Global Trends in Telecom Restructuring

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Monday Session 1

CTO Senior management seminar: Telecoms restructuring and business change

Malta, 17-21 May, 1999

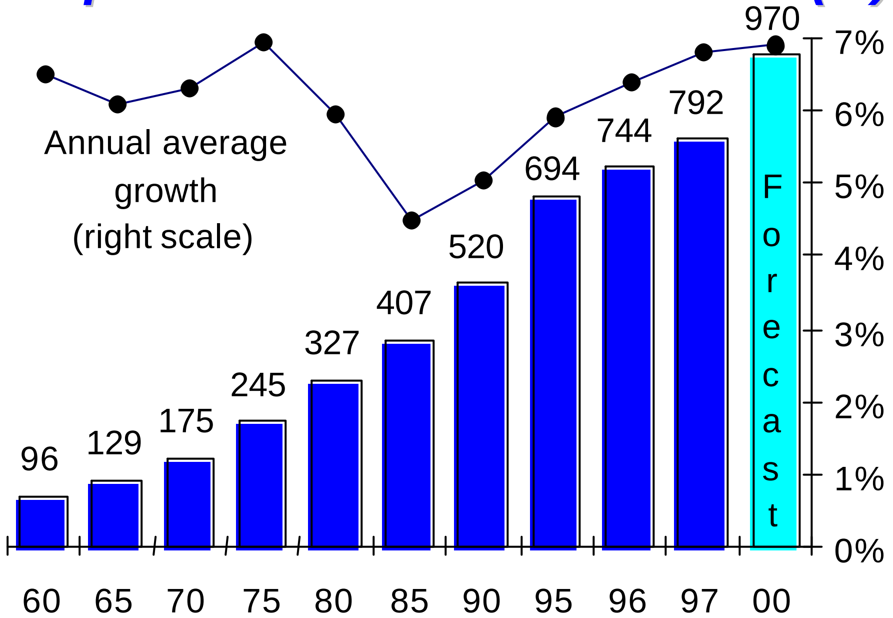
The views expressed in this paper are those of the author and do not necessarily reflect the opinions of the ITU or its membership. Dr Kelly can be contacted at Tim.Kelly@itu.int.

Agenda

- **The state of the Telecoms sector worldwide**
  - **The Public Switched Telephone Network**
  - **Mobile Communications**
  - **The Internet**
- **Market liberalisation / privatisation ***
- **Separation of regulatory and operational functions**
- **The telecoms development gap: The changing international telecoms environment**
  - **The erosion of the accounting rate system**
- **Key policy issues**

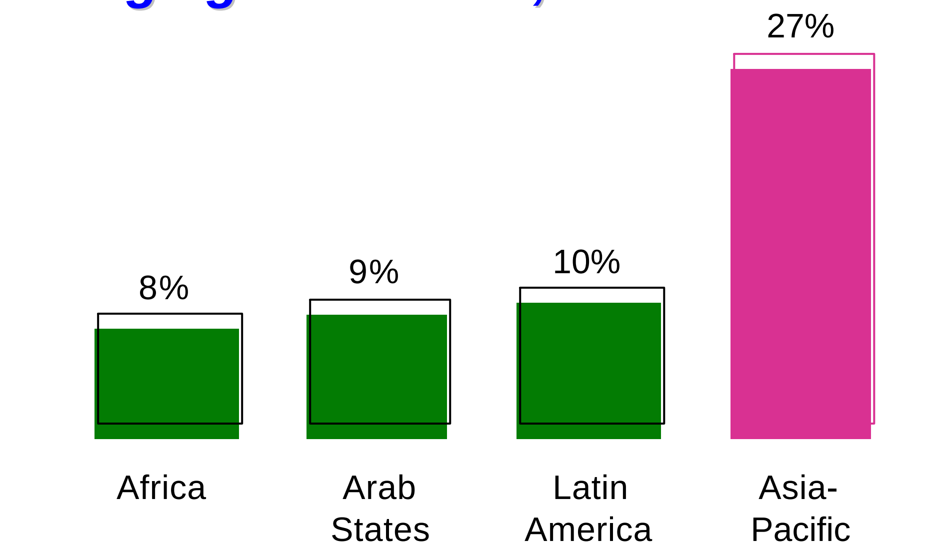
** This will be the subject of separate presentations.*

Telephone main lines worldwide (M)



Source: ITU World Telecommunication Indicators Database.

Annual growth in telephone network Emerging economies, 1990-95



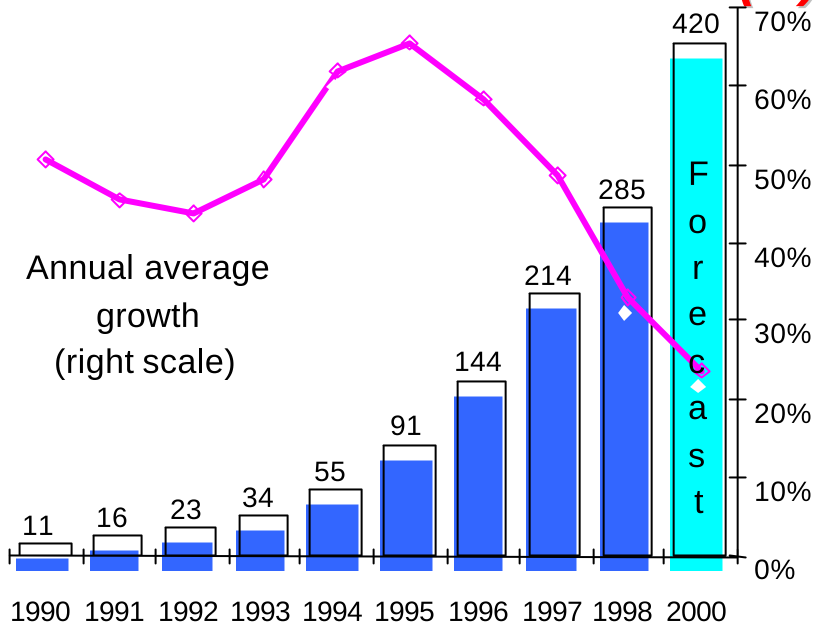
Source: ITU "Asia-Pacific Telecommunication Indicators, 1997: New Telecom Operators".

Top 20 PTOs by revenue, 1997

Rank 97	Rank 96	Operator (Country)	Telecom revenue: Total (US$ m)	Telecom revenue: Change (96-97)	Net income: Total (US$ m)	Net income: Change (96-97)
1	1	NTT (Japan) [a]	71'591	7.1%	2'196	15.3%
2	2	AT&T (United States)	51'319	1.5%	4'638	-21.5%
3	3	Deutsche Telekom (Germany)	37'694	7.1%	1'843	87.9%
4	16	Bell Atlantic (United States)	30'194	3.6%	2'455	-27.8%
5	5	BT (United Kingdom) [a]	26'277	4.7%	2'908	-17.6%
6	4	France Télécom (France)	26'174	3.6%	2'482	605.4%
7	14	SBC (United States)	24'856	6.0%	1'474	-55.0%
8	7	Telecom Italia (Italy)	24'204	9.9%	1'949	12.5%
9	6	GTE (United States)	23'260	9.0%	2'794	-0.1%
10	8	BellSouth (United States)	20'561	8.0%	3'261	13.9%
11	9	MCI (United States)	19'653	6.3%	149	-87.6%
12	12	DGT (China)	17'154	1.5%	5'375	-12.1%
13	11	Ameritech (United States)	15'998	7.2%	2'296	7.6%
14	10	Telefónica (Spain)	15'577	17.8%	1'253	18.6%
15	17	US West (United States)	15'235	18.0%	697	-40.8%
16	13	Sprint (United States)	14'874	5.9%	953	-19.5%
17	18	Telebras (Brazil)	14'158	23.7%	3'493	42.1%
18	19	Telstra (Australia) [b]	11'915	4.9%	1'205	-29.8%
19	22	DDI (Japan) [a]	8'927	15.9%	63	‡
20	23	KPN (Netherlands)	7'671	8.4%	962	9.4%
		Top twenty	**477'291**	**7.0%**	**42'447**	**-4.6%**

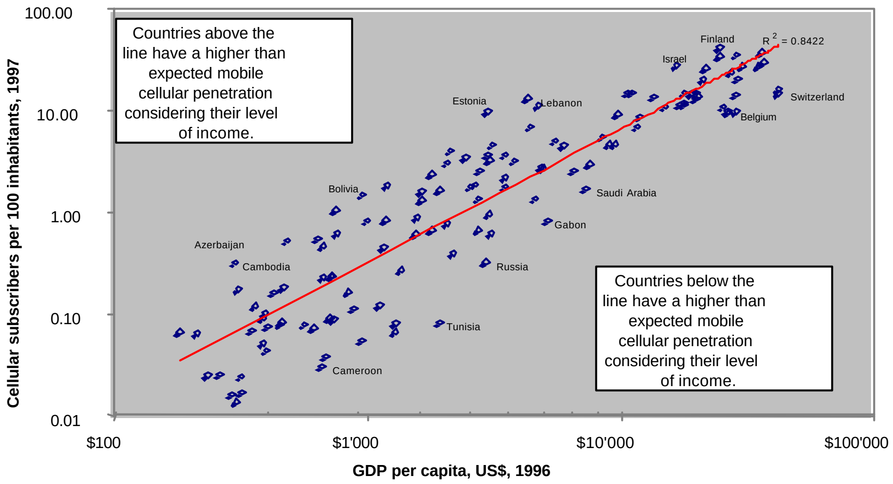
Source: ITU PTO Database.

Cellular subscribers worldwide (M)



Source: ITU World Telecommunication Indicators Database.

Cellphones, like fixed-lines, are closely related to wealth



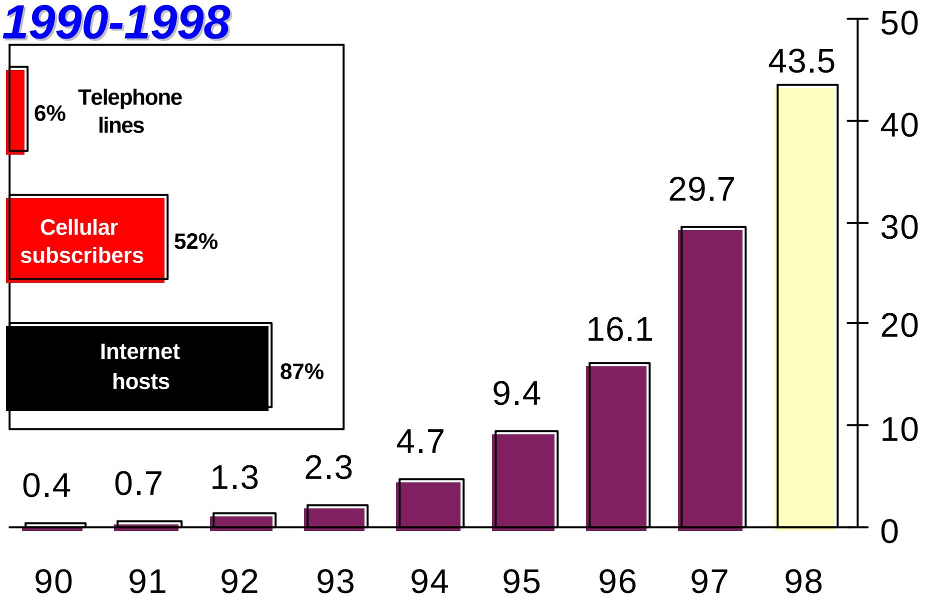
Source: ITU World Telecommunication Indicators Database.

Top 20 mobile companies, 1997

Rank 97	96	Operator (Country)	Cellular subscribers 1997 (000s)	Cellular subscribers CAGR (96-97)	Mobile revenue 1997 (US$ m)	Mobile revenue CAGR (96-97)	Mobile revenue % of total
1	1	NTT (Japan)	19'890	18.4%	20'873	35.5%	29%
2	5	DGT (China)	13'229	93.1%	3'334 *	81.9%	23%
3	3	TIM (Italy)	9'278	62.6%	5'345	28.7%	100%
4	9	DDI (Japan)	7'815	24.0%	6'953	26.1%	78%
5	2	AT&T (United States)	6'000	15.4%	4'337	10.3%	8%
6	4	SBC (United States)	5'493	23.9%	3'034	15.1%	12%
7	6	BANM (United States)	5'356	21.5%	2'859	17.2%	100%
8	15	SK Telecom (Korea (Rep.))	4'571	58.1%	2'090	31.2%	100%
9	7	GTE (United States)	4'487	19.7%	2'742	10.5%	12%
10	12	AirTouch (United States)	4'309	26.6%	2'363	19.1%	100%
11	8	BellSouth (United States)	4'193	15.1%	3'555	27.0%	17%
12	21	Telebras (Brazil)	4'023	64.1%	3'762	62.8%	20%
13	13	Deutsche Telekom (Germany)	3'752	39.6%	2'776	19.0%	7%
14	18	Mannesmann (Germany)	3'542	54.0%	3'118	32.8%	100%
15	10	Vodafone (United Kingdom)	3'400	18.6%	2'977	13.5%	100%
16	24	Telefónica (Spain)	3'187	35.9%	2'395	40.3%	15%
17	14	Ameritech (United States)	3'177	26.5%	1'760	31.0%	11%
18	11	BT (United Kingdom)	3'077	14.0%	1'830	14.8%	7%
19	23	France Télécom (France)	3'000	92.3%	2'851	52.0%	11%
20	16	Telstra (Australia)	2'777	21.6%	1'477	16.2%	12%
		Top twenty	**114'556**	**34.6%**	**80'430**	**27.8%**	**21%**

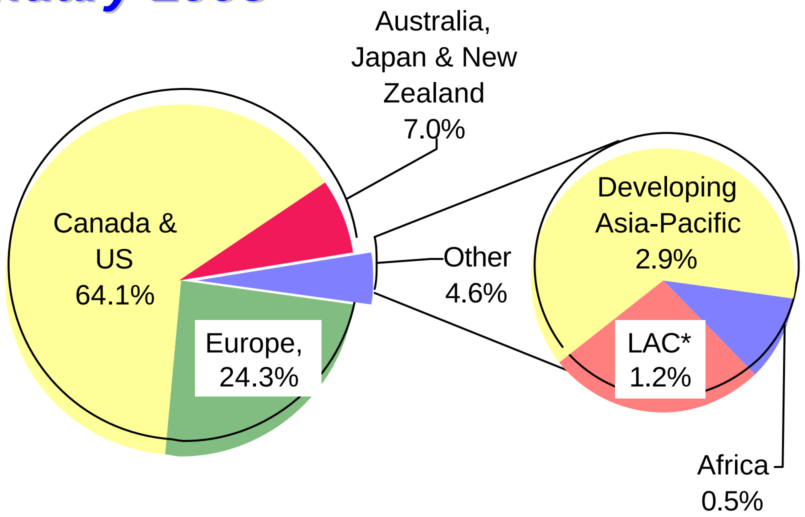
Source: ITU PTO Database.

Internet hosts (million) and growth rates, 1990-1998



Source: ITU "Challenges to the Network: Internet for development, 1999". Network Wizards.

Distribution of Internet hosts, January 1998



Source: ITU "Challenges to the Network: Internet for development, 1999".

Top 20 Internet Service Providers, 1998

Rank	Internet / Online Service provider (Country)	Owner	Website	Subscribers (latest, 000s)	
1	AOL (USA) *	AOL	www.aol.com	17'100	Jun-98
2	Nifty-Serve (Japan)	Fujitsu, others	www.nifty.ne.jp	2'630	Aug-98
3	Biglobe (Japan)	NEC, others	www.biglobe.ne.jp	2'560	Mar-98
4	T-Online (Germany)	Deutsche Telekom	www.t-online.de	2'300	Jun-98
5	MSN (USA)	Microsoft	home.microsoft.com	*2'000*	Jun-98
6	Chollian (Korea (Rep.))	Dacom	http://www.chollian.net/	1'170	Dec-97
7	WorldNet (USA)	AT&T	www.att.net	1'095	Jun-98
8	EarthLink Sprint (USA)	Sprint, others	www.earthlink.com	710	Jun-98
9	Prodigy (USA)	Prodigy	www.prodigy.com	638	Jun-98
10	Infovia (Spain)	Telefonica	www.tsai.es	535	Dec-97
11	Netcom (USA)	ICG	www.netcom.com	512	Jun-98
12	HiNet (Taiwan-China)	Chungwa Telecom	www.hinet.net	507	Jun-98
13	MindSpring (USA)	MindSpring	www.mindspring.net	393	Jun-98
14	SBC Internet Services	SBC	www.public.swbell.net www.public.pacbell.net	330	Jun-98
15	Tele2 (Sweden)	Tele2	www.tele2.se	317	Jun-98
16	GTE Internetworking (USA)	GTE	www.gte.net	311	Jun-98
17	CWIX (USA)	Cable&Wireless	www.cwix.com	310	Jun-98
18	Wanadoo (France)	France Telecom	www.wanadoo.fr	266	Jun-98
19	Netvigator (Hongkong SAR)	Hongkong Telecom	www.netvigator.com	235	Mar-98
20	Telia Internet (Sweden)	Telia	www.telia.se	232	Dec-97
	TOTAL, top 20			**34'151**	

Source: ITU "Challenges to the Network: Internet for development, 1999".

Market liberalisation and corporatisation/privatisation of incumbents

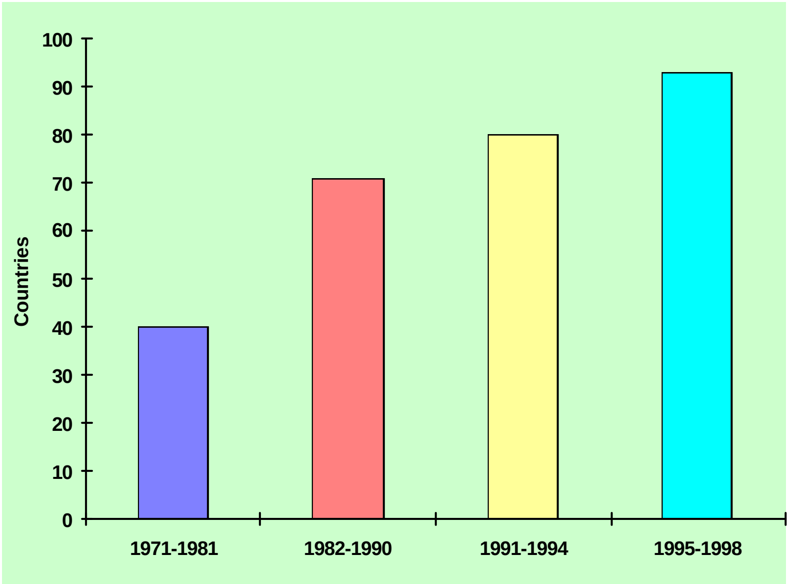
- Process and impact of liberalisation: worldwide trends (Tuesday, Session 1)
- Process and impact of commercialisation/privatisation: worldwide trends (Tuesday, Session 2)
- Towards the future: what next for telecoms businesses? (Wednesday, Session 1)

Separation of regulatory and operational functions

Of 188 ITU Member States:

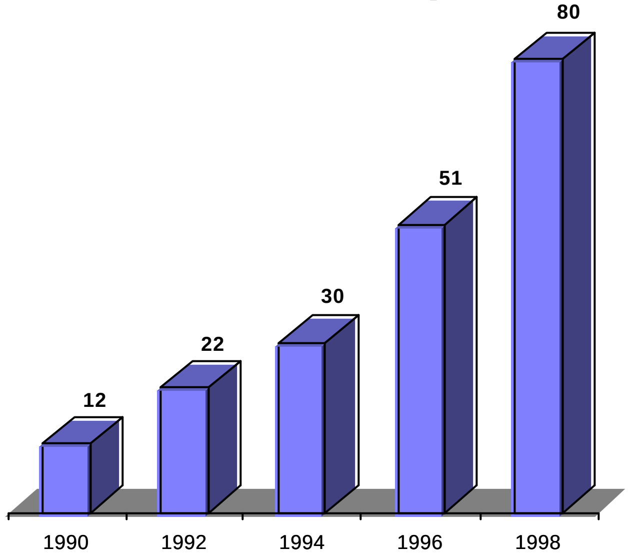
- **156 have separated posts & telecoms (32 have not)**
- **147 have separated regulatory and operational functions (41 have not)**
- **132 have a regulator which is independent of the operators in terms of finance and decision-making (in 56, it is not)**
- **83 have fully or partially privatised the incumbent operator (105 have not)**
- **38 have liberalised basic telecom services (150 have not)**

Drafting of new telecom laws



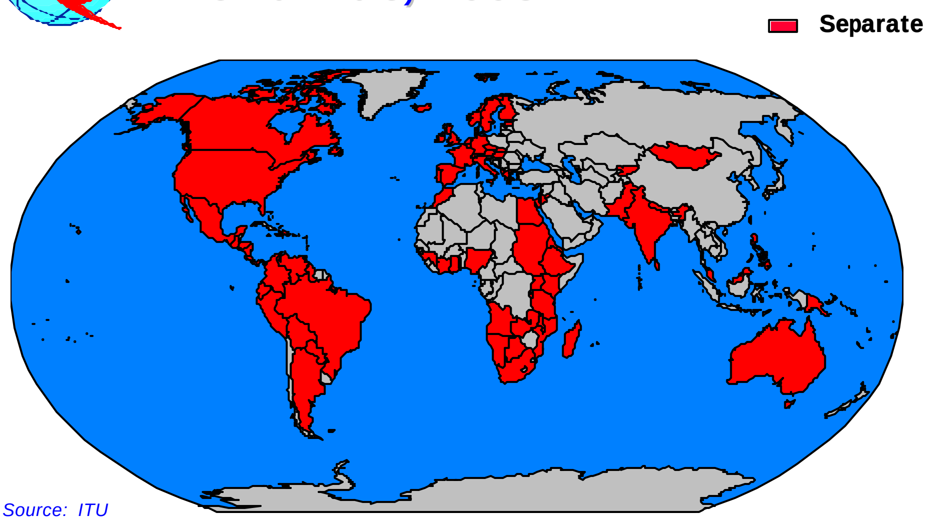
Source: ITU Telecom Regulatory Database.

Creation of separate regulatory bodies, worldwide (cumulative)



Source: ITU Telecom Regulatory Database.

Separate regulatory bodies, worldwide, 1998

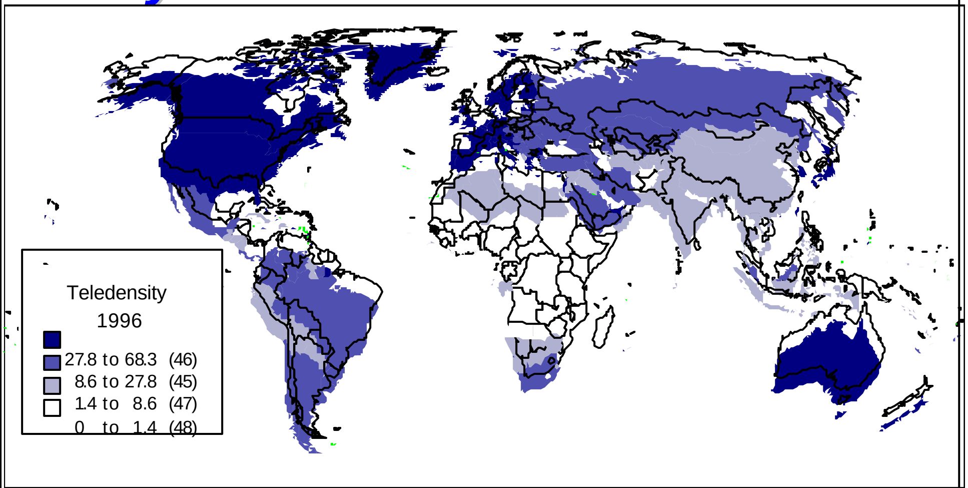


Source: ITU Telecom Regulatory Database.

The development gap: Impact of the changing international telecoms environment

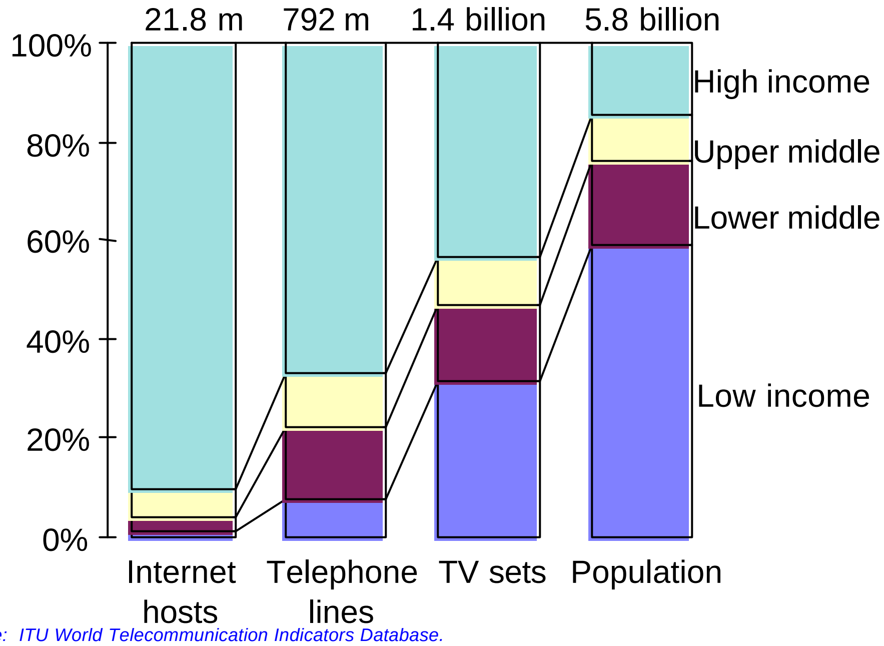
- **Telecommunications development gap**
  - ⇨ **Narrowing between developed and middle-income developing countries**
  - ⇨ **Widening between middle-income developing countries and the Least Developed Countries (LDCs)**
  - ⇨ **New development gap emerging for advanced telecom services (Internet, broadband, multimedia)**
- **Uneven pace of market liberalisation**
  - ⇨ **For instance, there are more telephone companies in the UK than the whole of Africa**
- **Erosion of accounting rate system**
  - ⇨ **Traditional support for network roll-out**

"The future is here, it's just not evenly distributed" William Gibson



Source: ITU World Telecommunication Indicators Database.

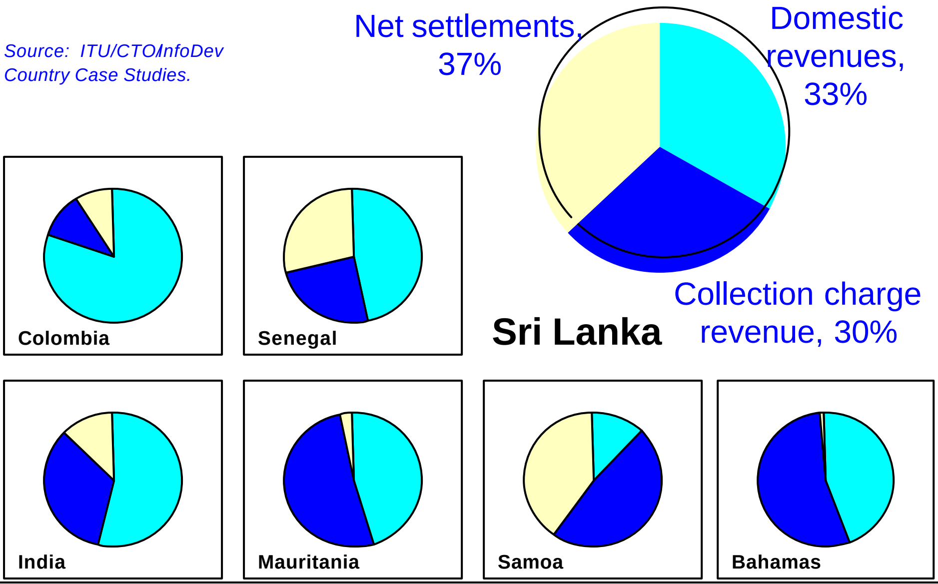
Percentage of installed base, 1997



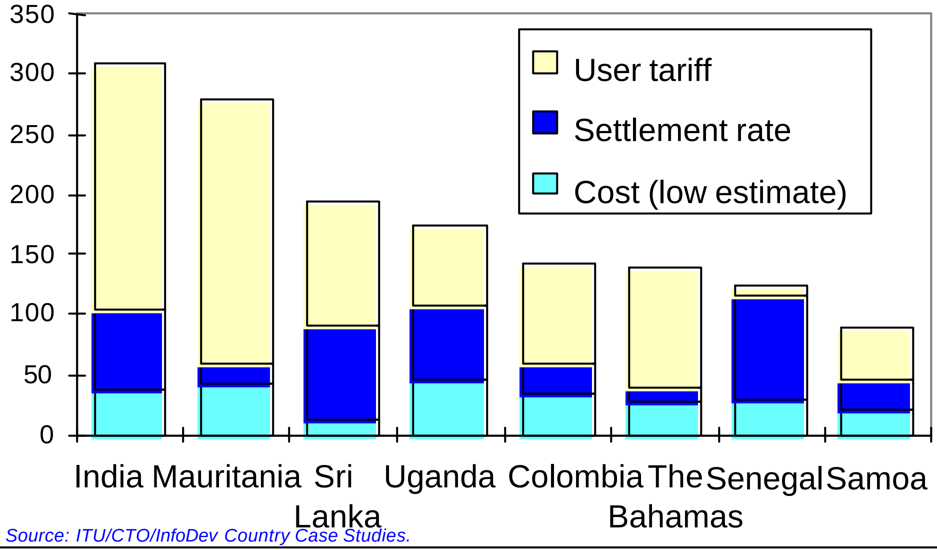
Source: ITU World Telecommunication Indicators Database.

Developing countries typically depend on international services & settlements

Source: ITU/CTO/InfoDev Country Case Studies.

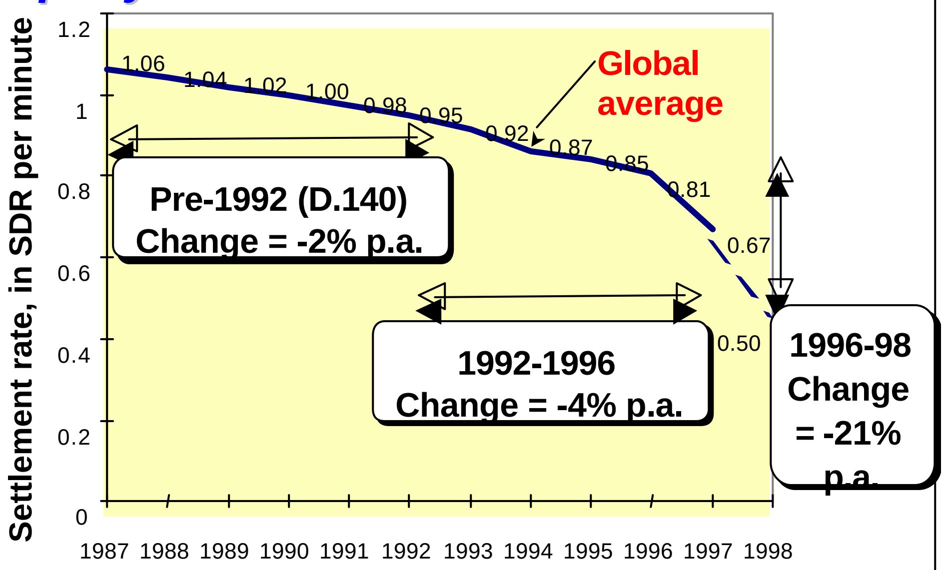


Developing countries also have relatively high cost structures (US cents per minute)



Source: ITU/CTO/InfoDev Country Case Studies.

Settlement rates are now declining rapidly ...



Source: ITU-T Study Group 3 (COM 3-53). 1998 estimate is a minimum projection based on D.140 Annex D.

Two alternative scenarios:

ITU Focus Group targets, by teledensity (T), to be achieved by 2001 (2004)

T < 1	1<T<5	5<T<10	10<T<20	20<T<35	35<T<50	T>50
$0.45	$0.35	$0.29	$0.23	$0.16	$0.12	$0.06

FCC Benchmarks, by income group

Low income, T<1	Low income	Low-mid income	Upper-mid income	High income
$0.23	$0.23	$0.19	$0.19	$0.15
2002	2001	2000	1999	1998

Source: ITU Focus Group Report, FCC.

Key policy issues to be tackled

- **Interconnection**
  - ⇨ **How to manage the transition to a multi-player environment?**
- **Internet**
  - ⇨ **Who really sets the rules? Who really gets benefits?**
- **International settlements**
  - ⇨ **How to transition to a cost-oriented system while providing a “soft-landing” for developing countries?**
- **International infrastructures**
  - ⇨ **How to ensure equal access at competitive rates?**
- **Investment**
  - ⇨ **How to increase investment, esp in LDCs?**