

Mobile Identification for the UK Police

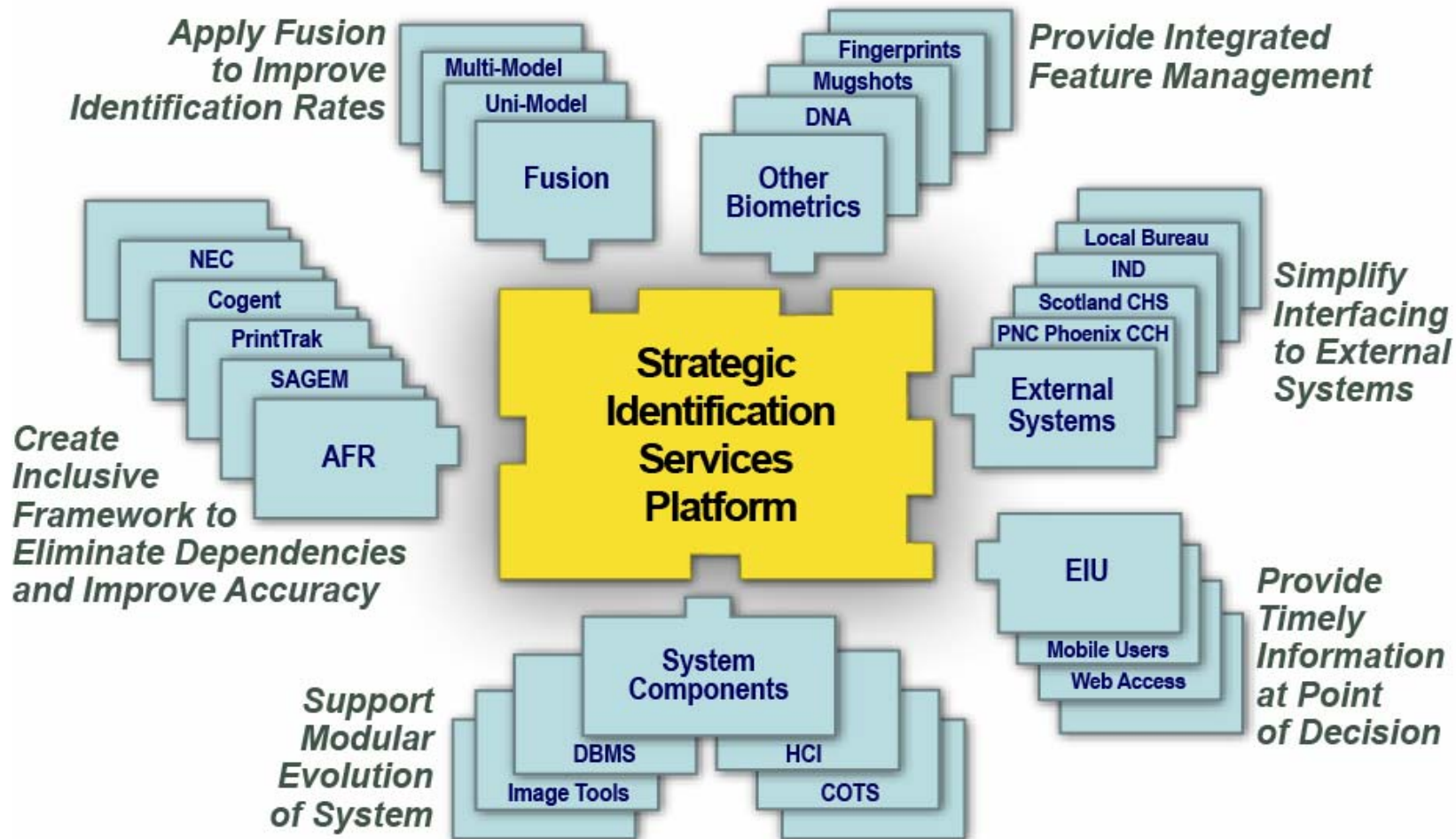
Project Lantern

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National Policing Improvement Agency

IDENT1



IDENT1 Future Potential - adding FIND & NDNAD

Existing

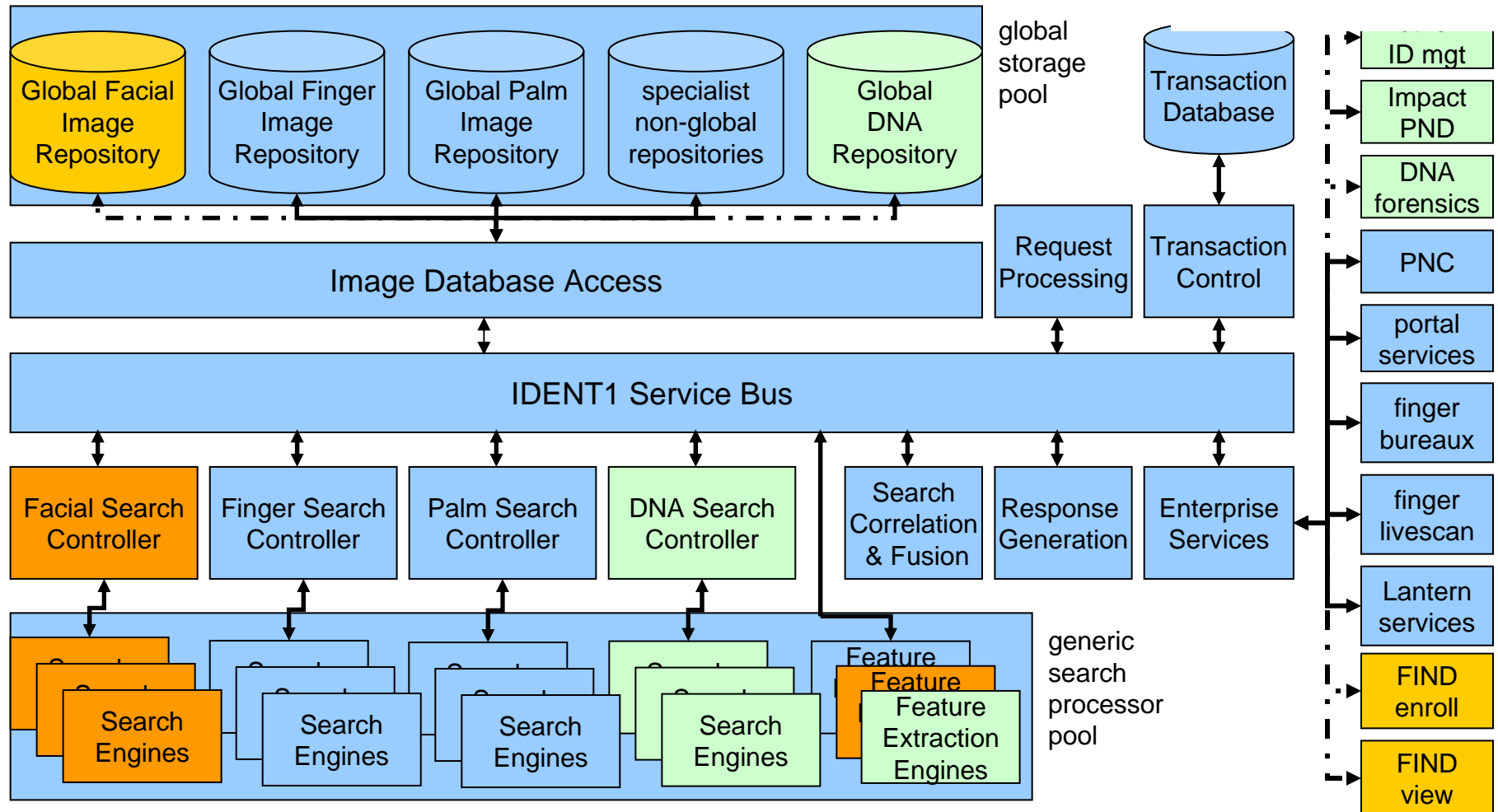
Face Rec

FIND

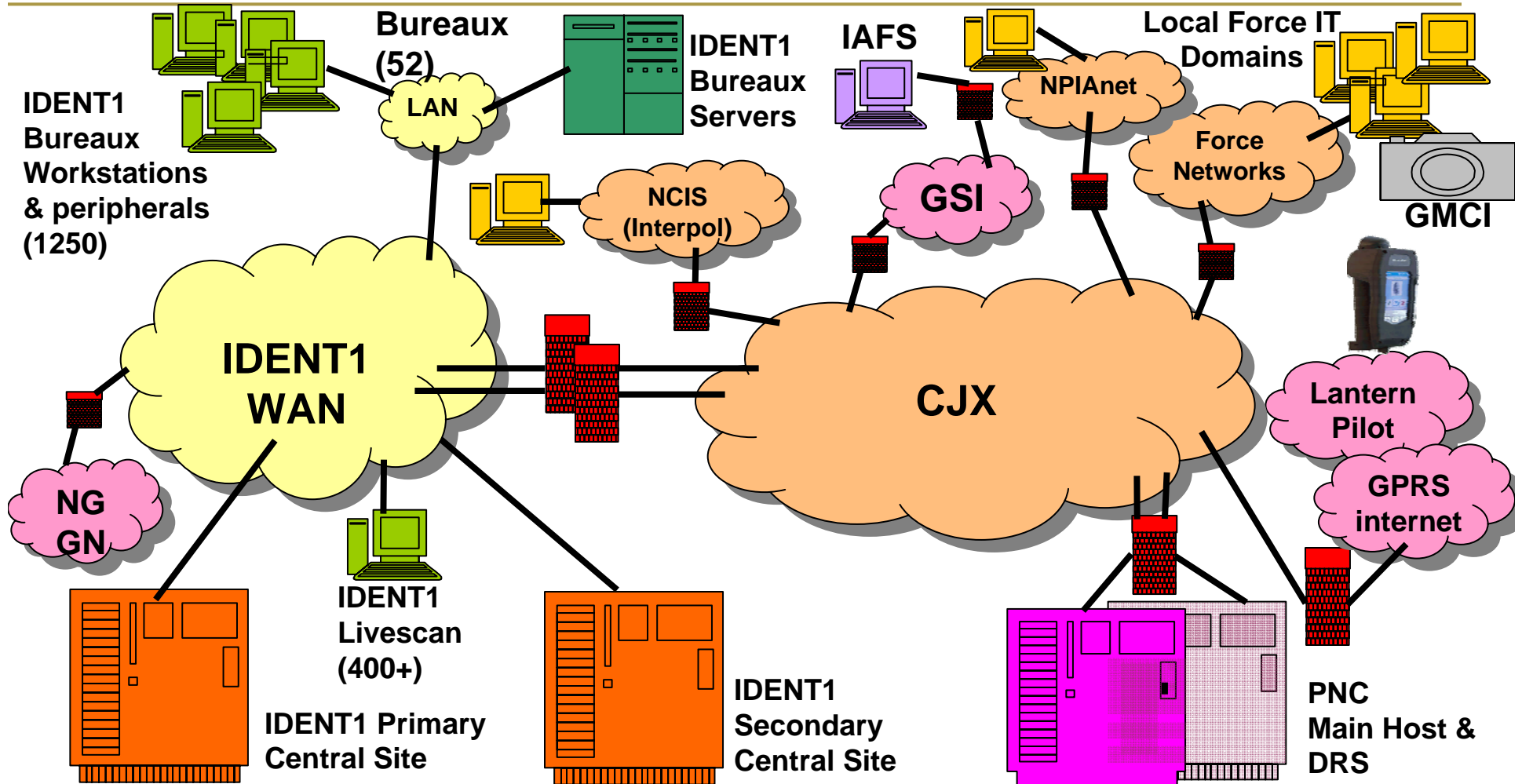
DNA or other ID



NPIA
National Policing Improvement Agency



IDENT1 Connectivity



Lantern Pilot (Phase 2)



Project Lantern - Objectives



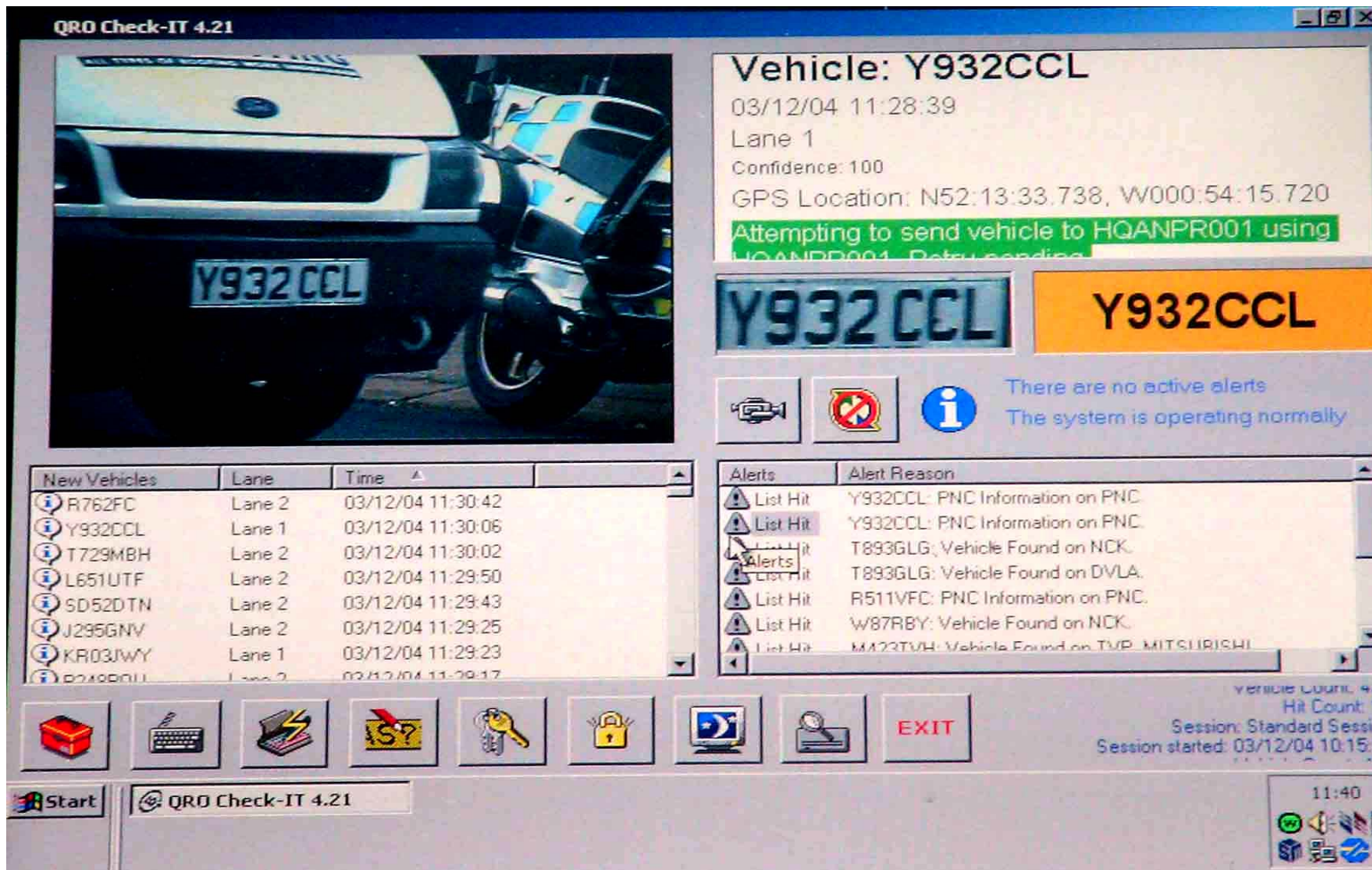
'To provide the UK police service with the capability to perform real time mobile identity checks against the full national collection of 10 prints'.

- Initial deployment in conjunction with existing ANPR systems
 - Key strategic objective – 'to deny criminals the use of the roads'.

What is ANPR?



What is ANPR?



QRO Check-IT 4.21

Vehicle: Y932CCL
03/12/04 11:28:39
Lane 1
Confidence: 100
GPS Location: N52:13:33.738, W000:54:15.720
Attempting to send vehicle to HQANPR001 using HQANPR001. Retrying...

Y932CCL **Y932CCL**

There are no active alerts
The system is operating normally

New Vehicles	Lane	Time
R762FC	Lane 2	03/12/04 11:30:42
Y932CCL	Lane 1	03/12/04 11:30:06
T729MBH	Lane 2	03/12/04 11:30:02
L651UTF	Lane 2	03/12/04 11:29:50
SD52DTN	Lane 2	03/12/04 11:29:43
J295GNV	Lane 2	03/12/04 11:29:25
KR03JWY	Lane 1	03/12/04 11:29:23
P249PQU	Lane 2	03/12/04 11:29:17

Alerts	Alert Reason
List Hit	Y932CCL: PNC Information on PNC.
List Hit	Y932CCL: PNC Information on PNC.
List Hit	T893GLG: Vehicle Found on NCK.
List Hit	T893GLG: Vehicle Found on DVLA.
List Hit	R511VFC: PNC Information on PNC.
List Hit	W87RBY: Vehicle Found on NCK.
List Hit	M423TVH: Vehicle Found on TWP. MITSUBISHI

Vehicle Count: 43
Hit Count: 1
Session: Standard Session
Session started: 03/12/04 10:15:3

11:40

What is ANPR?

- Stolen
- No insured driver
- No MOT
- No known owner
- Flagged as being of interest to the police

A hit on the database could mean the vehicle is

- involved in criminality
- trying to evade justice (safety cameras)

...or it could merely be a result of a recent change of ownership

- ***60% of drivers stopped as a result of an ANPR 'hit' give, or attempt to give, false details to the police.***

Expected Benefits of Lantern



- Increased arrests through not releasing wanted persons due to the inability to identify them at the time
- Keeping police officers on the street
- Improving public confidence in the police
 - A visible deterrent
- Reducing bureaucratic overheads
- Reducing the number of wrongful arrests and subsequent litigation

'Superior knowledge at the point of contact'

Current procedures

- Two flat impressions are taken, one from each index finger of the subject.
- These are then sent to IDENT1 (as Type 4 records) for comparison against the UK National Collection of 10Prints (records of approx 7M individuals)
- Possible matches are sent back to the officer in under 2 minutes



Information Returned

- Possible matches are graded as either 'High' or 'Medium' confidence
- Any matches will also return File Name, Date of Birth and Gender.
- 'High' confidence matches = approx 95% accuracy.

RESPONDENT	
HIGH	
Person Identification Number	▲
GB/00150706B	
Family Name	≡
MESSAWER/	
Date Of Birth	
01/11/1974	
Gender	
Male	
Transaction Control Number	▼
0610000185D	
EXIT	
Result Display	

Data Transmission - GPRS

- UK Police tetra network 'Airwave' not able to handle image file sizes at present.
 - Fingerprint image file sizes transmitted are 20kb in size
 - But this doubles to 40kb when security overheads added.
- Uses secure VPN via internet
- Could be used across whole of Europe ?

The downside of using GPRS



- GPRS is a public network – reliant on the network providers to get good coverage.
- Unlikely to be available in times of crisis (such as 7/7).
- Security software is required to protect communications between the device and central system (not need on Airwave)

Access to Data

- Device has 'Restricted' access
- Only suitably trained and authorised officers are allowed to use it
- If an attempt is made to breach security the device is 'wiped'
- Files held on the device are encrypted
- Biometric data is only stored temporarily on the device (erased at the end of each shift)
- Transmissions are encrypted and digitally signed

Some other uses of Lantern



- Identification of the deceased
 - Able to lift prints electronically at scene or at mortuary.
- Non-designated police stations
 - (no current Livescan capability)
- Major public events
- Special Operations
- Identification of prisoners in transit, suspects on bail etc (Identity Management)
- Immigration / border control checks

The Future...

- Establish real time links to:
 - Police National Computer (PNC)
 - Facial Images National Database (FIND)
 - Return mugshots along with demographic data
 - Incorporate cameras into the devices
 - => Automatic Face Recognition ?
 - Immigration and Nationalisation Directorate
 - Visa applications / Asylum seekers
 - Intelligence databases
 - IMPACT, VISOR, local force systems

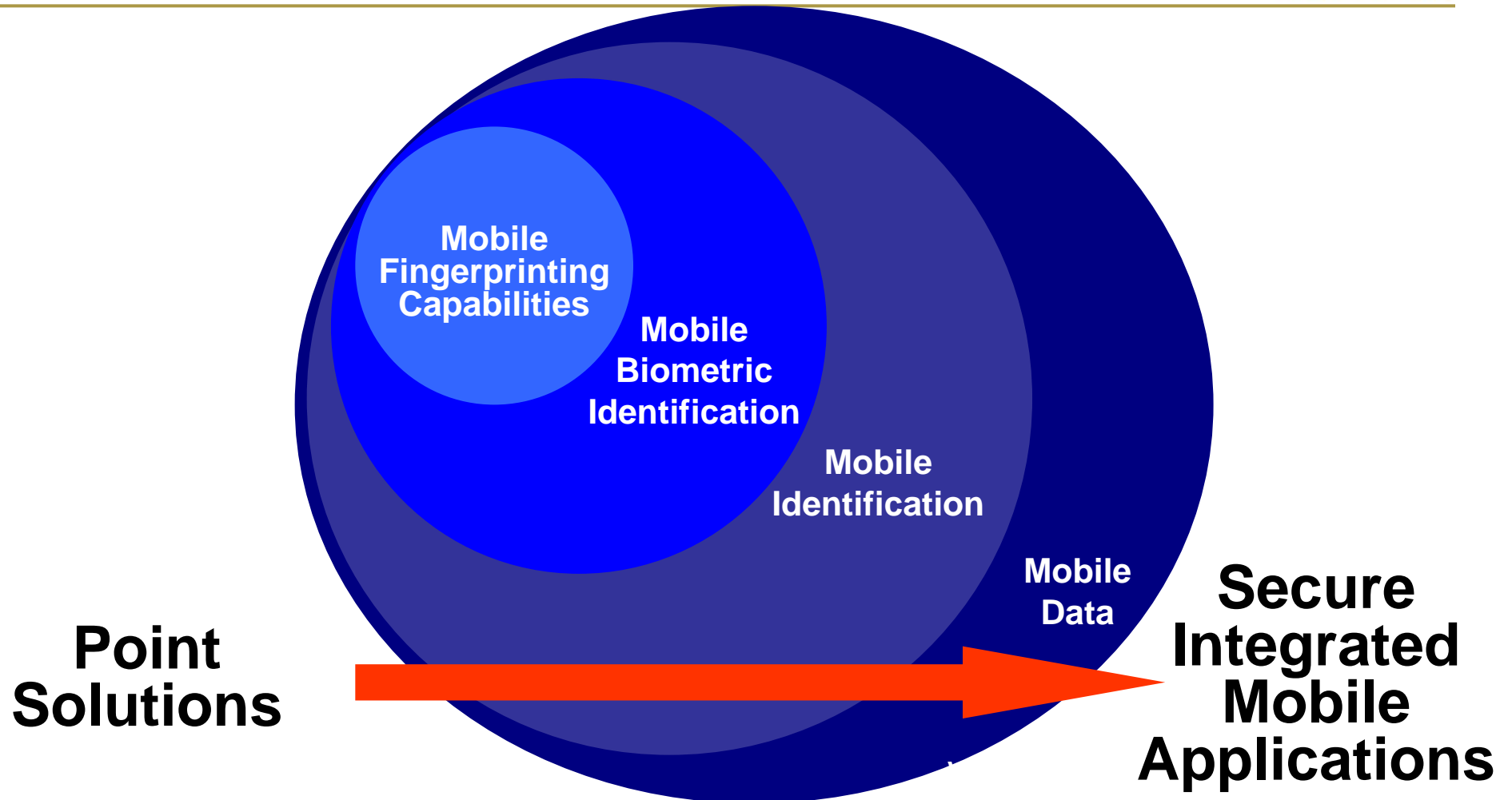
The Future...

- Integrate functionality into multi-purpose hand held devices.
- Develop an open interface for connection of mobile Live-ID devices
 - Alignment with the Mobile Data Strategy and for the UK police
- Extend use to whole of UK police service (potential for 100,000 concurrent users!)
- Switch preferred data carrier from GPRS to Airwave

Some Other Issues.....

- Remote capture and automated submission of latent finger and palm marks – GMCI
- Use of local (on board) databases v central collections
- Sensors – optical / capacitative / ultrasonic
- Robustness and Usability
 - Bright sunlight / rain / heat / cold
 - Use as a weapon
 - Impact of loss / theft of the device (remote de-activation)
 - Battery life – 8 hours continuous use
- Security
- Audit trail – date / time / **location**
 - User authentication
 - Role based access to data
- Legislative issues

Mobile ID – The Wider Context



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