

Wireless Transmission Portfolio



Customer Presentation
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Agenda

1. Alcatel-Lucent is a Leader in the Microwave Market
2. The Added Value for the Carrier Market
3. The Added Value for the Mission Critical Networks Market
4. Ahead on IP-Transformation
5. Managed Services to Secure Customer Business Plans
6. Proof of Expertise
7. Conclusion

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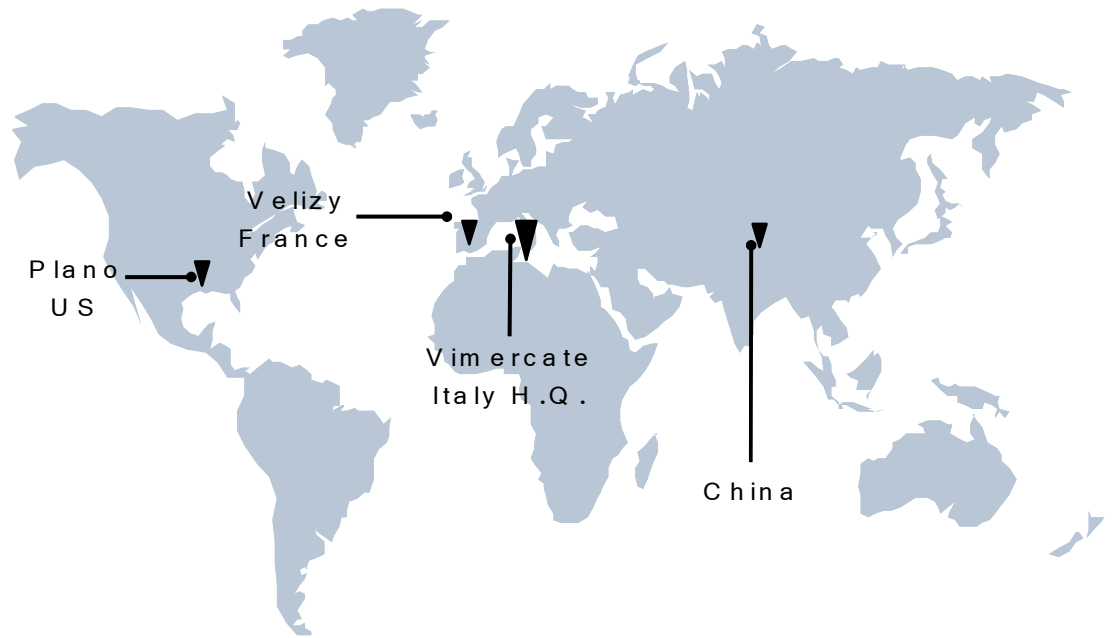
Alcatel-Lucent is a Leader in the
Microwave Market

Alcatel-Lucent: Wireless Transmission Leadership

A market leader in microwave with 17% of global market share*

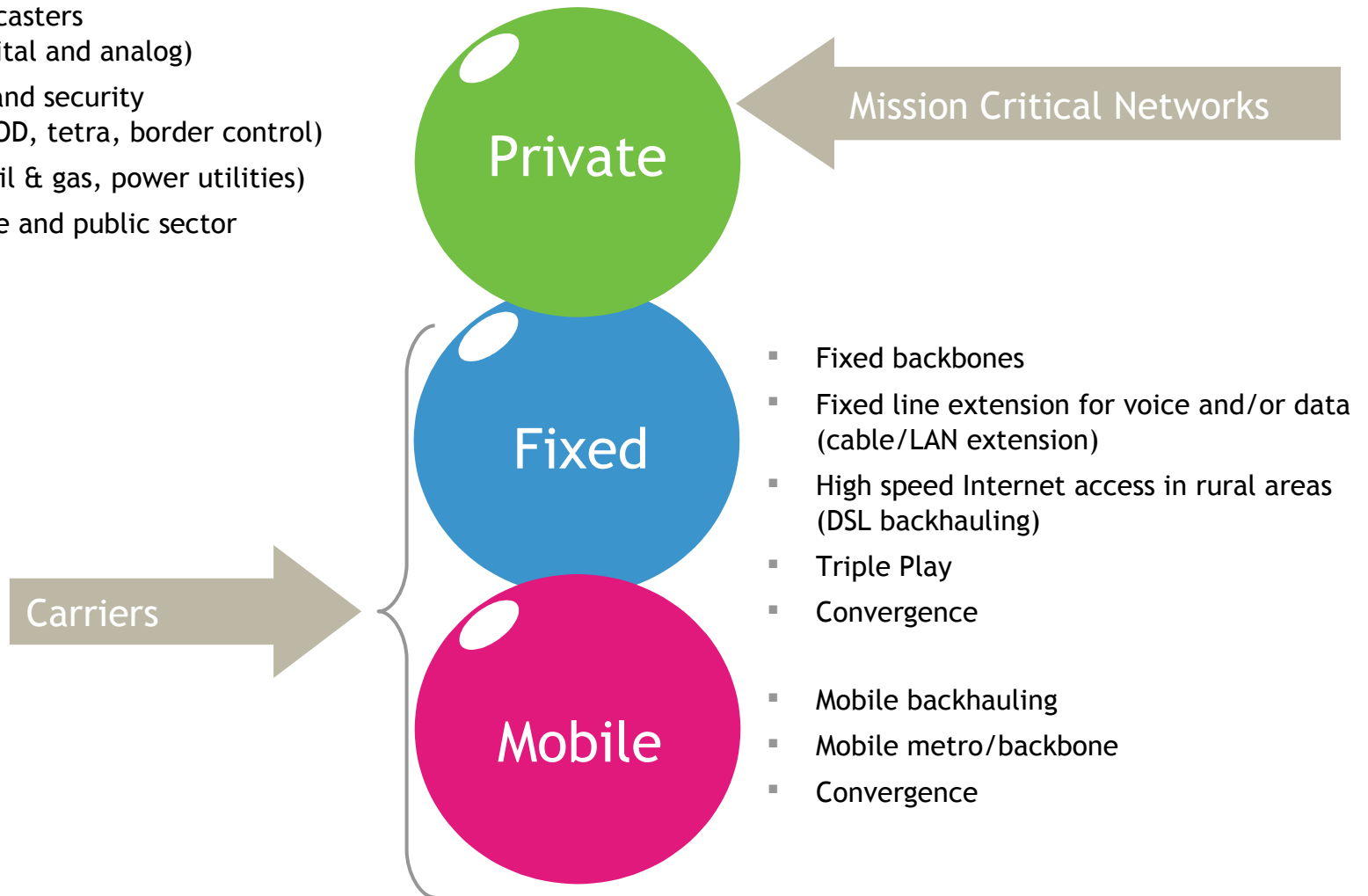
- Four active R&D centres
- More than 400,000 transceivers built
- Leadership in long-haul #1
- Leadership in ANSI market #1

* according to Skylight Research



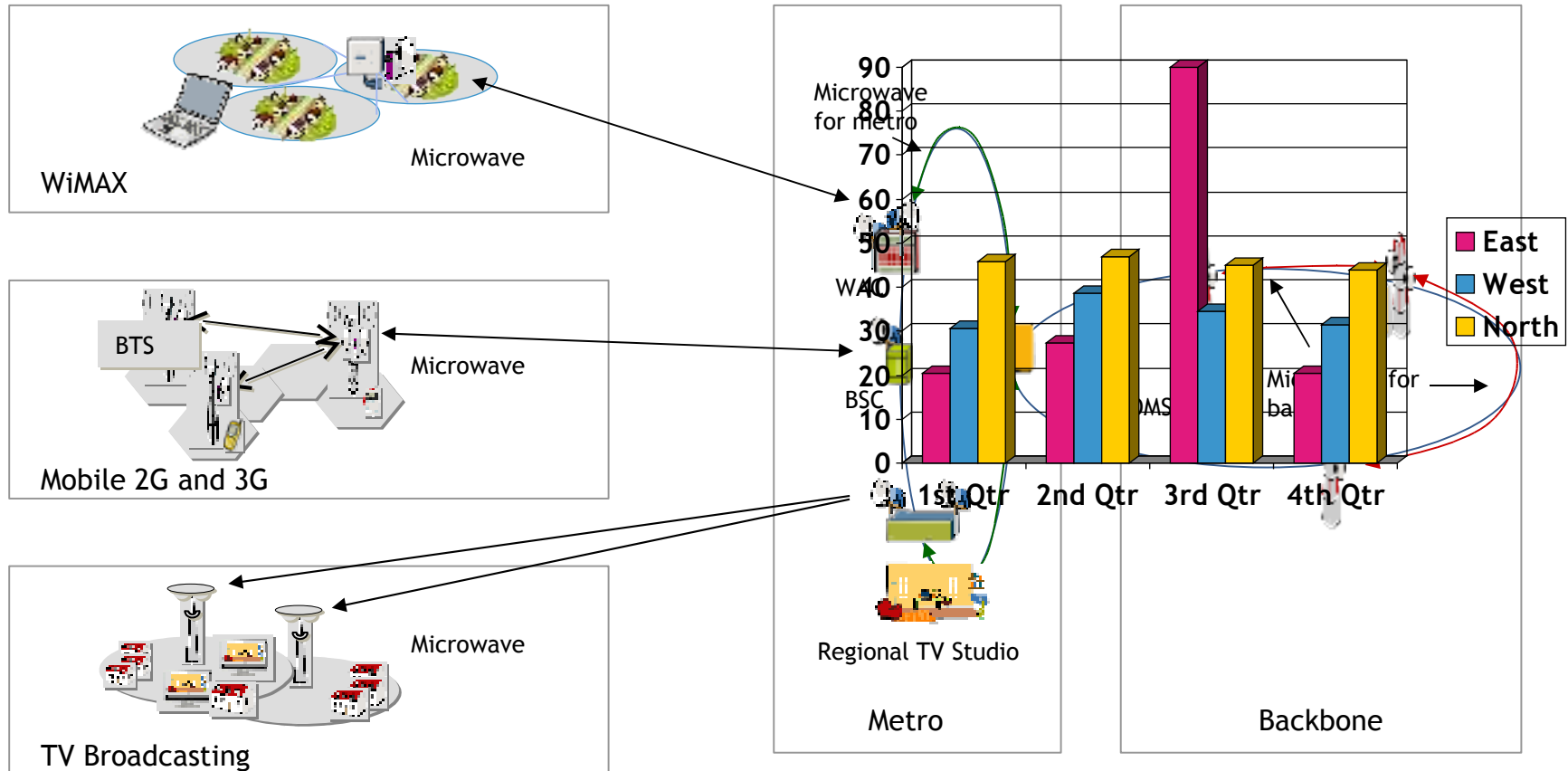
Wireless Transmission Solutions for All Markets

- TV broadcasters (both digital and analog)
- Defense and security (army, MOD, tetra, border control)
- Energy (oil & gas, power utilities)
- Enterprise and public sector











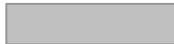



From Backhauling to Backbone...

It's all about microwaves



An Outstanding Product Portfolio

Short Haul

9400 AWY		<p>7 - 38 GHz</p>   <p>4 - 64 Mb/s</p>	<ul style="list-style-type: none"> ▪ Ideal solution for PDH ▪ SW configurable ▪ Ethernet ready
9500 MXC	 <p>New, available</p>	<p>6 - 38 GHz</p>   <p>64 - 311 Mb/s</p>	<ul style="list-style-type: none"> ▪ Ideal solution for SDH and “super PDH” ▪ Ethernet and Gigabit Ethernet
9500 MSS	 <p>New, 2007</p>	<p>6 - 38 GHz</p>   <p>4 - 311 Mb/s</p>	<ul style="list-style-type: none"> ▪ Packed-based node ▪ Any traffic, any capacity ▪ Adaptive modulation
9600 USY		<p>6 - 38 GHz</p>   <p>55 - 622 Mb/s</p>	<ul style="list-style-type: none"> ▪ Ideal for “legacy” SDH ▪ Up to 3+1/4+0 STM-1 ▪ High system gain

Long Haul for Backbone

The Strength of Being Number One

Key market requirements

- Full indoor systems
- Low-medium capacity (Nx E1/DS1, Nx E3/DS3)
- High capacity (OC3/Nx STM-1)
- High system gain for long distances
- Protected configuration for high link availability

Key differentiators

- Number 1 worldwide in High and Low capacity
- Worldwide customer base
- End-to-end transmission portfolio with common management system
- Unique skills in network design and propagation models
- Large scope of managed services

An Outstanding Product Portfolio

Long Haul

9600 LSY



4 - 13 GHz



155 - 1.2 Gb/s

- Ideal for any backbone
- Up to 7+1/8+0 STM-1
- Very high system gain

- Ideal for any backbone
- Up to 1+0/1+1 STM-1
- Compact version

MDR 8000



2 - 11 GHz



4 - 155 Mb/s

- Ideal for long distance
- FCC standard
- Medium-high capacity

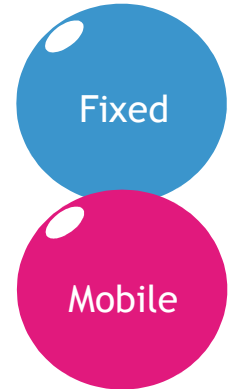
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The Added Value for the Carrier Market

Challenges of the Carrier Network Market

Carriers' Networks

- GSM/UMTS backhauling
- Mobile TV
- WiMAX backhauling
- Fixed broadband access
- National/regional backbones
- Fixed backbones
- High speed Internet access in rural areas (DSL backhauling)
- Triple play
- Convergence



Challenges

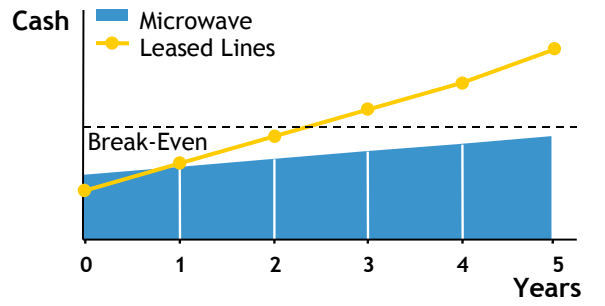
1. OPEX reduction
2. Fast deployment
3. Flexible and future-proof

Microwave Value Proposition for Carriers

Optimising the Total Cost of Ownership

1. OPEX Reduction

- LL: 100 (index)
- MW link: 10-20
- Quick ROI

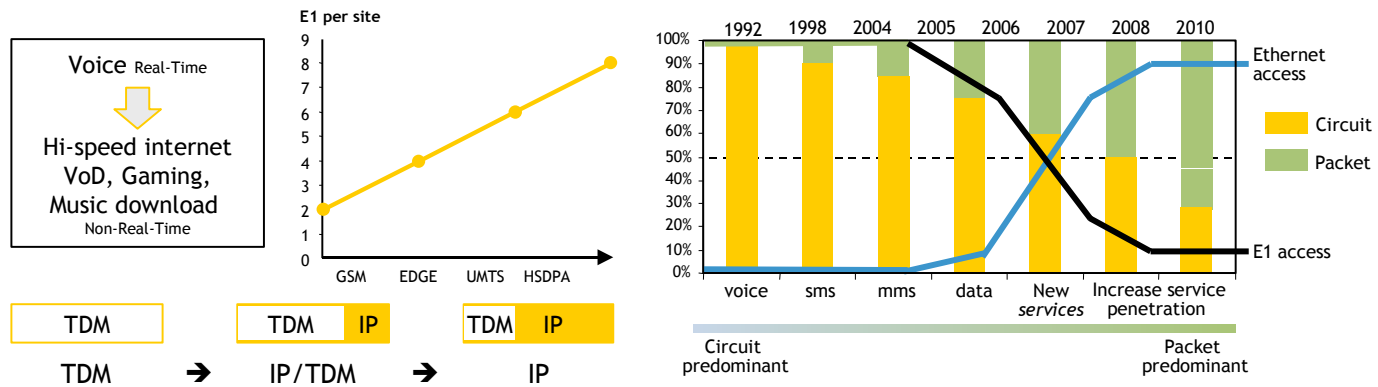


2. Fast Deployment

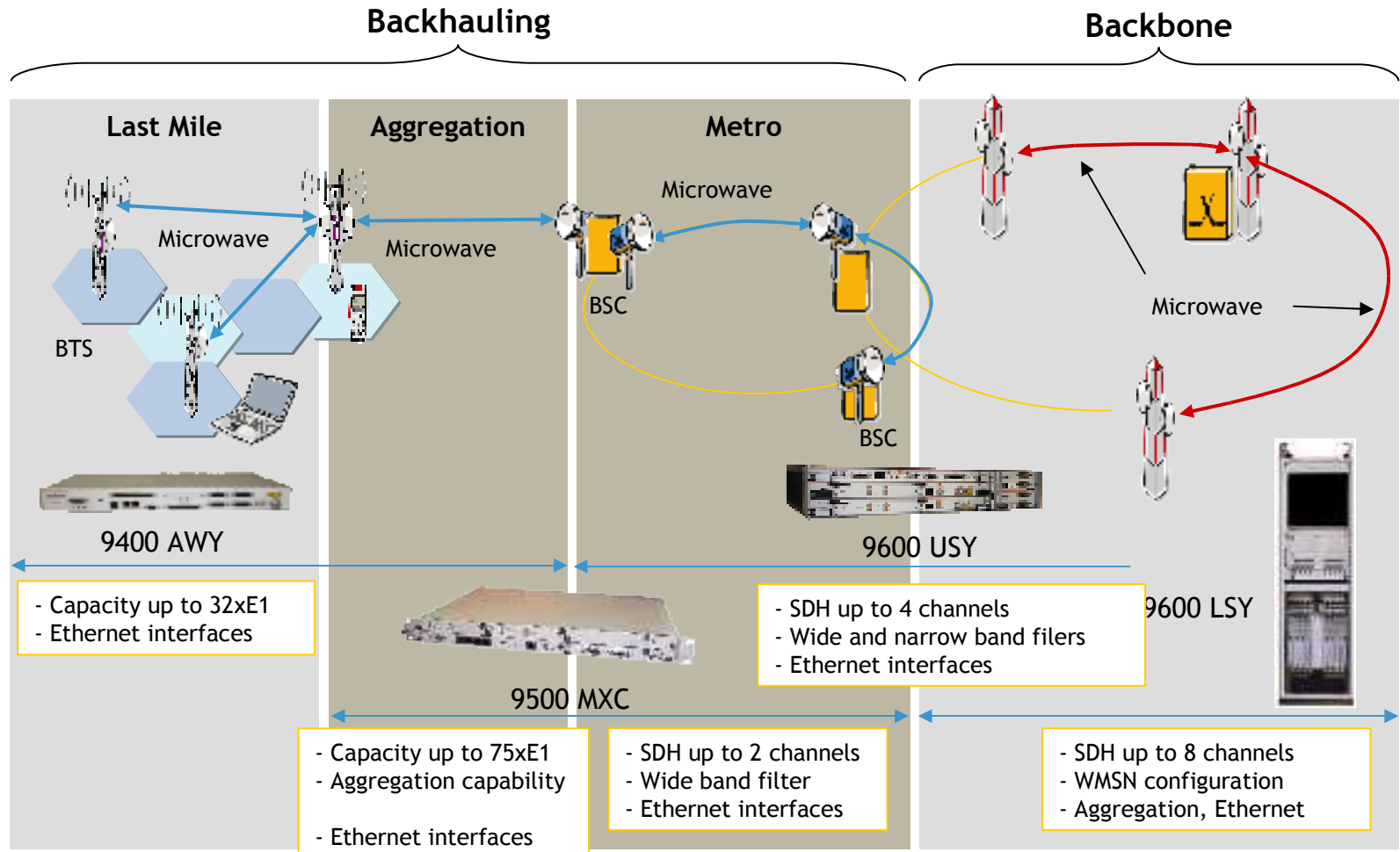
- Network ownership
- Algeria - Orascom - 110 PDH hops in 2 months
- Thailand- TA-Orange - 25 hops per week on average and up to 50 hops per week during peak phase

3. Flexible, Future Proof

- 2 Mb/s up to 311 Mb/s
- TDM and Ethernet



The Solution for Carrier Networks



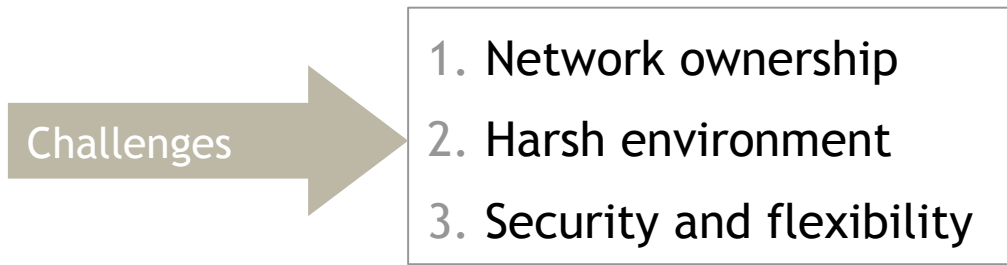
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The Added Value for the Mission Critical Networks Market

Mission Critical Networks Market

Mission Critical Networks

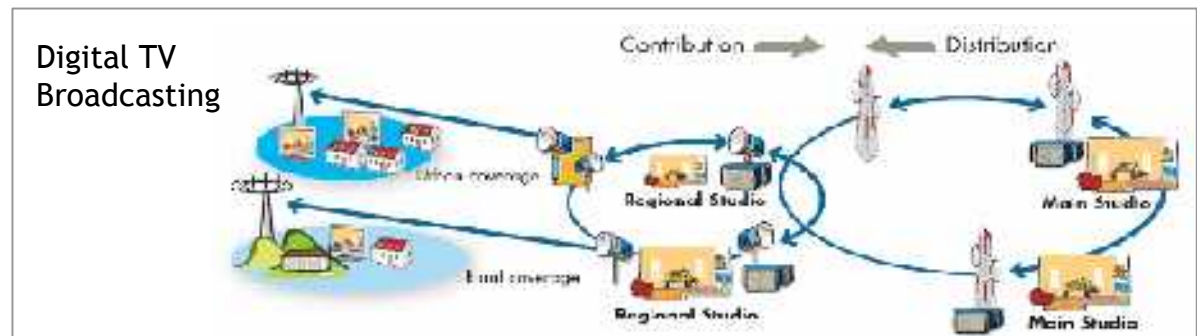
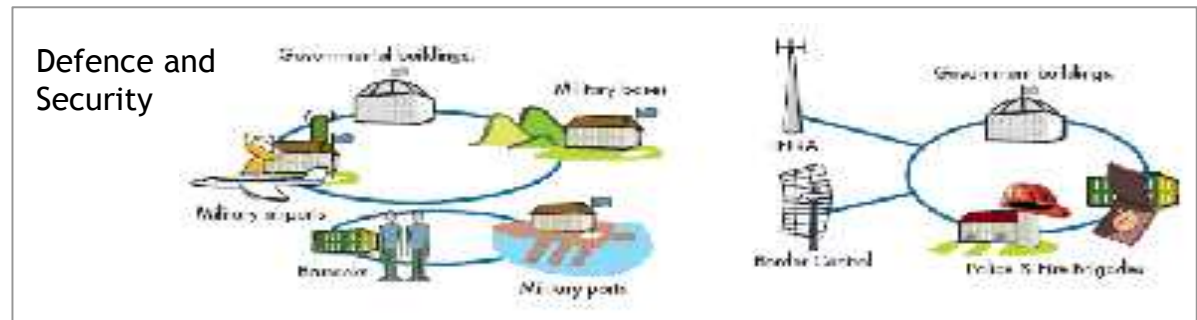
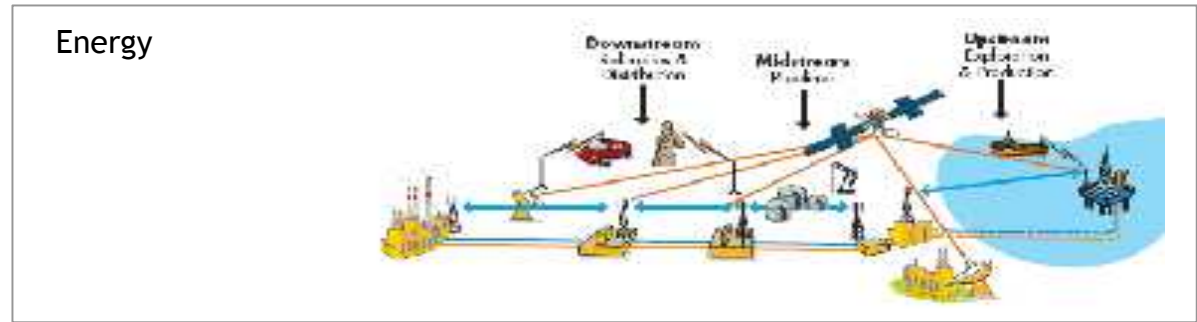
- Oil and gas and power lines supervision networks
- Strategic networks for defense
- Homeland security
- Digital TV broadcasting - DVB-T



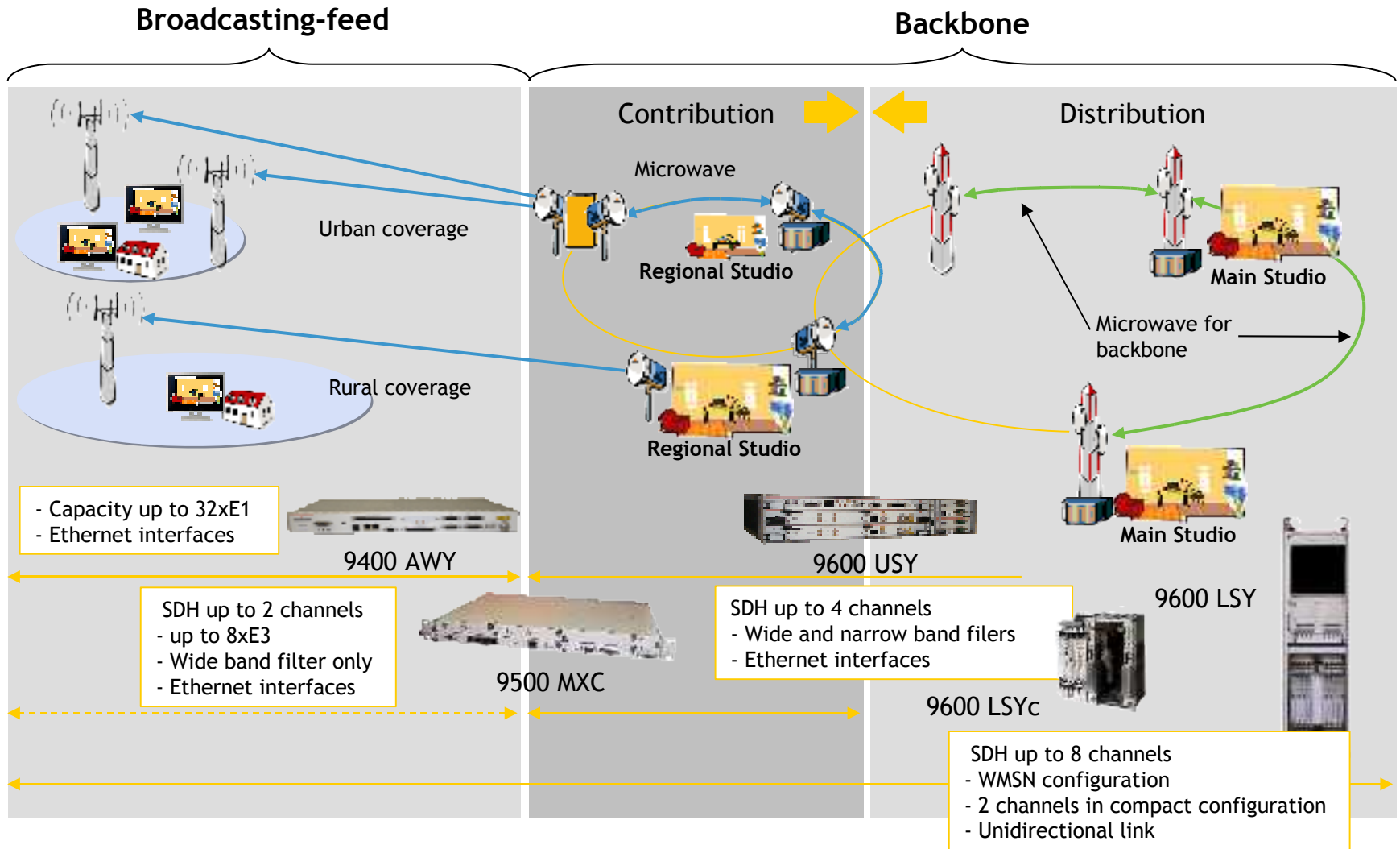
Microwave Value Proposition for Private Security and Independency for the Customers

Key differentiators

- Topology independent
- Terrain independent
- Capillary coverage
- Flexibility
- Fast deployment
- Reduced OPEX
- Network ownership
- Security



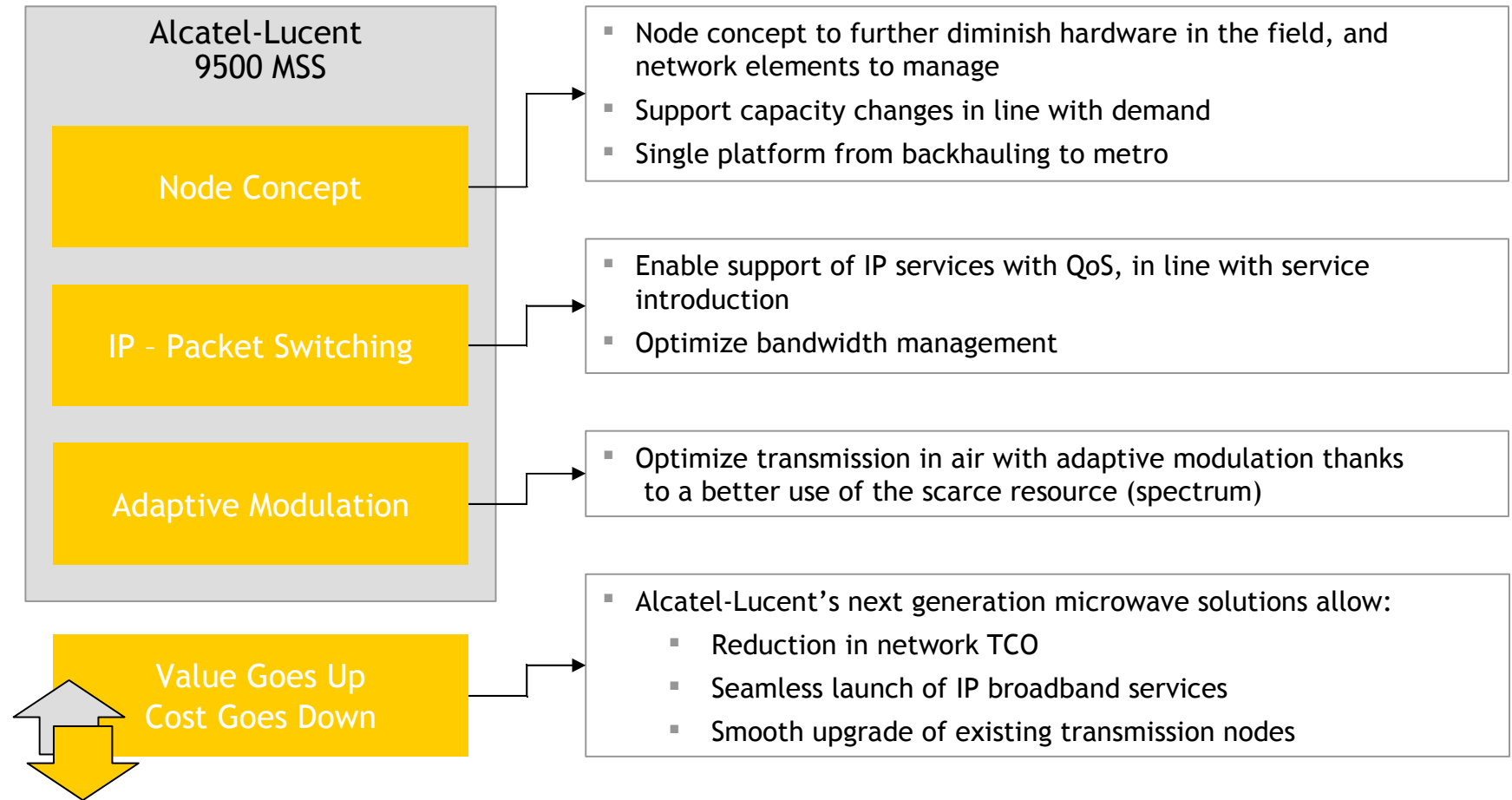
The Solution for Digital TV Networks



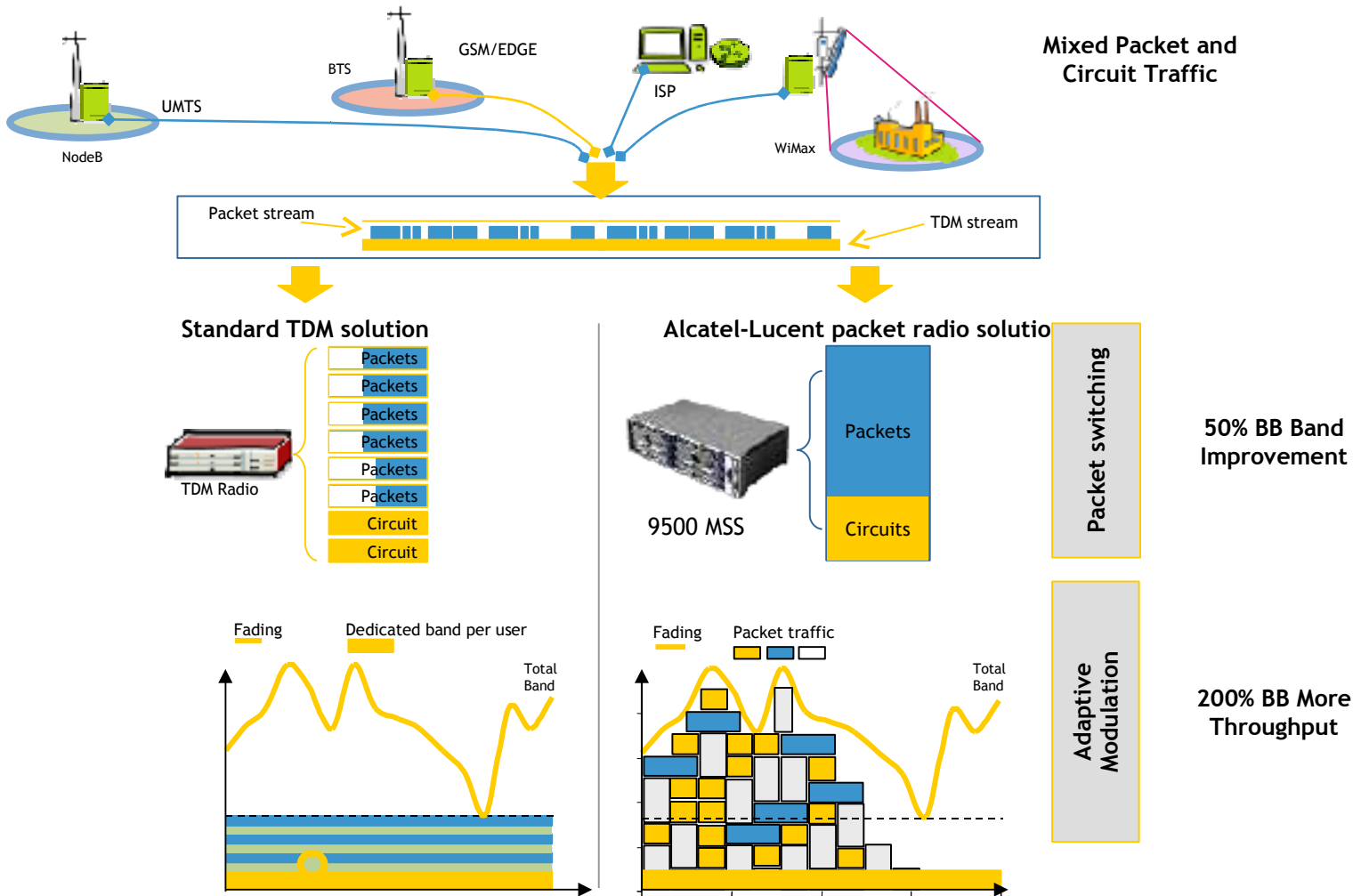
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Ahead on IP-Transformation

Innovation in the Broadband IP World



9500 MSS Delivers Huge Gain in Capacity and Spectrum Usage

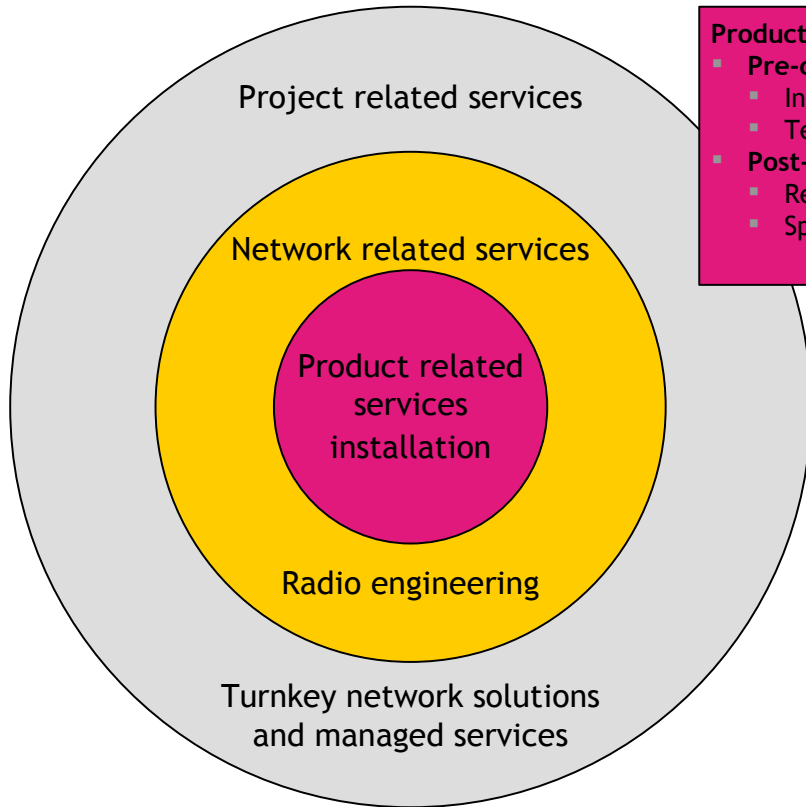


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Managed Services to Secure Customer Business Plans

Managed Services

Expanding the Scope



Product related services

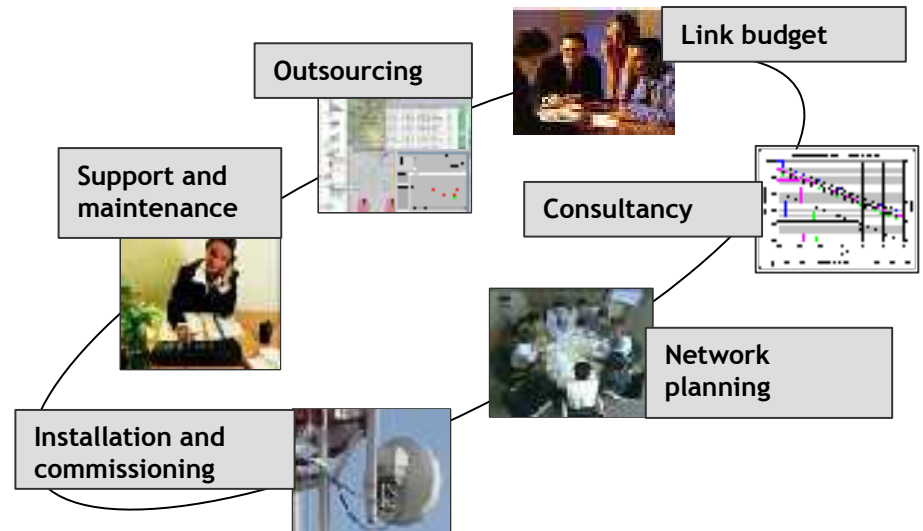
- Pre-commissioning
 - Installation
 - Test & com.
- Post-commissioning
 - Repairing
 - Spare parts mgt.

Network related services

- Pre-commissioning
 - Radio design
 - Radio engineering
- Post-commissioning
 - Radio upgrading
 - Radio swapping

Project related services

- Pre-commissioning
 - Solution design
 - Solution integration
- Post-commissioning
 - Operation
 - Maintenance



Managed Services

Staying Close to Business Objectives

Technology anticipation

- We optimize your existing transport infrastructure to future capacity needs
- We guarantee IP evolution for transport networks
- We introduce new technologies and applications

Business adaptation

- We work in a multi-vendor and multi-technology context (GSM, UMTS, WiMAX, DVB, private networks, DSL etc.)
- We provide from consultancy to outsourcing services
- We optimize your OPEX and help you to secure your business plan

Performance assurance

- We guarantee minimal disruption and maximum smoothness
- We provide optimized processes
- We work on SLA basis

6

Proof of Expertise

WiMAX Telekom - Austria

Transmission network for broadband service offer

Contract with Austrian service provider, WiMAX Telekom, signed in Q1 2006

- Nationwide broadband WiMAX service up to 2 Mb/s
- Target is to sign up to 200,000 customers in 2008 by reaching 70% of population in rural and urban areas in Austria



Alcatel's role:

- Delivery of flexible and cost-effective PDH solutions (contract up to 2008)
- Engineering, planning and network design support
- Future-proof platforms to support the current needs and able to evolve to full-IP transport nodes
- Strong support from conception to operational phases

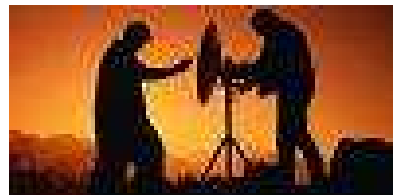


State of Michigan - U.S.A.

Reliable transport for public safety

Transport network of land mobile radio network made of 60 backbone hops and 124 backhauling hops

- Reliable solution for critical communications
- Support of broadband applications for public safety



Alcatel's role:

- Optimize the design of the network and provide the necessary on-site assistance
- Re-design of poorly performing paths, design high performing paths for the remainder of the network and design, integration and staging of the backbone network equipment
- Develop an interface from our TSM-2500 network management platform to Motorola's MOSCAD alarm system
- Provide factory-based training, on-site training and on-site field assistance during the initial system turn-up

Video Broadcasting Administration - Guangdong Province (China)

Transmission for video broadcasting services

Administration of the radio, film and television provider of the Guangdong province

- To deliver high quality video broadcasting service and new triple play offer to end-users
- Covering the whole Guangdong province through 2000 km backbone transmission



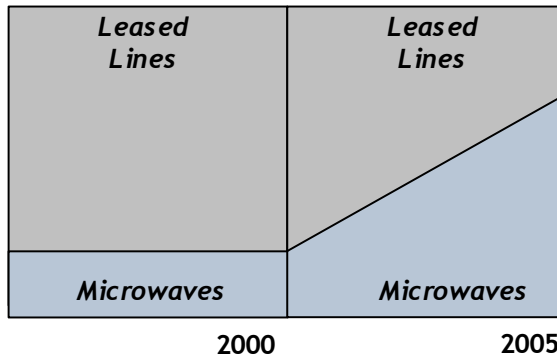
Alcatel's role:

- Integration capabilities of microwave, ADM, network management and services
- Project management and technical support
- Advanced SDH wireless transmission made of 45 links 9600 LSY SDH (with 384 Tx/Rx) and 12 links UX PDH (with 48 Tx/Rx)
- Provide transmission system adapted to deploy triple-play services such as video and platforms to support Asian Games services needs

SFR - Vodafone - France

Backhauling for mobile network

- SFR is the number 2 mobile operator in France
- Around 60% of SFR backhaul is made of microwaves
- Alcatel has deployed over 5000 PDH links for their backhauling network



Alcatel's role:

- SFR fully delegates to Alcatel the design and deployment of PDH clusters
- End-to-end scope: feasibility, design and optimization, deployment
- Swap of leased lines connecting existing sites (GSM or Node B) according to SFR time frame

7 Conclusion

Why Partner With Alcatel-Lucent?

Alcatel-Lucent is a leader in the microwave market

- More than 300 customers worldwide already use Alcatel microwave solutions for mobile service providers, fixed service providers, utilities and other private customers

Alcatel-Lucent is at the forefront of the broadband market with its new packet radio solution 9500 MSS in line with the IP transformation of your network

- Optimization for IP-based UMTS networks
- WiMAX broadband networks
- DSL backhauling, ISP networks

“ONE-STOP-SHOP”: as a comprehensive telecom manufacturer, Alcatel-Lucent is able to provide the complete wireless transmission portfolio under a common management platform

Alcatel-Lucent is able to provide managed services with direct customer support with a local presence worldwide

Main References*

More than 200 customers worldwide use Alcatel microwave equipment



* All trademarks are property of their respective owners

www.alcatel-lucent.com