Wireless Broadband in the Global Scene

Regional Seminar on
Broadband Wireless Access for rural and remote areas for the Americas

Brasilia
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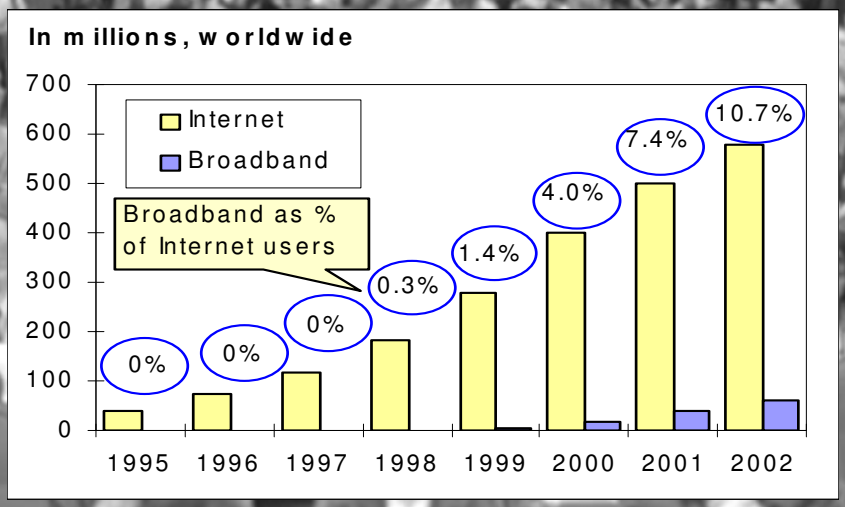
Connecting the world

World population:	**6.4 billion**
Not having broadband:	**6.3 billion**

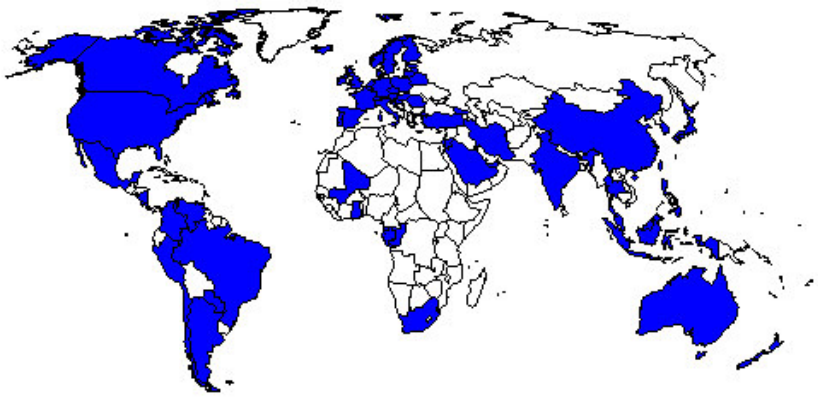
"…The economic and social case for developing broadband access is very strong and takes on added significance for ***rural and remote communities, where improved communications*** *can address a variety of challenges posed by distance."* OECD, April 2004.

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



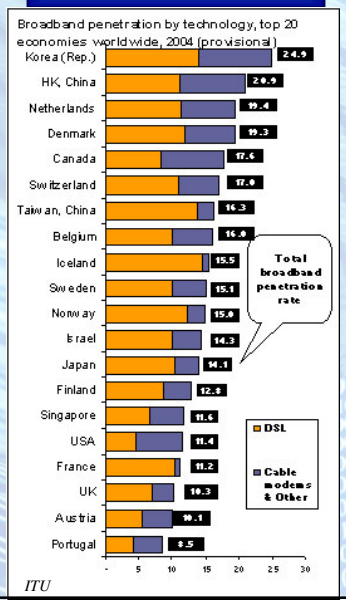
Broadband worldwide

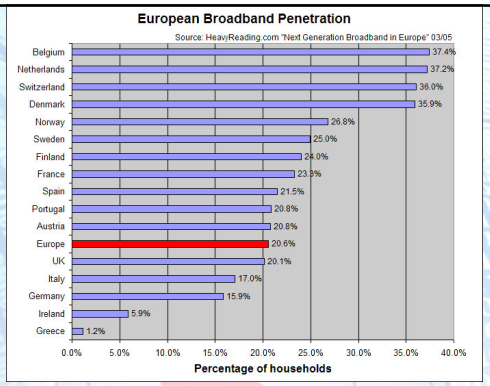


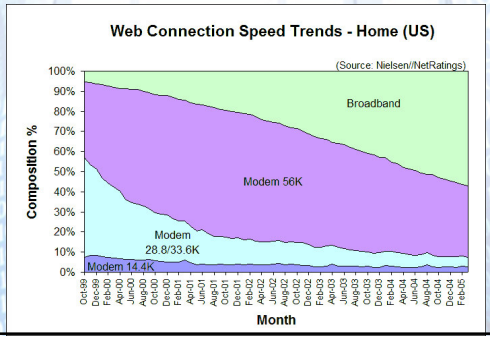
Shaded countries (81) had commercially available broadband services at 31.12.2002.

Source: ITU World Telecommunication Indicators Database

Broadband statistics



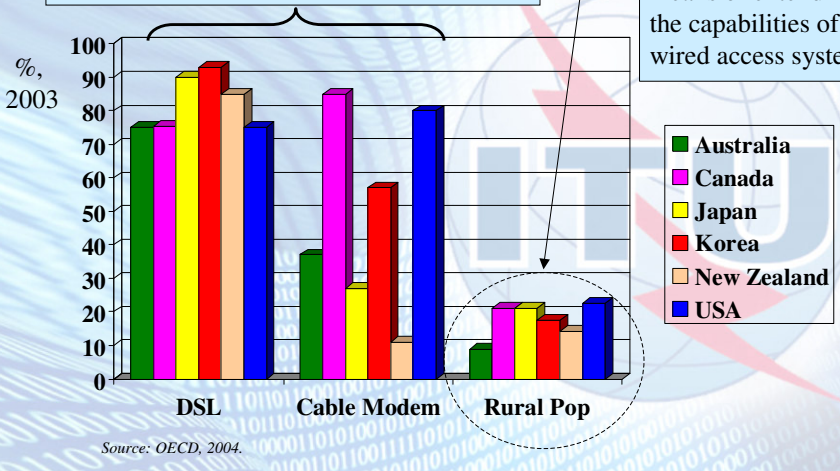




Wireless & wired broadband access

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.



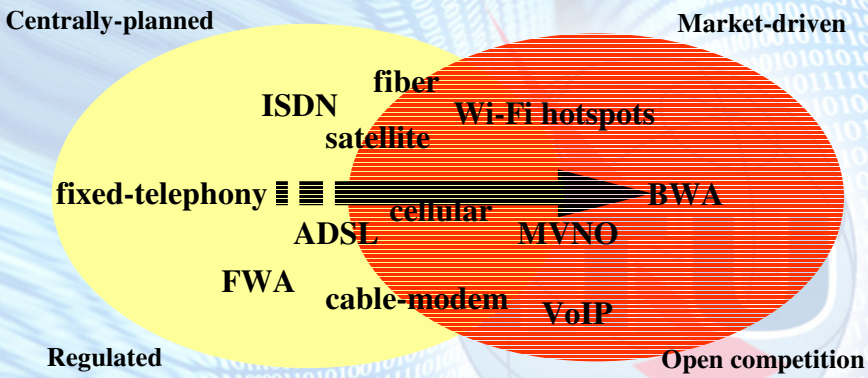
Source: OECD, 2004.

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

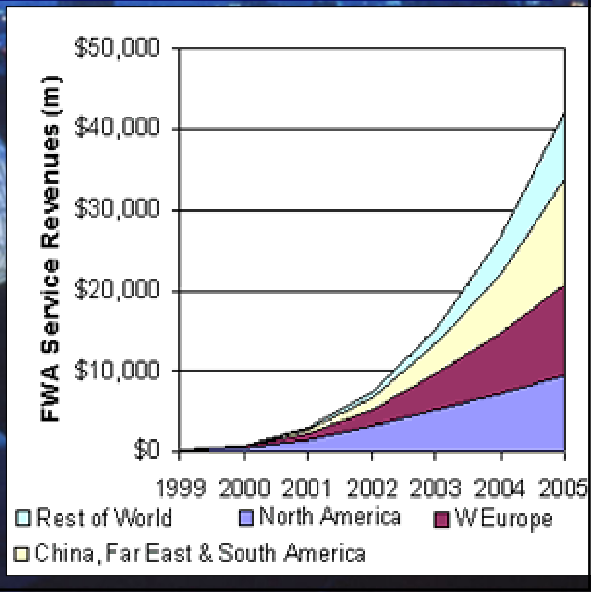


Fixed Wireless Service
revenues by region 1999-2005

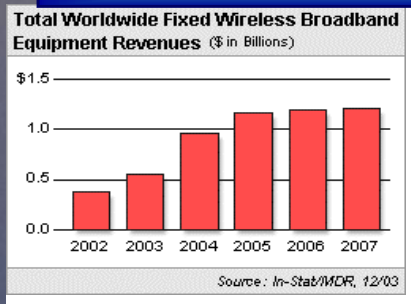
Fixed wireless deployments to both households and business premises could reach almost 28 million customers by 2005.

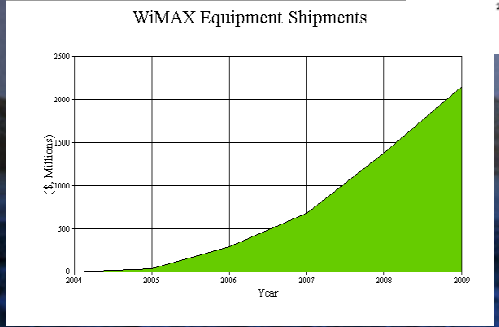
The market by then was estimated to be worth almost $42 billion in service revenues, and would have penetrated almost all developing and advanced world economies.

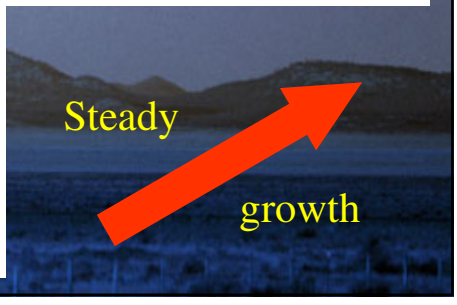
Source: ARC Group, Dec. 2000.



BWA Market





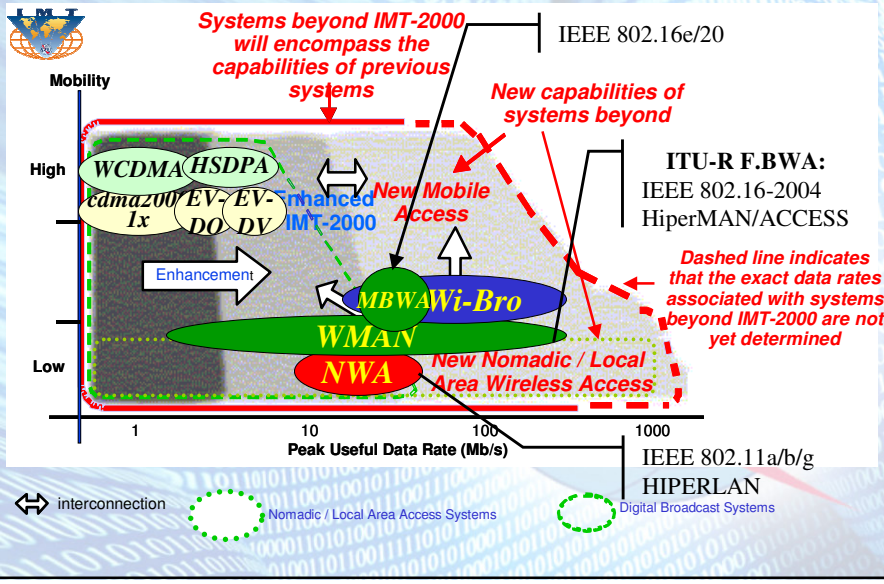


Status & roles of BWA

World Market Forecasts 2003-2008 by Visant Strategies

- A migration path to beyond IMT-2000 systems.
- More likely to be used by holders of BWA spectrum rather than mobile carriers.
- Plays a role in outdoor and private networks, the extension of hot spots, and backhaul applications that lack line-of-sight.
- Equipment is forecast to reach a value of approximately $1 billion in 2008, the study finds, with growth accelerating late in the period

Systems beyond IMT-2000



Broadband regional initiatives

AMERICAS

CITEL

Resolution PCC.I/RES.21 (II-03)

on Broadband Access Technologies and Services

Policies to promote national broadband infrastructure.

eEurope 2005

Action Plan: "The European Broadband Strategy"

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

ASIA-PACIFIC

Asia Broadband Program

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.

Broadband global initiative

world summit on the information society
Geneva 2003 - Tunis 2005

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:

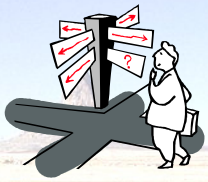
- broaden access to orbital resources, global frequency harmonization and global systems standardization;
- encourage public/private partnership;
- promote the provision of global high-speed satellite services for underserved areas such as remote and sparsely populated areas;
- explore other systems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

The road to BWA

Resources & policy

Service objectives

Technology strategy



- Spectrum & regulations
- System requirements
- Radio interface standards