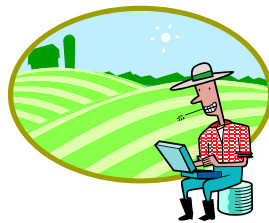


The Management of Telecommunication Services

Panel Discussion



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Panelists

- Mostafa Hashem Sherif – *AT&T, USA*
 - Introduction: Project Management of Telecommunications: Services vs. Equipment
- Amr Badawi – *General Dynamic, Cairo, Egypt*
 - Next Generation Network Management Role in Telecommunication Services
- Tayfun Cataltepe – *TT&TIM Telecommunication Service, Turkey*
 - Telecom Services in a Newly Deregulated Industries

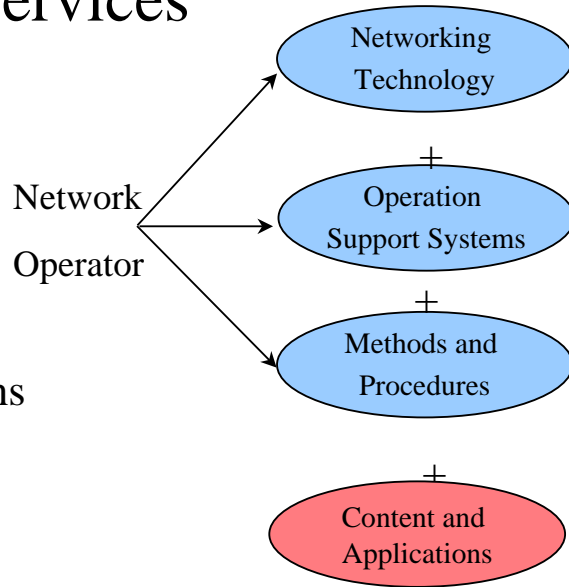
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The Two Sides of Telecommunication Services

- External view: a set of networking services available to subscribers
- Internal view: networking technologies, operation support systems, methods and procedures, applications and content distribution



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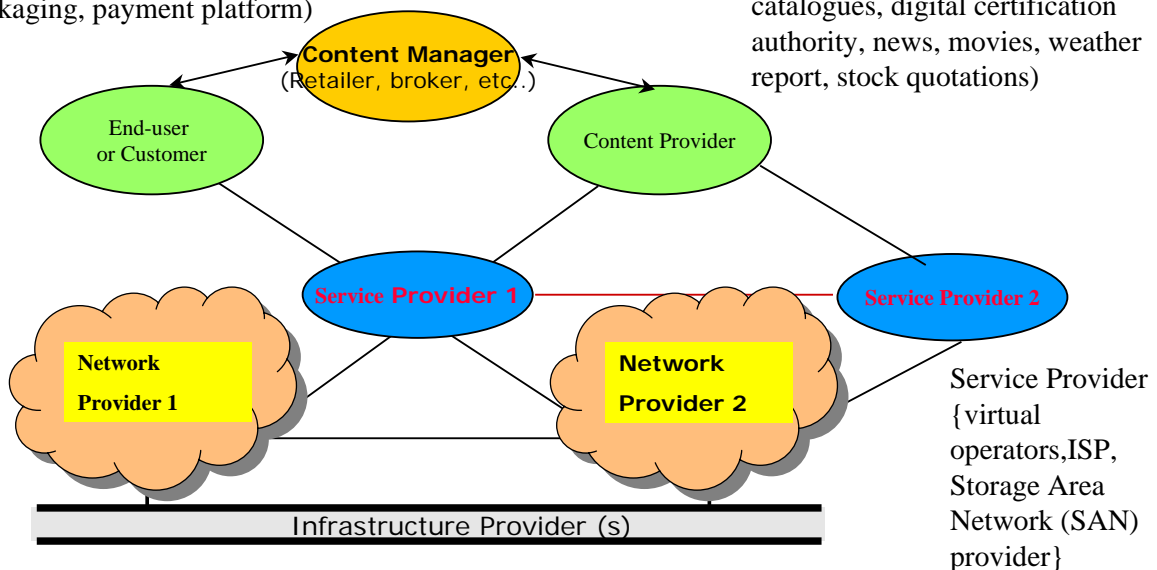
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Architecture of Telecommunications Services

Content Manager (Customer Relationship Manager, content packaging, payment platform)

Content Provider (Call center, catalogues, digital certification authority, news, movies, weather report, stock quotations)



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The Main Points of the Talk

- There are interesting technical and intellectual problems dealing with service
- These problems are not being adressed
- ISCC can take a lead in addressing these problems
 - By bringing these problems to the fore
 - By encouraging discussions on that subject
 - ??

Current Status

- Industrialized countries, the percentage of the workforce in the service section is around 70% but telecommunication services are not well understood
- No distinction between services and, equipment design or manufacturing.
 - Services are not considered in technical conferences
 - Technology management studies focus on innovation with an emphasis on product innovations
 - Last book on project management for telecommunications one was published in 1987
 - One of the few books on telecommunications service development was published in 1998

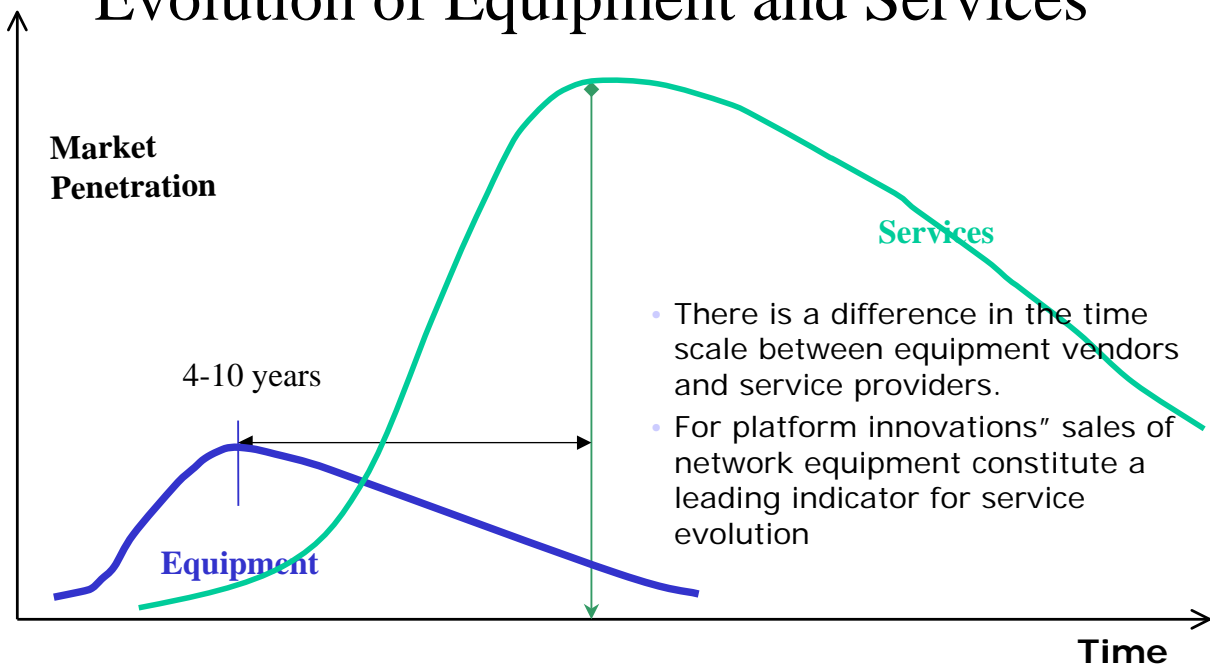
Missing Areas in Engineering

- Economics of telecommunications services e.g.
 - Spectrum allocation
 - Standardization
- Modeling of telecommunication systems (not just components)
- System integration for telecommunications services
- Use of telecommunications for urban planning and quality of life
- No existing curriculum or courses on that subject

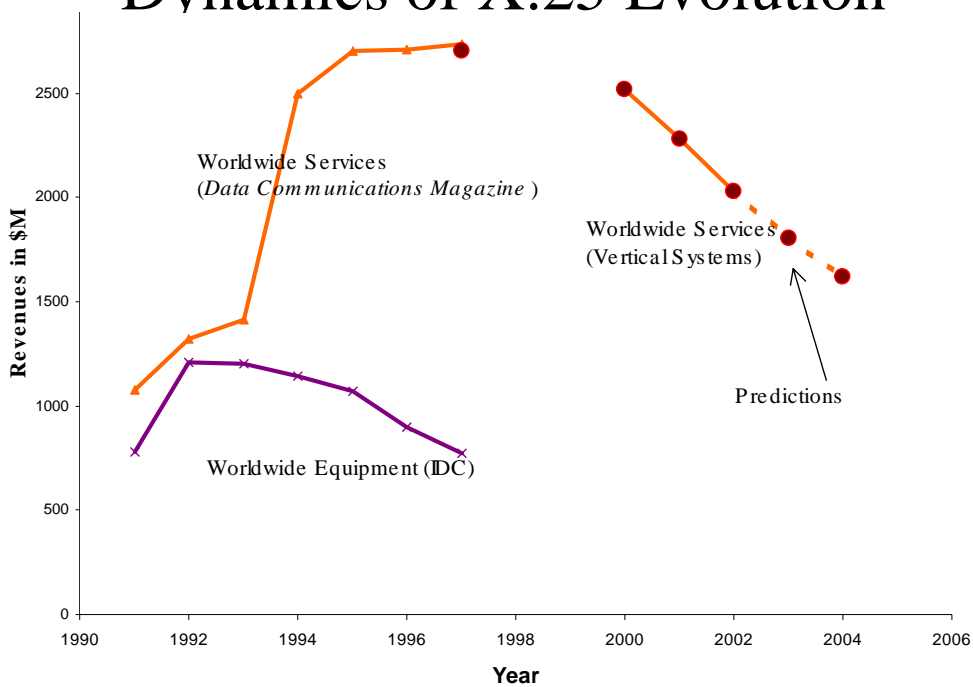
Business

- Management program focus on the use of global telecommunications and information industry to gain a competitive advantage: outsourcing, etc.
- Discussion on the service society centers on business consultants, legal advisers, insurance companies, health care or entertainment complexes, etc.
- Telecommunication services are not just call centers!

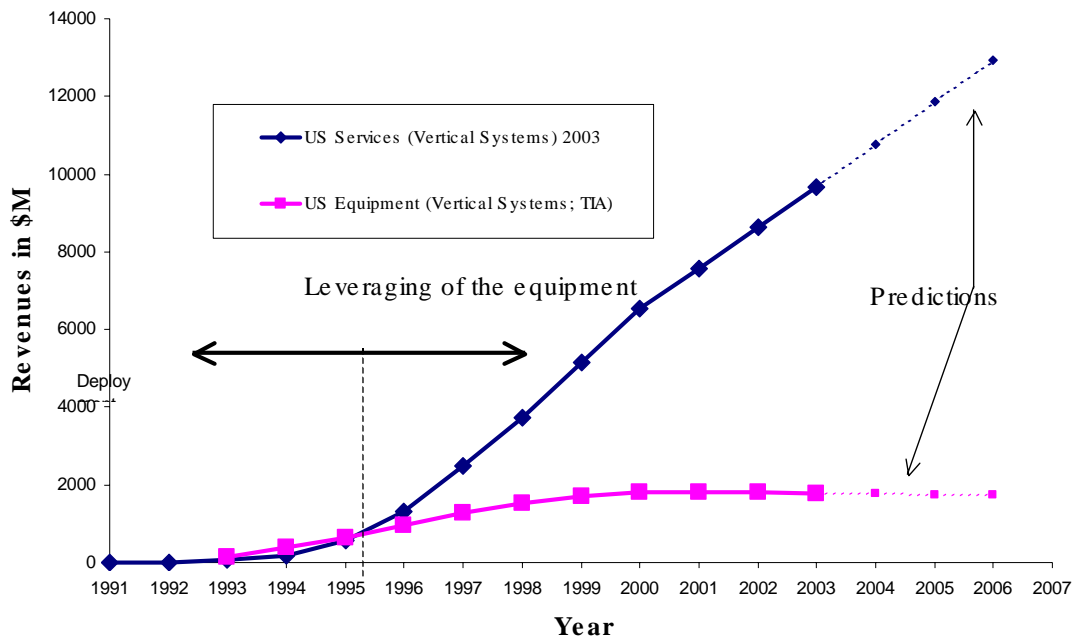
Evolution of Equipment and Services



Dynamics of X.25 Evolution

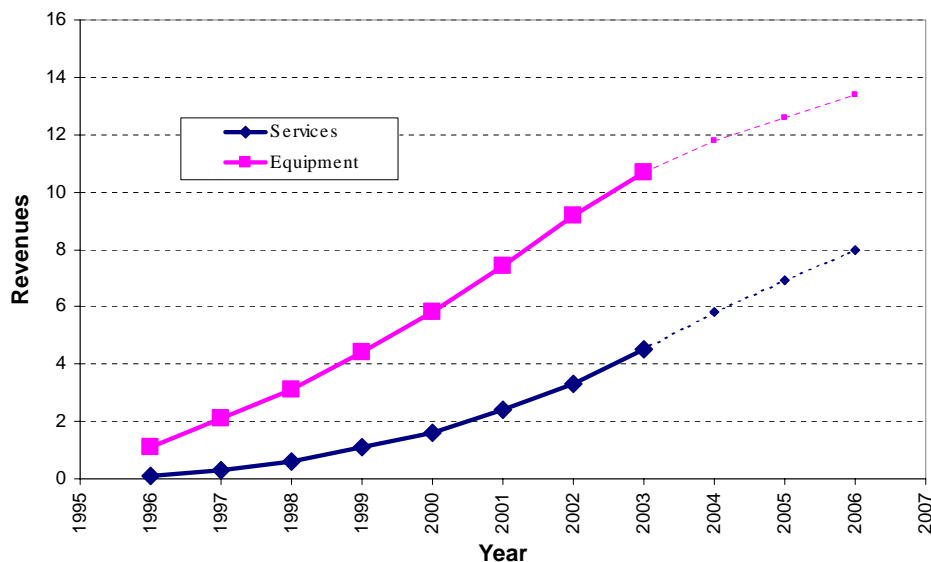


Dynamics of Frame Relay Market Evolution (US)

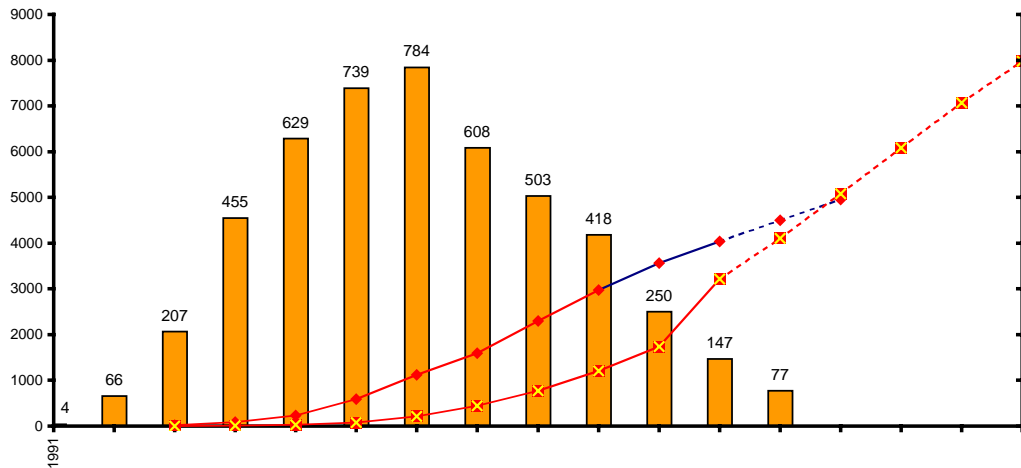


Dynamic of ATM Market Evolution (Worldwide Market-\$ Billions)

Worldwide ATM Market (\$ Billions)



Evolution of Standardization and ATM Revenues in the U.S.

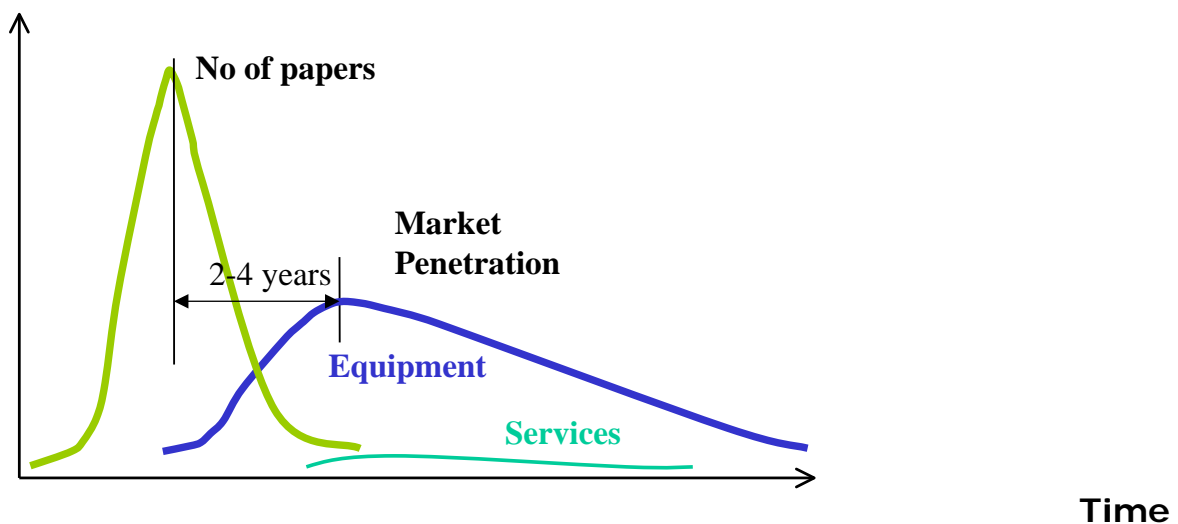


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Evolution of Papers in Engineering Conferences

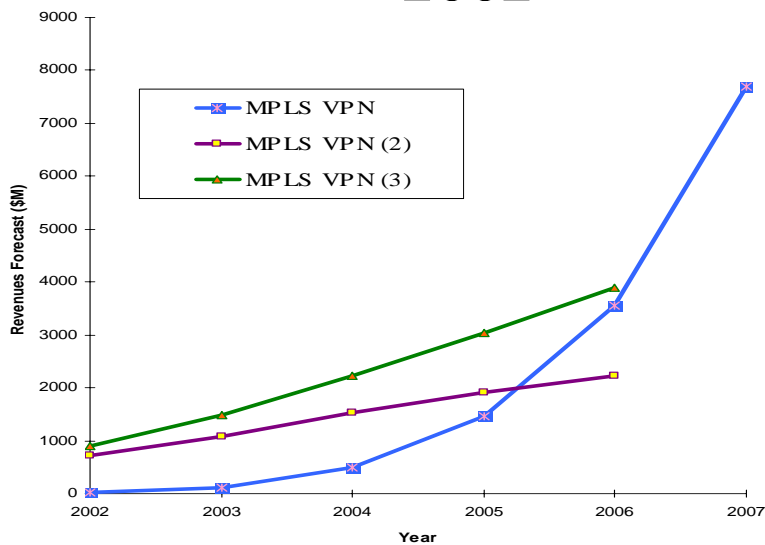


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Comparison of Various Estimates of MPLS VPN in the U.S. by Ovum in 2002



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Problems of Incorrect Scope – Failure of Telecom Services Alliances

Alliance Name/Parties in the Alliance	Start Date	End Date
BT and EDS		1993
Telecom Italia and IBM		1995
BT and Portugal Telecom		1998
Telecom Italia and Cable & Wireless		1998
AT&T, BT and KDD (GIMM)	1985	1998
Unisource (KPN, Telia, Swisscom)	1991	1999
Atlas Communications (Deutsche Telekom, France Telecom)	1993	1995
Word Partners (AT&T, KDD, Singapore Telecom)	1993	1998
Concert (BT, MCI, PT Austria, Portugal Telecom, Tele Denmark, Telefónica, Telenor)	1994	1997
Global One (Deutsche Telekom, France Telecom, Sprint)	1996	1999
Telefónica and Unisource	1996	1997
Telecom Italia and AT&T	1996	1998
AT&T and Unisource	1996	1998
Telefónica and Concert	1997	1997
Concert (AT&T and BT)	1998	2001
Vizzavi (Vodafone and Vivendi Universal)	2000	2002

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