

Global trends in ICTs and the work of the ITU



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Helping the world communicate



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. Lara Srivastava can be contacted at lara.srivastava@itu.int

A look back



1844: “what hath God wrought”

...in 1844 - the first interurban **telegraphic** communication from Washington to Baltimore, ‘morsed’ by Samuel



In 1864, radio is predicted and in 1887, it is detected...

- Heinrich Hertz was the first to detect radio waves by causing a spark to leap across a gap that generated electromagnetic waves
...
- He had mathematically predicted their existence in 1864



In 1865, the ITU was born as:

the International “Telegraph” Union



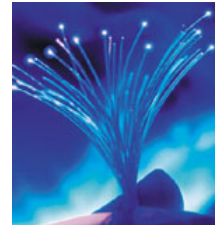
140 years ago!

This means...

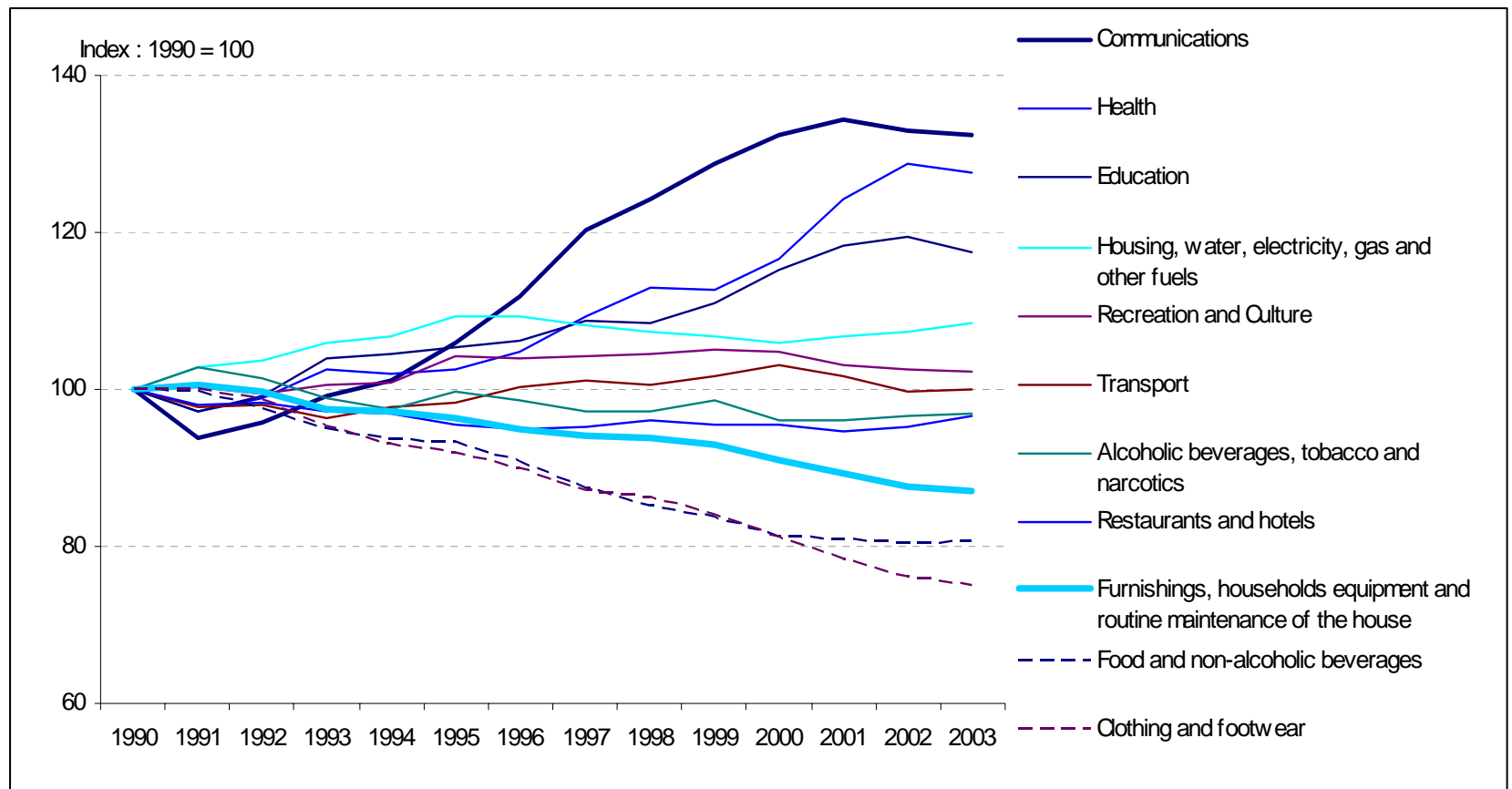
- That the ITU is the oldest international organization in the world...
- ... with its work spanning three centuries
- The the organization pre-dates the United Nations, and is now one of its specialized agencies
- A recent report by Booz Allen Hamilton and leading scholars ranks the ITU among the “*World's Top 10 Most Enduring Institutions*”, one that has:
 - “changed and grown in unswerving pursuit of success and relevance - yet remained true through time to its founding principles”



today's hi-tech world



Size of selected sectors: Communications continue to dominate



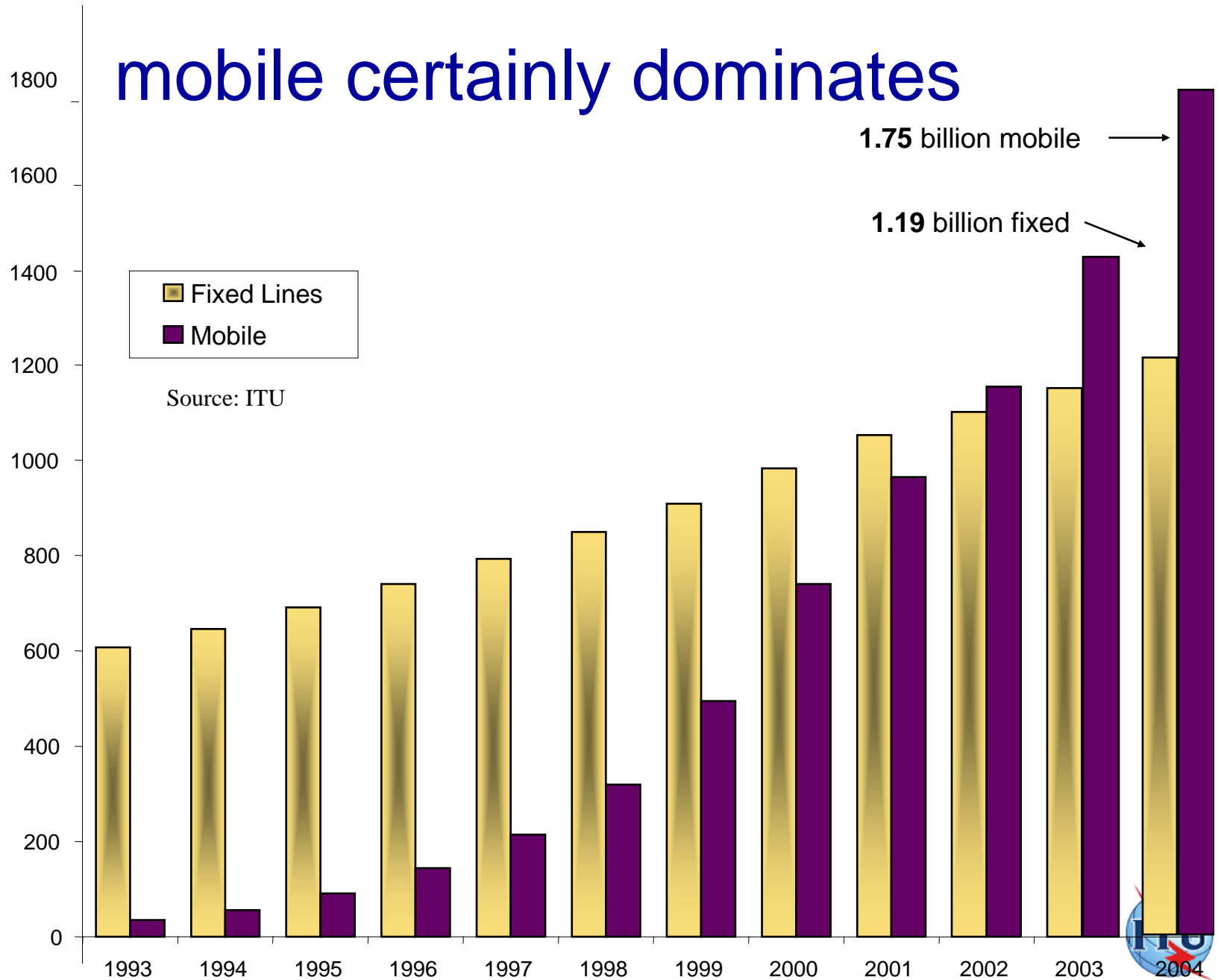
Today's information age would've seemed like science fiction back then...

- the birth of a World Wide Web of information, a revolution in itself
- growth of high-speed broadband infrastructure
- global proliferation of those small mobile devices that can be used to communicate and gather information anywhere/anytime
- an emphasis on “always-on” communications and information access
- advances in computing to render information even more “ubiquitous”

An age which has brought about many transitions, challenges:

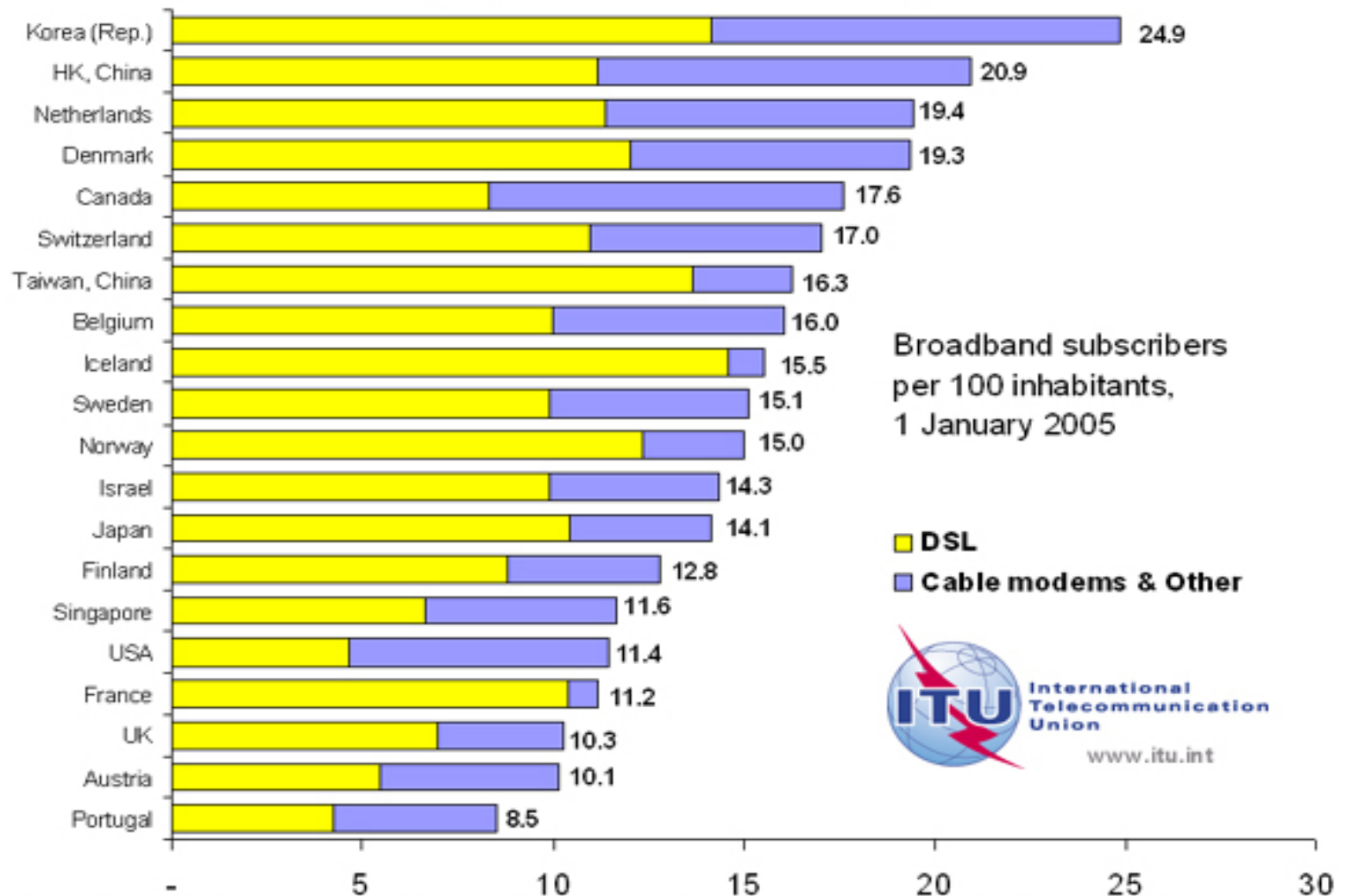
- from relatively static market environments to dynamic fast-paced innovation
- from heavy-handed regulation to increasing forbearance
- from “divergence” to “convergence”
- from local to global
- from low-speed to high-speed
- from sometimes-on to always-on
- from fixed to mobile

mobile certainly dominates



And access is getting faster...

Broadband penetration by technology, top 20 economies worldwide, 1 January 2005



Broadband subscribers per 100 inhabitants, 1 January 2005

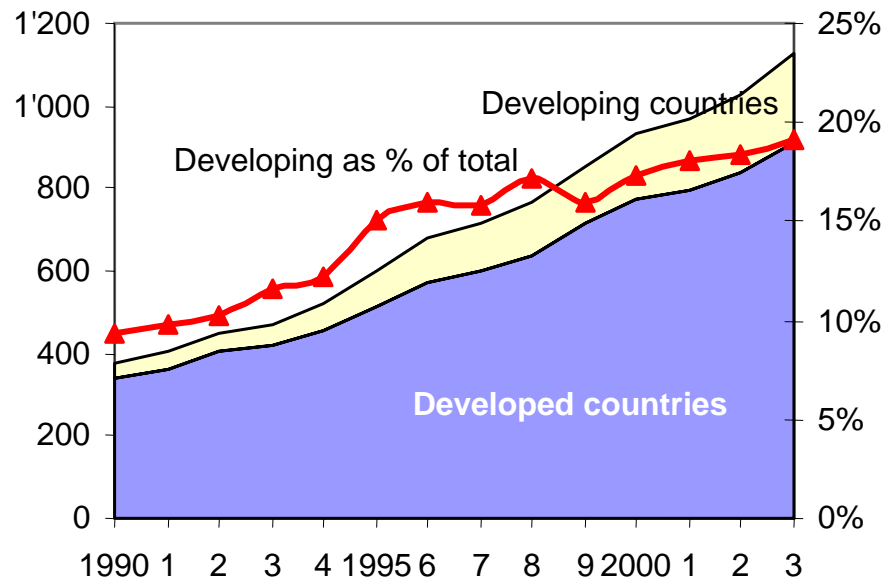
■ DSL
■ Cable modems & Other



Source: International Telecommunication Union (ITU) adapted from national reports (excludes mobile cellular broadband (e.g., 3G)).

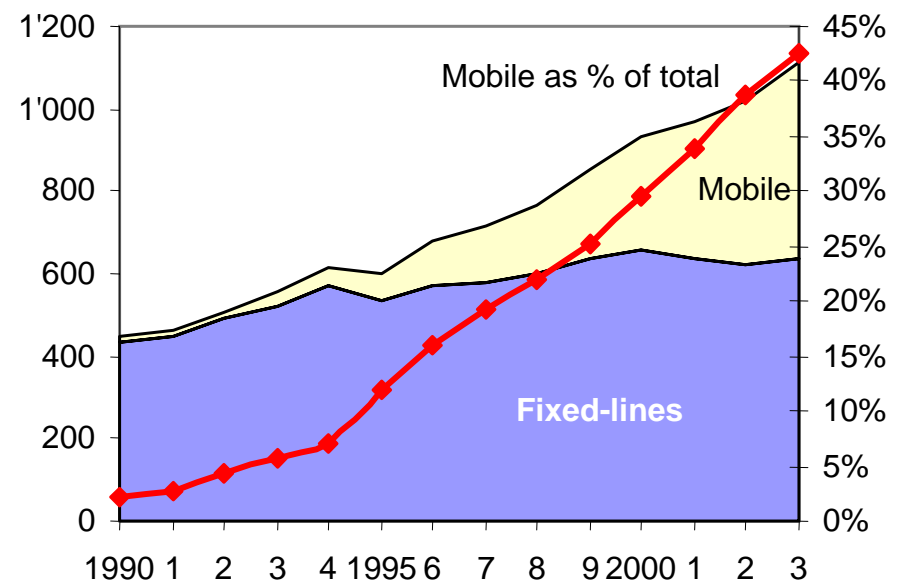
Near saturation of traditional markets...

Telecom services revenue, in US\$ bn



Developing countries growing faster than developed ones

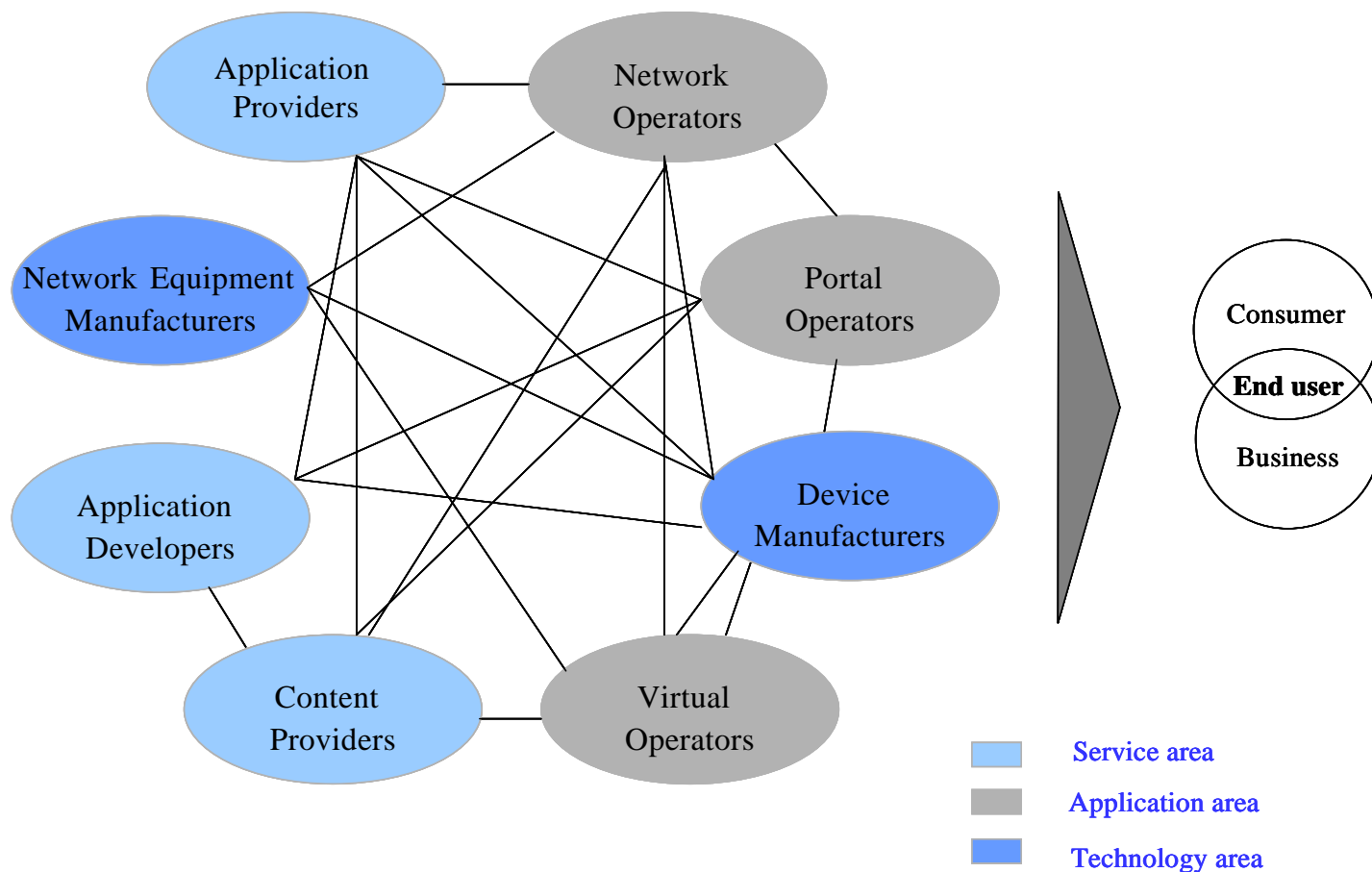
Fixed-line and mobile services revenue, in US\$ bn



Mobile markets growing faster than fixed-line markets

results in a changing landscape:

New players – new roles, old players – new roles



Source: EITO

So these are the signs of the times

- Innovation in **digital** technologies and popularity of **portable ICT** devices
- **Speed**, speed and more speed
- Growing value of **information**, esp. timely and “on-the-go” information
- “**Lifestyle**” and “**Personalization**” as an integral element of ICTs
- **The importance of being mobile**

more about the ITU



Today's International Telecommunication Union

- International organization where governments and private sector coordinate global telecom networks and services
- “International Telecommunication Union” since 1934
- 189 Member States, 650 Sector Members, 75 Sector Associates
 - Only International Organization to have both private sector members, governments and civil society as members
- Headquarters Geneva, 11 regional offices, 790 staff / 83 nationalities
- Secretary-General: Yoshio Utsumi (Japan)
- Deputy Sec-General: Roberto Blois (Brazil)
- 2002 budget = circa CHF172m (USD 115m)

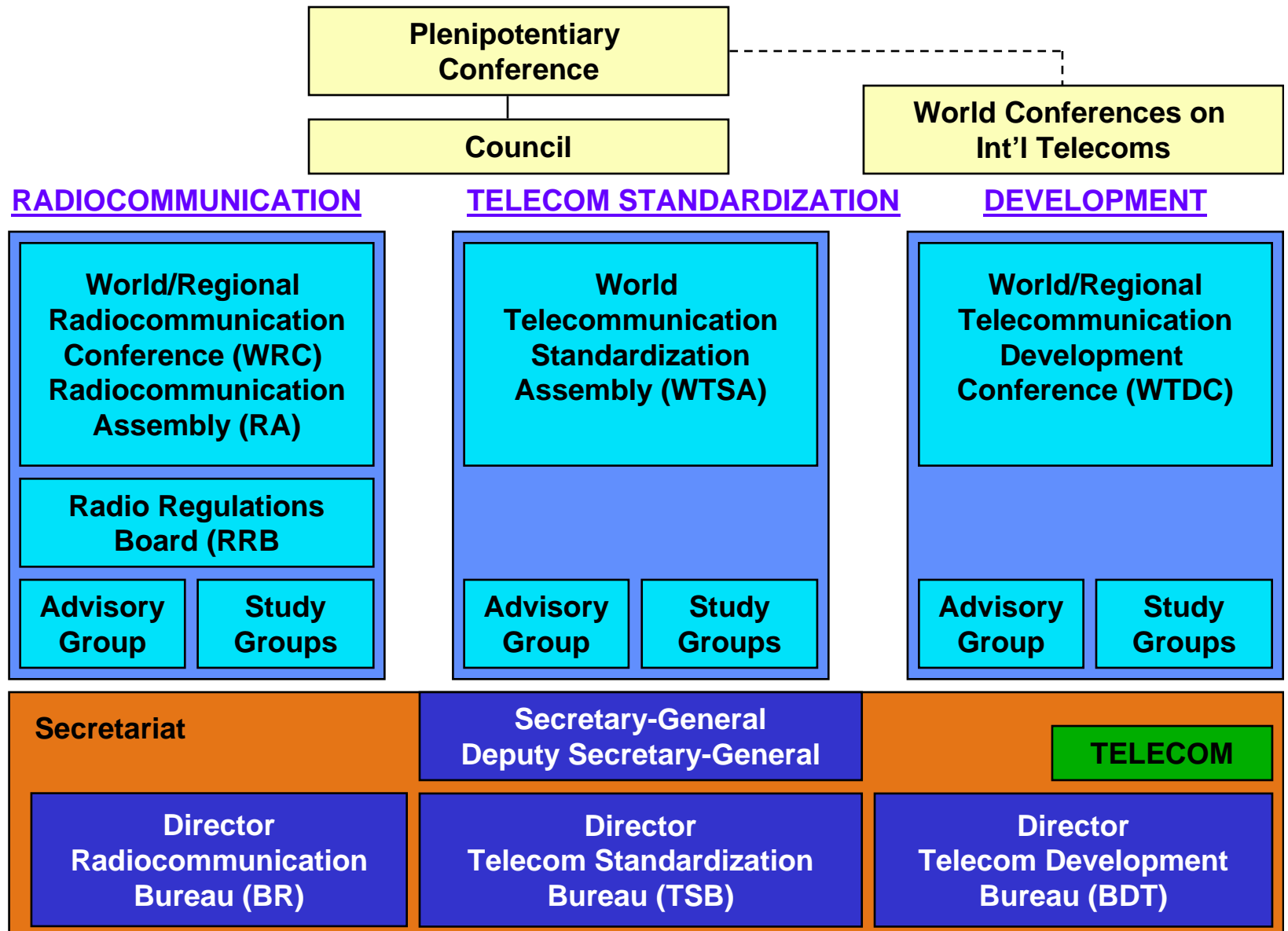


The mission of the ITU

- To maintain and extend international cooperation for the development of telecommunications
- To provide technical and policy assistance to developing countries
- To harmonize actions of Member States and promote cooperation between Member States and Sector Members
- To promote at international level, the adoption of a broader approach to issues of telecommunications in the global information economy and society
 - WSIS originally proposed at ITU in 1998 and later endorsed by UN
- To extend the benefits of telecoms to all the world's inhabitants
- In sum, to **“Help the world communicate”**



The Structure of the ITU



The Budget of the ITU

- **ITU has 189 Member States plus 650+ Sector Members and Associates**
 - Each chooses to pay a certain number contributory units e.g. US = 30, Malawi 1/16
 - For Member States, 1 unit = CHF 315'000
 - For Sector Members, 1 unit = CHF 63'000
 - For Associates, 1 unit = CHF 10'500
- **Main budget = CHF 172m in 2002, of which:**
 - CHF 113m (65.7%) from Member States
 - CHF 22m (12.8%) from Sector Members & Associates
 - CHF 14m (8.1%) from sale of publications
 - CHF 15m (8.7%) from cost recovery, interest, etc
 - CHF 4m (2.3%) from funds-in-trust (for dev't)



***The International Telecommunication
Constitution (Minneapolis, 1998),
declares ITU's role to be:***

- **International cooperation in telecommunications**
- **Technical assistance to LDCs**
- **To promote technical development**
- **To extend the benefits of telecoms**
- **To promote telecoms for peaceful use**
- **To harmonize national policies**
- **To promote telecoms in cooperation with other national and regional bodies**

**In other words,
ITU's role is in the following areas:**

- **Spectrum allocation and registration**
- **Coordination of national spectrum planning**
- **International telecoms standardization**
- **Collaboration in international tariff-setting**
- **Cooperation in telecoms development assistance**
- **Measures for ensuring safety of life**
- **Extension of universal access**
- **Policy reviews, research and information exchange**

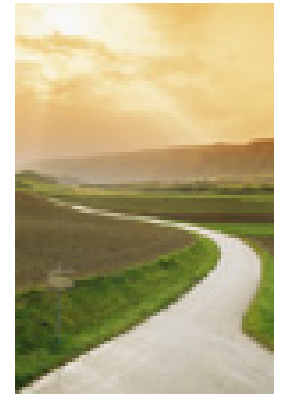
International Treaties

- **Constitution and Convention of ITU**
 - Two complementary treaties, containing mainly housekeeping details but also some longstanding international commitments (e.g. common carrier tradition)
 - Major update in 1992; minor updates in 1994 & 1998
- **International Telecommunication Regulations**
 - Thin (10 Articles) treaty concerning mainly accounting practices. Last update 1988. Under review
- **Radio Regulations**
 - Thick (>10'000 pages) treaty governing use of radio spectrum. Updated every WRC



ITU Development Sector (ITU-D)

- **World Telecom Development Conference**
 - Istanbul, March 2002
- **Study Groups**
- **Telecommunication Indicators reports and databases**
- **Regulatory assistance**
- **Technical cooperation**
- **Regional offices (11)**
- **Director: Hammadoun Touré (Mali)**



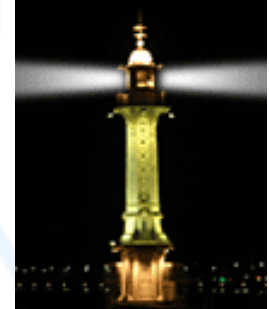
ITU Radiocommunication Sector

- **World Radio Conference**
 - Geneva, June 2003
- **ITU-R Recommendations**
- **Stewardship of radio frequency & satellite orbits**
 - Radio Regulations
 - Master International Frequency Register
- **Safety of life services (Maritime, Aeronautical, etc.)**
- **Director: Valery Timofeev (Russia)**



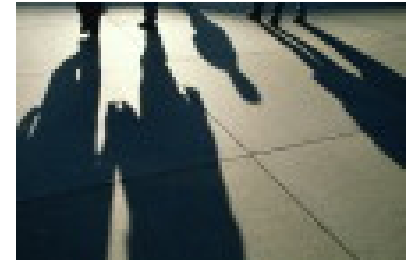
ITU Standardization Sector (ITU-T)

- **World Telecom Standardization Assembly**
 - Florianópolis, October 2004
- **ITU-T Recommendations**
- **Stewardship of international numbering plan**
 - Country codes
 - Universal International Freephone
 - ENUM
- **Collaboration with the Internet community (e.g.IETF, ICANN)**
- **Director: Houlin Zhao (China)**



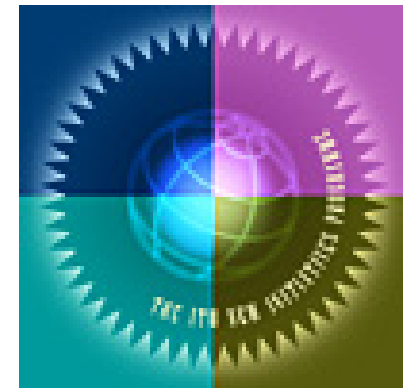
ITU's General Secretariat

- **Plenipotentiary Conferences**
 - Marrakesh, Sept-Oct 2002
- **ITU Council**
- **World Telecom Policy Forum**
 - March 2001, IP Telephony
- **ITU News**
- **Support services (e.g. IS, languages)**
- **ITU TELECOM**
- **Strategy and Policy Unit (SPU)**
 - **ITU New Initiatives Programme**



ITU New Initiatives Programme (SPU)

- Programme launched in 1999, under Strategy and Policy Unit (SPU)
- New Initiatives Projects (2003-2005)
 - Ubiquitous Network Societies
 - Digital Bridges Symposium
 - Shaping the Future Mobile Information Society
 - Internet Governance (also WSIS meeting)
 - Radio-spectrum management or a converging world
 - Promoting Broadband
- Background Papers, Websites & Country case studies



**“.. New topics of a regulatory, policy or other nature of high-current interest ...” –
ITU Council Decision
#496**

www.itu.int/ni/





world summit on the information society

Geneva 2003 - Tunis 2005

- **A world summit in two phases**
 - First Phase, December 10-12, 2003, Geneva
 - Second Phase, November 16-18, 2005, Tunis
- **What are the key issues?**
 - Addressing the digital divide
 - How can ICTs help to achieve the Goals of the Millennium Declaration?
 - Internet Governance
- **Outputs: declaration & action plan**

more about WSIS



WSIS: Origins and Status

- **WSIS originally proposed by ITU PP in 1998**
- **Formally endorsed by the UN in 2001**
- **Regional meetings, 2002 – 2003**
- **PrepCom process, started in July 2002**
- **First phase, Geneva 10-12 December 2003**
- **Second phase, Tunis, 16-18 November 2005**

Geneva Summit (2003): Numbers

- **More than 11'000 participants**
 - 175 governments
 - About 50 Head of States and Governments and Vice-Presidents
 - 3'300 representatives of from civil society
 - 514 business representatives from 98 organizations
 - 87 international organizations
 - More than 1'000 media representatives
- **More than 300 Summit events**



Geneva 2003 WSIS: Summit Outcomes

- **Declaration and Plan of Action**
 - Common vision and agenda for ICTs to achieve UN MDGs, including connecting all communities by 2015
- **Agreement on many important issues**
 - Cyber-security, freedom of expression, enabling environment, cultural diversity, local content and multilingualism
- **Asked UN SG to look into unresolved issues**
 - **Internet Governance and Financing**



WSIS established a common vision of the Information society

“...declare our common desire and commitment to build a people-centred, inclusive and development-oriented Information Society, where everyone can create, access, utilize and share information and knowledge, enabling individuals, communities and peoples to achieve their full potential in promoting their sustainable development and improving their quality of life...”

- (WSIS Declaration, Paragraph 1)



WSIS Thematic/Related Meetings

- **Some 20 WSIS-related meetings around the world**
- **Thematic meetings Organized by ITU**
 - **June/July 2005 (Geneva): WSIS Thematic Meeting on Cybersecurity**
 - **June 2005 (Seoul): WSIS Thematic Meeting on Multi-Stakeholder Partnerships for Bridging the Digital Divide**
 - **July 2004 (Geneva): WSIS Thematic Meeting on Countering Spam**
 - **February 2004 (Geneva): WSIS Thematic Meeting on Internet Governance**

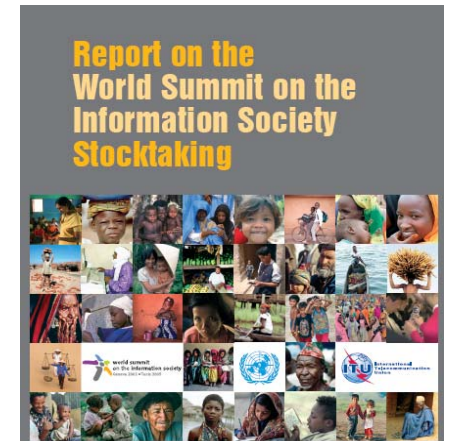


The Tunis Phase (November 2005)

- **Tunis Commitment**, reiterating much of the Geneva vision
- **Tunis Agenda**
 - ***Financial Mechanisms***
 - Creation of voluntary Digital Solidarity Fund
 - ***Internet Governance***
 - Creation of Internet Governance Forum
 - Agreement on “enhanced cooperation” in which all govts have an equal role and responsibility
 - Separate processes for ccTLDs and gTLDs

Stocktaking of WSIS-related Activities

- **ITU sent out letter and questionnaire to solicit inputs**
- **Report provides overview of stakeholder initiatives related to implementation of WSIS Plan of Action**
- **Also a platform to share experiences and lessons learned, possibly yield new partnerships**
- **Efforts regarding the stocktacking report and database to be continued, through the publication of a “Golden Book”**



thinking about tomorrow's hi-tech future



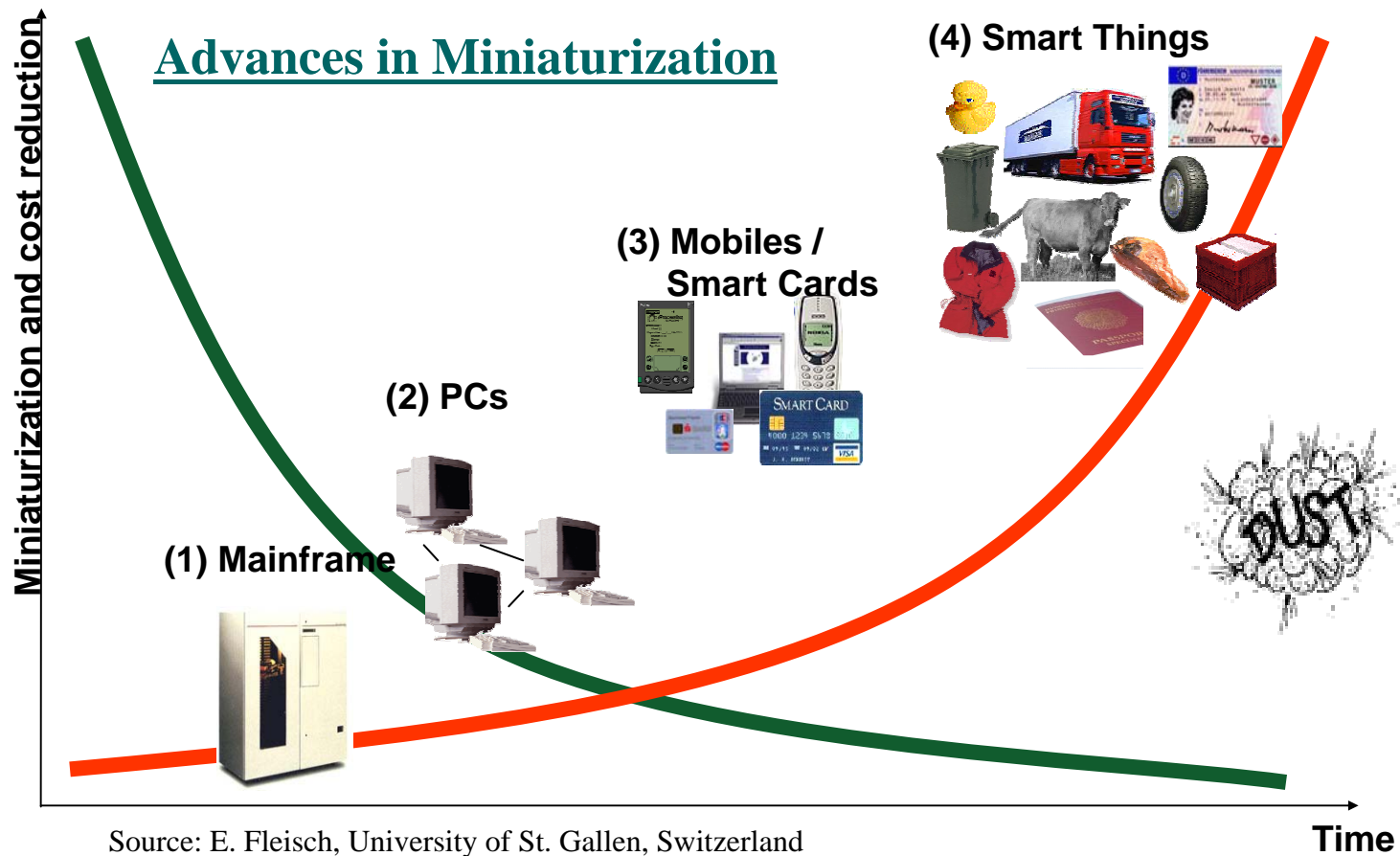
An increasingly pervasive and wireless communication environment

- Growth of high-speed and high-mobility networks
 - 802.16, 802.20 etc...
- Importance of short-range wireless
 - Zigbee
 - RFID
- From connecting people and PCs (devices) to connecting “things”

The next internet: An Internet of things?

- RFID, for instance, has the potential to tag every item on the planet
- Combined with sensors, it can create context aware applications and link the real world to the virtual world
- Developments in “smart materials” and nanotechnology will further drive this revolution
- ITU Internet Report on “Internet of Things” to published at the end of 2005

Towards a future of smart things...



More information

- more information on the **ITU's Strategy and Policy Unit** Activities:
 - www.itu.int/spu
- more information about the ITU's **New Initiatives Programme**:
 - www.itu.int/ni
- more information on the **World Summit on the Information Society**:
 - www.itu.int/wsis

“ a journey of a thousand miles must begin with a single step”

- Chinese proverb

Helping the world communicate



- t h a n k s -



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