

# MOTOROLA RURAL BROADBAND CONNECTIVITY



## Connecting Rural Communities



## EU Recovery Plan – Broadband Initiative

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April 3rd, 2009

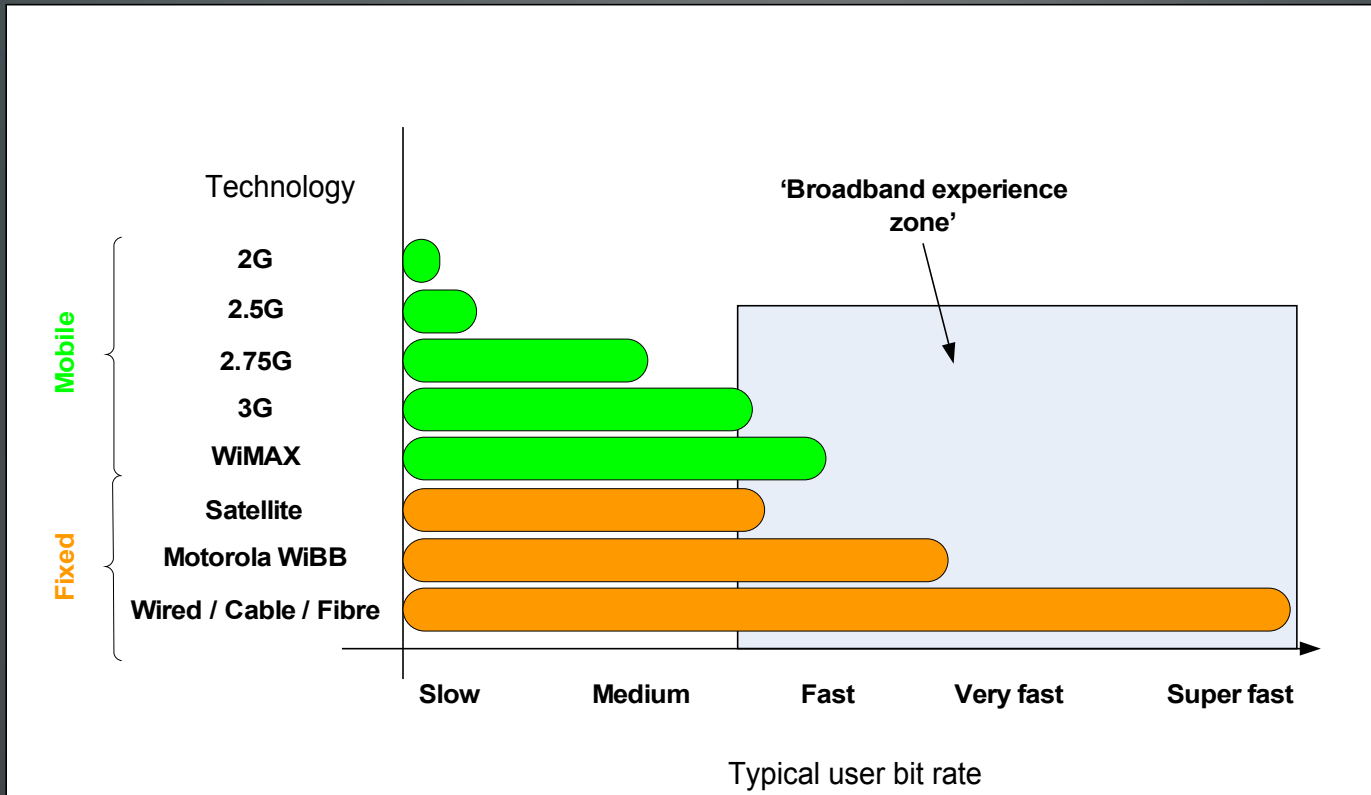


- It is possible today to deliver broadband to underserved areas via the use of a multitude of technologies
- The options include 'wired' and 'wireless' technologies ranging from ADSL2+, fiber, WiFi, satellite, 4th generation networks (WiMAX and LTE), and wireless HyperLAN PTP & PTMP in the licensed and unlicensed spectrum.
- Broadband is another utility - Education, commercial work, social networking increasing depend on the level of connectivity you can command





## Wireless broadband a credible ADSL / DSL alternative

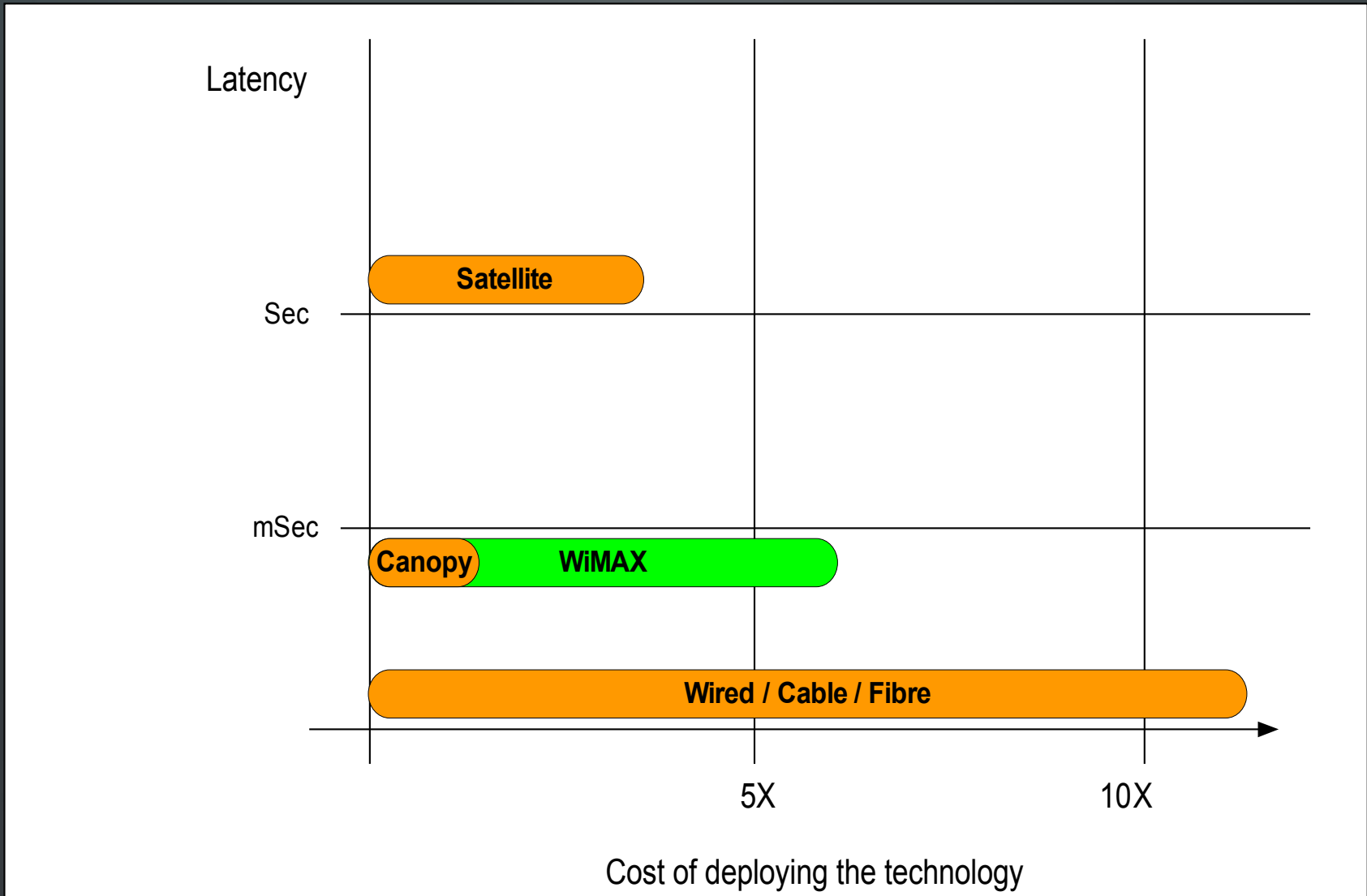




	Health	Education	eGov	Internet Access
Satellite	✓	✓	✓✓✓	✓✓✓
Wired	✓✓✓	✓✓✓	✓✓✓	✓✓✓
Wireless	✓✓✓	✓✓✓	✓✓✓	✓✓✓

Because of latency issues satellite is not suitable for real-time applications

# Comparison of Satellite, Wireless & Wired?



# Technology Comparison



	Satellite	Wired	Canopy	WiMAX
Real-time	✗	✓✓✓	✓✓✓	✓✓✓
Cost of deployment	✓	✓	✓✓✓	✓✓
Carrier grade	✗	✓✓✓	✓✓✓	✓✓✓
Mobility	✗	✗	✗	✓✓✓
Speed of deployment	✓✓	✓	✓✓✓	✓✓
Electrical power	✓✓✓	✗	✓✓✓	✓✓✓
Licensed frequencies	✗	✗	✓✓✓	✗
Unlicensed frequencies	✓✓✓	✓✓✓	✓✓✓	✓✓✓
Scalability				

Wireless technologies offer a distinct advantages over other technologies



## Problem

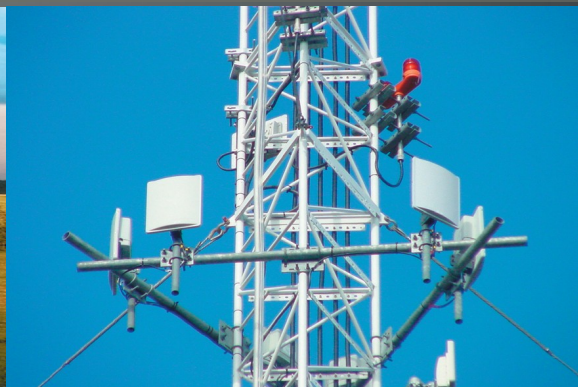
- 22% of Nova Scotia’s population, 93,000 dwellings, 5,600 businesses and hundreds of schools and medical facilities, did not have broadband connectivity as they are in rural underserved areas

## Motorola Solution

- A province wide 300+ site wireless broadband network is being rolled out using Canopy technology
- This is being achieved via co-operation of private enterprise and the Canadian and Nova Scotia Governments
- Providing high (2Mb+ bandwidth) to all

## Motorola Solution Value

- Low energy consumption allowing the use of ‘Green Power’ which is especially important given the remoteness of most of the sites
- Light weight technology allowing rapid deployment – 100 percent coverage planned by December 2009
- Reliable rugged equipment to survive the harsh Nova Scotia winter and minimise site visits



*Government subsidy and private investment brings broadband to rural communities*



## Problem

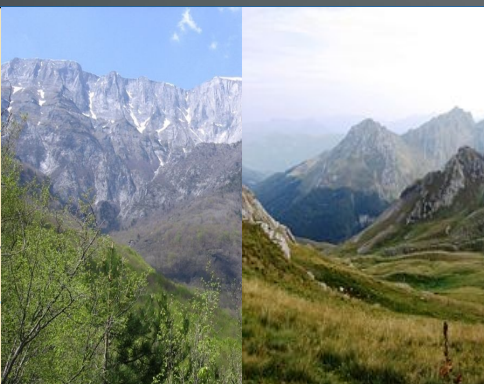
Macedonia was concerned about improving the country's ability to access the Internet to drive further economic development and delivering a higher quality of education.

## Motorola Solution

Macedonia was one of the first developing countries to build a nationwide wireless infrastructure. The network consisted of PTP and PMP equipment. The solution is being used for commercial as well as non-commercial purposes.

## Motorola Solution Value

Now 95% of Macedonia's population has affordable wireless connectivity – whether urban or rural. The Internet penetration in the country has jumped from less than four percent to 27 percent. The network has connected all 450 schools across the country facilitating e-learning and access to the Internet.



*“Wiring the schools created the springboard to full connectivity, and we knew from experience that this would produce a tremendously positive economic impact for Macedonia”.*

**Glenn Strachan, Director of the Macedonia Connects, Project for the AED**

*“The Point-to-Multipoint access points.....made it affordable to serve locations that were difficult to cover.”*

**Predrag Cemerikic, CEO of On.net, Internet Service Provider**

*Wireless broadband used to transform a Nation*



## Problem

- Megatel SL with an impressive goal to deliver broadband to individuals and business
- Rural internet access where WiFi technology could not provide capacity or reliability

## Motorola Solution

- End user connectivity through Point to Multipoint modules and high speed backbone via Motorola Point to Point wireless Ethernet
- Capacity growth available through optional software upgrades

## Motorola Solution Value

- Low energy consumption made it easy to deliver a “green” service by installing solar stations to power base station installation
- Solution offered guaranteed VoIP service to network users, via traffic prioritized service



*Private investment brings broadband to rural communities*



## Problem

- Given the often mountainous terrain of Italy, many small towns have no access to high speed Internet
- Need to reach customers beyond DSL coverage, for both social inclusion and public safety

## Motorola Solution

- WISP with PMP100 series
- Wavetech as a Wireless Internet service

## Motorola Solution Value

- Leveraging network to include municipal public safety
- Serves multiple outlying cities
- Thousands connected beyond the reach of DSL services
- IP video surveillance for schools, bridges, parks



*Demand aggregation makes rural broadband possible*



RuraliTIC, is the French national forum for boosting rural innovation with a focus on broadband and ICT development



as pleased to announce that Motorola  
of the Telecom infrastructures & linked  
in their Wireless Broadband solution

en as its fixed wireless broadband  
an optimum mix of the following:

ated homes, schools, companies and

quickly deployable solution  
and power efficient solution,  
environmental protection  
resistance to interferences



*Motorola Wireless Broadband solutions are proven and deployed in more than 120 countries today.*



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Enterprise  
Service Provider  
Government

**Applications**  
Video  
Data  
Voice

**Climates**  
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Dense Urban  
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Desert

**Over 100 Case Studies Available**



***THANK YOU***

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