



NORTEL

Business made simple



Broadband Services to Business and Consumer Markets

Danny Locklear
Director, Wireless Product Marketing
CDG LARC, May 2007

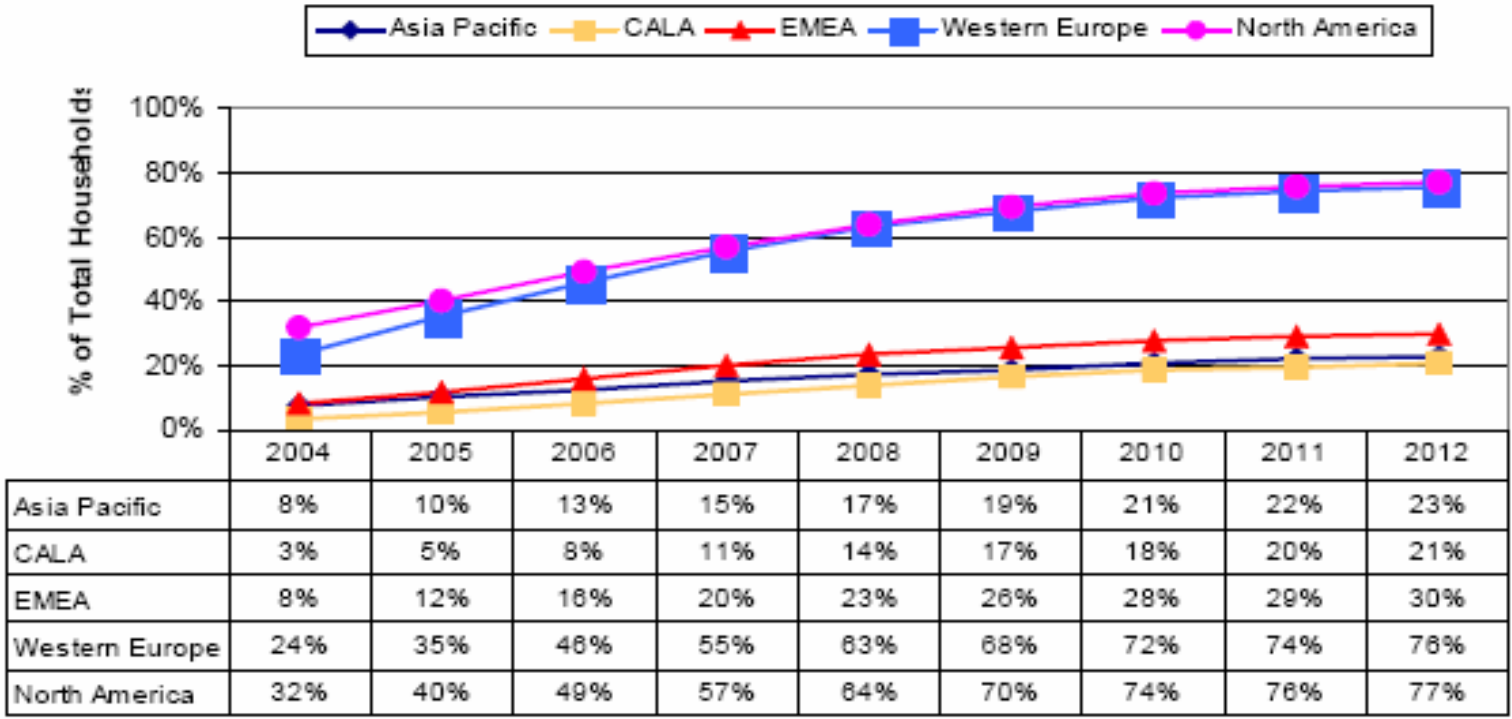




CALA Broadband Market Potential

Low fixed broadband penetration

Fixed Broadband Penetration by Regions



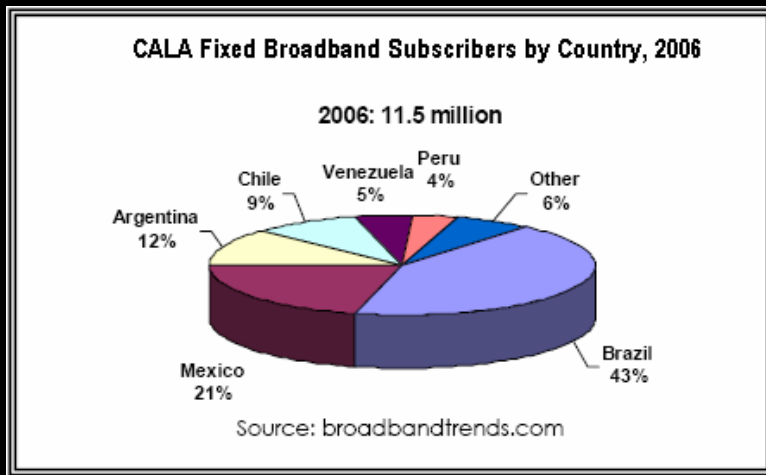
Source: broadbandtrends.com

Strong Potential for Mobile Broadband Wireless
Easier to build = Access to more customers = Drive higher penetration



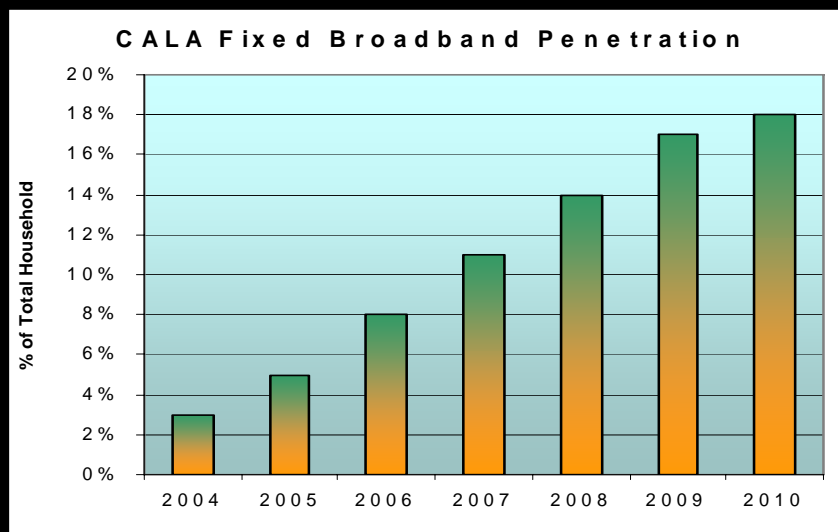
CALA Broadband Access Landscape

Drive higher penetration with mobile broadband

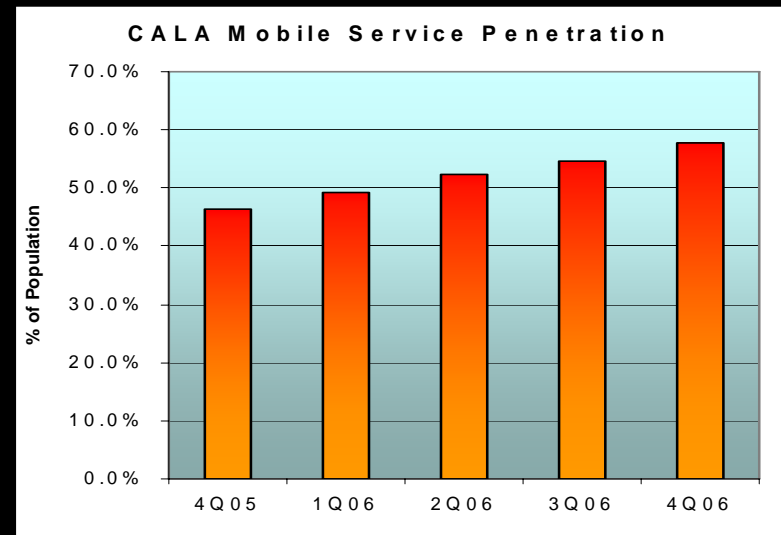


- > Broadband access is not uniformly distributed among CALA countries.
- > In all countries, wireless services have *significantly* higher penetration than “wired” services, such as fixed broadband.
- > Mobile broadband is a main key for more ubiquitous access and higher penetration.

Low sub 20% overall to 2010



Much higher penetration in Wireless



The Evolving Wireless Landscape



Wireless Wide Area Network (WWAN)

Metro/Geographical area
Ubiquitous public connectivity with private virtual networks

Wireless Mesh Networks (WMN)

Metro Area/Public or Private
Outside Enterprise / premises application data network extension

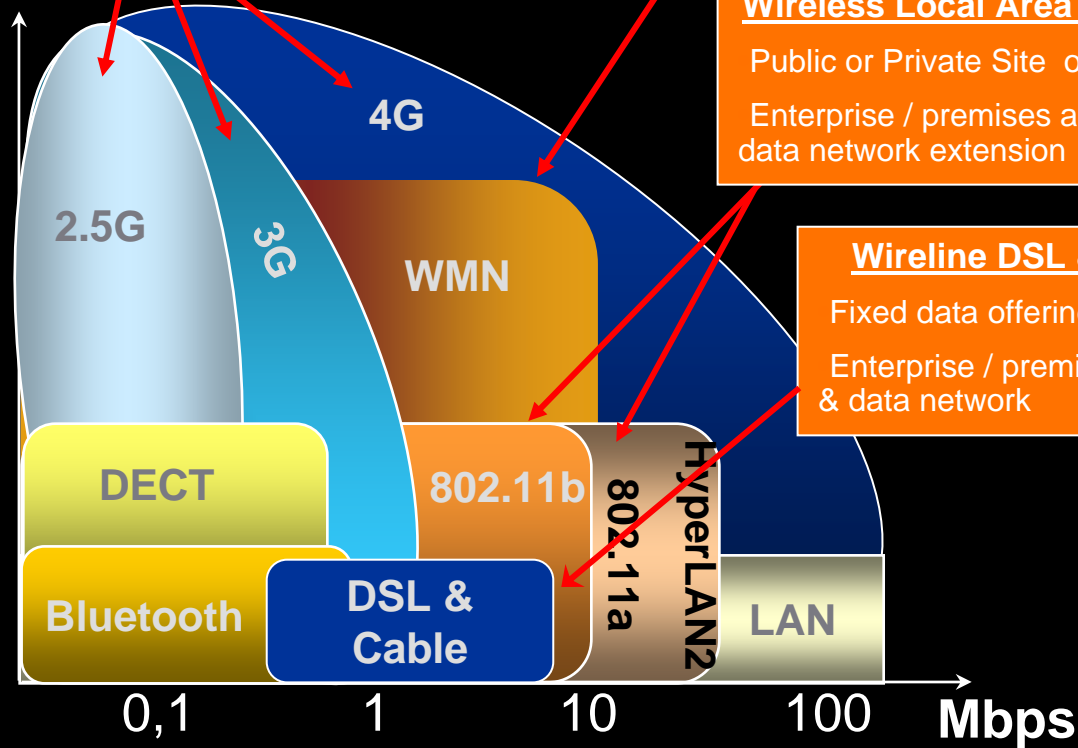
Wireless Local Area Network (WLAN)

Public or Private Site or Campus
Enterprise / premises application voice & data network extension

Wireline DSL & Cable Networks

Fixed data offering
Enterprise / premises application voice & data network

Mobility	
Outside Campus	Vehicle
	Walk
	Fixed
Within Campus	Walk
	Fixed/Desktop

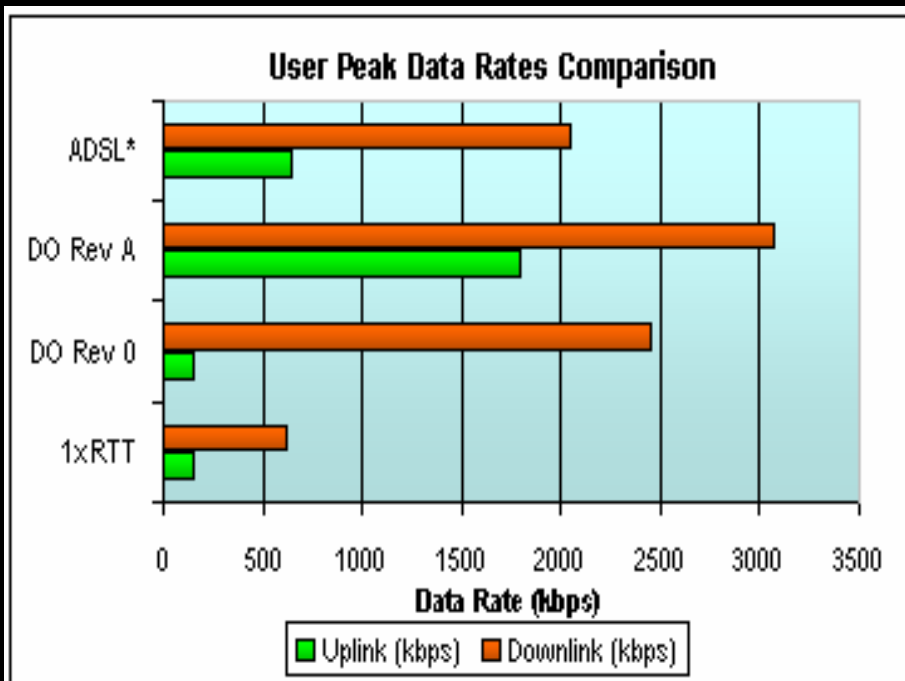




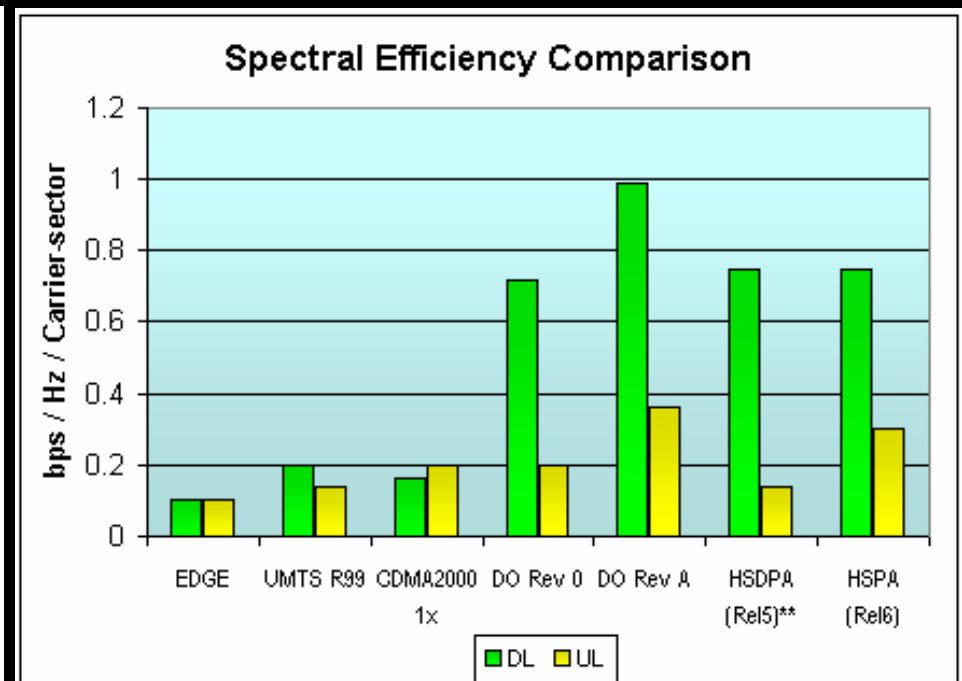
1xEV-DO: The Right Choice

Proven performance with high spectral efficiency

- **Higher broadband data rate** both on forward & reverse link
 - Up to 3.07 Mbps DL and 1.8 Mbps UL, comparable to ADSL
- **Lowest latency** among 3G technologies to enable real-time applications.
- **Better spectral efficiency:** Providing better cost per megabits
 - 1xEV-DO Rev A has the highest spectral efficiency commercially today.



* ADSL Data Rate at distance about 12,000 feet (~ 3.64 km from central office)



** HSDPA R5.0 with current available of UE category 6



1xEV-DO Rev A enables Real-time App

Deliver more than just a mobile broadband

VoIP



Video Telephony



Push to Talk



You see what I see



Push to Video

> Applications can be seamlessly switched depending on need and demand of your end-users.

- Maintain current connections. No need to stop and start new connections.
- All on the same Rev A handsets.

Seamless Interactions between real-time applications

More Applications + Better User Experience = Higher Revenue



1xEV-DO Application Segments

Consumers

- Video/Audio Streaming
- Video on demand
- Wireless Internet



- > Pictures/Imaging
- > Multimedia Messaging
- > Interactive Games

Enterprise / Business

- Fixed Mobile Convergence (FMC)
- Video/Audio Conferencing
- Mobile broadband Internet
- Laptop PC broadband applications, e.g. E-mail, Video on demand, etc.



Residential Broadband (Fixed residential)

- Broadband Fixed Wireless internet
- Replacement for DSC/Cable, including last mile access.
- Fastest and most cost effective deployment

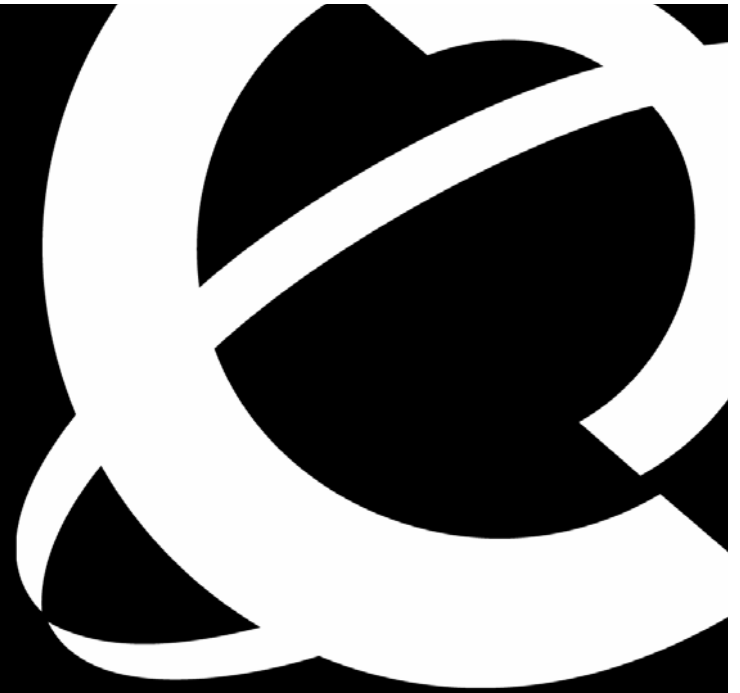


1xEV-DO Versatility: Suitable for Diverse Market Segments



Summary

- CALA Region-Currently Underserved in Delivering Broadband Services to Consumers & Businesses— **HUGE OPPORTUNITY!**
- Mobile Broadband is in High demand and a **COST EFFECTIVE** option to deploy services
- CDMA 2000 (EVDO) is ideal technology from a **Performance, Cost and TTM** perspective to capitalize on the Mobile Broadband Opportunity
- **EV-DO Rev A** Enables High Value Applications suitable to meet User demand and Carrier requirements for the Consumer and Enterprise Segments



NORTEL

Business made simple



Backup slides

NORTEL

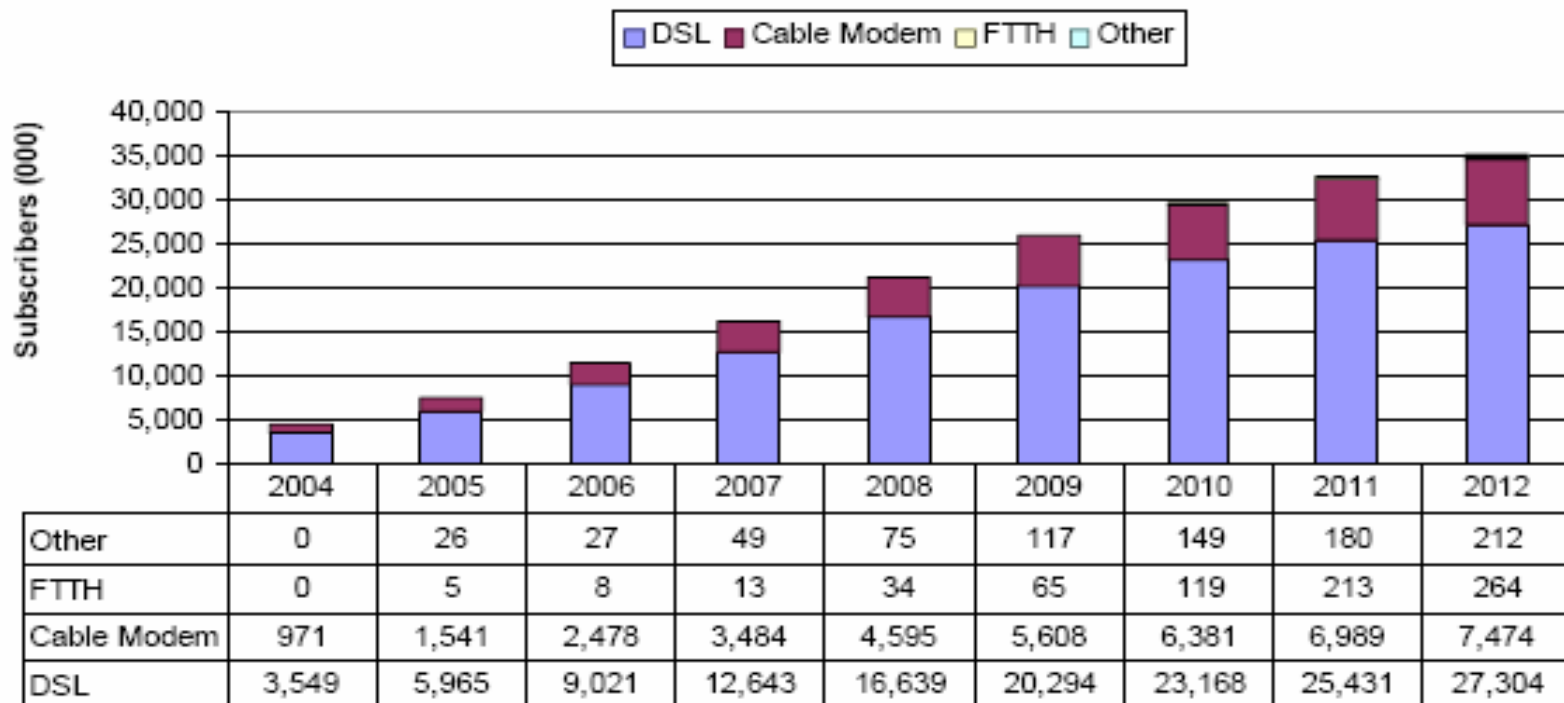
Business made simple



CALA Broadband Market Landscape

DSL is the dominance in the fixed BB for CALA

CALA Fixed Broadband Subscribers by Type, 2004 - 2012



Source: broadbandtrends.com

What is the right Mobile Broadband Technology?
Proven technology with comparable, if not better, data rate than DSL

Broadband Mobile for business & consumer

Secure

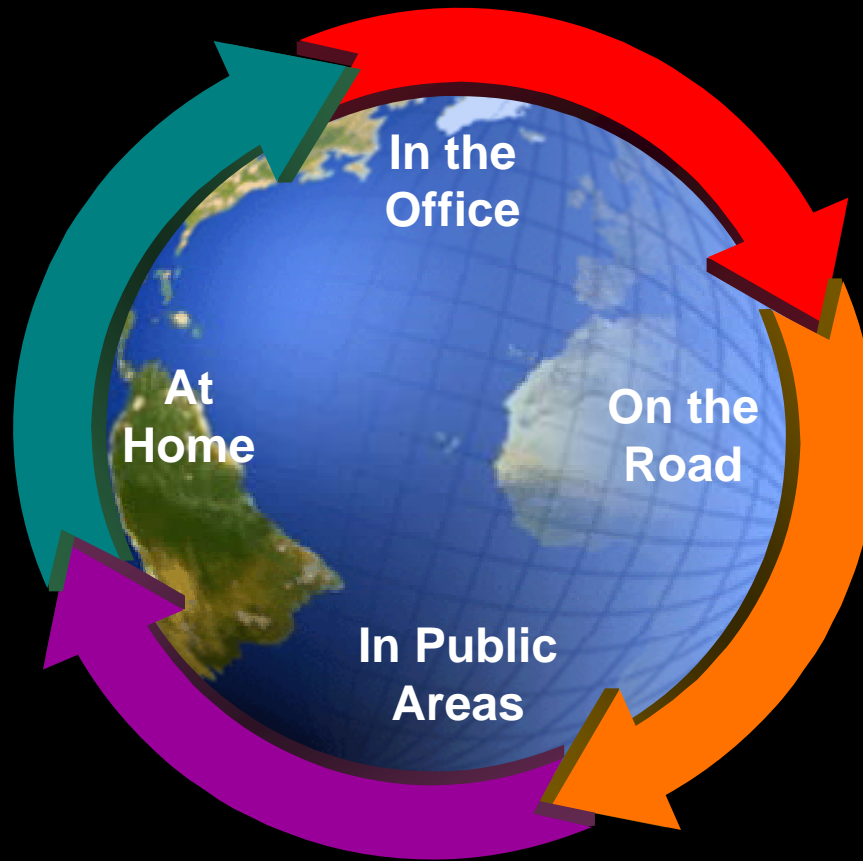


Privilege-based access

Multi-Service



Applications, including Voice with QoS



Versatile



Adapts as you move from one place to another

Cost-Effective



Scalable for Carriers and Enterprise Networks

Only Nortel Networks Supports all Wireless Technologies

Rev A Enables More Applications = More \$\$

Offer more than just broadband data...!!



Features to be integrated to 1xEV-DO Rev A solution

Rev A Quality of Service
(QoS)

Rev A Sub-synchronous
Control Channel

Rev A Data over Signaling
(DoS)

Robust Header Compression
(RoHC)

Rev A Enhanced
Idle State

SIP Signaling
Optimization

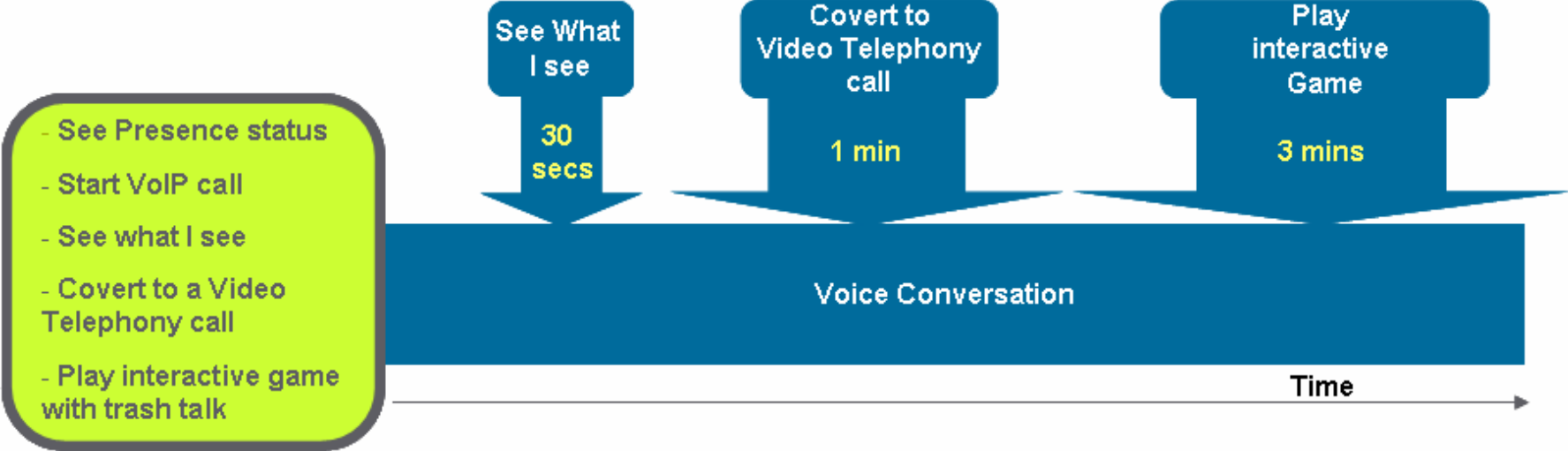
SIP Compression
(SIPComp)

Carrier-grade Performance for Real-time Applications

- > **Push-To-X Setup time (push to beep):** Less than 1 sec.
- > **VoIP Call Setup time:** Less than 3 sec -> Better than 1xRTT.
- > **Push-to-X and VoIP Call Capacity:** Better than current circuit-switch networks



VoIP Enables Interaction between Applications



Incremental ARPU for VoIP users due to interaction between applications

- Push to Video (see what I see) - \$5 / month
- Video Telephony - \$5 / month
- Gaming with Real-time Voice - \$5 / month

Attracts and Retains High ARPU subscribers



Photographic Treatment

- Select images per photographic brand standards
- Use photo on right side of page to keep text block consistent on left side of page.

