



Mobile Application Part (MAP) - PARAMETERS SIGNALING PROTOCOLS

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PART 550

1 GENERAL

This specification supports systems conforming to air-interface technologies AMPS, NAMPS, TDMA and CDMA, including cdma2000[®].¹

1.1 PARAMETER FORMAT

MAP uses the TCAP parameter format defined in *ANSI T1.114*.

Unless otherwise specified, the least significant bit (LSB) of a parameter, data type or field shall be placed in the rightmost bit of the highest numbered octet. The most significant bit (MSB) shall be placed in the leftmost bit of the lowest numbered octet. This applies to fields composed of contiguous or non-contiguous bits.

For example, a single octet field will have the LSB in bit A and the MSB in bit H:

H	G	F	E	D	C	B	A	octet
Allowed Call Types								1

A 12 bit field occupying octet 1 and bits A-D of octet 2 would have the LSB in bit A of octet 2 and the MSB in bit H of octet 1:

H	G	F	E	D	C	B	A	octet
MSB							12 Bit Field	1
Reserved							LSB	2

A 6 bit field occupying bits B-G of octet 1 would have the LSB in bit B and the MSB in bit G:

H	G	F	E	D	C	B	A	octet	
Rsvd	MSB				6 Bit Field		LSB	Rsvd	1

Unless otherwise defined, when a field is defined by reference to another standard (e.g., CDMA) the octet numbering should correspond with that standard (i.e., Octet 1 of the field in the referenced standard should be Octet 1 in this standard). When ordering is not defined explicitly, the order of the fields as listed within the referenced standard should be used. Within each octet, the least significant bit of each field (or portion within this octet) should be in the lowest lettered bit for that field. If the field does not fill an even number of octets, padding should be added only to the highest numbered octet defined for the field in this standard, starting with bit H. These bits should be treated as Reserved (i.e., transmitted as zero bits and ignored on receipt).

¹ cdma2000[®] is the trademark for the technical nomenclature for certain specifications and standards of the Organizational Partners (OPs) of 3GPP2. Geographically (and as of the date of publication), cdma2000[®] is a registered trademark of the Telecommunications Industry Association (TIA-USA) in the United States.

1.1.1 Transmission order

Octets are transmitted in sequence, starting with octet 1. Within each octet, bits are transmitted in sequence, starting with bit A.

1.2 PARAMETER IDENTIFIERS

The following table lists the MAP Parameter Identifiers.

Table 1 MAP Parameter Identifiers

Parameter Identifier Name	Parameter Identifier Code	Reference
	H G F E D C B A	
BillingID	1 0 0 0 0 0 0 1	2.24
ServingCellID	1 0 0 0 0 0 1 0	2.235
TargetCellID	1 0 0 0 0 0 1 1	2.273
Digits	1 0 0 0 0 1 0 0	2.115
ChannelData	1 0 0 0 0 1 0 1	2.91
InterMSCCircuitID	1 0 0 0 0 1 1 0	2.139
InterSwitchCount	1 0 0 0 0 1 1 1	2.140
MobileIdentificationNumber	1 0 0 0 1 0 0 0	2.150
ElectronicSerialNumber	1 0 0 0 1 0 0 1	2.122
ReleaseReason	1 0 0 0 1 0 1 0	2.213
SignalQuality	1 0 0 0 1 0 1 1	2.240
StationClassMark	1 0 0 0 1 1 0 0	2.265
AuthorizationDenied	1 0 0 0 1 1 0 1	2.19
AuthorizationPeriod	1 0 0 0 1 1 1 0	2.20
SeizureType	1 0 0 0 1 1 1 1	2.224
TrunkStatus	1 0 0 1 0 0 0 0	2.300
QualificationInformationCode	1 0 0 1 0 0 0 1	2.197
FeatureResult	1 0 0 1 0 0 1 0	2.131
RedirectionReason	1 0 0 1 0 0 1 1	2.212
AccessDeniedReason	1 0 0 1 0 1 0 0	2.1
MSCID	1 0 0 1 0 1 0 1	2.161
SystemMyTypeCode	1 0 0 1 0 1 1 0	2.270
OriginationIndicator	1 0 0 1 0 1 1 1	2.178
TerminationRestrictionCode	1 0 0 1 1 0 0 0	2.291
CallingFeaturesIndicator	1 0 0 1 1 0 0 1	2.38
FaultyParameter	1 0 0 1 1 0 1 0	2.130

Table 1 MAP Parameter Identifiers (Continued)

Parameter Identifier Name	Parameter Identifier Code	Reference
	H G F E D C B A	
Reserved	1 0 0 1 1 0 1 1	
TDMChannelData	1 0 0 1 1 1 0 0	2.280
TDMACallMode	1 0 0 1 1 1 0 1	2.279
HandoffReason	1 0 0 1 1 1 1 0	2.135
TDMABurstIndicator	1 0 0 1 1 1 1 1 0 0 0 1 1 1 1 1	2.278
PC_SSN	1 0 0 1 1 1 1 1 0 0 1 0 0 0 0 0	2.186
LocationAreaID	1 0 0 1 1 1 1 1 0 0 1 0 0 0 0 1	2.145
SystemAccessType	1 0 0 1 1 1 1 1 0 0 1 0 0 0 1 0	2.268
AuthenticationResponse	1 0 0 1 1 1 1 1 0 0 1 0 0 0 1 1	2.15
AuthenticationResponseBase-Station	1 0 0 1 1 1 1 1 0 0 1 0 0 1 0 0	2.16
AuthenticationResponseUnique-Challenge	1 0 0 1 1 1 1 1 0 0 1 0 0 1 0 1	2.18
CallHistoryCount	1 0 0 1 1 1 1 1 0 0 1 0 0 1 1 0	2.36
ConfidentialityModes	1 0 0 1 1 1 1 1 0 0 1 0 0 1 1 1	2.95
RandomVariable	1 0 0 1 1 1 1 1 0 0 1 0 1 0 0 0	2.199
RandomVariableBaseStation	1 0 0 1 1 1 1 1 0 0 1 0 1 0 0 1	2.200
RandomVariableSSD	1 0 0 1 1 1 1 1 0 0 1 0 1 0 1 0	2.202
RandomVariableUniqueChallenge	1 0 0 1 1 1 1 1 0 0 1 0 1 0 1 1	2.203
ReportType	1 0 0 1 1 1 1 1 0 0 1 0 1 1 0 0	2.214
SignalingMessageEncryptionKey	1 0 0 1 1 1 1 1 0 0 1 0 1 1 0 1	2.238
SharedSecretData	1 0 0 1 1 1 1 1 0 0 1 0 1 1 1 0	2.237
TerminalType	1 0 0 1 1 1 1 1 0 0 1 0 1 1 1 1	2.288

Table 1 MAP Parameter Identifiers (Continued)

Parameter Identifier Name	Parameter Identifier Code	Reference
	H G F E D C B A	
VoicePrivacyMask	1 0 0 1 1 1 1 1 0 0 1 1 0 0 0 0	2.307
SystemCapabilities	1 0 0 1 1 1 1 1 0 0 1 1 0 0 0 1	2.269
DenyAccess	1 0 0 1 1 1 1 1 0 0 1 1 0 0 1 0	2.110
UpdateCount	1 0 0 1 1 1 1 1 0 0 1 1 0 0 1 1	2.302
SSDNotShared	1 0 0 1 1 1 1 1 0 0 1 1 0 1 0 0	2.263
ExtendedMSCID	1 0 0 1 1 1 1 1 0 0 1 1 0 1 0 1	2.126
ExtendedSystemMyTypeCode	1 0 0 1 1 1 1 1 0 0 1 1 0 1 1 0	2.127
ControlChannelData	1 0 0 1 1 1 1 1 0 0 1 1 0 1 1 1	2.96
SystemAccessData	1 0 0 1 1 1 1 1 0 0 1 1 1 0 0 0	2.267
CancellationDenied	1 0 0 1 1 1 1 1 0 0 1 1 1 0 0 1	2.45
BorderCellAccess	1 0 0 1 1 1 1 1 0 0 1 1 1 0 1 0	2.25
CDMAStationClassMark	1 0 0 1 1 1 1 1 0 0 1 1 1 0 1 1	2.82
CDMAServingOneWayDelay	1 0 0 1 1 1 1 1 0 0 1 1 1 1 0 0	2.78
CDMATargetOneWayDelay	1 0 0 1 1 1 1 1 0 0 1 1 1 1 0 1	2.88
CDMACallMode	1 0 0 1 1 1 1 1 0 0 1 1 1 1 1 0	2.55
CDMAChannelData	1 0 0 1 1 1 1 1 0 0 1 1 1 1 1 1	2.56
CDMASignalQuality	1 0 0 1 1 1 1 1 0 1 0 0 0 0 0 0	2.79
CDMAPilotStrength	1 0 0 1 1 1 1 1 0 1 0 0 0 0 0 1	2.69
CDMAMobileProtocolRevision	1 0 0 1 1 1 1 1 0 1 0 0 0 0 1 0	2.65
CDMAPrivateLongCodeMask	1 0 0 1 1 1 1 1 0 1 0 0 0 0 1 1	2.71

Table 1 MAP Parameter Identifiers (Continued)

Parameter Identifier Name	Parameter Identifier Code	Reference
	H G F E D C B A	
CDMACodeChannel	1 0 0 1 1 1 1 1 0 1 0 0 0 1 0 0	2.59
CDMASearchWindow	1 0 0 1 1 1 1 1 0 1 0 0 0 1 0 1	2.74
MSLocation	1 0 0 1 1 1 1 1 0 1 0 0 0 1 1 0	2.165
PageIndicator	1 0 0 1 1 1 1 1 0 1 0 0 0 1 1 1	2.183
ReceivedSignalQuality	1 0 0 1 1 1 1 1 0 1 0 0 1 0 0 0	2.207
DeregistrationType	1 0 0 1 1 1 1 1 0 1 0 0 1 0 0 1	2.111
NAMPSChannelData	1 0 0 1 1 1 1 1 0 1 0 0 1 0 1 0	2.167
AlertCode	1 0 0 1 1 1 1 1 0 1 0 0 1 0 1 1	2.4
AnnouncementCode	1 0 0 1 1 1 1 1 0 1 0 0 1 1 0 0	2.9
AuthenticationAlgorithmVersion	1 0 0 1 1 1 1 1 0 1 0 0 1 1 0 1	2.11
AuthenticationCapability	1 0 0 1 1 1 1 1 0 1 0 0 1 1 1 0	2.12
CallHistoryCountExpected	1 0 0 1 1 1 1 1 0 1 0 0 1 1 1 1	2.37
CallingPartyNumberDigits1	1 0 0 1 1 1 1 1 0 1 0 1 0 0 0 0	2.40
CallingPartyNumberDigits2	1 0 0 1 1 1 1 1 0 1 0 1 0 0 0 1	2.41
CallingPartyNumberString1	1 0 0 1 1 1 1 1 0 1 0 1 0 0 1 0	2.42
CallingPartyNumberString2	1 0 0 1 1 1 1 1 0 1 0 1 0 0 1 1	2.43
CallingPartySubaddress	1 0 0 1 1 1 1 1 0 1 0 1 0 1 0 0	2.44
CancellationType	1 0 0 1 1 1 1 1 0 1 0 1 0 1 0 1	2.46
CarrierDigits	1 0 0 1 1 1 1 1 0 1 0 1 0 1 1 0	2.47
DestinationDigits	1 0 0 1 1 1 1 1 0 1 0 1 0 1 1 1	2.113

Table 1 MAP Parameter Identifiers (Continued)

Parameter Identifier Name	Parameter Identifier Code	Reference
	H G F E D C B A	
DMH_RedirectionIndicator	1 0 0 1 1 1 1 1 0 1 0 1 1 0 0 0	2.121
IntersystemTermination	1 0 1 1 1 1 1 1 0 1 0 1 1 0 0 1	2.141
AvailabilityType	1 0 0 1 1 1 1 1 0 1 0 1 1 0 1 0	2.21
LocalTermination	1 0 1 1 1 1 1 1 0 1 0 1 1 0 1 1	2.144
MessageWaitingNotificationCount	1 0 0 1 1 1 1 1 0 1 0 1 1 1 0 0	2.146
MobileDirectoryNumber	1 0 0 1 1 1 1 1 0 1 0 1 1 1 0 1	2.149
MSCIdentificationNumber	1 0 0 1 1 1 1 1 0 1 0 1 1 1 1 0	2.162
PSTNTermination	1 0 1 1 1 1 1 1 0 1 0 1 1 1 1 1	2.195
NoAnswerTime	1 0 0 1 1 1 1 1 0 1 1 0 0 0 0 0	2.175
OneTimeFeatureIndicator	1 0 0 1 1 1 1 1 0 1 1 0 0 0 0 1	2.177
OriginationTriggers	1 0 0 1 1 1 1 1 0 1 1 0 0 0 1 0	2.179
RANDC	1 0 0 1 1 1 1 1 0 1 1 0 0 0 1 1	2.198
RedirectingNumberDigits	1 0 0 1 1 1 1 1 0 1 1 0 0 1 0 0	2.208
RedirectingNumberString	1 0 0 1 1 1 1 1 0 1 1 0 0 1 0 1	2.209
RedirectingSubaddress	1 0 0 1 1 1 1 1 0 1 1 0 0 1 1 0	2.211
SenderIdentificationNumber	1 0 0 1 1 1 1 1 0 1 1 0 0 1 1 1	2.225
SMS_Address	1 0 0 1 1 1 1 1 0 1 1 0 1 0 0 0	2.242
SMS_BearerData	1 0 0 1 1 1 1 1 0 1 1 0 1 0 0 1	2.243
SMS_ChargeIndicator	1 0 0 1 1 1 1 1 0 1 1 0 1 0 1 0	2.245
SMS_DestinationAddress	1 0 0 1 1 1 1 1 0 1 1 0 1 0 1 1	2.246

Table 1 MAP Parameter Identifiers (Continued)

Parameter Identifier Name	Parameter Identifier Code	Reference
	H G F E D C B A	
SMS_MessageCount	1 0 0 1 1 1 1 1 0 1 1 0 1 1 0 0	2.247
SMS_NotificationIndicator	1 0 0 1 1 1 1 1 0 1 1 0 1 1 0 1	2.249
SMS_OriginalDestinationAddress	1 0 0 1 1 1 1 1 0 1 1 0 1 1 1 0	2.250
SMS_OriginalDestination-Subaddress	1 0 0 1 1 1 1 1 0 1 1 0 1 1 1 1	2.251
SMS_OriginalOriginatingAddress	1 0 0 1 1 1 1 1 0 1 1 1 0 0 0 0	2.252
SMS_OriginalOriginating-Subaddress	1 0 0 1 1 1 1 1 0 1 1 1 0 0 0 1	2.253
SMS_OriginatingAddress	1 0 0 1 1 1 1 1 0 1 1 1 0 0 1 0	2.254
SMS_OriginationRestrictions	1 0 0 1 1 1 1 1 0 1 1 1 0 0 1 1	2.255
SMS_TeleserviceIdentifier	1 0 0 1 1 1 1 1 0 1 1 1 0 1 0 0	2.256
SMS_TerminationRestrictions	1 0 0 1 1 1 1 1 0 1 1 1 0 1 0 1	2.257
SMS_MessageWaitingIndicator	1 0 0 1 1 1 1 1 0 1 1 1 0 1 1 0	2.248
TerminationAccessType	1 0 0 1 1 1 1 1 0 1 1 1 0 1 1 1	2.289
TerminationList	1 0 1 1 1 1 1 1 0 1 1 1 1 0 0 0	2.290
TerminationTreatment	1 0 0 1 1 1 1 1 0 1 1 1 1 0 0 1	2.292
TerminationTriggers	1 0 0 1 1 1 1 1 0 1 1 1 1 0 1 0	2.293
TransactionCapability	1 0 0 1 1 1 1 1 0 1 1 1 1 0 1 1	2.295
UniqueChallengeReport	1 0 0 1 1 1 1 1 0 1 1 1 1 1 0 0	2.301
Reserved	1 0 X 1 1 1 1 1 0 1 1 1 1 1 0 1	See Note b for value of X.
Reserved	1 0 X 1 1 1 1 1 0 1 1 1 1 1 1 0	See Note b for value of X.
Reserved	1 0 X 1 1 1 1 1 0 1 1 1 1 1 1 1	See Note b for value of X.

Table 1 MAP Parameter Identifiers (Continued)

Parameter Identifier Name	Parameter Identifier Code	Reference
	H G F E D C B A	
ActionCode	1 0 0 1 1 1 1 1 1 0 0 0 0 0 0 1 0 0 0 0 0 0 0 0	2.2
AlertResult	1 0 0 1 1 1 1 1 1 0 0 0 0 0 0 1 0 0 0 0 0 0 0 1	2.5
AnnouncementList	1 0 1 1 1 1 1 1 1 0 0 0 0 0 0 1 0 0 0 0 0 0 1 0	2.10
CDMACodeChannelInformation	1 0 1 1 1 1 1 1 1 0 0 0 0 0 0 1 0 0 0 0 0 0 1 1	2.60
CDMACodeChannelList	1 0 1 1 1 1 1 1 1 0 0 0 0 0 0 1 0 0 0 0 0 1 0 0	2.61
CDMATargetMeasurement-Information	1 0 1 1 1 1 1 1 1 0 0 0 0 0 0 1 0 0 0 0 0 1 0 1	2.86
CDMATargetMeasurementList	1 0 1 1 1 1 1 1 1 0 0 0 0 0 0 1 0 0 0 0 0 1 1 0	2.87
CDMATargetMAHOInformation	1 0 1 1 1 1 1 1 1 0 0 0 0 0 0 1 0 0 0 0 0 1 1 1	2.84
CDMATargetMAHOList	1 0 1 1 1 1 1 1 1 0 0 0 0 0 0 1 0 0 0 0 1 0 0 0	2.85
ConferenceCallingIndicator	1 0 0 1 1 1 1 1 1 0 0 0 0 0 0 1 0 0 0 0 1 0 0 1	2.94
CountUpdateReport	1 0 0 1 1 1 1 1 1 0 0 0 0 0 0 1 0 0 0 0 1 0 1 0	2.98
DigitCollectionControl	1 0 0 1 1 1 1 1 1 0 0 0 0 0 0 1 0 0 0 0 1 0 1 1	2.114
DMH_AccountCodeDigits	1 0 0 1 1 1 1 1 1 0 0 0 0 0 0 1 0 0 0 0 1 1 0 0	2.118
DMH_AlternateBillingDigits	1 0 0 1 1 1 1 1 1 0 0 0 0 0 0 1 0 0 0 0 1 1 0 1	2.119

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Table 1 MAP Parameter Identifiers (Continued)

Parameter Identifier Name	Parameter Identifier Code	Reference
	H G F E D C B A	
DMH_BillingDigits	1 0 0 1 1 1 1 1 1 0 0 0 0 0 0 1 0 0 0 0 1 1 1 0	2.120
GeographicAuthorization	1 0 0 1 1 1 1 1 1 0 0 0 0 0 0 1 0 0 0 0 1 1 1 1	2.132
LegInformation	1 0 0 1 1 1 1 1 1 0 0 0 0 0 0 1 0 0 0 1 0 0 0 0	2.143
MessageWaitingNotificationType	1 0 0 1 1 1 1 1 1 0 0 0 0 0 0 1 0 0 0 1 0 0 0 1	2.147
PACAIndicator	1 0 0 1 1 1 1 1 1 0 0 0 0 0 0 1 0 0 0 1 0 0 1 0	2.181
PreferredLanguageIndicator	1 0 0 1 1 1 1 1 1 0 0 0 0 0 0 1 0 0 0 1 0 0 1 1	2.189
RANDValidTime	1 0 0 1 1 1 1 1 1 0 0 0 0 0 0 1 0 0 0 1 0 1 0 0	2.204
RestrictionDigits	1 0 0 1 1 1 1 1 1 0 0 0 0 0 0 1 0 0 0 1 0 1 0 1	2.216
RoutingDigits	1 0 0 1 1 1 1 1 1 0 0 0 0 0 0 1 0 0 0 1 0 1 1 0	2.219
SetupResult	1 0 0 1 1 1 1 1 1 0 0 0 0 0 0 1 0 0 0 1 0 1 1 1	2.236
SMS_AccessDeniedReason	1 0 0 1 1 1 1 1 1 0 0 0 0 0 0 1 0 0 0 1 1 0 0 0	2.241
SMS_CauseCode	1 0 0 1 1 1 1 1 1 0 0 0 0 0 0 1 0 0 0 1 1 0 0 1	2.244
SPINIPIN	1 0 0 1 1 1 1 1 1 0 0 0 0 0 0 1 0 0 0 1 1 0 1 0	2.261
SPINITriggers	1 0 0 1 1 1 1 1 1 0 0 0 0 0 0 1 0 0 0 1 1 0 1 1	2.262

Table 1 MAP Parameter Identifiers (Continued)

Parameter Identifier Name	Parameter Identifier Code	Reference
	H G F E D C B A	
SSDUpdateReport	1 0 0 1 1 1 1 1 1 0 0 0 0 0 0 1 0 0 0 1 1 1 0 0	2.264
TargetMeasurementInformation	1 0 1 1 1 1 1 1 1 0 0 0 0 0 0 1 0 0 0 1 1 1 0 1	2.275
TargetMeasurementList	1 0 1 1 1 1 1 1 1 0 0 0 0 0 0 1 0 0 0 1 1 1 1 0	2.276
VoiceMailboxPIN	1 0 0 1 1 1 1 1 1 0 0 0 0 0 0 1 0 0 0 1 1 1 1 1	2.306
VoiceMailboxNumber	1 0 0 1 1 1 1 1 1 0 0 0 0 0 0 1 0 0 1 0 0 0 0 0	2.305
AuthenticationData	1 0 0 1 1 1 1 1 1 0 0 0 0 0 0 1 0 0 1 0 0 0 0 1	2.13
ConditionallyDeniedReason	1 0 0 1 1 1 1 1 1 0 0 0 0 0 0 1 0 0 1 0 0 0 1 0	2.93
GroupInformation	1 0 0 1 1 1 1 1 1 0 0 0 0 0 0 1 0 0 1 0 0 0 1 1	2.134
HandoffState	1 0 0 1 1 1 1 1 1 0 0 0 0 0 0 1 0 0 1 0 0 1 0 0	2.136
NAMPSCallMode	1 0 0 1 1 1 1 1 1 0 0 0 0 0 0 1 0 0 1 0 0 1 0 1	2.166
CDMASlotCycleIndex	1 0 0 1 1 1 1 1 1 0 0 0 0 0 0 1 0 0 1 0 0 1 1 0	2.80
DeniedAuthorizationPeriod	1 0 0 1 1 1 1 1 1 0 0 0 0 0 0 1 0 0 1 0 0 1 1 1	2.109
PilotNumber	1 0 0 1 1 1 1 1 1 0 0 0 0 0 0 1 0 0 1 0 1 0 0 0	2.188
PilotBillingID	1 0 0 1 1 1 1 1 1 0 0 0 0 0 0 1 0 0 1 0 1 0 0 1	2.187

Table 1 MAP Parameter Identifiers (Continued)

Parameter Identifier Name	Parameter Identifier Code	Reference
	H G F E D C B A	
CDMABandClass	1 0 0 1 1 1 1 1 1 0 0 0 0 0 0 1 0 0 1 0 1 0 1 0	2.52
CDMABandClassInformation	1 0 1 1 1 1 1 1 1 0 0 0 0 0 0 1 0 0 1 0 1 0 1 1	2.53
CDMABandClassList	1 0 1 1 1 1 1 1 1 0 0 0 0 0 0 1 0 0 1 0 1 1 0 0	2.54
CDMAPilotPN	1 0 0 1 1 1 1 1 1 0 0 0 0 0 0 1 0 0 1 0 1 1 0 1	2.68
CDMAServiceConfiguration Record	1 0 0 1 1 1 1 1 1 0 0 0 0 0 0 1 0 0 1 0 1 1 1 0	2.75
CDMAServiceOption	1 0 0 1 1 1 1 1 1 0 0 0 0 0 0 1 0 0 1 0 1 1 1 1	2.76
CDMAServiceOptionList	1 0 1 1 1 1 1 1 1 0 0 0 0 0 0 1 0 0 1 1 0 0 0 0	2.77
CDMAStationClassMark2	1 0 0 1 1 1 1 1 1 0 0 0 0 0 0 1 0 0 1 1 0 0 0 1	2.83
TDMAServiceCode	1 0 0 1 1 1 1 1 1 0 0 0 0 0 0 1 0 0 1 1 0 0 1 0	2.283
TDMATerminalCapability	1 0 0 1 1 1 1 1 1 0 0 0 0 0 0 1 0 0 1 1 0 0 1 1	2.284
TDMAVoiceCoder	1 0 0 1 1 1 1 1 1 0 0 0 0 0 0 1 0 0 1 1 0 1 0 0	2.285
AKeyProtocolVersion	1 0 0 1 1 1 1 1 1 0 0 0 0 0 0 1 0 0 1 1 0 1 0 1	2.3
AuthenticationResponse- Reauthentication	1 0 0 1 1 1 1 1 1 0 0 0 0 0 0 1 0 0 1 1 0 1 1 0	2.17
BaseStationPartialKey	1 0 0 1 1 1 1 1 1 0 0 0 0 0 0 1 0 0 1 1 0 1 1 1	2.23

Table 1 MAP Parameter Identifiers (Continued)

Parameter Identifier Name	Parameter Identifier Code	Reference
	H G F E D C B A	
MobileStationMIN	1 0 0 1 1 1 1 1 1 0 0 0 0 0 0 1 0 0 1 1 1 0 0 0	2.152
MobileStationPartialKey	1 0 0 1 1 1 1 1 1 0 0 0 0 0 0 1 0 0 1 1 1 0 0 1	2.154
ModulusValue	1 0 0 1 1 1 1 1 1 0 0 0 0 0 0 1 0 0 1 1 1 0 1 0	2.159
NewlyAssignedMIN	1 0 0 1 1 1 1 1 1 0 0 0 0 0 0 1 0 0 1 1 1 0 1 1	2.171
Reserved	1 0 0 1 1 1 1 1 1 0 0 0 0 0 0 1 0 0 1 1 1 1 0 0	
OTASP_ResultCode	1 0 0 1 1 1 1 1 1 0 0 0 0 0 0 1 0 0 1 1 1 1 0 1	2.180
PrimitiveValue	1 0 0 1 1 1 1 1 1 0 0 0 0 0 0 1 0 0 1 1 1 1 1 0	2.190
RandomVariableReauthentication	1 0 0 1 1 1 1 1 1 0 0 0 0 0 0 1 0 0 1 1 1 1 1 1	2.201
ReauthenticationReport	1 0 0 1 1 1 1 1 1 0 0 0 0 0 0 1 0 1 0 0 0 0 0 0	2.206
ServiceIndicator	1 0 0 1 1 1 1 1 1 0 0 0 0 0 0 1 0 1 0 0 0 0 0 1	2.231
SignalingMessageEncryptionReport	1 0 0 1 1 1 1 1 1 0 0 0 0 0 0 1 0 1 0 0 0 0 1 0	2.239
TemporaryReferenceNumber	1 0 0 1 1 1 1 1 1 0 0 0 0 0 0 1 0 1 0 0 0 0 1 1	2.287
VoicePrivacyReport	1 0 0 1 1 1 1 1 1 0 0 0 0 0 0 1 0 1 0 0 0 1 0 0	2.308
BaseStationManufacturerCode	1 0 0 1 1 1 1 1 1 0 0 0 0 0 0 1 0 1 0 0 0 1 0 1	2.22

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Table 1 MAP Parameter Identifiers (Continued)

Parameter Identifier Name	Parameter Identifier Code	Reference
	H G F E D C B A	
BSMCStatus	1 0 0 1 1 1 1 1	2.35
	1 0 0 0 0 0 0 1	
	0 1 0 0 0 1 1 0	
ControlChannelMode	1 0 0 1 1 1 1 1	2.97
	1 0 0 0 0 0 0 1	
	0 1 0 0 0 1 1 1	
NonPublicData	1 0 0 1 1 1 1 1	2.176
	1 0 0 0 0 0 0 1	
	0 1 0 0 1 0 0 0	
PagingFrameClass	1 0 0 1 1 1 1 1	2.185
	1 0 0 0 0 0 0 1	
	0 1 0 0 1 0 0 1	
PSID_RSIDInformation	1 0 0 1 1 1 1 1	2.193
	1 0 0 0 0 0 0 1	
	0 1 0 0 1 0 1 0	
PSID_RSIDList	1 0 1 1 1 1 1 1	2.194
	1 0 0 0 0 0 0 1	
	0 1 0 0 1 0 1 1	
ServicesResult	1 0 0 1 1 1 1 1	2.234
	1 0 0 0 0 0 0 1	
	0 1 0 0 1 1 0 0	
SOCStatus	1 0 0 1 1 1 1 1	2.272
	1 0 0 0 0 0 0 1	
	0 1 0 0 1 1 0 1	
SystemOperatorCode	1 0 0 1 1 1 1 1	2.271
	1 0 0 0 0 0 0 1	
	0 1 0 0 1 1 1 0	
TargetCellIDList	1 0 1 1 1 1 1 1	2.274
	1 0 0 0 0 0 0 1	
	0 1 0 0 1 1 1 1	
UserGroup	1 0 0 1 1 1 1 1	2.303
	1 0 0 0 0 0 0 1	
	0 1 0 1 0 0 0 0	
UserZoneData	1 0 0 1 1 1 1 1	2.304
	1 0 0 0 0 0 0 1	
	0 1 0 1 0 0 0 1	
CDMAConnectionReference	1 0 0 1 1 1 1 1	2.62
	1 0 0 0 0 0 0 1	
	0 1 0 1 0 0 1 0	
CDMAConnectionReference- Information	1 0 1 1 1 1 1 1	2.63
	1 0 0 0 0 0 0 1	
	0 1 0 1 0 0 1 1	

Table 1 MAP Parameter Identifiers (Continued)

Parameter Identifier Name	Parameter Identifier Code	Reference
	H G F E D C B A	
CDMAConnectionReferenceList	1 0 1 1 1 1 1 1 1 0 0 0 0 0 0 1 0 1 0 1 0 1 0 0	2.64
CDMAState	1 0 0 1 1 1 1 1 1 0 0 0 0 0 0 1 0 1 0 1 0 1 0 1	2.81
ChangeServiceAttributes	1 0 0 1 1 1 1 1 1 0 0 0 0 0 0 1 0 1 0 1 0 1 1 0	2.90
DataKey	1 0 0 1 1 1 1 1 1 0 0 0 0 0 0 1 0 1 0 1 0 1 1 1	2.103
DataPrivacyParameters	1 0 0 1 1 1 1 1 1 0 0 0 0 0 0 1 0 1 0 1 1 0 0 0	2.104
ISLPInformation	1 0 0 1 1 1 1 1 1 0 0 0 0 0 0 1 0 1 0 1 1 0 0 1	2.142
ReasonList	1 0 0 1 1 1 1 1 1 0 0 0 0 0 0 1 0 1 0 1 1 0 1 0	2.205
SecondInterMSCCircuitID	1 0 0 1 1 1 1 1 1 0 0 0 0 0 0 1 0 1 0 1 1 0 1 1	2.223
TDMABandwidth	1 0 0 1 1 1 1 1 1 0 0 0 0 0 0 1 0 1 0 1 1 1 0 0	2.277
TDMADataFeaturesIndicator	1 0 0 1 1 1 1 1 1 0 0 0 0 0 0 1 0 1 0 1 1 1 0 1	2.281
TDMADataMode	1 0 0 1 1 1 1 1 1 0 0 0 0 0 0 1 0 1 0 1 1 1 1 0	2.282
TDMAVoiceMode	1 0 0 1 1 1 1 1 1 0 0 0 0 0 0 1 0 1 0 1 1 1 1 1	2.286
AnalogRedirectInfo	1 0 0 1 1 1 1 1 1 0 0 0 0 0 0 1 0 1 1 0 0 0 0 0	2.7
AnalogRedirectRecord	1 0 1 1 1 1 1 1 1 0 0 0 0 0 0 1 0 1 1 0 0 0 0 1	2.8

Table 1 MAP Parameter Identifiers (Continued)

Parameter Identifier Name	Parameter Identifier Code	Reference
	H G F E D C B A	
CDMAChannelNumber	1 0 0 1 1 1 1 1 1 0 0 0 0 0 0 1 0 1 1 0 0 0 1 0	2.57
CDMAChannelNumberList	1 0 1 1 1 1 1 1 1 0 0 0 0 0 0 1 0 1 1 0 0 0 1 1	2.58
CDMAPowerCombinedIndicator	1 0 0 1 1 1 1 1 1 0 0 0 0 0 0 1 0 1 1 0 0 1 0 0	2.70
CDMAREdirectRecord	1 0 0 1 1 1 1 1 1 0 0 0 0 0 0 1 0 1 1 0 0 1 0 1	2.72
CDMASearchParameters	1 0 0 1 1 1 1 1 1 0 0 0 0 0 0 1 0 1 1 0 0 1 1 0	2.73
Reserved	1 0 X 1 1 1 1 1 1 0 0 0 0 0 0 1 0 1 1 0 0 1 1 1	See Note b for value of X.
CDMANetworkIdentification	1 0 0 1 1 1 1 1 1 0 0 0 0 0 0 1 0 1 1 0 1 0 0 0	2.67
NetworkTMSI	1 0 0 1 1 1 1 1 1 0 0 0 0 0 0 1 0 1 1 0 1 0 0 1	2.168
NetworkTMSIExpirationTime	1 0 0 1 1 1 1 1 1 0 0 0 0 0 0 1 0 1 1 0 1 0 1 0	2.169
NewNetworkTMSI	1 0 0 1 1 1 1 1 1 0 0 0 0 0 0 1 0 1 1 0 1 0 1 1	2.174
RequiredParametersMask	1 0 0 1 1 1 1 1 1 0 0 0 0 0 0 1 0 1 1 0 1 1 0 0	2.215
ServiceRedirectionCause	1 0 0 1 1 1 1 1 1 0 0 0 0 0 0 1 0 1 1 0 1 1 0 1	2.232
ServiceRedirectionInfo	1 0 0 1 1 1 1 1 1 0 0 0 0 0 0 1 0 1 1 0 1 1 1 0	2.233
RoamingIndication	1 0 0 1 1 1 1 1 1 0 0 0 0 0 0 1 0 1 1 0 1 1 1 1	2.218

Table 1 MAP Parameter Identifiers (Continued)

Parameter Identifier Name	Parameter Identifier Code	Reference
	H G F E D C B A	
EmergencyServicesRoutingDigits	1 0 0 1 1 1 1 1 1 0 0 0 0 0 0 1 0 1 1 1 0 0 0 0	2.123
SpecialHandling	1 0 0 1 1 1 1 1 1 0 0 0 0 0 0 1 0 1 1 1 0 0 0 1	2.259
IMSI	1 0 0 1 1 1 1 1 1 0 0 0 0 0 0 1 0 1 1 1 0 0 1 0	2.137
CallingPartyName	1 0 0 1 1 1 1 1 1 0 0 0 0 0 0 1 0 1 1 1 0 0 1 1	2.39
DisplayText	1 0 0 1 1 1 1 1 1 0 0 0 0 0 0 1 0 1 1 1 0 1 0 0	2.116
RedirectingPartyName	1 0 0 1 1 1 1 1 1 0 0 0 0 0 0 1 0 1 1 1 0 1 0 1	2.210
ServiceID	1 0 0 1 1 1 1 1 1 0 0 0 0 0 0 1 0 1 1 1 0 1 1 0	2.230
AllOrNone	1 0 0 1 1 1 1 1 1 0 0 0 0 0 0 1 0 1 1 1 0 1 1 1	2.6
Change	1 0 0 1 1 1 1 1 1 0 0 0 0 0 0 1 0 1 1 1 1 0 0 0	2.89
DataAccessElement	1 0 1 1 1 1 1 1 1 0 0 0 0 0 0 1 0 1 1 1 1 0 0 1	2.99
DataAccessElementList	1 0 1 1 1 1 1 1 1 0 0 0 0 0 0 1 0 1 1 1 1 0 1 0	2.100
DataID	1 0 0 1 1 1 1 1 1 0 0 0 0 0 0 1 0 1 1 1 1 0 1 1	2.102
DataBaseKey	1 0 0 1 1 1 1 1 1 0 0 0 0 0 0 1 0 1 1 1 1 1 0 0	2.101
DataResult	1 0 0 1 1 1 1 1 1 0 0 0 0 0 0 1 0 1 1 1 1 1 0 1	2.105

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Table 1 MAP Parameter Identifiers (Continued)

Parameter Identifier Name	Parameter Identifier Code	Reference
	H G F E D C B A	
DataUpdateResult	1 0 1 1 1 1 1 1 1 0 0 0 0 0 0 1 0 1 1 1 1 1 1 0	2.106
DataUpdateResultList	1 0 1 1 1 1 1 1 1 0 0 0 0 0 0 1 0 1 1 1 1 1 1 1	2.107
DataValue	1 0 0 1 1 1 1 1 1 0 0 0 0 0 1 0 0 0 0 0 0 0 0 0	2.108
Reserved	1 0 X 1 1 1 1 1 1 0 0 0 0 0 1 0 0 0 0 0 0 0 0 1	See Note b for value of X.
ExecuteScript	1 0 1 1 1 1 1 1 1 0 0 0 0 0 1 0 0 0 0 0 0 0 1 0	2.125
FailureCause	1 0 0 1 1 1 1 1 1 0 0 0 0 0 1 0 0 0 0 0 0 0 1 1	2.128
FailureType	1 0 0 1 1 1 1 1 1 0 0 0 0 0 1 0 0 0 0 0 0 1 0 0	2.129
GlobalTitle	1 0 0 1 1 1 1 1 1 0 0 0 0 0 1 0 0 0 0 0 0 1 0 1	2.133
ModificationRequest	1 0 1 1 1 1 1 1 1 0 0 0 0 0 1 0 0 0 0 0 0 1 1 0	2.155
ModificationRequestList	1 0 1 1 1 1 1 1 1 0 0 0 0 0 1 0 0 0 0 0 0 1 1 1	2.156
ModificationResultList	1 0 1 1 1 1 1 1 1 0 0 0 0 0 1 0 0 0 0 0 1 0 0 0	2.158
PrivateSpecializedResource	1 0 0 1 1 1 1 1 1 0 0 0 0 0 1 0 0 0 0 0 1 0 0 1	2.191
Reserved.	1 0 X 1 1 1 1 1 1 0 0 0 0 0 1 0 0 0 0 0 1 0 1 0	See Note b for value of X.
ScriptArgument	1 0 0 1 1 1 1 1 1 0 0 0 0 0 1 0 0 0 0 0 1 0 1 1	2.220

Table 1 MAP Parameter Identifiers (Continued)

Parameter Identifier Name	Parameter Identifier Code	Reference
	H G F E D C B A	
ScriptName	1 0 0 1 1 1 1 1 1 0 0 0 0 0 1 0 0 0 0 0 1 1 0 0	2.221
ScriptResult	1 0 0 1 1 1 1 1 1 0 0 0 0 0 1 0 0 0 0 0 1 1 0 1	2.222
ServiceDataAccessElement	1 0 1 1 1 1 1 1 1 0 0 0 0 0 1 0 0 0 0 0 1 1 1 0	2.226
ServiceDataAccessElementList	1 0 1 1 1 1 1 1 1 0 0 0 0 0 1 0 0 0 0 0 1 1 1 1	2.227
ServiceDataResult	1 0 1 1 1 1 1 1 1 0 0 0 0 0 1 0 0 0 0 1 0 0 0 0	2.228
ServiceDataResultList	1 0 1 1 1 1 1 1 1 0 0 0 0 0 1 0 0 0 0 1 0 0 0 1	2.229
SpecializedResource	1 0 0 1 1 1 1 1 1 0 0 0 0 0 1 0 0 0 0 1 0 0 1 0	2.260
TimeDateOffset	1 0 0 1 1 1 1 1 1 0 0 0 0 0 1 0 0 0 0 1 0 0 1 1	2.294
TriggerAddressList	1 0 1 1 1 1 1 1 1 0 0 0 0 0 1 0 0 0 0 1 0 1 0 0	2.296
TriggerCapability	1 0 0 1 1 1 1 1 1 0 0 0 0 0 1 0 0 0 0 1 0 1 0 1	2.297
TriggerList	1 0 1 1 1 1 1 1 1 0 0 0 0 0 1 0 0 0 0 1 0 1 1 0	2.298
TriggerType	1 0 0 1 1 1 1 1 1 0 0 0 0 0 1 0 0 0 0 1 0 1 1 1	2.299
WINCapability	1 0 1 1 1 1 1 1 1 0 0 0 0 0 1 0 0 0 0 1 1 0 0 0	2.309
WINOperationsCapability	1 0 0 1 1 1 1 1 1 0 0 0 0 0 1 0 0 0 0 1 1 0 0 1	2.310

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Table 1 MAP Parameter Identifiers (Continued)

Parameter Identifier Name	Parameter Identifier Code	Reference
	H G F E D C B A	
Reserved	1 0 X 1 1 1 1 1 1 0 0 0 0 0 1 0 0 0 0 1 1 0 1 0	See Note b for value of X.
WIN_TriggerList	1 0 0 1 1 1 1 1 1 0 0 0 0 0 1 0 0 0 0 1 1 0 1 1	2.311
MSC_Address	1 0 0 1 1 1 1 1 1 0 0 0 0 0 1 0 0 0 0 1 1 1 0 0	2.160
SuspiciousAccess	1 0 0 1 1 1 1 1 1 0 0 0 0 0 1 0 0 0 0 1 1 1 0 1	2.266
MobileStationIMSI	1 0 0 1 1 1 1 1 1 0 0 0 0 0 1 0 0 0 0 1 1 1 1 0	2.151
NewlyAssignedIMSI	1 0 0 1 1 1 1 1 1 0 0 0 0 0 1 0 0 0 0 1 1 1 1 1	2.170
BroadcastCategory	1 0 0 1 1 1 1 1 1 0 0 0 0 0 1 0 0 0 1 0 0 0 0 0	2.26
BroadcastMessageIdentifier	1 0 0 1 1 1 1 1 1 0 0 0 0 0 1 0 0 0 1 0 0 0 0 1	2.28
BroadcastMessagePriority	1 0 0 1 1 1 1 1 1 0 0 0 0 0 1 0 0 0 1 0 0 0 1 0	2.29
BroadcastMessageStatus	1 0 0 1 1 1 1 1 1 0 0 0 0 0 1 0 0 0 1 0 0 0 1 1	2.30
Reserved	1 0 0 1 1 1 1 1 1 0 0 0 0 0 1 0 0 0 1 0 0 1 0 0	See Note b for value of X.
BroadcastPeriodicity	1 0 0 1 1 1 1 1 1 0 0 0 0 0 1 0 0 0 1 0 0 1 0 1	2.31
BroadcastServiceGroup	1 0 0 1 1 1 1 1 1 0 0 0 0 0 1 0 0 0 1 0 0 1 1 0	2.32
BroadcastZoneIdentifier	1 0 0 1 1 1 1 1 1 0 0 0 0 0 1 0 0 0 1 0 0 1 1 1	2.33

Table 1 MAP Parameter Identifiers (Continued)

Parameter Identifier Name	Parameter Identifier Code	Reference
	H G F E D C B A	
BroadcastZoneIdentifierList	1 0 1 1 1 1 1 1 1 0 0 0 0 0 1 0 0 0 1 0 1 0 0 0	2.34
BroadcastCategorySpecific-Information	1 0 0 1 1 1 1 1 1 0 0 0 0 0 1 0 0 0 1 0 1 0 0 1	2.27
CommandCode	1 0 0 1 1 1 1 1 1 0 0 0 0 0 1 0 0 0 1 0 1 0 1 0	2.92
DisplayText2	1 0 0 1 1 1 1 1 1 0 0 0 0 0 1 0 0 0 1 0 1 0 1 1	2.117
PageCount	1 0 0 1 1 1 1 1 1 0 0 0 0 0 1 0 0 0 1 0 1 1 0 0	2.182
PageResponseTime	1 0 0 1 1 1 1 1 1 0 0 0 0 0 1 0 0 0 1 0 1 1 0 1	2.184
SMS_TransactionID	1 0 0 1 1 1 1 1 1 0 0 0 0 0 1 0 0 0 1 0 1 1 1 0	2.258
Reserved	1 0 X 1 1 1 1 1 1 1 0 0 0 0 0 1 0 0 0 1 0 1 1 1 1	See Note b for value of X.
	• • •	
	1 0 X 1 1 1 1 1 1 1 0 0 0 0 0 1 0 0 0 1 1 1 0 1 1	
CaveKey	1 0 0 1 1 1 1 1 1 0 0 0 0 0 1 0 0 0 1 1 1 1 0 0	2.48
RingStartDelay	1 0 0 1 1 1 1 1 1 0 0 0 0 0 1 0 0 0 1 1 1 1 0 1	2.217
Reserved	1 0 X 1 1 1 1 1 1 1 0 0 0 0 0 1 0 0 0 1 1 1 1 1 0	See Note b for value of X.
Reserved	1 0 X 1 1 1 1 1 1 1 0 0 0 0 0 1 0 0 0 1 1 1 1 1 1	See Note b for value of X.

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Table 1 MAP Parameter Identifiers (Continued)

Parameter Identifier Name	Parameter Identifier Code	Reference
	H G F E D C B A	
Reserved	1 0 X 1 1 1 1 1 1 0 0 0 0 0 1 0 0 1 0 0 0 0 0 0	See Note b for value of X.
CDMA2000MobileSupported-Capabilities	1 0 0 1 1 1 1 1 1 0 0 0 0 0 1 0 0 1 0 0 0 0 0 1	2.51
Reserved	1 0 X 1 1 1 1 1 1 0 0 0 0 0 1 0 0 1 0 0 0 0 1 0	See Note b for value of X.
Reserved	1 0 X 1 1 1 1 1 1 0 0 0 0 0 1 0 0 1 0 0 0 0 1 1	See Note b for value of X.
Reserved	1 0 X 1 1 1 1 1 1 0 0 0 0 0 1 0 0 1 0 0 0 1 0 0	See Note b for value of X.
EnhancedPrivacyEncryptionReport	1 0 0 1 1 1 1 1 1 0 0 0 0 0 1 0 0 1 0 0 0 1 0 1	2.124
InterMessageTime	1 0 0 1 1 1 1 1 1 0 0 0 0 0 1 0 0 1 0 0 0 1 1 0	2.138
MSIDUsage	1 0 0 1 1 1 1 1 1 0 0 0 0 0 1 0 0 1 0 0 0 1 1 1	2.164
NewMINExtension	1 0 0 1 1 1 1 1 1 0 0 0 0 0 1 0 0 1 0 0 1 0 0 0	2.173
Reserved	1 0 X 1 1 1 1 1 1 0 0 0 0 0 1 0 0 1 0 0 1 0 0 1	See Note b for value of X.
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	1 0 X 1 1 1 1 1 1 0 0 0 0 0 1 0 0 1 0 1 1 0 1 1	
QoSPriority	1 0 0 1 1 1 1 1 1 0 0 0 0 0 1 0 0 1 0 1 1 1 0 0	2.196
Reserved	1 0 X 1 1 1 1 1 1 0 0 0 0 0 1 0 0 1 0 1 1 1 0 1	See Note b for value of X.

Table 1 MAP Parameter Identifiers (Continued)

Parameter Identifier Name	Parameter Identifier Code	Reference
	H G F E D C B A	
Reserved	1 0 X 1 1 1 1 1 1 0 0 0 0 0 1 0 0 1 0 1 1 1 1 0	See Note b for value of X.
CDMAMSMeasuredChannelIdentity	1 0 0 1 1 1 1 1 1 0 0 0 0 0 1 0 0 1 0 1 1 1 1 1	2.66
Reserved	1 0 X 1 1 1 1 1 1 0 0 0 0 0 1 0 0 1 1 0 0 0 0 0	See Note b for value of X.
Reserved	1 0 X 1 1 1 1 1 1 0 0 0 0 0 1 0 0 1 1 0 0 0 0 1	See Note b for value of X.
Reserved	1 0 X 1 1 1 1 1 1 0 0 0 0 0 1 0 0 1 1 0 0 0 1 0	See Note b for value of X.
Reserved	1 0 X 1 1 1 1 1 1 0 0 0 0 0 1 0 0 1 1 0 0 0 1 1	See Note b for value of X.
CDMA2000HandoffInvokeIOSData	1 0 0 1 1 1 1 1 1 0 0 0 0 0 1 0 0 1 1 0 0 1 0 0	2.49
CDMA2000HandoffResponseIOSData	1 0 0 1 1 1 1 1 1 0 0 0 0 0 1 0 0 1 1 0 0 1 0 1	2.50
Other values are reserved	1 0 X 1 1 1 1 1 1 0 0 0 0 0 1 0 0 1 1 0 0 1 1 0	See Note b for value of X.
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	1 0 X 1 1 1 1 1 1 0 0 0 0 0 1 1 0 0 0 0 0 0 1 1	
MINExtension	1 0 0 1 1 1 1 1 1 0 0 0 0 0 1 1 0 0 0 0 0 1 0 0	2.148
Reserved for Protocol Extension	1 0 X 1 1 1 1 1 1 0 0 0 0 0 1 1 0 0 0 0 0 1 0 1	See Note b for value of X.
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Table 1 MAP Parameter Identifiers (Continued)

Parameter Identifier Name	Parameter Identifier Code	Reference
	H G F E D C B A	
	1 0 X 1 1 1 1 1 1 1 0 0 0 0 0 1 1 0 0 0 1 0 0 1 0	
AuthenticationFailureEvent	1 0 0 1 1 1 1 1 1 0 0 0 0 0 1 1 0 0 0 1 0 0 1 1	2.14
Reserved for National Network use	1 0 0 1 1 1 1 1 1 0 0 0 0 0 1 1 0 0 0 1 0 1 0 0	See Note a.
	• • •	See Note b for value of X.
	1 0 X 1 1 1 1 1 1 1 1 1 1 1 1 1 0 0 1 1 1 1 1 1 1	
Reserved for Protocol Extension	1 0 X 1 1 1 1 1 1 1 1 1 1 1 1 1 1 0 0 0 0 0 0 0 0	See Note b for value of X.
	• • •	
	1 0 X 1 1 1 1 1 1 1 1 1 1 1 1 1 1 0 1 1 1 1 1 1 1	

Notes:

- a. “National Network use” parameters may be independently used by each nation. “National Network use” parameters may be used between nations by bilateral agreement.
- b. The Parameter Identifier Code first octet’s bit=“F” is variable (e.g., set=0 for Primitive elements and set=1 for Constructor elements), see ANSI *T1.114*.

2 PARAMETER DEFINITIONS

This Section provides the definitions of the parameters used in this specification.

2.1 AccessDeniedReason

The AccessDeniedReason (ACCDEN) parameter indicates the reason access cannot be given to the called MS.

Field	Value	Type	Reference	Notes					
Identifier	AccessDeniedReason IMPLICIT Unsigned Enumerated	M	see Part 550						
Length	1 octet	M	see Part 550						
Contents									
H	G	F	E	D	C	B	A	Octet	Notes
Access Denied Reason								1	

<i>Access Denied Reason (octet 1)</i>	
Value	Meaning
0	Not used.
1	Unassigned directory number (the MS is not served by the accessed system).
2	Inactive (the MS is not active in the accessed system and the HLR pointer to the MS' VLR should be maintained).
3	Busy (the MS is busy in the accessed system and cannot accept additional calls).
4	Termination Denied (terminations to this MS are not allowed).
5	No Page Response (the MS was paged by the accessed system but did not respond).
6	Unavailable (the MS is currently not available and the HLR pointer to the MS' VLR should be maintained and the MS shall remain in the same state).

<i>Access Denied Reason (octet 1)</i>	
Value	Meaning
7	Service Rejected by MS (the MS responded to the Serving System page request with Service Reject).
8	Service Rejected by the System (the HLR or the Serving system does not support the service).
9	Service Type Mismatch (the MS responded to the page in a border system with a service type that differs from the one used by the system that paged).
10	Service Denied (access to the MS is denied by service logic).
11 through 223	Reserved. Treat the same as value 4, <i>Termination Denied</i> .
224 through 255	Reserved for <i>MAP</i> protocol extension. If unknown, treat the same as value 4, <i>Termination Denied</i> .

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2.2 ActionCode

The ActionCode (ACTCODE) parameter specifies the nature of the action (e.g., disconnect the call) to be performed by the designated functional entity.

Field	Value	Type	Reference	Notes					
Identifier	ActionCode IMPLICIT OCTET STRING	M	see Part 550						
Length	variable octets	M	see Part 550						
Contents									
H	G	F	E	D	C	B	A	Octet	Notes
Action								1	
•••								n	a

Notes:

- a. Ignore extra octets, if received. Send only defined (or significant) octets.

<i>Action (octet 1)</i>	
Value	Meaning
0	Not used.
1	Continue processing.
2	Disconnect call.
3	Disconnect call leg.
4	Conference Calling Drop Last Party.
5	Bridge call leg(s) to conference call.
6	Drop call leg on busy or routing failure.
7	Disconnect all call legs.
8	Attach MSC to OTAF.
9	Initiate RegistrationNotification.
10	Generate Public Encryption values.
11	Generate A-key.
12	Perform SSD Update procedure.
13	Perform re-authentication procedure.
14	Release TRN.
15	Commit A-key.
16	Release Resources (e.g., A-key, Traffic Channel).
17	Record NEWMSID.

<i>Action (octet 1)</i>	
Value	Meaning
18	Allocate Resources (e.g., Multiple message traffic channel delivery).
19	Generate Authentication Signature.
20 through 95	Reserved. Treat the same as value 1, <i>Continue processing</i> .
96 through 127	Reserved for <i>MAP</i> protocol extension. If unknown, treat the same as value 1, <i>Continue processing</i> .
128 through 223	Reserved. Treat the same as value 2, <i>Disconnect call</i> .
224 through 255	Reserved for <i>MAP</i> protocol extension. If unknown, treat the same as value 2, <i>Disconnect call</i> .

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2.3 AKeyProtocolVersion

The AKeyProtocolVersion (AKEYPV) parameter is used to send A-Key Generation Procedure protocol version(s) supported by the MS or selected by the AC.

Field	Value	Type	Reference	Notes					
Identifier	AKeyProtocolVersion IMPLICIT OCTET STRING	M	see Part 550						
Length	variable octets	M	see Part 550						
Contents									
H	G	F	E	D	C	B	A	Octet	Notes
1 st A-Key Generation Procedure Protocol Version								1	
...								...	
n th A-Key Generation Procedure Protocol Version								n	

A-Key Generation Procedure Protocol Version values (octets 1-n)

Value	Meaning
0	Not used.
1	A-Key Generation not supported.
2	Diffie Hellman with 768-bit modulus, 160-bit primitive, and 160-bit exponents.
3	Diffie Hellman with 512-bit modulus, 160-bit primitive, and 160-bit exponents.
4	Diffie Hellman with 768-bit modulus, 32-bit primitive, and 160-bit exponents.
5 through 223	Reserved. Treat the same as value 1, <i>A-Key Generation not supported</i> .
224 through 255	Reserved for <i>MAP</i> protocol extension. If unknown, treat the same as value 1, <i>A-Key Generation not supported</i> .

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2.4 AlertCode

The AlertCode (ALRTCODE) parameter specifies the pitch and cadence of an alert signal to be applied to a designated MS.

Field	Value	Type	Reference	Notes					
Identifier	AlertCode IMPLICIT OCTET STRING	M	see Part 550						
Length	2 or more octets	M	see Part 550						
Contents									
H	G	F	E	D	C	B	A	Octet	Notes
Pitch		Cadence						1	
Reserved					Alert Action			2	a
• • •								n	b

Notes:

- a. Reserved bits shall be ignored on receipt and set to zero on sending.
- b. Ignore extra octets, if received. Send only defined (or significant) octets.

<i>Cadence (octet 1, bits A-F)</i>	
Value	Meaning
0	NoTone. Used to stop alerting in progress.
1	Long (2.0 s on, 4.0 s off, repeating). Used for normal alerting.
2	ShortShort (0.8 s on, 0.4 s off, 0.8 s on, 4.0 s off, repeating). Used for distinctive alerting.
3	ShortShortLong (0.4 s on, 0.2 s off, 0.4 s on, 0.2 s off, 0.8 s on, 4.0 s off, repeating). Used for distinctive alerting 2, automatic callback, and automatic recall.
4	ShortShort2 (1.0 s on, 1.0 s off, 1.0 s on, 3.0 s off, repeating). Used for coded ringing.
5	ShortLongShort (0.5 s on, 0.5 s off, 1.0 s on, 0.5 s off, 0.5 s on, 3.0 s off, repeating). Used for distinctive alerting 3.
6	ShortShortShortShort (0.5 s on, 0.5 s off, 0.5 s on, 0.5 s off, 0.5 s on, 0.5 s off, 0.5 s on, 2.5 s off, repeating). Used for executive override and preemption.
7	PBXLong (1.0 s on, 2.0 s off, repeating). Used for normal PBX alerting.

<i>Cadence (octet 1, bits A-F)</i>	
Value	Meaning
8	PBXShortShort (0.4 s on, 0.2 s off, 0.4 s on, 2.0 s off, repeating). Used for PBX distinctive alerting 1.
9	PBXShortShortLong (0.4 s on, 0.2 s off, 0.4 s on, 0.2 s off, 0.8 s on, 1.0 s off, repeating). Used for PBX distinctive alerting 2 and PBX automatic callback.
10	PBXShortLongShort (0.4 s on, 0.2 s off, 0.8 s on, 0.2 s off, 0.4 s on, 1.0 s off, repeating). Used for PBX distinctive alerting 3.
11	PBXShortShortShortShort (0.4 s on, 0.2 s off, 0.4 s on, 0.2 s off, 0.4 s on, 0.2 s off, 0.4 s on, 0.8 s off, repeating). Used for PBX executive override and PBX preemption.
12	PipPipPipPip (0.1 s on, 0.1 s off, 0.1 s on, 0.1 s off, 0.1 s on, 0.1 s off, 0.1 s on). Used for alert pip tone.
13 through 63	Reserved. Treat the same as value 0, <i>NoTone</i> .
<i>Pitch (octet 1, bits G-H)</i>	
Value	Meaning
0	Medium pitch - for normal alerting.
1	High pitch.
2	Low pitch.
3	Reserved.
<i>Alert Action (octet 2, bits A-C)</i>	
Value	Meaning
0	Alert without waiting to report.
1	Apply a reminder alert once (ignore the pitch and cadence) and wait for success or failure.
2 through 7	Other values reserved. Treat the same as value 0, <i>Alert without waiting to report</i> .

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2.5 AlertResult

The AlertResult (ALRTRES) parameter indicates the result of the alerting action attempted by the designated functional entity. It is returned when a result is requested in the AlertCode parameter (as indicated in the Alert Action field of the AlertCode parameter).

Field	Value	Type	Reference	Notes					
Identifier	AlertResult IMPLICIT OCTET STRING	M	see Part 550						
Length	variable octets	M	see Part 550						
Contents									
H	G	F	E	D	C	B	A	Octet	Notes
Result								1	
• • •								n	a

Notes:

- a. Ignore extra octets, if received. Send only defined (or significant) octets.

<i>Result (octet 1)</i>	
Value	Meaning
0	Not specified.
1	Success.
2	Failure.
3	Denied. The requested action was not authorized and was not attempted.
4	Not Attempted. The requested action could not be attempted at this time due to congestion or other temporary failure.
5	No Page Response. The alerted MS did not respond to paging.
6	Busy. The requested action was not attempted due to MS busy.
7 through 255	Reserved. Treat the same as value 0, <i>Not specified</i> .

2.6 AllOrNone

The AllOrNone (AON) parameter indicates that all changes must succeed or none should be applied. If set, a single result value is expected. If not set, a result value per data update transaction is expected.

Field	Value	Type	Reference	Notes					
Identifier	AllOrNone IMPLICIT Unsigned Enumerated	M	see Part 550						
Length	1 octet	M	see Part 550						
Contents									
H	G	F	E	D	C	B	A	Octet	Notes
All Or None Indicator								1	

<i>All Or None Indicator (octet 1)</i>	
Value	Meaning
0	Not used.
1	All changes must succeed or none should be applied.
2	Treat each change independently.
3 through 223	Reserved. Treat the same as value 1, <i>All changes must succeed or none should be applied.</i>
224 through 255	Reserved for MAP protocol extension. If unknown, treat the same as value 1, <i>All changes must succeed or none should be applied.</i>

2.7 AnalogRedirectInfo

The AnalogRedirectInfo (ANALOGRI) indicates whether the MS is to ignore the CDMA Capability Message on the analog system to which it is being redirected, and the order in which the MS is to attempt to obtain service on an analog system.

Field	Value	Type	Reference	Notes					
Identifier	AnalogRedirectInfo IMPLICIT OCTET STRING	M	see Part 550						
Length	variable octets	M	see Part 550						
Contents									
H	G	F	E	D	C	B	A	Octet	Notes
Reserved		IC	Sys Ordering					1	a, b
•••							n	c	

Notes:

- See CDMA SYS_ORDERING for the definition of the Sys Ordering field.
- Reserved bits shall be ignored on receipt and set to zero on sending.
- Ignore extra octets, if received. Send only defined (or significant) octets.

<i>Ignore CDMA (IC) (octet 1, bit F)</i>	
Value	Meaning
0	The MS may discontinue service on the system to which it is being redirected if receives a CDMA Capability Message with CDMA_AVAIL equal to '1', and the preferred mode of the MS is CDMA.
1	Ignore the CDMA Capability Message on the analog system to which it is being redirected.

2.8 AnalogRedirectRecord

The AnalogRedirectRecord (ANALOGRR) indicates whether the MS is to ignore the CDMA Capability Message on the analog system to which it is being redirected, and the order in which the MS is to attempt to obtain service on an analog system.

Field	Value	Type	Reference	Notes
Identifier	AnalogRedirectRecord IMPLICIT SEQUENCE	M	see Part 550	
Length	variable octets	M	see Part 550	
Contents				
	AnalogRedirectInfo	M	2.7	
	MSCID	M	2.161	
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Notes:

- a. Ignore extra unexpected parameters, if received. Send only defined (or significant) parameters.

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2.9 AnnouncementCode

The AnnouncementCode (ANNCODE) parameter specifies the announcement or tone to be given to a designated party.

Field	Value	Type	Reference	Notes					
Identifier	AnnouncementCode IMPLICIT OCTET STRING	M	see Part 550						
Length	variable octets	M	see Part 550	a					
Contents									
H	G	F	E	D	C	B	A	Octet	Notes
Tone								1	b, c
Reserved				Class				2	d
Standard Announcement								3	
Custom Announcement								4	e
• • •								n	f

Notes:

- a. The length is variable with more specific requests in the later octets. The minimum length is one octet.
- b. The tone is applied if an announcement is not specified or if the specified announcement is not available.
- c. This is based on the *ANSI T1.607 (Q.931)* Signal parameter and includes “network specific values” [*N-ISDN*]. It should not be used for alerting purposes; use the AlertCode instead.
- d. Reserved bits shall be ignored on receipt and set to zero on sending.
- e. The assignment of this octet is left to bilateral agreement. When a Custom Announcement is specified, it takes precedence over either the Standard Announcement or Tone.
- f. Ignore extra octets, if received. Send only defined (or significant) octets.

<i>Tone (octet 1)</i>	
Value	Meaning
0	DialTone. A continuous 350 Hz tone added to a 440 Hz tone.
1	RingBack or Audible Alerting. A 440 Hz tone added to a 480 Hz tone repeated in a 2s on 4s off pattern.
2	InterceptTone or MobileReorder. Alternating 440 Hz and 620 Hz tones, each on for 250 ms.
3	CongestionTone or ReorderTone. A 480 Hz tone added to a 620 Hz tone repeated in a 250 ms on, 250 ms off cycle.
4	BusyTone. A 480 Hz tone added to a 620 Hz tone repeated in a 500 ms on, 500 ms off cycle.
5	ConfirmationTone. A 350 Hz tone added to a 440 Hz tone repeated 3 times in a 100 ms on, 100 ms off cycle.
6	AnswerTone. Answer tone is not presently used in many networks. Answer tone is not presently used in North American networks.
7	CallWaitingTone. A single 300 ms burst of 440 Hz tone.
8	OffHookTone. Off-hook warning tone on.
9 through 16	Reserved. Treat the same as value 63, <i>TonesOff</i> .
17	RecallDialTone. Three bursts (0.1 s on, 0.1s off) then steady on of dial tone.
18	BargelnTone. No information available. <i>[N-ISDN]</i>
19 through 62	Reserved. Treat the same as value 63, <i>TonesOff</i> .
63	TonesOff. All tones off.
64 though 191	Reserved. Treat the same as value 63, <i>TonesOff</i> .
192	PipTone. Four bursts of (0.1 s on, 0.1 s off) of 480 Hz tone, then off. <i>[TIA/EIA-664]</i>
193	AbbreviatedIntercept. 4 seconds of InterceptTone. <i>[CDMA]</i>

<i>Tone (octet 1)</i>	
Value	Meaning
194	AbbreviatedCongestion. 4 seconds of CongestionTone. [CDMA]
195	WarningTone. A single 0.1 s burst of 480 Hz tone. [TIA/EIA-664]
196	DenialToneBurst. A single 2.0 s burst of 480 Hz tone added to a 620 Hz tone. [TIA/EIA-664]
197	DialToneBurst. A single 2.0 s burst of DialTone. [TIA/EIA-664]
198 through 249	Reserved. Treat the same as value 63, <i>TonesOff</i> .
250	IncomingAdditionalCallTone. No information available. [N-ISDN]
251	PriorityAdditionalCallTone. No information available. [N-ISDN]
252 through 255	Reserved. Treat the same as value 63, <i>TonesOff</i> .
<i>Class (octet 2, bits A-D)</i>	
Value	Meaning
0	Concurrent. Play announcements concurrently with any call routing.
1	Sequential. Play all announcements before any call termination or routing.
2 through 7	Reserved. Treat the same as value 0, <i>Concurrent</i> .
8 through 15	Reserved. Treat the same as value 1, <i>Sequential</i> .

<i>Standard Announcement (octet 3)</i>	
Value	Meaning
0	None. No announcement is requested, just play the tone.
1	Unauthorized user. (e.g., "Your cellular telephone's serial number has been restricted from this service area. If you feel this is an error, please contact your home cellular provider.")
2	InvalidESN. (e.g., "You cannot make a call because of conflicting serial number data. Please call your customer service representative by dialing (*) 611.")
3	UnauthorizedMobile. An MS attempts to originate a call for an unauthorized subscriber. (e.g., "There is no service agreement between the serving service provider and the home service provider.")
4	SuspendedOrigination. (e.g., "Your service has been temporarily disconnected. For more information, call your customer service representative by dialing (*) 611.")
5	OriginationDenied. The subscriber attempted to originate a call that is denied by its service profile. (e.g., "You cannot make a call from this cellular telephone. You can only receive calls with your type of service.")
6	ServiceAreaDenial. The subscriber attempted a call that is not permitted in the current service area. (e.g., "You cannot make that call from this service area. For more information, call your customer service representative by dialing (*) 611.")
7 through 15	Reserved. Treat the same as value 0, <i>None</i> .
16	PartialDial. The subscriber dialed insufficient digits to complete routing. The Reorder SIT may apply. Alternatively reorder tone may apply. (e.g., "Your call cannot be completed as dialed. Please try your call again.") [NoLECN]
17	Require1Plus. The subscriber dialed a toll network without dialing a '1' digit prefix. (e.g., "It is necessary to first dial a one when calling this number. Please try your call again.")
18	Require1PlusNPA. A roaming subscriber attempted to dial a seven-digit call that is likely to be a toll call, but the call is not permitted. (e.g., "It is necessary to dial a one plus the area code and phone number of the party you are calling when calling from this service area. Please try your call again.") [TIA/EIA-660]

<i>Standard Announcement (octet 3)</i>	
Value	Meaning
19	Require0Plus. (e.g., "It is not possible to provide toll service at this time. You may place credit card, collect or third party long distance calls by dialing "0", area code and number. Please try your call again.")
20	Require0PlusNPA. (e.g., "It is necessary to first dial a zero plus the area code and phone number of the party you are calling to complete a long distance call from this service area. Please try your call again.")
21	Deny1Plus. The subscriber dialed a local number prefixed with a '1' digit. (e.g., "It is not necessary to dial a one when calling this number. Please try your call again.") [TIA/EIA-660]
22	Unsupported10plus. (e.g., "Long distance carrier access codes are not supported on this system.")
23	Deny10plus. (e.g., "You are not authorized to dial long distance access codes.") [TIA/EIA-660]
24	Unsupported10XXX. (e.g., "The long distance access code you have dialed is not accessible on this system. Please call your long distance provider's customer service number for assistance.") [TIA/EIA-660]
25	Deny10XXX. (e.g., "The long distance access code you have dialed is not authorized on this system.") [TIA/EIA-660]
26	Deny10XXXLocally. (e.g., "A carrier access code is not required for the number you have dialed. Please try your call again without the carrier access code.")
27	Require10Plus. (e.g., "A carrier access code is required for the number you have dialed. Please dial the call again with the carrier access code.") [NoLECN]
28	RequireNPA. (e.g., "While roaming on this system, you are required to include the area code of the number you are calling to complete local calls.")
29	DenyTollOrigination. The subscriber attempted a toll call that is not permitted by its service profile. (e.g., "At the present time we are not able to offer toll service to roamers.") [TIA-41]

<i>Standard Announcement (octet 3)</i>	
Value	Meaning
30	DenyInternationalOrigination. The subscriber attempted an international call that is not permitted by its service profile. (e.g., "At the present time we are not able to offer international service to roamers. You may place credit card calls by dialing "0" and the appropriate access code and phone number.") [TIA-41]
31	Deny0Minus. The subscriber attempted to dial a 0- call that is not permitted by its service profile. (e.g., "At the present time we are not able to offer operator services.")
32 through 47	Reserved. Treat the same as value 0, <i>None</i> .
48	DenyNumber. (e.g., "Your service does not allow calls to the number you have dialed. For more information please call your customer service representative by dialing (*) 611.") [TIA-41]
49	AlternateOperatorServices. (e.g., "Your call is being processed by a cellular operator service. Use of a credit or calling card is required.")
50 through 63	Reserved. Treat the same as value 0, <i>None</i> .
64	NoCircuit or AllCircuitsBusy or FacilityProblem. There are no available outgoing trunks (or other facilities) for the terminating route. The No Circuit SIT may apply. Alternatively reorder tone may apply. (e.g., All circuits are busy now. Please try again later.)
65	Overload. There are no available outgoing trunks (or other facilities) for the terminating route due to heavy calling. (e.g., "All circuits are busy now due to heavy calling. Please try again later. If your call is urgent, please try again now.") [T1.209]
66	InternalOfficeFailure. The Reorder SIT may apply. Alternatively reorder tone may apply. (e.g., "Your call did not go through. Please try again later.") [NoLECN]
67	NoWinkReceived. The Reorder SIT may apply. Alternatively reorder tone may apply. (e.g., "Your call did not go through. Please try again later.") [NoLECN]
68	InterofficeLinkFailure. The Reorder SIT may apply. Alternatively reorder tone may apply. (e.g., "Your call did not go through. Please try again later.") [NoLECN]

<i>Standard Announcement (octet 3)</i>	
Value	Meaning
69	Vacant. The subscriber dialed an unassigned area code, office code, X11 service code, out-of-area call, or country code. The Vacant Code SIT may apply. (e.g., "Your call cannot be completed as dialed. Please check the number and dial again.") [NoLECN]
70	InvalidPrefix or InvalidAccessCode. The Ineffective Order SIT may apply. (e.g., "Your call cannot be completed as dialed. Please check the number and dial again.") [NoLECN]
71	OtherDialingIrregularity. The Ineffective Order SIT may apply. (e.g., "Your call cannot be completed as dialed. Please check the number and dial again.") [NoLECN]
72 through 79	Reserved. Treat the same as value 0, <i>None</i> .
80	VacantNumber or DisconnectedNumber. The Intercept SIT may apply. (e.g., "You have reached a number that has been disconnected or is no longer in service. If you feel you have reached this recording in error, please check the number and try again.") [NoLECN]
81	DenyTermination. The Intercept SIT may apply. Calls to the dialed number are denied by its service profile. (e.g., "The number you have dialed does not accept incoming calls.") [TIA-41]
82	SuspendedTermination. The called party has been temporarily disconnected. The Intercept SIT may apply. (e.g., "The number you have called has temporarily been disconnected.") [NoLECN]
83	ChangedNumber. The Intercept SIT may apply. (e.g., "The number you have reached (NPA) NXX-XXXX has been changed. The new number is (NPA) NXX-XXXX. Please make note of it.") [NoLECN]
84	InaccessibleSubscriber. The Ineffective Order SIT may apply. (e.g., "The customer you have called is not accessible. Please try your call again later.") [TIA-41]
85	DenyIncomingToll. A call to an MS, involving subscriber paid toll (e.g., Call Delivery, Call Forwarding, etc.), is not permitted by its service profile.) The Ineffective Order SIT may apply. (e.g., "The customer you have called is not accessible. Please try your call again later.")

<i>Standard Announcement (octet 3)</i>	
Value	Meaning
86	RoamerAccessScreening. The subscriber called via a roamer port is either outside the roamer port calling area or is forwarded to a number outside the roamer port calling area. The Ineffective Order SIT may apply. (e.g., "You have reached a mobile subscriber that cannot be reached through this roamer port. Please try to dial the subscriber number directly.")
87	RefuseCall. The calling party has been refused by has permanent or temporary screening of incoming calls. The Intercept SIT may apply. (e.g., "The number you have dialed does not accept incoming calls.")
88	RedirectCall. (e.g., "Your call is being forwarded. Please wait.") [TIA-41]
89	NoPageResponse. (e.g., "Your call cannot be completed at this time. Please try your call again later.") [TIA-41]
90	NoAnswer. The called subscriber has not answered and the alerting has been discontinued. (e.g., "The customer you have called does not answer. Please try your call again later.")
91 through 95	Reserved. Treat the same as value 0, <i>None</i> .
96	RoamerIntercept. A subscriber has roamed into a service area requiring activation. (e.g., "If you are interested in using cellular service, call #.")
97	GeneralInformation. (e.g., "If you need assistance using your service features please call your service representative by dialing (*) 611.")
98 through 111	Reserved. Treat the same as value 0, <i>None</i> .
112	UnrecognizedFeatureCode. The subscriber dialed an unrecognized feature code. (e.g., "The feature code you have dialed is not valid. Please check the code and enter it again.") [TIA/EIA-664]
113	UnauthorizedFeatureCode. The subscriber dialed a recognized, but unauthorized, feature code. (e.g., "Your service does not include use of this feature. For more information please call your customer service representative by dialing (*) 611.") [TIA/EIA-664]
114	RestrictedFeatureCode. The subscriber dialed a feature code which is not available in his or her current service area. (e.g., "The feature code you have dialed is not available in your service area.")

<i>Standard Announcement (octet 3)</i>	
Value	Meaning
115	InvalidModifierDigits. The subscriber attempted to activate a feature with invalid modifier digits. (e.g., "The modifier digits you have dialed is not valid. Please check the number and try again.")
116	SuccessfulFeatureRegistration. (e.g., "The feature you have selected has been registered.") [TIA/EIA-664]
117	SuccessfulFeatureDeRegistration. (e.g., "The feature you have selected has been de-registered.") [TIA/EIA-664]
118	SuccessfulFeatureActivation. (e.g., "The feature you have selected has been activated.") [TIA/EIA-664]
119	SuccessfulFeatureDeActivation. (e.g., "The feature you have selected has been de-activated.") [TIA/EIA-664]
120	InvalidForwardToNumber. (e.g., "The telephone number you have entered is not valid. Please try again.")
121	CourtesyCallWarning. The subscriber has dialed a feature code involving a courtesy call. (e.g., "Please wait while your call is forwarded.")
122 through 127	Reserved. Treat the same as value 0, <i>None</i> .
128	EnterPINSendPrompt. (e.g., "Please enter your PIN number and depress the SEND key.") [TIA/EIA-664]
129	EnterPINPrompt. (e.g., "Please enter your PIN.") [TIA/EIA-664]
130	ReEnterPINSendPrompt. (e.g., "Please re-enter your PIN number and depress the SEND key.") [TIA/EIA-664]
131	ReEnterPINPrompt. (e.g., "Please re-enter your PIN.") [TIA/EIA-664]
132	EnterOldPINSendPrompt. (e.g., "Please enter your old PIN number and depress the SEND key.") [TIA/EIA-664]
133	EnterOldPINPrompt. (e.g., "Please enter your old PIN.") [TIA/EIA-664]
134	EnterNewPINSendPrompt. (e.g., "Please enter your new PIN number and depress the SEND key.") [TIA/EIA-664]

<i>Standard Announcement (octet 3)</i>	
Value	Meaning
135	EnterNewPINPrompt. (e.g., "Please enter your new PIN.") [TIA/EIA-664]
136	ReEnterNewPINSendPrompt. (e.g., "Please re-enter your new PIN number and depress the SEND key.") [TIA/EIA-664]
137	ReEnterNewPINPrompt. (e.g., "Please re-enter your new PIN.") [TIA/EIA-664]
138	EnterPasswordPrompt. (e.g., "Please enter your secret password number to access the called party.") [TIA/EIA-664]
139	EnterDirectoryNumberPrompt. (e.g., "Please enter your directory number.") [TIA/EIA-664]
140	ReEnterDirectoryNumberPrompt. (e.g., "Please re-enter your directory number.") [TIA/EIA-664]
141	EnterFeatureCodePrompt. (e.g., "Please enter a feature code.") [TIA/EIA-664]
142	EnterCreditCardNumberPrompt. (e.g., "Please enter your credit card number.") [TIA/EIA-664]
143	EnterDestinationNumberPrompt. (e.g., "Please enter the destination number.") [TIA/EIA-664]
144 through 255	Reserved. Treat the same as value 0, <i>None</i> .

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2.10 AnnouncementList

The AnnouncementList (ANNLIST) parameter specifies a list of announcements to be given to a designated party. Announcements are played in order and in the preferred language of the affected party if possible.

Field	Value	Type	Reference	Notes
Identifier	AnnouncementList IMPLICIT SEQUENCE OF	M	see Part 550	
Length	variable octets	M	see Part 550	
Contents				
	AnnouncementCode	M	2.9	
	AnnouncementCode	O	2.9	a, b
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Notes:

- a. Optionally include additional AnnouncementCode parameters. The maximum number of AnnouncementCode parameters is dependent upon the two systems involved in the transaction and the intervening network.
- b. Ignore Class after playing the first occurrence of an AnnouncementCode with a *concurrent* class.

2.11 AuthenticationAlgorithmVersion

The AuthenticationAlgorithmVersion (AAV) parameter may be sent with messages that also contain the SharedSecretData parameter.

Field	Value	Type	Reference	Notes					
Identifier	AuthenticationAlgorithmVersion IMPLICIT OCTET STRING	M	see Part 550						
Length	variable octets	M	see Part 550						
Contents									
H	G	F	E	D	C	B	A	Octet	Notes
Authentication Algorithm Version								1	
• • •								n	a

Notes:

- a. Ignore extra octets, if received. Send only defined (or significant) octets.

<i>Authentication Algorithm Version (octet 1)</i>	
Value	Meaning
0 through 255	Value as used in the CAVE algorithm.
199	The default value if this parameter is not received from the AC.

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2.12 AuthenticationCapability

The AuthenticationCapability (AUTHCAP) parameter indicates whether an MS shall or shall not be authenticated.

Field	Value	Type	Reference	Notes					
Identifier	AuthenticationCapability IMPLICIT OCTET STRING	M	see Part 550						
Length	variable octets	M	see Part 550						
Contents									
H	G	F	E	D	C	B	A	Octet	Notes
Authentication Capability								1	
• • •								n	a

Notes:

- a. Ignore extra octets, if received. Send only defined (or significant) octets.

<i>Authentication Capability (octet 1)</i>	
Value	Meaning
0	Not used.
1	No authentication required.
2	Authentication required.
3 through 95	Reserved. Treat the same as value 1, <i>No authentication required.</i>
96 through 127	Reserved for <i>MAP</i> protocol extension. If unknown, treat the same as value 1, <i>No authentication required.</i>
128 through 223	Reserved. Treat the same as value 2, <i>Authentication required.</i>
224 through 255	Reserved for <i>MAP</i> protocol extension. If unknown, treat the same as value 2, <i>Authentication required.</i>

2.13 AuthenticationData

The AuthenticationData (AUTHDATA) parameter contains the 24-bit authentication data used as input to CAVE for call origination. AUTHDATA is derived from the information sent by the MS (e.g., last six digits or characters).

Field	Value	Type	Reference	Notes					
Identifier	AuthenticationData IMPLICIT OCTET STRING	M	see Part 550						
Length	3 octets	M	see Part 550						
Contents									
H	G	F	E	D	C	B	A	Octet	Notes
MSB								1	a
AUTHDATA								2	
LSB								3	

Notes:

- a. See appropriate air interface standards for encoding.

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2.14 AuthenticationFailureEvent

The AuthenticationFailureEvent (AUTHFAIL) parameter is used by the AC to inform the VLR of a failed authentication event without denying access for the call.

Field	Value	Type	Reference	Notes					
Identifier	AuthenticationFailureEvent IMPLICIT OCTET STRING	M	see Part 550						
Length	Variable Octets	M	see Part 550						
Contents									
H	G	F	E	D	C	B	A	octet	Notes
Authentication Failure Event								1	
• • •								<i>n</i>	<i>b</i>

<i>Authentication Failure Event (octet 1)</i>	
Decimal Value	Meaning
0	Not used.
1	Unspecified.
2	SSD Update failure.
3	COUNT Update failure.
4	Unique Challenge failure
5	AUTHR mismatch.
6	COUNT mismatch.
7	Process collision.
8	Missing authentication parameters.
9	TerminalType mismatch.
10	MIN, IMSI or ESN authorization failure.
11 through 223	Reserved. Treat the same as value 1, <i>Unspecified</i> .
224 through 255	Reserved for protocol extension. If unknown, treat the same as value 1, <i>Unspecified</i> .

2.15 AuthenticationResponse

The AuthenticationResponse (AUTHR) parameter contains the 18-bit authentication response generated by an MS when accessing the system (e.g., call origination, page response or autonomous registration). It is computed by CAVE using the SSD of the MS and a Random Number (RAND) chosen by the MSC-V.

Field	Value	Type	Reference	Notes					
Identifier	AuthenticationResponse IMPLICIT OCTET STRING	M	see Part 550						
Length	3 octets	M	see Part 550						
Contents									
H	G	F	E	D	C	B	A	Octet	Notes
Reserved						MSB		1	a
Authentication Response						LSB		2	
								3	

Notes:

- a. Reserved bits shall be ignored on receipt and set to zero on sending.

2.16 AuthenticationResponseBaseStation

The AuthenticationResponseBaseStations (AUTHBS) parameter contains the 18-bit response to a Base Station Challenge Order, computed by CAVE using the new SSD of the MS and a Random Number (RANDBS) chosen by the MS.

Field	Value	Type	Reference	Notes					
Identifier	AuthenticationResponseBaseStation IMPLICIT OCTET STRING	M	see Part 550						
Length	3 octets	M	see Part 550						
Contents									
H	G	F	E	D	C	B	A	Octet	Notes
Reserved						MSB		1	a
Authentication Response Base Station								2	
								3	
								LSB	

Notes:

- a. Reserved bits shall be ignored on receipt and set to zero on sending.

2.17 AuthenticationResponseReauthentication

The AuthenticationResponseReauthentication (AUTHRA) parameter contains the 18-bit authentication response generated by an MS for reauthentication. It is computed by the Auth_Signature procedure using the SSD of the MS and a RandomVariableReauthentication (RANDRA) chosen by the AC.

Field	Value	Type	Reference	Notes						
Identifier	AuthenticationResponse-Reauthentication IMPLICIT OCTET STRING	M	see Part 550							
Length	3 octets	M	see Part 550							
Contents										
H	G	F	E	D	C	B	A	Octet	Notes	
Reserved						MSB	A	1	a	
AuthenticationResponse-Reauthentication								LSB	2	
									3	

Notes:

- a. Reserved bits shall be ignored on receipt and set to zero on sending.

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2.18 AuthenticationResponseUniqueChallenge

The AuthenticationResponseUniqueChallenge (AUTHU) parameter contains the MS's 18-bit response to a Unique Challenge Order, computed by CAVE using the SSD of the MS and a Random Number (RANDU).

Field	Value	Type	Reference	Notes					
Identifier	AuthenticationResponseU- niqueChallenge IMPLICIT OCTET STRING	M	see Part 550						
Length	3 octets	M	see Part 550						
Contents									
H	G	F	E	D	C	B	A	Octet	Notes
Reserved						MSB		1	a
Authentication Response Unique Challenge								2	
								3	
								LSB	

Notes:

- a. Reserved bits shall be ignored on receipt and set to zero on sending.

2.19 AuthorizationDenied

The AuthorizationDenied (AUTHDEN) parameter is used to indicate that the MS is not authorized.

Field	Value	Type	Reference	Notes					
Identifier	AuthorizationDenied IMPLICIT Unsigned Enumerated	M	see Part 550						
Length	1 octet	M	see Part 550						
Contents									
H	G	F	E	D	C	B	A	Octet	Notes
AuthorizationDenied Reason								1	

<i>AuthorizationDenied Reason (octet 1)</i>	
Value	Meaning
0	Not used.
1	Delinquent account.
2	Invalid serial number.
3	Stolen unit.
4	Duplicate unit.
5	Unassigned directory number.
6	Unspecified.
7	Multiple access.
8	Not authorized for the MSC.
9	Missing authentication parameters.
10	TerminalType mismatch.
11	Requested Service Code Not Supported.
12 through 223	Reserved. Treat the same as value 6, <i>Unspecified</i> .
224 through 255	Reserved for <i>MAP</i> protocol extension. If unknown, treat the same as value 6, <i>Unspecified</i> .

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2.20 AuthorizationPeriod

The AuthorizationPeriod (AUTHPER) parameter is used to confirm authorization and specify the authorization period. After the authorization period has elapsed, the visited system must obtain authorization from the home system before providing service to the MS, except for Call Delivery which carries an implicit single call authorization.

Field	Value	Type	Reference	Notes					
Identifier	AuthorizationPeriod IMPLICIT OCTET STRING	M	see Part 550						
Length	2 octets	M	see Part 550						
Contents									
H	G	F	E	D	C	B	A	Octet	Notes
Period								1	
Value								2	

<i>Period (octet 1)</i>	
Value	Meaning
0	Not used.
1	Per Call.
2	Hours.
3	Days.
4	Weeks.
5	Per Agreement.
6	Indefinite (i.e., authorized until canceled or deregistered).
7	Number of calls.
8 through 223	Reserved. Treat the same as value 1, <i>Per Call</i> .
224 through 255	Reserved for <i>MAP</i> protocol extension. If unknown, treat the same as value 1, <i>Per Call</i> .
<i>Value (octet 2)</i>	
Value	Meaning
0 through 255	Number of hours, days, weeks or number of calls (as per Period). If Period indicates anything else, the Value is set to zero on sending and ignored on receipt.

2.21 AvailabilityType

The AvailabilityType (AVTYP) parameter indicates that an MS is unavailable for the purposes of normal Call Delivery. The MS is operating in a mode where it may be intentionally inaccessible for periods of time (e.g., slotted mode, paging frame class, or sleep mode).

Field	Value	Type	Reference	Notes					
Identifier	AvailabilityType IMPLICIT OCTET STRING	M	see Part 550						
Length	variable octets	M	see Part 550						
Contents									
H	G	F	E	D	C	B	A	Octet	Notes
Availability Type								1	
•••								n	a

Notes:

- a. Ignore extra octets, if received. Send only defined (or significant) octets.

Availability Type (octet 1)	
Value	Meaning
0	Not used.
1	Unspecified MS inactivity type.
2 through 223	Reserved. Treat the same as value 1, <i>Unspecified</i> .
224 through 255	Reserved for <i>MAP</i> protocol extension. If unknown, treat the same as value 1, <i>Unspecified</i> .

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2.22 BaseStationManufacturerCode

The BaseStationManufacturerCode (BSMC) parameter specifies the manufacturer of the base station that is currently serving the MS (see *TDMA* for enumeration of values).

Field	Value	Type	Reference	Notes					
Identifier	BaseStationManufacturerCode IMPLICIT OCTET STRING	M	see Part 550						
Length	1 octet	M	see Part 550						
Contents									
H	G	F	E	D	C	B	A	Octet	Notes
Base Station Manufacturer Code								1	

2.23 BaseStationPartialKey

The BaseStationPartialKey (BSKEY) parameter is used to send the Base Station partial key value for the A-Key Generation procedure.

Field	Value	Type	Reference	Notes					
Identifier	BaseStationPartialKey IMPLICIT OCTET STRING	M	see Part 550						
Length	variable octets	M	see Part 550						
Contents									
H	G	F	E	D	C	B	A	Octet	Notes
MSB								1	a
BS partial key value								...	
LSB								n	

Notes:

- a. The length of this field corresponds to the AKeyProtocolVersion value used.

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2.24 BillingID

The BillingID (BILLID) parameter is initially assigned at the Anchor MSC for originating and terminating calls involving radio contact. The BillingID is transferred, as required, to each system involved in an intersystem operation. This ID is primarily intended for billing record correlation, but may be used for other purposes such as identifying the Anchor MSC, etc.

A BillingID is also assigned at the Originating MSC for incoming calls.

Field	Value	Type	Reference	Notes					
Identifier	BillingID IMPLICIT OCTET STRING	M	see Part 550						
Length	7 octets	M	see Part 550						
Contents									
H	G	F	E	D	C	B	A	Octet	Notes
MSB								1	a
Anchor or Originating MarketID								2	
LSB								3	a
Anchor or Originating Switch Number								4	b
MSB								5	
ID Number								6	
LSB								7	
Segment Counter								7	

Notes:

- a. Refer to the MSCID parameter (see 2.161) for the definition of these fields.
- b. ID Number is a unique number assigned by the functional entity identified in MarketID and Switch Number fields (see *DMH*).

<i>Segment Counter (octet 7)</i>	
Value	Meaning
0 through 127	Number of call segments (see <i>DMH</i>).
128 through 254	Bit H is intended for recording use following call disconnect and will always be 0 in <i>MAP</i> messages, except value 255, <i>Unspecified</i> .
255	Unspecified. The number of segments is unknown.

2.25 BorderCellAccess

The BorderCellAccess (BORDACC) parameter is used to indicate a system access in a border cell.

Field	Value	Type	Reference	Notes					
Identifier	BorderCellAccess IMPLICIT Unsigned Enumerated	M	see Part 550						
Length	1 octet	M	see Part 550						
Contents									
H	G	F	E	D	C	B	A	Octet	Notes
BorderCellAccess Indication								1	

<i>BorderCellAccess Indication (octet 1)</i>	
Value	Meaning
0	Not used.
1	Border Cell Access.
2 through 223	Reserved. Treat the same as value 1, <i>Border Cell Access</i> .
224 through 255	Reserved for <i>MAP</i> protocol extension. If unknown, treat the same as value 1, <i>Border Cell Access</i> .

2.26 BroadcastCategory

The BroadcastCategory (BR_CAT) parameter provides an indication of the specific subject matter of the broadcast teleservice payload (e.g., emergency, system operator announcement, advertisement, sports).

Field	Value	Type	Reference	Notes					
Identifier	BroadcastCategory IMPLICIT OCTET STRING	M	see Part 550						
Length	variable octets	M	see Part 550						
Contents									
H	G	F	E	D	C	B	A	Octet	Notes
MSB							LSB	1	a
Broadcast Category								2	
...								n	b

Notes:

- a. See air interface standards (e.g., *CDMA*, *TDMA*) for the definition of this field.
- b. Ignore extra octets, if received. Send only defined (or significant) octets.

2.27 BroadcastCategorySpecificInformation

The BroadcastCategorySpecificInformation (BR_CATSPECINFO) parameter is free form and carries information that is specific to a particular broadcast message as specified in air interface standards.

Field	Value	Type	Reference	Notes					
Identifier	BroadcastCategorySpecific- Information IMPLICIT OCTET STRING	M	see Part 550						
Length	variable octets	M	see Part 550						
Contents									
H	G	F	E	D	C	B	A	Octet	Notes
Category Specific Information								1	a
								2	
								n	

Notes:

- a. See air interface standards (e.g., *CDMA*, *TDMA*) for the definition of this field.

2.28 BroadcastMessageIdentifier

The BroadcastMessageIdentifier (BR_MSGID) parameter provides a unique identification within the network of broadcast messages originated by a particular SME.

Field	Value	Type	Reference	Notes					
Identifier	BroadcastMessageIdentifier IMPLICIT OCTET STRING	M	see Part 550						
Length	variable octets	M	see Part 550						
Contents									
H	G	F	E	D	C	B	A	Octet	Notes
MSB								1	
Broadcast Message Identifier								LSB	
...								n	a

Notes:

- a. Ignore extra octets, if received. Send only defined (or significant) octets.

2.29 BroadcastMessagePriority

The BroadcastMessagePriority (BR_PRIO) parameter provides an indication of the level of priority of the broadcast message. The values are given in an increasing order of priority.

Field	Value	Type	Reference	Notes					
Identifier	BroadcastMessagePriority IMPLICIT OCTET STRING	M	see Part 550						
Length	variable octets	M	see Part 550						
Contents									
H	G	F	E	D	C	B	A	Octet	Notes
Reserved						BR_PRIO		1	a
•••								n	b

Notes:

- a. Reserved bits shall be ignored on receipt and set to zero on sending.
- b. Ignore extra octets, if received. Send only defined (or significant) octets.

<i>Broadcast Message Priority (BR_PRIO) (octet 1, bits A and B)</i>	
Value	Meaning
0	Normal (lower priority).
1	Interactive.
2	Urgent.
3	Emergency (higher priority).

2.30 BroadcastMessageStatus

The BroadcastMessageStatus (BR_STAT) parameter provides an indication of whether the message is new, a replacement, or a deletion of an existing broadcast message with the same identification.

Field	Value	Type	Reference	Notes					
Identifier	BroadcastMessageStatus IMPLICIT OCTET STRING	M	see Part 550						
Length	variable octets	M	see Part 550						
Contents									
H	G	F	E	D	C	B	A	Octet	Notes
Reserved						BR_STAT		1	a
•••								n	b

Notes:

- a. Reserved bits shall be ignored on receipt and set to zero on sending.
- b. Ignore extra octets, if received. Send only defined (or significant) octets.

<i>Broadcast Message Status (BR_STAT) (octet 1, bits A and B)</i>	
Value	Meaning
0	Not used.
1	New.
2	Replacement.
3	Deletion.

2.31 BroadcastPeriodicity

The BroadcastPeriodicity (BR_PERIOD) parameter provides an indication of the requested start time, duration and repetition rate of the broadcast.

Field	Value	Type	Reference	Notes					
Identifier	BroadcastPeriodicity IMPLICIT OCTET STRING	M	see Part 550						
Length	variable octets	M	see Part 550						
Contents									
H	G	F	E	D	C	B	A	Octet	Notes
Start Time - Day								1	a
Start Time - Hour								2	b
Start Time - Minute								3	c
MSB Repetition Rate LSB								4	d
								5	
Duration								6	e
...								n	f

Notes:

- a. Day of the current month (1-31).
- b. Hour of the day (1-24)
- c. Minute of the hour (1-60)
- d. Rate in minutes (1-4095) – e.g., 240 = every 4 hours.
- e. Duration 0 to 143 = (value + 1) x 5 minutes.
 Duration 144 to 167 = 12 hours + ((value - 143) x 30 minutes).
 Duration 168 to 196 = (value - 166) days.
 Duration 197 to 244 = (value - 192) weeks.
 Duration 245 = Indefinite until deleted.
 Duration 246 = Immediate broadcast, else discard.
 Duration 247 to 255 = Reserved.
- f. Ignore extra octets, if received. Send only defined (or significant) octets.

2.32 BroadcastServiceGroup

The BroadcastServiceGroup (BR_SRVGRP) parameter is free form and carries information that identifies of the target mobile station audience (e.g., Target Service Group).

Field	Value	Type	Reference	Notes					
Identifier	BroadcastServiceGroup IMPLICIT OCTET STRING	M	see Part 550						
Length	variable octets	M	see Part 550						
Contents									
H	G	F	E	D	C	B	A	Octet	Notes
Broadcast Service Group								1	a
								2	
								n	

Notes:

- a. See air interface standards (e.g., *CDMA*, *TDMA*) for the definition of this field.

2.33 BroadcastZoneIdentifier

The BroadcastZoneIdentifier (BR_ZONE) parameter is free form and provides an indication of the geographical area over which the message is requested to be broadcast (e.g., to cells or sectors or both within an MSC, or to the whole MSC).

It can accommodate a number of variants such as:

- a. List of TargetCellIDs;
- b. List of Zone Area Identities;
- c. List of SID/NID pairs;
- d. List of PSID/RSIDs;
- e. List of User Zone IDs;
- f. List of SOCs.
- g. etc.

The first octet indicates the type of broadcast zone variant used. The remaining octets identify one or more instances of that broadcast zone variant.

Field	Value	Type	Reference	Notes					
Identifier	BroadcastZoneIdentifier IMPLICIT OCTET STRING	M	see Part 550						
Length	variable octets	M	see Part 550						
Contents									
H	G	F	E	D	C	B	A	Octet	Notes
Nature of Broadcast Zone								1	
Broadcast Zone Identifier								2	a
								3	
								n	

Notes:

- a. Information accepted by the MC or the MSC consists of one or more instances of the type of zone identifier whose use is indicated by Octet 1, e.g., one or more instances of SOC, SID, TargetCellID, RSID, PSID and User Zone ID.

<i>Nature of Broadcast Zone (octet 1)</i>	
Value	Meaning
0	Not used.
1	TargetCellID (List of individual Target Cell IDs). See 2.273.
2	Zone Area Identity (2 octet long field preset by mutual agreement between MC and MSCs). This field carries a number that identifies cells, sectors, etc., for each MSC receiving SMDPP. It is intended to minimize link traffic. Rather than send a large list of individual cell identifies, for example, the ZAI would provide shorthand notation that is mutually understandable by the MSC and MC. When using ZAI's, the MC does not need to have knowledge of the service area topography.
3	SID (List of System IDs). Applies to all cells controlled by the MSC receiving this message that are broadcasting one of the listed SID codes. See <i>CDMA</i> , <i>TDMA</i> .
4	SID/NID (List of System ID/Network ID pairs). See <i>CDMA</i> .
5	PSID (List of Private SIDs). See <i>TDMA</i> .
6	RSID (List of Residential SIDs). See <i>TDMA</i> .
7	UZID (List of User Zone IDs). See <i>TDMA</i> .
8	SOC (List of System Operator Codes). Applies to all cells controlled by the MSC receiving this message. See <i>TDMA</i> .
through 254	Reserved. Treat the same as value 255, <i>Type of variant not specified</i> .
255	Type of variant not specified.

2.34 BroadcastZoneIdentifierList

The BroadcastZoneIdentifierList (BR_ZONELIST) parameter specifies BroadcastZoneIdentifiers, each defined in terms of a different zone type (e.g., Nature of BR_ZONE) over which the message is requested to be broadcast (e.g., to cells or sectors or both within an MSC, or to the whole MSC).

Field	Value	Type	Reference	Notes
Identifier	BroadcastZoneIdentifierList IMPLICIT SET	M	see Part 550	
Length	variable octets	M	see Part 550	
Contents				
	BroadcastZoneIdentifier	M	2.310	
	BroadcastZoneIdentifier	O	2.310	a, b
	• • •			

Notes:

- a. Optionally include additional BroadcastZoneIdentifier parameters.
- b. All combinations of Broadcast Zone Identifiers are valid as long as one zone is not a subset of another one (e.g., Target CellID, ZoneAreaID, PSID, RSID).

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2.35 BSMCStatus

The BSMCStatus (BSMCS) parameter indicates whether the target environment after an intersystem handoff shall support the same base station manufacturer code (BMC) that is currently serving the MS.

Field	Value	Type	Reference	Notes					
Identifier	BSMCStatus IMPLICIT OCTET STRING	M	see Part 550						
Length	1 octet	M	see Part 550						
Contents									
H	G	F	E	D	C	B	A	Octet	Notes
BSMC Status								1	

<i>BSMC Status (octet 1)</i>	
Value	Meaning
0	Same BSMC Value shall not be supported.
1	Same BSMC Value shall be supported.
2 through 255	Reserved. Treat the same as value 0, <i>Same BSMC Value shall not be supported.</i>

2.36 CallHistoryCount

The CallHistoryCount (COUNT) parameter contains a modulo 64 event counter maintained by the MS, AC and optionally the VLR, that is used for clone detection. The events that result in incrementing the counter are defined by local administrative procedures at the AC and optionally at the VLR, and may include initial registration in a new Serving MSC, call origination, page response or periodically.

Field	Value	Type	Reference	Notes					
Identifier	CallHistoryCount IMPLICIT Unsigned Integer (0...63)	M	see Part 550						
Length	1 octet	M	see Part 550						
Contents									
H	G	F	E	D	C	B	A	Octet	Notes
COUNT Event Counter								1	

2.37 CallHistoryCountExpected

The CallHistoryCountExpected (COUNTEx) parameter contains a modulo 64 event counter which was expected from the MS. The value received from the MS is sent in the CallHistoryCount parameter.

Field	Value	Type	Reference	Notes					
Identifier	CallHistoryCountExpected IMPLICIT Unsigned Integer (0..63)	M	see Part 550						
Length	1 octet	M	see Part 550						
Contents									
H	G	F	E	D	C	B	A	Octet	Notes
COUNT Event Counter								1	

2.38 CallingFeaturesIndicator

The CallingFeaturesIndicator (CFI) parameter defines the authorization and activity states of the MS's features.

Field	Value	Type	Reference	Notes					
Identifier	CallingFeaturesIndicator IMPLICIT OCTET STRING	M	see Part 550						
Length	2 or more octets	M	see Part 550						
Contents									
H	G	F	E	D	C	B	A	Octet	Notes
CW-FA		CFNA-FA		CFB-FA		CFU-FA		1	a
CT-FA		VP-FA		CD-FA		3WC-FA		2	a
CNIROver-FA		CNIR-FA		CNIP2-FA		CNIP1-FA		3	a
USCFvm-FA		AH-FA		DP-FA		PCW-FA		4	a
CCS-FA		CPDS-FA		USCFnr-FA		USCFms-FA		5	a
Reserved		DRBforCW-FA		Reserved		TDMA EPE-FA		6	a, b
•••								n	c

Notes:

- a. CFU-FA, CFB-FA, etc. denotes the FeatureActivity status for the designated feature, where the FeatureActivity encoding is defined as below.
 - **CFU-FA** = Call Forwarding-Unconditional: FeatureActivity.
 - **CFB-FA** = Call Forwarding-Busy: FeatureActivity.
 - **CFNA-FA** = Call Forwarding-No Answer: FeatureActivity.
 - **CW-FA** = Call Waiting: FeatureActivity.
 - **3WC-FA** = Three-Way Calling: FeatureActivity.
 - **CD-FA** = Call Delivery: FeatureActivity (not interpreted on reception by TIA/EIA-41-C or later).
 - **VP-FA** = Voice Privacy: FeatureActivity.
 - **CT-FA** = Call Transfer: FeatureActivity.
 - **CNIP1-FA** = One number (network-provided only) Calling Number Identification Presentation: FeatureActivity. CNIP2-FA takes precedence over CNIP1-FA.
 - **CNIP2-FA** = Two number (network-provided and user-provided) Calling Number Identification Presentation: FeatureActivity. CNIP2-FA takes precedence over CNIP1-FA.
 - **CNIR-FA** = Calling Number Identification Restriction: FeatureActivity. An *Authorized and Activated* value for CNIR-FA indicates that Calling Number Identification Presentation is restricted.

- **CNIROver-FA** = Calling Number Identification Restriction Override: FeatureActivity. An *Authorized and Activated* value for CNIROver indicates that Calling Number Identification Restriction is overridden.
 - **PCW-FA** = Priority Call Waiting: FeatureActivity.
 - **DP-FA** = Data Privacy: FeatureActivity.
 - **AH-FA** = Answer Hold Feature Activity
 - **USCFnr-FA** = User Selective Call Forwarding divert to network registered DN: FeatureActivity.
 - **USCFms-FA** = User Selective Call Forwarding divert to mobile station provided DN: FeatureActivity.
 - **USCFvm-FA** = User Selective Call Forwarding divert to voice mail: Feature Activity.
 - **CPDS-FA**=CDMA Packet Data Service: Feature Activity.
 - **CCS-FA** = CDMA Concurrent Service (e.g., both circuit and packet services simultaneously): FeatureActivity.
 - **TDMA_EPE-FA** = TDMA Enhanced Privacy and Encryption: FeatureActivity
 - **DRBforCW** = Distinctive Ring Back for Call Waiting Feature Activity. This feature is only applicable if the subscriber is authorized for Call Waiting.
- b. Reserved bits shall be ignored on receipt and set to zero on sending.
- c. Ignore extra octets, if received. Send only defined (or significant) octets.

<i>FeatureActivity</i>	
Value	Meaning
0	Not used.
1	Not authorized.
2	Authorized but de-activated.
3	Authorized and activated.

2.39 CallingPartyName

The CallingPartyName (CGNAME) parameter carries information regarding the availability and presentation status of the original calling party's name, and optionally, the name text. This parameter is based on the Generic Name parameter defined in *ANSI T1.114 1996*.

Field	Value	Type	Reference	Notes					
Identifier	CallingPartyName IMPLICIT OCTET STRING	M	see Part 550						
Length	variable octets	M	see Part 550						
Contents									
H	G	F	E	D	C	B	A	Octet	Notes
0	0	1	Avail.	Reserved		Pres. Status		1	a, b
1 st IA5 Character								2	c
2 nd IA5 Character								3	
•••								•••	
n th IA5 Character								m	

Notes:

- a. Refer to *ANSI T1.114 1996* for field encoding.
- b. Set reserved values to 0 when sending, ignore if received.
- c. From 0 to 15 IA5 characters of name information may be present.

<i>Presentation Status: CallingPartyName (octet 1, bits A and B)</i>	
Value	Meaning
0	Presentation allowed.
1	Presentation restricted.
2	Blocking toggle.
3	No indication.
<i>Availability: CallingPartyName (octet 1, bit E)</i>	
Value	Meaning
0	Name available/unknown.
1	Name not available.

2.40 CallingPartyNumberDigits1

The CallingPartyNumberDigits1 (CPNDGTS1) parameter carries the network-provided calling party number information in BCD format.

Field	Value	Type	Reference	Notes					
Identifier	CallingPartyNumberDigits1 IMPLICIT DigitsType	M	see Part 550	a					
Length	variable octets	M	see Part 550						
Contents									
H	G	F	E	D	C	B	A	Octet	Notes
Type of Digits								1	b
Nature of Number								2	c
Numbering Plan				Encoding				3	d, e
Number of Digits								4	f
2 nd BCD Digit				1 st BCD Digit				5	
4 th BCD Digit				3 rd BCD Digit				6	
...				
n th BCD Digit				n-1 st BCD Digit				m	

Notes:

- a. Refer to the DigitsType parameter type see [Part 551 Section 1.2](#) for notes and field encoding.
- b. The Type of Digits field is set to *Calling Party Number*.
- c. The Nature of Number field is set as applicable.
- d. The Numbering Plan field is set to *Telephony Numbering*.
- e. The Encoding field is set to *BCD*.
- f. The Number of Digits is between 0 and at least 15.

2.41 CallingPartyNumberDigits2

The CallingPartyNumberDigits2 (CPNDGTS2) parameter carries the user-provided calling party number information in BCD format.

Field	Value	Type	Reference	Notes					
Identifier	CallingPartyNumberDigits2 IMPLICIT DigitsType	M	see Part 550	a					
Length	variable octets	M	see Part 550						
Contents									
H	G	F	E	D	C	B	A	Octet	Notes
Type of Digits								1	b
Nature of Number								2	c
Numbering Plan				Encoding				3	d, e
Number of Digits								4	f
2 nd BCD Digit				1 st BCD Digit				5	
4 th BCD Digit				3 rd BCD Digit				6	
...				
n th BCD Digit				n-1 st BCD Digit				m	

Notes:

- a. Refer to the DigitsType parameter type for notes and field encoding.
- b. The Type of Digits field is set to *Calling Party Number*.
- c. The Nature of Number field is set as applicable.
- d. The Numbering Plan field is set to *Telephony Numbering*.
- e. The Encoding field is set to *BCD*.
- f. The Number of Digits is between 0 and at least 15.

2.42 CallingPartyNumberString1

The CallingPartyNumberString1 (CPNSTRG1) parameter carries the network-provided identification of the calling party in IA5 format.

Field	Value	Type	Reference	Notes					
Identifier	CallingPartyNumberString1 IMPLICIT DigitsType	M	see Part 550	a					
Length	variable octets	M	see Part 550						
Contents									
H	G	F	E	D	C	B	A	Octet	Notes
Type of Digits								1	b
Nature of Number								2	c
Numbering Plan				Encoding				3	d, e
Number of Digits								4	f
1 st Character								5	
2 nd Character								6	
• • •								• • •	
Last Character								n	

Notes:

- a. Refer to DigitsType parameter type see [Part 551 Section 1.2](#) for notes and field encoding.
- b. The Type of Digits is set to *Calling Party Number*.
- c. The Nature of Number is set as applicable.
- d. The Numbering Plan field is set to *Telephony Numbering*.
- e. The Encoding field is set to *IA5*.
- f. The Number of Digits is between 0 and at least 15.

2.43 CallingPartyNumberString2

The CallingPartyNumberString2 (CPNSTRG2) parameter carries the user-provided identification of the calling party in IA5 format.

Field	Value	Type	Reference	Notes					
Identifier	CallingPartyNumberString2 IMPLICIT DigitsType	M	see Part 550	a					
Length	variable octets	M	see Part 550						
Contents									
H	G	F	E	D	C	B	A	Octet	Notes
Type of Digits								1	b
Nature of Number								2	c
Numbering Plan				Encoding				3	d, e
Number of Digits								4	f
1 st Character								5	
2 nd Character								6	
• • •								• • •	
Last Character								n	

Notes:

- a. Refer to DigitsType parameter type see [Part 551 Section 1.2](#) for notes and field encoding.
- b. The Type of Digits is set to *Calling Party Number*.
- c. The Nature of Number is set as applicable.
- d. The Numbering Plan field is set to *Telephony Numbering*.
- e. The Encoding field is set to *IA5*.
- f. The Number of Digits is between 0 and at least 15.

2.44 CallingPartySubaddress

The CallingPartySubaddress (CPSUB) parameter identifies the subaddress of the calling party of a call.

Field	Value	Type	Reference	Notes					
Identifier	CallingPartySubaddress IMPLICIT Subaddress	M	see Part 550	a					
Length	variable octets	M	see Part 550						
Contents									
H	G	F	E	D	C	B	A	Octet	Notes
1	Type of Subaddress			O/E	Reserved			1	
Subaddress								2	
								3	
								...	
								n	

Notes:

- a. Refer to Subaddress parameter type see [Part 551 Section 1.15](#) for notes and field encoding.

2.45 CancellationDenied

The CancellationDenied (CANDEN) parameter is used to indicate either:

- a. the MS associated with this CancellationDenied has simultaneously accessed multiple MSCs, and the VLR which sent this parameter considers itself to be the best serving system, or
- b. the addressed MS is currently involved in a call or service request.

Field	Value	Type	Reference	Notes					
Identifier	CancellationDenied IMPLICIT Unsigned Enumerated	M	see Part 550						
Length	1 octet	M	see Part 550						
Contents									
H	G	F	E	D	C	B	A	Octet	Notes
CancellationDenied Indication								1	

<i>CancellationDenied Indication (octet 1)</i>	
Value	Meaning
0	Not used.
1	Multiple Access (i.e., the VLR has detected a multiple access situation and considers itself to be the best serving system).
2	Busy (i.e., the addressed MS is currently involved in a call or service request).
3 through 223	Reserved. Treat the same as value 1, <i>Multiple Access</i> .
224 through 255	Reserved for <i>MAP</i> protocol extension. If unknown, treat the same as value 1, <i>Multiple Access</i> .

2.46 CancellationType

The CancellationType (CANTYP) parameter indicates the handling of the call or service interruption caused by the receipt of a RegistrationCancellation INVOKE component.

Field	Value	Type	Reference	Notes					
Identifier	CancellationType IMPLICIT OCTET STRING	M	see Part 550						
Length	variable octets	M	see Part 550						
Contents									
H	G	F	E	D	C	B	A	Octet	Notes
Cancellation Type								1	
• • •								n	a

Notes:

- a. Ignore extra octets, if received. Send only defined (or significant) octets.

<i>Cancellation Type (octet 1)</i>	
Value	Meaning
0	Not used.
1	Serving System Option. The serving system may discontinue a call or service in progress at its option.
2	Report In Call. The serving system shall continue to provide service when a call or service is in progress and just report its incidence.
3	Discontinue. The serving system shall discontinue any call or service in progress, regardless of the MS's qualification, profile or authentication.
4 through 223	Reserved. Treat the same as value 1, <i>Serving System Option</i> .
224 through 255	Reserved for <i>MAP</i> protocol extension. If unknown, treat the same as value 1, <i>Serving System Option</i> .

2.47 CarrierDigits

The CarrierDigits (CARDGTS) parameter specifies the preferred interexchange carrier for the call. The parameter specifies only those digits required to uniquely identify the preferred carrier, and does not include other (e.g., prefix) digits that may be needed to satisfy a particular dialing plan. CarrierDigits is currently only specified for national usage. Within the North American Numbering Plan, CarrierDigits specifies the unique Carrier Identification Code (CIC) of the preferred carrier as defined in *ANSI-93*.

Field	Value	Type	Reference	Notes					
Identifier	CarrierDigits IMPLICIT DigitsType	M	see Part 550	a					
Length	5 or more octets	M	see Part 550						
Contents									
H	G	F	E	D	C	B	A	Octet	Notes
Type of Digits								1	b
Nature of Number								2	c
Numbering Plan				Encoding				3	d, e
Number of Digits								4	f
2 nd BCD Digit				1 st BCD Digit				5	
4 th BCD Digit				3 rd BCD Digit				6	
...				
n th BCD Digit				n-1 st BCD Digit				m	

Notes:

- a. Refer to the DigitsType parameter type see [Part 551 Section 1.2](#) for notes and field encoding.
- b. The Type of Digits field is set to *Carrier*.
- c. The Nature of Number field is set to *National*, other subfields are ignored on receipt.
- d. The Numbering Plan field is set to *Telephony Numbering*.
- e. The Encoding field is set to *BCD*.
- f. Systems conformant with *TIA/EIA-41-D* or earlier may only support between 3 and 5 digits, inclusive.

2.48 CaveKey

The CaveKey parameter contains the key schedule to be used for encryption of appropriate digital control or traffic channel information using TDMA Enhanced Privacy and Encryption. CaveKey is calculated using CAVE parameters in effect when the access is attempted and remains constant for the duration of the call (if used as a Digital Traffic Channel Key) or (if used as a Digital Control Channel Key) until replaced by a subsequent DCCH Registration.

The presence of this optional parameter indicates that TDMA Enhanced Privacy and Encryption is possible for this MS.

Field	Value	Type	Reference	Notes						
Identifier	CaveKey IMPLICIT OCTET STRING	M	see Part 550							
Length	variable octets	M	see Part 550							
Contents										
	H	G	F	E	D	C	B	A	Octet	Notes
MSB	CaveKey								1	a
									2	
									3	
									•••	
LSB									n	

Notes:

- a. Ignore extra octets, if received. Send only defined (or significant) octets.

2.49 CDMA2000HandoffInvokeIOSData

The CDMA2000HandoffInvokeIOSData (c2KHINVID) parameter contains cdma2000 IOS A1 element information required to support cdma2000 IOS handoff invoke operations (e.g., Class Mark Information Type2, IS-2000 Channel Identity, IS-2000 Mobile Capabilities, IS-2000 Service Configuration Record, Quality of Service Parameter, Service Option List, Source RNC to Target RNC Transparent Container, Slot Cycle Index, Access Network ID, IS-2000 Channel Identity 3x [see IOS]). Note: each A1 element included in this parameter shall contain the element's A1 identifier and A1 element length fields.

Field	Value	Type	Reference	Notes					
Identifier	CDMA2000HandoffInvokeIOSData IMPLICIT OCTET STRING	M	see Part 550						
Length	variable octets	M	see Part 550						
Contents									
H	G	F	E	D	C	B	A	Octet	Notes
MSB								1	a
IOS A1 Element Handoff Invoke Information								...	
LSB								n	

Notes:

- a. This field carries the information of all IOS A1 data elements required to support cdma2000 handoff invoke operations. Each A1 element included in this parameter shall contain the element's A1 identifier and A1 element length fields¹. The A1 element field information in this parameter has precedence over the same A1 field duplicated in other parameters sent in the same operation. This parameter includes all required handoff invoke A1 elements with the exception of the following A1 elements:
 - Message Type,
 - Channel Type,
 - Encryption Information,
 - Cell Identifier List (Target),
 - Circuit Identity Code Extension,
 - IS-95 Channel Identity,
 - Mobile Identity (IMSI),
 - Mobile Identity (ESN),
 - Downlink Radio Environment,
 - Service Option,
 - CDMA Serving One Way Delay,
 - IS-95 MS Measured Channel Identity, and
 - Response Request.

¹ For IOS A1 elements without a length field, the A1 element length field must be appropriately inserted on sending and deleted on reception.

2.50 CDMA2000HandoffResponseIOSData

The CDMA2000HandoffResponseIOSData (c2KHRSPID) parameter contains cdma2000 IOS A1 element information required to support cdma2000 IOS handoff response operations (e.g., IS-95 Channel Identity, IS-2000 Channel Identity, IS-2000 Non-Negotiable Service Configuration Record, Cause, Extended Handoff Direction Parameters, Hard Handoff Parameters, IS-2000 Service Configuration Record, target RNC to source RNC Transparent Container, IS-2000 Channel Identity 3x, Service Option List [see *IOS*]). Note: each A1 element included in this parameter shall contain the element's A1 identifier and A1 element length fields.

Field	Value	Type	Reference	Notes					
Identifier	CDMA2000HandoffResponseIOS-Data IMPLICIT OCTET STRING	M	see Part 550						
Length	variable octets	M	see Part 550						
Contents									
H	G	F	E	D	C	B	A	Octet	Notes
MSB								1	a
IOS A1 Element Handoff Response Information								...	
LSB								n	

Notes:

- a. This field carries the information of all *IOS* A1 data elements required to support cdma2000 handoff response operations. Each A1 element included in this parameter shall contain the element's A1 identifier and A1 element length fields¹. The A1 element field information in this parameter has precedence over the same A1 field duplicated in other parameters sent in the same operation. This parameter includes all required handoff response A1 elements with the exception of the following Handoff Request Ack A1 element:
 - Message Type, and
 - Cell Identifier List.

¹ For IOS response A1 elements without a length field (i.e., Hard Handoff Parameters), the A1 element length field must be appropriately inserted on sending and deleted on reception.

2.51 CDMA2000MobileSupportedCapabilities

The CDMA2000MobileSupportedCapabilities (c2KMSC) parameter contains cdma2000 MS capabilities.

Field	Value	Type	Reference	Notes					
Identifier	CDMA2000MobileSupportedCapabilities IMPLICIT OCTET STRING	M	see Part 550						
Length	1 or more octets	M	see Part 550						
Contents									
H	G	F	E	D	C	B	A	Octet	Notes
Reserved						ERCS	QPS	1	a, b, c
...								n	d

Notes:

- a. See *CDMA* QPCH_SUPPORTED for the definition of this field.
- b. See *CDMA* Enhanced_RC for the definition of this field.
- c. Reserved bits shall be ignored on receipt and set to zero on sending.
- d. Ignore extra octets, if received. Send only defined (or significant) octets.

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2.52 CDMABandClass

The CDMABandClass (CDMABC) parameter identifies a band class and related band subclasses that an MS is capable of supporting.

Field	Value	Type	Reference	Notes					
Identifier	CDMABandClass IMPLICIT OCTET STRING	M	see Part 550						
Length	variable octets	M	see Part 550						
Contents									
H	G	F	E	D	C	B	A	Octet	Notes
BC	SC	Reserved	Band Class					1	a, b, c, d
Band Subclass							2	e, f, g, h	
							•••		
							n+1		

Notes:

- a. The bit layout is the same as that of Band Class Value Assignment in *BANDCLASS*.
- b. Reserved bits shall be ignored on receipt and set to zero on sending.
- c. If the CDMABandClass parameter appears as a separate parameter from the CDMABandClassList parameter, it indicates the last reported band class and band subclass (if applicable) used by the MS. In this case, “BC” and “SC” are not applicable and shall be set to “0”.
- d. If the CDMABandClass parameter appears as a parameter within the CDMABandClassList parameter, then “BC” and “SC” are set as follows:
 - » “BC” is set to “1” in all occurrences of CDMABandClass within CDMABandClassList when the list of band classes represents all of the MS’s band class capabilities. If it is not known that all of the band classes that are supported by the MS are included, then “BC” is set to “0” in all occurrences.
 - » For each occurrence of CDMABandClass within CDMABandClassList, “SC” is set to “1” when the band subclass bitmap that follows represents all of the MS’s band subclass capabilities for the associated band class. If it is not known that the band subclass bitmap represents all of the band subclasses that are supported by the MS for this band class, then “SC” is set to “0”.
- e. Bit A of octet 2 indicates whether band subclass 0 is supported. Bit H of octet 2 indicates whether band subclass 7 is supported. Bit A of octet 3 indicates whether band subclass 8 is supported, etc.
- f. Support for a band subclass is indicated by a value of “1” in the associated bit. Non-support is indicated by a “0” bit.
- g. Bits for undefined band subclasses shall be set to 0.

- h. The number of band subclass octets, n , will be equal to: $\lceil (\text{the number of the highest numbered band subclass supported by the MS plus } 8) / 8 \rceil$, with the remainder discarded. If the associated Band Class does not have any band subclasses defined, the band subclass octet(s) may be omitted and “SC” should be set to “0”.

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2.53 CDMABandClassInformation

The CDMABandClassInformation (CDMABCI) parameter specifies CDMA band class information for a single band that the MS supports.

Field	Value	Type	Reference	Notes
Identifier	CDMABandClassInformation IMPLICIT SEQUENCE	M	see Part 550	
Length	variable octets	M	see Part 550	
Contents				
	CDMABandClass	M	2.52	a
	CDMAMobileProtocolRevision	O	2.65	b
	CDMAStationClassMark2	O	2.83	b
	• • •			c

Notes:

- a. Include for multi-band CDMA. Defines band class for subsequent parameters.
- b. Include for multi-band CDMA.
- c. Ignore unexpected parameters, if received. Send only defined (or significant) parameters.

2.54 CDMABandClassList

The CDMABandClassList (CDMABCL) parameter specifies CDMA band class information for each band that the MS supports.

Field	Value	Type	Reference	Notes
Identifier	CDMABandClassList IMPLICIT SEQUENCE OF	M	see Part 550	
Length	variable octets	M	see Part 550	
Contents				
	CDMABandClassInformation	M	2.53	
	CDMABandClassInformation	O	2.53	a
	•••			

Notes:

- a. Optionally include additional CDMABandClassInformation parameters.

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2.55 CDMACallMode

The CDMACallMode (CDMAMODE) parameter identifies certain characteristics of a multi-mode, multi-band CDMA and NAMPS MS.

Field	Value	Type	Reference	Notes					
Identifier	CDMACallMode IMPLICIT OCTET STRING	M	see Part 550						
Length	variable octets	M	see Part 550						
Contents									
H	G	F	E	D	C	B	A	Octet	Notes
Call Mode								1	a, b
								•••	
								n	

Notes:

- a. Ignore extra octets, if received. Send only defined (or significant) octets.
- b. For bits except octet 1 bit A, B and C the value of the bit is derived from the CDMA band classes as defined in *CBC*. The 'band class bit number' (*m*) starts at 1 for Octet 1, bit D, 2 for Octet 1, bit E and so on through 6 for Octet 2 bit 1, 14 for Octet 3 bit 1 and beyond.

<i>Call Mode (octet 1, bit A)</i>	
Value	Meaning
0	CDMA 800 MHz channel (Band Class 0) not acceptable.
1	CDMA 800 MHz channel (Band Class 0) acceptable.
<i>Call Mode (octet 1, bit B)</i>	
Value	Meaning
0	AMPS 800 MHz channel not acceptable.
1	AMPS 800 MHz channel acceptable.
<i>Call Mode (octet 1, bit C)</i>	
Value	Meaning
0	NAMPS 800 MHz channel not acceptable.
1	NAMPS 800 MHz channel acceptable.
<i>Call Mode (octet 1, bit D)</i>	
Value	Meaning
0	CDMA 1900 MHz channel (Band Class 1) not acceptable.
1	CDMA 1900 MHz channel (Band Class 1) acceptable.

2.56 CDMACHannelData

The CDMACHannelData (CDMADATA) parameter contains the CDMA Channel Number field, the Frame Offset field and a Long Code Mask field associated with the CDMA Traffic Channel in use. The CDMA Channel Number is an 11-bit number corresponding to the CDMA frequency assignment. This number specifies the channel number for the CDMA Channel center frequency (see *CDMA* for details).

The Frame Offset is a 4-bit binary number that contains the time skew of the Traffic Channel frames in units of 1.25 ms. The maximum frame offset is 18.75 ms which is 15 times 1.25 ms. The valid values in the Frame Offset field are 0 through 15.

The Long Code Mask is a 42-bit binary number that contains the long code mask in use at the Serving MSC. The Long Code Mask creates a unique identity of the MS's long code which is a Pseudo Random Number sequence with period of $2^{42}-1$ that is used for scrambling on the Forward CDMA Channel and spreading on the Reverse CDMA Channel.

The Band Class indicates the frequency band in use by the MS (when this parameter is transmitted from the Serving to the Target MSC) and the band to which the MS is being redirected (when this parameter is transmitted from the Target to the Serving MSC).

NP_EXT is a flag sent from the Base Station to the MS to indicate that the correction factor in Nominal Power is in the range of -9 dB to -24 dB inclusive.

Nominal Power is the nominal transmit power offset that the Base Station sends to the MS set to the correction factor to be used in the open loop power estimate. If the range of the correction factor is -8 dB to 7 dB inclusive, the NP_EXT is set to 0 (or not included). If the range of the correction factor is -9 dB to -24 dB inclusive, the NP_EXT is set to 1.

Number Preamble is sent from the Base Station to the MS and is set to the number of Traffic Channel preamble frames the MS should send during handoff.

The Base Station Protocol Revision indicates the air interface revision supported by the controlling base station.

Field	Value	Type	Reference	Notes					
Identifier	CDMAChannelData IMPLICIT OCTET STRING	M	see Part 550						
Length	8 or more octets	M	see Part 550						
Contents									
H	G	F	E	D	C	B	A	Octet	Notes
Rsvd	Frame Offset				MSB			1	b, d
CDMA Channel Number							LSB	2	d
Rsvd	Band Class				MSB			3	b, c, d
Long Code Mask							•••	8	d
							7		
							LSB		
NP_EXT	Nominal Power				Number Preamble			9	a
Base Station Protocol Revision								10	d
•••								n	e

Notes:

- a. See *CDMA* for definitions of Nominal Power and Number Preamble fields. See *CDMA* for the definition of the NP_EXT field.
- b. Reserved (Rsvd) bits shall be ignored on receipt and set to zero on sending.
- c. The bit layout is the same as that of Band Class Value Assignments defined in *CDMA*.
- d. See *CDMA* for the definition of these fields.
- e. Ignore extra octets, if received. Send only defined (or significant) octets.

<i>Band Class (octet 3, bits C-G)</i>	
Value	Meaning
0	800 MHz Cellular System.
1 through 31	See <i>BANDCLASS</i> for defined values other than value 0. If unknown, treat the same as value 0, <i>800 MHz Cellular System</i> .

2.57 CDMACHannelNumber

The CDMACHannelNumber (CDMACN) parameter is used to indicate the 11-bit number corresponding to a CDMA frequency assignment. The number specifies the channel number for the CDMA Channel center frequency (see *CDMA* for details).

Field	Value	Type	Reference	Notes						
Identifier	CDMACHannelNumber IMPLICIT OCTET STRING	M	see Part 550							
Length	2 or more octets	M	see Part 550							
Contents										
H	G	F	E	D	C	B	A	Octet	Notes	
Reserved					MSB			1	a	
CDMA Channel Number								LSB	2	b
• • •								n	c	

Notes:

- a. Reserved bits shall be ignored on receipt and set to zero on sending.
- b. See *CDMA* for definitions of this field.
- c. Ignore extra octets, if received. Send only defined (or significant) octets.

2.58 CDMACHannelNumberList

The CDMACHannelNumberList (CDMACNL) parameter specifies a list of CDMA channel numbers.

Field	Value	Type	Reference	Notes
Identifier	CDMACHannelNumberList IMPLICIT SEQUENCE OF	M	see Part 550	
Length	variable octets	M	see Part 550	
Contents				
	CDMACHannelNumber	M	2.57	
	CDMACHannelNumber	O	2.57	a
	• • •			

Notes:

- a. Optionally include additional CDMACHannelNumber parameters.

2.59 CDMACodeChannel

The CDMACodeChannel (CDMACHAN) parameter specifies the code channel in a Forward CDMA Channel. A Forward CDMA Channel contains 64 code channels. A Forward cdma2000 Channel contains 128 code channels. Code channel 0 is assigned to the Pilot Channel. Code channel 1 through 7 may be assigned to either the Paging Channels or Traffic Channels. Code channel 32 may be assigned to either a Synchronization Channel or a Traffic Channel. The remaining code channels may be assigned to the Traffic Channels.

Field	Value	Type	Reference	Notes					
Identifier	CDMACodeChannel IMPLICIT OCTET STRING	M	see Part 550						
Length	variable octets	M	see Part 550						
Contents									
H	G	F	E	D	C	B	A	Octet	Notes
Rsvd	CDMA Code Channel							1	a, b, d
...								n	c

Notes:

- a. See *CDMA* for the definition of this field.
- b. Reserved bits shall be ignored on receipt and set to zero on sending.
- c. Ignore extra octets, if received. Send only defined (or significant) octets.
- d. The field size is increased from 6 to 7 bits for cdma2000.

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2.60 CDMACodeChannelInformation

The CDMACodeChannelInformation (CDMACHINFO) parameter specifies CDMA code channel information which is used in the handoff process.

Field	Value	Type	Reference	Notes
Identifier	CDMACodeChannelInformation IMPLICIT SEQUENCE	M	see Part 550	
Length	variable octets	M	see Part 550	
Contents				
TargetCellID		M	2.273	
CDMACodeChannel		M	2.59	
CDMAPilotPN		O	2.68	a
CDMAPowerCombinedIndicator		O	2.70	b
• • •				c

Notes:

- a. Included by *TSB76* and later.
- b. Included by *IS-735* and later.
- c. Ignore unexpected parameters, if received. Send only defined (or significant) parameters.

2.61 CDMACodeChannelList

The CDMACodeChannelList (CDMACHLIST) parameter specifies CDMA code channel information which is used in the handoff process.

Field	Value	Type	Reference	Notes
Identifier	CDMACodeChannelList IMPLICIT SEQUENCE OF	M	see Part 550	
Length	variable octets	M	see Part 550	
Contents				
	CDMACodeChannelInformation	M	2.60	
	CDMACodeChannelInformation	O	2.60	a
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Notes:

- a. Optionally include additional CDMACodeChannelInformation parameters.

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2.62 CDMAConnectionReference

The CDMAConnectionReference (CDMACR) parameter is used to specify the Connection Reference associated with the CDMAServiceOption.

Field	Value	Type	Reference	Notes					
Identifier	CDMAConnectionReference IMPLICIT OCTET STRING	M	see Part 550						
Length	variable octets	M	see Part 550						
Contents									
H	G	F	E	D	C	B	A	Octet	Notes
Service Option Connection Reference								1	a
...								n	b

Notes:

- a. This field carries the CDMA Service Option Connection Reference. The bit-layout is the same as that of Service Option Connection Reference in *CDMA*.
- b. Ignore extra octets, if received. Send only defined (or significant) octets.

2.63 CDMAConnectionReferenceInformation

The CDMAConnectionReferenceInformation (CDMACRINFO) parameter specifies the active Service Option, its Connection Reference, State Information, and optionally, Data Privacy information.

Field	Value	Type	Reference	Notes
Identifier	CDMAConnectionReference Information IMPLICIT SEQUENCE	M	see Part 550	
Length	variable octets	M	see Part 550	
Contents				
	CDMAConnectionReference	M	2.62	
	CDMAServiceOption	M	2.76	
	CDMAState	O	2.81	a
	DataPrivacyParameter	O	2.104	b
	• • •			c

Notes:

- a. Include if Service Option Control has been invoked, see *CDMA*.
- b. Include if the data privacy is requested.
- c. Ignore unexpected parameters, if received. Send only defined (or significant) parameters.

2.64 CDMAConnectionReferenceList

The CDMAConnectionReferenceList (CDMACRLIST) parameter contains Service Option information for currently active service options.

Field	Value	Type	Reference	Notes
Identifier	CDMAConnectionReferenceList IMPLICIT SEQUENCE OF	M	see Part 550	
Length	variable octets	M	see Part 550	
Contents				
	CDMAConnectionReferenceInformation	M	2.63	
	CDMAConnectionReferenceInformation	O	2.63	a
	• • •			

Notes:

- a. Optionally include additional CDMAConnectionReferenceInformation parameters.

2.65 CDMAMobileProtocolRevision

The CDMAMobileProtocolRevision (CDMAMPR) parameter contains the CDMA Mobile Protocol Revision number of the MS.

Field	Value	Type	Reference	Notes					
Identifier	CDMAMobileProtocolRevision IMPLICIT OCTET STRING	M	see Part 550						
Length	variable octets octets	M	see Part 550						
Contents									
H	G	F	E	D	C	B	A	Octet	Notes
Revision Number								1	a
•••								n	b

Notes:

- a. See *CDMA MOB_P_REV* for the definition of this field.
- b. Ignore extra octets, if received. Send only defined (or significant) octets.

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2.66 CDMAMSMeasuredChannelIdentity

The CDMAMSMeasuredChannelIdentity (CDMAMSMCI) parameter indicates the band class and frequency that has been measured by the MS in preparation for a hard handoff.

Field	Value	Type	Reference	Notes					
Identifier	CDMAMSMeasuredChannelIdentity IMPLICIT OCTET STRING	M	see Part 550						
Length	variable octets	M	see Part 550						
Contents									
H	G	F	E	D	C	B	A	Octet	Notes
Band Class					MSB			1	a
ARFCN					LSB			2	b
•••								n	c

Notes:

- a. This field conveys the band class received from the MS in the Candidate Frequency Search Report message.
- b. ARFCN (Absolute Radio Frequency Channel Number). This field is set to the CDMA channel number, in the specified CDMA band class, corresponding to the CDMA frequency assignment for the candidate frequency.
- c. Ignore extra octets, if received. Send only defined (or significant) octets.

2.67 CDMANetworkIdentification

The CDMANetworkIdentification (CDMANID) parameter is used to indicate the 16-bit identification number of a network.

Field	Value	Type	Reference	Notes					
Identifier	CDMANetworkIdentification IMPLICIT OCTET STRING	M	see Part 550						
Length	2 or more octets	M	see Part 550						
Contents									
H	G	F	E	D	C	B	A	Octet	Notes
MSB CDMA Network ID								1	a
								LSB	
...								n	b

Notes:

- a. See *CDMA* for encoding of this field.
- b. Ignore extra octets, if received. Send only defined (or significant) octets.

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2.68 CDMAPilotPN

The CDMAPilotPN (CDMAPPN) parameter is the Pilot PN Sequence Offset Index (Pilot PN) in *CDMA*. Base stations use Pilot PN offset to identify a Forward CDMA Channel. Time offsets may be reused within a CDMA 800 MHz system. Destination Pilot Channels are identified by an offset index (0 through 511, inclusive in units of 64 PN chips). CDMAPPN specifies the offset value from the zero offset PN sequence. The same pilot PN sequence offset is used on all CDMA frequency assignments for a given base station

Field	Value	Type	Reference	Notes					
Identifier	CDMAPilotPN IMPLICIT OCTET STRING	M	see Part 550						
Length	2 or more octets	M	see Part 550						
Contents									
H	G	F	E	D	C	B	A	Octet	Notes
Reserved							MSB	1	a, b
CDMAPPN							LSB	2	a
• • •								n	c

Notes:

- a. See *CDMA* for a definition of this field.
- b. Reserved bits shall be ignored on receipt and set to zero on sending.
- c. Ignore extra octets, if received. Send only defined (or significant) octets.

2.69 CDMAPilotStrength

The CDMAPilotStrength (CDMAPILOT) parameter indicates the signal strength of a CDMA Pilot Channel transmitted by a base station and measured by an MS. The pilot strength is the signal to noise ratio E_c/I_0 where E_c is the pilot energy per Pseudonoise (PN) chip (i.e., 813.802 ns) summed over various pilot multipath components, and I_0 is the total received power (noise plus signal) in CDMA bandwidth normalized to 1 Hz. This parameter is set to (-20) times \log_{10} (Pilot Strength) and rounded down to the smallest integer. The valid values are 0 through 63.

Field	Value	Type	Reference	Notes					
Identifier	CDMAPilotStrength IMPLICIT OCTET STRING	M	see Part 550						
Length	1 octet	M	see Part 550						
Contents									
H	G	F	E	D	C	B	A	Octet	Notes
Reserved		CDMA Pilot Strength						1	a, b, c

Notes:

- a. See *CDMA PILOT_STRENGTH* for the definition of this field.
- b. Reserved bits shall be ignored on receipt and set to zero on sending.
- c. Value 0 indicates the CDMA Pilot Strength level is unknown.

2.70 CDMAPowerCombinedIndicator

The CDMAPowerCombinedIndicator (CDMAPCI) parameter indicates whether the Forward Traffic Channel associated with this pilot carries the same closed-loop power control sub-channel bits as that of the previous pilot in the list.

Field	Value	Type	Reference	Notes					
Identifier	CDMAPowerCombinedIndicator IMPLICIT OCTET STRING	M	see Part 550						
Length	1 octet	M	see Part 550						
Contents									
H	G	F	E	D	C	B	A	Octet	Notes
Reserved							PCI	1	a, b

Notes:

- a. See *CDMA PWR_COMB_IND* for the definition of the PCI field.
- b. Reserved bits shall be ignored on receipt and set to zero on sending.

2.71 CDMAPrivateLongCodeMask

The CDMAPrivateLongCodeMask (CDMAPLCM) parameter contains the 42-bit private long code mask.

Field	Value	Type	Reference	Notes					
Identifier	CDMAPrivateLongCodeMask IMPLICIT OCTET STRING	M	see Part 550						
Length	6 octets	M	see Part 550						
Contents									
H	G	F	E	D	C	B	A	Octet	Notes
Reserved						MSB		1	a, b
CDMA Private Ldong Code Mask								...	
								5	
						LSB		6	

Notes:

- a. See *CDMA* for definition of these fields.
- b. Reserved bits shall be ignored on receipt and set to zero on sending.

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2.72 CDMARedirectRecord

The CDMARedirectRecord (CDMARR) contains the redirect record for redirecting a MS to a CDMA system.

Field	Value	Type	Reference	Notes
Identifier	CDMARedirectRecord IMPLICIT SEQUENCE	M	see Part 550	
Length	variable octets	M	see Part 550	
Contents				
	CDMABandClass	M	2.54	
	CDMAChannelNumberList	M	2.58	
	MSCID	M	2.161	
	CDMANetworkIdentification	M	2.67	
	• • •			a

Notes

- a. Ignore unexpected parameters, if received. Send only defined (or significant) parameters.

2.73 CDMA Search Parameters

The CDMA Search Parameters parameter (CDMASP) contains the CDMA Search Window field, the T_ADD field, the T_DROP field, T_COMP field, and the T_TDROP field used to establish handoff criteria and initiate the handoff process.

CDMA Search Window specifies the number of pseudonoise (PN) chips that a CDMA MS should use to search for usable multipath components (i.e., multipath components that the MS can use for demodulation of the associated Forward Traffic Channel) of the pilots in the Active Set and the Candidate Set. The valid values are 0 through 15.

T_ADD is a pilot threshold for adding a pilot to the Candidate Set. It is used by the MS to trigger the sending of the *Pilot Strength Measurement Message* to initiate the handoff process.

T_DROP is a pilot drop threshold. It is used by the MS to trigger the sending of the *Pilot Strength Measurement Message* to terminate the handoff process.

T_COMP is the comparison threshold for pilots in the Active Set vs. the Candidate Set. The MS sends a *Pilot Strength Measurement Message* when the strength of a pilot in the Candidate Set exceeds that of a pilot in the Active Set by this margin.

T_TDROP is the drop timer value after which an action is taken by the MS for a pilot that is a member of the Active Set or the Candidate Set, and whose strength has not become greater than T_DROP. If the pilot is a member of the Active Set, a *Pilot Strength Measurement Message* is issued. If the pilot is a member of the Candidate Set, it will be moved to the Neighbor Set.

Field	Value	Type	Reference	Notes					
Identifier	CDMA Search Parameters IMPLICIT OCTET STRING	M	see Part 550	a					
Length	4 or more octets	M	see Part 550						
Contents									
H	G	F	E	D	C	B	A	Octet	Notes
Reserved				CDMA Search Window				1	b, c
Reserved		T_ADD						2	b, d
Reserved		T_DROP						3	b, e
T_TDROP				T_COMP				4	f
• • •								n	g

Notes:

- a. Used for this Standard and later.
- b. Reserved bits shall be ignored on receipt and set to zero on sending.
- c. See *CDMA SRCH_WIN_A* for the definition of this field.
- d. See *CDMA T_ADD* for the definition of this field.
- e. See *CDMA T_DROP* for the definition of this field.
- f. See *CDMA T_COMP* and *T_TDROP* for the definition of these fields.
- g. Ignore extra octets, if received. Send only defined (or significant) octets.

2.74 CDMA Search Window

This parameter is replaced by the CDMA Search Parameters parameter. Note 1

The CDMA Search Window (CDMASWIN) parameter specifies the number of pseudonoise (PN) chips that a CDMA MS should use to search for usable multipath components (i.e., multipath components that the MS can use for demodulation of the associated Forward Traffic Channel) of the pilots in the Active Set and the Candidate Set. The valid values are 0 through 15.

Field	Value	Type	Reference	Notes					
Identifier	CDMA Search Window IMPLICIT OCTET STRING	M	see Part 550	<u>a</u>					
Length	1 octet	M	see Part 550						
Contents									
H	G	F	E	D	C	B	A	Octet	Notes
Reserved				CDMA Search Window				1	b, c

Notes:

- a. Used for *TSB64*, *IS-41-C* and *TIA/EIA-41-D*.
- b. See *TIA/EIA/IS-95-A* SRCH_WIN_A for the definition of this field.
- c. Reserved bits shall be ignored on receipt and set to zero on sending.

2.75 CDMAServiceConfigurationRecord

The CDMAServiceConfigurationRecord (CDMASCR) parameter identifies common attributes used by the MS and the BS to build and interpret traffic channel frames.

Field	Value	Type	Reference	Notes					
Identifier	CDMAServiceConfigurationRecord IMPLICIT OCTET STRING	M	see Part 550						
Length	7 or more octets	M	see Part 550						
Contents									
H	G	F	E	D	C	B	A	Octet	Notes
Service Configuration Record								1	a
								2	
								3	
								4	
								5	
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								7	
								...	
LSB								n	

Notes:

- a. This field carries the CDMA Service Configuration Record. The bit-layout is the same as that of Service Configuration Record in the CDMA. The contents may vary depending on the version of the air interface supported.

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2.76 CDMAServiceOption

The CDMAServiceOption (CDMASO) parameter specifies the CDMA Service Option.

Field	Value	Type	Reference	Notes					
Identifier	CDMAServiceOption IMPLICIT OCTET STRING	M	see Part 550						
Length	2 or more octets	M	see Part 550						
Contents									
H	G	F	E	D	C	B	A	Octet	Notes
MSB ServiceOption								1	a
								LSB 2	
•••								n	b

Notes:

- a. This field carries the *CDMA* service option. The bit-layout is the same as that of Service Option defined in the *CDMA* air interface specification (see *CDMA*).
- b. Ignore extra octets, if received. Send only defined (or significant) octets.

2.77 CDMAServiceOptionList

The CDMAServiceOptionList (CDMASOL) parameter specifies the authorized *CDMA* Service Option(s) in descending order of preference for an MS.

Field	Value	Type	Reference	Notes
Identifier	CDMAServiceOptionList IMPLICIT SEQUENCE OF	M	see Part 550	
Length	variable octets	M	see Part 550	
Contents				
	CDMAServiceOption	M	2.76	
	CDMAServiceOption	O	2.76	a
	•••			

Notes:

- a. Optionally include additional CDMAServiceOption parameters. When used as authorized service list (e.g., as SubstituteServices from an Anchor MSC to the Serving MSC in the ChangeService RETURN RESULT), CDMAServiceOption parameters are listed in the descending order of preference.

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2.78 CDMA Serving One Way Delay

The CDMA Serving One Way Delay (CDMASOWD) parameter specifies the estimated one-way delay from the MS to a serving base station. The estimated delay can be converted to the estimated distance. The estimate can be used to minimize the search and acquisition times for the MS. The estimated one way delay between the MS and the associated base station is specified in units of 100 ns. The valid values are 0 through 65535.

Field	Value	Type	Reference	Notes					
Identifier	CDMAServingOneWayDelay IMPLICIT OCTET STRING	M	see Part 550						
Length	2 octets	M	see Part 550						
Contents									
H	G	F	E	D	C	B	A	Octet	Notes
MSB								1	
CDMA Serving One Way Delay								LSB 2	

2.79 CDMASignalQuality

The CDMASignalQuality (CDMAQUAL) parameter indicates the signal quality from the MS as measured by a base station. The signal quality is the signal to noise ratio E_b/N_0 where E_b is the energy per bit and N_0 is the total received noise power in the CDMA bandwidth normalized to 1 Hz. Signal Quality shall be computed by adding together the individual E_b/N_0 values from each multipath component. The CDMASignalQuality parameter is set to (20) times \log_{10} (Signal Quality) and rounded down to the smallest integer. The valid values are 0 through 63.

Field	Value	Type	Reference	Notes					
Identifier	CDMASignalQuality IMPLICIT OCTET STRING	M	see Part 550						
Length	1 octet	M	see Part 550						
Contents									
H	G	F	E	D	C	B	A	Octet	Notes
Reserved		CDMA Signal Quality						1	a, b

Notes:

- a. See *CDMA* for the definition of this field.
- b. Reserved bits shall be ignored on receipt and set to zero on sending.

2.80 CDMA Slot Cycle Index

The CDMA Slot Cycle Index (CDMASlotCycleIndex) parameter indicates the preferred slot cycle length of a CDMA MS. The slot cycle length, T , in units of 1.28 seconds is given by $T = 2^i$, where i is the slot cycle index. The valid values are 0 through 7.

Field	Value	Type	Reference	Notes					
Identifier	CDMASlotCycleIndex IMPLICIT OCTET STRING	M	see Part 550						
Length	1 octet	M	see Part 550						
Contents									
H	G	F	E	D	C	B	A	Octet	Notes
Reserved					Slot Cycle Index			1	a, b

Notes:

- a. See *CDMA SLOT_CYCLE_INDEX* for the definition of this field.
- b. Reserved bits shall be ignored on receipt and set to zero on sending.

2.81 CDMAState

The CDMAState (CDMAS) parameter is used to specify the CDMA State information associated with the CDMAServiceOption.

Field	Value	Type	Reference	Notes					
Identifier	CDMAState IMPLICIT OCTET STRING	M	see Part 550						
Length	variable octets	M	see Part 550						
Contents									
H	G	F	E	D	C	B	A	Octet	Notes
Service Option State								1	a
...								n	b

Notes:

- a. This field carries the CDMA Service Option State information. The CDMA Service Option State is defined in the current *CDMA Service Options* standard. If CDMA Service Option State is not explicitly defined within a section of the relevant *CDMA Service Option* standard, the CDMA Service Option State shall carry the value of the ORD_Q octet of all current *Service Option Control Orders* (see *CDMA*), or the contents of all current *CDMA Service Option Control Messages* (see *CDMA*) type specific field for this connection reference.
- b. Ignore extra octets, if received. Send only defined (or significant) octets.

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2.82 CDMAStationClassMark

The CDMAStationClassMark (CDMASCM) parameter identifies certain characteristics of a dual-mode CDMA MS. This is used in accordance with the appropriate air interface.

Field	Value	Type	Reference	Notes					
Identifier	CDMAStationClassMark IMPLICIT OCTET STRING	M	see Part 550						
Length	variable octets	M	see Part 550						
Contents									
H	G	F	E	D	C	B	A	Octet	Notes
Rsvd	DMI	SMI	Reserved		DTX	PC		1	a
• • •								n	b

Notes:

- a. Reserved (Rsvd) bits shall be ignored on receipt and set to zero on sending.
- b. Ignore extra octets, if received. Send only defined (or significant) octets.

Value	Meaning
0	Class I.
1	Class II.
2	Class III.
3	Reserved.

Power Class (PC) (octet 1, bits A and B)

Value	Meaning
0	Continuous.
1	Discontinuous.

Analog Transmission (DTX) (octet 1, bit C)

Value	Meaning
0	Slotted incapable. MS does not monitor the paging channel in slotted mode.
1	Slotted capable. MS may monitor the paging channel in slotted mode.

Slotted Mode Indicator (SMI) (octet 1, bit F)

<i>Dual-mode Indicator (DMI) (octet 1, bit G)</i>	
Value	Meaning
0	CDMA only.
1	Dual-mode CDMA and Analog capable MS.

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2.83 CDMAStationClassMark2

The CDMAStationClassMark2 (CDMASCM2) parameter identifies certain characteristics of a dual-mode CDMA MS. CDMASCM2 is used in accordance with the appropriate air interface.

Field	Value	Type	Reference	Notes					
Identifier	CDMAStationClassMark2 IMPLICIT OCTET STRING	M	see Part 550						
Length	variable octets	M	see Part 550						
Contents									
H	G	F	E	D	C	B	A	Octet	Notes
SCM								1	a
...								n	b

Notes:

- a. See *CDMA* for the definition of this field.
- b. Ignore extra octets, if received. Send only defined (or significant) octets.

2.84 CDMATargetMAHOInformation

The CDMATargetMAHOInformation (CDMAMAHO) parameter specifies CDMA target cell information which is used in the handoff process.

Field	Value	Type	Reference	Notes
Identifier	CDMATargetMAHOInformation IMPLICIT SEQUENCE	M	see Part 550	
Length	variable octets	M	see Part 550	
Contents				
TargetCellID		M	2.273	
CDMAPilotStrength		M	2.69	
CDMATargetOneWayDelay		M	2.88	
• • •				a

Notes:

- a. Ignore unexpected parameters, if received. Send only defined (or significant) parameters.

2.85 CDMATargetMAHOList

The CDMATargetMAHOList (CDMAMAHOList) parameter specifies CDMA target cell information which is used in the handoff process.

Field	Value	Type	Reference	Notes
Identifier	CDMATargetMAHOList IMPLICIT SEQUENCE OF	M	see Part 550	
Length	variable octets	M	see Part 550	
Contents				
	CDMATargetMAHOInformation	M	2.84	
	CDMATargetMAHOInformation	O	2.84	a
	•••			

Notes:

- a. Optionally include additional CDMATargetMAHOInformation parameters.

2.86 CDMATargetMeasurementInformation

The CDMATargetMeasurementInformation (CDMAMEAS) parameter specifies CDMA target cell information which is used in the handoff process.

Field	Value	Type	Reference	Notes
Identifier	CDMATargetMeasurementInformation IMPLICIT SEQUENCE	M	see Part 550	
Length	variable octets	M	see Part 550	
Contents				
TargetCellID		M	2.273	
CDMASignalQuality		M	2.79	
CDMATargetOneWayDelay		O	2.88	a
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Notes:

- a. Include if available.
- b. Ignore unexpected parameters, if received. Send only defined (or significant) parameters.

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2.87 CDMATargetMeasurementList

The CDMATargetMeasurementList (CDMAMEASLIST) parameter specifies CDMA target cell information which is used in the handoff process.

Field	Value	Type	Reference	Notes
Identifier	CDMATargetMeasurementList IMPLICIT SEQUENCE OF	M	see Part 550	
Length	variable octets	M	see Part 550	
Contents				
	CDMATargetMeasurementInformation	M	2.86	
	CDMATargetMeasurementInformation	O	2.86	a
	• • •			

Notes:

- a. Optionally include additional CDMATargetMeasurementInformation parameters.

2.88 CDMATargetOneWayDelay

This parameter was named TargetOneWayDelay prior to *IS-41-C*.

The CDMATargetOneWayDelay (CDMATOWD) parameter specifies the estimated one-way delay from the MS to a target base station. The estimated delay can be converted to the estimated distance. The estimate can be used to minimize the search and acquisition times for the MS. The estimated one way delay between the MS and the associated base station is specified in units of 100 ns. The valid values are 0 through 65535.

Field	Value	Type	Reference	Notes					
Identifier	CDMATargetOneWayDelay IMPLICIT OCTET STRING	M	see Part 550						
Length	2 octets	M	see Part 550						
Contents									
H	G	F	E	D	C	B	A	Octet	Notes
MSB								1	a
CDMA Target One Way Delay								LSB	

Notes:

- a. Value 0 indicates the CDMA Target One Way Delay level is unknown.

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2.89 Change

The Change (CHANGE) parameter specifies the update action to be performed.

Field	Value	Type	Reference	Notes					
Identifier	Change IMPLICIT Unsigned Enumerated	M	see Part 550						
Length	1 octet	M	see Part 550						
Contents									
H	G	F	E	D	C	B	A	Octet	Notes
Change Action								1	

<i>Change Action (octet 1)</i>	
Value	Meaning
0	Not used.
1	Set Data Item to Default Value.
2	Add Data Item.
3	Delete Data Item.
4	Replace Data Item with associated DataValue.
5 through 223	Reserved. Treat the same as value 1, <i>Set Data Item to Default Value</i> .
224 through 255	Reserved for <i>MAP</i> protocol extension. If unknown, treat the same as value 1, <i>Set Data Item to Default Value</i> .

2.90 ChangeServiceAttributes

The ChangeServiceAttributes (CHGSRVAT) parameter is used to flag attributes which have been used or may be required for the pending service change.

ChangeFacilities indicates whether or not a ChangeFacilities operation is necessary to reserve and activate the facilities required for the requested service. It is also used to indicate whether or not the use of new facilities and the removal of old facilities was accomplished with the execution of a ChangeFacilities operation.

ServiceNegotiate indicates service negotiation at the serving MSC is complete.

Field	Value	Type	Reference	Notes					
Identifier	ChangeServiceAttributes IMPLICIT OCTET STRING	M	see Part 550						
Length	variable octets	M	see Part 550						
Contents									
H	G	F	E	D	C	B	A	Octet	Notes
Reserved				SRVNEG		CHGFAC		1	a
• • •								n	b

Notes:

- a. Reserved bits shall be ignored on receipt and set to zero on sending.
- b. Ignore extra octets, if received. Send only defined (or significant) octets.

<i>Change Facilities Flag (CHGFAC) (octet 1, bits A - B)</i>	
Value	Meaning
0	Change Facilities Operation Requested.
1	Change Facilities Operation Not Requested.
2	Change Facilities Operation Used.
3	Change Facilities Operation Not Used.
<i>Service Negotiate Flag (SRVNEG) (octet 1, bits C - D)</i>	
Value	Meaning
0	Service Negotiation Used.
1	Service Negotiation Not Used.
2	Service Negotiation Required.
3	Service Negotiation Not Required.

2.91 ChannelData

The ChannelData (CHDATA) parameter is used to indicate the SAT Color Code (SCC), Discontinuous Transmission Mode (DTX), Voice Mobile Attenuation Code (VMAC) and the Channel Number (CHNO) of the channel being reported. SCC, DTX, VMAC, and CHNO are in accordance with *AMPS*, analog *TDMA*, *NAMPS*, and analog *CDMA*.

Field	Value	Type	Reference	Notes						
Identifier	ChannelData IMPLICIT OCTET STRING	M	see Part 550							
Length	zero or 3 octets	M	see Part 550	a						
Contents										
H	G	F	E	D	C	B	A	Octet	Notes	
SCC		ABC	DTX		VMAC			1	b	
MSB							Channel Number (CHNO)		2	
							LSB		3	

Notes:

- a. An omitted CHDATA parameter or a CHDATA parameter with a length of 0 indicates that another channel data parameter (i.e., CDMACHannelData, TDMACHannelData) is used. Also, if the CHDATA parameter is applicable, the extended analog protocol parameter, NAMPSChannelData, may also be applicable.
- b. VMAC indicates the current power level of the MS associated with the analog channel being reported.

<i>Discontinuous Transmission Mode (DTX) (octet 1, bits D-E)</i>	
Value	Meaning
0	DTX disabled. (not active/acceptable).
1	Reserved. Treat the same as value 0, <i>DTX disabled</i> .
2	DTX-low mode. (i.e., 8 dB below DTX active/acceptable).
3	DTX mode active or acceptable.
<i>Analog Band Class (ABC) (octet 1, bit F)</i>	
Value	Meaning
0	800 MHz System.
1	Reserved (1800 MHz Analog System).

2.92 CommandCode

The CommandCode (CMDCODE) parameter permits the serving system to allow or deny the originating system to initiate a TransferToNumberRequest operation.

Field	Value	Type	Reference	Notes					
Identifier	CommandCode IMPLICIT OCTET STRING	M	see Part 550						
Length	1 octet	M	see Part 550						
Contents									
H	G	F	E	D	C	B	A	Octet	Notes
Reserved							ALLTRA	1	a

Notes:

- a. Reserved bits shall be ignored on receipt and set to zero on sending.

<i>Allow Transfer To Number (ALLTRA) (octet 1, bit A)</i>	
Value	Meaning
0	Deny HLR Transfer. The serving system attempts optimization by directing the originating system to not initiate TransferToNumberRequests toward the HLR.
1	Allow HLR Transfer. The serving system does not attempt optimization, and directs originating system normal treatment (e.g., initiating TransferToNumberRequests toward the HLR).

2.93 ConditionallyDeniedReason

The ConditionallyDeniedReason (CDEN) parameter indicates the reason access may not be given to the called MS.

Field	Value	Type	Reference	Notes					
Identifier	ConditionallyDeniedReason IMPLICIT Unsigned Enumerated	M	see Part 550						
Length	1 octet	M	see Part 550						
Contents									
H	G	F	E	D	C	B	A	Octet	Notes
Conditionally Denied Reason								1	

<i>Conditionally Denied Reason (octet 1)</i>	
Value	Meaning
0	Not used.
1	Waitable. (i.e., Call Waiting is possible).
2 through 223	Reserved. Treat the same as value 1, <i>Waitable</i> .
224 through 255	Reserved for <i>MAP</i> protocol extension. If unknown, treat the same as value 1, <i>Waitable</i> .

2.94 ConferenceCallingIndicator

The ConferenceCallingIndicator (CCI) parameter is used to request that the ongoing call be transformed into a Conference Call. The parameter contains the maximum number of conferees that can be connected at any given time in the ongoing call.

Field	Value	Type	Reference	Notes					
Identifier	ConferenceCallingIndicator IMPLICIT OCTET STRING	M	see Part 550						
Length	variable octets	M	see Part 550						
Contents									
H	G	F	E	D	C	B	A	Octet	Notes
Maximum Number of Conferees								1	
•••								n	a

Notes:

- a. Ignore extra octets, if received. Send only defined (or significant) octets.

<i>Maximum Number of Conferees (octet 1)</i>	
Value	Meaning
0	Not specified.
1 through 254	Maximum number of conferees.
255	Unlimited number of conferees.

2.95 ConfidentialityModes

The ConfidentialityModes (CMODES) parameter identifies the status of Signaling Message Encryption, Voice Privacy, Data Privacy and TDMA Enhanced Privacy and Encryption features for the MS and the subscriber's preference; on handoff, for example, the Target MSC should attempt to provide the subscriber's preference regardless of the status in the Serving MSC. Note that the ability to activate Voice Privacy, Data Privacy and TDMA Enhanced Privacy and Encryption is dictated by the CallingFeaturesIndicator in the subscriber's profile.

In a FacilitiesDirective, FacilitiesDirective2, HandoffToThird, HandoffToThird2, HandoffBack, or HandoffBack2 operation INVOKE component, the CMODES-Desired indicates the subscriber's preference for Voice Privacy or Data Privacy¹ and the current state of Signaling Message Encryption and TDMA Enhanced Privacy and Encryption in the Serving MSC. The Target MSC responds with CMODES-Actual in the RETURN RESULT component. This response indicates the modes that the target system will support following the handoff.

Field	Value	Type	Reference	Notes					
Identifier	ConfidentialityModes IMPLICIT OCTET STRING	M	see Part 550						
Length	1 octet	M	see Part 550						
Contents									
H	G	F	E	D	C	B	A	Octet	Notes
Reserved				EPE	DP	SE	VP	1	a

Notes:

- a. Reserved bits shall be ignored on receipt and set to zero on sending.

<i>Voice Privacy (VP) Confidentiality Status (octet 1, bit A)</i>	
Value	Meaning
0	Off.
1	On.
<i>Signaling Message Encryption (SE) Confidentiality Status (octet 1, bit B)</i>	
Value	Meaning
0	Off.
1	On.
<i>Data Privacy (DP) Confidentiality Status (octet 1, bit C)</i>	
Value	Meaning
0	Off.
1	On.

¹ Data Privacy is only supported on FacilitiesDirective2, HandoffToThird2 and HandoffBack2 operations.

<i>TDMA Enhanced Privacy and Encryption (EPE) Confidentiality Status (octet 1, bit D)</i>	
Value	Meaning
0	Off.
1	On.

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2.96 ControlChannelData

The ControlChannelData (CCDATA) parameter is used to indicate the Digital Color Code (DCC), the Control Mobile Attenuation Code (CMAC), and the Channel Number (CHNO) of the access channel being reported. The contents of this parameter are in accordance with *AMPS*, *TDMA* and *CDMA*.

Field	Value	Type	Reference	Notes						
Identifier	ControlChannelData IMPLICIT OCTET STRING	M	see Part 550							
Length	4 octets	M	see Part 550							
Contents										
H	G	F	E	D	C	B	A	Octet	Notes	
DCC		Reserved			CMAC				1	a, b
MSB							Channel Number (CHNO)		2	
							LSB		3	
Reserved				SDCC1		SDCC2			4	a, c

Notes:

- a. Reserved bits shall be ignored on receipt and set to zero on sending.
- b. CMAC indicates the current power level of the MS associated with the channel being reported.
- c. If the Supplementary Digital Color Codes (SDCC1 and SDCC2) are not supported by either the MS or the system, then they should be transmitted as zeroes.

2.97 ControlChannelMode

The ControlChannelMode (CCM) parameter indicates the current (or last known) Control Channel operating mode used by the MS to access the system.

Field	Value	Type	Reference	Notes					
Identifier	ControlChannelMode IMPLICIT OCTET STRING	M	see Part 550						
Length	variable octets	M	see Part 550						
Contents									
H	G	F	E	D	C	B	A	Octet	Notes
Control Channel Mode								1	
•••								n	a

Notes:

- a. Ignore extra octets, if received. Send only defined (or significant) octets.

<i>Control Channel Mode (octet 1)</i>	
Value	Meaning
0	Unknown.
1	MS is in Analog CC Mode.
2	MS is in Digital CC Mode.
3	MS is in NAMPS CC Mode.
4 through 223	Reserved. Treat the same as value 0, <i>Unknown</i> .
224 through 255	Reserved for <i>MAP</i> protocol extension. If unknown, treat the same as value 0, <i>Unknown</i> .

2.98 CountUpdateReport

The CountUpdateReport (COUNTRPT) parameter indicates the outcome of the CallHistoryCount (COUNT) Update initiated by the AC or the VLR.

Field	Value	Type	Reference	Notes					
Identifier	CountUpdateReport IMPLICIT OCTET STRING	M	see Part 550						
Length	variable octets	M	see Part 550						
Contents									
H	G	F	E	D	C	B	A	Octet	Notes
COUNT Update Report								1	
•••								n	a

Notes:

- a. Ignore extra octets, if received. Send only defined (or significant) octets.

<i>COUNT Update Report (octet 1)</i>	
Value	Meaning
0	Not used.
1	COUNT Update not attempted.
2	COUNT Update no response.
3	COUNT Update successful.
4 through 223	Reserved. Treat the same as value 1, <i>COUNT Update not attempted</i> .
224 through 255	Reserved for <i>MAP</i> protocol extension. If unknown, treat the same as value 1, <i>COUNT Update not attempted</i> .

2.99 DataAccessElement

The DataAccessElement (DAE) parameter specifies a data item. Optionally, it may specify a change to be applied to that data item, a value for that data item, or both.

Field	Value	Type	Reference	Notes
Identifier	DataAccessElement IMPLICIT SEQUENCE	M	see Part 550	
Length	variable octets	M	see Part 550	
Contents				
DataID		M	2.102	
Change		O	2.89	a
DataValue		O	2.108	a
• • •				b

Notes:

- a. If the Change parameter is not present, the DataValue parameter, if present, provides the current value of the specified data item. If the Change parameter is present, the DataValue parameter, if present, provides a value which should replace the current value of the specified data item.
- b. Ignore unexpected parameters, if received. Send only defined (or significant) parameters.

2.100 DataAccessElementList

The DataAccessElementList (DAEL) parameter specifies a list of data items. Optionally, it may specify changes to be applied to data items, values for some of these data items, or both.

Field	Value	Type	Reference	Notes
Identifier	DataAccessElementList IMPLICIT SEQUENCE OF	M	see Part 550	
Length	variable octets	M	see Part 550	
Contents				
	DataAccessElement	M	2.99	a
	DataAccessElement	O	2.99	a, b
	• • •			

Notes:

- a. If the Change parameter is a component of one DataAccessElement in this list, it must be a component of each DataAccessElement in this list.
- b. Optionally, include additional DataAccessElement parameters. The maximum number of DataAccessElement parameters is dependent upon the two systems involved in the transaction.

2.101 DatabaseKey

The DatabaseKey (DATAKEY) parameter identifies the key field(s) for accessing the data items identified in the accompanying parameters.

Field	Value	Type	Reference	Notes					
Identifier	DatabaseKey IMPLICIT OCTET STRING	M	see Part 550						
Length	variable octets	M	see Part 550						
Contents									
H	G	F	E	D	C	B	A	Octet	Notes
Database Key Indicator								1	a
•••								n	

Notes:

- a. The Database Key Indicator value is determined by bi-lateral agreement between the sender and receiver (e.g., mobile directory number, mobile identification number, proprietary database key).

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2.102 DataID

The DataID (DATAID) parameter identifies a data item for use with the SEARCH and MODIFY operations.

Field	Value	Type	Reference	Notes					
Identifier	DataID IMPLICIT OCTET STRING	M	see Part 550						
Length	variable octets	M	see Part 550						
Contents									
H	G	F	E	D	C	B	A	Octet	Notes
Data Identifier								1	a
								...	
								n	
...								m	b

Notes:

- a. May be any valid *MAP* parameter identifier (explicitly defined in the standard or private).
- b. Ignore extra octets, if received. Send only defined (or significant) octets.

2.103 DataKey

The DataKey (DKEY) parameter provides the key for the data privacy algorithm when SSD is not shared. DataKey is unique to a particular SSD.

Field	Value	Type	Reference	Notes					
Identifier	DataKey IMPLICIT OCTET STRING	M	see Part 550						
Length	4 or more octets	M	see Part 550						
Contents									
H	G	F	E	D	C	B	A	Octet	Notes
Data Key								1	
								2	
								3	
								4	
								...	
								LSB	

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2.104 DataPrivacyParameters

The DataPrivacyParameters (DPP) parameter is used to indicate the Data Privacy information necessary to support data privacy.

Field	Value	Type	Reference	Notes					
Identifier	DataPrivacyParameters IMPLICIT OCTET STRING	M	see Part 550						
Length	4 or more octets	M	see Part 550						
Contents									
H	G	F	E	D	C	B	A	Octet	Notes
Reserved						PM		1	a
DP Version								2	b
MSB DP Data LSB								3	c
								4	
								...	
								n	

Notes:

- a. Reserved bits shall be ignored on receipt and set to zero on sending.
- b. This field carries the Data Privacy Version as defined in this standard.
- c. This field carries the Data Privacy Data. For example, if DP version is equal to 1, then DP Data contains the current value of HOOK.

<i>Privacy Mode (PM) (octet 1, Bits A and B)</i>	
Value	Meaning
0	Privacy inactive or not supported.
1	Privacy Requested or Acknowledged.
2 through 3	Reserved. Treat reserved values the same as value 0, <i>Privacy inactive or not supported.</i>
<i>Data Privacy Version (PM) (octet 2)</i>	
Value	Meaning
0	Not used.
1	Data Privacy Version 1.
2 through 223	Reserved. Treat reserved values the same as value 0, <i>Not used.</i>
224 through 255	Reserved for <i>MAP</i> protocol extension. If unknown, treat reserved values the same as value 0, <i>Not used.</i>

2.105 DataResult

The DataResult (DATARES) parameter provides the associated data update result (e.g., successful, unsuccessful).

Field	Value	Type	Reference	Notes					
Identifier	DataResult IMPLICIT Unsigned Enumerated	M	see Part 550						
Length	1 octet	M	see Part 550						
Contents									
H	G	F	E	D	C	B	A	Octet	Notes
Data Result								1	

<i>Data Result (octet 1)</i>	
Value	Meaning
0	Not used.
1	Successful.
2	Unsuccessful, unspecified.
3	Unsuccessful, no default value available.
4 through 95	Reserved. Treat the same as value 2, <i>Unsuccessful</i> .
96 through 127	Reserved for <i>MAP</i> protocol extension (Unsuccessful values). If unknown, treat the same as value 2, <i>Unsuccessful</i> .
128 through 223	Reserved. Treat the same as value 1, <i>Successful</i> .
224 through 255	Reserved for <i>MAP</i> protocol extension (Successful values). If unknown, treat the same as value 1, <i>Successful</i> .

2.106 DataUpdateResult

The DataUpdateResult (DATUR) parameter specifies a data element identifier and the result of the update performed on that data element.

Field	Value	Type	Reference	Notes
Identifier	DataUpdateResult IMPLICIT SEQUENCE	M	see Part 550	
Length	variable octets	M	see Part 550	
Contents				
DataID		M	2.102	
DataResult		M	2.105	
• • •				a

Notes:

- a. Ignore unexpected parameters if received. Send only defined (or significant) parameters.

2.107 DataUpdateResultList

The DataUpdateResultList (DATURL) parameter specifies a list of data element identifiers and the associated data update results for each data element.

Field	Value	Type	Reference	Notes
Identifier	DataUpdateResultList IMPLICIT SEQUENCE OF	M	see Part 550	
Length	variable octets	M	see Part 550	
Contents				
	DataUpdateResult	M	2.106	
	DataUpdateResult	O	2.106	a
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Notes:

- a. Optionally include additional DataUpdateResult parameters. The maximum number of DataUpdateResult parameters is dependent upon the two systems involved in the transaction.

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2.108 DataValue

The DataValue (DATAVAL) parameter contains the value of a specific data item. The Data Value Indicator value will vary according to the type of data transferred. The encoding of this parameter will vary according to the type of data item.

Field	Value	Type	Reference	Notes					
Identifier	DataValue IMPLICIT OCTET STRING	M	see Part 550						
Length	variable octets	M	see Part 550						
Contents									
H	G	F	E	D	C	B	A	Octet	Notes
Data Value Indicator								1	
•••								n	

2.109 DeniedAuthorizationPeriod

The DeniedAuthorizationPeriod (DENAUTHPER) parameter is used to specify the interval before re-authorization. After this period has elapsed, the visited system shall attempt to obtain authorization from the home system again.

Field	Value	Type	Reference	Notes					
Identifier	DeniedAuthorizationPeriod IMPLICIT OCTET STRING	M	see Part 550						
Length	variable octets	M	see Part 550						
Contents									
H	G	F	E	D	C	B	A	Octet	Notes
Period								1	
Value								2	a
• • •								n	b

Notes:

- a. The default value is 0.
- b. Ignore extra octets, if received. Send only defined (or significant) octets.

<i>Period (octet 1)</i>	
Value	Meaning
0	Not used.
1	Per Call. Re-authorization should be attempted on the next call attempt.
2	Hours.
3	Days.
4	Weeks.
5	Per Agreement.
6	Reserved. Treat the same as value 1, <i>Per Call</i> .
7	Number of calls. Re-authorization should be attempted after this number of (rejected) call attempts.
8	Minutes.
9 through 223	Reserved. Treat the same as value 1, <i>Per Call</i> .
224 through 255	Reserved for <i>MAP</i> protocol extension. If unknown, treat the same as value 1, <i>Per Call</i> .

<i>Value (octet 2)</i>	
Value	Meaning
0 through 255	Number of minutes, hours, days, weeks, or number of calls (as per Period). If Period indicates anything else, the Value is set to zero on sending and ignored on receipt.

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2.110 DenyAccess

The DenyAccess (DENACC) parameter is used by the AC to indicate that the visiting MS to which the DenyAccess response applies is invalid.

Field	Value	Type	Reference	Notes					
Identifier	DenyAccess IMPLICIT Unsigned Enumerated	M	see Part 550						
Length	1 octet	M	see Part 550						
Contents									
H	G	F	E	D	C	B	A	Octet	Notes
DenyAccess Reason								1	

<i>DenyAccess Reason (octet 1)</i>	
Value	Meaning
0	Not used.
1	Unspecified.
2	SSD Update failure.
3	COUNT Update failure.
4	Unique Challenge failure
5	AUTHR mismatch.
6	COUNT mismatch.
7	Process collision.
8	Missing authentication parameters.
9	TerminalType mismatch.
10	MIN, IMSI or ESN authorization failure.
11 through 223	Reserved. Treat the same as value 1, <i>Unspecified</i> .
224 through 255	Reserved for <i>MAP</i> protocol extension. If unknown, treat the same as value 1, <i>Unspecified</i> .

2.111 DeregistrationType

The DeregistrationType (DEREG) parameter is used to request that an MS be deregistered when an MS is reported as *Inactive*. This allows deregistration and *Inactive* reporting to be separated.

Field	Value	Type	Reference	Notes					
Identifier	DeregistrationType IMPLICIT Unsigned Enumerated	M	see Part 550						
Length	1 octet	M	see Part 550						
Contents									
H	G	F	E	D	C	B	A	Octet	Notes
DeregistrationType								1	

<i>DeregistrationType (octet 1)</i>	
Value	Meaning
0	Not used
1	Deregister for an unspecified reason.
2	Deregister for an administrative reason (e.g., removal of VLR record).
3	Deregister due to MS power down.
4 through 223	Reserved. Treat the same as value 1, <i>Deregister for an unspecified reason</i> .
224 through 255	Reserved for <i>TIA-41</i> protocol extension. If unknown, treat the same as value 1, <i>Deregister for an unspecified reason</i> .

2.112 DestinationAddress

The DestinationAddress (DESTADDR) identifies a final destination address. The DestinationAddress CHOICE is not explicitly encoded with a parameter identifier and length.

Field	Value	Type	Reference	Notes
CHOICE				
GlobalTitle		O	2.133	
PC_SSN		O	2.186	

The Abstract Syntax Notation One (ASN.1) representation of the DestinationAddress is:

```
DestinationAddress ::= CHOICE {GlobalTitle, PC_SSN}
```

2.113 DestinationDigits

The DestinationDigits (DESTDGTS) parameter specifies the network address of the called party for the purpose of call routing.

Field	Value	Type	Reference	Notes					
Identifier	DestinationDigits IMPLICIT DigitsType	M	see Part 550	a					
Length	variable octets	M	see Part 550						
Contents									
H	G	F	E	D	C	B	A	Octet	Notes
Type of Digits								1	b
Nature of Number								2	c
Numbering Plan				Encoding				3	d, e
Number of Digits								4	f
2 nd BCD Digit				1 st BCD Digit				5	
4 th BCD Digit				3 rd BCD Digit				6	
...				
n th BCD Digit				n-1 st BCD Digit				m	

Notes:

- a. Refer to the DigitsType parameter type see [Part 551 Section 1.2](#) for notes and field encoding.
- b. The Type of Digits field is set to *Destination Number*.
- c. The Nature of Number field is set as applicable.
- d. The Numbering Plan field is set to *Telephony Numbering*.
- e. The Encoding field is set to *BCD*.
- f. The Number of Digits is between 0 and at least 15.

2.114 DigitCollectionControl

The DigitCollectionControl (DGTCC) parameter is used to control the collection of digits.

Field	Value							Type	Reference	Notes	
Identifier	DigitCollectionControl IMPLICIT OCTET STRING							M	see Part 550		
Length	variable octets							M	see Part 550	a	
Contents											
H	G	F	E	D	C	B	A	Octet	Notes		
BRK	TA	Res'd	MaximumCollect						1	b, c	
Reserved		MinimumCollect						2	b, d		
MaximumInteractionTime								3	e		
Reserved		InitialInterdigitTime						4	b, f		
Reserved		NormalInterdigitTime						5	b, g		
Reserved											
Reserved			ClearDigits DigitMask					7			
Reserved								8	b, h, j		
Reserved			EnterDigits DigitMask					9			
Reserved								10	b, h, k		
Reserved			AllowedDigits DigitMask					11			
Reserved			SpecialInterdigitTime					12	b, l		
SIT 8	SIT 7	SIT 6	SIT 5	SIT 4	SIT 3	SIT 2	SIT 1	13	l		
SIT 16	SIT 15	SIT 14	SIT 13	SIT 12	SIT 11	SIT 10	SIT 9	14	l		
SIT 24	SIT 23	SIT 22	SIT 21	SIT 20	SIT 19	SIT 18	SIT 17	15	l		
Res'd	SIT 31	SIT 30	SIT 29	SIT 28	SIT 27	SIT 26	SIT 25	16	b, l		
...								n	m		

Notes:

- a. If not all octets are sent, the unsent octets assume a default value. More values may be added to the end of the string in the future.
- b. Reserved (Res'd) bits shall be ignored on receipt and set to zero on sending.
- c. MaximumCollect defines the maximum number of digits to collect. Initially this maximum must be 32 digits or less. Zero (0) indicates that the digits should be collected until an EnterDigit is entered, the user abandons the call, or the collection times out. Other values cause collection until the MaximumCollect number of digits are received (in addition to the other criteria). By default a zero (0) value is assumed.

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- d. MinimumCollect defines the minimum number of digits to collect. This should be less than or equal to the MaximumCollect number. Zero (0) indicates that there is no minimum number of digits to collect. Other values cause a replaying of the announcement if less digits than the MinimumCollect are entered when an EnterDigit is entered or the collection times out. By default a zero (0) value is assumed.
 - e. The MaximumInteractionTime defines the amount of time in seconds allowed to collect a string of digits including announcement(s) and any retries. This is fairly long to allow the user to enter all digits and possible correct them. By default this is 1 minute.
 - f. InitialInterdigitTime defines the amount of time in seconds between the end of the announcement and when collection is declared completed without digits entered. This should be fairly short (less than 15 seconds) for PSTN interactions to wait to redirect a non-DTMF phone. If an MS subscriber is expected to use *en bloc* sending of digits, this time may be long enough to enter the entire number. This timer is restarted if the user uses a ClearDigit. By default this is 15 seconds.
 - g. The NormalInterdigitTime defines the normal amount of time in seconds allowed between key strokes. This is usually fairly short (on the order of 5 to 10 seconds). By default this is 5 seconds.
 - h. The ClearDigits, EnterDigits, and AllowedDigits fields use the following DigitMask to select individual digits:

25 Format of DigitMask Fields

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H	G	F	E	D	C	B	A	octet
7 Digit	6 Digit	5 Digit	4 Digit	3 Digit	2 Digit	1 Digit	0 Digit	1st
Reserved			# Digit	* Digit	Res'd	9 Digit	8 Digit	2nd

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- i. ClearDigits applies the DigitMask (Figure 55) to define the digits that cause the buffered digits to be discarded, so that the digits may be re-entered. A one (1) value in the mask causes the corresponding digit to be treated as a clear digit. Digits with a corresponding zero (0) values are ignored. Zero or more bits may have the one value. By default there are no clear digits.
 - j. EnterDigits applies the DigitMask (Figure 55) to define the digits that cause the buffered digits to be sent, thereby ending this entry. A one (1) value in the mask causes the corresponding digit to be treated as an enter digit. Digits with a corresponding zero (0) values are ignored. Zero or more bits may have the one value. By default the pound (#) key is the enter digit.
 - k. AllowedDigits applies the DigitMask (Figure 55) to define the digits that are buffered. A one (1) value in the mask causes the corresponding digit to be buffered. Digits with a corresponding zero (0) values are ignored. Zero or more bits may have the one value. By default all digits are buffered.
 - l. The SpecialInterdigitTime (SIT) overrides the applicable NormalInterdigitTime after the digits with the corresponding SIT bit set to a one (1) value. SIT 1 applies after the first digit, SIT 2 applies after the second digit, and so on. This allows for shorter timers to be applied for digit strings that may have special lengths, such as, 1, 3, 7, and 10 for the North American Numbering Plan. By default special interdigit timing does not apply.
 - m. Ignore extra octets, if received. Send only defined (or significant) octets.

<i>TypeAhead (TA) (octet 1, bit G)</i>	
Value	Meaning
0	NoTypeAhead. Ignore digits received before the end of the announcement.
1	Buffer (default). Allow digits to be received and collected before the end of the announcement.
<i>Break (BRK) (octet 1, bit H)</i>	
Value	Meaning
0	NoBreak. Ignore digits received before the end of the announcement for purposes of controlling the announcement.
1	BreakIn (default). Allow digits received before or during an announcement to cut the announcement off.

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2.115 Digits

The Digits parameter is based on the Digits parameter defined in Section 3 of *ANSI T1.114-1988*. Where there are differences, this Standard takes precedence.

Field	Value	Type	Reference	Notes					
Identifier	Digits IMPLICIT DigitsType	M	see Part 550	a					
Length	variable octets	M	see Part 550						
Contents									
H	G	F	E	D	C	B	A	Octet	Notes
Type of Digits								1	b
Nature of Number								2	c
Numbering Plan				Encoding				3	d, e
Number of Digits								4	f
2 nd BCD Digit				1 st BCD Digit				5	
4 th BCD Digit				3 rd BCD Digit				6	
• • •				• • •				• • •	
n th BCD Digit				n-1 st BCD Digit				m	

Notes for all Digits parameter variants:

- a. Refer to the DigitsType parameter type see [Part 551 Section 1.2](#) for notes and field encoding.
- d. The Numbering Plan field is set to *Telephony Numbering*.
- e. The Encoding field is set to BCD.

Notes for the Digits (Dialed) variant:

- b. The Type of Digits field is set to *Dialed Number*.
- c. The Nature of Number field is *National* or *International*.
- f. The Number of Digits is between 0 and 32.

Notes for the Digits (Carrier) variant:

- b. The Type of Digits field is set to *Carrier*.
- c. The Nature of Number field is *National*.

Notes for the Digits (Destination) as a profile restriction variant:

- b. The Type of Digits field is set to *Destination Number*. The digits specify the national leading digits of the directory number (e.g., 6-digit NANP office code) or the leading digits of an international E.164 number or a full directory number (e.g., 10-digit NANP directory number) or a full international E.164 number used to restrict the numbers dialed by an MS as indicated by the OriginationIndicator parameter.
- c. The Nature of Number field is set to *National* or *International* as appropriate.

- f. The Number of Digits is set appropriately (e.g., 6 or 10 for NANP).

Notes for the Digits (Destination) as a network destination variant:

- b. The Type of Digits field is set to *Destination Number*. The digits specify a telephone network destination address.
- c. The Nature of Number field is set as necessary:
 - i. for a destination within the same country (or multi-country integrated numbering plan) the digits may consist of a national number without prefix digits. The Nature of Number Field is set to *National*.
 - ii. otherwise, the digits should consist of a full E.164 number, including country code. The Nature of Number field is set to *International*.
- f. The Number of Digits is between 0 and at least 15.

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2.116 DisplayText

The DisplayText (DISPTEXT) parameter carries information to be sent to the MS for display. This parameter is based on the Display Text information element defined in Annex D (normative) of *ANSI T1.610*.

Field	Value	Type	Reference	Notes					
Identifier	DisplayText IMPLICIT OCTET STRING	M	see Part 550						
Length	3 or more octets	M	see Part 550						
Contents									
H	G	F	E	D	C	B	A	Octet	Notes
1	Display Type							1	a
Display information								2	a, b
								n	

Notes:

- a. Refer to *ANSI T1.610* for field encoding.
- b. One or more groups of Display information may be included depending on specific service requirements.

2.117 DisplayText2

The DisplayText2 (DISPTEXT2) parameter carries multiple character display information to be sent to the MS for display.

Field	Value	Type	Reference	Notes					
Identifier	DisplayText2 IMPLICIT OCTET STRING	M	see Part 550						
Length	variable octets	M	see Part 550	a					
Contents									
H	G	F	E	D	C	B	A	Octet	Notes
Multiple Character Extended Display								1	a
								...	
								m	
...								n	b

Notes:

- a. The encoding is the same as that of the *Multiple Character Extended Display* information record in the *CDMA* specification.
- b. Ignore extra octets, if received. Send only defined (or significant) octets.

2.118 DMH_AccountCodeDigits

The DMH_AccountCodeDigits (ACDGTS) parameter specifies the account code digits as dialed by a subscriber. The account code is defined between the subscriber and the home cellular service provider.

Field	Value	Type	Reference	Notes					
Identifier	DMH_AccountCodeDigits IMPLICIT DigitsType	M	see Part 550	a					
Length	variable octets	M	see Part 550						
Contents									
H	G	F	E	D	C	B	A	octet	Notes
Type of Digits								1	b
Nature of Number								2	c
Numbering Plan				Encoding				3	d, e
Number of Digits								4	f
2 nd BCD Digit				1 st BCD Digit				5	
4 th BCD Digit				3 rd BCD Digit				6	
...				
n th BCD Digit				n-1 st BCD Digit				m	

Notes:

- a. Refer to the DigitsType parameter type see [Part 551 Section 1.2](#) for notes and field encoding.
- b. The Type of Digits field is ignored on receipt.
- c. The Nature of Number field is ignored on receipt.
- d. The Numbering Plan field is ignored on receipt.
- e. The Encoding field is set to *BCD*.
- f. The Number of Digits is between 0 and at least 15.

2.119 DMH_AlternateBillingDigits

The DMH_AlternateBillingDigits (ABDGTS) parameter specifies a non-telephony billing number, such as a calling card number, credit card account number, debit card account code, etc. The DMH_AlternateBillingDigits is supplied and screened by a subscriber's home cellular service provider.

The account responsible for a call is based upon the presence of the following parameters in order of precedence:

- a. DMH_AlternateBillingDigits.
- b. DMH_BillingDigits.
- c. MobileDirectoryNumber.
- d. MobileIdentificationNumber or IMSI.

Field	Value	Type	Reference	Notes					
Identifier	DMH_AlternateBillingDigits IMPLICIT DigitsType	M	see Part 550	a					
Length	variable octets	M	see Part 550						
Contents									
H	G	F	E	D	C	B	A	Octet	Notes
Type of Digits								1	b
Nature of Number								2	c
Numbering Plan				Encoding				3	d, e
Number of Digits								4	f
2 nd BCD Digit				1 st BCD Digit				5	
4 th BCD Digit				3 rd BCD Digit				6	
...				
n th BCD Digit				n-1 st BCD Digit				m	

Notes:

- a. Refer to the DigitsType parameter type see [Part 551 Section 1.2](#) for notes and field encoding.
- b. The Type of Digits field is ignored on receipt.
- c. The Nature of Number field is ignored on receipt.
- d. The Numbering Plan field is ignored on receipt.
- e. The Encoding field is set to *BCD*.
- f. The Number of Digits is between 0 and at least 15.

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2.120 DMH_BillingDigits

The DMH_BillingDigits (BILLDGTS) parameter specifies the telephony billing number used for calls with special billing arrangements to identify the party to be billed, such as third party billing, calling card, etc. The billing number must be a valid telephony number for billing the call.

The account responsible for a call is based upon the presence of the following parameters in order of precedence:

- a. DMH_AlternateBillingDigits.
- b. DMH_BillingDigits.
- c. MobileDirectoryNumber.
- d. MobileIdentificationNumber or IMSI.

The network charge number for a call is determined by the presence of the following parameters in order of precedence:

- a. DMH_BillingDigits.
- b. MobileDirectoryNumber.
- c. MobileIdentificationNumber or IMSI.

Field	Value	Type	Reference	Notes					
Identifier	DMH_BillingDigits IMPLICIT DigitsType	M	see Part 550	a					
Length	variable octets	M	see Part 550						
Contents									
H	G	F	E	D	C	B	A	Octet	Notes
Type of Digits								1	b
Nature of Number								2	c
Numbering Plan				Encoding				3	d, e
Number of Digits								4	f
2 nd BCD Digit				s st BCD Digit				5	
4 th BCD Digit				3 rd BCD Digit				6	
...				
n th BCD Digit				n-1 st BCD Digit				m	

Notes:

- a. See the DigitsType parameter type see [Part 551 Section 1.2](#) for notes and field encoding.
- b. The Type of Digits field is set to *Billing Number*.
- c. The Nature of Number field is ignored on receipt.
- d. The Numbering Plan field is ignored on receipt.
- e. The Encoding field is set to *BCD*.
- f. The Number of Digits is between 0 and at least 15.

2.121 DMH_RedirectionIndicator

The DMH_RedirectionIndicator (REDIND) parameter indicates the reason for extending an incoming call for recording purposes and possibly for other purposes (e.g., monitoring for call forwarding loops).

Field	Value	Type	Reference	Notes					
Identifier	DMH_RedirectionIndicator IMPLICIT unsigned ENUMERATED	M	see Part 550						
Length	variable octets	M	see Part 550	a					
Contents									
H	G	F	E	D	C	B	A	Octet	Notes
Redirection Indicator								1	b
•••								n	

Notes:

- a. If a value is received using more octets than supported, change the received value to value 0, *Not specified*.
- b. See *DMH* parameter RedirectionIndicator for the definition of values in this field.

2.122 ElectronicSerialNumber

This parameter was named MobileSerialNumber prior to this revision of the Interim Standard.

The ElectronicSerialNumber (ESN) parameter is used to indicate the unique 32-bit electronic serial number of an MS.

Field	Value	Type	Reference	Notes					
Identifier	ElectronicSerialNumber IMPLICIT OCTET STRING	M	see Part 550						
Length	4 octets	M	see Part 550						
Contents									
H	G	F	E	D	C	B	A	Octet	Notes
Manufacturer's Code								1	a
MSB Serial Number LSB								2	a
								3	
								4	

Notes:

- a. See *AMPS*, *NAMPS*, *TDMA*, or *CDMA* for encoding of this field.

2.123 EmergencyServicesRoutingDigits

The EmergencyServicesRoutingDigits (ESRD) parameter is a BCD digit string identifying a base station, cell site or sector.

Field	Value	Type	Reference	Notes					
Identifier	EmergencyServicesRoutingDigits IMPLICIT DigitsType	M	see Part 550	a					
Length	variable octets	M	see Part 550						
Contents									
H	G	F	E	D	C	B	A	Octet	Notes
Type of Digits								1	b
Nature of Number								2	c
Numbering Plan				Encoding				3	d, e
Number of Digits								4	f
2 nd BCD Digit				1 st BCD Digit				5	
4 th BCD Digit				3 rd BCD Digit				6	
...				
n th BCD Digit				n-1 st BCD Digit				m	

Notes:

- a. Refer to the DigitsType parameter type see [Part 551 Section 1.2](#) for notes and field encoding.
- b. The Type of Digits field is ignored on receipt.
- c. The Nature of Number field is set as applicable.
- d. The Numbering Plan field is set to *Telephony Numbering*.
- e. The Encoding field is set to *BCD*.
- f. The Number of Digits is between 0 and at least 15.

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2.124 EnhancedPrivacyEncryptionReport

The EnhancedPrivacyEncryptionReport (EPERPT) parameter indicates the outcome of the TDMA Enhanced Privacy and Encryption initiated by the serving MSC.

Field	Value	Type	Reference	Notes					
Identifier	EnhancedPrivacyEncryptionReport IMPLICIT OCTET STRING	M	see Part 550						
Length	1 octet	M	see Part 550						
Contents									
H	G	F	E	D	C	B	A	Octet	Notes
EPE Report								1	

<i>EPE Report (octet 1)</i>	
Value	Meaning
0	Not used.
1	TDMA Enhanced Privacy and Encryption enabling not attempted.
2	TDMA Enhanced Privacy and Encryption enabling no response.
3	TDMA Enhanced Privacy and Encryption is enabled.
4	TDMA Enhanced Privacy and Encryption enabling failed.
5 through 223	Reserved. Treat the same as value 1, <i>TDMA Enhanced Privacy and Encryption enabling not attempted.</i>
224 through 255	Reserved for <i>TIA-41</i> protocol extension. If unknown, treat the same as value 1, <i>TDMA Enhanced Privacy and Encryption enabling not attempted.</i>

2.125 ExecuteScript

The ExecuteScript (EXESCR) parameter carries a script which specifies instructions for a specialized resource function to execute (e.g., play announcement, collect digits, recognize spoken words).

Field	Value	Type	Reference	Notes
Identifier	ExecuteScript IMPLICIT SEQUENCE	M	see Part 550	
Length	variable octets	M	see Part 550	
Contents				
ScriptName		M	2.221	a
ScriptArgument		O	2.220	b
• • •				c

Notes:

- a. Specifies the script to execute.
- b. Specifies the optional set of parameters required for script execution.
- c. Ignore unexpected parameters, if received. Send only defined (or significant) parameters.

2.126 ExtendedMSCID

The ExtendedMSCID (EXTMSCID) parameter indicates the ID of the specified system, and the type of system.

Field	Value	Type	Reference	Notes					
Identifier	ExtendedMSCID IMPLICIT OCTET STRING	M	see Part 550						
Length	4 octets	M	see Part 550						
Contents									
H	G	F	E	D	C	B	A	Octet	Notes
Type								1	
MSB MarketID LSB								2	a
								3	
Switch Number								4	a

Notes:

- a. Refer to the MSCID parameter (see 2.161) for the definition of these fields.

<i>Type (octet 1)</i>	
Value	Meaning
0	Not specified.
1	Serving MSC
2	Home MSC.
3	Gateway MSC.
4	HLR.
5	VLR.
6	EIR (reserved).
7	AC.
8	Border MSC.
9	Originating MSC.
10 through 223	Reserved. Treat reserved values the same as value 0, <i>Not specified.</i>
224 through 255	Reserved for <i>TIA-41</i> protocol extension. If unknown, treat the same as value 0, <i>Not specified.</i>

2.127 ExtendedSystemMyTypeCode

The ExtendedSystemMyTypeCode (EXTMYTYP) parameter indicates the manufacturer of the system and its role in the network.

Field	Value	Type	Reference	Notes					
Identifier	ExtendedSystemMyTypeCode IMPLICIT OCTET STRING	M	see Part 550						
Length	2 octets	M	see Part 550						
Contents									
H	G	F	E	D	C	B	A	Octet	Notes
Type								1	
SystemMyTypeCode Identifier								2	a

Notes:

- a. This octet is encoded the same as octet 1 in the SystemMyTypeCode parameter see 2.270.

<i>Type (octet 1)</i>	
Value	Meaning
0	Not specified.
1	Serving MSC.
2	Home MSC.
3	Gateway MSC.
4	HLR
5	VLR
6	EIR
7	AC
8	Border MSC.
9	Originating MSC.
10 through 223	Reserved. Treat reserved values the same as value 0, <i>Not specified</i> .
224 through 255	Reserved for <i>TIA-41</i> protocol extension. If unknown, treat the same as value 0, <i>Not specified</i>

2.128 FailureCause

The FailureCause (FAILCAUSE) parameter carries the ISUP Cause Indicator. The parameter encoding is based on the encoding of the information elements in Section 2.3.9 of *ANSI T1.113.3*.

Field	Value	Type	Reference	Notes					
Identifier	FailureCause IMPLICIT OCTET STRING	M	see Part 550						
Length	2 or more octets	M	see Part 550						
Contents									
H	G	F	E	D	C	B	A	Octet	Notes
Cause Indicator								1	
								2	
...								n	

2.129 FailureType

The FailureType (FAILTYPE) parameter indicates the type of connection failure.

Field	Value	Type	Reference	Notes					
Identifier	FailureType IMPLICIT Unsigned Enumerated	M	see Part 550						
Length	1 octet	M	see Part 550						
Contents									
H	G	F	E	D	C	B	A	Octet	Notes
Failure Type								1	

<i>Failure Type (octet 1)</i>	
Value	Meaning
0	Not used.
1	Call abandoned.
2	Resource disconnect.
3	Failure at MSC.
4	SSFT expiration.
5 through 223	Reserved. Ignore if received.
224 through 255	Reserved for <i>MAP</i> protocol extension. If unknown, ignore.

2.130 FaultyParameter

The FaultyParameter parameter identifies a parameter which has been determined to be in error. Only a single occurrence of this parameter is defined in RETURN ERROR components containing an Error Code of *MissingParameter*, *ParameterError*, or *UnrecognizedParameterValue*. It should not occur in RETURN ERROR messages containing other Error Code values. If the detected problem is the presence of two or more mutually exclusive parameters, report the first parameter found. If the detected problem is more than one missing, but expected or required, optional parameter; report only one of the missing parameters.

Field	Value	Type	Reference	Notes					
Identifier	FaultyParameter IMPLICIT OCTET STRING	M	see Part 550						
Length	variable octets	M	see Part 550						
Contents									
H	G	F	E	D	C	B	A	Octet	Notes
Parameter Identifier								1	a
• • •								n	

Notes:

- a. See see Part 550 for the list of valid Parameter Identifiers. Ignore reserved values, except for auditing purposes.

2.131 FeatureResult

This parameter was named RemoteFeatureOperationResult prior to this revision of the Interim Standard.

The FeatureResult (FEATRESULT) parameter indicates whether the associated feature request was successful or unsuccessful.

Field	Value	Type	Reference	Notes					
Identifier	FeatureResult IMPLICIT Unsigned Enumerated	M	see Part 550						
Length	1 octet	M	see Part 550						
Contents									
H	G	F	E	D	C	B	A	Octet	Notes
Feature Result								1	

<i>Feature Result (octet 1)</i>	
Value	Meaning
0	Not used.
1	Unsuccessful.
2	Successful.
3 through 95	Reserved. Treat the same as value 1, <i>Unsuccessful</i> .
96 through 127	Reserved for <i>TIA-41</i> protocol extension (Unsuccessful values). If unknown, treat the same as value 1, <i>Unsuccessful</i> .
128 through 223	Reserved. Treat the same as value 2, <i>Successful</i> .
224 through 255	Reserved for <i>TIA-41</i> protocol extension (Successful values). If unknown, treat the same as value 2, <i>Successful</i> .

2.132 GeographicAuthorization

The GeographicAuthorization (GEOAUTH) parameter indicates the geographic authorization capability of an MS.

Field	Value	Type	Reference	Notes					
Identifier	GeographicAuthorization IMPLICIT OCTET STRING	M	see Part 550						
Length	variable octets	M	see Part 550						
Contents									
H	G	F	E	D	C	B	A	Octet	Notes
Geographic Authorization								1	
• • •								n	a

Notes:

- a. Ignore extra octets, if received. Send only defined (or significant) octets.

<i>Geographic Authorization (octet 1)</i>	
Value	Meaning
0	Not used.
1	Authorized for all MarketIDs served by the VLR.
2	Authorized for this MarketID only.
3	Authorized for this MarketID and Switch Number only.
4	Authorized for this LocationAreaID within a MarketID only.
5 through 95	Reserved. Treat the same as value 1, <i>Authorized for all MarketIDs served by the VLR.</i>
96 through 127	Reserved for <i>TIA-41</i> protocol extension. If unknown, treat the same as value 1, <i>Authorized for all MarketIDs served by the VLR.</i>
128 through 223	Reserved. Treat the same as value 4, <i>Authorized for this LocationAreaID within a MarketID only.</i>
224 through 255	Reserved for <i>TIA-41</i> protocol extension. If unknown, treat the same as value 4, <i>Authorized for this LocationAreaID within a MarketID only.</i>

2.133 GlobalTitle

The GlobalTitle (GT) parameter carries the SCCP Global Title as defined in ANSI SCCP (Section 3 of *ANSI TL.112*) or in ITU-T SCCP (Section 3 of ITU-T Recommendation *Q.713*). This form of address requires Global Title Translation in order to identify the final destination address.

Field	Value	Type	Reference	Notes					
Identifier	GlobalTitle IMPLICIT OCTET STRING	M	see Part 550						
Length	variable octets	M	see Part 550						
Contents									
H	G	F	E	D	C	B	A	Octet	Notes
Address Indicator								1	a
Address								2	a
								...	
								n	

Notes:

- a. Depending on the network type refer to the appropriate SCCP specification for the encoding of this field.

2.134 GroupInformation

The GroupInformation (GRPINFO) parameter carries information associated with the Pilot Directory Number of a multileg call.

Field	Value	Type	Reference	Notes					
Identifier	GroupInformation IMPLICIT OCTET STRING	M	see Part 550						
Length	variable octets	M	see Part 550						
Contents									
H	G	F	E	D	C	B	A	Octet	Notes
MSB GroupInformation LSB								1	
								2	
								3	
								4	
...								n	a

Notes:

- a. Ignore extra octets, if received. Send only defined (or significant) octets.

2.135 HandoffReason

The HandoffReason (HANDREASON) parameter is sent to the target system from the serving system to indicate the reason for the handoff.

Field	Value	Type	Reference	Notes					
Identifier	HandoffReason IMPLICIT Unsigned Enumerated	M	see Part 550						
Length	1 octet	M	see Part 550						
Contents									
H	G	F	E	D	C	B	A	Octet	Notes
Handoff Reason								1	

<i>Handoff Reason (octet 1)</i>	
Value	Meaning
0	Not used.
1	Unspecified.
2	Weak Signal.
3	Off-loading.
4	Anticipatory (i.e., in anticipation of a future weak signal).
5 through 223	Reserved. Treat the same as value 1, <i>Unspecified</i> .
224 through 255	Reserved for <i>TIA-41</i> protocol extension. If unknown, treat the same as value 1, <i>Unspecified</i> .

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2.136 HandoffState

The HandoffState (HOSTATE) parameter indicates that the MS is currently involved in a call that is in the awaiting answer or alerting state.

Field	Value	Type	Reference	Notes					
Identifier	HandoffState IMPLICIT OCTET STRING	M	see Part 550						
Length	variable octets	M	see Part 550						
Contents									
H	G	F	E	D	C	B	A	Octet	Notes
Reserved							PI	1	a
• • •								n	b

Notes:

- a. Reserved bits shall be ignored on receipt and set to zero on sending.
- b. Ignore extra octets, if received. Send only defined (or significant) octets.

<i>Party Involved (PI) (octet 1, bit A)</i>	
Value	Meaning
0	Originator is handing off (i.e., handle as normal handoff).
1	Terminator is handing off (i.e., place MS on voice channel in the alerting state).

2.137 IMSI

The IMSI (International Mobile Station Identity) parameter is used to identify a specific MS. It is defined in *ITU-T recommendation E.212*. IMSI may be up to 15 digits in length. Only the last digit may be set to the filler value (i.e. for IMSI with an odd number of digits).

Field	Value	Type	Reference	Notes					
Identifier	IMSI IMPLICIT OCTET STRING	M	see Part 550						
Length	variable octets	M	see Part 550						
Contents									
H	G	F	E	D	C	B	A	Octet	Notes
Digit 2				Digit 1				1	a
Digit 4				Digit 3				2	
Digit 6				Digit 5				3	
Digit 8				Digit 7				4	
Digit 10				Digit 9				5	
Digit 12				Digit 11				6	
Digit 14				Digit 13				7	
filler				Digit 15				8	

Notes:

- a. Digit 1 (bits A through D of octet 1) is the most significant digit (i.e. first digit of MCC).

<i>Digit n, where n={0,1, 2, ..., 15} (octets 1 - 8, bits A - D or E - F)</i>	
Value	Meaning
0	Digit = 0.
1	Digit = 1.
2	Digit = 2.
3	Digit = 3.
4	Digit = 4.
5	Digit = 5.
6	Digit = 6.
7	Digit = 7.
8	Digit = 8.
9	Digit = 9.
10 through 14	Reserved.
15	Digit = Filler.

2.138 InterMessageTime

The InterMessageTime (IMTIME) parameter is used to indicate the desired inter-message guard timer value (in 10s of seconds) at the receiving node when the timer value is to be different than the system default.

Field	Value	Type	Reference	Notes					
Identifier	InterMessageTime IMPLICIT OCTET STRING	M	see Part 550						
Length	1 octet	M	see Part 550						
Contents									
H	G	F	E	D	C	B	A	Octet	Notes
Timer value (in 10s of seconds)								1	

Notes:

- a. Timer value is specified in 10s of seconds (e.g., a value of '1' is 10 seconds; a value of '2' is 20 seconds).

2.139 InterMSCCircuitID

The InterMSCCircuitID (IMSCCID) parameter is used to identify a specific trunk in a dedicated trunk group between two MSCs. This number consists of a trunk group number and member number.

Field	Value	Type	Reference	Notes					
Identifier	InterMSCCircuitID IMPLICIT OCTET STRING	M	see Part 550						
Length	2 octets	M	see Part 550						
Contents									
H	G	F	E	D	C	B	A	Octet	Notes
Trunk Group Number (G)								1	
Trunk Member Number (M)								2	

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2.140 InterSwitchCount

The InterSwitchCount (ISCOUNT) parameter consists of a single octet containing an eight bit binary number whose value indicates either:

- (a) the number of inter-MSC facilities that will be transited by the call (including the Anchor MSC) at the successful conclusion of a pending handoff forward or intersystem call setup, or
- (b) the number of inter-MSC facilities in use before the handoff between the Anchor MSC and the Serving MSC.

Item (a) applies to the use of InterSwitchCount in the FacilitiesDirective, FacilitiesDirective2 or InterSystemSetup operations; item (b) applies to the use of InterSwitchCount in the HandoffToThird or HandoffToThird2 operations.

No limit on the value of the InterSwitchCount is imposed by this standard, but one may be established between system operators, through configuration of the MAXHANDOFF and TANDEMDEPTH system parameters.

Field	Value	Type	Reference	Notes					
Identifier	InterSwitchCount IMPLICIT Unsigned Integer (0-255)	M	see Part 550						
Length	1 octet	M	see Part 550						
Contents									
H	G	F	E	D	C	B	A	Octet	Notes
InterSwitchCount								1	

2.141 IntersystemTermination

The IntersystemTermination (ISTERM) parameter is used to provide an MSC with routing information for calls which are to be terminated on another MSC.

Field	Value	Type	Reference	Notes
Identifier	IntersystemTermination IMPLICIT SET	M	see Part 550	
Length	variable octets	M	see Part 550	
Contents				
DestinationDigits		M	2.113	
MSCID (serving)		M	2.161	
AccessDeniedReason		O	2.1	a
BillingID (terminating)		O	2.24	b
CarrierDigits		O	2.47	c, d
ElectronicSerialNumber		O	2.122	e
IMSI		O	2.137	e, k
LegInformation		O	2.143	f
MobileDirectoryNumber		O	2.149	d, e
MobileIdentificationNumber		O	2.150	e, k
MSCIdentificationNumber		O	2.162	g
RingStartDelay		O	2.217	l
RoutingDigits		O	2.219	d, h
TerminationTriggers		O	2.293	d, i
• • •				j

Notes:

- a. Include if access may be denied.
- b. Required for recording purposes (see *DMH*).
- c. Include to select interexchange carrier or international carrier.
- d. This parameter has precedence for this call leg over the parameters outside the TerminationList parameter or the subscriber's profile.
- e. Include for recording purposes, if TerminationTreatment indicates that termination is to an MS.
- f. Include if part of a multileg call.
- g. Include to identify the Serving MSC.
- h. Include for special steering.
- i. Include for subsequent redirection.
- j. Ignore unexpected parameters, if received.

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- k. Include if available.
- l. Include if routing of this termination is to be delayed.

2.142 ISLPInformation

The ISLPInformation (ISLPINFO) parameter is used to indicate the ISLP Information necessary to support circuit-mode data between the Serving MSC and the Anchor MSC. Refer to *ISLP*.

Field	Value	Type	Reference	Notes					
Identifier	ISLPInformation IMPLICIT OCTET STRING	M	see Part 550						
Length	variable octets	M	see Part 550						
Contents									
H	G	F	E	D	C	B	A	Octet	Notes
ISLP Type								1	
•••								n	a

Notes:

- a. Ignore extra octets, if received. Send only defined (or significant) octets.

<i>ISLP Type (octet 1)</i>	
Value	Meaning
0	No ISLP supported.
1	ISLP supported (see <i>ISLP</i>).
2 through 112	Reserved. Treat reserved values the same as value 0, <i>No ISLP supported</i> .
113 through 223	Reserved. Treat reserved values the same as value 1, <i>ISLP supported</i> .
224 through 240	Reserved for <i>MAP</i> protocol extension. Treat reserved values the same as value 0, <i>No ISLP supported</i> .
241 through 255	Reserved for <i>MAP</i> protocol extension. Treat reserved values the same as value 1, <i>ISLP supported</i> .

2.143 LegInformation

The LegInformation (LEGINFO) parameter identifies a particular leg of a multiple termination call (e.g., a Flexible Alerting call) assigned by the HLR. Note that this is different than the LegNumber assigned by an MSC for *DMH* purposes.

Field	Value	Type	Reference	Notes					
Identifier	LegInformation IMPLICIT OCTET STRING	M	see Part 550						
Length	variable octets	M	see Part 550						
Contents									
H	G	F	E	D	C	B	A	Octet	Notes
MSB HLR Leg Number LSB								1	
								2	
								3	
								4	
...								n	a

Notes:

- a. Ignore extra octets, if received. Send only defined (or significant) octets

2.144 LocalTermination

The LocalTermination (LOCTERM) parameter is used to provide an MSC with routing information for calls which are to be terminated on the same MSC.

Field	Value	Type	Reference	Notes
Identifier	LocalTermination IMPLICIT SET	M	see Part 550	
Length	variable octets	M	see Part 550	
Contents				
ElectronicSerialNumber		M	2.122	
TerminationTreatment		M	2.292	
AlertCode		O	2.4	a, b
CarrierDigits		O	2.47	b, c
DestinationDigits		O	2.113	d, e
IMSI		O	2.137	k
LegInformation		O	2.143	a
MobileDirectoryNumber		O	2.150	b, f
MobileIdentificationNumber		O	2.150	k
OneTimeFeatureIndicator		O	2.177	b, g
RingStartDelay		O	2.217	m
RoutingDigits		O	2.219	b, h
TerminationTriggers		O	2.293	a, b
VoiceMailboxPIN		O	2.306	i
VoiceMailboxNumber		O	2.305	j
• • •				l

Notes:

- a. Optional, if the TerminationTreatment indicates termination to an MS.
- b. This parameter has precedence for this call leg over the parameters outside the TerminationList parameter or the subscriber's profile.
- c. Optional, for preferred carrier call routing.
- d. Optionally include if TerminationTreatment parameter value is *Dialogue*, to select a dialogue or to provide information to a dialogue.
- e. Optionally include if TerminationTreatment parameter value is *VoiceMailRetrieval* or *VoiceMailStorage* to select the voice mail system.
- f. Include to identify the MS if different than MIN for call recording purposes.
- g. Include if modification to normal feature processing is required.
- h. Optional, for special routing purposes.

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- i. Optional, if the TerminationTreatment value is *VoiceMailRetrieval* or *VoiceMailStorage*.
- j. Include if the TerminationTreatment value is *VoiceMailRetrieval* or *VoiceMailStorage* and the mailbox is not the MIN.
- k. Include all available.
- l. Ignore unexpected parameters if received. Send only defined (or significant) parameters.
- m. Include if routing of this termination is to be delayed.

2.145 LocationAreaID

The LocationAreaID (LOCID) parameter is used by the Serving MSC to specify the location area identity of an MS. The location area identity is a 16-bit number which identifies a specific location area within the group of cell sites indicated by the MSCID (Serving MSC). The LOCID is transferred to the VLR and to the HLR.

Field	Value	Type	Reference	Notes					
Identifier	LocationAreaID IMPLICIT OCTET STRING	M	see Part 550						
Length	2 octets	M	see Part 550						
Contents									
H	G	F	E	D	C	B	A	Octet	Notes
MSB								1	
Location Area ID								LSB	

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2.146 MessageWaitingNotificationCount

The MessageWaitingNotificationCount (MWNCOUNT) parameter carries the type and number of messages currently stored in the subscriber's mailbox(es).

Field	Value	Type	Reference	Notes					
Identifier	MessageWaitingNotificationCount IMPLICIT OCTET STRING	M	see Part 550						
Length	2 or more octets	M	see Part 550						
Contents									
H	G	F	E	D	C	B	A	Octet	Notes
Type of messages								1	a
Number of Messages Waiting								2	a
...								n	b

Notes:

- a. These fields must occur in pairs and at least one pair must be included.
- b. There may be more occurrences of the octet pairs.

<i>Type of messages (octet 1)</i>	
Value	Meaning
0	Voice messages
1	Short Message Services (SMS) messages.
2	Group 3 (G3) Fax messages.
3 through 254	Reserved. Treat the same as value 255, <i>Not specified</i> .
255	Not Specified.
<i>Number of Messages Waiting (octet 2)</i>	
Value	Meaning
0	No messages are waiting.
1 through 254	Number of messages waiting.
255	Unknown. An unknown number of messages are waiting (greater than zero).

2.147 MessageWaitingNotificationType

The MessageWaitingNotificationType (MWNTYPE) parameter is used to convey the subscriber's Message Waiting Notification options to the serving system.

Field	Value	Type	Reference	Notes					
Identifier	MessageWaitingNotificationType IMPLICIT OCTET STRING	M	see Part 550						
Length	variable octets	M	see Part 550						
Contents									
H	G	F	E	D	C	B	A	Octet	Notes
Reserved				MWI		APT	PT	1	a
• • •								n	b

Notes:

- a. Reserved bits shall be ignored on receipt and set to zero on sending.
- b. Ignore extra octets, if received. Send only defined (or significant) octets.

<i>Pip Tone (PT)</i>	
Value	Meaning
0	Pip Tone (PT) notification is not authorized or notification is not required.
1	Pip Tone (PT) notification is required.
<i>Alert Pip Tone (APT)</i>	
Value	Meaning
0	Alert Pip Tone (APT) notification is not authorized or notification is not required.
1	Alert Pip Tone (APT) notification is required.

<i>Message Waiting Indication (MWI)</i>	
Value	Meaning
0	No MWI. Message Waiting Indication (MWI) notification is not authorized or notification is not required.
1	Reserved. Treat the same as value 0, <i>No MWI</i> .
2	MWI On. Message Waiting Indication (MWI) notification is required. Messages waiting.
3	MWI Off. Message Waiting Indication (MWI) notification is required. No messages waiting.

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2.148 MINExtension

The MINExtension (MINEXT) parameter contains the IMSI_M_CLASS, IMSI_M_ADDR_NUM, MCC_M, and IMSI_M_11_12 values of an IMSI_M programmed in a CDMA MS.

Field	Value	Type	Reference	Notes					
Identifier	MINExtension IMPLICIT OCTET STRING	M	see Part 550						
Length	5 octets	M	see Part 550						
Contents									
H	G	F	E	D	C	B	A	Octet	Notes
Digit 1				ADDR_NUM			CLASS	1	a, b, c
Digit 3				Digit 2				2	c
Digit 5				Digit 4				3	c

Notes:

- a. Bit A of octet 1 is the IMSI_M_CLASS of the MS's IMSI_M. (See CDMA for the definition of the IMSI_M_CLASS and the encoding of this bit.)
- b. Bits DCB of is the IMSI_M_ADDR_NUM of the MS's IMSI_M. (See CDMA for the definition of IMSI_M_ADDR_NUM and the encoding of this field.)
- c. Digits 1, 2 and 3 are the digits of MS's MCC_M, digit 1 being the most significant digit of the MS's MCC_M and digit 3 being the least significant digit of the MS's MCC_M. Digits 4 and 5 are the digits of the MS's IMSI_11_12, digit 4 being the most significant digit of the MS's IMSI_M_11_12 and digit 5 being the least significant digit of the MS's IMSI_M_11_12. (See CDMA for the definitions of MCC_M and IMSI_M_11_12.)

<i>Digits n where n={1-5} (octet 1 bits E-H and octets 2 and 3, bits A-D and bits E-H)</i>	
Value	Meaning
0	Digit = 0
1	Digit = 1
2	Digit = 2
3	Digit = 3
4	Digit = 4
5	Digit = 5
6	Digit = 6
7	Digit = 7
8	Digit = 8
9	Digit = 9
Other values	Reserved.

2.149 MobileDirectoryNumber

The MobileDirectoryNumber (MDN) parameter contains the MS's directory number, which may be different from its MIN.

Field	Value	Type	Reference	Notes					
Identifier	MobileDirectoryNumber IMPLICIT DigitsType	M	see Part 550	a					
Length	variable octets	M	see Part 550						
Contents									
H	G	F	E	D	C	B	A	Octet	Notes
Type of Digits								1	b
Nature of Number								2	c
Numbering Plan				Encoding				3	d, e
Number of Digits								4	f
2 nd BCD Digit				1 st BCD Digit				5	
4 th BCD Digit				3 rd BCD Digit				6	
...				
n th BCD Digit				n-1 st BCD Digit				m	

Notes:

- a. Refer to the DigitsType parameter type see [Part 551 Section 1.2](#) for notes and field encoding.
- b. The Type of Digits field is ignored on receipt.
- c. The Nature of Number field is set to *National* or *International*.
- d. The Numbering Plan field is set to *Telephony Numbering*.
- e. The Encoding field is set to *BCD*.
- f. The Number of Digits is between 0 and at least 15.

2.150 MobileIdentificationNumber

The MobileIdentificationNumber (MIN) is a 10-digit representation of the MS's MIN, coded in BCD form.

Field	Value	Type	Reference	Notes					
Identifier	MobileIdentificationNumber IMPLICIT MINType	M	see Part 550	b					
Length	5 octets	M	see Part 550						
Contents									
H	G	F	E	D	C	B	A	Octet	Notes
Digit 2				Digit 1				1	a
Digit 4				Digit 3				2	a
Digit 6				Digit 5				3	a
Digit 8				Digit 7				4	a
Digit 10				Digit 9				5	a

Notes:

- a. Digit 1 is the most significant digit and Digit 10 is the least significant digit
- b. Refer to the MINType parameter type see [Part 551 Section 1.7](#) for notes and field encoding.

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2.151 MobileStationIMSI

The MobileStationIMSI (MSIMSI) parameter is used to send the IMSI value stored in the MS's permanent memory at an OTASP call origination.

Field	Value	Type	Reference	Notes					
Identifier	MobileStationIMSI IMPLICIT IMSIType	M	see Part 550	b					
Length	variable octets	M	see Part 550						
Contents									
H	G	F	E	D	C	B	A	Octet	Notes
Digit 2				Digit 1				1	a
Digit 4				Digit 3				2	a
Digit 6				Digit 5				3	a
Digit 8				Digit 7				4	a
Digit 10				Digit 9				5	a
Digit 12				Digit 11				6	a
Digit 14				Digit 13				7	a
filler				Digit 15				8	a

Notes:

- a. Digit 1 is the most significant digit and Digit 10 is the least significant digit.
- b. Refer to the IMSIType parameter type see [Part 551 Section 1.5](#) for notes and field encoding.

2.152 MobileStationMIN

The MobileStationMIN (MSMIN) parameter is used to send the MIN value stored in the MS's permanent memory at an OTASP call origination.

Field	Value	Type	Reference	Notes					
Identifier	MobileStationMIN IMPLICIT MINType	M	see Part 550	b					
Length	5 octets	M	see Part 550						
Contents									
H	G	F	E	D	C	B	A	Octet	Notes
Digit 2				Digit 1				1	a
Digit 4				Digit 3				2	a
Digit 6				Digit 5				3	a
Digit 8				Digit 7				4	a
Digit 10				Digit 9				5	a

Notes:

- a. Digit 1 is the most significant digit and Digit 10 is the least significant digit.
- b. Refer to the MINType parameter type see [Part 551 Section 1.7](#) for notes and field encoding.

2.153 MobileStationMSID

The MobileStationMSID (MS_MSID) identifies the MIN or the IMSI value stored in the MS's permanent memory at an OTASP call origination. The MS_MSID CHOICE is not explicitly encoded with a parameter ID and length.

Field	Value	Type	Reference	Notes
CHOICE				
MobileStationMIN		O	2.152	
MobileStationIMSI		O	2.151	

2.154 MobileStationPartialKey

The MobileStationPartialKey (MSKEY) parameter is used to send the MS partial key value for the A-Key Generation procedure.

Field	Value	Type	Reference	Notes					
Identifier	MobileStationPartialKey IMPLICIT OCTET STRING	M	see Part 550						
Length	variable octets	M	see Part 550						
Contents									
H	G	F	E	D	C	B	A	Octet	Notes
MSB								1	a
MS partial key value								...	
LSB								n	

Notes:

- a. The length of this field corresponds to the AKeyProtocolVersion value used.

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2.155 ModificationRequest

The ModificationRequest (MODRQ) parameter specifies the changes to be applied to the data items in a list of data items (each of which may be a data item associated with a particular service), and it indicates the treatment to be applied if some of the indicated changes cannot be made.

Field	Value	Type	Reference	Notes
Identifier	ModificationRequest IMPLICIT SEQUENCE	M	see Part 550	
Length	variable octets	M	see Part 550	
Contents				
	ServiceDataAccessElementList	M	2.227	a
	AllOrNone	O	2.6	b
	• • •			c

Notes:

- a. For this use of the ServiceDataAccessElementList parameter, the optional Change parameter must be included in each DataAccessElement within the DataAccessElementList component of each ServiceDataAccessElement in the ServiceDataAccessElementList.
- b. When this parameter is present, it controls the execution of the changes requested in the ServiceDataAccessElementList. If this parameter is not present, the default treatment is that all changes specified in the ServiceDataAccessElementList must succeed or no changes should be applied.
- c. Ignore extra parameters if received. Send only defined (or significant) parameters.

2.156 ModificationRequestList

The ModificationRequestList (MODRQL) parameter specifies a list of ModificationRequests.

Field	Value	Type	Reference	Notes
Identifier	ModificationRequestList IMPLICIT SEQUENCE OF	M	see Part 550	
Length	variable octets	M	see Part 550	
Contents				
	ModificationRequest	M	2.155	
	ModificationRequest	O	2.155	a
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Notes:

- a. Optionally, include additional ModificationRequest parameters. The maximum number of ModificationRequest parameters is dependent upon the two systems involved in the transaction. When more than one ModificationRequest is present, the individual ModificationRequests in that list are treated independently.

2.157 ModificationResult

The ModificationResult (MODRES) reports the outcome resulting from the execution of the modifications to the data items requested by the ModificationRequest. The ModificationResult CHOICE is not explicitly encoded with a parameter identifier and length.

Field	Value	Type	Reference	Notes
CHOICE				
DataResult		O	2.105	
ServiceDataResultList		O	2.229	

The Abstract Syntax Notation One (ASN.1) representation of the ModificationResult is:

```
ModificationResult ::= CHOICE {DataResult, ServiceDataResultList}
```

2.158 ModificationResultList

The ModificationResultList (MODRSL) parameter specifies the results of data item updates carried out as specified by the ModificationRequests in a ModificationRequestList.

Field	Value	Type	Reference	Notes
Identifier	ModificationResultList IMPLICIT SEQUENCE OF	M	see Part 550	
Length	variable octets	M	see Part 550	
Contents				
	ModificationResult	M	2.155	
	ModificationResult	O	2.155	a
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Notes:

- a. Optionally, include additional ModificationResult parameters.

2.159 ModulusValue

The ModulusValue (MODVAL) parameter is used to return the A-Key Generation procedure modulus value.

Field	Value	Type	Reference	Notes																																					
Identifier	ModulusValue IMPLICIT OCTET STRING	M	see Part 550																																						
Length	variable octets	M	see Part 550																																						
Contents																																									
	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>H</th> <th>G</th> <th>F</th> <th>E</th> <th>D</th> <th>C</th> <th>B</th> <th>A</th> <th>Octet</th> <th>Notes</th> </tr> </thead> <tbody> <tr> <td colspan="8" style="text-align: center;">Modulus value</td> <td style="text-align: center;">1</td> <td rowspan="3" style="text-align: center;">a</td> </tr> <tr> <td colspan="8"></td> <td style="text-align: center;">...</td> </tr> <tr> <td colspan="8"></td> <td style="text-align: center;">n</td> </tr> </tbody> </table>	H	G	F	E	D	C	B	A	Octet	Notes	Modulus value								1	a									...									n		
H	G	F	E	D	C	B	A	Octet	Notes																																
Modulus value								1	a																																
								...																																	
								n																																	

Notes:

- a. The length of this field corresponds to the AKeyProtocolVersion value used.

2.160 MSC_Address

2.160.1 MSC_Address parameter for BCD Digits.

The MSC_Address (MSCADDR) parameter is used to convey the current routing address of the Serving MSC.

Field	Value	Type	Reference	Notes					
Identifier	MSC_Address IMPLICIT DigitsType	M	see Part 550	a					
Length	variable octets	M	see Part 550						
Contents									
H	G	F	E	D	C	B	A	Octet	Notes
Type of Digits								1	b
Nature of Number								2	c
Numbering Plan				Encoding				3	d, e
Number of Digits								4	f
2 nd BCD Digit				1 st BCD Digit				5	
4 th BCD Digit				3 rd BCD Digit				6	
...				
n th BCD Digit				n-1 st BCD Digit				m	

Notes:

- a. Refer to the DigitsType parameter type see [Part 551 Section 1.2](#) for notes and field encoding.
- b. Type of Digits is ignored on receipt.
- c. Nature of Number may be *National* or *International*.
- d. Numbering Plan supported shall include *E.164*, *X.121*, and *Private numbering plan* for this parameter variant.
- e. The encoding field shall always be set to *BCD* for this parameter variant.
- f. The Number of Digits ranges from 0 to at least 15.

2.160.2 MSC_Address parameter for an IP address

Field	Value	Type	Reference	Notes					
Identifier	MSC_Address IMPLICIT DigitsType	M	see Part 550	a					
Length	variable octets	M	see Part 550						
Contents									
H	G	F	E	D	C	B	A	Octet	Notes
Type of Digits								1	b
Nature of Number								2	c
Numbering Plan				Encoding				3	d, e
MSB IP Address LSB								4	
								5	
								6	
								7	

Notes:

- a. Refer to the DigitsType parameter type see [Part 551 Section 1.2](#) for notes and field encoding.
- b. Type of Digits is ignored on receipt.
- c. Nature of Number may be *National* or *International*.
- d. Numbering Plan shall be *IP* for this parameter variant.
- e. Encoding shall be *octet string* for this parameter variant.

2.160.3 MSC_Address parameter for a generic SS7 Point Code address

Field	Value	Type	Reference	Notes					
Identifier	MSC_Address IMPLICIT DigitsType	M	see Part 550	a					
Length	variable octets	M	see Part 550						
Contents									
H	G	F	E	D	C	B	A	Octet	Notes
Type of Digits								1	b
Nature of Number								2	c
Numbering Plan				Encoding				3	d, e
Point Code								4	
								5	
								6	
Subsystem Number (SSN)								7	

Notes:

- a. Refer to the DigitsType parameter type see [Part 551 Section 1.2](#) for notes and field encoding.
- b. Type of Digits is ignored on receipt.
- c. Nature of Number may be *National*.
- d. Numbering Plan shall be *SS7* for this parameter variant.
- e. Encoding shall be *octet string* for this parameter variant.
- f. Bit A of Octet 4 is the first bit that would be emitted if the point code was transmitted by the MTP layer. If the point code is less than 24 bits in length, then all bits beyond the end of the point code up to and including bit H of Octet 6, should be set to 0.

2.161 MSCID

The MSCID parameter indicates the ID of the specified system.

Field	Value	Type	Reference	Notes					
Identifier	MSCID IMPLICIT OCTET STRING	M	see Part 550						
Length	3 octets	M	see Part 550						
Contents									
H	G	F	E	D	C	B	A	Octet	Notes
MSB MarketID								1	a
LSB								2	
Switch Number (SWNO)								3	b

Notes:

- a. MarketID represent a unique market ID that is specified by the service provider (e.g., FCC assigned SID, CIBERNET assigned BID—see *TIA/EIA TSB29*).
- b. Switch Number represents a particular group of cell sites and switch resources associated with a common MarketID.

2.162 MSCIdentificationNumber

The MSCIdentificationNumber (MSCIN) parameter indicates the identification number of an MSC sending a message.

Field	Value	Type	Reference	Notes					
Identifier	MSCIdentificationNumber IMPLICIT DigitsType	M	see Part 550	a					
Length	variable octets	M	see Part 550						
Contents									
H	G	F	E	D	C	B	A	Octet	Notes
Type of Digits								1	b
Nature of Number								2	c
Numbering Plan				Encoding				3	d, e
Number of Digits								4	f
2 nd BCD Digit				1 st BCD Digit				5	
4 th BCD Digit				3 rd BCD Digit				6	
...				
n th BCD Digit				n-1 st BCD Digit				m	

Notes:

- a. Refer to the DigitsType parameter type see [Part 551 Section 1.2](#) for notes and field encoding.
- b. Set to *Not Used*. The Type of Digits field is ignored on receipt.
- c. The Nature of Number field bit A is set to *International*. Other bits are set as applicable.
- d. The Numbering Plan field is set to *Land Mobile Numbering (E.212)*.
- e. The Encoding field is set to *BCD*.
- f. The Number of Digits is between 0 and at least 15.

2.163 MSID

The MSID (Mobile Station Identity) identifies a mobile station (MS). The MSID CHOICE is not explicitly encoded with a parameter id and length.

Field	Value	Type	Reference	Notes
CHOICE				
MobileIdentificationNumber		O	2.150	
IMSI		O	2.137	

2.164 MSIDUsage

The MSIDUsage (MSIDUSE) parameter identifies the MSID last used to calculate the control channel and paging slot.

Field	Value	Type	Reference	Notes					
Identifier	MSIDUsage IMPLICIT OCTET STRING	M	see Part 550						
Length	variable octets	M	see Part 550						
Contents									
H	G	F	E	D	C	B	A	Octet	Notes
Reserved						M or I		1	a
• • •								n	b

Notes:

- a. Reserved bits shall be ignored on receipt and set to zero on sending.
- b. Ignore extra octets, if received. Send only defined (or significant) octets.

<i>M and I Report (octet 1, bit A and B)</i>	
Value	Meaning
0	Not used.
1	MIN last used.
2	IMSI last used.
3	Reserved.

2.165 MSLocation

The MSLocation (MSLOC) parameter provides the estimated location (latitude, longitude) of the MS with corresponding resolution.

Field	Value	Type	Reference	Notes						
Identifier	MSLocation IMPLICIT OCTET STRING	M	see Part 550							
Length	7 or more octets	M	see Part 550							
Contents										
H	G	F	E	D	C	B	A	Octet	Notes	
Sign	MSB							1	a	
Latitude in tenths of a second							2			
							3 LSB			
Sign	MSB							4	a	
Longitude in tenths of a second							5			
							6 LSB			
MSB							Resolution in units of 1 foot		7	b
									8 LSB	
							...		n	c

Notes:

- a. The latitude and longitude fields are signed integers specifying the estimated MS location in units of tenths of a second. The range of latitude is $\pm 3,240,000$ seconds; the range of longitude is $\pm 6,480,000$ seconds. A positive latitude implies North latitude; a positive longitude implies West longitude. A negative value is represented by taking the 2's complement of the corresponding positive value.
- b. The resolution field specifies the resolution of the latitude and longitude location measurement. It is expressed in 1 foot increments for a 90 percent certainty that the MS is within a circle of resolution radius centered at latitude and longitude. A value of 65,535 indicates that the resolution is worse than 65,535 feet. Note that the second octet of this field is optional.
- c. Ignore extra octets, if received. Send only defined (or significant) octets.

2.166 NAMPSCallMode

The NAMPSCallMode (NAMPSMODE) parameter identifies certain characteristics of a dual-mode AMPS and NAMPS MS.

Field	Value	Type	Reference	Notes					
Identifier	NAMPSCallMode IMPLICIT OCTET STRING	M	see Part 550						
Length	variable octets	M	see Part 550						
Contents									
H	G	F	E	D	C	B	A	Octet	Notes
Call Mode								1	
...								n	a

Notes:

- a. Ignore extra octets, if received. Send only defined (or significant) octets.

<i>Call Mode (octet 1, bit A)</i>	
Value	Meaning
0	NAMPS 800 MHz channel not acceptable.
1	NAMPS 800 MHz channel acceptable.
<i>Call Mode (octet 1, bit B)</i>	
Value	Meaning
0	AMPS 800 MHz channel not acceptable.
1	AMPS 800 MHz channel acceptable.
<i>Call Mode (octet 1, bit C)</i>	
Value	Meaning
0	NAMPS 1800 MHz channel not acceptable.
1	NAMPS 1800 MHz channel acceptable.

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<i>Call Mode (octet 1, bit D)</i>	
Value	Meaning
0	AMPS 1800 MHz channel not acceptable.
1	AMPS 1800 MHz channel acceptable.
<i>Call Mode (octet 1, bits E, F, G, H)</i>	
Value	Meaning
x, x, x, x	Reserved. Reserved bits shall be ignored on receipt and set to zero on sending.

2.167 NAMPSChannelData

The NAMPSChannelData (NCHDATA) parameter is used to indicate Narrow Analog options related to the associated ChannelData (CHDATA) parameter. Other Narrow Analog ChannelData parameter values (i.e., CHNO, VMAC, etc.) are in accordance with AMPS analog TDMA, NAMPS analog, and CDMA.

Field	Value	Type	Reference	Notes					
Identifier	NAMPSChannelData IMPLICIT OCTET STRING	M	see Part 550						
Length	variable octets	M	see Part 550						
Contents									
H	G	F	E	D	C	B	A	Octet	Notes
Reserved			CC Indicator			NAVCA		1	a
...								n	b

Notes:

- a. Reserved bits shall be ignored on receipt and set to zero on sending.
- b. Ignore extra octets, if received. Send only defined (or significant) octets.

<i>Narrow Analog Voice Channel Assignment (NAVCA) (octet 1, bits A and B)</i>	
Value	Meaning
0	Wide. 30 kHz AMPS voice channel.
1	Upper. 10 kHz NAMPS voice channel.
2	Middle. 10 kHz NAMPS voice channel.
3	Lower. 10 kHz NAMPS voice channel.
<i>Color Code Indicator (CCIndicator) (octet 1, bits C, D, and E)</i>	
Value	Meaning3
0	ChannelData parameter SCC field applies.
1	Digital SAT Color Code 1 (ignore SCC field).

<i>Color Code Indicator (CCIndicator) (octet 1, bits C, D, and E)</i>	
Value	Meaning3
2	Digital SAT Color Code 2 (ignore SCC field).
3	Digital SAT Color Code 3 (ignore SCC field).
4	Digital SAT Color Code 4 (ignore SCC field).
5	Digital SAT Color Code 5 (ignore SCC field).
6	Digital SAT Color Code 6 (ignore SCC field).
7	Digital SAT Color Code 7 (ignore SCC field).

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2.168 NetworkTMSI

The NetworkTMSI (NETMSI) consists of the TMSI_CODE and the TMSI_ZONE fields. TMSI_CODE defines a 32-bit MS temporary identification in one TMSI Zone. The TMSI_ZONE is associated with a group of cell sites (e.g., cell sites associated with a single MSC) such that all TMSI_CODEs assigned to mobiles within the TMSI_ZONE are unique. TMSI_CODEs may be re-used in different TMSI zones.

Field	Value	Type	Reference	Notes					
Identifier	NetworkTMSI IMPLICIT OCTET STRING	M	see Part 550						
Length	4 or more octets	M	see Part 550						
Contents									
H	G	F	E	D	C	B	A	Octet	Notes
TMSI_CODE								1	a
								2	
								3	
								4	
1 st Digit of TMSI_ZONE				Type of Addressing				5	b
3 rd Digit of TMSI_ZONE				2 nd Digit of TMSI_ZONE				6	b
5 th Digit of TMSI_ZONE				4 th Digit of TMSI_ZONE				7	b
...				b
n th Digit of TMSI_ZONE				n th -1 Digit of TMSI_ZONE				m	b, c

Notes:

- a. See *CDMA* for the encoding details of this field.
- b. The encoding scheme of the address digits is BCD encoding.
- c. Where there is an odd number of digits, the nth digit is set to *filler*.

Type of Addressing (octet 5, bits A-D)	
Value	Meaning
0	Not Used.
1	E.212 based routing.
2 through 15	Reserved for <i>MAP</i> protocol extension. If unknown, treat the same as value 0, <i>Not Used</i> .

2.169 NetworkTMSIExpirationTime

NetworkTMSIExpirationTime (NETMSIT) parameter defines the NetworkTMSI Expiration Time which is used to automatically de-assign the assigned TMSI.

Field	Value	Type	Reference	Notes					
Identifier	NetworkTMSIExpirationTime IMPLICIT OCTET STRING	M	see Part 550						
Length	variable octets	M	see Part 550						
Contents									
H	G	F	E	D	C	B	A	Octet	Notes
MSB TMSI Expiration Time LSB								1	a
								2	
								3	
								4	
•••								n	b

Notes:

- a. See *CDMA* for the definition of this field. It is the System Time in the units of $80\text{ms} \times 2^{12}$ when the TMSI is to expire.
- b. Ignore extra octets, if received. Send only defined (or significant) octets.

2.170 NewlyAssignedIMSI

The NewlyAssignedIMSI (NEWIMSI) parameter contains the IMSI that may be assigned following the successful completion of OTASP process.

Field	Value	Type	Reference	Notes					
Identifier	NewlyAssignedIMSI IMPLICIT IMSIType	M	see Part 550	b					
Length	variable octets	M	see Part 550						
Contents									
H	G	F	E	D	C	B	A	Octet	Notes
Digit 2				Digit 1				1	a
Digit 4				Digit 3				2	a
Digit 6				Digit 5				3	a
Digit 8				Digit 7				4	a
Digit 10				Digit 9				5	a
Digit 12				Digit 11				6	a
Digit 14				Digit 13				7	a
filler				Digit 15				8	a

Notes:

- a. Digit 1 is the most significant digit and Digit 10 is the least significant digit.
- b. Refer to the IMSIType parameter type see [Part 551 Section 1.5](#) for notes and field encoding.

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2.171 NewlyAssignedMIN

The NewlyAssignedMIN (NEWMIN) parameter contains the MIN that may be assigned following the successful completion of the OTASP process.

Field	Value	Type	Reference	Notes					
Identifier	NewlyAssignedMIN IMPLICIT MINType	M	see Part 550	b					
Length	5 octets	M	see Part 550						
Contents									
H	G	F	E	D	C	B	A	Octet	Notes
Digit 2				Digit 1				1	a
Digit 4				Digit 3				2	a
Digit 6				Digit 5				3	a
Digit 8				Digit 7				4	a
Digit 10				Digit 9				5	a

Notes:

- a. Digit 1 is the most significant digit and Digit 10 is the least significant digit.
- b. Refer to the MINType parameter type see [Part 551 Section 1.7](#) for notes and field encoding.

2.172 NewlyAssignedMSID

The NewlyAssignedMSID (NEWMSID) identifies the MIN or the IMSI value that may be assigned following the successful completion of the OTASP process. The MS_MSID CHOICE is not explicitly encoded with a parameter ID and length.

Field	Value	Type	Reference	Notes
CHOICE				
NewlyAssignedMIN		O	2.171	
NewlyAssignedIMSI		O	2.170	

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2.173 NewMINExtension

The NewMINExtension (NEWMINEXT) parameter contains the IMSI_M_CLASS, IMSI_M_ADDR_NUM, MCC_M, and IMSI_M_11_12 of an IMSI_M assigned during a successful CDMA OTA session.

Field	Value	Type	Reference	Notes					
Identifier	NewMINExtension IMPLICIT OCTET STRING	M	see Part 550						
Length	3 octets	M	see Part 550						
Contents									
H	G	F	E	D	C	B	A	Octet	Notes
Digit 1				ADDR_NUM			CLASS	1	a, b, c
Digit 3				Digit 2				2	c
Digit 5				Digit 4				3	c

Notes:

- Bit A of octet 1 is the IMSI_M_CLASS of the newly assigned IMSI_M. (See *CDMA* for the definition of the IMSI_M_CLASS and the encoding of this bit.)
- Bits DCB of octet 1 is the IMSI_M_ADDR_NUM of the newly assigned IMSI_M. (See *CDMA* for the definition of IMSI_M_ADDR_NUM and the encoding of this field.)
- Digits 1, 2 and 3 are the digits of the newly assigned MCC_M, digit 1 being the most significant digit of the newly assigned MCC_M and digit 3 being the least significant digit of the newly assigned MCC_M. Digits 4 and 5 are the digits of the newly assigned IMSI_11_12, digit 4 being the most significant digit of the newly assigned IMSI_M_11_12 and digit 5 being the least significant digit of the newly assigned IMSI_M_11_12. (See *CDMA* for the definitions of MCC_M and IMSI_M_11_12.)

<i>Digit n, where n={1-5} (octet 1 bits E to H and octets 2-3)</i>	
Value	Meaning
0	Digit = 0 or filler.
1	Digit = 1.
2	Digit = 2
3	Digit = 3.
4	Digit = 4.

<i>Digit n, where n={1-5} (octet 1 bits E to H and octets 2-3)</i>	
Value	Meaning
5	Digit = 5.
6	Digit = 6.
7	Digit = 7.
8	Digit = 8.
9	Digit = 9.
Other values	Reserved.

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2.174 NewNetworkTMSI

The NewNetworkTMSI (NNETMSI) parameter consists of the TMSI_CODE and the TMSI_ZONE fields. The NewNetworkTMSI is used in the TMSI Assignment operation to update an MS's TMSI. See 2.168 NetworkTMSI for encoding details.

Field	Value	Type	Reference	Notes					
Identifier	NewNetworkTMSI IMPLICIT OCTET STRING	M	see Part 550						
Length	4 or more octets	M	see Part 550						
Contents									
H	G	F	E	D	C	B	A	Octet	Notes
MSB TMSI_CODE LSB								1	a
								2	
								3	
								4	
1 st Digit of TMSI_ZONE				Type of Addressing				5	b
3 rd Digit of TMSI_ZONE				2 nd Digit of TMSI_ZONE				6	b
5 th Digit of TMSI_ZONE				4 th Digit of TMSI_ZONE				7	b
...				b
n th Digit of TMSI_ZONE				n th -1 Digit of TMSI_ZONE				m	b, c

Notes:

- a. See *CDMA* for the encoding details of this field.
- b. The encoding scheme of the address digits is BCD encoding.
- c. Where there is an odd number of digits, the nth digit is set to *filler*.

<i>Type of Addressing (octet 5, bits A-D)</i>	
Value	Meaning
0	Not Used.
1	E.212 based routing.
2 through 15	Reserved for <i>MAP</i> protocol extension. If unknown, treat the same as value 0, <i>Not Used</i> .

2.175 NoAnswerTime

The NoAnswerTime (NATIME) parameter is used to indicate how long, in seconds, to wait after alerting an MS or after seizing an outgoing trunk before “No Answer” treatment is applied. This value overrides the receiving system’s default *No Answer Time* value.

Field	Value	Type	Reference	Notes					
Identifier	NoAnswerTime IMPLICIT OCTET STRING	M	see Part 550						
Length	variable octets	M	see Part 550						
Contents									
H	G	F	E	D	C	B	A	Octet	Notes
Time								1	
...								n	a

Notes:

- a. Ignore extra octets, if received. Send only defined (or significant) octets.

<i>Time (octet 1)</i>	
Value	Meaning
0 through 255	The number of seconds to wait after alerting an MS or after seizing an outgoing trunk before applying “no answer” trigger treatment.

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2.176 NonPublicData

The NonPublicData (NPDATA) parameter is used to update a subscriber's attributes related to Non-Public Mode Service, applicable in all MSCs.

Field	Value	Type	Reference	Notes					
Identifier	NonPublicData IMPLICIT OCTET STRING	M	see Part 550						
Length	variable octets	M	see Part 550						
Contents									
H	G	F	E	D	C	B	A	Octet	Notes
PRDO		CATS				NPOS		1	
Reserved					NPID			2	a
• • •								n	b

Notes:

- a. Set reserved values to 0 when sending, ignore if received.
- b. Ignore extra octets, if received. Send only defined (or significant) octets.

<i>NP Only Service (NPOS) (octet 1, bits A and B)</i>	
Value	Meaning
0	Not used.
1	Service not available outside this UZ set or PSID/RSID list.
2	Service also available outside this UZ set or PSID/RSID list.
3	Reserved. Treat as value 2, Service also available outside this UZ set or PSID/RSID list.
<i>Charging Area Tone Service (CATS) (octet 1, bits C - F)</i>	
Value	Meaning
0	Not used.
1	Not authorized for this UZ set or PSID/RSID list service; do not provide in-call Transition Tone.
2	Authorized but deactivated; do not provide in-call Transition Tone.
3	Authorized and activated; provide in-call Transition tone.
4 through 15	Reserved. Treat as value 1, Not authorized for this UZ set or PSID/RSID list service; do not provide in-call Transition Tone.

<i>PSID/RSID Download Order (PRDO) (octet 1, bits G and H)</i>	
Value	Meaning
0	Not used.
1	Do not download PSID/RSID.
2	Download PSID/RSID.
3	Reserved. Treat as value 1, <i>Do not download PSID/RSID.</i>
<i>Non Public Information Display (NPID) (octet 2, bits A-C)</i>	
Value	Meaning
0	Not used.
1	Do not display.
2	Display Non-Public Information.
3	Display Non-Public Information only during originations and terminations.
4 through 15	Reserved. Treat as value 1, <i>Do not display.</i>

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2.177 OneTimeFeatureIndicator

The OneTimeFeatureIndicator (OTFI) parameter defines the modifications to feature processing that are in effect for a designated MS until the time of the next call release by the MS.

Field	Value	Type	Reference	Notes					
Identifier	OneTimeFeatureIndicator IMPLICIT OCTET STRING	M	see Part 550						
Length	variable octets	M	see Part 550						
Contents									
H	G	F	E	D	C	B	A	Octet	Notes
CNIR		MWN		CWIC		CWFI		1	a
Reserved		CNAR		Flash		PACA		2	a, b
RPE4 (Reserved)		RPE3 (Reserved)		RPE2 (Reserved)		RPE1 (Reserved)		3	c
•••								n	d

Notes:

- a. The CNIR and PACA indicators have no meaning when the OTFI is sent in the RoutingRequest INVOKE (i.e., for terminations).
- b. Reserved bits shall be ignored on receipt and set to zero on sending.
- c. Indicators in this octet are reserved for protocol extension.
- d. Ignore extra octets, if received. Send only defined (or significant) octets.

Call Waiting for Future Incoming Call (CWFI) (octet 1, bits A and B)	
Value	Meaning
0	Ignore. Ignore this indicator (use subscriber's profile).
1	No CW. Call Waiting is turned off. (If this call is answered, Call Waiting should not be applied for future incoming calls.)
2	Normal CW. Call Waiting is turned on. (If this call is answered, Call Waiting may be applied for future incoming calls requesting <i>Normal CW</i> or <i>Priority CW</i> .)
3	Priority CW. (If the call is answered Call Waiting may be applied for future incoming calls requesting <i>Priority CW</i> .)

<i>Call Waiting for Incoming Call (CWIC) (octet 1, bits C and D)</i>	
Value	Meaning
0	Ignore. Ignore this indicator (treat the same as value 2, <i>Normal CW</i>).
1	No CW. Call Waiting is not requested.
2	Normal CW. Normal Call Waiting is requested.
3	Priority CW. Priority Call Waiting is requested.
<i>MessageWaitingNotification (MWN) (octet 1, bits E and F)</i>	
Value	Meaning
0	Ignore. Ignore this indicator. OneTimeFeatureIndicator.
1	Pip Tone Inactive. MWN Pip Tones are not active for this call.
2	Pip Tone Active. MWN Pip Tones are active for this call.
3	Reserved.
<i>Calling Number Identification Restriction (CNIR) (octet 1, bits G and H)</i>	
Value	Meaning
0	Ignore. Ignore this indicator.
1	Presentation Allowed. CNIR is not active for this call.
2	Presentation Restricted. CNIR is active for this call.
3	Reserved.
<i>Priority Access and Channel Assignment (PACA) (octet 2, bits A and B)</i>	
Value	Meaning
0	Ignore. Ignore this indicator.
1	PACA Demand Inactive. PACA is not demand activated.
2	PACA Demand Activated. PACA is demand activated.
3	Reserved.

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<i>Flash Privileges (Flash) (octet 2, bits C and D)</i>	
Value	Meaning
0	Ignore. Ignore this indicator.
1	Flash Inactive. Flash privileges are de-activated for the remainder of this call. (If flash features, such as Three-Way Calling (3WC) or Call Transfer (CT), have already been invoked, the subscriber may continue his or her operation in progress. Flash features may not be invoked.)
2	Flash Active. Normal flash privileges.
3	Reserved.
<i>Calling Name Restriction (CNAR) (octet 2, bits E and F)</i>	
Value	Meaning
0	Ignore. Ignore this indicator.
1	Presentation Allowed. CNAR is not active for this call.
2	Presentation Restricted. CNAR is active for this call.
3	Blocking Toggle. CNAR is toggled.

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2.178 OriginationIndicator

The OriginationIndicator (ORIGIND) parameter defines the type of calls the MS is allowed to originate.

Field	Value	Type	Reference	Notes					
Identifier	OriginationIndicator IMPLICIT Unsigned Enumerated	M	see Part 550						
Length	1 octet	M	see Part 550						
Contents									
H	G	F	E	D	C	B	A	Octet	Notes
Allowed Call Types								1	a, b, c

Notes:

- a. When being sent to systems supporting the TransactionCapability parameter's profile procedures, when the ORIGIND value is 4, 5, or 8, the RestrictionDigits parameter (see 2.216) shall accompany the OriginationIndicator parameter and shall contain the selected leading digits or directory number (e.g., NPA-NXX or NPA-NXX-XXXX for NANP) or international E.164 number.

When being sent to systems not supporting the TransactionCapability parameter's Profile procedures, when the ORIGIND value is 4, 5, or 8, the Digits (Destination) parameter (see 2.115) shall accompany the OriginationIndicator parameter and shall contain the selected leading digits or directory number (e.g., NPA-NXX or NPA-NXX-XXXX for NANP) or international E.164 number.
- b. Value 8, Single directory number (e.g., NPA-NXX-XXXX for NANP), shall cause all originations to be treated as if this single number had been dialed, with exceptions (e.g., "9-1-1," "*-9-1-1")
- c. For value 9, the Digits (Destination) parameter (see 2.115) shall accompany the OriginationIndicator parameter and shall contain the E.164 Country Code to which international calls are allowed.

<i>Allowed Call Types (octet 1)</i>	
Value	Meaning
0	Not used.
1	Prior agreement.
2	Origination denied.
3	Local calls only.
4	Selected leading digits of directory number or of international E.164 number (e.g., NPA-NXX for NANP). See Note (a) above.
5	Selected leading digits of directory number or of international E.164 number and local calls only (e.g., NPA-NXX for NANP). See Note (a) above.

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<i>Allowed Call Types (octet 1)</i>	
Value	Meaning
6	National long distance (includes local calls and may include neighboring countries).
7	International calls (includes national long distance and local calls).
8	Single directory number or international E.164 number (e.g., NPA-NXX-XXXX for NANP). See Notes (a) and (b) above.
9	National long distance plus home country (includes national long distance plus calls to subscriber's home country only).
10 through 223	Reserved. Treat the same as value 3, <i>Local calls only</i> .
224 through 255	Reserved for TIA-41 protocol extension. If unknown, treat the same as value 3, <i>Local calls only</i> .

2.179 OriginationTriggers

The OriginationTriggers (ORIGTRIG) parameter defines the origination trigger points that are currently active for the subscriber.

Field	Value		Type	Reference	Notes				
Identifier	OriginationTriggers IMPLICIT OCTET STRING		M	see Part 550					
Length	variable octets		M	see Part 550					
Contents									
H	G	F	E	D	C	B	A	Octet	Notes
RvtC	Unrec	WZ	Int'l	NLTOLL	LTOLL	Local	All	1	
Reserved			PA	DP	Pound	DS	Star	2	a
7 digits	6 digits	5 digits	4 digits	3 digits	2 digits	1 digit	No digits	3	
15 digits	14 digits	13 digits	12 digits	11 digits	10 digits	9 digits	8 digits	4	
• • •								n	b

Notes:

- a. Set reserved values to 0 when sending, and process other triggers before treating received reserved values the same as *All*.
- b. If unknown octets with bits set are received, process other triggers before treating the same as *All*. Send only defined (or significant) octets.

<i>All Origination (All) (octet 1, bit A)</i>	
Value	Meaning
0	Trigger is not active.
1	Launch an OriginationRequest for any call attempt. This overrides all other values.
<i>Local (octet 1, bit B)</i>	
Value	Meaning
0	Trigger is not active.
1	Launch an OriginationRequest for any local call attempt.
<i>Local Toll (LTOLL) (octet 1, bit C)</i>	
Value	Meaning
0	Trigger is not active.
1	Launch an OriginationRequest for any local toll call attempt. Within the US refers to intraLATA toll.

<i>Non-Local Toll (NLTOLL) (octet 1, bit D)</i>	
Value	Meaning
0	Trigger is not active.
1	Launch an OriginationRequest for any toll calls outside the local carrier's serving area. Within the US refers to interLATA toll.
<i>International (Int'l) (octet 1, bit E)</i>	
Value	Meaning
0	Trigger is not active.
1	Launch an OriginationRequest for any international call attempt.
<i>World Zone (WZ) (octet 1, bit F)</i>	
Value	Meaning
0	Trigger is not active.
1	Launch an OriginationRequest for any call attempt outside of the current World Zone [not recommended for use].
<i>Unrecognized Number (Unrec) (octet 1, bit G)</i>	
Value	Meaning
0	Trigger is not active.
1	Launch an OriginationRequest for any call attempt to an unrecognized number.
<i>Revertive Call (RvtC) (octet 1, bit H)</i>	
Value	Meaning
0	Trigger is not active.
1	Launch an OriginationRequest for any Revertive Call attempt.
<i>Star (octet 2, bit A)</i>	
Value	Meaning
0	Trigger is not active.
1	Launch an OriginationRequest for any number beginning with a Star '*' digit.
<i>Double Star (DS) (octet 2, bit B)</i>	
Value	Meaning
0	Trigger is not active.
1	Launch an OriginationRequest for any number beginning with two Star '**' digits.

<i>Pound (octet 2, bit C)</i>	
Value	Meaning
0	Trigger is not active.
1	Launch an OriginationRequest for any number beginning with a Pound '#' digit.
<i>Double Pound; Origination trigger;(DP) (octet 2, bit D)</i>	
Value	Meaning
0	Trigger is not active.
1	Launch an OriginationRequest for any number beginning with two Pound '##' digits.
<i>Prior Agreement (PA) (octet 2, bit E)</i>	
Value	Meaning
0	Trigger is not active.
1	Launch an OriginationRequest for any number matching a criteria of a prior agreement.
<i>No digits (octet 3, bit A)</i>	
Value	Meaning
0	Trigger is not active.
1	Launch an OriginationRequest for any call attempt with no digits.
<i>1 digit (octet 3, bit B)</i>	
Value	Meaning
0	Trigger is not active.
1	Launch an OriginationRequest for any call attempt with 1 digit.
<i>2 digits (octet 3, bit C)</i>	
Value	Meaning
0	Trigger is not active.
1	Launch an OriginationRequest for any call attempt with 2 digits.
<i>3 digits (octet 3, bit D)</i>	
Value	Meaning
0	Trigger is not active.
1	Launch an OriginationRequest for any call attempt with 3 digits.

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<i>4 digits (octet 3, bit E)</i>	
Value	Meaning
0	Trigger is not active.
1	Launch an OriginationRequest for any call attempt with 4 digits.
<i>5 digits (octet 3, bit F)</i>	
Value	Meaning
0	Trigger is not active.
1	Launch an OriginationRequest for any call attempt with 5 digits.
<i>6 digits (octet 3, bit G)</i>	
Value	Meaning
0	Trigger is not active.
1	Launch an OriginationRequest for any call attempt with 6 digits.
<i>7 digits (octet 3, bit H)</i>	
Value	Meaning
0	Trigger is not active.
1	Launch an OriginationRequest for any call attempt with 7 digits.
<i>8 digits (octet 4, bit A)</i>	
Value	Meaning
0	Trigger is not active.
1	Launch an OriginationRequest for any call attempt with 8 digits.
<i>9 digits (octet 4, bit B)</i>	
Value	Meaning
0	Trigger is not active.
1	Launch an OriginationRequest for any call attempt with 9 digits.
<i>10 digits (octet 4, bit C)</i>	
Value	Meaning
0	Trigger is not active.
1	Launch an OriginationRequest for any call attempt with 10 digits.

<i>11 digits (octet 4, bit D)</i>	
Value	Meaning
0	Trigger is not active.
1	Launch an OriginationRequest for any call attempt with 11 digits.
<i>12 digits (octet 4, bit E)</i>	
Value	Meaning
0	Trigger is not active.
1	Launch an OriginationRequest for any call attempt with 12 digits.
<i>13 digits (octet 4, bit F)</i>	
Value	Meaning
0	Trigger is not active.
1	Launch an OriginationRequest for any call attempt with 13 digits.
<i>14 digits (octet 4, bit G)</i>	
Value	Meaning
0	Trigger is not active.
1	Launch an OriginationRequest for any call attempt with 14 digits.
<i>15 digits or more (octet 4, bit H)</i>	
Value	Meaning
0	Trigger is not active.
1	Launch an OriginationRequest for any call attempt with 15 or more digits.

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2.180 OTASP_ResultCode

The OTASP_ResultCode (OTASPRC) parameter is used to specify the result of an OTASP related AC procedure.

Field	Value	Type	Reference	Notes					
Identifier	OTASP_ResultCode IMPLICIT OCTET STRING	M	see Part 550						
Length	1 octet	M	see Part 550						
Contents									
H	G	F	E	D	C	B	A	Octet	Notes
Result Code								1	a

Notes:

- a. The absence of this parameter or the presence of value 0 indicates a successful result.

<i>Result Code (Octet 1)</i>	
Value	Meaning
0	Accepted - Successful.
1	Rejected - Unknown cause.
2	Computation Failure - e.g., unable to compute A-key.
3	CSC Rejected - CSC challenge failure.
4	Unrecognized OTASPCallEntry.
5	Unsupported AKeyProtocolVersion(s).
6	Unable to Commit.
7 through 253	Reserved. Treat the same as value 1 <i>Rejected - Unknown Cause</i> .
224 through 255	Reserved for <i>TIA-41</i> protocol extension. If unknown, treat the same as value 1 <i>Rejected - Unknown Cause</i> .

2.181 PACAIndicator

The PACAIndicator (PACAIND) parameter indicates the Priority Access and Channel Assignment (PACA) permanent activation status and priority level assigned to the subscriber. If the parameter is included, the subscriber is authorized for the indicated level.

Field	Value	Type	Reference	Notes					
Identifier	PACAIndicator IMPLICIT OCTET STRING	M	see Part 550						
Length	variable octets	M	see Part 550						
Contents									
H	G	F	E	D	C	B	A	Octet	Notes
Reserved			PACA Level				PA	1	a
...								n	b

Notes:

- a. Reserved bits shall be ignored on receipt and set to zero on sending.
- b. Ignore extra octets, if received. Send only defined (or significant) octets.

<i>Permanent Activation (PA) (octet 1, bit A)</i>	
Value	Meaning
0	PACA is not permanently activated.
1	PACA is permanently activated.
<i>PACA Level (octet 1, bits B-E)</i>	
Value	Meaning
0	Not used.
1	Priority Level 1. This is the highest level.
2	Priority Level 2.
3	Priority Level 3.
4	Priority Level 4.
5	Priority Level 5.
6	Priority Level 6.
7	Priority Level 7.
8	Priority Level 8.
9	Priority Level 9.

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<i>PACA Level (octet 1, bits B-E)</i>	
Value	Meaning
10	Priority Level 10.
11	Priority Level 11.
12	Priority Level 12.
13	Priority Level 13.
14	Priority Level 14.
15	Priority Level 15.

2.182 PageCount

The PageCount (PAGECOUNT) parameter is used to indicate the recommended number of sequential paging attempts that the receiving system is expected to do.

Field	Value	Type	Reference	Notes					
Identifier	PageCount IMPLICIT OCTET STRING	M	see Part 550						
Length	1 octet	M	see Part 550						
Contents									
H	G	F	E	D	C	B	A	Octet	Notes
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2.183 PageIndicator

The PageIndicator (PAGEIND) parameter is used to indicate if paging should occur or if the system should only listen for a page response.

Field	Value	Type	Reference	Notes					
Identifier	PageIndicator IMPLICIT OCTET STRING	M	see Part 550						
Length	variable octets	M	see Part 550						
Contents									
H	G	F	E	D	C	B	A	Octet	Notes
Page Indicator								1	
•••								n	a

Notes:

- a. Ignore extra octets, if received. Send only defined (or significant) octets.

<i>PageIndicator (octet 1)</i>	
Value	Meaning
0	Not used.
1	Page.
2	Listen only.
3 through 223	Reserved. Treat the same as value 1, <i>Page</i> .
224 through 255	Reserved for <i>TIA-41</i> protocol extension. If unknown, treat the same as value 1, <i>Page</i> .

2.184 PageResponseTime

The PageResponseTime (PAGETIM) parameter is used to indicate the maximum time that a system has to respond to an intersystem paging request.

Field	Value	Type	Reference	Notes					
Identifier	PageResponseTime IMPLICIT OCTET STRING	M	see Part 550						
Length	1 octet	M	see Part 550						
Contents									
H	G	F	E	D	C	B	A	Octet	Notes
Page Response Time								1	a

Notes:

- a. Page Response Time is expressed in seconds (e.g., PageResponseTime of 3 = 3.0 seconds).

2.185 PagingFrameClass

The PagingFrameClass (PFC) parameter indicates the number of hyper frames over which a MS has a single instance of Paging Channel allocation, therefore allowing the MS to “sleep”.

Field	Value	Type	Reference	Notes					
Identifier	PagingFrameClass IMPLICIT OCTET STRING	M	see Part 550						
Length	variable octets	M	see Part 550						
Contents									
H	G	F	E	D	C	B	A	Octet	Notes
Paging Frame Class								1	
•••								n	a

Notes:

- a. Ignore extra octets, if received. Send only defined (or significant) octets.

<i>Paging Frame Class (octet 1)</i>	
Value	Meaning
0	PagingFrameClass 1 (1.28 seconds).
1	PagingFrameClass 2 (2.56 seconds)
2	PagingFrameClass 3 (3.84 seconds)
3	PagingFrameClass 4 (7.68 seconds)
4	PagingFrameClass 5 (15.36 seconds)
5	PagingFrameClass 6 (30.72 seconds)
6	PagingFrameClass 7 (61.44 seconds)
7	PagingFrameClass 8 (122.88 seconds)
8 through 223	Reserved. Treat the same as value 0, <i>PagingFrameClass 1</i> .
224 through 255	Reserved for <i>MAP</i> protocol extension. If unknown, treat the same as value 0, <i>PagingFrameClass 1</i> .

2.186 PC_SSN

The PC_SSN parameter carries the *national SS7 Point Code (PC)* and Subsystem Number (SSN) of a particular wireless network entity. Used for subsequent routing by the application and takes precedence over lower layer addressing. The Point Code may represent a single entity or an alias for mated pair entities. Two descriptions of the format are shown, one for *ANSI SS7* point codes and a more general format for other national point code formats.

2.186.1 PC_SSN (ANSI)

Field	Value	Type	Reference	Notes					
Identifier	PC_SSN IMPLICIT OCTET STRING	M	see Part 550						
Length	5 octets	M	see Part 550						
Contents									
H	G	F	E	D	C	B	A	Octet	Notes
Reserved								1	a
ANSI Point Code—Member Number								2	
ANSI Point Code—Cluster Number								3	
ANSI Point Code—Network Number								4	
Subsystem Number (SSN)								5	

Notes:

- a. Reserved bits shall be ignored on receipt and set to zero on sending.

2.186.2 PC_SSN (Generic)

Field	Value	Type	Reference	Notes					
Identifier	PC_SSN IMPLICIT OCTET STRING	M	see Part 550						
Length	5 octets	M	see Part 550						
Contents									
H	G	F	E	D	C	B	A	Octet	Notes
Reserved								1	a
Point Code								2	b
								3	
								4	
Subsystem Number (SSN)								5	

Notes:

- a. Reserved bits shall be ignored on receipt and set to zero on sending.
- b. Bit A of Octet 2 is the first bit that would be emitted if the point code was transmitted by the MTP layer. If the point code is less than 24 bits in length, then all bits beyond the end of the point code up to and including bit H of Octet 4 should be set to 0.

2.187 PilotBillingID

The PilotBillingID (PILOTBID) parameter is initially assigned at the first Originating MSC for incoming calls. The PilotBillingID is transferred, as required, to each system involved in an intersystem operation when multileg calls are handled. This ID is primarily intended for billing record correlation, but may be used for other purposes such as identifying the originating call, etc.

Field	Value	Type	Reference	Notes					
Identifier	PilotBillingID IMPLICIT OCTET STRING	M	see Part 550						
Length	7 octets	M	see Part 550						
Contents									
H	G	F	E	D	C	B	A	Octet	Notes
MSB								1	a
First Originating MarketID								2	
First Originating Switch Number								3	a
MSB								4	b
ID Number								5	
								6	
Segment Counter								7	

Notes:

- a. Refer to the MSCID parameter (see 2.161) for the definition of these fields.
- b. ID Number is a unique number assigned by the functional entity identified in the MarketID and Switch Number fields (see DMH).

<i>Segment Counter (octet 7)</i>	
Value	Meaning
0 through 127	Number of call segments (see DMH).
Other	Bit H is intended for recording use following call disconnect and will always be 0 in TIA-41 messages, except value 255, <i>Unspecified</i> .
255	Unspecified. The number of segments is unknown.

2.188 PilotNumber

The PilotNumber (PILOT) parameter contains the Pilot Directory Number for a multileg call.

Field	Value	Type	Reference	Notes					
Identifier	PilotNumber IMPLICIT DigitsType	M	see Part 550	a					
Length	variable octets	M	see Part 550						
Contents									
H	G	F	E	D	C	B	A	Octet	Notes
Type of Digits								1	b
Nature of Number								2	c
Numbering Plan				Encoding				3	d, e
Number of Digits								4	f
2 nd BCD Digit				1 st BCD Digit				5	
4 th BCD Digit				3 rd BCD Digit				6	
...				
n th BCD Digit				n-1 st BCD Digit				m	

Notes:

- a. Refer to the DigitsType parameter type see [Part 551 Section 1.2](#) for notes and field encoding.
- b. The Type of Digits field is ignored on receipt.
- c. The Nature of Number field is set to *National* or *International*.
- d. The Numbering Plan field is set to *Telephony Numbering*.
- e. The Encoding field is set to *BCD*.
- f. The Number of Digits is between 0 and at least 15.

2.189 PreferredLanguageIndicator

The PreferredLanguageIndicator (PLIND) parameter indicates the Preferred Language feature activity status and language associated with the subscriber.

Field	Value	Type	Reference	Notes					
Identifier	PreferredLanguageIndicator IMPLICIT OCTET STRING	M	see Part 550						
Length	variable octets	M	see Part 550						
Contents									
H	G	F	E	D	C	B	A	Octet	Notes
Preferred Language								1	
• • •								n	a

Notes:

- a. Ignore extra octets, if received. Send only defined (or significant) octets.

<i>Preferred Language (octet 1)</i>	
Value	Meaning
0	Not specified
1	English
2	French
3	Spanish
4	German
5	Portuguese
6	Cantonese
7	Mandarin
8	Hangul (Korea)
9	Bahasa (Indonesia)
10	Hindi
11	Urdu
12	Tagalog (Philippines)
13	Yoruba (West Africa)
14	Swahili (East Africa)
15	Gaelic
16	Hebrew
17	Nihongo (Japan)
18	Russian

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<i>Preferred Language (octet 1)</i>	
Value	Meaning
19	Arabic
20	Dutch
21	Italian
22	Polish
23	Vietnamese
24	Greek
25	Yiddish
26	Thai
27	Laotian
28	Persian
29	French Creole
30	Armenian
31	Navaho
32	Hungarian
33	Mon-Khmer (Cambodian)
34	Gujarathi
35	Ukranian
36	Czech
37	Pennsylvania Dutch
38	Miao (Hmong)
39	Norwegian
40	Slovak
41	Swedish
42	Serbian
43	Kru
44	Rumanian
45	Lithuanian
46	Finnish
47	Punjabi
48	Formosan
49	Croatian
50	Bosnian
51	Turkish

<i>Preferred Language (octet 1)</i>	
Value	Meaning
52	Llocano
53	Bengali
54	Danish
55	Flemish
56	Syrian
57	Tamil
58	Samoan
59	Malayalam
60	Cajun
61	Amharic
62 through 255	Reserved. Treat the same as value 0, <i>Not specified.</i>

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2.190 PrimitiveValue

The PrimitiveValue (PRIMVAL) parameter is used to return the A-Key Generation procedure primitive value from the AC to the OTAF.

Field	Value	Type	Reference	Notes					
Identifier	PrimitiveValue IMPLICIT OCTET STRING	M	see Part 550						
Length	variable octets	M	see Part 550						
Contents									
H	G	F	E	D	C	B	A	Octet	Notes
MSB								1	a
Primitive value								...	
LSB								n	

Notes:

- a. The length of this field corresponds to the AKeyProtocolVersion value used.

2.191 PrivateSpecializedResource

The PrivateSpecializedResource (PSPECRES) parameter indicates the particular type of proprietary specialized resource requested at a given SRF.

Note: Specialized resources defined by this standard are indicated by the SpecializedResource parameter.

Field	Value	Type	Reference	Notes					
Identifier	PrivateSpecializedResource IMPLICIT OCTET STRING	M	see Part 550						
Length	variable octets	M	see Part 550						
Contents									
H	G	F	E	D	C	B	A	Octet	Notes
Private Specialized Resource								1	a
• • •								n	b

Notes:

- a. Values are allocated per bi-lateral agreement.
- b. Ignore extra octets, if received. Send only defined (or significant) octets.

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2.192 Profile

The Profile is a collection of the subscriber's calling profile information. This information is a list of optional parameters. The Profile macro has been defined solely for editorial convenience, and does not affect the encoding in any way.

PROFILE			
	Type	Reference	Notes
Contents			
AuthenticationCapability	O	2.12	a
CallingFeaturesIndicator	O	2.38	b
CarrierDigits	O	2.47	c
CDMABandClass	O	2.52	z
CDMABandClassList	O	2.54	ad
CDMAServiceOptionList	O	2.77	ab
DMH_AccountCodeDigits	O	2.118	d
DMH_AlternateBillingDigits	O	2.119	d
DMH_BillingDigits	O	2.120	d
GeographicAuthorization	O	2.132	e
MessageWaitingNotificationCount	O	2.146	f
MessageWaitingNotificationType	O	2.147	g
MobileDirectoryNumber	O	2.149	x
OriginationIndicator	O	2.178	h
OriginationTriggers	O	2.179	i
PACAIndicator	O	2.181	j
PreferredLanguageIndicator	O	2.189	k
PSID_RSIDList	O	2.194	u, aa
QoSPriority	O	2.196	y
RestrictionDigits	O	2.216	l
RoutingDigits	O	2.219	m
SMS_OriginationRestrictions	O	2.255	n
SMS_TerminationRestrictions	O	2.257	o
SPINIPIN	O	2.261	q
SPINITriggers	O	2.262	r
TDMADataFeaturesIndicator	O	2.281	ac
TerminationRestrictionCode	O	2.291	s
TerminationTriggers	O	2.293	t
TriggerAddressList	O	2.296	w
UserGroup	O	2.303	p

NonPublicData	O	2.176	v
UserZoneData	O	2.304	v, aa

Notes:

- a. Include if available. May not be received from systems that conform to revisions prior to *IS-41-C*.
- b. Include to identify feature authorization and activity.
- c. Include if preferred carrier is applicable and TransactionCapability supported.
- d. Include if available for recording purposes (see *DMH*).
- e. Include if available for certain authorization restricted areas.
- f. Include if the MWI field of the MessageWaitingNotificationType parameter has the value *MWI On*. Include to indicate the type and number of messages waiting.
- g. Include if Message Waiting Notification feature is active.
- h. Include to indicate the type of calls allowed for origination service.
- i. Include to indicate OriginationRequest triggers.
- j. Include to identify the PACA feature.
- k. Include to identify the Preferred Language feature.
- l. Include if originations are restricted (e.g., to NPA-NXX or NPA-NXX-XXXX) and the TransactionCapability parameter is supported. Set nature of number to *International* if it is known that the destination network element for the profile can accept digits in this format (e.g., MSCIdentificationNumber parameter previously received).
- m. Include for special routing information.
- n. Include for MS originated Short Message Service.
- o. Include for MS terminated Short Message Service.
- p. Include to specify the User Group allocation status.
- q. Include if local SPINI operation supported.
- r. Include to indicate SPINI triggers.
- s. Include to indicate the type of call termination service.
- t. Include to indicate the RedirectionRequest or TransferToNumberRequest triggers.
- u. Include to indicate the list of acceptable PSIDs/RSIDs for the indicated MS.
- v. Include to perform User Zone updates at the serving system.
- w. Include to indicate active WIN triggers and associated addresses for service logic network elements.
- x. Include if available.
- y. Include if packet data services are applicable to indicate relative priority for purposes of radio resource allocation.

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- z. Include to indicate information for the last reported band class and band subclass in use.
- aa. The PSID_RSIDList and UserZoneData parameters are mutually exclusive.
- ab. Include to indicate preferred CDMA service options in descending order of preference.
- ac. Include to indicate allowed TDMA data services.
- ad. Include to indicate band classes and band subclasses supported by the MS.

2.193 PSID_RSIDInformation

The PSID_RSIDInformation (PRINFO) parameter defines the information necessary for Non-Public Mode registration.

Field	Value	Type	Reference	Notes					
Identifier	PSID_RSIDInformation IMPLICIT OCTET STRING	M	see Part 550						
Length	3 or more octets	M	see Part 550						
Contents									
H	G	F	E	D	C	B	A	Octet	Notes
Reserved				P/R Type			P/R	1	a
MSB PSID/RSID								2	c
								LSB 3	
MSB SID, SOC or MCC								4	b, c
								LSB 5	
MSB MCC								6	b, c
								LSB 7	
...								n	b

Notes:

- a. Reserved bits shall be ignored on receipt and set to zero on sending.
- b. Ignore extra octets, if received. Send only defined (or significant) octets
- c. See *TDMA* for definitions of these fields.

<i>PSID/RSID Indicator (octet 1, bit A)</i>	
Value	Meaning
0	PSID.
1	RSID.

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<i>PSID/RSID Type (octet 1, bits B-D)</i>	
Value	Meaning
0	SID Specific. (PSID Only)
1	SOC Specific, National SOC. (PSID or RSID)
2	SOC Specific, International SOC. (PSID or RSID)
3	Nationwide. (PSID Only)
4	International. (PSID Only)
5 through 7	Reserved. If received--should be ignored (i.e.,not passed on to the mobile).

Notes:

- a. The following table shows how the rules for populating octets 4, 5, 6 and 7 apply, depending on the value of the P/R Type field.

Is P/R Type-value is...	In PSID_RSIDInformation parameter being sent, then...		In PSID_RSIDInformation parameter being received, then...	
	octets 4&5 have	octets 6&7 have	octets 4&5 are	octets 6&7 are
0	SID	nothing	processed	ignored
1	SOC	MCC	processed	processed
2	SOC	nothing	processed	ignored
3	MCC	nothing	processed	ignored
4	nothing	nothing	ignored	ignored

2.194 PSID_RSIDList

The PSID_RSIDList (PRLIST) parameter specifies PSID/RSID information which is used in the registration process.

Field	Value	Type	Reference	Notes
Identifier	PSID_RSIDList IMPLICIT SEQUENCE OF	M	see Part 550	
Length	variable octets	M	see Part 550	
Contents				
	PSID_RSIDInformation	M	2.193	
	PSID_RSIDInformation	O	2.193	a
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Notes:

- a. Optionally include additional PSID/RSID information parameters.

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2.195 PSTNTermination

The PSTNTermination (PSTNTERM) parameter is used to provide an MSC with routing information for calls which are to be terminated in the PSTN.

Field	Value	Type	Reference	Notes
Identifier	PSTNTermination IMPLICIT SET	M	see Part 550	
Length	variable octets	M	see Part 550	
Contents				
DestinationDigits		M	2.113	h
CarrierDigits		O	2.47	a, b
ElectronicSerialNumber		O	2.122	c
IMSI		O	2.137	c, e
LegInformation		O	2.143	d
MobileIdentificationNumber		O	2.150	c, e
RingStartDelay		O	2.217	i
RoutingDigits		O	2.219	b, e
TerminationTriggers		O	2.293	b, f
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Notes:

- a. Optional for preferred carrier call routing. Note that this information may not be valid across international boundaries.
- b. This parameter has precedence for this call leg over the parameters outside the TerminationList parameter or the subscriber profile.
- c. Optional, for recording purposes.
- d. Include if part of a multi leg call.
- e. Optional, for special routing purposes.
- f. Include to indicate processing for failed call attempts.
- g. Ignore unexpected parameters, if received. Send only defined (or significant) parameters.
- h. Encode the DestinationDigits as *International* if the originating MSC is known to be capable of accepting digits in International format (e.g., MSCIdentification parameter was received).
- i. Include if routing of this termination is to be delayed.

2.196 QoSPriority

The QoSPriority (QoSPRI) parameter indicates the relative priority with which to treat a MS subscriber's requests for radio resources related to packet data services. The priority level is applicable to user admission, Media Access Control (MAC) state transition control, and burst allocation.

Field	Value	Type	Reference	Notes					
Identifier	QoSPriority IMPLICIT OCTET STRING	M	see Part 550						
Length	variable octets	M	see Part 550						
Contents									
H	G	F	E	D	C	B	A	Octet	Notes
Reserved				Non-Assured Priority				1	a
				• • •				n	b

Notes:

- a. Reserved bits shall be ignored on receipt and set to zero on sending.
- b. Ignore extra octets, if received. Send only defined (or significant) octets.

<i>Non-Assured Priority (octet 1, bits A-D)</i>	
Value	Meaning
0	Priority Level 0. This is the lowest priority level.
1	Priority Level 1.
2	Priority Level 2.
3	Priority Level 3.
4	Priority Level 4.
5	Priority Level 5.
6	Priority Level 6.
7	Priority Level 7.
8	Priority Level 8.
9	Priority Level 9.
10	Priority Level 10.
11	Priority Level 11.
12	Priority Level 12.
13	Priority Level 13.
14	Reserved. Treat as priority level 14.
15	Reserved. Treat as priority level 15.

2.197 QualificationInformationCode

The QualificationInformationCode (QUALCODE) parameter indicates the type of qualification required.

Field	Value	Type	Reference	Notes					
Identifier	QualificationInformationCode IMPLICIT Unsigned Enumerated	M	see Part 550						
Length	1 octet	M	see Part 550						
Contents									
H	G	F	E	D	C	B	A	Octet	Notes
Qualification Information Code								1	a

<i>QualificationInformationCode (octet 1)</i>	
Value	Meaning
0	Not used.
1	No information.
2	Validation only.
3	Validation and profile.
4	Profile only.
5 through 223	Reserved. Treat the same as value 3, <i>Validation and profile</i> .
224 through 255	Reserved for <i>TIA-41</i> protocol extension. If unknown, treat the same as value 3, <i>Validation and profile</i> .

2.198 RANDC

The RANDC parameter is used to indicate which Random Variable was used by an MS to compute Authentication Response. Values of the RANDC may be coordinated between systems so that the RANDC also indicates which MSC generated the random number variable.

Field	Value	Type	Reference	Notes					
Identifier	RANDC IMPLICIT OCTET STRING	M	see Part 550						
Length	variable octets	M	see Part 550						
Contents									
H	G	F	E	D	C	B	A	Octet	Notes
RANDC								1	
...								n	a

Notes:

- a. Ignore extra octets, if received. Send only defined (or significant) octets.

<i>RANDC (octet 1)</i>	
Value	Meaning
0 through 255	The 8 most significant bits of the 32-bit Random Variable used to compute the Authentication Response.

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2.199 RandomVariable

The RandomVariable (RAND) parameter contains a 32-bit random number that is used as input to the CAVE algorithm for MS authentication, Signaling Message Encryption and digital channel Voice Privacy. The random number is chosen by the Serving MSC.

Field	Value	Type	Reference	Notes					
Identifier	RandomVariable IMPLICIT OCTET STRING	M	see Part 550						
Length	4 octets	M	see Part 550						
Contents									
H	G	F	E	D	C	B	A	Octet	Notes
MSB RAND LSB								1	
								2	
								3	
								4	

2.200 RandomVariableBaseStation

The RandomVariableBaseStation (RANDBS) parameter contains a 32-bit random number that is used as input to the CAVE authentication algorithm for base station authentication. The random number is chosen independently by the MS during the process to update its SSD.

Field	Value	Type	Reference	Notes					
Identifier	RandomVariableBaseStation IMPLICIT OCTET STRING	M	see Part 550						
Length	4 octets	M	see Part 550						
Contents									
H	G	F	E	D	C	B	A	Octet	Notes
MSB RANDBS LSB								1	
								2	
								3	
								4	

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2.201 RandomVariableReauthentication

The RandomVariableReauthentication (RANDRA) parameter contains the 32-bit random number that is used as input to the Auth_Signature algorithm for MS Reauthentication. The random number is chosen by the AC.

Field	Value	Type	Reference	Notes					
Identifier	RandomVariableReauthentication IMPLICIT OCTET STRING	M	see Part 550						
Length	4 octets	M	see Part 550						
Contents									
H	G	F	E	D	C	B	A	Octet	Notes
MSB Random Variable Reauthentication LSB								1	
								2	
								3	
								4	

2.202 RandomVariableSSD

The RandomVariableSSD (RANDSSD) parameter contains a 56-bit random number that is used as input to the CAVE algorithm for generating Shared Secret Data (SSD-A and SSD-B). The random number is chosen independently by the AC during the process to update the MS's SSD.

Field	Value	Type	Reference	Notes					
Identifier	RandomVariableSSD IMPLICIT OCTET STRING	M	see Part 550						
Length	7 octets	M	see Part 550						
Contents									
H	G	F	E	D	C	B	A	Octet	Notes
RANDSSD								1	
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2.203 RandomVariableUniqueChallenge

The RandomVariableUniqueChallenge (RANDU) parameter contains a 24-bit random number that is used as input to the CAVE algorithm for authenticating a specific MS. The random number is chosen independently by the AC or VLR whenever a unique challenge is prescribed by local AC or VLR authentication procedures.

Field	Value	Type	Reference	Notes					
Identifier	RandomVariableUniqueChallenge IMPLICIT OCTET STRING	M	see Part 550						
Length	3 octets	M	see Part 550						
Contents									
H	G	F	E	D	C	B	A	Octet	Notes
MSB								1	
RANDU								2	
LSB								3	

2.204 RANDValidTime

The RANDValidTime (RANDVT) parameter is used to specify the period in minutes for which a received Random Variable (RAND) is valid.

Field	Value	Type	Reference	Notes					
Identifier	RANDValidTime IMPLICIT OCTET STRING	M	see Part 550						
Length	variable octets	M	see Part 550						
Contents									
H	G	F	E	D	C	B	A	Octet	Notes
Period								1	
...								n	a

Notes:

- a. Ignore extra octets, if received. Send only defined (or significant) octets.

<i>Period (octet 1)</i>	
Value	Meaning
0	RAND shall not be stored
1 through 255	Number of minutes the associated received RAND is to be used.

2.205 ReasonList

The ReasonList (RSNLST) parameter is used to indicate the reason(s) for operation failure (e.g., rejecting a ChangeService, ChangeFacilities or TMSIAssignment failure).

Field	Value	Type	Reference	Notes					
Identifier	ReasonList IMPLICIT OCTET STRING	M	see Part 550						
Length	variable octets	M	see Part 550						
Contents									
H	G	F	E	D	C	B	A	Octet	Notes
Reason								1	a
•••								n	

Notes:

- a. Include one or more occurrences of this field.

<i>Reason</i>	
Value	Meaning
0	Unknown.
1	Unable to configure ISLP.
2	ISLP failure.
3	Service allowed but facilities not available.
4	Service not allowed.
5	No Response to TMSI assignment.
6	Required parameters unavailable. (e.g., as indicated by the RequiredParametersMask parameter).
7 through 110	Reserved for common CDMA and TDMA network error causes. If unknown, treat the same as value 0, <i>Unknown</i> .
111 through 127	Reserved for common CDMA and TDMA network error causes for <i>MAP</i> protocol extension. If unknown, treat the same as value 0, <i>Unknown</i> .
128 through 174	CDMA Specific error causes. If unknown, treat the same as value 0, <i>Unknown</i> .
175 through 191	CDMA Specific error causes for <i>MAP</i> protocol extension. If unknown treat the same as value 0, <i>Unknown</i> .
192 through 238	TDMA Specific error causes as defined in by the TDMACause parameter. If unknown treat the same as value 0, <i>Unknown</i> .
239 through 255	TDMA Specific error causes for <i>MAP</i> protocol extension. If unknown, treat the same as value 0, <i>Unknown</i> .

2.206 ReauthenticationReport

The ReauthenticationReport (RARPT) parameter indicates the outcome of the Reauthentication procedure initiated by the AC.

Field	Value	Type	Reference	Notes					
Identifier	ReauthenticationReport IMPLICIT OCTET STRING	M	see Part 550						
Length	1 octet	M	see Part 550						
Contents									
H	G	F	E	D	C	B	A	Octet	Notes
Reauthentication Report								1	

<i>Reauthentication Report (octet 1)</i>	
Value	Meaning
0	Not used.
1	Reauthentication not attempted.
2	Reauthentication no response.
3	Reauthentication successful.
4	Reauthentication failed.
5 through 223	Reserved. Treat the same as value 1, <i>Reauthentication not attempted</i> .
224 through 255	Reserved for <i>TIA-41</i> protocol extension. If unknown, treat the same as value 1, <i>Reauthentication not attempted</i> .

2.207 ReceivedSignalQuality

The ReceivedSignalQuality (RSIGQUAL) parameter is used to indicate the raw received signal strength of the transmission from an MS. This signal is encoded as *SignalQuality* (see 2.240) except that the received signal strength is not adjusted based on power levels or the Station Class Mark of the MS. This raw value may be used as input to certain Border Cell problem resolution algorithms.

Field	Value	Type	Reference	Notes					
Identifier	ReceivedSignalQuality IMPLICIT Unsigned Integer (0-255)	M	see Part 550						
Length	1 octet	M	see Part 550						
Contents									
H	G	F	E	D	C	B	A	Octet	Notes
Received Signal Quality								1	a

Notes:

- a. This octet is encoded the same as octet 1 in the SignalQuality parameter (see 2.240).

2.208 RedirectingNumberDigits

The RedirectingNumberDigits (RNDGTS) parameter provides information identifying the last redirecting party sent from or to the telephone network.

Field	Value	Type	Reference	Notes					
Identifier	RedirectingNumberDigits IMPLICIT DigitsType	M	see Part 550	a					
Length	variable octets	M	see Part 550						
Contents									
H	G	F	E	D	C	B	A	Octet	Notes
Type of Digits								1	b
Nature of Number								2	c
Numbering Plan				Encoding				3	d, e
Number of Digits								4	f
2 nd BCD Digit				1 st BCD Digit				5	
4 th BCD Digit				3 rd BCD Digit				6	
...				
n th BCD Digit				n-1 st BCD Digit				m	

Notes:

- a. Refer to the DigitsType parameter type [Part 551 Section 1.2](#) for notes and field encoding.
- b. The Type of Digits is ignored on receipt.
- c. The Nature of Number is set as applicable.
- d. The Numbering Plan field is set to *Telephony Numbering*.
- e. The Encoding field is set to *BCD*.
- f. The Number of Digits is between 0 and at least 15.

2.209 RedirectingNumberString

The RedirectingNumberString (RNSTRING) parameter carries the identification of the last redirecting party to be displayed on the MS.

Field	Value	Type	Reference	Notes					
Identifier	RedirectingNumberString IMPLICIT DigitsType	M	see Part 550	a					
Length	variable octets	M	see Part 550						
Contents									
H	G	F	E	D	C	B	A	Octet	Notes
Type of Digits								1	b
Nature of Number								2	c
Numbering Plan				Encoding				3	d, e
Number of Digits								4	f
1 st Character								5	
2 nd Character								6	
• • •								• • •	
Last Character								n	

Notes:

- a. Refer to the DigitsType parameter type [Part 551 Section 1.2](#) for notes and field encoding.
- b. The Type of Digits is ignored on receipt.
- c. The Nature of Number is set as applicable.
- d. The Numbering Plan field is set to *Telephony Numbering*.
- e. The Encoding field is set to *IA5*.
- f. The Number of Digits is between 0 and at least 15.

2.210 RedirectingPartyName

The RedirectingPartyName (RDNAME) parameter carries information regarding the availability and presentation status of a last redirecting party's name, and optionally, the name text. This parameter is based on the Generic Name parameter defined in *ANSI T1.114 1996*.

Field	Value	Type	Reference	Notes					
Identifier	RedirectingPartyName IMPLICIT OCTET STRING	M	see Part 550						
Length	variable octets	M	see Part 550						
Contents									
H	G	F	E	D	C	B	A	Octet	Notes
0	1	1	Avail.	Reserved		Pres. Status		1	a, b
1 st IA5 Character								2	c
2 nd IA5 Character								3	
•••								•••	
n th IA5 Character								m	

Notes:

- Refer to *ANSI T1.114 1996* for field encoding.
- Set reserved values to 0 when sending, ignore if received.
- From 0 to 15 IA5 characters of name information may be present.

<i>Presentation Status (octet 1, bits A and B)</i>	
Value	Meaning
0	Presentation allowed.
1	Presentation restricted.
2	Blocking toggle.
3	No indication.
<i>Availability (octet 1, bit E)</i>	
Value	Meaning
0	Name available/unknown.
1	Name not available.

2.211 RedirectingSubaddress

The RedirectingSubaddress (RSUB) parameter identifies the subaddress of the redirecting party of a call.

Field	Value	Type	Reference	Notes					
Identifier	RedirectingSubaddress IMPLICIT Subaddress	M	see Part 550	a					
Length	variable octets	M	see Part 550						
Contents									
H	G	F	E	D	C	B	A	Octet	Notes
1	Type of Subaddress		O/E	Reserved				1	
Subaddress								2	
								3	
								•••	
								n	

Notes:

- a. Refer to the Subaddress parameter type see [Part 551 Section 1.15](#) for notes and field encoding.

2.212 RedirectionReason

The RedirectionReason (REDREASON) parameter indicates the reason for redirection.

Field	Value	Type	Reference	Notes					
Identifier	RedirectionReason IMPLICIT unsigned Enumerated	M	see Part 550						
Length	1 octet	M	see Part 550						
Contents									
H	G	F	E	D	C	B	A	Octet	Notes
Redirection Reason								1	

<i>Redirection Reason (octet 1)</i>	
Value	Meaning
0	Not Used.
1	Busy.
2	No answer.
3	Unconditional.
4	No page response.
5	Unavailable.
6	Unroutable. A routing failure occurred while attempting to complete the call.
7	Call accepted.
8	Call refused.
9	USCFvm. Divert to voice mail.
10	USCFms. Divert to MS provided DN.
11	USCFnr. Divert to network registered DN.
12 through 223	Reserved. Treat the same as value 2, <i>No Answer</i> .
224 through 255	Reserved for <i>MAP</i> protocol extension. If unknown, treat the same as value 2, <i>No Answer</i> .

2.213 ReleaseReason

The ReleaseReason (RELREASON) parameter is used to indicate the reason for requesting that allocated resources be released (i.e., via the invocation of the FacilitiesRelease operation).

Field	Value	Type	Reference	Notes					
Identifier	ReleaseReason IMPLICIT unsigned Enumerated	M	see Part 550						
Length	1 octet	M	see Part 550						
Contents									
H	G	F	E	D	C	B	A	Octet	Notes
Release Reason								1	

<i>Release Reason (octet 1)</i>	
Value	Meaning
0	Not specified.
1	CallOverClearForward.
2	CallOverClearBackward.
3	HandoffSuccessful.
4	HandoffAbort-call over.
5	HandoffAbort-not received.
6	AbnormalMobileTermination.
7	AbnormalSwitchTermination.
8	SpecialFeatureRelease.
9 through 223	Reserved. Treat the same as value 0, <i>Not specified</i> .
224 through 255	Reserved for MAP protocol extension. If unknown, treat the same as value 0, <i>Not specified</i> .

2.214 ReportType

The ReportType (RPTTYP) parameter indicates the type of authentication failure being reported by the Visited System (MSC or VLR) to the AC.

Field	Value	Type	Reference	Notes					
Identifier	ReportType IMPLICIT Unsigned Enumerated	M	see Part 550						
Length	1 octet	M	see Part 550						
Contents									
H	G	F	E	D	C	B	A	Octet	Notes
ReportType								1	

<i>Report Type (octet 1)</i>	
Value	Meaning
0	Not used.
1	Unspecified security violation.
2	MSID/ESN mismatch.
3	RANDC mismatch.
4	Reserved (see <i>TSB51</i>).
5	SSD Update failed.
6	Reserved (see <i>TSB51</i>).
7	COUNT mismatch.
8	Reserved (see <i>TSB51</i>).
9	Unique Challenge failed.
10	Unsolicited Base Station Challenge.
11	SSD Update no response.
12	COUNT Update no response.

<i>Report Type (octet 1)</i>	
Value	Meaning
13	Unique Challenge no response.
14	AUTHR mismatch.
15	TERMTYP mismatch.
16	Missing authentication parameters.
17 through 223	Reserved. Treat the same as value 1, <i>Unspecified security violation</i> .
224 through 255	Reserved for <i>MAP</i> protocol extension.If unknown, treat the same as value 1, <i>Unspecified security violation</i> .

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2.215 RequiredParametersMask

RequiredParametersMask (RPM) parameter identifies the parameters which are required by the serving system.

Field	Value	Type	Reference	Notes					
Identifier	RequiredParametersMask IMPLICIT OCTET STRING	M	see Part 550						
Length	variable octets	M	see Part 550						
Contents									
H	G	F	E	D	C	B	A	Octet	Notes
Reserved			LOCID	TMSI	ESN	MIN	IMSI	1	a
...								n	b

Notes:

- a. Reserved bits shall be ignored on receipt and set to zero on sending.
- b. Ignore extra octets, if received. Send only defined (or significant) octets.

<i>IMSI (octet 1, bit A)</i>	
Value	Meaning
0	Not Required.
1	Required.
<i>MIN (octet 1, bit B)</i>	
Value	Meaning
0	Not Required.
1	Required.
<i>ESN (octet 1, bit C)</i>	
Value	Meaning
0	Not Required.
1	Required.
<i>TMSI (octet 1, bit D)</i>	
Value	Meaning
0	Not Required.
1	Required.

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<i>LocationAreaID (LOCID) (octet 1, bit E)</i>	
Value	Meaning
0	Not Required.
1	Required.

2.216 RestrictionDigits

The RestrictionDigits parameter specifies either the leading digits of the directory number (e.g., 6 digit NANP office code) or a full directory number (e.g., 10-digit NANP directory number) for which call originations are allowed, as indicated in the OriginationIndicator parameter.

Field	Value	Type	Reference	Notes					
Identifier	RestrictionDigits IMPLICIT DigitsType	M	see Part 550	a					
Length	variable octets	M	see Part 550						
Contents									
H	G	F	E	D	C	B	A	Octet	Notes
Type of Digits								1	b
Nature of Number								2	c
Numbering Plan				Encoding				3	d, e
Number of Digits								4	f
2 nd BCD Digit				1 st BCD Digit				5	
4 th BCD Digit				3 rd BCD Digit				6	
...				
n th BCD Digit				n-1 st BCD Digit				m	

Notes:

- a. Refer to the DigitsType parameter type [Part 551 Section 1.2](#) for notes and field encoding.
- b. Ignore the field Type of Digits on receipt.
- c. The Nature of Number field is set as applicable.
- d. The Numbering Plan field is set to *Telephony Numbering*.
- e. The Encoding field is set to *BCD*.
- f. The Number of Digits is set as applicable (e.g., either 6 or 10 in NANP).

2.217 RingStartDelay

The RingStartDelay (RNGSTRTDLY) parameter is used by the HLR to instruct the MSC to delay the routing of a leg associated to a Termination within a TerminationList.

Field	Value	Type	Reference	Notes					
Identifier	RingStartDelay IMPLICIT OCTET STRING	M	see Part 550						
Length	variable octets	M	see Part 550						
Contents									
H	G	F	E	D	C	B	A	Octet	Notes
Delay								1	a
•••								n	b

Notes:

- a. The desired delay in units of seconds.
- b. Ignore extra octets, if received. Send only defined (or significant) octets.

2.218 RoamingIndication

The RoamingIndication (ROAMIND) parameter is used to support the Enhanced Roaming Indicator feature.

Field	Value	Type	Reference	Notes					
Identifier	RoamingIndication IMPLICIT OCTET STRING	M	see Part 550						
Length	variable octets	M	see Part 550						
Contents									
H	G	F	E	D	C	B	A	Octet	Notes
Roaming Indication								1	a
•••								n	b

Notes:

- a. See *CDMA* for the definition of this field.
- b. Ignore extra octets, if received. Send only defined (or significant) octets.

2.219 RoutingDigits

The RoutingDigits (ROUTDGTS) parameter specifies special routing information. The DestinationDigits are used once the call is routed with the RoutingDigits as a second stage of outpulsing or as a ISUP Generic Address Parameter. The usage of the RoutingDigits parameter is determined by the receiving MSC and various bilateral agreements.

Field	Value	Type	Reference	Notes					
Identifier	RoutingDigits IMPLICIT DigitsType	M	see Part 550	a					
Length	variable octets	M	see Part 550						
Contents									
H	G	F	E	D	C	B	A	Octet	Notes
Type of Digits								1	b
Nature of Number								2	c
Numbering Plan				Encoding				3	d, e
Number of Digits								4	f
2 nd BCD Digit				1 st BCD Digit				5	
4 th BCD Digit				3 rd BCD Digit				6	
...				
n th BCD Digit				n-1 st BCD Digit				m	

Notes:

- a. Refer to the DigitsType parameter type [Part 551 Section 1.2](#) for notes and field encoding.
- b. The Type of Digits field is ignored on receipt.
- c. The Nature of Number field is set as applicable.
- d. The Numbering Plan field is set to *Telephony Numbering*.
- e. The Encoding field is set to *BCD*.
- f. The Number of Digits is between 0 and at least 15.

2.220 ScriptArgument

The ScriptArgument (SCRARG) parameter specifies arguments used by the script to execute the user interaction instructions.

Field	Value	Type	Reference	Notes					
Identifier	ScriptArgument IMPLICIT OCTET STRING	M	see Part 550						
Length	variable octets	M	see Part 550	a					
Contents									
H	G	F	E	D	C	B	A	Octet	Notes
1 st Octet								1	
2 nd Octet								2	
...								...	
n th Octet								n	

Notes:

- a. The maximum length of a ScriptArgument is 96 octets.

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2.221 ScriptName

The ScriptName (SCRNAME) parameter specifies the script for a specialized resource function to execute.

Field	Value	Type	Reference	Notes					
Identifier	ScriptName IMPLICIT OCTET STRING	M	see Part 550						
Length	variable octets	M	see Part 550	a					
Contents									
H	G	F	E	D	C	B	A	Octet	Notes
1 st Octet								1	
2 nd Octet								2	
...								...	
n th Octet								n	

Notes:

- a. The maximum length of a ScriptName is 6 octets.

2.222 ScriptResult

The ScriptResult (SCRRESULT) parameter carries the results of user interaction specified by a script.

Field	Value	Type	Reference	Notes					
Identifier	ScriptResult IMPLICIT OCTET STRING	M	see Part 550						
Length	variable octets	M	see Part 550	a					
Contents									
H	G	F	E	D	C	B	A	Octet	Notes
1 st Octet								1	
2 nd Octet								2	
...								...	
n th Octet								n	

Notes:

- a. The maximum length of a ScriptResult is 96 octets.

2.223 SecondInterMSCCircuitID

The SecondInterMSCCircuitID (SECIMSCCID) parameter is used to identify the new trunk in a dedicated trunk group between two MSCs. This number consists of a trunk group number and member number. SECIMSCCID differs from the IMSCCID in that it is used when a second inter-MSC circuit needs to be defined in the same operation.

Field	Value	Type	Reference	Notes					
Identifier	SecondInterMSCCID IMPLICIT OCTET STRING	M	see Part 550						
Length	2 octets	M	see Part 550						
Contents									
H	G	F	E	D	C	B	A	Octet	Notes
Trunk Group Number (G)								1	
Trunk Member Number (M)								2	

2.224 SeizureType

The SeizureType (SEIZTYP) parameter is used to identify a trunk test configuration (e.g., a loop-back).

Field	Value	Type	Reference	Notes					
Identifier	SeizureType IMPLICIT Unsigned Enumerated	M	see Part 550						
Length	1 octet	M	see Part 550						
Contents									
H	G	F	E	D	C	B	A	Octet	Notes
SeizureType								1	

Seizure Type (octet 1)	
Value	Meaning
0	Not specified.
1	Loop-back. The destination switch is to set up a loop around connection back to the source switch.
2 through 223	Reserved. Treat the same as value 0, <i>Not specified</i> .
224 through 255	Reserved for <i>MAP</i> protocol extension. If unknown, treat the same as value 0, <i>Not specified</i> .

2.225 SenderIdentificationNumber

The SenderIdentificationNumber (SENDERIN) parameter indicates the identification number of the functional entity that is sending a message.

Field	Value	Type	Reference	Notes					
Identifier	SenderIdentificationNumber IMPLICIT DigitsType	M	see Part 550	a					
Length	variable octets	M	see Part 550						
Contents									
H	G	F	E	D	C	B	A	Octet	Notes
Type of Digits								1	b
Nature of Number								2	c
Numbering Plan				Encoding				3	d, e
Number of Digits								4	f
2 nd BCD Digit				1 st BCD Digit				5	
4 th BCD Digit				3 rd BCD Digit				6	
...				
n th BCD Digit				n-1 st BCD Digit				m	

Notes:

- a. Refer to the DigitsType parameter type [Part 551 Section 1.2](#) for notes and field encoding.
- b. Set to *Not Used*. The Type of Digits field is ignored on receipt.
- c. The Nature of Number field bit A is set to *International*. Other bits are set as applicable.
- d. The Numbering Plan field is set to *Land Mobile Numbering (E.212)*.
- e. The Encoding field is set to *BCD*.
- f. The Number of Digits is between 0 and at least 15.

2.226 ServiceDataAccessElement

The ServiceDataAccessElement (SDAE) parameter specifies a list of data items and, optionally, a service to which those data items are all associated. Optionally, it may specify changes to be applied to those data items, values for some of those data items, or both.

Field	Value	Type	Reference	Notes
Identifier	ServiceDataAccessElement IMPLICIT SEQUENCE	M	see Part 550	
Length	variable octets	M	see Part 550	
Contents				
	DataAccessElementList	M	2.100	
	ServiceID	O	2.230	a
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Notes:

- a. Include if all the DataAccessElements in the DataAccessElementList are for data items associated to a particular service.

2.227 ServiceDataAccessElementList

The `ServiceDataAccessElementList` (SDAEL) parameter specifies a list of `ServiceDataAccessElements`, each of which specifies a list of data items and, optionally, one or more of the following optional elements, a service to which those data items are all associated, changes to be applied to those data items, and values for some of those data items.

Field	Value	Type	Reference	Notes
Identifier	<code>ServiceDataAccessElementList</code> IMPLICIT SEQUENCE OF	M	see Part 550	
Length	variable octets	M	see Part 550	
Contents				
	<code>ServiceDataAccessElement</code>	M	2.226	a
	<code>ServiceDataAccessElement</code>	O	2.226	a, b
	• • •			

Notes:

- a. If the optional `Change` parameter is included in the `DataAccessElements` in the `DataAccessElementList` component of any `ServiceDataAccessElement` in this list, it must be included in the `DataAccessElements` within the `DataAccessElementList` component of each `ServiceDataAccessElement` in this list.
- b. Optionally, include additional `ServiceDataAccessElement` parameters. The maximum number of `ServiceDataAccessElement` parameters is dependent upon the two systems involved in the transaction.

2.228 ServiceDataResult

The ServiceDataResult (SDR) parameter specifies the results of data updates carried out independently on the data items in a list of data items. It may optionally identify a single service to which all those data items are all associated.

Field	Value	Type	Reference	Notes
Identifier	ServiceDataResult IMPLICIT SEQUENCE	M	see Part 550	
Length	variable octets	M	see Part 550	
Contents				
	DataUpdateResultList	M	2.107	
	ServiceID	O	2.230	a
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Notes:

- a. Include if all the data items for which the results of an update are being reported by the DataUpdateResultList parameter are data items associated to a particular service.

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2.229 ServiceDataResultList

The ServiceDataResultList (SDRL) parameter specifies the results of data updates carried out independently on the data items in a list of data items. For each of those data items, it may optionally identify a service to which that data item is associated.

Field	Value	Type	Reference	Notes
Identifier	ServiceDataResultList IMPLICIT SEQUENCE OF	M	see Part 550	
Length	variable octets	M	see Part 550	
Contents				
	ServiceDataResult	M	2.228	
	ServiceDataResult	O	2.228	a
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Notes:

- a. Optionally include additional ServiceDataResult parameters. The maximum number of ServiceDataResult parameters is dependent upon the two systems involved in the transaction.

2.231 ServiceIndicator

The ServiceIndicator (SRVIND) parameter indicates a type of service.

Field	Value	Type	Reference	Notes					
Identifier	ServiceIndicator IMPLICIT OCTET STRING	M	see Part 550						
Length	variable octets	M	see Part 550						
Contents									
H	G	F	E	D	C	B	A	Octet	Notes
Service								1	
•••								n	a

Notes:

- a. Ignore extra octets, if received. Send only defined (or significant) octets.

<i>Service (octet 1)</i>	
Value	Meaning
0	Undefined Service.
1	CDMA OTASP Service.
2	TDMA OTASP Service.
3	CDMA OTAPA Service.
4 through 223	Reserved. Treat the same as value 0, <i>Undefined Service</i>
224 through 255	Reserved for <i>TIA-41</i> protocol extension. If unknown, treat the same as value 0, <i>Undefined Service</i>

2.232 ServiceRedirectionCause

The ServiceRedirectionCause (SRCAUSE) parameter is used to indicate the reason the MS has returned to the original system after having been directed away from that system by NDSS.

Field	Value	Type	Reference	Notes					
Identifier	ServiceRedirectionCause IMPLICIT OCTET STRING	M	see Part 550						
Length	variable octets	M	see Part 550						
Contents									
H	G	F	E	D	C	B	A	Octet	Notes
Service Redirection Cause								1	
•••								n	a

Notes:

- a. Ignore extra octets, if received. Send only defined (or significant) octets.

<i>ServiceRedirectionCause (octet 1)</i>	
Value	Meaning
0	Not used.
1	NormalRegistration.
2	SystemNotFound.
3	ProtocolMismatch.
4	RegistrationRejection.
5	WrongSID.
6	WrongNID.
7 through 223	Reserved. Treat the same as value 1, <i>NormalRegistration</i> .
224 through 255	Reserved for <i>MAP</i> protocol extension. If unknown, treat the same as value 1, <i>NormalRegistration</i> .

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2.233 ServiceRedirectionInfo

The ServiceRedirectionInfo (SRINFO) parameter identifies whether the MS should return to the system from which it is being redirected upon failure to obtain service (Return If Fail). The NDSS Status field identifies whether the NDSS feature is suppressed.

Field	Value	Type	Reference	Notes					
Identifier	ServingRedirectInfo IMPLICIT OCTET STRING	M	see Part 550						
Length	variable octets	M	see Part 550						
Contents									
H	G	F	E	D	C	B	A	Octet	Notes
Reserved						NDS	RIF	1	a
•••								n	b

Notes:

- a. Reserved bits shall be ignored on receipt and set to zero on sending.
- b. Ignore extra octets, if received. Send only defined (or significant) octets.

<i>Return If Fail (RIF) (octet 1, bit A)</i>	
Value	Meaning
0	If MS fails to access the redirected system, MS shall not return to the serving system.
1	If MS fails to access the redirected system, MS shall return to the serving system.
<i>NDSS Status (NDS) (octet 1, bit B)</i>	
Value	Meaning
0	NDSS is not suppressed.
1	NDSS is suppressed.

2.234 ServicesResult

The ServicesResult (SERVRSLT) parameter is used to indicate the outcome of a service action (e.g., the download of PSID/RSIDs to a mobile station).

Field	Value	Type	Reference	Notes					
Identifier	ServicesResult IMPLICIT OCTET STRING	M	see Part 550						
Length	variable octets	M	see Part 550						
Contents									
H	G	F	E	D	C	B	A	Octet	Notes
Reserved						PRDR	1	a	
•••								n	b

Notes:

- a. Set reserved bits to 0 when sending, ignore if received.
- b. Ignore extra octets, if received. Send only defined (or significant) octets.

<i>PSID/RSID Download Result (PRDR) (octet 1, bits A and B)</i>	
Value	Meaning
0	No Indication.
1	Unsuccessful PSID/RSID download.
2	Successful PSID/RSID download.
3	Reserved. Treat the same as value 0, <i>No Indication</i> .

2.235 ServingCellID

The ServingCellID (CELLID) parameter specifies the ID of the serving cell site.

Field	Value	Type	Reference	Notes						
Identifier	ServingCellID IMPLICIT OCTET STRING	M	see Part 550							
Length	2 octet	M	see Part 550							
Contents										
H	G	F	E	D	C	B	A	Octet	Notes	
MSB								1		
ServingCellID								LSB	2	

2.236 SetupResult

The SetupResult (SETRESULT) parameter indicates whether the inter-system setup operation was successful or unsuccessful.

Field	Value	Type	Reference	Notes					
Identifier	SetupResult IMPLICIT OCTET STRING	M	see Part 550						
Length	variable octets	M	see Part 550						
Contents									
H	G	F	E	D	C	B	A	Octet	Notes
Setup Result								1	
...								n	a

Notes:

- a. Ignore extra octets, if received. Send only defined (or significant) octets.

<i>Setup Result (octet 1)</i>	
Value	Meaning
0	Not used.
1	Unsuccessful.
2	Successful.
3 through 255	Reserved. Treat the same as value 1, <i>Unsuccessful</i> .

2.237 SharedSecretData

The SharedSecretData (SSD) parameter contains the SharedSecretData-A (SSD-A) used in authentication of an MS and SharedSecretData-B (SSD-B) used as a cryptovvariable in Voice Privacy and Signaling Message Encryption for an MS. SSD is computed only at the Authentication Center (AC) and at the MS since it is based on the secret subscriber authentication key (A-Key) shared only between the AC and the MS.

Field	Value	Type	Reference	Notes						
Identifier	SharedSecretData IMPLICIT OCTET STRING	M	see Part 550							
Length	16 octets	M	see Part 550							
Contents										
	H	G	F	E	D	C	B	A	Octet	Notes
MSB	SharedSecretData-A								1	
									2	
									...	
									LSB 8	
MSB	SharedSecretData-B								9	
									10	
									...	
									LSB 16	

2.238 SignalingMessageEncryptionKey

The SignalingMessageEncryptionKey (SMEKEY) parameter contains the 64-bit key to be used for encryption of appropriate data fields within signaling messages sent in both directions by the voice or traffic channels. The SMEKEY is calculated using CAVE parameters in effect when the call is established and remains constant for the duration of the call.

The presence of this optional parameter indicates that Signaling Message Encryption is possible for this MS.

Field	Value	Type	Reference	Notes						
Identifier	SignalingMessageEncryption IMPLICIT OCTET STRING	M	see Part 550							
Length	8 octets	M	see Part 550							
Contents										
	H	G	F	E	D	C	B	A	Octet	Notes
MSB	SignalingMessageEncryptionKey								1	
									2	
									...	
									LSB 8	

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2.239 SignalingMessageEncryptionReport

The SignalingMessageEncryptionReport (SMERPT) parameter indicates the outcome of the Signaling Message Encryption initiated by the serving MSC.

Field	Value	Type	Reference	Notes					
Identifier	SignalingMessageEncryption Report IMPLICIT OCTET STRING	M	see Part 550						
Length	1 octet	M	see Part 550						
Contents									
H	G	F	E	D	C	B	A	Octet	Notes
SME Report								1	

<i>SMEReport (octet 1)</i>	
Value	Meaning
0	Not used
1	Signaling Message Encryption enabling not attempted.
2	Signaling Message Encryption enabling no response.
3	Signaling Message Encryption is enabled.
4	Signaling Message Encryption enabling failed.
5 through 223	Reserved. Treat the same as value 1, <i>Signaling Message Encryption not attempted.</i>
224 through 255	Reserved for <i>MAP</i> protocol extension. If unknown, treat the same as value 1, <i>Signaling Message Encryption not attempted.</i>

2.240 SignalQuality

The SignalQuality (SIGQUAL) parameter is used to indicate to a requesting MSC, the relative received signal strength of an MS for which a location process has been performed.

Field	Value	Type	Reference	Notes					
Identifier	SignalQuality IMPLICIT Unsigned Integer (0-255)	M	see Part 550						
Length	1 octet	M	see Part 550						
Contents									
H	G	F	E	D	C	B	A	Octet	Notes
SignalQuality								1	

<i>SignalQuality (octet 1)</i>	
Value	Meaning
0	<i>Not a usable signal.</i>
1 through 8	Reserved. If unknown treat the same as value 0, <i>Not a usable signal.</i>
9 through 245	Usable signal range.
246 through 254	Reserved. If unknown treat the same as value 255, <i>Interference.</i>
255	Interference.

The concept of the SignalQuality value for handoff purposes is summarized in the figure on the next page. Each cell site is assumed to be equipped with a scanning receiver capable of being tuned to any cellular channel and which contains circuitry that produces an output proportional to a characteristic of the received signal suitable for evaluating a proposed handoff operation. This output is then converted by means of appropriate A/D circuits to a digital value in a range with "reasonable" resolution. Values within this range shall be suitably adjusted with respect to the Candidate cell's power level, the maximum power level that an MS is allowed to transmit in the candidate cell, the MS maximum power level, the current MS power level (VMAC or DMAC) in the serving cell, and the power class indicated in the station class mark. The adjusted value shall then be linearly mapped onto the signal quality scale.

The following example illustrates how the received signal strength of an MS can be adjusted:

The current power level of the MS in the serving cell is subtracted from the maximum possible power level in the candidate cell. The result is multiplied by the difference in the Effective Radiated Power (ERP) between two consecutive levels. This value is then added to the received signal strength. The result is the adjusted value that shall be mapped to the signal quality scale.

For the TDMA 800 MHz to 1800 MHz case, the adjusted signal quality is obtained by adding to the received signal strength the difference between the serving Effective Radiated Power (ERPs) corresponding to the serving power level, MS power class, and serving Hyperband, and the target Effective Radiated Power (ERP_t) corresponding to the target power level, MS power class and target Hyperband.

$$ASQ = MSS + [ERPs (PL, SCM, Hyperband) - ERPt (PL, SCM, Hyperband)]$$

- ASQ: Adjusted Signal Quality
- MSS: Measured Signal Strength
- ERP: Effective Radiated Power
- PL: Power Level
- SCM: Station Class Mark

Note: The maximum possible power level of the MS in the candidate cell is the lesser of:

- the maximum transmit power level allowed in the candidate cell (this value may be obtained from an internal database of the serving system).
- the maximum power level corresponding to the power class of the MS.

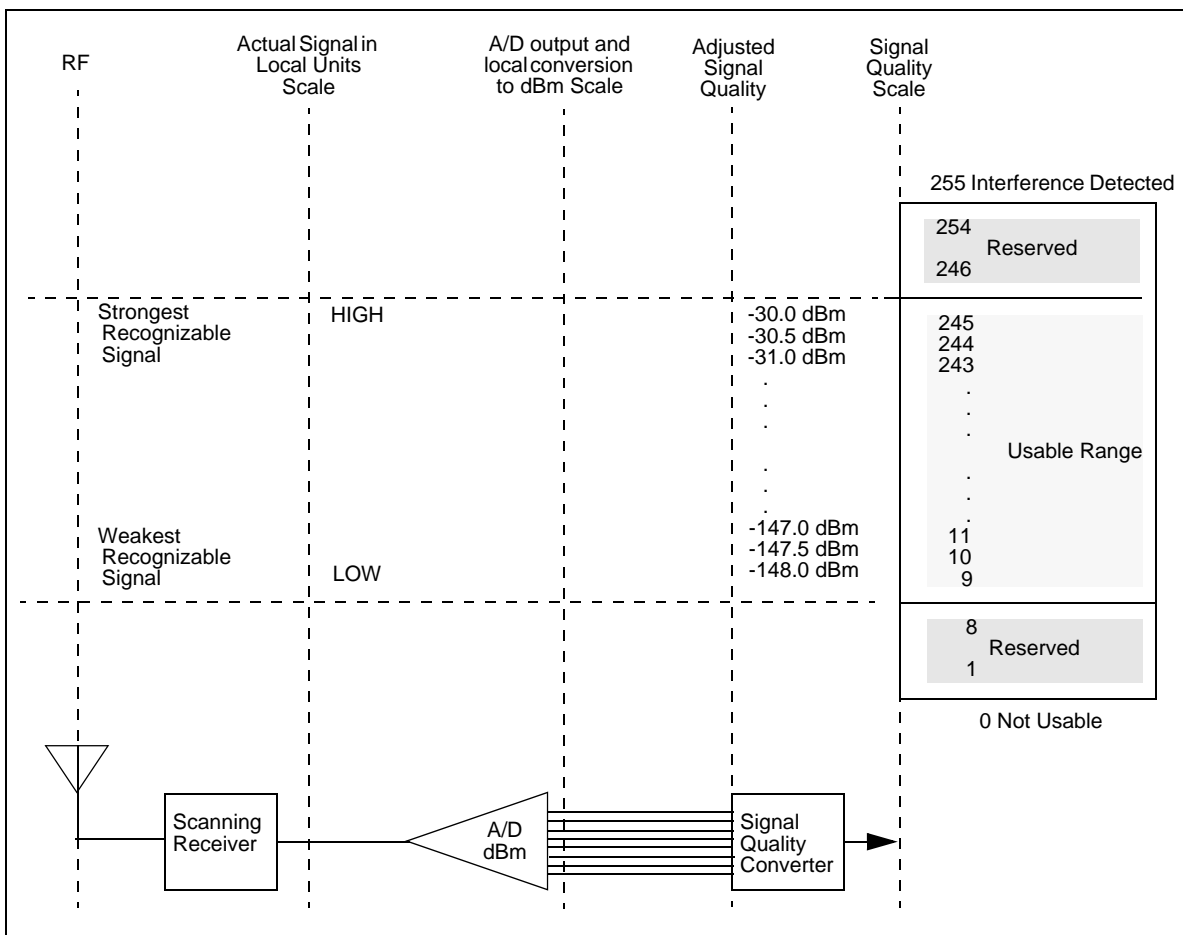


Figure 1 Definition of Signal Quality for Handoff

The scale labeled "ACTUAL SIGNAL IN LOCAL UNITS" represents the open ended range of signal characteristic in which the Scanning Receiver operates. The value marked "HIGH" corresponds to the maximum value at which saturation occurs in the Scanning Receiver circuits. The value marked "LOW" corresponds to the minimum usable signal for handoff purposes. It must be greater than or equal to the sensitivity rating of the base site receiver equipment.

The A/D output may have any range with a "reasonable" number of distinguishable values between those corresponding to the HIGH and LOW values of RF signal. Reasonable resolution will be defined at the "Signal Quality scale" reference point as 0.5 dBm with the weakest recognizable value, -148 dBm, defined as decimal (9) and the strongest recognizable value, -30 dBm, defined as decimal (245). The -148 to -30 dBm range with 0.5 dBm resolution requires 237 representative values. The octal encoding for decimal (9) to decimal (245) will be used to represent signal quality values between MSCs. Signal quality zero (0) is used to indicate an unusable signal (including an undetectable signal). The value 255 is used to indicate a case of known (or suspected) interference. Values (1-8) and (246-254) are reserved for future use.

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2.241 SMS_AccessDeniedReason

The SMS_AccessDeniedReason (SMSACCDEN) parameter indicates why short message delivery is not currently allowed to an MS-based SME or why a temporary routing address to be used for CDMA OTAPA cannot currently be provided.

Field	Value	Type	Reference	Notes					
Identifier	SMS_AccessDeniedReason IMPLICIT OCTET STRING	M	see Part 550						
Length	variable octets	M	see Part 550						
Contents									
H	G	F	E	D	C	B	A	Octet	Notes
SMS AccessDeniedReason								1	
• • •								n	a

Notes:

- a. Ignore extra octets, if received. Send only defined (or significant) octets

<i>SMS_AccessDeniedReason (octet 1)</i>	
Value	Meaning
0	Not used.
1	Denied. The request cannot be honored, or the MS is unknown, or the addressed MS is known, but the addressed MS user has either not subscribed to SMS or the user's subscription has been suspended (e.g., subscriber vacation disconnect, non-payment disconnect, HLR doesn't support postponed notification, HLR doesn't support specified SRVIND value). No notification shall be sent.
2	Postponed. The addressed MS is known, but is currently unreachable (e.g., an MS-based SME is unreachable, the SME is not currently available, MS receiver is off, MS is busy, Serving MSC doesn't support CDMA OTAPA, SME not located in an MSC that is secure for CDMA OTAPA programming) and SMSNotificationIndicator indicates <i>Notify when available</i> . Notification shall be sent.
3	Unavailable. The addressed MS is known, but is currently unavailable (e.g., an MS-based SME is unreachable, the SME is not currently available, MS receiver is off, MS-based SME is busy, Serving MSC doesn't support OTAPA, SME not located in an MSC that is secure for OTAPA programming) and SMSNotificationIndicator indicates <i>Do not notify when available</i> . No notification shall be sent.

<i>SMS_AccessDeniedReason (octet 1)</i>	
Value	Meaning
4	Invalid. The SMS_TeleserviceID is invalid. No notification shall be sent.
5 through 63	Reserved. Treat the same value as value 1, <i>Denied</i> .
64 through 127	Reserved. Treat the same value as value 2, <i>Postponed</i> .
128 through 223	Reserved. Treat the same value as value 3, <i>Unavailable</i> .
224 through 255	Reserved for <i>MAP</i> protocol extension. If unknown, treat the same value as value 3, <i>Unavailable</i> .

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2.242 SMS_Address

The SMS_Address (SMSADDR) parameter is used to convey the current routing address of the Serving MSC for the purpose of short message termination to an MS-based SME. If SS7 is used for international SMS message routing, this parameter should be formatted as an E.212 number. If SS7 is used for national message routing, this parameter may be formatted either as an SS7 point code address or as an E.212 number.

2.242.1 SMS_Address parameter for BCD digits

Field	Value	Type	Reference	Notes					
Identifier	SMS_Address IMPLICIT DigitsType	M	see Part 550	a					
Length	variable octets	M	see Part 550						
Contents									
H	G	F	E	D	C	B	A	Octet	Notes
Type of Digits								1	b
Nature of Number								2	c
Numbering Plan				Encoding				3	d, e
Number of Digits								4	f
2 nd BCD Digit				1 st BCD Digit				5	
4 th BCD Digit				3 rd BCD Digit				6	
...				
n th BCD Digit				n-1 st BCD Digit				m	

Notes:

- a. Refer to the DigitsType parameter type [Part 551 Section 1.2](#) for notes and field encoding.
- b. Type of Digits is ignored on receipt.
- c. Nature of Number may be *National* or *International*.
- d. Numbering Plan supported shall include *E.164*, *E.212*, *X.121*, and *Private numbering plan* for this parameter variant.
- e. The Encoding field shall always be set to *BCD* for this parameter variant.
- f. The Number of Digits ranges from 0 to at least 15.

2.242.2 SMS_Address Encoding for an IP address

Field	Value	Type	Reference	Notes					
Identifier	SMS_Address IMPLICIT DigitsType	M	see Part 550	a					
Length	variable octets	M	see Part 550						
Contents									
H	G	F	E	D	C	B	A	Octet	Notes
Type of Digits								1	b
Nature of Number								2	c
Numbering Plan				Encoding				3	d, e
MSB IP Address LSB								4	
								5	
								6	
								7	

Notes:

- a. Refer to the DigitsType parameter type [Part 551 Section 1.2](#) for notes and field encoding.
- b. Type of Digits is ignored on receipt.
- c. Nature of Number may be *National* or *International*.
- d. Numbering Plan shall be *IP* for this parameter variant.
- e. Encoding shall be *octet string* for this parameter variant.

2.242.3 SMS_Address Encoding for an ANSI SS7 Point Code Address

Field	Value	Type	Reference	Notes					
Identifier	SMS_Address IMPLICIT DigitsType	M	see Part 550	a					
Length	variable octets	M	see Part 550						
Contents									
H	G	F	E	D	C	B	A	Octet	Notes
Type of Digits								1	b
Nature of Number								2	c
Numbering Plan				Encoding				3	d, e
Point code--Member Number								4	
Point code--Cluster Number								5	
Point code--Network Number								6	
Subsystem Number								7	

Notes:

- a. Refer to the DigitsType parameter type see [Part 551 Section 1.2](#) for notes and field encoding.
- b. Type of Digits is ignored on receipt.
- c. Nature of Number shall be *National*.
- d. Numbering Plan shall be *SS7 PC* and *SSN* for this parameter variant.
- e. Encoding shall be *octet string* for this parameter variant.

2.242.4 SMS_Address Encoding for a Generic SS7 Point Code Address

Field	Value	Type	Reference	Notes					
Identifier	SMS_Address IMPLICIT DigitsType	M	see Part 550	a					
Length	variable octets	M	see Part 550						
Contents									
H	G	F	E	D	C	B	A	Octet	Notes
Type of Digits								1	b
Nature of Number								2	c
Numbering Plan				Encoding				3	d, e
Point Code								4	f
								5	
								6	
Subsystem Number (SSN)								7	

Notes:

- a. Refer to the DigitsType parameter type see [Part 551 Section 1.2](#) for notes and field encoding.
- b. Type of Digits is ignored on receipt.
- c. Nature of Number shall be *National*.
- d. Numbering Plan shall be *SS7* for this parameter variant.
- e. Encoding shall be *octet string* for this parameter variant.
- f. Bit A of Octet 4 is the first bit that would be emitted if the point code was transmitted by the MTP layer. If the point code is less than 24 bits in length, then all bits beyond the end of the point code up to and including bit H of Octet 6, should be set to 0.

2.243 SMS_BearerData

The SMS_BearerData parameter is to be used and interpreted by an SMS teleservice.

Field	Value	Type	Reference	Notes					
Identifier	SMS_BearerData IMPLICIT OCTET STRING	M	see Part 550						
Length	variable octets	M	see Part 550						
Contents									
H	G	F	E	D	C	B	A	Octet	Notes
SMS Bearer Data								1	a, b
								•••	
								n	

Notes:

- a. The formatting of the SMS Bearer Data is performed independently of this Standard. The formatting of the SMS Bearer Data is defined by a Teleservice specification.
- b. The maximum size is approximately 200 octets for this standard.

2.244 SMS_CauseCode

The SMS_CauseCode (SMSCAUSE) parameter indicates a reason for not delivering an SMS or OTASP message or indicates certain conditions at the Serving MSC for use during OTASP.

Field	Value	Type	Reference	Notes					
Identifier	SMS_CauseCode IMPLICIT OCTET STRING	M	see Part 550						
Length	variable octets	M	see Part 550						
Contents									
H	G	F	E	D	C	B	A	Octet	Notes
SMS_CauseCode								1	a
•••								n	b

Notes:

- a. Only the SMS_CauseCode SMS delivery postponed is used to indicate that an SMS message is pending delivery and that notification shall be provided.
- b. Ignore extra octets, if received. Send only defined (or significant) octets.

<i>SMS_CauseCode (octet 1)</i>	
Value	Meaning
Network Problems	
0	Address vacant. SMS Destination Address is valid but not currently allocated to an SMS terminal. The MSID associated with a valid destination address is not known to its HLR.
1	Address translation failure. The SMS Destination Address is invalid (e.g., address is not a recognized address type, address is not for a known or possible SMS functional entity, the MSID associated with a destination MS address does not correspond to its HLR, the ESN associated with a destination MS does not match the expected value, the SMS_DestinationAddress, SMS_OriginalDestinationAddress, destination MSID, or original destination subaddress does not match the address of a destination SME). For CDMA OTASP, the TRN, the Activation_MIN, or the ESN is currently not allocated to an OTASP call.
2	Network resource shortage. Network transmission failed due to lack of a network resource shortage or link capacity.
3	Network failure. A network node failed, a link failed or a required operation failed.

<i>SMS_CauseCode (octet 1)</i>	
Value	Meaning
4	Invalid Teleservice ID. The SMS_TeleserviceIdentifier is not known, is not supported or is not authorized by an addressed functional entity.
5	Other network problem.
6	Unsupported network interface. The intersystem network interface required for the delivery of the received message is not supported.
7	Broadcast periodicity failure in MSC. Requested broadcast periodicity cannot be handled by MSC.
8 through 14	Reserved. Treat the same as value 5, <i>Other network problem</i> .
15	SMS delivery on paging channel not supported.
16 through 31	Reserved. Treat the same as value 5, <i>Other network problem</i> .
Terminal Problems	
32	No page response. The addressed MS-based SME is known, but it does not respond to a page. SMS Notification is not pending.
33	Destination busy. The destination MS-based SME is SMS capable, but is currently engaged in a call, a service or a call mode that precludes the use of SMS or the destination SME is congested. This value shall only be used between the MSC and the MC when allowed by bilateral agreement. SMS Notification is not pending.
34	No acknowledgment. The destination SME does not acknowledge receipt of the SMS delivery (e.g., SMS or an OTASP Data message). This value may be used when <i>Terminal busy</i> and <i>No page response</i> are not appropriate. SMS Notification is not pending.
35	Destination resource shortage. A required terminal resource (e.g., memory) is not available to process this message. SMS notification is not pending.
36	SMS delivery postponed. Delivery is not currently possible (e.g., <i>No page response</i> , <i>Destination busy</i> , <i>No acknowledgment</i> , <i>Destination out of service</i> , <i>Other terminal problem</i>), but SMS notification is pending.
37	Destination out of service. The addressed destination is out of service for an extended period of time (e.g., MS sleep, inactive, power off). SMS notification is not pending.

<i>SMS_CauseCode (octet 1)</i>	
Value	Meaning
38	Destination no longer at this address. The MS-based SME is no longer at the temporary SMS routing address. The message sender should not re-use the temporary SMS routing address. SMS notification is not pending.
39	Other terminal problem. A terminal problem other than described above. SMS notification is not pending.
40 through 47	Reserved. Treat the same as value 39, <i>Other terminal problem</i> .
48 through 63	Reserved. Treat the same as value 36, <i>SMS delivery postponed</i> .
Radio Interface Problems	
64	Radio interface shortage. There is no channel available or there is radio congestion at this time.
65	Radio interface incompatibility. The MS for an MS-based SME is operating in a mode that does not support SMS at this time. This cause code may also be used to indicate that the air interface does not support OTASP Data Message delivery.
66	Other radio interface problem. A radio interface problem to an MS-based SME other than described above
67	Unsupported Base Station Capability. Base Station does not support this service (e.g., SMS, OTASP, OTAPA).
68 through 95	Reserved. Treat the same as value 66, <i>Other radio interface problem</i> .
General Problems	
96	Encoding problem. The size of a parameter or field is not what is expected.
97	Service origination denied. The originating MSID is not recognized, the originating address is not allowed for the originating MS, the ESN does not match the originating MSID, the origination is not authorized, the originating address is not recognized.

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<i>SMS_CauseCode (octet 1)</i>	
Value	Meaning
98	Service termination denied. The destination is not authorized to receive this service message, the MC refused the message, the destination SME refused the message, the destination is not authorized for a required supplementary service, etc. This cause code may also be used to indicate that an MS rejected an OTASP Data Message.
99	Supplementary service not supported. The originating supplementary service is not known or supported, the sender is not authorized for an originating supplementary service, etc.
100	Service not supported. The service is not supported by an addressed functional entity.
101	Reserved. Treat the same as value 107, <i>Other general problems</i> .
102	Missing expected parameter. An optional parameter that is required for a particular function.
103	Missing mandatory parameter. A parameter is missing that is mandatory for a particular message.
104	Unrecognized parameter value. A known parameter has a unknown or unsupported value.
105	Unexpected parameter value. A known parameter has a known, but unexpected value.
106	User Data size error. The User Data size is too large for access technology, transport network, or call mode, etc. The User Data size is not what is expected for the indicated teleservice
107	Other general problems.
108	Session not active. An OTASP or OTAPA session does not currently exist for the MS. The session may have been terminated (e.g., due to loss of the associated traffic channel).
109 through 223	Reserved. Treat the same as value 107, <i>Other general problems</i> .
224 through 255	Reserved for <i>MAP</i> protocol extension. If unknown, treat the same as value 107, <i>Other general problems</i> .

2.245 SMS_ChargeIndicator

The SMS_ChargeIndicator parameter is used to specify various charging options for an SMS message.

Field	Value	Type	Reference	Notes					
Identifier	SMS_ChargeIndicator IMPLICIT OCTET STRING	M	see Part 550						
Length	variable octets	M	see Part 550						
Contents									
H	G	F	E	D	C	B	A	Octet	Notes
SMS_Charge Indicator								1	
•••								n	a

Notes:

- a. Ignore extra octets, if received. Send only defined (or significant) octets.

<i>SMS_ChargeIndicator (octet 1)</i>	
Value	Meaning
0	Not used.
1	No Charge.
2	Charge original originator. Charge the original message originator, if allowed by the originator's profile.
3	Charge original destination. Charge the message destination, if allowed by the destination's profile.
4 through 63	Reserved. Treat the same as value 1, <i>No Charge</i> .
64 through 127	Reserved. Treat the same as value 2, <i>Charge original originator</i> .
128 through 223	Reserved. Treat the same as value 3, <i>Charge original destination</i> .
224 through 255	Reserved for <i>MAP</i> protocol extension. If unknown, treat the same as value 2, <i>Charge original originator</i> .

2.246 SMS_DestinationAddress

The SMS_DestinationAddress parameter conveys the address of the FE that the MAP message containing this parameter is destined to.

2.246.1 SMS_DestinationAddress parameter for BCD Digits

Field	Value	Type	Reference	Notes					
Identifier	SMS_DestinationAddress IMPLICIT DigitsType	M	see Part 550	a					
Length	variable octets	M	see Part 550						
Contents									
H	G	F	E	D	C	B	A	Octet	Notes
Type of Digits								1	b
Nature of Number								2	c
Numbering Plan				Encoding				3	d, e
Number of Digits								4	f
2 nd BCD Digit				1 st BCD Digit				5	
4 th BCD Digit				3 rd BCD Digit				6	
...				
n th BCD Digit				n-1 st BCD Digit				m	

Notes:

- a. Refer to the DigitsType parameter type [Part 551 Section 1.2](#) for notes and field encoding.
- b. Type of Digits is ignored on receipt.
- c. Nature of Number may be *National* or *International*.
- d. Numbering Plan supported shall include *E.164*, *X.25*, and Private numbering plan for this parameter variant.
- e. The Encoding field shall always be set to *BCD* for this parameter variant.
- f. The Number of Digits ranges from 0 to at least 15.

2.246.2 SMS_DestinationAddress parameter for an IP Address

Field	Value	Type	Reference	Notes					
Identifier	SMS_DestinationAddress IMPLICIT DigitsType	M	see Part 550	a					
Length	variable octets	M	see Part 550						
Contents									
H	G	F	E	D	C	B	A	Octet	Notes
Type of Digits								1	b
Nature of Number								2	c
Numbering Plan				Encoding				3	d, e
MSB IP Address LSB								4	
								5	
								6	
								7	

Notes:

- a. Refer to the DigitsType parameter type see [Part 551 Section 1.2](#) for notes and field encoding.
- b. Type of Digits is ignored on receipt.
- c. Nature of Number may be *National* or *International*.
- d. Numbering Plan shall be *IP* for this parameter variant.
- e. Encoding shall be *octet string* for this parameter variant.

2.247 SMS_MessageCount

The SMS_MessageCount (SMSMSGCNT) parameter is used to indicate the number of SMS messages pending delivery.

Field	Value	Type	Reference	Notes					
Identifier	SMS_MessageCount IMPLICIT OCTET STRING	O	see Part 550						
Length	variable octets	O	see Part 550						
Contents									
H	G	F	E	D	C	B	A	Octet	Notes
SMS Message Count								1	a
•••								n	b

Notes:

- a. A value of 0 (zero) indicates there are no more pending SMS messages.
- b. Ignore extra octet, if received. Send only defined (or significant) octets.

2.248 SMS_MessageWaitingIndicator

The SMS_MessageWaitingIndicator (SMSMWI) parameter prompts the Serving MSC and the HLR to be prepared to launch an SMSNotification, when the MS (in the case of an MS-based recipient SME) becomes available.

Field	Value	Type	Reference	Notes
Identifier	SMS_MessageWaitingIndicator IMPLICIT NULL	M	see Part 550	
Length	zero octets	M	see Part 550	
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2.249 SMS_NotificationIndicator

The SMS_NotificationIndicator (SMSNOTIND) parameter is used to control the sending of subsequent SMSNotification messages.

Field	Value	Type	Reference	Notes					
Identifier	SMS_NotificationIndicator IMPLICIT OCTET STRING	M	see Part 550						
Length	variable octets	M	see Part 550						
Contents									
H	G	F	E	D	C	B	A	Octet	Notes
SMS Notification Indicator								1	
•••								n	a

Notes:

- a. Ignore extra octet, if received. Send only defined (or significant) octets.

<i>SMS_NotificationIndicator (octet 1)</i>	
Value	Meaning
0	Not used.
1	Notify when available. If the indicated subscriber is not currently available, notify sender when MS becomes available.
2	Do not notify when available. If the indicated subscriber is not currently available, do NOT specify sender when MS becomes available.
3 through 127	Reserved. Treat the same as value 1, <i>Notify when available</i> .
128 through 223	Reserved. Treat the same as value 2, <i>Do not notify when available</i> .
224 through 255	Reserved for <i>MAP</i> protocol extension. If unknown, treat the same as value 1, <i>Notify when available</i> .

2.250 SMS_OriginalDestinationAddress

The SMS_OriginalDestinationAddress parameter is the address of the original message destination. In the case of an MS-terminated short message, this is the address of the destination MS-based SME.

2.250.1 SMS_OriginalDestinationAddress parameter for BCD Digits

Field	Value	Type	Reference	Notes					
Identifier	SMS_OriginalDestinationAddress IMPLICIT DigitsType	M	see Part 550	a					
Length	variable octets	M	see Part 550						
Contents									
H	G	F	E	D	C	B	A	Octet	Notes
Type of Digits								1	b
Nature of Number								2	c
Numbering Plan				Encoding				3	d, e
Number of Digits								4	f
2 nd BCD Digit				1 st BCD Digit				5	
4 th BCD Digit				3 rd BCD Digit				6	
...				
n th BCD Digit				n-1 st BCD Digit				m	

Notes:

- a. Refer to the DigitsType parameter type see [Part 551 Section 1.2](#) for notes and field encoding.
- b. Type of Digits is ignored on receipt.
- c. Nature of Number may be *National* or *International*.
- d. Numbering Plan supported shall include *E.164*, *X.121*, and Private numbering plan for this parameter variant.
- e. The Encoding field shall always be set to *BCD* for this parameter variant.
- f. The Number of Digits ranges from 0 to at least 15.

2.250.2 SMS_OriginalDestinationAddress parameter for IA5 Digits

Field	Value	Type	Reference	Notes					
Identifier	SMS_OriginalDestinationAddress IMPLICIT DigitsType	M	see Part 550	a					
Length	variable octets	M	see Part 550						
Contents									
H	G	F	E	D	C	B	A	Octet	Notes
Type of Digits								1	b
Nature of Number								2	c
Numbering Plan				Encoding				3	d, e
Number of Digits								4	f
1 st IA5 Character								5	
2 nd IA5 Character								6	
• • •								• • •	
Last IA5 Character								n	

Notes:

- a. Refer to the DigitsType parameter type see [Part 551 Section 1.2](#) for notes and field encoding.
- b. The Type of Digits is ignored on receipt.
- c. The Nature of Number may be *National* or *International*.
- d. The Numbering Plan shall be *IP* for this parameter variant.
- e. The Encoding field is set to *IA5* for this parameter variant.
- f. The Number of Digits ranges from 0 to 129.

2.250.3 SMS_OriginalDestinationAddress parameter for an IP Address

Field	Value	Type	Reference	Notes					
Identifier	SMS_OriginalDestinationAddress IMPLICIT DigitsType	M	see Part 550	a					
Length	variable octets	M	see Part 550						
Contents									
H	G	F	E	D	C	B	A	Octet	Notes
Type of Digits								1	b
Nature of Number								2	c
Numbering Plan				Encoding				3	d, e
MSB IP Address LSB								4	
								5	
								6	
								7	

Notes:

- a. Refer to the DigitsType parameter type see [Part 551 Section 1.2](#) for notes and field encoding.
- b. Type of Digits is ignored on receipt.
- c. Nature of Number may be *National* or *International*.
- d. Numbering Plan shall be *IP* for this parameter variant.
- e. Encoding shall be *octet string* for this parameter variant.

2.251 SMS_OriginalDestinationSubaddress

The SMS_OriginalDestinationSubaddress parameter is the subaddress of the original message destination.

Field	Value	Type	Reference	Notes					
Identifier	SMS_OriginalDestination-Subaddress IMPLICIT Subaddress	M	see Part 550	a					
Length	variable octets	M	see Part 550						
Contents									
H	G	F	E	D	C	B	A	Octet	Notes
1	Type of Subaddress			O/E	Reserved			1	a
Subaddress								2	a
								•••	
								n	

Notes:

- a. Refer to the Subaddress parameter type see [Part 551 Section 1.15](#) for notes and field encoding.

2.252 SMS_OriginalOriginatingAddress

The SMS_OriginalOriginatingAddress parameter is the address of the original message sender. In the case of an MS-originated short message, this is the address of the initiating MS-based SME.

2.252.1 SMS_OriginalOriginatingAddress for BCD Digits.

Field	Value	Type	Reference	Notes					
Identifier	SMS_OriginalOriginatingAddress IMPLICIT DigitsType	M	see Part 550	a					
Length	variable octets	M	see Part 550						
Contents									
H	G	F	E	D	C	B	A	Octet	Notes
Type of Digits								1	b
Nature of Number								2	c
Numbering Plan				Encoding				3	d, e
Number of Digits								4	f
2 nd BCD Digit				1 st BCD Digit				5	
4 th BCD Digit				3 rd BCD Digit				6	
...				
n th BCD Digit				n-1 st BCD Digit				m	

Notes:

- a. Refer to the DigitsType parameter type [Part 551 Section 1.2](#) for notes and field encoding.
- b. Type of Digits is ignored on receipt.
- c. Nature of Number may be *National* or *International*.
- d. Numbering Plan supported shall include *E.164*, *X.121*, and Private numbering plan for this parameter variant.
- e. The Encoding field shall always be set to *BCD* for this parameter variant.
- f. The Number of Digits ranges from 0 to at least 15.

2.252.2 SMS_OriginalOriginatingAddress parameter for IA5 Digits

Field	Value	Type	Reference	Notes					
Identifier	SMS_OriginalOriginatingAddress IMPLICIT DigitsType	M	see Part 550	a					
Length	variable octets	M	see Part 550						
Contents									
H	G	F	E	D	C	B	A	Octet	Notes
Type of Digits								1	b
Nature of Number								2	c
Numbering Plan				Encoding				3	d, e
Number of Digits								4	f
1 st IA5 Character								5	
2 nd IA5 Character								6	
• • •								• • •	
Last IA5 Character								m	

Notes:

- a. Refer to the DigitsType parameter type see [Part 551 Section 1.2](#) for notes and field encoding.
- b. The Type of Digits is ignored on receipt.
- c. The Nature of Number may be *National* or *International*.
- d. The Numbering Plan shall be *IP* for this parameter variant.
- e. The Encoding field is set to *IA5* for this parameter variant.
- f. The Number of Digits ranges from 0 to 129.

2.252.3 SMS_OriginalOriginatingAddress parameter for an IP Address

Field	Value	Type	Reference	Notes					
Identifier	SMS_OriginalOriginatingAddress IMPLICIT DigitsType	M	see Part 550	a					
Length	variable octets	M	see Part 550						
Contents									
H	G	F	E	D	C	B	A	Octet	Notes
Type of Digits								1	b
Nature of Number								2	c
Numbering Plan				Encoding				3	d, e
MSB IP Address LSB								4	
								5	
								6	
								7	

Notes:

- a. Refer to the DigitsType parameter type see [Part 551 Section 1.2](#) for notes and field encoding.
- b. Type of Digits is ignored on receipt.
- c. Nature of Number may be *National* or *International*.
- d. Numbering Plan shall be *IP* for this parameter variant.
- e. Encoding shall be *octet string* for this parameter variant.

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2.253 SMS_OriginalOriginatingSubaddress

The SMS_OriginalOriginatingSubaddress parameter is the subaddress of the original message sender.

Field	Value	Type	Reference	Notes					
Identifier	SMS_OriginalOriginating-Subaddress IMPLICIT Subaddress	M	see Part 550	a					
Length	variable octets	M	see Part 550						
Contents									
H	G	F	E	D	C	B	A	Octet	Notes
1	Type of Subaddress			O/E	Reserved			1	a
Subaddress								2	a
								•••	
								n	

Notes:

- a. Refer to the Subaddress parameter type see [Part 551 Section 1.15](#) for the definition of these fields.

2.254 SMS_OriginatingAddress

The SMS_OriginatingAddress parameter is used to convey the current routing address of an MS based SME. This is normally the address of the FE from which the MAP message containing this parameter was initiated.

2.254.1 SMS_OriginatingAddress parameter for BCD Digits

Field	Value	Type	Reference	Notes					
Identifier	SMS_OriginatingAddress IMPLICIT DigitsType	M	see Part 550	a					
Length	variable octets	M	see Part 550						
Contents									
H	G	F	E	D	C	B	A	Octet	Notes
Type of Digits								1	b
Nature of Number								2	c
Numbering Plan				Encoding				3	d, e
Number of Digits								4	f
2 nd BCD Digit				1 st BCD Digit				5	
4 th BCD Digit				3 rd BCD Digit				6	
...				
n th BCD Digit				n-1 st BCD Digit				m	

Notes:

- a. Refer to the DigitsType parameter type see [Part 551 Section 1.2](#) for notes and field encoding.
- b. Type of Digits is ignored on receipt.
- c. Nature of Number may be *National* or *International*.
- d. Numbering Plan supported shall include *E.164*, *X.121*, and Private numbering plan for this parameter variant.
- e. The Encoding field shall always be set to *BCD* for this parameter variant.
- f. The Number of Digits ranges from 0 to at least 15.

2.254.2 SMS_OriginalOriginatingAddress parameter for an IP Address

Field	Value	Type	Reference	Notes					
Identifier	SMS_OriginatingAddress IMPLICIT DigitsType	M	see Part 550	a					
Length	variable octets	M	see Part 550						
Contents									
H	G	F	E	D	C	B	A	Octet	Notes
Type of Digits								1	b
Nature of Number								2	c
Numbering Plan				Encoding				3	d, e
MSB IP Address LSB								4	
								5	
								6	
								7	

Notes:

- a. Refer to the DigitsType parameter type see [Part 551 Section 1.2](#) for notes and field encoding.
- b. Type of Digits is ignored on receipt.
- c. Nature of Number may be *National* or *International*.
- d. Numbering Plan shall be *IP* for this parameter variant.
- e. Encoding shall be *octet string* for this parameter variant.

2.255 SMS_OriginationRestrictions

The SMS_OriginationRestrictions parameter defines the type of messages the MS is allowed to originate.

Field	Value	Type	Reference	Notes					
Identifier	SMS_OriginationRestrictions IMPLICIT OCTET STRING	M	see Part 550						
Length	variable octets	M	see Part 550						
Contents									
H	G	F	E	D	C	B	A	Octet	Notes
Reserved				FMC	RSVD	DEFAULT		1	a
•••								n	b

Notes:

- a. Reserved bits shall be ignored on receipt and set to zero on sending
- b. Ignore extra octet, if received. Send only defined (or significant) octets.

<i>DEFAULT (octet 1, bits A and B)</i>	
Value	Meaning
0	Block all. Block all message originations regardless of more specific settings. (i.e. the value of the FMC field).
1	Reserved.
2	Allow specific. Allow all message originations unless otherwise blocked or directed as indicated by the value of the FMC field.
3	Allow all. Allow all message originations regardless of more specific settings. (i.e. the value of the FMC field).
<i>Force Message Center (FMC) (octet 1, bit D)</i>	
Value	Meaning
0	Do Not Force Indirect. Route message originations per visited MSC operator policy.
1	Force Indirect. Force message originations to use indirect routing through the originating subscriber's Message Center.

2.256 SMS_TeleserviceIdentifier

The SMS_TeleserviceIdentifier (SMSTID) parameter indicates the teleservice for which the SMS message applies.

Field	Value	Type	Reference	Notes					
Identifier	SMS_TeleserviceIdentifier IMPLICIT OCTET STRING	M	see Part 550						
Length	variable octets	M	see Part 550						
Contents									
H	G	F	E	D	C	B	A	Octet	Notes
MSB								1	
SMS Teleservice Identifier								2	
LSB								n	a
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Notes:

- a. Ignore extra octets, if received. Send only defined (or significant) octets.

<i>SMS Teleservice Identifier (octets 1 and 2)</i>	
Value	Meaning
0	Not used.
1	Reserved for maintenance.
2 through 4095	Reserved for assignment by <i>MAP</i> .
4096	AMPS Extended Protocol Enhanced Services.
4097	CDMA Cellular Paging Teleservice.
4098	CDMA Cellular Messaging Teleservices.
4099	CDMA Voice Mail Notification.
4100	CDMA Wireless Application Protocol (WAP).
4101	CDMA Wireless Enhanced Messaging Teleservice (WEMT).
4102	CDMA Service Category Programming Teleservice (SCPT).
4103	CDMA Card Application Toolkit Protocol Teleservice (CATPT).
4104 through 4113	Reserved for GSM1x Teleservice (CDMA).
4114	CDMA IP-Based Location Service [<i>CDMA</i>].(see note a, b)
4115	OMA Secure User Plane Location [<i>CDMA</i>].(see note a, b)
4116	Device Management Notification (CDMA) (see note a, b)
4117 through 4241	Reserved for Push Teleservices (see note a, b)

<i>SMS Teleservice Identifier (octets 1 and 2)</i>	
Value	Meaning
4242	IMS Services Teleservice (IMSST).
4243 through 32512	Reserved for assignments by <i>MAP</i> .
32513	TDMA Cellular Messaging Teleservice.
32514	TDMA Cellular Paging Teleservice (CPT-136).
32515	TDMA Over-the-Air Activation Teleservice (OATS).
32516	TDMA Over-the-Air Programming Teleservice (OPTS).
32517	TDMA General UDP Transport Service (GUTS).
32518	TDMA Charge Indication Teleservice (CIT).
32519	TDMA GSM Hosted SMS Teleservice (GHOST).
32520	TDMA System Assisted Mobile Positioning through Satellite (SAMPS).
32521 through 32575	Reserved for assignment by this Standard for TDMA MS-based SMEs.
32576	Reserved.
32577	TDMA Segmented Cellular Messaging Teleservice.
32578	TDMA Segmented Cellular Paging Teleservice.
32579	TDMA Segmented Over-the-Air Activation Teleservice (OATS).
32580	TDMA Segmented Over-the-Air Programming Teleservice (OPTS).
32581	TDMA Segmented General UDP Transport Service (GUTS).
32582	TDMA Segmented Charge Indication Teleservice (CIT).
32583	TDMA Segmented GSM Hosted SMS Teleservice (GHOST).

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<i>SMS Teleservice Identifier (octets 1 and 2)</i>	
Value	Meaning
32584	TDMA Segmented System Assisted Mobile Positioning through Satellite (SAMPS).
32585 through 32639	Reserved for assignment by this Standard for Segmented teleservices for TDMA MS-based SMEs.
32640 through 32703	Reserved for carrier specific teleservices for TDMA MS-based SMEs. These teleservices may be assigned by carriers. No mechanism is defined for resolving conflicts between individual carriers. Originating supplementary services may be supported only with bilateral agreements.
32704 through 32767	Reserved for segmented carrier specific teleservices for TDMA MS-based SMEs. These teleservices may be assigned by carriers. No mechanism is defined for resolving conflicts between individual carriers. Originating supplementary services may be supported only with bilateral agreements.
32768 through 49151	Reserved for node specific teleservices. These teleservices may be assigned freely by any node operator. Use of these identifiers must be negotiated between the message originator and destination. Only supplementary services not requiring teleservice parameters may be supported.
49152 through 65535	Reserved for carrier specific teleservices. These teleservices may be assigned by carriers. No mechanism is defined for resolving conflicts between individual carriers. Originating supplementary services may be supported only with bilateral agreements.

Notes:

- a. Initiation of a Push Teleservice by an MS-based SME should be barred. Push Teleservices may be routed and prioritized differently than other types of Teleservices.
- b. SMS_Teleservice Identifier values 4114 through 4241 are allocated for Push Teleservices.

2.257 SMS_TerminationRestrictions

The SMS_TerminationRestrictions (SMSTERMREST) parameter defines the type of messages the MS is allowed to receive.

The default value for this parameter (when it is not included) is to assume that the DEFAULT field is set to "Allow specific" and the Reverse Charges (RC) field is set to "Block message terminations charged to the destination".

Field	Value	Type	Reference	Notes					
Identifier	SMS_TerminationRestrictions IMPLICIT OCTET STRING	M	see Part 550						
Length	variable octets	M	see Part 550						
Contents									
H	G	F	E	D	C	B	A	Octet	Notes
Reserved					RC	DEFAULT		1	a
•••									b

Notes:

- a. Reserved bits shall be ignored on receipt and set to zero on sending.
- b. Ignore extra octets, if received. Send only defined (or significant) octets.

<i>DEFAULT (octet 1, bits A and B)</i>	
Value	Meaning
0	Block all. Block all message terminations regardless of more specific settings.
1	Reserved.
2	Allow specific. Allow message terminations specifically allowed.
3	Allow all. Allow message terminations regardless of more specific settings.
<i>Reverse Charges (RC) (octet 1, bit C)</i>	
Value	Meaning
0	Block message terminations charged to the destination.
1	Allow message terminations charged to the destination.

2.258 SMS_TransactionID

The SMSTransactionID (SMS_TID) parameter identifies an MS based SME originating message transaction identifier.

Field	Value	Type	Reference	Notes					
Identifier	SMS_TransactionIID IMPLICIT OCTET STRING	M	see Part 550						
Length	variable octets	M	see Part 550						
Contents									
H	G	F	E	D	C	B	A	Octet	Notes
SMS Transaction Identifier								1	a
• • •								n	b

Notes:

- a. See the relevant air interface for encoding of this field (e.g., *CDMA*, *TDMA*).
- b. Ignore extra octets, if received. Send only defined (or significant) octets.

2.259 SpecialHandling

The presence of the SpecialHandling (SHH) parameter indicates that a call requires special handling (e.g., an emergency call, requiring reconnect upon abnormal disconnect).

Field	Value	Type	Reference	Notes					
Identifier	SpecialHandling IMPLICIT OCTET STRING	M	see Part 550						
Length	variable octets	M	see Part 550						
Contents									
H	G	F	E	D	C	B	A	Octet	Notes
Reserved							ES	1	a
...								n	b

Notes:

- a. Reserved bits shall be ignored on receipt and set to zero on sending.
- b. Ignore extra octets, if received. Send only defined (or significant) octets.

<i>ES (octet 1, bit A)</i>	
Value	Meaning
0	Emergency Service Procedures should not be used.
1	Emergency Service procedures, including automatic reconnect upon loss of radio contact, should be used.

2.260 SpecializedResource

The SpecializedResource parameter indicates the particular type of specialized resource requested at a given SRF.

Note: Proprietary specialized resources are indicated by the PrivateSpecializedResource parameter.

Field	Value	Type	Reference	Notes					
Identifier	SpecializedResource IMPLICIT OCTET STRING	M	see Part 550						
Length	variable octets	M	see Part 550						
Contents									
H	G	F	E	D	C	B	A	Octet	Notes
Resource Type								1	a
Resource Type								2	b
•••								•••	

Notes:

- a. At least one Resource Type must be included.
- b. Include as many specialized resources as appropriate.

<i>Resource Type (octet 1)</i>	
Value	Meaning
0	Not used.
1	DTMF tone detector.
2	Automatic Speech Recognition – Speaker Independent – Digits.
3	Automatic Speech Recognition - Speaker Independent - Speech User Interface Version 1 (refer to <i>MAP-201</i>).
4 through 223	Reserved. If unknown, treat the same as value 0, <i>Not used</i> .
224 through 255	Reserved for <i>MAP</i> protocol extension. If unknown, treat the same as value 0, <i>Not used</i> .

2.261 SPINIPIN

The SPINIPIN parameter contains the personal identification number (PIN) for the designated subscriber. The PIN may be required on origination of certain types of calls.

Field	Value	Type	Reference	Notes					
Identifier	SPINIPIN IMPLICIT DigitsType	M	see Part 550	a					
Length	variable octets	M	see Part 550						
Contents									
H	G	F	E	D	C	B	A	Octet	Notes
Type of Digits								1	b
Nature of Number								2	c
Numbering Plan				Encoding				3	d, e
Number of Digits								4	f
2 nd Digit				1 st Digit				5	
4 th Digit				3 rd Digit				6	
...				
n th Digit				n-1 st Digit				m	

Note:

- a. Refer to the DigitsType parameter type see [Part 551 Section 1.2](#) for notes and field encoding.
- b. The Type of Digits field is ignored on receipt.
- c. The Nature of Number field is ignored on receipt.
- d. The Numbering Plan field is ignored on receipt.
- e. The Encoding field is set to *BCD*.
- f. The Number of Digits is between 0 and at least 15.

2.262 SPINITriggers

The SPINITriggers parameter defines the trigger points that are currently active for the subscriber.

Field	Value	Type	Reference	Notes					
Identifier	SPINITriggers IMPLICIT DigitsType	M	see Part 550	a					
Length	variable octets	M	see Part 550						
Contents									
H	G	F	E	D	C	B	A	Octet	Notes
RvtC	Unrec	WZ	Int'l	NLTOLL	LTOLL	Local	All	1	
Reserved			PA	DP	Pound	DS	Star	2	a
7 digits	6 digits	5 digits	4 digits	3 digits	2 digits	1 digit	No digits	3	
15 digits	14 digits	13 digits	12 digits	11 digits	10 digits	9 digits	8 digits	4	
• • •								n	b

Notes:

- a. Set reserved values to 0 when sending, and process other triggers before treating received reserved values the same as *All*.
- b. If unknown octets with bits set are received, process other triggers before treating the same as *All*. Send only defined (or significant) octets.

<i>All Origination (All) (octet 1, bit A)</i>	
Value	Meaning
0	Trigger is not active.
1	Execute local SPINI procedures for any call origination. This overrides all other values.
<i>Local (octet 1; bits B)</i>	
Decimal	Meaning
0	Trigger is not active.
1	Execute local SPINI procedures for any local call attempt.
<i>Local Toll (LTOLL) (octet 1; bit C)</i>	
Value	Meaning
0	Trigger is not active.
1	Execute local SPINI procedures for any local toll call attempt. Within the US refers to intraLATA toll.

<i>Non-Local Toll (NLTOLL) (octet 1; bit D)</i>	
Value	Meaning
0	Trigger is not active.
1	Execute local SPINI procedures for any toll calls outside the local carrier's serving area. Refers to interLATA toll within the US.
<i>International (Int'l) (octet 1; bit E)</i>	
Value	Meaning
0	Trigger is not active.
1	Execute local SPINI procedures for any international call attempt. Within the US refers to intraLATA toll.
<i>World Zone (WZ) (octet 1; bit F)</i>	
Value	Meaning
0	Trigger is not active.
1	Execute local SPINI procedures for any call attempt outside of the current World Zone. This value is not recommended for use.
<i>Unrecognized Number (Unrec) (octet 1; bit G)</i>	
Value	Meaning
0	Trigger is not active.
1	Execute local SPINI procedures for any call attempt to an unrecognized number.
<i>Revertive Call (RvtC) (octet 1; bit H)</i>	
Value	Meaning
0	Trigger is not active.
1	Execute local SPINI procedures for any Revertive Call attempt.
<i>Star (octet 2; bit A)</i>	
Value	Meaning
0	Trigger is not active.
1	Execute local SPINI procedures for any number beginning with a Star '*' digit.

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<i>Double Star (DS) (octet 2; bit B)</i>	
Value	Meaning
0	Trigger is not active.
1	Execute local SPINI procedures for any number beginning with two Star '**' digits.
<i>Pound (octet 2; bit C)</i>	
Value	Meaning
0	Trigger is not active.
1	Execute local SPINI procedures for any number beginning with a Pound '#' digit.
<i>Double Pound (DP) (octet 2; bit D)</i>	
Value	Meaning
0	Trigger is not active.
1	Execute local SPINI procedures for any number beginning with two Pound '##' digits.
<i>Prior Agreement (PA) (octet 2; bit E)</i>	
Value	Meaning
0	Trigger is not active.
1	Execute local SPINI procedures for any number matching a criteria of a prior agreement.
<i>No digits (octet 3; bit A)</i>	
Value	Meaning
0	Trigger is not active.
1	Execute local SPINI procedures for any call attempt with no digits.
<i>1 digit (octet 3; bit B)</i>	
Value	Meaning
0	Trigger is not active.
1	Execute local SPINI procedures for any call attempt with 1 digit.
<i>2 digits (octet 3; bit C)</i>	
Value	Meaning
0	Trigger is not active.
1	Execute local SPINI procedures for any call attempt with 2 digits.

<i>3 digits (octet 3; bit D)</i>	
Value	Meaning
0	Trigger is not active.
1	Execute local SPINI procedures for any call attempt with 3 digits.
<i>4 digits (octet 3; bit E)</i>	
Value	Meaning
0	Trigger is not active.
1	Execute local SPINI procedures for any call attempt with 4 digits.
<i>5 digits (octet 3; bit F)</i>	
Value	Meaning
0	Trigger is not active.
1	Execute local SPINI procedures for any call attempt with 5 digits.
<i>6 digits (octet 3; bit G)</i>	
Value	Meaning
0	Trigger is not active.
1	Execute local SPINI procedures for any call attempt with 6 digits.
<i>7 digits (octet 3; bit H)</i>	
Value	Meaning
0	Trigger is not active.
1	Execute local SPINI procedures for any call attempt with 7 digits.
<i>8 digits (octet 4; bit A)</i>	
Value	Meaning
0	Trigger is not active.
1	Execute local SPINI procedures for any call attempt with 8 digits.
<i>9 digits (octet 4; bit B)</i>	
Value	Meaning
0	Trigger is not active.
1	Execute local SPINI procedures for any call attempt with 9 digits.

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<i>10 digits (octet 4; bit C)</i>	
Value	Meaning
0	Trigger is not active.
1	Execute local SPINI procedures for any call attempt with 10 digits.
<i>11 digits (octet 4; bit D)</i>	
Value	Meaning
0	Trigger is not active.
1	Execute local SPINI procedures for any call attempt with 11 digits.
<i>12 digits (octet 4; bit E)</i>	
Value	Meaning
0	Trigger is not active.
1	Execute local SPINI procedures for any call attempt with 12 digits.
<i>13 digits (octet 4; bit F)</i>	
Value	Meaning
0	Trigger is not active.
1	Execute local SPINI procedures for any call attempt with 13 digits.
<i>14 digits (octet 4; bit G)</i>	
Value	Meaning
0	Trigger is not active.
1	Execute local SPINI procedures for any call attempt with 14 digits.
<i>15 digits (octet 4; bit H)</i>	
Value	Meaning
0	Trigger is not active.
1	Execute local SPINI procedures for any call attempt with 15 or more digits.

2.263 SSDNotShared

The SSDNotShared (NOSSD) parameter is used by the home system to indicate that the previously provided SSD is no longer valid.

Field	Value	Type	Reference	Notes					
Identifier	SSDNotShared IMPLICIT OCTET STRING	M	see Part 550						
Length	1 octet	M	see Part 550						
Contents									
H	G	F	E	D	C	B	A	Octet	Notes
SSD Not Shared								1	a

<i>SSD Not Shared (octet 1)</i>	
Value	Meaning
0	Not used.
1	Discard SSD.
2 through 255	Reserved. Treat the same as value 1, <i>Discard SSD</i> .

2.264 SSDUpdateReport

The SSDUpdateReport (SSDURPT) parameter indicates the outcome of the SSD Update initiated by the AC.

Field	Value	Type	Reference	Notes					
Identifier	SSDUpdateReport IMPLICIT OCTET STRING	M	see Part 550						
Length	variable octets	M	see Part 550						
Contents									
H	G	F	E	D	C	B	A	Octet	Notes
SSD Update Report								1	
• • •								n	a

Notes:

- a. Ignore extra octets, if received. Send only defined (or significant) octets.

<i>SSD Update Report (octet 1)</i>	
Value	Meaning
0	Not used.
1	SSD Update not attempted.
2	SSD Update no response.
3	SSD Update successful.
4	SSD Update failed.
5 through 223	Reserved. Treat the same as value 1, <i>SSD Update not attempted</i> .
224 through 255	Reserved for <i>MAP</i> protocol extension. If unknown, treat the same as value 1, <i>SSD Update not attempted</i> .

2.265 StationClassMark

The StationClassMark (SCM) parameter is used to indicate the power class and station type of the subscriber unit. This is used in accordance with the *AMPS* and *TDMA* air interface standards.

Field	Value	Type	Reference	Notes					
Identifier	StationClassMark IMPLICIT OCTET STRING	M	see Part 550						
Length	1 octet	M	see Part 550						
Contents									
H	G	F	E	D	C	B	A	Octet	Notes
Reserved			PC	BW	TX	PC	PC	1	a

Notes:

- a. Reserved bits shall be ignored on receipt and set to zero on sending.

<i>Power Class (PC)(octet 1, bit A)</i>	
Value	Meaning
0	Class I
1	Class II
2	Class III
3	Class IV
4	Class V
5	Class VI
6	Class VII
7	Class VIII
<i>Transmission (TX) (octet 1, bit C)</i>	
Value	Meaning
0	Continuous.
1	Discontinuous.
<i>Bandwidth (BW) (octet 1, bit D)</i>	
Value	Meaning
0	20MHz.
1	25MHz.

2.266 SuspiciousAccess

The SuspiciousAccess (SUSACC) parameter indicates the received dialed digits are anomalous or that an access is possibly fraudulent.

Field	Value	Type	Reference	Notes					
Identifier	SuspiciousAccess IMPLICIT Unsigned Enumerated	M	see Part 550						
Length	1 octet	M	see Part 550						
Contents									
H	G	F	E	D	C	B	A	Octet	Notes
SuspiciousAccess								1	

<i>Suspicious Access (octet 1)</i>	
Value	Meaning
0	Not used.
1	Anomalous Digits (the dialed digits may contain extraneous digits).
2	Unspecified (access regarded as suspicious for a reason other than the receipt of extraneous dialed digits).
3 through 113	Reserved. Treat the same as value 1, <i>Anomalous Digits</i> .
114 through 223	Reserved. Treat the same as value 2, <i>Unspecified</i> .
224 through 255	Reserved for <i>TIA-41</i> protocol extension. If unknown, treat the same as value 2, <i>Unspecified</i> .

2.267 SystemAccessData

The SystemAccessData (SYSACCDATA) parameter is used to indicate the Serving MSC and cell site to the HLR or VLR so that the multiple access detection algorithm can identify the specific MSCs and cell sites which were simultaneously accessed by the MS. The "serving" system is considered to be the system which is known to have reported the best SignalQuality at the time that this parameter is encoded.

Field	Value	Type	Reference	Notes					
Identifier	SystemAccessData IMPLICIT OCTET STRING	M	see Part 550						
Length	5 octets	M	see Part 550						
Contents									
H	G	F	E	D	C	B	A	Octet	Notes
MSB Serving MarketID LSB								1	a
								2	
Serving Switch Number								3	a
MSB Serving Cell ID LSB								4	
								5	

Notes:

- a. Refer to the MSCID parameter (see 2.161) for the definition of these fields.

2.268 SystemAccessType

The SystemAccessType (SYSACCTYPE) parameter defines the type of system access made by the MS.

Field	Value	Type	Reference	Notes					
Identifier	SystemAccessType IMPLICIT Unsigned Enumerated	M	see Part 550						
Length	1 octet	M	see Part 550						
Contents									
H	G	F	E	D	C	B	A	Octet	Notes
SystemAccessType								1	

<i>SystemAccessType(octet 1)</i>	
Value	Meaning
0	Not used.
1	Unspecified.
2	Flash request.
3	Autonomous registration.
4	Call origination.
5	Page response.
6	No access. Used when the authentication procedure was initiated at the control channel.
7	Power down registration.
8	SMS page response.
9	OTASP.
10	Packet Data Channel Access. Applicable to <i>TIA/EIA-136</i> MS's only.
11	TDMA SMS Origination.
12 through 223	Reserved. Treat the same as value 1, <i>Unspecified</i> .
224 through 255	Reserved for <i>MAP</i> protocol extension. If unknown, treat the same as value 1, <i>Unspecified</i> .

2.269 SystemCapabilities

The SystemCapabilities (SYSCAP) parameter defines the capabilities of the serving system, especially regarding authentication. For example, when allowed by local AC administrative policies, it provides an AC with the option to send a subscriber's SSD to a VLR capable of executing CAVE, thereby off-loading the AC and reducing the number of intersystem transactions. It also allows the response from the AC to be customized to the capabilities of the serving system, eliminating the transmission of unnecessary, and often lengthy, data.

Field	Value	Type	Reference	Notes					
Identifier	SystemCapabilities IMPLICIT OCTET STRING	M	see Part 550						
Length	1 octet	M	see Part 550						
Contents									
H	G	F	E	D	C	B	A	Octet	Notes
Rsvd	T-EPE	DP	SSD	CAVE	VP	SE	AUTH	1	a

Notes:

- a. Reserved bits shall be ignored on receipt and set to zero on sending.

<i>Authentication Parameters Requested (AUTH) (octet 1, bit A)</i>	
Value	Meaning
0	Authentication parameters were not requested on this system access (AUTH=0 in the OMT).
1	Authentication parameters were requested on this system access (AUTH=1 in the OMT).
<i>Signaling Message Encryption Capable (SE) (octet 1, bit B)</i>	
Value	Meaning
0	Signaling Message Encryption not supported by the system.
1	Signaling Message Encryption is supported by the system.
<i>Voice Privacy Capable (VP) (octet 1, bit C)</i>	
Value	Meaning
0	Voice Privacy not supported by the system
1	Voice Privacy is supported by the system.
<i>CAVE Algorithm Capable (CAVE) (octet 1, bit D)</i>	
Value	Meaning
0	System cannot execute the CAVE algorithm and cannot share SSD for the indicated MS.
1	System can execute the CAVE algorithm and share SSD for the indicated MS.

<i>Share SSD (SSD) (octet 1, bit E)</i>	
Value	Meaning
0	SSD is not shared with the system for the indicated MS.
1	SSD is shared with the system for the indicated MS.
<i>Data Privacy (DP) (octet 1, bit F)</i>	
Value	Meaning
0	DP is not supported by the system.
1	DP is supported by the system.
<i>TDMA Enhanced Privacy and Encryption (T-EPE) (octet 1, bit G)</i>	
Value	Meaning
0	TDMA EPE is not supported by the system.
1	TDMA EPE is supported by the system.

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2.270 SystemMyTypeCode

The SystemMyTypeCode (MYTYP) parameter indicates the vendor of a system.

Field	Value	Type	Reference	Notes					
Identifier	SystemMyTypeCode IMPLICIT Unsigned Enumerated	M	see Part 550						
Length	1 octet	M	see Part 550						
Contents									
H	G	F	E	D	C	B	A	Octet	Notes
Vendor Identifier								1	a, b

Notes:

- a. SystemMyTypeCode identifiers may be obtained from the chairman of the TIA TR-45.2 Subcommittee through the TIA.
- b. The SystemMyTypeCode should be ignored unless the value is for the vendor's own system.

<i>Vendor Identifier (octet 1)</i>	
Value	Meaning
0	Not used.
1	EDS.
2	Astronet.
3	Lucent Technologies.
4	Ericsson.
5	GTE.
6	Motorola.
7	NEC.
8	NORTEL.
9	NovAtel.
10	Plexsys.
11	Digital Equipment Corp.
12	INET.
13	Bellcore.
14	Alcatel SEL.
15	Compaq.
16	QUALCOMM.
17	Aldiscon.
18	Celcore

<i>Vendor Identifier (octet 1)</i>	
Value	Meaning
19	TELOS.
20	ADI Limited.
21	Coral Systems.
22	Synacom Technology.
23	DSC.
24	MCI.
25	NewNet.
26	Sema Group Telecoms.
27	LG Information and Communications.
28	CBIS.
29	Siemens.
30	Samsung Electronics.
31	ReadyCom Inc.
32	AG Communication Systems.
33	Hughes Network Systems.
34	Phoenix Wireless Group.
35	Ulticom
36	Winphoria
37	Open Telecommunications
38	ipGEN
39	ZTE
40	Huawei Technologies
41	Santera Systems Inc.
42	Sonus Networks
<u>43</u>	<u>Interwave Communications Inc.</u>
<u>44</u>	<u>BridgePort Networks</u>
<u>45</u>	<u>Motivity</u>
<u>46</u>	<u>Tatara Systems Inc.</u>
<u>47 through 255</u>	<u>Reserved.</u>

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2.271 SystemOperatorCode

The SystemOperatorCode (SOC) parameter specifies the system operator that is currently providing service to a MS (see *TDMA* for enumeration of values).

Field	Value	Type	Reference	Notes					
Identifier	SystemOperatorCode IMPLICIT OCTET STRING	M	see Part 550						
Length	2 octets	M	see Part 550						
Contents									
H	G	F	E	D	C	B	A	Octet	Notes
MSB								1	
System Operator Code								LSB	

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2.272 SOCStatus

The SOCStatus (SOCS) parameter indicates whether the target environment after an intersystem handoff shall support the same system operator code (SOC) that is currently serving the MS.

Field	Value	Type	Reference	Notes					
Identifier	SOCStatus IMPLICIT OCTET STRING	M	see Part 550						
Length	1 octet	M	see Part 550						
Contents									
H	G	F	E	D	C	B	A	Octet	Notes
SOC Status								1	

<i>SOC Status (octet 1)</i>	
Value	Meaning
0	Same SOC Value shall not be supported.
1	Same SOC Value shall be supported.
2 through 255	Reserved. Treat a reserved value the same as value 0, <i>Same SOC Value shall not be supported.</i>

2.273 TargetCellID

The TargetCellID (TCELLID) parameter specifies the ID of the target cell site to be used in this transaction.

Field	Value	Type	Reference	Notes					
Identifier	TargetCellID IMPLICIT OCTET STRING	M	see Part 550						
Length	2 octets	M	see Part 550						
Contents									
H	G	F	E	D	C	B	A	Octet	Notes
MSB								1	
TargetCellID								LSB	

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2.274 TargetCellIDList

The TargetCellIDList (TCELLIDLIST) parameter specifies the IDs of cells to be used in the handoff measurement process.

Field	Value	Type	Reference	Notes
Identifier	TargetCellIDList IMPLICIT SEQUENCE OF	M	see Part 550	
Length	variable octets	M	see Part 550	
Contents				
	TargetCellID	M	2.273	
	TargetCellID	O	2.273	a
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Notes:

- a. Optionally include additional TargetCellID parameters.

2.275 TargetMeasurementInformation

The TargetMeasurementInformation (TMEAS) parameter specifies target cell information which is used in the handoff process.

Field	Value	Type	Reference	Notes
Identifier	TargetMeasurementInformation IMPLICIT SEQUENCE	M	see Part 550	
Length	variable octets	M	see Part 550	
Contents				
	TargetCellID	M	2.273	
	SignalQuality	M	2.240	
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Notes:

- a. Ignore unexpected parameters, if received. Send only defined (or significant) parameters.

2.276 TargetMeasurementList

The TargetMeasurementList (TMEASLIST) parameter specifies target cell information which is used in the handoff process.

Field	Value	Type	Reference	Notes
Identifier	TargetMeasurementList IMPLICIT SEQUENCE OF	M	see Part 550	
Length	variable octets	M	see Part 550	
Contents				
	TargetMeasurementInformation	M	2.275	
	TargetMeasurementInformation	O	2.275	a
	• • •			

Notes:

- a. Optionally include additional TargetMeasurementInformation parameters.

2.277 TDMABandwidth

The TDMABandwidth (TDMABW) parameter is used to indicate the requested digital traffic channel bandwidth for the call.

Field	Value	Type	Reference	Notes					
Identifier	TDMABandwidth IMPLICIT OCTET STRING	M	see Part 550						
Length	variable octets	M	see Part 550						
Contents									
H	G	F	E	D	C	B	A	Octet	Notes
Reserved				Bandwidth				1	a
				•••				n	b

Notes:

- a. Reserved bits shall be ignored on receipt and set to zero on sending.
- b. Ignore extra octets, if received. Send only defined (or significant) octets.

<i>TDMABandwidth (octet 1, bits A - D)</i>	
Value	Meaning
0	Half-Rate Digital Traffic Channel Only.
1	Full-Rate Digital Traffic Channel Only.
2	Half-Rate or Full-rate Digital Traffic Channel - Full-Rate Preferred.
3	Half-rate or Full-rate Digital Traffic Channel - Half-rate Preferred.
4	Double Full-Rate Digital Traffic Channel Only.
5	Triple Full-Rate Digital Traffic Channel Only.
6 through 15	Reserved. Treat reserved values the same as value 1, <i>Full-Rate Digital Traffic Channel Only</i> .

2.278 TDMABurstIndicator

The TDMABurstIndicator (TDMASBI) parameter indicates whether or not the MS is required to transmit shortened burst, after handoff, on the new digital traffic channel.

Field	Value	Type	Reference	Notes					
Identifier	TDMABurstIndicator IMPLICIT OCTET STRING	M	see Part 550						
Length	1 octet	M	see Part 550						
Contents									
H	G	F	E	D	C	B	A	Octet	Notes
Res'd	Time Alignment Offset (TA)					Burst Code		1	a, b

Notes:

- a. Reserved (Rsvd) bits shall be ignored on receipt and set to zero on sending.
- b. See *TDMA* for encoding of the Time Alignment Offset field.

<i>Burst Code (octet 1, bits A and B)</i>	
Value	Meaning
0	Transmit normal burst after cell-to-cell handoff.
1	Transmit normal burst after handoff within cell.
2	Transmit shortened burst after cell-to-cell handoff.
3	Reserved. Treat with a RETURN ERROR.

2.279 TDMACallMode

This parameter was named CallMode prior to *IS-41-C*.

The TDMACallMode (TDMAMODE) parameter is used to indicate the preferred mode in accordance with TDMA.

Field	Value	Type	Reference	Notes					
Identifier	TDMACallMode IMPLICIT OCTET STRING	M	see Part 550						
Length	1 octet	M	see Part 550						
Contents									
H	G	F	E	D	C	B	A	Octet	Notes
Reserved		Call Mode						1	a

Notes:

- a. Reserved bits shall be ignored on receipt and set to zero on sending.

<i>Call Mode (octet 1, bit A)</i>	
Value	Meaning
0	AMPS channel acceptable.
1	AMPS channel not acceptable.
<i>Call Mode (octet 1, bit B)</i>	
Value	Meaning
0	Full rate digital traffic channel (i.e., VSELP coding) not acceptable.
1	Full rate digital traffic channel (i.e., VSELP coding) acceptable.
<i>Call Mode (octet 1, bit C)</i>	
Value	Meaning
0	Half rate digital traffic channel not acceptable.
1	Half rate digital traffic channel acceptable.
<i>Call Mode (octet 1, bit D)</i>	
Value	Meaning
0	Other DQPSK channel not acceptable.
1	Other DQPSK channel acceptable.

<i>Call Mode (octet 1, bit E)</i>	
Value	Meaning
0	Other voice coding (e.g., <i>IS-641</i>) not acceptable.
1	Other voice coding (e.g., <i>IS-641</i>) acceptable.

<i>Call Mode (octet 1, bit F)</i>	
Value	Meaning
0	Extended modulation and framing not used.
1	Extended modulation and framing used.

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2.280 TDMAChannelData

This parameter was named DigitalChannelData prior to *IS-41-C*.

The TDMAChannelData (TDMADATA) parameter is used to indicate the Rate, the Digital Verification Color Code (DVCC), the Digital Mobile Attenuation Code (DMAC), and the Channel Number (CHNO) of a TDMA digital channel. Rate, DVCC, HyperBand, DMAC, and Channel Number are in accordance with *TDMA*.

If an optional TDMAChannelData parameter is received in a transaction with a mandatory ChannelData parameter and the ChannelData parameter length is greater than zero, respond with a RETURN ERROR indicating *ParameterError*.

Field	Value	Type	Reference	Notes					
Identifier	TDMAChannelData IMPLICIT OCTET STRING	M	see Part 550						
Length	5 octets	M	see Part 550						
Contents									
H	G	F	E	D	C	B	A	Octet	Notes
Reserved			TSR					1	a
DVCC								2	b
Hyperband				DMAC				3	b, c
MSB								4	b
Channel Number (CHNO)						LSB		5	

Notes:

- Reserved bits shall be ignored on receipt and set to zero on sending.
- See *TDMA* for encoding of these fields.
- DMAC indicates the current power level of the MS associated with the digital channel being reported.

<i>Time Slot and Rate indicator (TSR)(octet 1)</i>	
Value	Meaning
0	Analog (not used if ChannelData is present)
1	Assigned to timeslot 1 and 4, full rate.
2	Assigned to timeslot 2 and 5, full rate.
3	Assigned to timeslot 3 and 6, full rate.
4	Assigned to timeslots 1, 4 and 2, 5 double rate.
5	Assigned to timeslots 1, 4 and 3, 6 double rate.
6	Assigned to timeslots 2, 5 and 3, 6 double rate.

<i>Time Slot and Rate indicator (TSR)(octet 1)</i>	
Value	Meaning
9	Assigned to timeslot 1, half rate.
10	Assigned to timeslot 2, half rate.
11	Assigned to timeslot 3, half rate.
12	Assigned to timeslot 4, half rate.
13	Assigned to timeslot 5, half rate.
14	Assigned to timeslot 6, half rate.
15	Assigned to timeslot 1, 2, 3, 4, 5, 6 triple rate.
Other values	Reserved. Treat a reserved value the same as value 0, <i>Analog</i> .
<i>Hyperband (HBAND) (octet 3; bits E-H)</i>	
Value	Meaning
0	800 MHz.
1	1800 MHz.
2 through 15	Reserved. Treat the same as value 0, <i>800 MHz</i> .

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2.281 TDMADataFeaturesIndicator

The TDMADataFeaturesIndicator (TDMADFI) parameter defines the authorization and activity states of the MS's data calling features.

Field	Value	Type	Reference	Notes					
Identifier	TDMADataFeaturesIndicator IMPLICIT OCTET STRING	M	see Part 550						
Length	2 or more octets	M	see Part 550						
Contents									
H	G	F	E	D	C	B	A	Octet	Notes
Reserved		STUIII-FA		G3FAX-FA		ADS-FA		1	a, b
3RATE-FA		2RATE-FA		FRATE-FA		HRATE-FA		2	
• • •								n	c

Notes:

- a. Reserved bits shall be ignored on receipt and set to zero on sending.
- b. The identified 2-bit fields denote the FeatureActivity status for the designated feature, where the Feature Activity encoding is defined in the value table below, the definitions of these 2-bits field acronyms are:
 - ADS-FA = ADS FeatureActivity.
 - G3FAX-FA = G3 Fax FeatureActivity.
 - STUIII-FA = STU-III FeatureActivity.
 - HRATE-FA = Half Rate data FeatureActivity.
 - FRATE-FA = Full Rate data FeatureActivity.
 - 2RATE-FA = Double Rate data FeatureActivity.
 - 3RATE-FA = Triple Rate data FeatureActivity.
- c. Ignore extra octets, if received. Send only defined (or significant) octets.

TDMADataFeaturesIndicator (octet 1, bits E - F or bits C - D or bits A - B or octet 2, bits G - H or E - F or bits C - D or bits A - B)

Value	Meaning
0	Not Used.
1	Not Authorized.
2	Authorized, but de-activated.
3	Authorized and activated

2.282 TDMADataMode

The TDMADataMode (TDMADM) parameter is used to indicate the requested call data mode to the Anchor MSC.

Field	Value	Type	Reference	Notes					
Identifier	TDMA DataMode IMPLICIT OCTET STRING	M	see Part 550						
Length	2 or more octets	M	see Part 550						
Contents									
H	G	F	E	D	C	B	A	Octet	Notes
Data Part			AD	SAP	Data Privacy Mode			1	
Reserved				RLP		CRC		2	a
•••								n	b

Notes:

- a. Reserved bits shall be ignored on receipt and set to zero on sending
- b. Ignore extra octets, if received. Send only defined (or significant) octets.

<i>Data Privacy Mode (octet 1, bits A - C)</i>	
Value	Meaning
0	No Data Privacy.
1	Data Privacy Algorithm A.
2 through 7	Reserved. Treat reserved values the same as value 0, <i>No Data Privacy</i> .
<i>Service Access Point-SAP (octet 1, bit D)</i>	
Value	Meaning
0	Service Access Point 0 only.
1	Service Access Point 0 and 1.
<i>Acknowledged Data-AD (octet 1, bit E)</i>	
Value	Meaning
0	Acknowledged Data, unacked data or both.
1	Unacknowledged data only.

<i>Data Part (octet 1, bits F - H)</i>	
Value	Meaning
0	As per IS-135.
1	As per FSVS - 211 (STU-III).
2 through 7	Reserved.
<i>Cyclic Redundancy Check-CRC (octet 2, bits A - B)</i>	
Value	Meaning
0	16-bit Cyclic Redundancy Check.
1	24-bit Cyclic Redundancy Check.
2	No Cyclic Redundancy Check.
3	Reserved.
<i>Radio Link Protocol RLP (octet 2, bits C - D)</i>	
Value	Meaning
0	Radio Link Protocol 1.
1	Radio Link Protocol 2.
2 through 3	Reserved.

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2.283 TDMAServiceCode

The TDMAServiceCode (TDMASC) parameter is used to indicate the acceptable or current mode of a call in accordance with TDMA. TDMASC is an extension to the TDMACallMode parameter.

Field	Value	Type	Reference	Notes					
Identifier	TDMAServiceCode IMPLICIT OCTET STRING	M	see Part 550						
Length	variable octets	M	see Part 550						
Contents									
H	G	F	E	D	C	B	A	Octet	Notes
Service Code								1	
• • •								n	a

Notes:

- a. Ignore extra octets, if received. Send only defined (or significant) octets.

<i>Service Code (octet 1)</i>	
Value	Meaning
0	Analog Speech Only.
1	Digital Speech Only.
2	Analog or Digital Speech, Analog Preferred.
3	Analog or Digital Speech, Digital Preferred.
4	Asynchronous Data.
5	G3 Fax.
6	Not Used (Service Rejected).
7	STU III (Secure Telephone Unit).
8	Direct Asynch Data
9 through 255	Reserved. Treat reserved values the same as value 0, <i>Analog Speech Only</i> .

2.284 TDMA Terminal Capability

The TDMA Terminal Capability (TERMCAP) parameter indicates the capabilities of a TDMA mobile station. It identifies if the mobile station is capable of Asynchronous Data or Group 3 Fax, its supported frequency bands, its analog speech capability at 800 MHz, its Voice Coder and bandwidth capabilities.

Field	Value	Type	Reference	Notes					
Identifier	TDMA Terminal Capability IMPLICIT OCTET STRING	M	see Part 550						
Length	4 or more octets	M	see Part 550						
Contents									
H	G	F	E	D	C	B	A	Octet	Notes
Supported Frequency Band								1	
Voice Coder								2	a
Protocol Version								3	
3RATE	2RATE	FRATE	HRATE	AVOX	STU3	G3FAX	ADS	4	
• • •								n	b

Notes:

- a. This field indicates the MS Officeholder capability.
- b. Ignore extra octets, if received. Send only defined (or significant) octets.

<i>Supported Frequency Band (octet 1, bit A)</i>	
Value	Meaning
0	800 MHz A&B band not acceptable.
1	800 MHz A&B band acceptable.
<i>Supported Frequency Band (octet 1, bit B)</i>	
Value	Meaning
0	1800 MHz A band not acceptable.
1	1800 MHz A band acceptable.
<i>Supported Frequency Band (octet 1, bit C)</i>	
Value	Meaning
0	1800 MHz B band not acceptable.
1	1800 MHz B band acceptable.

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<i>Supported Frequency Band (octet 1, bit D)</i>	
Value	Meaning
0	1800 MHz C band not acceptable.
1	1800 MHz C band acceptable.
<i>Supported Frequency Band (octet 1, bit E)</i>	
Value	Meaning
0	1800 MHz D band not acceptable.
1	1800 MHz D band acceptable.
<i>Supported Frequency Band (octet 1, bit F)</i>	
Value	Meaning
0	1800 MHz E band not acceptable.
1	1800 MHz E band acceptable.
<i>Supported Frequency Band (octet 1, bit G)</i>	
Value	Meaning
0	1800 MHz F band not acceptable.
1	1800 MHz F band acceptable.
<i>Supported Frequency Band (octet 1, bit H)</i>	
Value	Meaning
0	Reserved. Ignore on reception, use any acceptable value.
<i>Voice Coder VSELP(octet 2, bit A)</i>	
Value	Meaning
0	VSELP Voice Coder not acceptable.
1	VSELP Voice Coder acceptable.
<i>Voice Coder IS-641(octet 2, bit B)</i>	
Value	Meaning
0	IS-641 Voice Coder not acceptable.
1	IS-641 Voice Coder acceptable.
<i>Voice Coder Reserved (octet 2, bit C-H)</i>	
Value	Meaning
	All values reserved.

<i>Protocol Version (octet 3)</i>	
Value	Meaning
0	EIA-553 or IS-54-A.
1	TIA/EIA-627.
2	IS-136.
3	Permanently Reserved (ANSI J-STD-011). Treat the same as value 4, IS-136-A.
4	PV 0 as published in TIA/EIA-136-0 and IS-136-A.
5	PV 1 as published in TIA/EIA-136-A.
6	PV 2 as published in TIA/EIA-136-A.
7	PV 3 as published in TIA/EIA-136-A.
8 through 255	Reserved. Treat a reserved value the same as value 0, EIA-553 or IS-54-A.
<i>Asynchronous Data (ADS) (octet 4, bit A)</i>	
Value	Meaning
0	Asynchronous Data not supported
1	Asynchronous Data supported.
<i>Group 3 Fax (G3FAX) (octet 4, bit B)</i>	
Value	Meaning
0	Group 3 Fax not supported.
1	Group 3 Fax supported.
<i>Secure Telephone Unit III (STU3) (octet 4, bit C)</i>	
Value	Meaning
0	Secure Telephone Unit III not supported.
1	Secure Telephone Unit III supported.
<i>Analog Voice (AVOX) (octet 4, bit D)</i>	
Value	Meaning
0	Analog Voice not supported
1	Analog Voice supported.
<i>Half Rate (HRATE) (octet 4, bit E)</i>	
Value	Meaning
0	Half Rate data not supported.
1	Half Rate data supported.

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<i>Full Rate (FRATE) (octet 4, bit F)</i>	
Value	Meaning
0	Full Rate data not supported.
1	Full Rate data supported.

<i>Double Rate (2RATE) (octet 4, bit G)</i>	
Value	Meaning
0	Double Rate data not supported.
1	Double Rate data supported.

<i>Triple Rate (3RATE) (octet 4, bit H)</i>	
Value	Meaning
0	Triple Rate data not supported.
1	Triple Rate data supported.

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2.285 TDMAVoiceCoder

The TDMAVoiceCoder (TDMAVC) parameter is used to indicate the selected voice coder or a list of the preferred voice coders.

Field	Value	Type	Reference	Notes					
Identifier	TDMAVoiceCoder IMPLICIT OCTET STRING	M	see Part 550						
Length	variable octets	M	see Part 550						
Contents									
H	G	F	E	D	C	B	A	Octet	Notes
Reserved				VoiceCoder 1				1	a, b
								• • •	
Reserved				VoiceCoder n				n	a, b

Notes:

- a. Voice coders should be listed in priority order.
- b. Reserved bits shall be ignored on receipt and set to zero on sending.

<i>VoiceCoder 1 (octet 1)</i>	
Value	Meaning
0	Not used.
1	VSELP Voice Coder acceptable.
2	<i>IS-641</i> Voice Coder acceptable.
3 through 5	Reserved. Ignore on reception, use any acceptable value.
6	Reserved for SOC/BSMC Specific signaling. If unknown, use any acceptable value.
7 through 12	Reserved. Ignore on reception, use any acceptable value.
13 through 15	Reserved for <i>MAP</i> protocol extension. If unknown, use any acceptable value.

2.286 TDMAVoiceMode

The TDMAVoiceMode parameter is used to indicate the voice mode to be used for the requested voice call or service change.

Field	Value	Type	Reference	Notes					
Identifier	TDMAVoiceMode IMPLICIT OCTET STRING	M	see Part 550						
Length	variable octets	M	see Part 550						
Contents									
H	G	F	E	D	C	B	A	Octet	Notes
VoicePrivacyMode				VoiceCoder				1	
•••							n	a	

Notes:

- a. Ignore extra octets, if received. Send only defined (or significant) octets.

<i>VoiceCoder (octet 1, bits A - D)</i>	
Value	Meaning
0	No Voice Coder.
1	VSELP Voice Coder.
2	IS-641 Voice Coder.
3 through 5	Reserved. Treat reserved values the same as value 0, <i>No Voice Coder.</i>
6	Reserved for SOC/BMSC Specific Signaling.
7 through 15	Reserved. Treat reserved values the same as value 0, <i>No Voice Coder.</i>
<i>VoicePrivacyMode (octet 1, bits E-H)</i>	
Value	Meaning
0	No Voice Privacy.
1	Voice Privacy Algorithm A.
2 through 3	Reserved. Treat reserved values the same as value 0, <i>No Voice Coder.</i>
4	Reserved for SOC/BMSC Specific Signaling.
5 through 15	Reserved. Treat reserved values the same as value 0, <i>No Voice Coder.</i>

2.287 TemporaryReferenceNumber

The TemporaryReferenceNumber (TRN) parameter is used to correlate the voice connection between the MS and CSC with the data connection between the MSC and OTAF, during an OTASP session.

Field	Value	Type	Reference	Notes					
Identifier	TemporaryReferenceNumber IMPLICIT OCTET STRING	M	see Part 550						
Length	variable octets	M	see Part 550						
Contents									
H	G	F	E	D	C	B	A	Octet	Notes
Digit 2				Digit 1				1	a
Digit 4				Digit 3				2	a
...				
n th Digit				n-1 st Digit				m	a

Notes:

- a. Digit 1 is the most significant digit and the nth Digit is the least significant digit.

Digit N, where N={1, 2, ...,} (octets 1-m)	
Value	Meaning
0	Digit = 0.
1	Digit = 1.
2	Digit = 2.
3	Digit = 3.
4	Digit = 4.
5	Digit = 5.
6	Digit = 6.
7	Digit = 7.
8	Digit = 8.
9	Digit = 9.
10-14	Reserved.
15	filler.

Note: For odd number of digits, the nth digit is set to the *filler* value.

2.288 TerminalType

The TerminalType (TERMTYP) parameter identifies the radio frequency interface standard supported by the associated MS. The values of this parameter are derived from the Mobile Protocol Capability Indicator (see *AMPS*, *TDMA*, *NAMPS*, or *CDMA MPC*) over the analog control channel, the CDMA control channel Mobile Protocol Revision Level (see *CDMA MOB_P_REV*), or other means.

Field	Value	Type	Reference	Notes					
Identifier	TerminalType IMPLICIT unsigned Enumerated	M	see Part 550						
Length	1 octet	M	see Part 550						
Contents									
H	G	F	E	D	C	B	A	Octet	Notes
TerminalType								1	

<i>TerminalType (octet 1)</i>	
Value	Meaning
0	Not used
1	Not distinguished (e.g., <i>EIA/TIA-533</i> , <i>IS-54-A</i> , <i>IS-88</i> , <i>IS-91</i> , <i>IS-94</i>).
2	<i>IS-54-B</i> .
3	<i>IS-136</i> .
4	<i>J-STD-011</i> (rescinded 11/23/99).
5	<i>IS-136-A</i> or <i>TIA/EIA-136 Revision-0</i> .
6	<i>TIA/EIA-136-A</i> .
7	<i>TIA/EIA-136-B</i> .
8 through 31	Reserved. Treat a reserved value the same as value 2, <i>IS-54-B</i> .
32	<i>IS-95</i> .
33	<i>IS-95-A</i> .
34	<i>J-STD-008</i> .
35	<i>TIA/EIA-95-B</i> .
36	<i>IS-2000</i> .
37	<i>IS-2000-A</i> .
38	<i>IS-2000-B</i> .
39	<i>IS-2000-C (MOB_P_REV=9)</i> .
40	<i>IS-2000-C (MOB_P_REV=10)</i> .

<i>TerminalType (octet 1)</i>	
Value	Meaning
41	<i>IS-2000-D</i>
42 through 63	Reserved. Treat a reserved value the same as value 33, <i>IS-95-A</i> .
64	<i>IS-88</i> .
65	<i>IS-94</i> .
66	<i>IS-91</i> .
67	<i>J-STD-014</i> .
68	<i>TIA/EIA-553-A</i> .
69	<i>IS-91-A</i> .
70 through 223	Reserved. Treat a reserved value the same as value 1, <i>Not distinguished</i> .
224 through 255	Reserved for <i>MAP</i> protocol extension. If unknown, treat a reserved value the same as value 1, <i>Not distinguished</i> .

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2.289 TerminationAccessType

The TerminationAccessType (TAT) parameter identifies special access situations.

Field	Value	Type	Reference	Notes					
Identifier	TerminationAccessType IMPLICIT OCTET STRING	M	see Part 550						
Length	variable octets	M	see Part 550						
Contents									
H	G	F	E	D	C	B	A	Octet	Notes
TerminationAccessType								1	
• • •								n	a

Notes:

- a. Ignore extra octets, if received. Send only defined (or significant) octets.

<i>Termination Access Type (octet 1)</i>	
Value	Meaning
0	Not used.
1 through 127	Reserved for controlling system assignment (may be a trunk group identifier).
128 through 160	Reserved for <i>MAP</i> protocol extension. If unknown, treat the same as value 253, <i>Land-to-Mobile Directory Number access</i> .
161 through 251	Reserved for this Standard.
252	Mobile-to-Mobile Directory Number access.
253	Land-to-Mobile Directory Number access.
254	Remote Feature Control port access.
255	Roamer port access.

2.290 TerminationList

The TerminationList (TERMLIST) parameter is used to provide an MSC with routing information, in the form of one or more terminations. A sequence of terminations would be provided for calls which involve multiple legs (e.g., a Flexible Alerting call).

Field	Value	Type	Reference	Notes
Identifier	TerminationList IMPLICIT SET OF CHOICE	M	see Part 550	a
Length	variable	M	see Part 550	
Contents				
	IntersystemTermination	O	2.141	b, c, d
	LocalTermination	O	2.144	b, c, e
	PSTNTermination	O	2.195	b, c, f
	• • •			g

Notes:

- a. The number of terminations is limited by the sending system, the receiving system and the intervening network. This Standard does not specify a maximum number to allow the maximum to grow as technology advances.
- b. At least one parameter must be included within the TerminationList parameter.
- c. Optionally include additional CHOICE (IntersystemTermination, LocalTermination, PSTNTermination) parameters. There is no significance to the order of the parameters within the TerminationList parameter.
- d. Include if call leg is to an intersystem MSC.
- e. Include if call leg is to the local MSC.
- f. Include if call leg is to the PSTN.
- g. Ignore unexpected parameters, if received. Send only defined (or significant) parameters.

2.291 TerminationRestrictionCode

The TerminationRestrictionCode (TERMRES) parameter indicates the type of calls the MS is allowed to terminate.

Field	Value	Type	Reference	Notes					
Identifier	TerminationRestrictionCode IMPLICIT Unsigned Enumerated	M	see Part 550						
Length	1 octet	M	see Part 550						
Contents									
H	G	F	E	D	C	B	A	Octet	Notes
TerminationRestrictionCode								1	

<i>TerminationRestrictionCode (octet 1)</i>	
Value	Meaning
0	Not used.
1	Termination denied.
2	Unrestricted.
3	Not specified. Treat the same as value 0, <i>Not used</i> .
4 through 223	Reserved. Treat a reserved value the same as value 2, <i>Unrestricted</i> .
224 through 255	Reserved for <i>MAP</i> protocol extension. If unknown, treat a reserved value the same as value 2, <i>Unrestricted</i> .

2.292 TerminationTreatment

The TerminationTreatment (TERMTRMT) parameter identifies the nature of call termination treatment (e.g., distinguishing call termination to an MS from call termination to a voice mailbox).

Field	Value	Type	Reference	Notes					
Identifier	TerminationTreatment IMPLICIT OCTET STRING	M	see Part 550						
Length	variable octets	M	see Part 550						
Contents									
H	G	F	E	D	C	B	A	Octet	Notes
Termination Treatment								1	
•••								n	a

Notes:

- a. Ignore extra octets, if received. Send only defined (or significant) octets.

<i>Termination Treatment (octet 1)</i>	
Value	Meaning
0	Not used.
1	MS Termination. Termination to an MS.
2	Voice Mail Storage. Termination to a voice mail box for message storage.
3	Voice Mail Retrieval. Termination to a voice mail box for message retrieval.
4	Dialogue Termination. Termination to a dialog.
5 through 223	Reserved. Treat the same as an <i>Unrecognized parameter value</i> .
224 through 255	Reserved for <i>MAP</i> protocol extension. If unknown, treat the same as an <i>Unrecognized parameter value</i> .

2.293 TerminationTriggers

The TerminationTriggers (TERMTRIG) parameter defines the termination trigger points that are currently active for the subscriber.

Field	Value	Type	Reference	Notes					
Identifier	TerminationTriggers IMPLICIT OCTET STRING	M	see Part 550						
Length	variable octets	M	see Part 550						
Contents									
H	G	F	E	D	C	B	A	Octet	Notes
NA		NPR		RF		Busy		1	
Reserved							NR	2	a
•••								n	b

Notes:

- a. Reserved bits shall be ignored on receipt and set to zero on sending.
- b. Ignore extra octets, if received. Send only defined (or significant) octets.

<i>Busy (octet 1, bits A and B)</i>	
Value	Meaning
0	Busy Call. Apply treatment for a detected busy condition local to the controlling system for the entire call.
1	Busy Trigger. Launch a RedirectionRequest or TransferToNumberRequest for any detected busy condition.
2	Busy Leg. For a multileg call apply treatment for a detected busy condition local to the controlling system for the affected leg only (e.g., drop this leg). For a single leg call with a detected busy condition, treat the same as value 0, <i>Busy Call</i> .
3	Reserved. Treat the same as an <i>Unrecognized parameter value</i> .

<i>Routing Failure (RF) (octet 1, bits C and D)</i>	
Value	Meaning
0	Failed Call. Apply treatment for a detected routing failure (e.g., reach reorder, an SIT, unable to seize a trunk, facility shortage) local to the controlling system for the entire call.
1	Routing Failure Trigger. Launch a RedirectionRequest or Transfer-ToNumberRequest for any detected routing failure.
2	Failed Leg. For a multileg call apply treatment for a detected routing failure local to the controlling system for the affected leg only (e.g., drop this leg). For a single leg call with a detected routing failure. treat the same as value 0, <i>Failed Call</i> .
3	Reserved. Treat the same as an <i>Unrecognized parameter value</i> .
<i>No Page Response (NPR) (octet 1, bits E and F)</i>	
Value	Meaning
0	No Page Response Call. Apply treatment for a detected no page response condition local to the controlling system for the entire call.
1	No Page Response Trigger. Launch a RedirectionRequest or Transfer-ToNumberRequest for a detected no page response condition.
2	No Page Response Leg. For a multileg call apply treatment for a detected no page response condition for the affected leg only (e.g., drop this leg). For a single leg call with a detected no page response condition. treat the same as value 0, <i>No Page Response Call</i> .
3	Reserved. Treat the same as an <i>Unrecognized parameter value</i> .

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<i>No Answer (NA) (octet 1, bits G and H)</i>	
Value	Meaning
0	No Answer Call. Apply treatment for a detected "no answer" condition local to the controlling system for the entire call.
1	No Answer Trigger. Launch a RedirectionRequest or Transfer-ToNumberRequest for any detected "no answer" condition.
2	No Answer Leg. For a multileg call apply treatment for a detected "no answer" condition for the affected leg only (e.g., drop this leg). For a single leg call with a detected no answer condition. treat the same as value 0, <i>No Answer Call</i> .
3	Reserved. Treat as an <i>Unrecognized parameter value</i> .
<i>None Reachable (NR) (octet 2, bit A)</i>	
Value	Meaning
0	Member Not Reachable. Apply treatment for the last member not reachable for a detected busy, routing failure, no page response, or no answer condition local to the controlling system for the entire call.
1	Group Not Reachable. Launch a RedirectionRequest or Transfer-ToNumberRequest for a group in which no members were reachable.

2.294 TimeDateOffset

The TimeDateOffset (TDO) parameter specifies the time offset in minutes of Local Civil Time with respect to Coordinated Universal Time (UTC). Local Civil Time includes differences in time zones and local daylight savings. Note that the range of this offset is plus 13 hours (780 minutes) to minus 12 hours (720 minutes).

Field	Value	Type	Reference	Notes					
Identifier	TimeDateOffset IMPLICIT Integer (-720..780)	M	see Part 550						
Length	2 octets	M	see Part 550						
Contents									
H	G	F	E	D	C	B	A	Octet	Notes
MSB								1	a
Time Date Offset								2	
								LSB	

Notes:

- a. For example, the TimeDateOffset may take on the following values (with time zones based on the US Uniform Time Act of 1966).

Time Zone	Offset	Value
Newfoundland Standard Time	- 3 hours 30 minutes	- 210
Atlantic Daylight Time	- 3 hours	- 180
Atlantic Standard Time	- 4 hours	- 240
Eastern Daylight Time	- 4 hours	- 240
Eastern Standard Time	- 5 hours	- 300
Central Daylight Time	- 5 hours	- 300
Central Standard Time	- 6 hours	- 360
Mountain Daylight Time	- 6 hours	- 360
Mountain Standard Time	- 7 hours	- 420
Pacific Daylight Time	- 7 hours	- 420
Pacific Standard Time	- 8 hours	- 480
Yukon Daylight Time	- 8 hours	- 480
Yukon Standard Time	- 9 hours	- 540
Alaska/Hawaii Daylight Time	- 9 hours	- 540

Time Zone	Offset	Value
Alaska/Hawaii Standard Time	- 10 hours	- 600
Bering Daylight Time	- 10 hours	- 600
Bering Standard Time	- 11 hours	- 660

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2.295 TransactionCapability

The TransactionCapability (TRANSCAP) parameter indicates a system's transaction capability at the current time (i.e., this capability may change over time).

Field	Value	Type	Reference	Notes					
Identifier	TransactionCapability IMPLICIT OCTET STRING	M	see Part 550						
Length	2 or more octets	M	see Part 550						
Contents									
H	G	F	E	D	C	B	A	Octet	Notes
NAMI	NDSS	UZCI	SPINI	RUI	ANN	BUSY	PROF	1	
OTAPA	S&R	WADDR	TL	Multiple Terminations				2	
Reserved					MX	ANCAP	Rsvd	3	a
• • •								n	b

Notes:

- a. Reserved bits shall be ignored on receipt and set to zero on sending.
- b. Ignore extra octets, if received. Send only defined (or significant) octets.

<i>Profile (PROF) (octet 1, bit A)</i>	
Value	Meaning
0	The system is not capable of supporting the <i>IS-41-C</i> profile parameters.
1	The system is capable of supporting the <i>IS-41-C</i> profile parameters.
<i>Busy Detection (BUSY) (octet 1, bit B)</i>	
Value	Meaning
0	The system is not capable of detecting a busy condition at the current time.
1	The system is capable of detecting a busy condition at the current time.
<i>Announcements (ANN) (octet 1, bit C)</i>	
Value	Meaning
0	The system is not capable of honoring the AnnouncementList parameter at the current time.
1	The system is capable of honoring the AnnouncementList parameter at the current time.

<i>Remote User Interaction (RUI) (octet 1, bit D)</i>	
Value	Meaning
0	The system is not capable of interacting with the user.
1	The system is capable of interacting with the user.
<i>Subscriber PIN Intercept (SPINI) (octet 1, bit E)</i>	
Value	Meaning
0	The system is not capable of supporting local SPINI operation at the current time.
1	The system is capable of supporting local SPINI operation.
<i>UZCapabilityIndicator (UZCI) (octet 1, bit F)</i>	
Value	Meaning
0	The system is not User Zone capable at the current time.
1	The system is User Zone capable at the current time.
<i>NDSS Capability (NDSS) (octet 1 bit G)</i>	
Value	Meaning
0	Serving System is not NDSS capable.
1	Serving System is NDSS capable.
<i>NAME Capability Indicator (NAMI) (octet 1 bit H)</i>	
Value	Meaning
0	The system is not CNAP/CNAR capable.
1	The system is CNAP/CNAR capable.
<i>Multiple Terminations (octet 2, bits A-D)</i>	
Value	Meaning
0	The system cannot accept a termination at this time (i.e., cannot accept routing information).
1 through 15	The system supports the number of call legs indicated.
<i>TerminationList (TL) (octet 2, bit E)</i>	
Value	Meaning
0	The system is not capable of supporting the TerminationList parameter at the current time.
1	The system is capable of supporting the TerminationList parameter at the current time.

<i>WIN Addressing (WADDR) (octet 2, bit F)</i>	
Value	Meaning
0	The system is not capable of supporting the TriggerAddressList parameter.
1	The system is capable of supporting the TriggerAddressList parameter.
<i>Lower Layer Segmentation and Reassembly (S&R) (octet 2, bit G)</i>	
Value	Meaning
0	The system is not capable of supporting lower layer segmentation and reassembly, (S&R)
1	The system is capable of supporting lower layer segmentation and reassembly, (S&R).
<i>Over the Air Parameter Administration OTAPA (octet 2, bit H)</i>	
Value	Meaning
0	The system is not capable of supporting the CDMA Over the Air Parameter Administration.
1	The system is capable of supporting the CDMA Over the Air Parameter Administration.
<i>Announcement Capabilities(ANCAP) (octet 3, bit B)</i>	
Value	Meaning
0	The system is not capable of supporting the enhanced call redirection (e.g., generating tones and announcements) at the current time.
1	The system is capable of supporting the enhanced call redirection (e.g., generating tones and announcements) at the current time.
<i>MIN Extension(MX) (octet 3, bit C)</i>	
Value	Meaning
0	The system does not require the MIN Extension for this MS.
1	The system requires that the MIN Extension for this MS be transmitted.

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2.296 TriggerAddressList

The TriggerAddressList (TRIGADDRLIST) parameter is used to provide an MSC with lists of triggers and the associated address of the network entity that provides the service control function for each list of triggers. It provides all the information needed to download a set of active WIN triggers for a subscriber.

Field	Value	Type	Reference	Notes
Identifier	TriggerAddressList IMPLICIT SET OF	M	see Part 550	
Length	variable octets	M	see Part 550	
Contents				
	TriggerList	M	2.298	
	TriggerList	O	2.298	a
	• • •			

Notes:

- a. Optionally, include additional TriggerList parameters.

2.297 TriggerCapability

The TriggerCapability (TRIGCAP) parameter is used to specify the WIN Triggers of the sending network element that can be armed by the TriggerAddressList parameter.

Field	Value	Type	Reference	Notes					
Identifier	TriggerCapability IMPLICIT OCTET STRING	M	see Part 550						
Length	variable octets	M	see Part 550						
Contents									
H	G	F	E	D	C	B	A	Octet	Notes
Reserved				RvtC	All	K-digit	INIT	1	a
Reserved				AT	PA	Unrec	CT	2	a
Reserved					TNA	TBusy	TRA	3	a
• • •								n	b

Notes:

- a. Reserved bits shall be ignored on receipt and set to zero on sending.
- b. Ignore extra octets, if received. Send only defined (or significant) octets.

Value	Meaning
<i>Introducing Star/Pound (INIT) (octet 1, bit A)</i>	
0	Introducing Star triggers and Introducing Pound triggers cannot be armed by the TriggerAddressList parameter.
1	Introducing Star triggers and Introducing Pound triggers can be armed by the TriggerAddressList parameter.
<i>K-digit (octet 1, bit B)</i>	
0	<i>K-digit</i> triggers cannot be armed by the TriggerAddressList parameter.
1	<i>K-digit</i> triggers can be armed by the TriggerAddressList parameter.
<i>All_Calls (All) (octet 1, bit C)</i>	
0	<i>All_Calls</i> trigger cannot be armed by the TriggerAddressList parameter.
1	<i>All_Calls</i> trigger can be armed by the TriggerAddressList parameter.

<i>Revertive_Call (RvtC) (octet 1, bit D)</i>	
Value	Meaning
0	<i>Revertive_Call</i> trigger cannot be armed by the TriggerAddressList parameter.
1	<i>Revertive_Call</i> trigger can be armed by the TriggerAddressList parameter.
<i>Call Types (CT) (octet 2, bit A)</i>	
Value	Meaning
0	Call Type triggers cannot be armed by the TriggerAddressList parameter.
1	Call Type triggers can be armed by the TriggerAddressList parameter.
<i>Unrecognized_Number (Unrec) (octet 2, bit B)</i>	
Value	Meaning
0	<i>Unrecognized_Number</i> trigger cannot be armed by the TriggerAddressList parameter.
1	<i>Unrecognized_Number</i> trigger can be armed by the TriggerAddressList parameter.
<i>Prior_Agreement (PA) (octet 2, bit C)</i>	
Value	Meaning
0	<i>Prior_Agreement</i> trigger cannot be armed by the TriggerAddressList parameter.
1	<i>Prior_Agreement</i> trigger can be armed by the TriggerAddressList parameter.
<i>Advanced_Termination (PA) (octet 2, bit D)</i>	
Value	Meaning
0	<i>Advanced_Termination</i> trigger cannot be armed by the TriggerAddressList parameter.
1	<i>Advanced_Termination</i> trigger can be armed by the TriggerAddressList parameter.
<i>Terminating_Resource_Available (TRA) (octet 3, bit A)</i>	
Value	Meaning
0	<i>Terminating_Resource_Available</i> trigger cannot be armed by the TriggerAddressList parameter.
1	<i>Terminating_Resource_Available</i> trigger can be armed by the TriggerAddressList parameter.

<i>T_Busy (TBusy) (octet 3, bit B)</i>	
Value	Meaning
0	<i>T_Busy</i> trigger cannot be armed by the TriggerAddressList parameter.
1	<i>T_Busy</i> trigger can be armed by the TriggerAddressList parameter.
<i>T_No_Answer (TNA) (octet 3, bit C)</i>	
Value	Meaning
0	<i>T_No_Answer</i> trigger cannot be armed by the TriggerAddressList parameter.
1	<i>T_No_Answer</i> trigger can be armed by the TriggerAddressList parameter.

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2.298 TriggerList

The TriggerList (TRIGLIST) parameter provides an address and one or more triggers associated with that address.

Field	Value	Type	Reference	Notes
Identifier	TriggerList IMPLICIT SET	M	see Part 550	
Length	variable octets	M	see Part 550	
Contents				
	DestinationAddress	M	2.112	
	WIN_TriggerList	M	2.311	

2.299 TriggerType

The TriggerType (TRIGTYPE) parameter identifies an individual trigger.

Field	Value	Type	Reference	Notes					
Identifier	TriggerType IMPLICIT Unsigned Enumerated	M	see Part 550						
Length	1 octet	M	see Part 550						
Contents									
H	G	F	E	D	C	B	A	Octet	Notes
Trigger Type								1	

<i>Trigger Type (octet 1)</i>	
Value	Meaning
0	Unspecified.
1	All_Calls.
2	Double_Introducing_Star.
3	Single_Introducing_Star.
4	Reserved [for Home_System_Feature_Code (Note 1)].
5	Double_Introducing_Pound.
6	Single_Introducing_Pound.
7	Revertive_Call.
8	0_Digit.
9	1_Digit.
10	2_Digit.
11	3_Digit.
12	4_Digit.
13	5_Digit.
14	6_Digit.
15	7_Digit.
16	8_Digit.
17	9_Digit.
18	10_Digit.
19	11_Digit.
20	12_Digit.
21	13_Digit.

<i>Trigger Type (octet 1) (Continued)</i>	
Value	Meaning
22	14_Digit.
23	15_Digit.
24	Local_Call.
25	Local_Toll_Call.
26	Non-Local_Toll_Call.
27	World_Zone_Call.
28	International_Call.
29	Unrecognized_Number.
30	Prior_Agreement.
31	Specific_Called_Party_Digit_String (Note 2).
32	Mobile_Termination (Note 2).
33	Advanced_Termination (Note 2).
34	Location (Note 2).
35 through 63	Reserved. Treat a reserved value the same as value 0, <i>Unspecified</i> .
64	Terminating_Resource_Available.
65	T_Busy.
66	T_No_Answer.
67	T_No_Page_Response.
68	T_Unroutable.
68 through 219	Reserved. Treat a reserved value the same as value 0, <i>Unspecified</i> .
220	Reserved for TDP-R DP Type value.
221	Reserved for TDP-N DP Type value.
222	Reserved for EDP-R DP Type value.
223	Reserved for EDP-N DP Type value.
224 through 255	Reserved for <i>MAP</i> protocol extension. If unknown, treat the same as value 0, <i>Unspecified</i> .

Notes:

1. The *Home_System_Feature_Code* trigger type is mutually exclusive with the *Single_Introducing_Star* trigger type. This trigger type is armed by default at the serving system when the *Single_Introducing_Star* trigger is not armed. When thus armed, the address associated with this trigger is the HLR for the served subscriber.
2. These Trigger Type values are not intended for inclusion in the *TriggerAddressList* parameter when this parameter is used for downloading a subscriber's trigger profile (e.g., *regnot*). The inclusion of these specific Trigger Type values in a subscriber's trigger profile is an error. If they are received in a trigger profile, they shall be ignored.

2.300 TrunkStatus

The TrunkStatus (TRNKSTAT) parameter indicates the status of a designated trunk (e.g., either idle or blocked).

Field	Value	Type	Reference	Notes					
Identifier	TrunkStatus IMPLICIT Unsigned Enumerated	M	see Part 550						
Length	1 octet	M	see Part 550						
Contents									
H	G	F	E	D	C	B	A	Octet	Notes
TrunkStatus								1	

<i>TrunkStatus (octet 1)</i>	
Value	Meaning
0	Idle.
1	Blocked.
2 through 223	Reserved. Return a RETURN ERROR if a reserved value is used when this parameter appears in an INVOKE component. If a reserved value is used in a RETURN RESULT component, treat the reserved value the same as value 1, <i>Blocked</i> .
224 through 255	Reserved for <i>MAP</i> protocol extension. If unknown, treat the same as a reserved value (see above).

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2.301 UniqueChallengeReport

The UniqueChallengeReport (UCHALRPT) parameter indicates the outcome of the Unique Challenge initiated by the AC or the VLR.

Field	Value	Type	Reference	Notes					
Identifier	UniqueChallengeReport IMPLICIT OCTET STRING	M	see Part 550						
Length	variable octets	M	see Part 550						
Contents									
H	G	F	E	D	C	B	A	Octet	Notes
Unique Challenge Report								1	
• • •								n	a

Notes:

- a. Ignore extra octets, if received. Send only defined (or significant) octets.

<i>Unique Challenge Report (octet 1)</i>	
Value	Meaning
0	Not used.
1	Unique Challenge not attempted.
2	Unique Challenge no response.
3	Unique Challenge successful.
4	Unique Challenge failed.
5 through 223	Reserved. Treat the same as value 1, <i>Unique Challenge not attempted</i> .
224 through 225	Reserved for <i>MAP</i> protocol extension. If unknown, treat the same as value 1, <i>Unique Challenge not attempted</i> .

2.302 UpdateCount

The UpdateCount (UPDCOUNT) parameter is used to indicate that the CallHistoryCount (COUNT) update procedure shall be initiated.

Field	Value	Type	Reference	Notes					
Identifier	UpdateCount IMPLICIT Unsigned Enumerated	M	see Part 550						
Length	1 octet	M	see Part 550						
Contents									
H	G	F	E	D	C	B	A	Octet	Notes
UpdateCount								1	

<i>UpdateCount (octet 1)</i>	
Value	Meaning
0	Not used.
1	Update COUNT.
2 through 223	Reserved. Treat a reserved value the same as value 1, <i>Update COUNT</i> .
224 through 255	Reserved for <i>MAP</i> protocol extension. If unknown, treat a reserved value the same as value 1, <i>Update COUNT</i> .

2.303 UserGroup

The UserGroup (UG) parameter indicates the allocation status of a MS in a User Group. It contains a status indicator and optionally the User Group identifier.

Field	Value	Type	Reference	Notes					
Identifier	UserGroup IMPLICIT OCTET STRING	M	see Part 550						
Length	1 or more octets	M	see Part 550						
Contents									
H	G	F	E	D	C	B	A	Octet	Notes
Number of Digits				Group Info				1	a, b
2 nd BCD Digit				1 st BCD Digit				2	c
4 th BCD Digit				3 rd BCD Digit				3	
...				
n th BCD Digit				n-1 st BCD Digit				m	

Notes:

- a. If user group identifier is not to be included, encode Number of Digits as zero.
- b. If user group identifier is included, the maximum number of digits is 15.
- c. User group identifier. Encode as *BCD* digits.

<i>Group Info (octet 1, bits A through D)</i>	
Value	Meaning
0	Request for indicated user group allocation.
1	Request for unspecified user group allocation.
2	Request to de-allocate MS from currently allocated user group.
3	MS allocated in the indicated user group.
4	MS de-allocated from user group.
5 through 15	Reserved. Treat a reserved value the same as value 1, <i>Request for unspecified user group allocation.</i>

2.304 UserZoneData

The UserZoneData (UZDATA) parameter is used to update a subscriber's User Zone identifier information on a per-MSCID basis, and to include the UZID indicated by the subscriber's chosen PSID/RSID.

Field	Value	Type	Reference	Notes					
Identifier	UserZoneData IMPLICIT OCTET STRING	M	see Part 550						
Length	variable octets	M	see Part 550						
Contents									
H	G	F	E	D	C	B	A	Octet	Notes
UZ Identifier 1								1	
								2	a, g
								3	
Rsvd	SUZ	UZPAC 1	UZ Priority Indicator 1				4	b, c, h, j	
...								...	d
UZ Identifier m								(4*m-3)	
								(4*m-2)	e, g
								(4*m-1)	
Rsvd	SUZ	UZPAC m	UZ Priority Indicator m				(4*m)	f, h, j	
...								n	i

Notes:

- a. Include information on User Zone Identifier (UZID) number 1.
- b. Include UZ Profile Action Code (UZPAC) for UZID number 1, with:
 - 0 = not used.
 - 1 = New Profile for this UZID.
 - 2 = Modified Profile for this UZID.
 - 3 = Delete Profile for this UZID.

Set the value of UZPAC to 1, when this parameter contains the UZID indicated by the subscriber's chosen PSID/RSID.

- c. Include UZ Priority Indicator (UZPI) for UZID number 1, with:
 - 0 = Priority Level 0 (highest)
 - 1 = Priority Level 1.
 - 2 = Priority Level 2.
 - 3 = Priority Level 3.
 - 4 = Priority Level 4.

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5 = Priority Level 5.

6 = Priority Level 6.

7 = Priority Level 7.

8 = Priority Level 8.

9 = Priority Level 9.

10 = Priority Level 10.

11 = Priority Level 11.

12 = Priority Level 12.

13 = Priority Level 13.

14 = Priority Level 14.

15 = Priority Level 15 (lowest).

Set the value of UZPI to 0, when this parameter contains the UZID indicated by the subscriber's chosen PSID/RSID.

- d. Include information on UZID, UZPAC & UZPI for UZIDs 2, 3, etc., up to (m-1).
- e. Include information on UZID number m.
- f. Include information on UZ Profile Action Code (UZPAC) and UZ Priority Indicator (UZPI) for UZID number m.
- g. User Zone Identifier values (shown in hexadecimal below):
 - 0 = Reserved.
 - 1-FFFFFF = valid UZ zone number.

If the identifier used on the air interface is less than 24 bits in length, as n bits in length, then the first (24 - n) bits shall be set to zero.
- h. Reserved bits shall be ignored on receipt and set to zero on sending.
- i. Ignore extra octets, if received. Send only defined (or significant) octets.
- j. Serving User Zone (SUZ). If encoded as value one, this User Zone is the zone in which the MS is currently receiving service. When transferring the User Zone Data from one MSC to another, the SUZ field of at most one UserZone should be encoded as value one.

2.305 VoiceMailboxNumber

The VoiceMailboxNumber (VMBOX) parameter contains a voice mailbox number. Note that an MS's voice mailbox number may be different from its MobileIdentificationNumber.

Field	Value	Type	Reference	Notes					
Identifier	VoiceMailboxNumber IMPLICIT DigitsType	M	see Part 550	a					
Length	variable octets	M	see Part 550						
Contents									
H	G	F	E	D	C	B	A	Octet	Notes
Type of Digits								1	b
Nature of Number								2	c
Numbering Plan				Encoding				3	d, e
Number of Digits								4	f
2 nd BCD Digit				1 st BCD Digit				5	
4 th BCD Digit				3 rd BCD Digit				6	
...				
n th BCD Digit				n-1 st BCD Digit				m	

Notes:

- a. Refer to the DigitsType parameter type see [Part 551 Section 1.2](#) for notes and field encoding.
- b. The Type of Digits field is ignored on receipt.
- c. The Nature of Number field is ignored on receipt.
- d. The Numbering Plan field is ignored on receipt.
- e. The Encoding field is set to *BCD*.
- f. The Number of Digits is between 0 and at least 15.

2.306 VoiceMailboxPIN

The VoiceMailboxPIN (VMSPIN) parameter contains the Voice Message System personal identification number (PIN) for the designated subscriber.

Field	Value	Type	Reference	Notes					
Identifier	VoiceMailboxPIN IMPLICIT DigitsType	M	see Part 550	a					
Length	variable octets	M	see Part 550						
Contents									
H	G	F	E	D	C	B	A	Octet	Notes
Type of Digits								1	b
Nature of Number								2	c
Numbering Plan				Encoding				3	d, e
Number of Digits								4	f
2 nd BCD Digit				1 st BCD Digit				5	
4 th BCD Digit				3 rd BCD Digit				6	
...				
n th BCD Digit				n-1 st BCD Digit				m	

Notes:

- a. Refer to the DigitsType parameter type see [Part 551 Section 1.2](#) for notes and field encoding.
- b. The Type of Digits field is ignored on receipt.
- c. The Nature of Number field is ignored on receipt.
- d. The Numbering Plan field is ignored on receipt.
- e. The Encoding field is set to *BCD*.
- f. The Number of Digits is between 0 and at least 15.

2.307 VoicePrivacyMask

The VoicePrivacyMask (VPMASK) parameter contains a 528-bit field consisting of two 260-bit masks used for Voice Privacy. For a TDMA digital traffic channel, VPMASK-A is for speech transferred in the inward direction (from the MS toward the MSC) and VPMASK-B is for speech transferred in the outward direction (from the MSC toward the MS).

For a CDMA digital traffic channel, the Private Long Code Mask is derived from the VPMASK-A and VPMASK-B.

These masks are calculated using CAVE parameters in effect when the call is established and remain constant for the duration of the call.

The presence of this optional parameter indicates Voice Privacy is possible for this MS; the current operational status of privacy is, however, defined by the ConfidentialityModes parameter (see 2.95).

Field	Value	Type	Reference	Notes					
Identifier	VoicePrivacyMask IMPLICIT OCTET STRING	M	see Part 550						
Length	66 octets	M	see Part 550						
Contents									
H	G	F	E	D	C	B	A	Octet	Notes
Reserved				MSB				1	a
				VPMASK-A				...	
				LSB				33	
Reserved				MSB				34	a
				VPMASK-B				...	
				LSB				66	

Notes:

- a. Reserved bits shall be ignored on receipt and set to zero on sending.

2.308 VoicePrivacyReport

The VoicePrivacyReport (VPRPT) parameter indicates the outcome of the Voice Privacy procedure initiated by the Serving MSC.

Field	Value	Type	Reference	Notes					
Identifier	VoicePrivacyReport IMPLICIT OCTET STRING	M	see Part 550						
Length	1 octet	M	see Part 550						
Contents									
H	G	F	E	D	C	B	A	Octet	Notes
Voice Privacy Report								1	

VoicePrivacy Report (octet 1)	
Value	Meaning
0	Not used.
1	Voice Privacy not attempted.
2	Voice Privacy no response.
3	Voice Privacy is active.
4	Voice Privacy failed.
5 through 223	Reserved. Treat the same as value 1, <i>Voice Privacy not attempted</i> .
224 through 225	Reserved for <i>MAP</i> protocol extension. If unknown, treat the same as value 1, <i>Voice Privacy not attempted</i> .

2.309 WINCapability

The WINCapability (WINCAP) parameter is used to specify the WIN commands and triggers supported by the sending network element.

Field	Value	Type	Reference	Notes
Identifier	WINCapability IMPLICIT SET	M	see Part 550	
Length	variable octets	M	see Part 550	
Contents				
	TriggerCapability	O	2.297	a
	WINOperationsCapability	O	2.310	a

Notes:

- a. At least one must be present.

2.310 WINOperationsCapability

The WINOperationsCapability (WINOPCAP) parameter is used to specify the WIN operations supported by the sending network element.

Field	Value	Type	Reference	Notes					
Identifier	WINOperationsCapability IMPLICIT OCTET STRING	M	see Part 550						
Length	variable octets	M	see Part 550						
Contents									
H	G	F	E	D	C	B	A	Octet	Notes
Reserved							CONN	1	a
•••								n	b

Notes:

- a. Reserved bits shall be ignored on receipt and set to zero on sending.
- b. Ignore extra octets, if received. Send only defined (or significant) octets.

<i>Connect Resource(CONN) (octet 1, bit A)</i>	
Value	Meaning
0	Sender is not capable of supporting the ConnectResource, DisconnectResource, ConnectionFailureReport and ResetTimer (SSFT timer) operations.
1	Sender is capable of supporting the ConnectResource, DisconnectResource, ConnectionFailureReport and ResetTimer (SSFT timer) operations.

2.311 WIN_TriggerList

The WIN_TriggerList (WTRIGLIST) parameter provides a set of WIN triggers that are associated with a single trigger address.

Field	Value	Type	Reference	Notes					
Identifier	WIN_TriggerList IMPLICIT OCTET STRING	M	see Part 550						
Length	variable octets	M	see Part 550						
Contents									
H	G	F	E	D	C	B	A	Octet	Notes
1	1	0	1	1	1	0	0	1	a
1 st TDP-R Trigger Type								2	b
...								...	b
m-1 th TDP-R Trigger Type								m	b
1	1	0	1	1	1	0	1	m+1	c
1 st TDP-N Trigger Type								m+2	d
...								...	d
n-1 th TDP-N Trigger Type								m+n	d
1	1	0	1	1	1	1	0	m+n+1	e
1 st EDP-R Trigger Type								m+n+2	f
...								...	f
p-1 th EDP-R Trigger Type								m+n+p	f
1	1	0	1	1	1	1	1	m+n+p+1	g
1 st EDP-N Trigger Type								m+n+p+2	h
...								...	h
q-1 th EDP-N Trigger Type								m+n+p+q	h

Notes:

- a. Include this octet if one or more DPs is armed as a TDP-R.
- b. Include to identify Trigger Type associated with TDP-R DP. Refer to 2.299.
- c. Include this octet if one or more DPs is armed as a TDP-N.
- d. Include to identify Trigger Type associated with TDP-N DP. Refer to 2.299.
- e. Include this octet if one or more DPs is armed as an EDP-R.
- f. Include to identify Trigger Type associated with EDP-R DP. Refer to 2.299.
- g. Include this octet if one or more DPs is armed as an EDP-N.
- h. Include to identify Trigger Type associated with EDP-N DP. Refer to 2.299.