Trend's Multiplay Services

Pocket Guide

TrendMultipro Triple Play

Trend Multipro is a multitechnology test platform for next-generation services and applications. It ensures correct end-to-end operation of converged networks by testing VoIP, IPTV, VoD and Internet services as they are experienced by the customer. Trend Multipro is supplied with multiple interfaces such as ADSL2+, VDSL2, and Gigabit Ethernet to maximize its connectivity to the network.

Trend Multipro can perform quick, cost-effective Pass/Fail tests and benchmarking tasks. However, very comprehensive and detailed testing is also available, making Trend Multipro a versatile tool that adapts to the needs and skills of any user. It is a perfect solution for the deployment and bringing-into-service of multiplay applications.

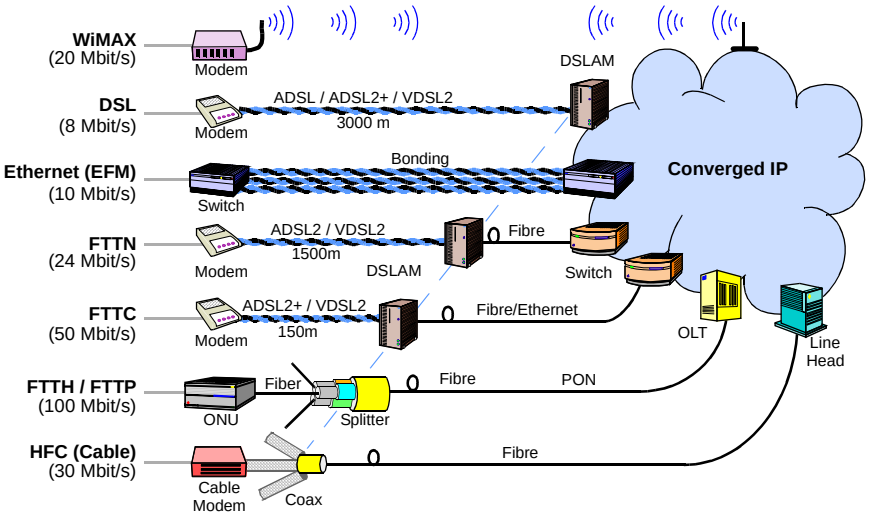

Figure 1 Broadband access technologies for Triple Play applications.

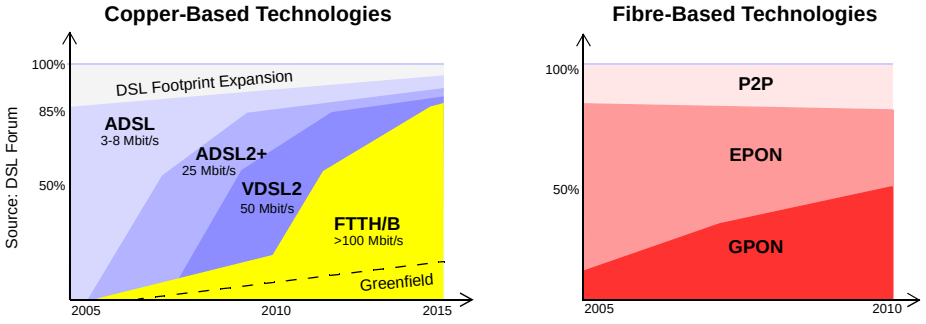

Figure 2 Forecast for the use of broadband access technologies.

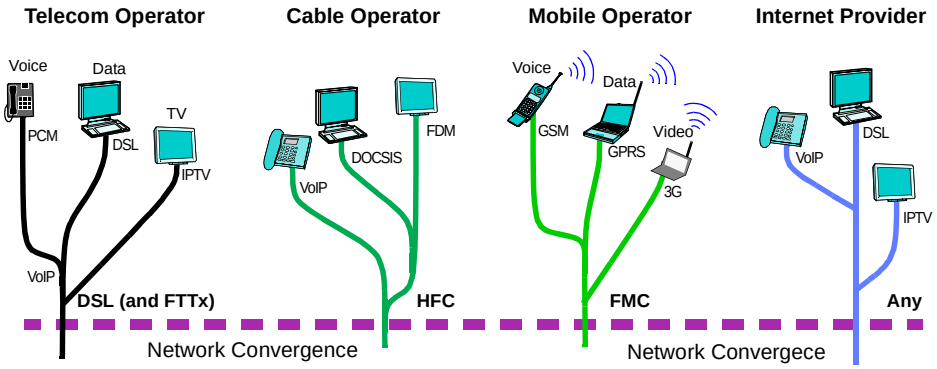

Figure 3 Each operator has their own migration strategy for network convergence.

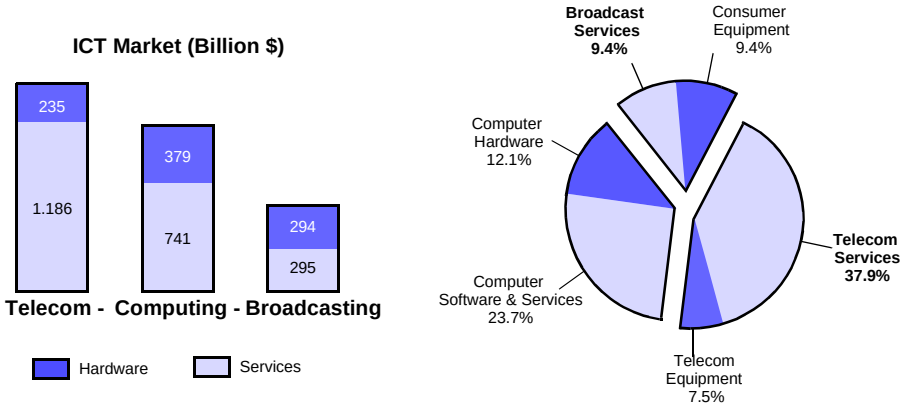

Figure 4 The global information and communication technologies market (ICT). Source ITU (2006).

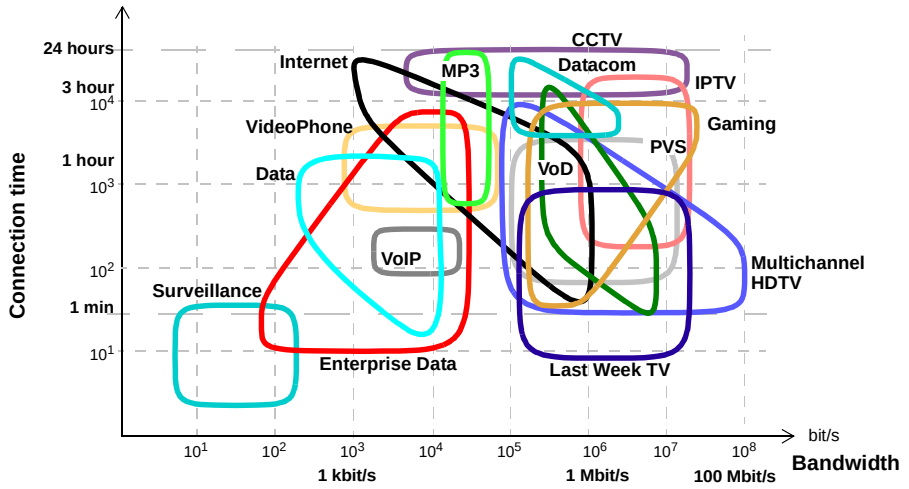

Figure 5 Triple Play applications: Bandwidth and time requirements.

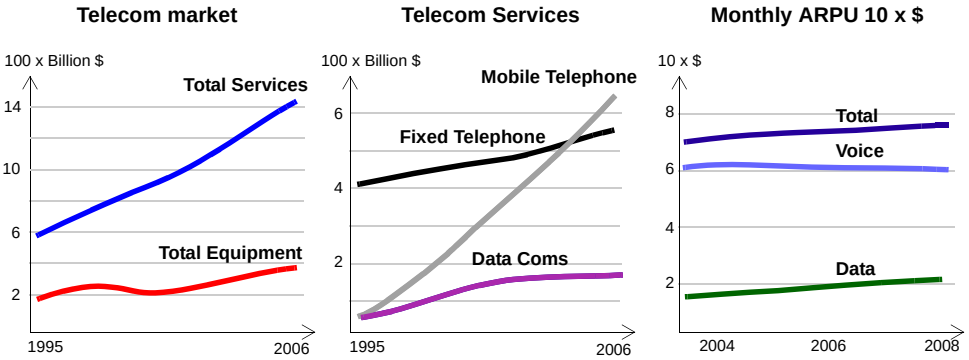

Figure 6 Telecom market revenues in services, equipment and ARPU. Source: ITU and Telegeography Rch.

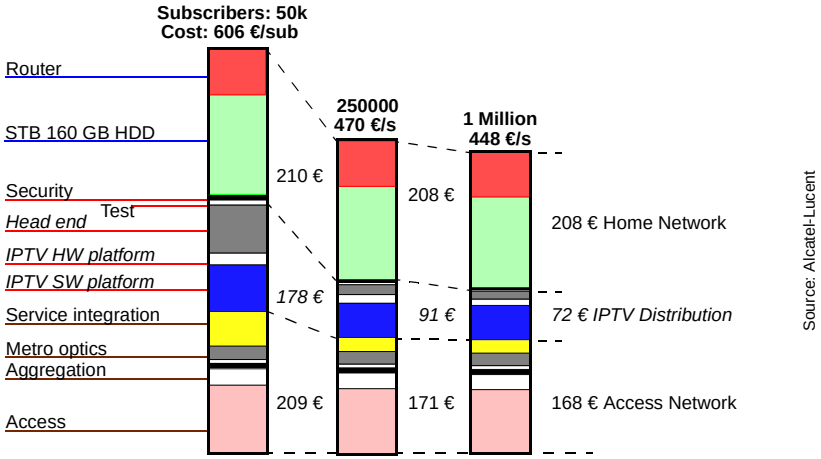

Figure 7 Triple Play deployment costs and the scale economies.

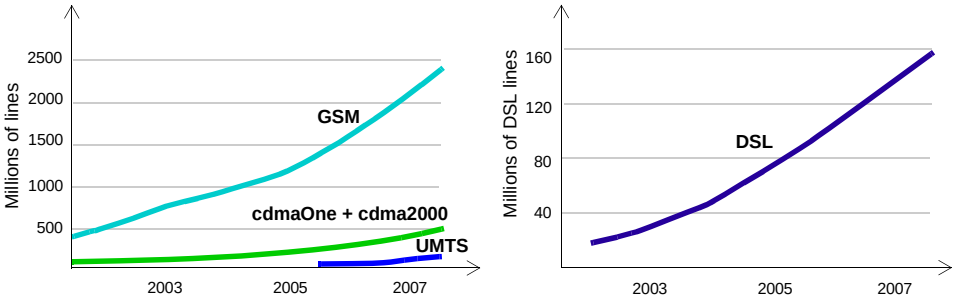

Figure 8 Evolution of the worldwide mobile telephony market.

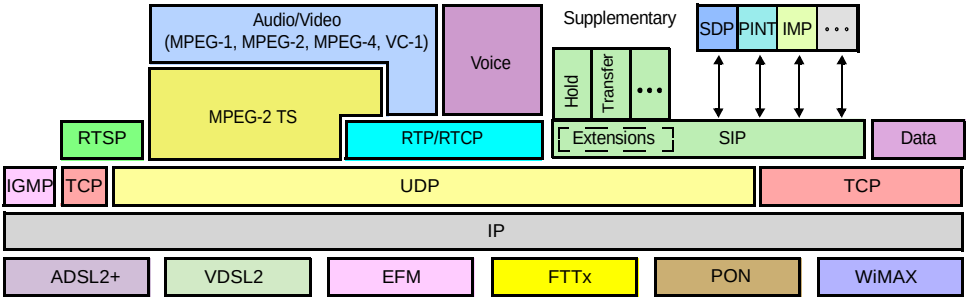

Figure 9 Protocol for IP multimedia services.

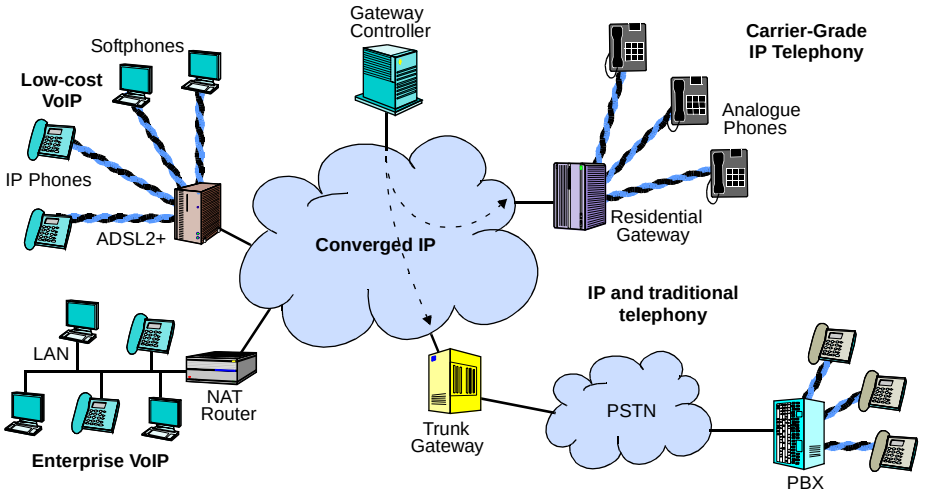

Figure 10 VoIP is revolutionising the world of telephony: it enables users to make low-cost Internet phone calls, but at the same time, it is also a key element in the strategy of telecom companies worldwide.

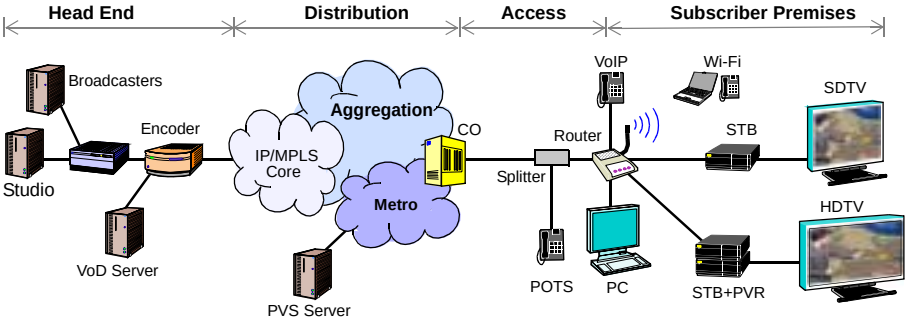

Figure 11 Architecture for supporting audiovisual services, such as IPTV, VoD and PVS. The bidirectional nature of IP enables interaction with TV.

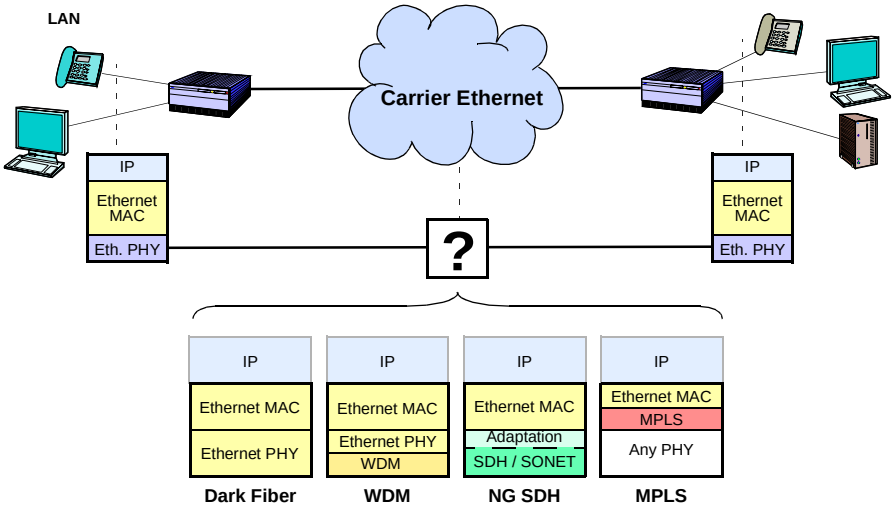

Figure 12 Alternatives for providing Carrier Ethernet services.

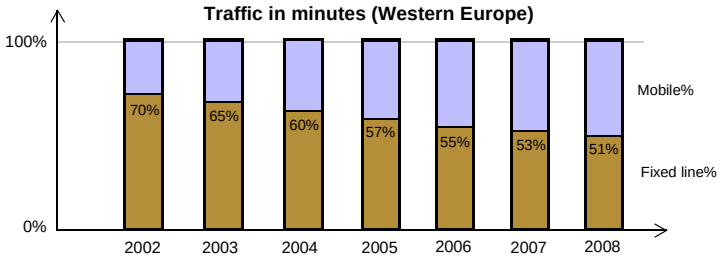

Figure 13 Fixed-line voice traffic is declining, but wireless voice revenues are not growing as before.

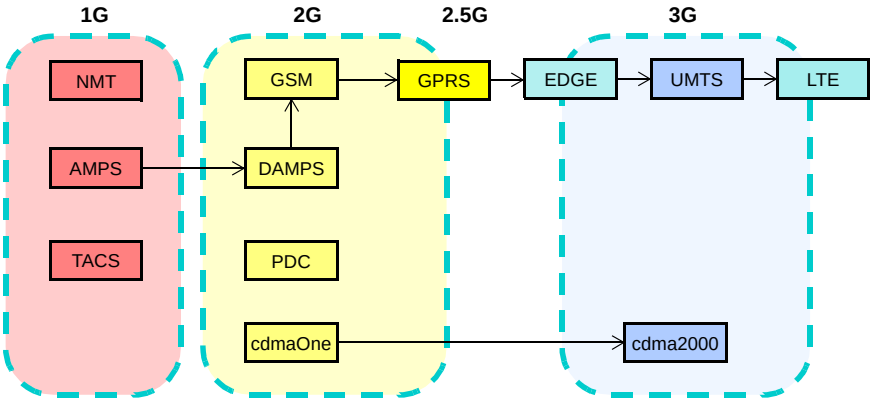

Figure 14 Evolution of mobile communications standards.

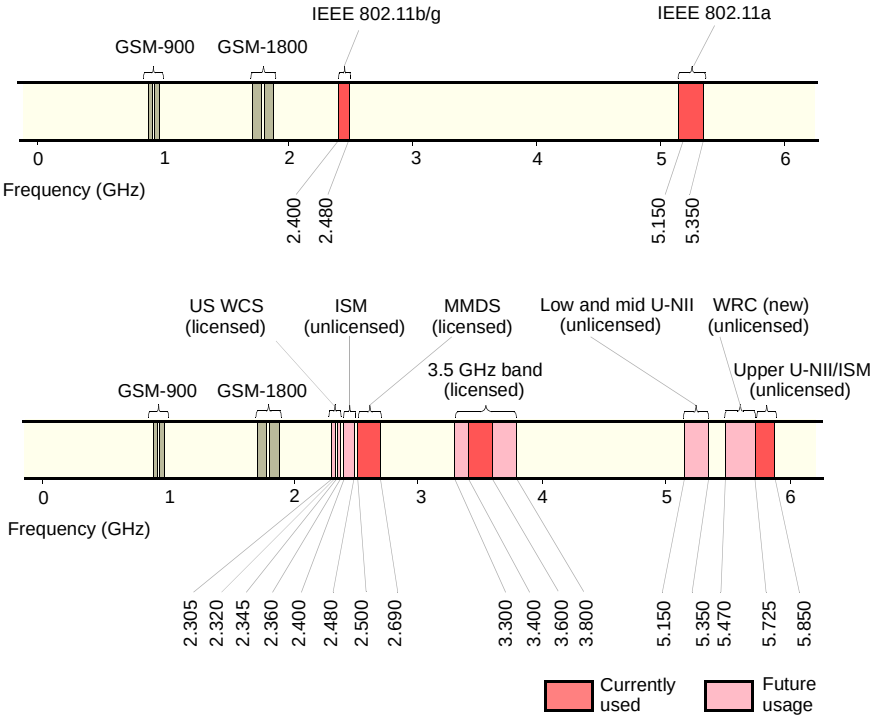

Figure 15 Frequency allocations for Wi-Fi and WiMAX.

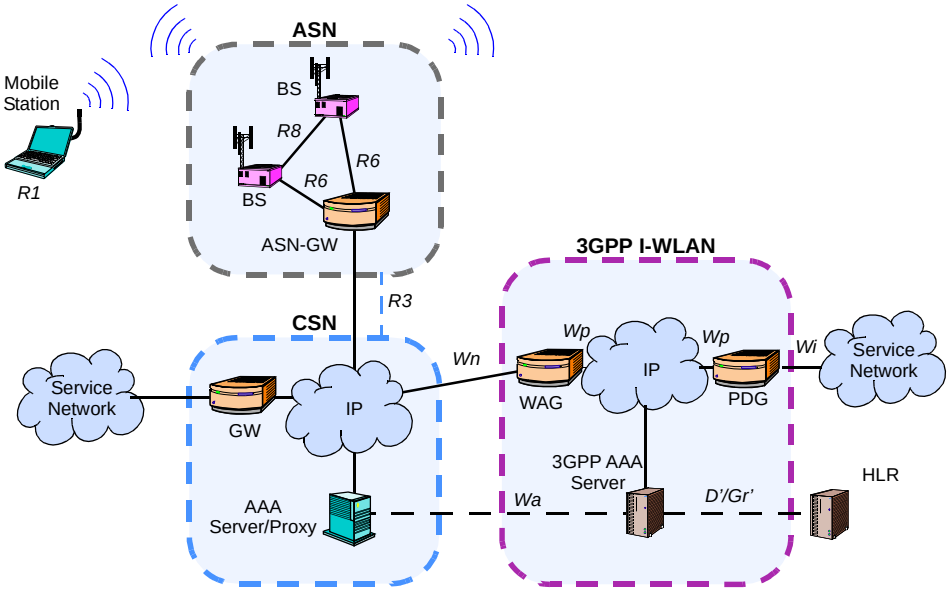

Figure 16 Simplified WiMAX and 3GPP interworking architecture based on the I-WLAN standard.

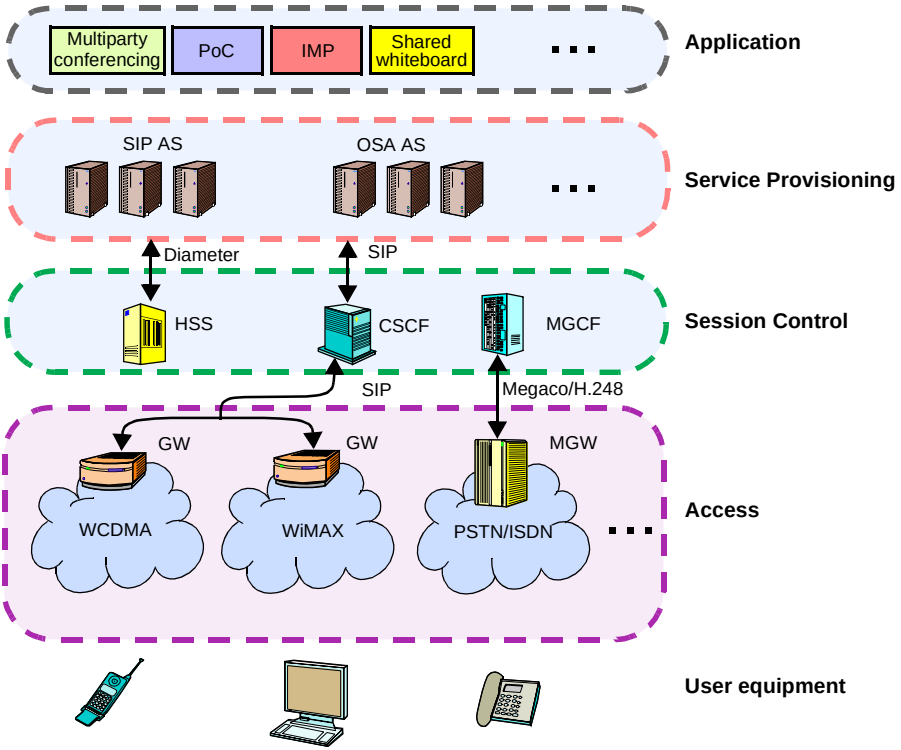

Figure 17 IMS, layered architecture.

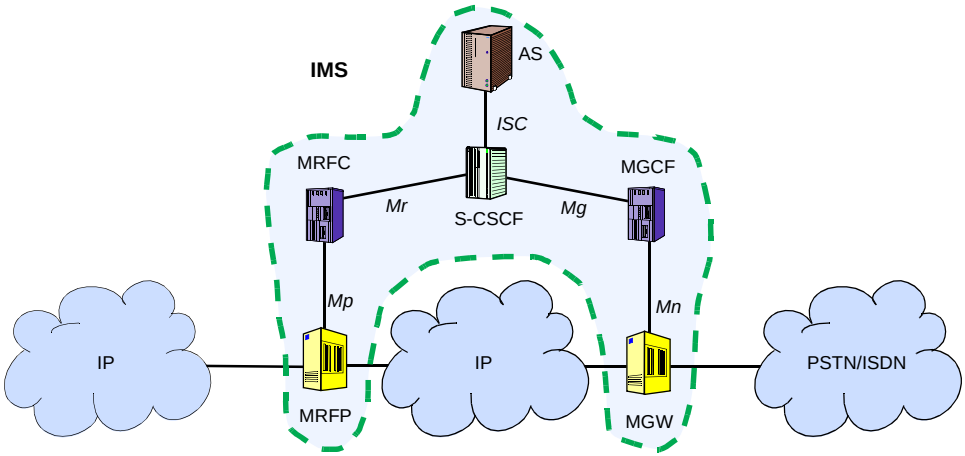

Figure 18 The IMS controls user data flows, but it does not transport user data itself. Gateways are divided into management entities (MRFC, MGCF) and enforcement entities (MRFC, MGCF).

Acronyms

AAA	Authentication, Authorization and Accounting	MAC	Media Access Control
ADSL	Asymmetric Digital Subscriber Line	MGCF	Media Gateway Controller Function
AMPS	Advanced Mobile Phone System	MGW	Media Gateway
ARPU	Average Revenue Per User	MMDS	Multichannel, Multipoint Distribution Service
AS	Application Server	MPEG	Moving Picture Experts Group
ASN	Access Service Network	MPLS	Multi-Protocol Label Switching
CSCF	Call Session Control Function	MRFP	Multimedia Resource Function Processor
CSN	Connectivity Service Network	NAT	Network Address Translation
DAMPS	Digital Advanced Mobile Phone System	NMT	Nordic Mobile Telephone
DOCSIS	Data Over Cable Service Interface Specification	OLT	Optical Line Transmission
DSL	Digital Subscriber Loop	OSA	Open Services Architecture
EDGE	Enhanced Data rate for Global Evolution	P2P	Person two Person
EFM	Ethernet in the First Mile	PDC	Personal Digital Cellular
EPON	Ethernet Passive Optical Network	PoC	Push-to-talk over Cellular
FDM	Frequency Division Multiplexing	POTS	Plain Old Telephone System
FTTB	Fibre-To-The-Building	PSTN	Public Switched Telephone Network
FTTC	Fibre-To-The-Cabinet	PVS	Personal Video Service
FTTH	Fibre-To-The-Home	RTCP	Real-Time Control Protocol
FTTN	Fibre-To-The-Node	RTP	Real-Time Transport Protocol
FTTP	Fibre-To-The-Premises	RTSP	Real-Time Streaming Protocol
GPON	Gigabit Passive Optical Network	SDH	Synchronous Digital Hierarchy
GPRS	General Packet Radio Service	SDP	Session Description Protocol
GSM	Global System for Mobile communications	SONET	Synchronous Optical Network
HDTV	High-Definition TV	STB	Set-Top Box
HFC	Hybrid Fibre Coaxial	TACS	Total Access Communication System
HLR	Home Location Register	TCP	Transfer Connection Protocol
HSS	Home Subscriber Server	TS	Transport Stream
IGMP	Internet Group Management Protocol	UDP	User Datagram Protocol
IMP	Instant Messaging and Presence	UMTS	Universal Mobile Telephone Service
IMS	IP Multimedia Subsystem	U-NII	Unlicensed National Information Infrastructure
IP	Internet Protocol	VDSL	Very-high-bitrate Digital Subscriber Line
IPTV	Internet Protocol Television	VoD	Video-on-Demand
ISC	IMS Service Control	VoIP	Voice over Internet Protocol
ISM	Industrial, Scientific and Medical	WCDMA	Wideband Code Division Multiple Access
ISP	Internet Service Provider	WCS	Wireless Communications Service
LAN	Local Area Network	WDM	Wavelength Division Multiplexing
LEO	Low Earth Orbit	WiMAX	Wireless Broadband Transmission System
LTE	Long-Term Evolution	WRC	World Radio Conference

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