



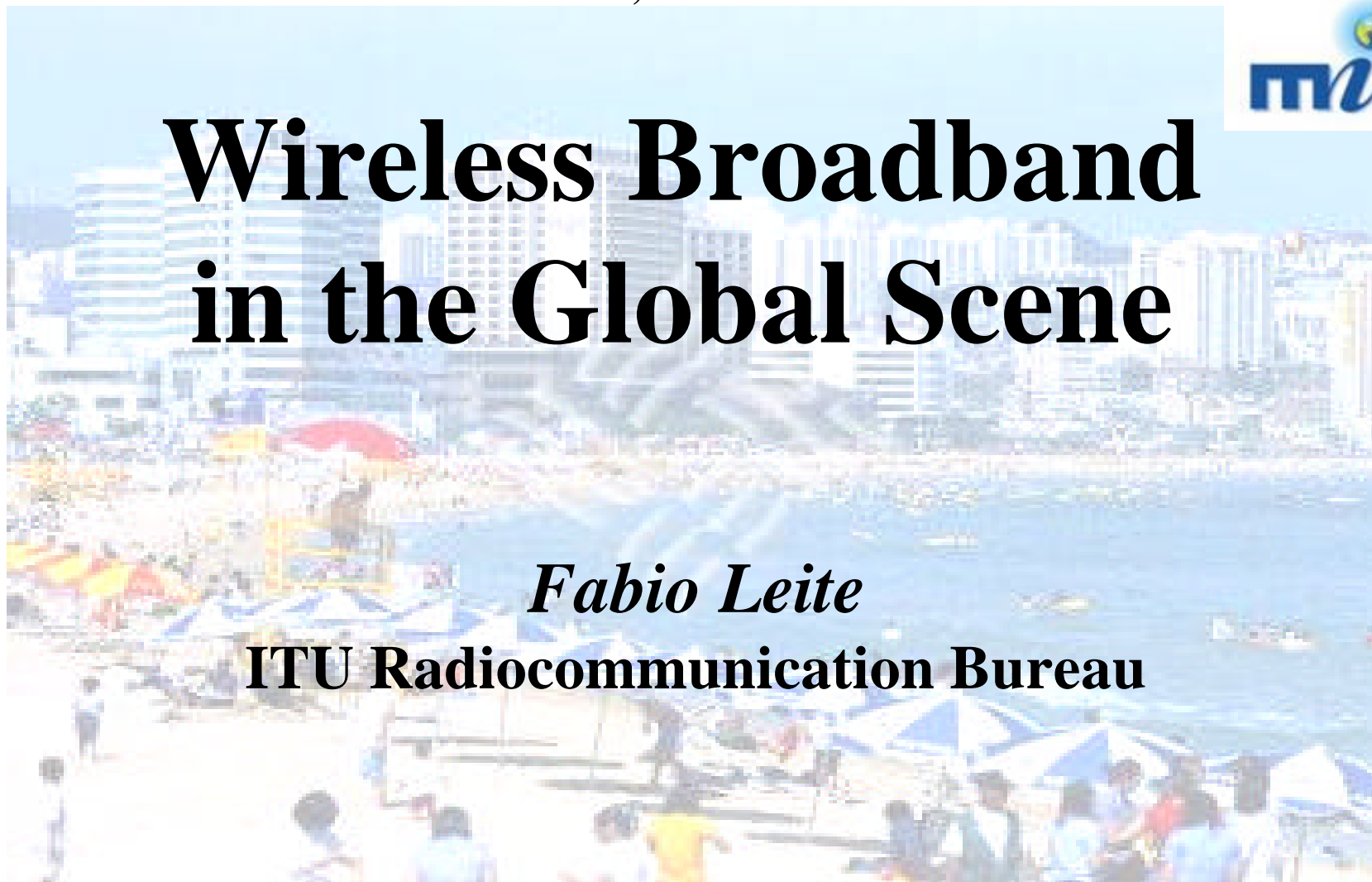
**Regional Seminar on
Broadband Wireless Access for Asia-Pacific Region
Busan, 10.9.04**



Wireless Broadband in the Global Scene

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ITU Radiocommunication Bureau





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Wireless Broadband in the Global Scene

Contents

- Birth of BWA & return of FWA
- The ITU vision of wireless future
- Broadband initiatives
- Road to global BWA



Connecting the World

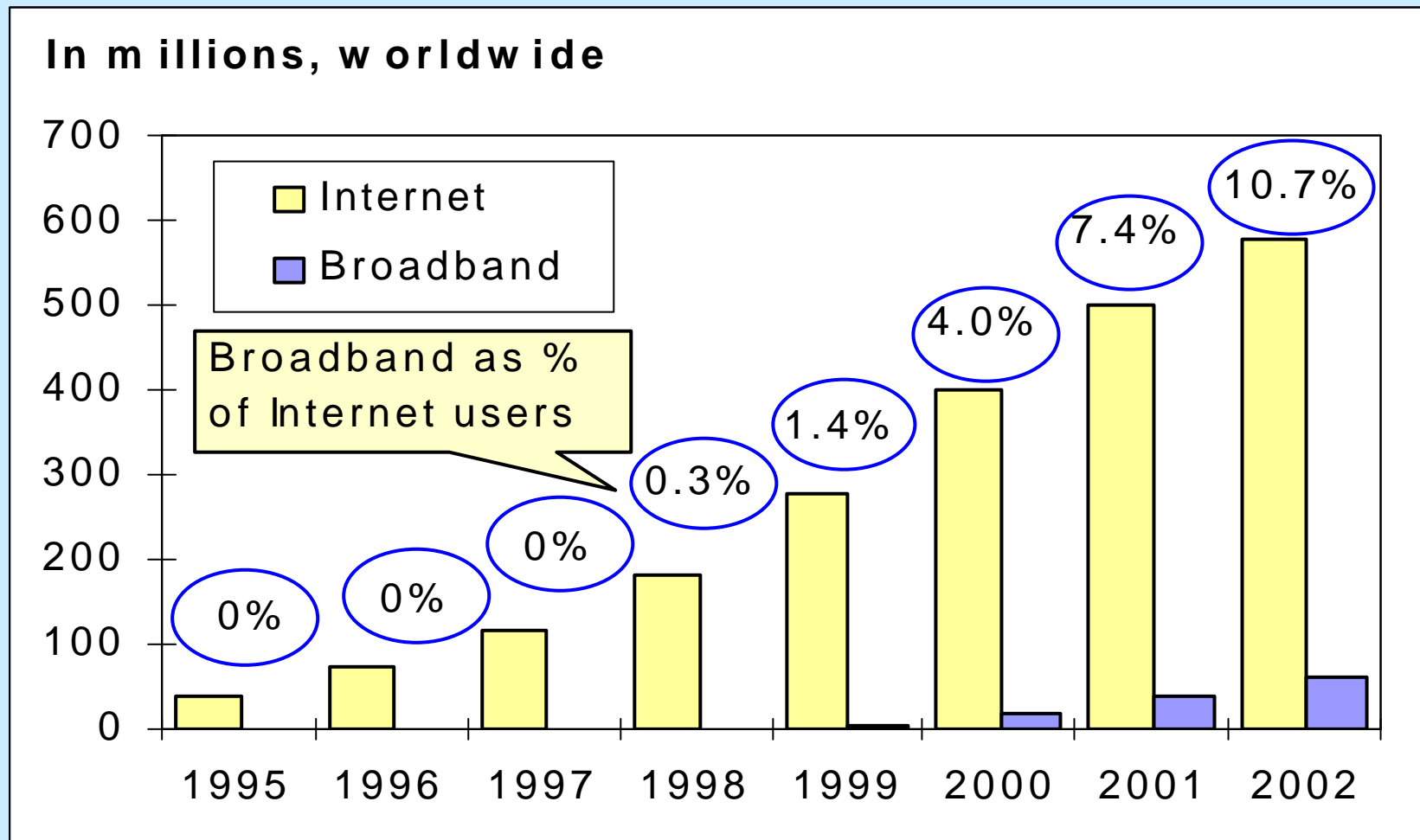
World population: 6.4 billion
Not having broadband: 6.3 billion

*“...The economic and social case for developing broadband access is very strong and takes on added significance for **rural and remote communities**, where improved communications can address a variety of challenges posed by distance.”*

OECD, April 2004.

New fact: the emergence of **broadband wireless** as a platform to provide low-cost high-performance access networks in rural and remote areas.

Internet & Broadband Growth

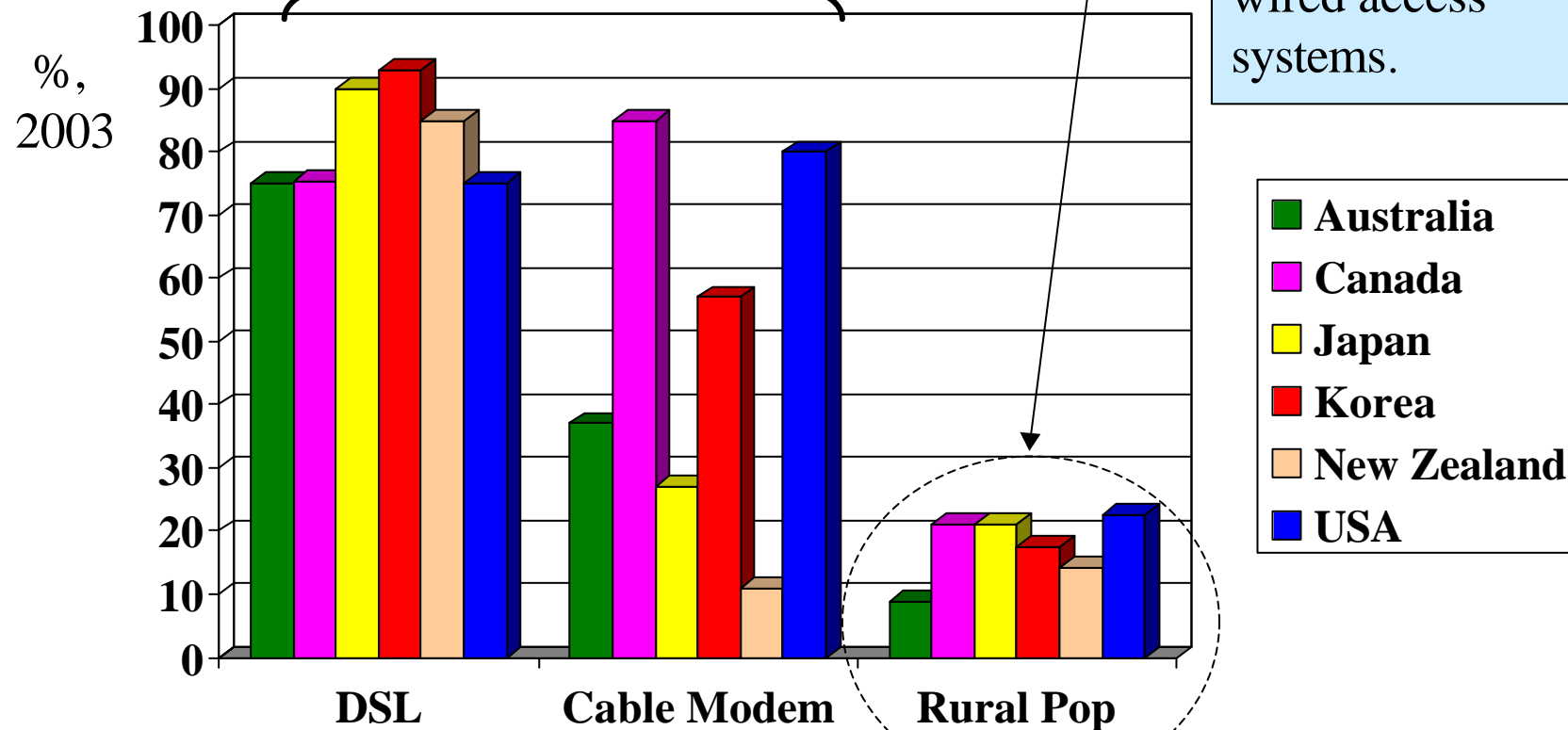


Source: ITU, 2003.

Wireless & wired broadband access

Wired access systems mostly in urban areas.

BWA in rural areas is becoming the ideal means of extending the capabilities of the wired access systems.



Source: OECD, 2004.

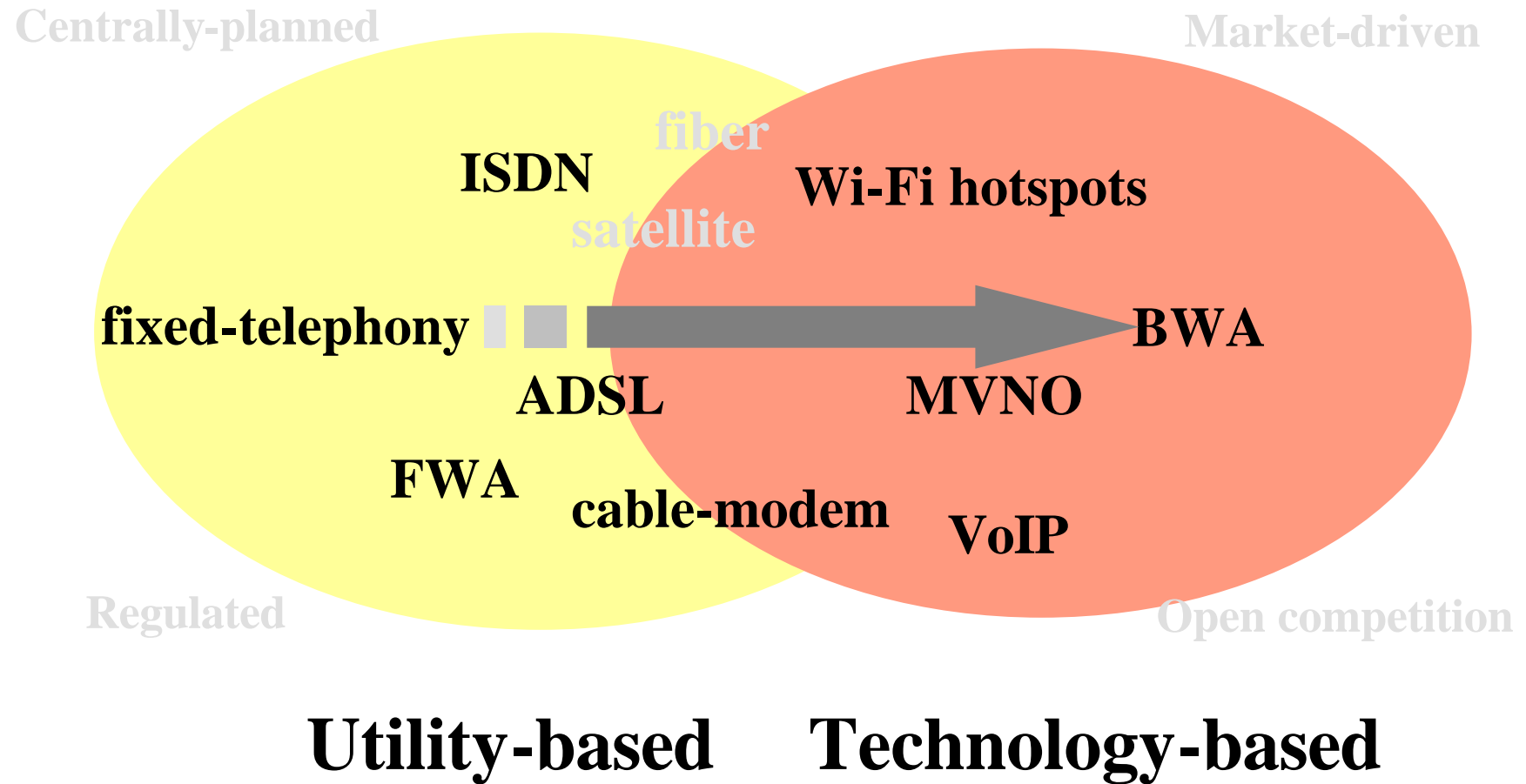
Broadband Wireless Access

***“This will revolutionize society, just as mobile telephony revolutionized society in the 1980s”,
Mike Galvin, Director of Internet Operations, BT.***

*“Some ideas that have been given up for dead can be revived, either through rethinking the basic business model, or through advances in technology. In particular, the proposal for **Internet access through fixed wireless**, which led to major losses at Winstar, Teligent, as well as at AT&T Wireless and Sprint, may yet turn out to be the best way to provide residential broadband access.”,*

Andrew Odlyzko, Univ. of Minnesota

Business Model Shift

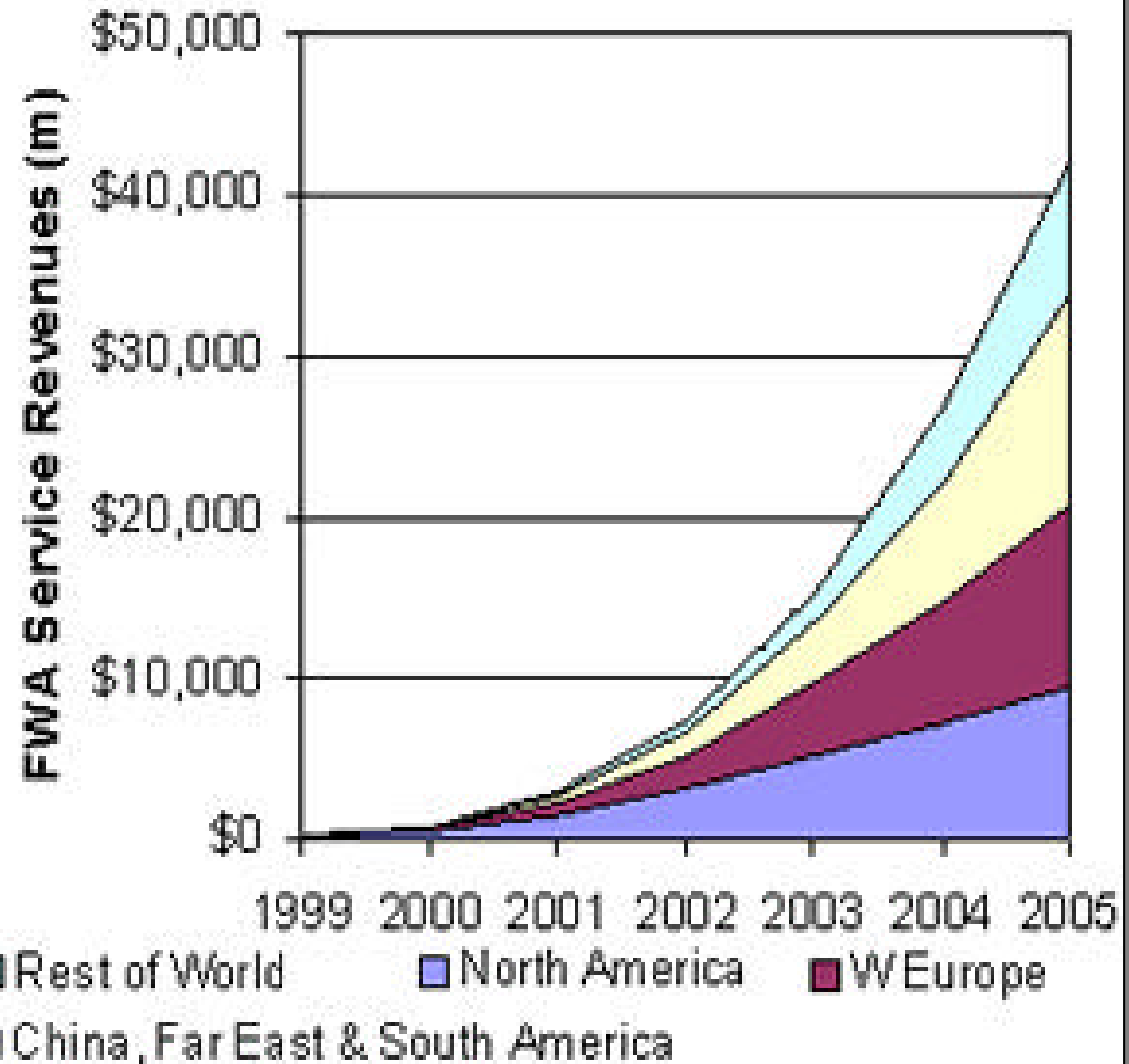


Fixed Wireless Service revenues by region 1999-2005

Fixed wireless deployments to both households and business premises could reach almost 28 million customers by 2005.

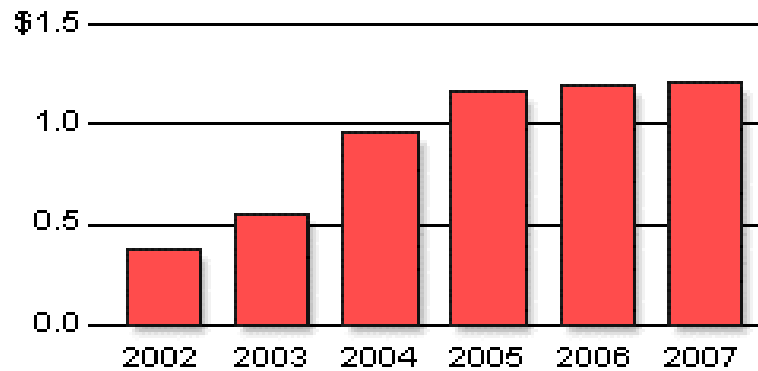
The market by then was estimated to be worth almost \$42 billion in service revenues, and would have penetrated almost all developing and advanced world economies.

Source: ARC Group, Dec. 2000.



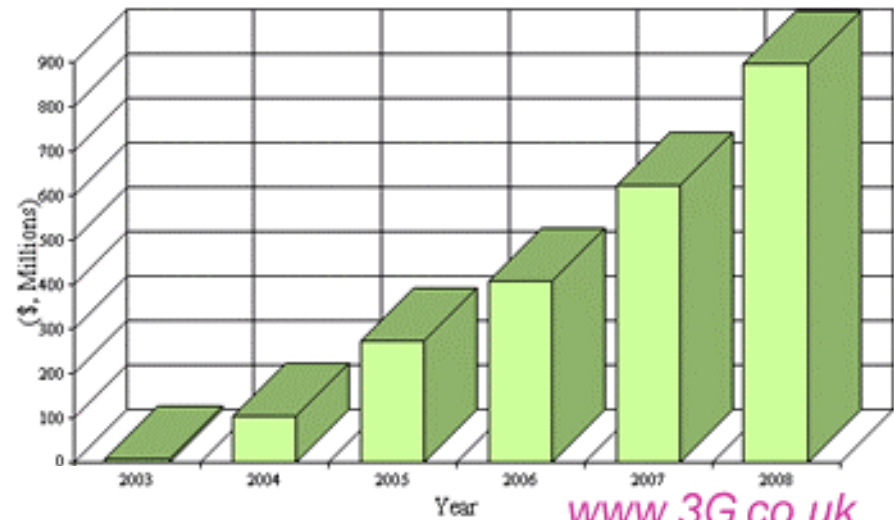
BWA market

Total Worldwide Fixed Wireless Broadband Equipment Revenues (\$ in Billions)



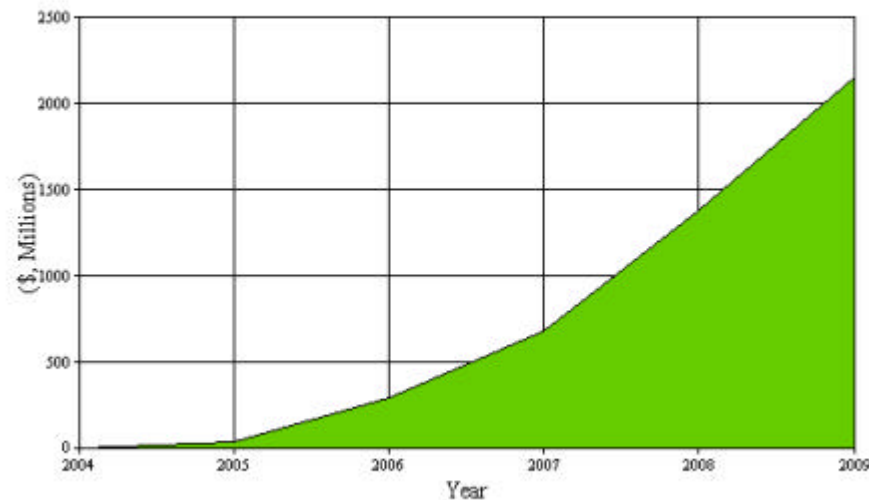
Source: In-Stat/MDR, 12/03

WiMAX Equipment Shipments



www.3g.co.uk

WiMAX Equipment Shipments

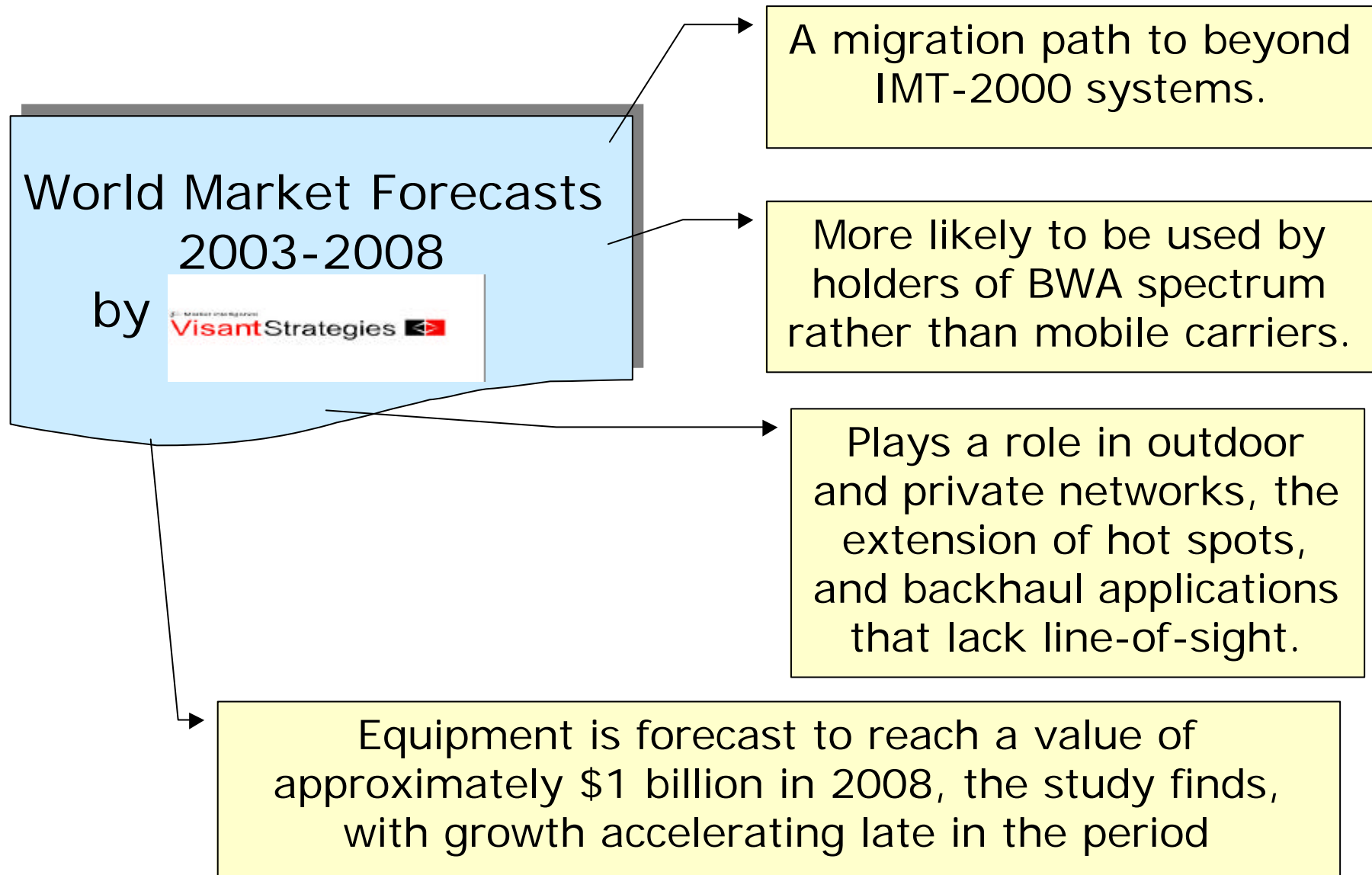


Source: <http://www.visantstrategies.com/chart80216mod.html>

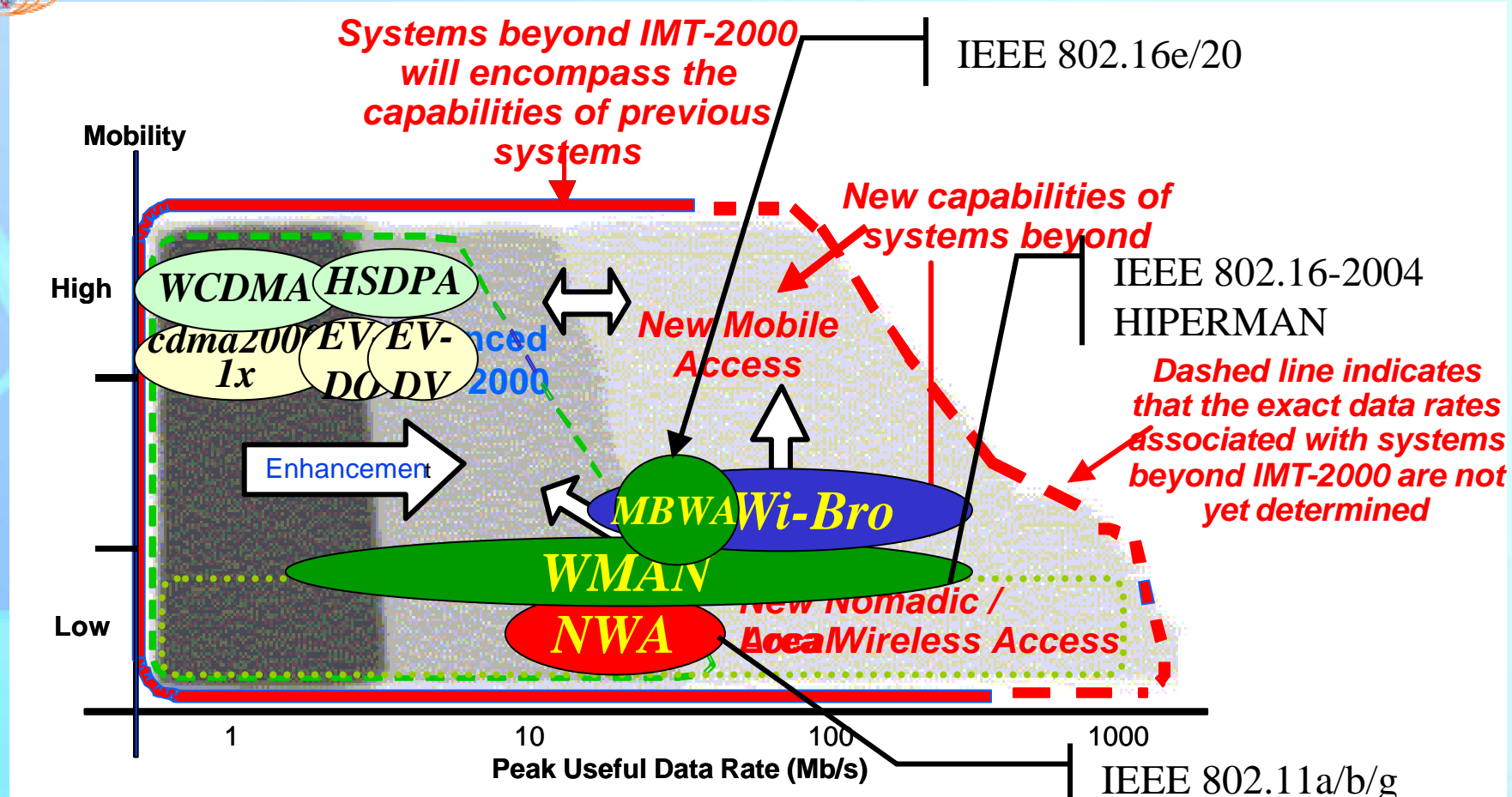
Steady

growth

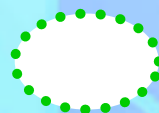
Status & roles of BWA



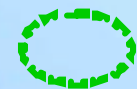
Systems beyond IMT-2000



↔ interconnection



Nomadic / Local Area Access Systems



Digital Broadcast Systems

Broadband global initiative



Plan of Action ([Document WSIS-03/GENEVA/DOC/5](#)): C2. Information and communication infrastructure: an essential foundation for the Information Society:

d) Develop and strengthen national, regional and international **broadband network infrastructure, including delivery by satellite and other systems**, to help in providing the capacity to match the needs of countries and their citizens and for the delivery of new ICT-based services. Support technical, regulatory and operational studies by the ITU and, as appropriate, other relevant international organizations in order to:

- broaden access to orbital resources, global frequency harmonization and global systems standardization;
- encourage public/private partnership;
- promote the provision of global high-speed satellite services for underserved areas such as remote and sparsely populated areas;
- explore other systems that can provide high-speed connectivity.

Broadband regional initiatives

AMERICAS



Resolution
PCC.I/RES.21 (II-03)
on Broadband Access
Technologies and
Services

Policies to promote
national broadband
infrastructure.



Action Plan: "The
European Broadband
Strategy"

EC COM(2003) 65
"Electronic
communications: the
road to the knowledge
economy"

ASIA-PACIFIC



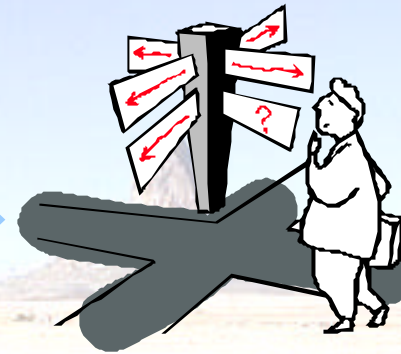
APEC Asia Broadband
Program (conducted by
Japan) (2002-05)

IT-related policy
measures towards a
globally-balanced IT
society.

- all Member States to put comprehensive national broadband strategies in place by the end of 2003;
- all public administrations to have broadband connections by end 2005;
- half of all Internet connections to be broadband by 2005.

The road to BWA

Resources & policy
Service objectives
Technology strategy



- Spectrum & regulations
- System requirements
- Radio interface standards

ITU & BWA

Radiocommunications

- Preferred frequency bands (harmonization)
- Draft ITU-R Recommendation on radio interface specifications (requirements & standards)
- Collaboration with external organizations (e.g., IEEE 802.16 WG & ETSI Project BRAN)

Strategy & Policy

- Workshops & publications (e.g., Promoting Broadband, The Birth of Broadband & country case studies)

Developing countries

- Report on Broadband Technologies (ITU-D Q.20/2)
- Seminars on BWA

Visit: <http://www.itu.int/ITU-R/study-groups/was/>