

International interconnection: Part 1: Trends in international telecom traffic

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Note: The views expressed in this presentation are those of the author and do not necessarily reflect the opinions of the ITU or its membership. Dr Tim Kelly can be contacted by e-mail at Tim.Kelly@itu.int

International Interconnect: A series of three lectures

Part 1: Trends in international traffic

Part 2: Managing the transition from revenue-sharing to cost-orientation

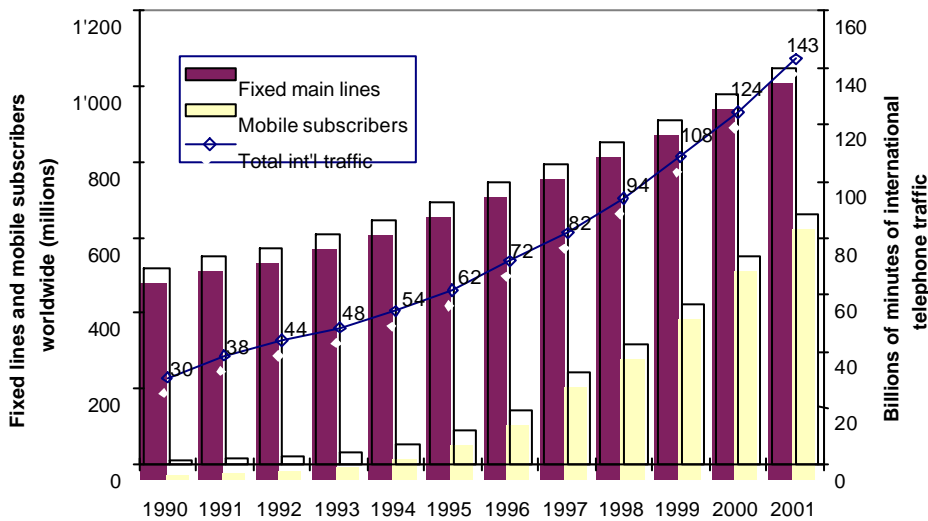
Part 3: The Internet changes everything



Agenda

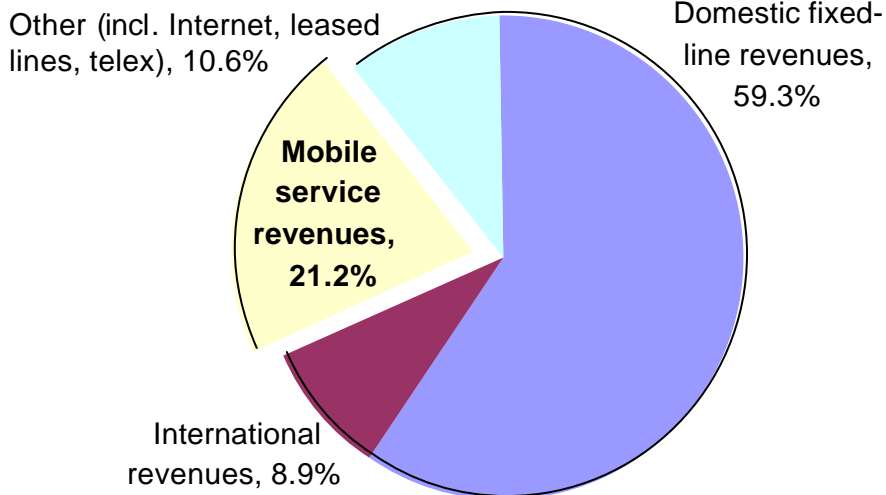
- Trends in international traffic
 - ⇒ Steady growth in voice traffic
 - ⇒ Higher percentage originating from mobiles
 - ⇒ Explosive growth of Internet traffic
- Regional breakdown of traffic
- Market shares
- Competitive markets
- Telecom Italia's international position
- ITU/TeleGeography "Direction of Traffic" publication

Trends in international traffic minutes (billions)



Source: ITU/TeleGeography Inc. "Direction of Traffic 1999: Trading Telecom Minutes"

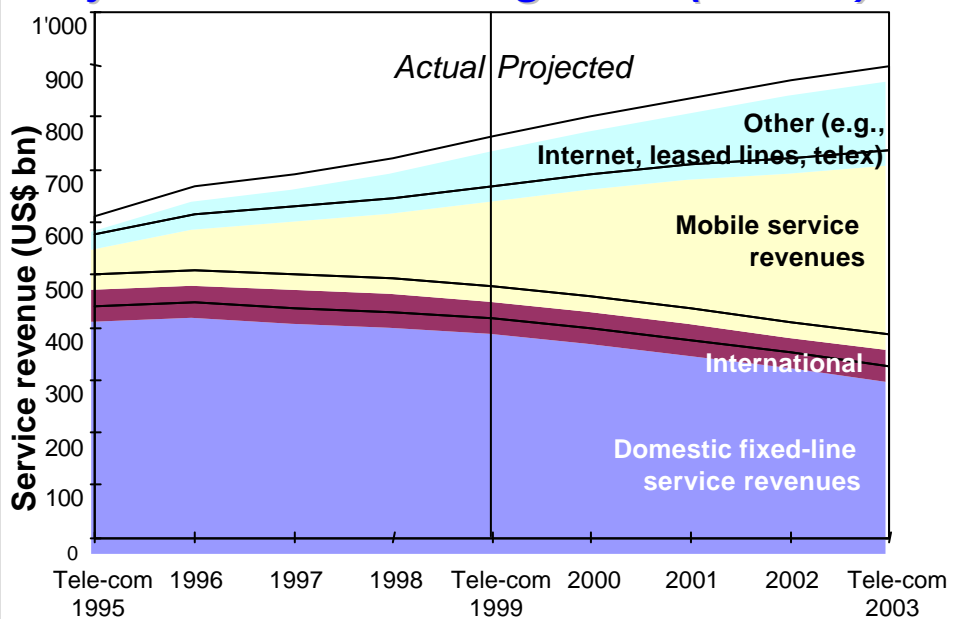
The changing pie: Global telecom service revenue, 1998



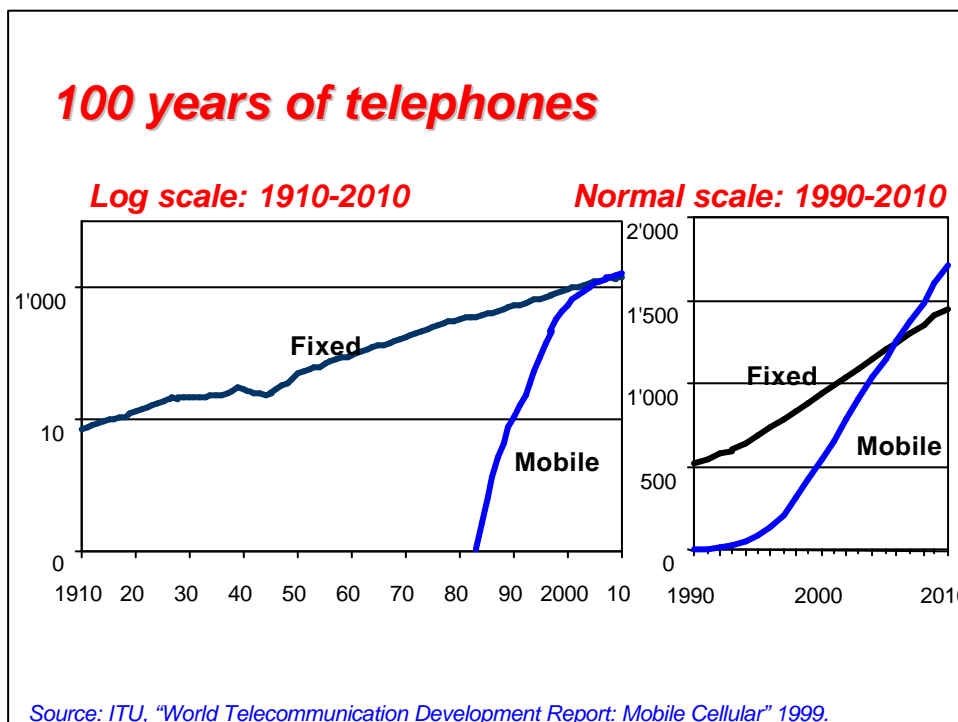
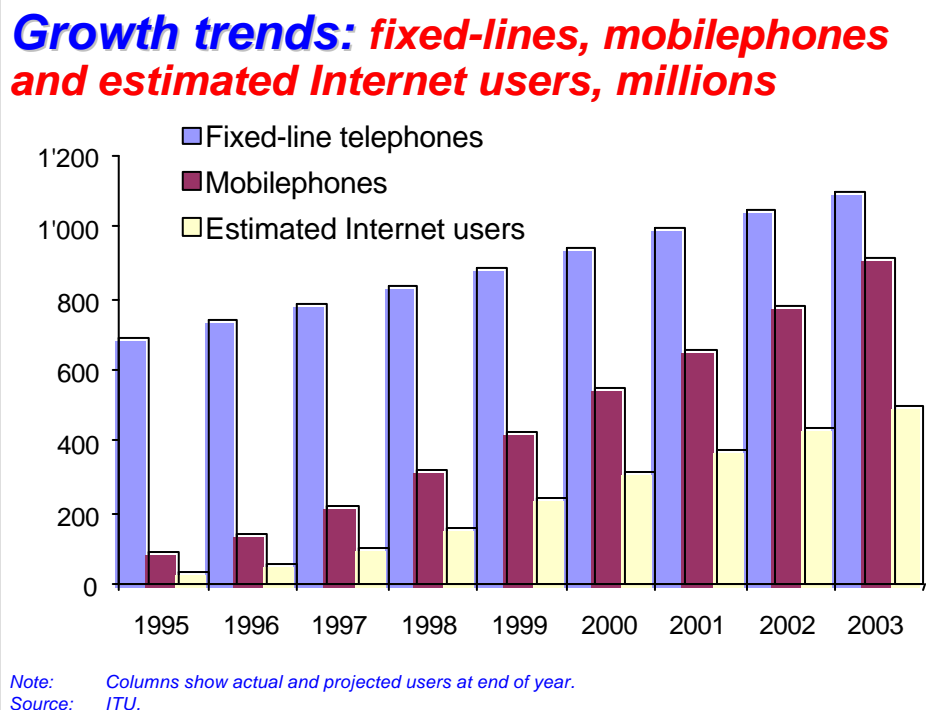
1998 Telecom service revenue. Total = US\$724bn

Source: ITU "World Telecommunication Development Report 1999: Mobile cellular"

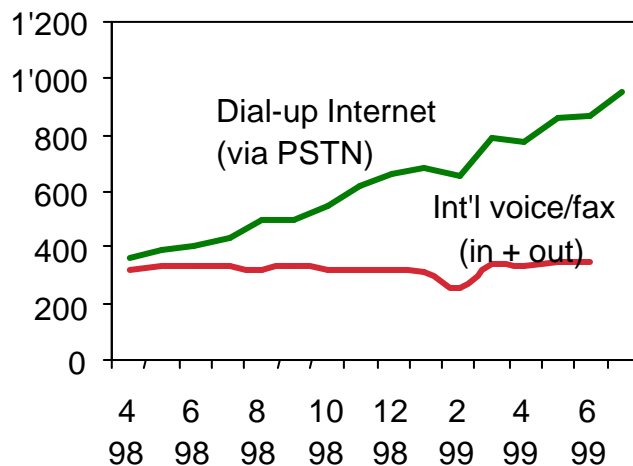
Projection of revenue growth (US\$bn)



Source: ITU "World Telecommunication Development Report 1999: Mobile cellular"

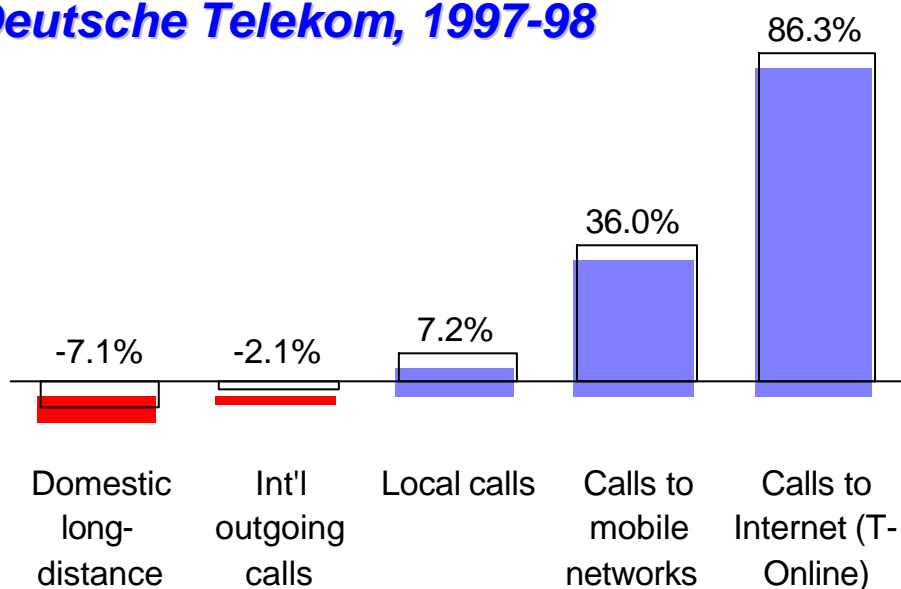


Internet outgrowing voice
Hongkong SAR, April '98-July '99,
Minutes of user per month, '000s



Source: ITU/TeleGeography Inc. "Direction of Traffic 1999: Trading Telecom Minutes".

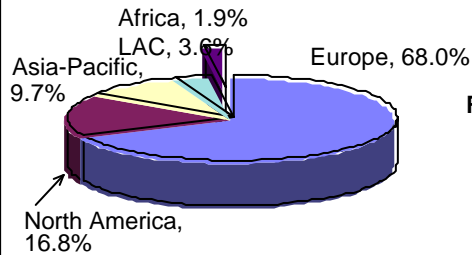
Trends in call volume,
Deutsche Telekom, 1997-98



Source: ITU/TeleGeography Inc. "Direction of Traffic 1999: Trading Telecom Minutes".

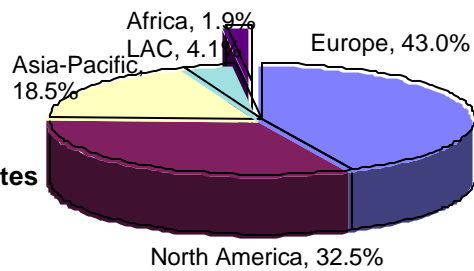
Changing regional shares of global international traffic, 1983 & 1997

Regional share of International traffic, 1983



By origin, total = 10.2 billion minutes

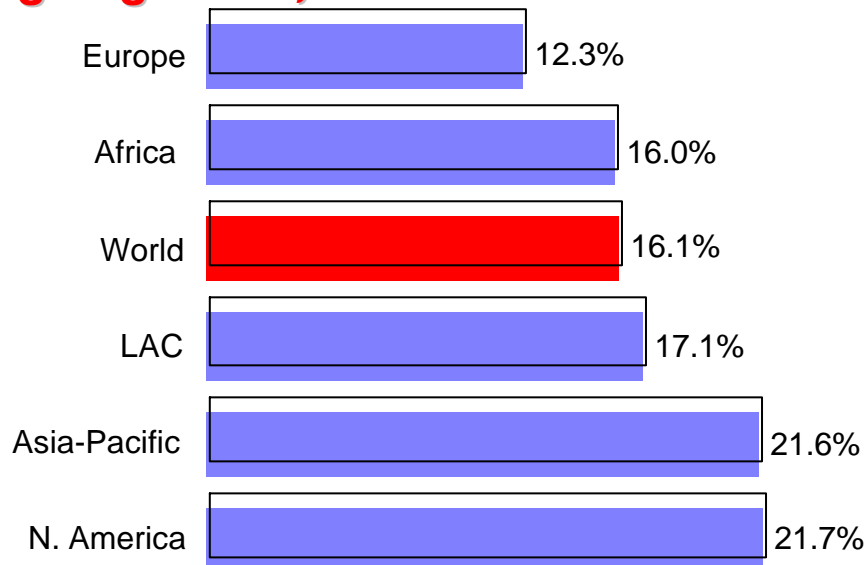
Regional share of int'l traffic, 1997



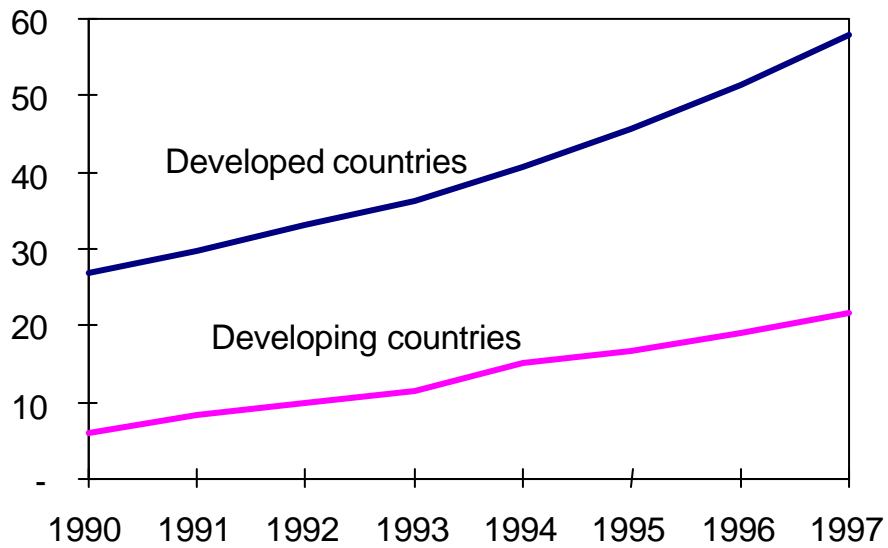
By origin, total = 81.8 billion minutes

Source: ITU/TeleGeography Inc. "Direction of Traffic 1999: Trading Telecom Minutes".

Compound annual growth rates in outgoing traffic, 1983-1997

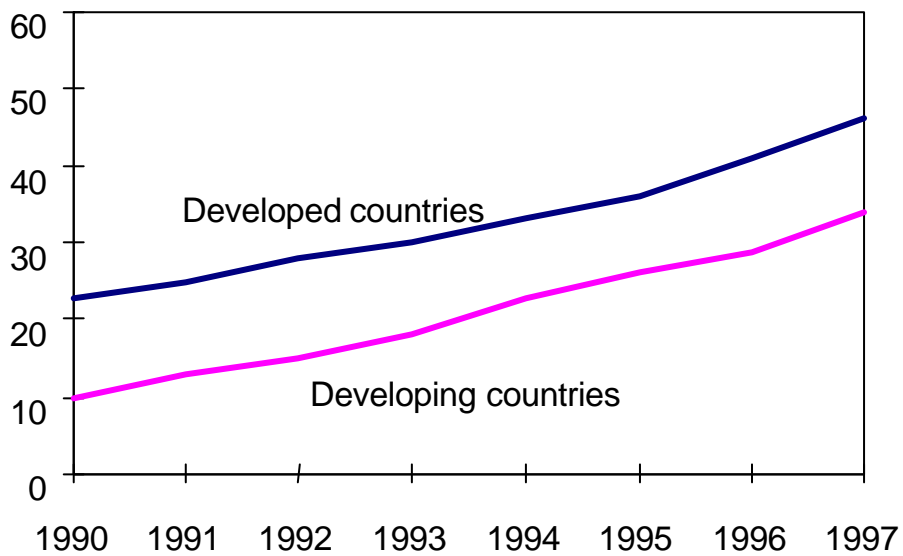


Trends in outgoing traffic, bn minutes



Source: ITU/TeleGeography Inc. "Direction of Traffic 1999: Trading Telecom Minutes".

Trends in incoming traffic, bn minutes



Source: ITU/TeleGeography Inc. "Direction of Traffic 1999: Trading Telecom Minutes".

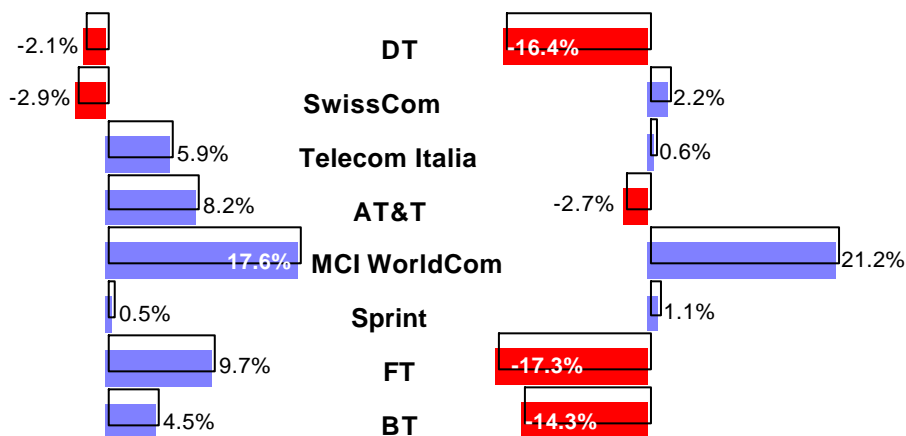
Top 10 PTOs by outgoing int'l traffic

PTO	1998 Bn Mins	% change 97/98
AT&T (97 data)	10'331	8.2%
MCI WorldCom (97)	7'313	17.6%
Deutsche Telekom	4'711	-2.1%
France Telecom	3'400	9.7%
Sprint (97)	2'759	0.5%
BT	2'710	4.5%
Telecom Italia	2'339	5.9%
SwissCom	1'901	-2.9%
Telefonica	1'803	15.1%
Hongkong Telecom	1'718	-2.1%

Source: ITU/TeleGeography Inc. "Direction of Traffic 1999: Trading Telecom Minutes"

Selected PTOs, performance 1997/98

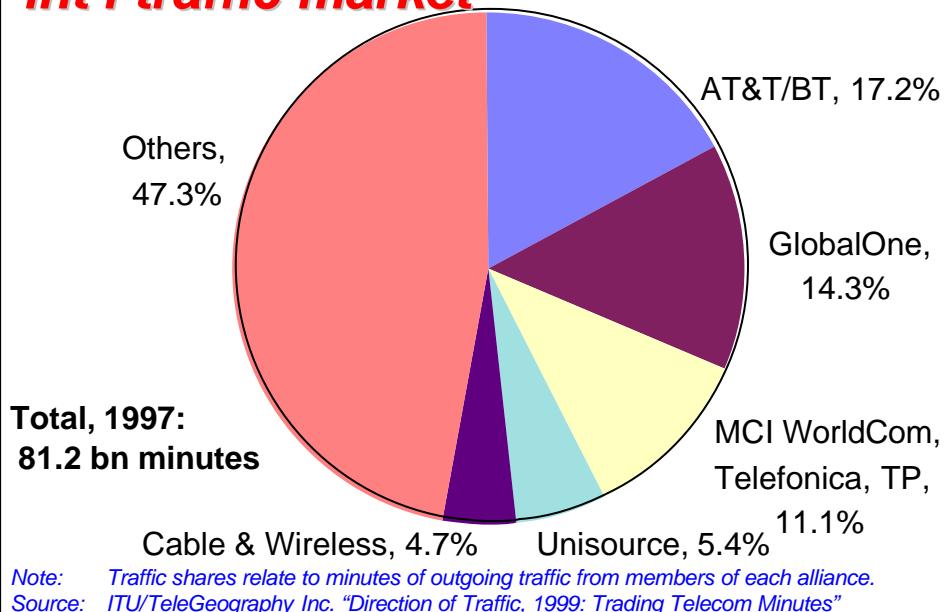
% change in traffic % change in int'l rev.



Note: Based on 1998 international outgoing traffic and revenue from international operations. For Sprint, MCI WorldCom and AT&T, data relates to 1997. The definition of international revenue (gross, net or retail) is that used by each individual operator.

Source: ITU/TeleGeography Inc. "Direction of Traffic 1999: Trading Telecom Minutes"

Emerging global alliances, shares of int'l traffic market

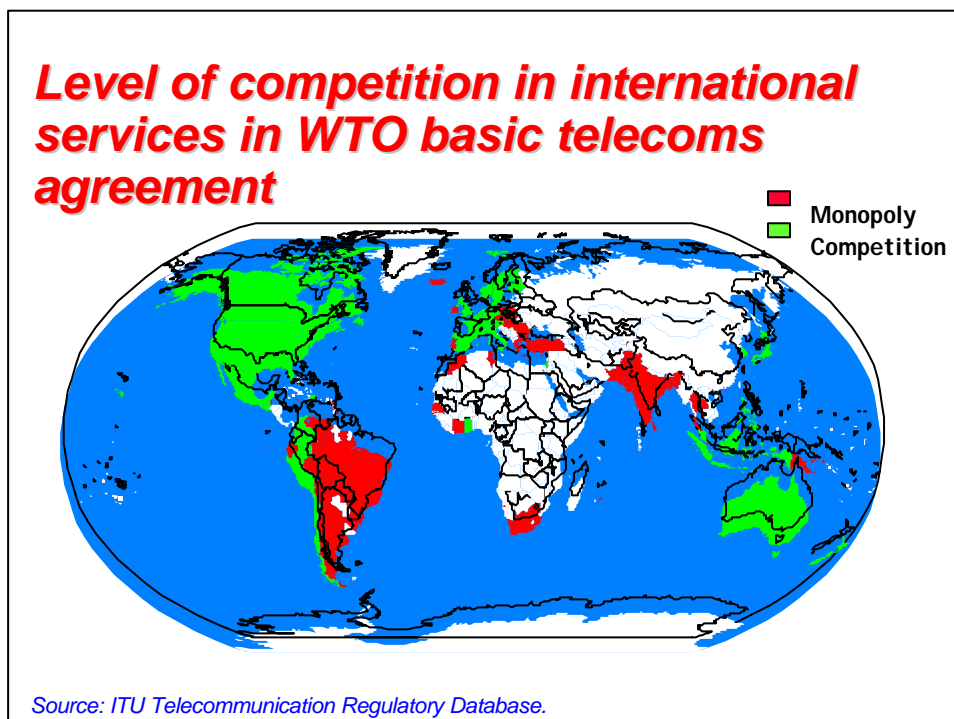
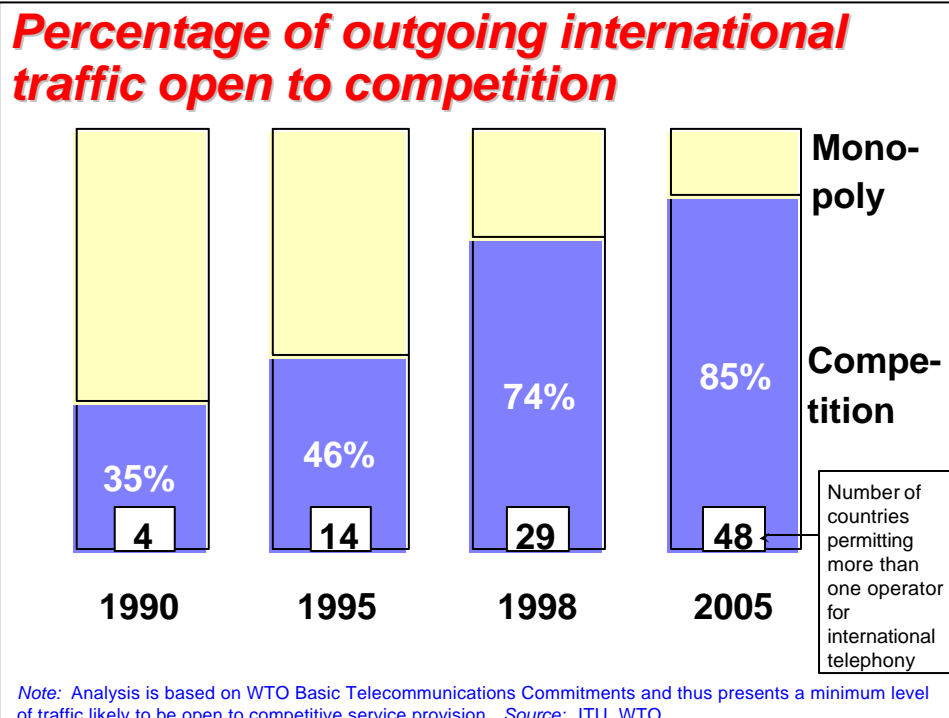




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Emerging global alliances: Recent developments

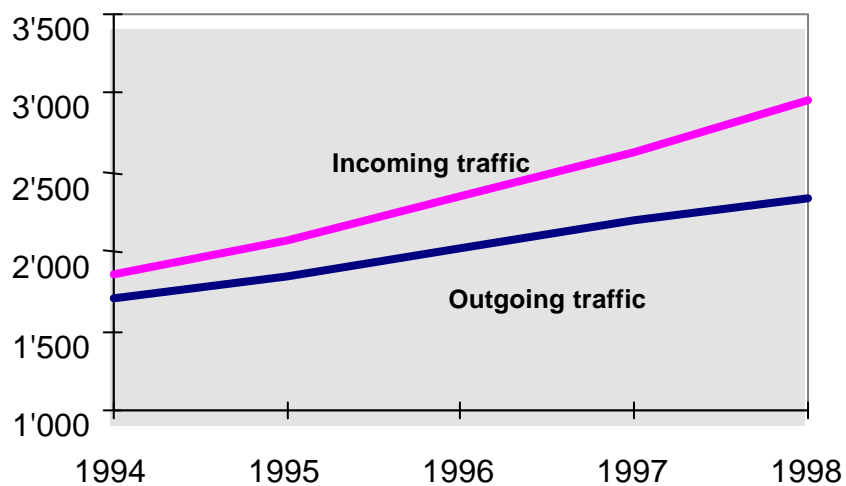
- WorldCom merges with MCI.
- Following collapse of BT/MCI merger, BT & AT&T join forces in "Concert"
- AT&T and Telefonica withdraw from Unisource
- GlobalOne on point of collapse following purchase of Sprint by WorldCom
- Deutsche Telekom's bid for Telecom Italia fails; Olivetti's succeeds
- Cable & Wireless re-positioning itself as supplier of data services
- Telia and TeleNor merge

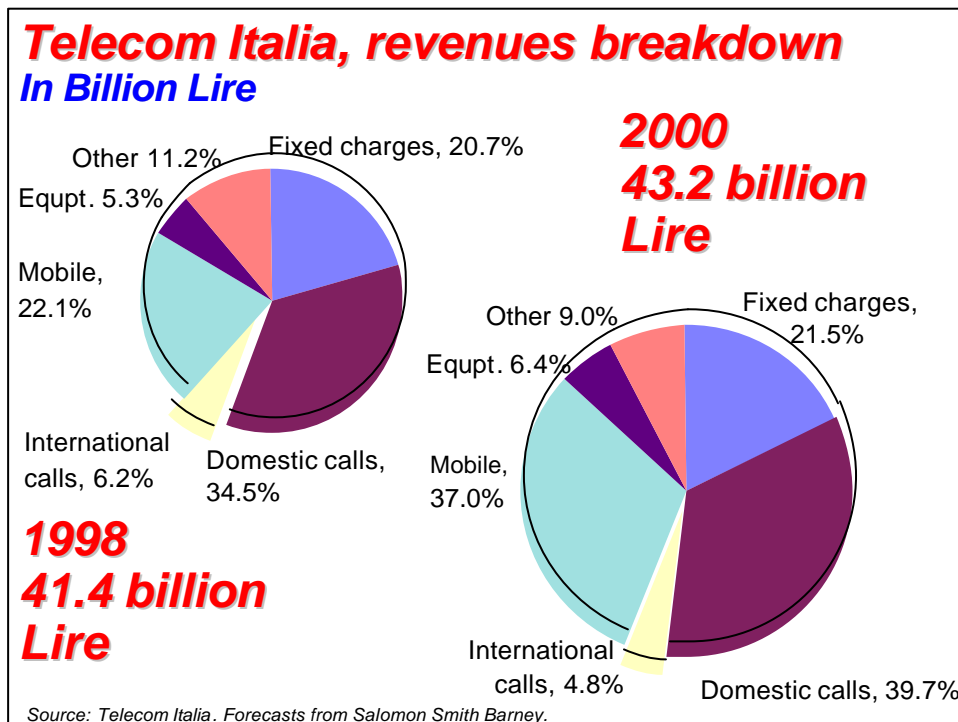
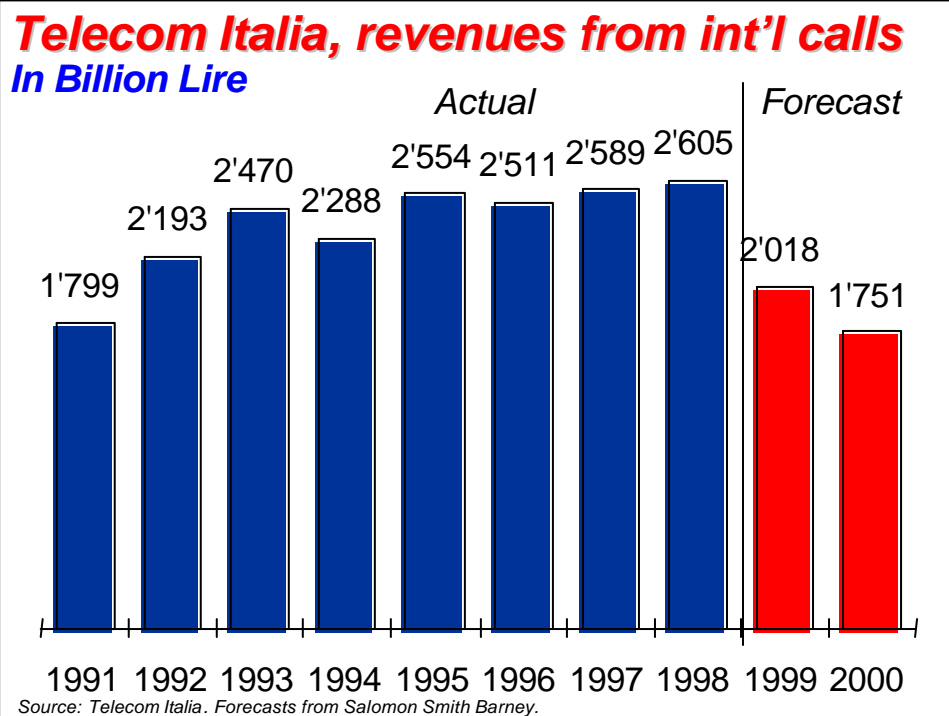


Countries permitting int'l competition

<p>1990</p> <p>1 Japan 2 New Zealand 3 UK 4 USA</p> <p>1995</p> <p>1 Australia 2 Canada (partial) 3 Colombia 4 Chile 5 Denmark 6 Finland 7 Japan 8 Korea (Rep.) 9 Malaysia 10 New Zealand 11 Philippines 12 Sweden 13 UK 14 USA</p>	<p>1998</p> <p>1 Australia 2 Austria 3 Belgium 4 Brunei D. 5 Canada 6 Chile 7 Colombia 8 DPR Congo 9 Denmark 10 Dominican Rep. 11 El Salvador 12 Finland 13 France 14 Germany 15 Ghana 16 Guatemala 17 HK-China (after Dec 1998) 18 Indonesia 19 Ireland (after Dec. 1999)</p>	<p>20 Israel 21 Italy 22 Japan 23 Korea (Rep.) 24 Malaysia 25 Mexico 26 Netherlands 27 New Zealand 28 Norway 29 Peru 30 Philippines 31 Russia 32 Somalia 33 Spain (after Dec. 1998) 34 Sweden 35 Switzerland 36 Uganda 37 Ukraine 38 UK 39 USA</p>
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Telecom Italia, int'l traffic trends, billion minutes

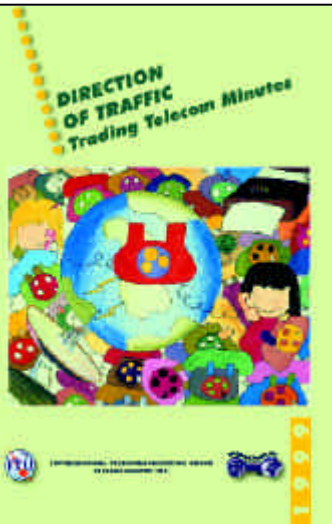






International traffic trends: Conclusions

- Voice traffic continuing to grow, but the main action is now elsewhere
- Mobile and the Internet will be the major demand drivers for the future
- Competitive markets will be the norm, monopolistic markets the exception in the future
- Alliances will continue to be formed, but partnerships are still unstable



For more information ...

- Publication launch: 10 October 1999 (TELECOM '99)
- Available on paper and on-line (PDF format)
- Also available with database on CD-ROM
- Website:

<http://www.itu.int/ti>

Other reports launched at TELECOM '99

- World Telecom Development Report 1999: Mobile Cellular
- Trends in Telecom Reform 1999: Convergence & Regulation
- Internet for Development (updated with latest data)