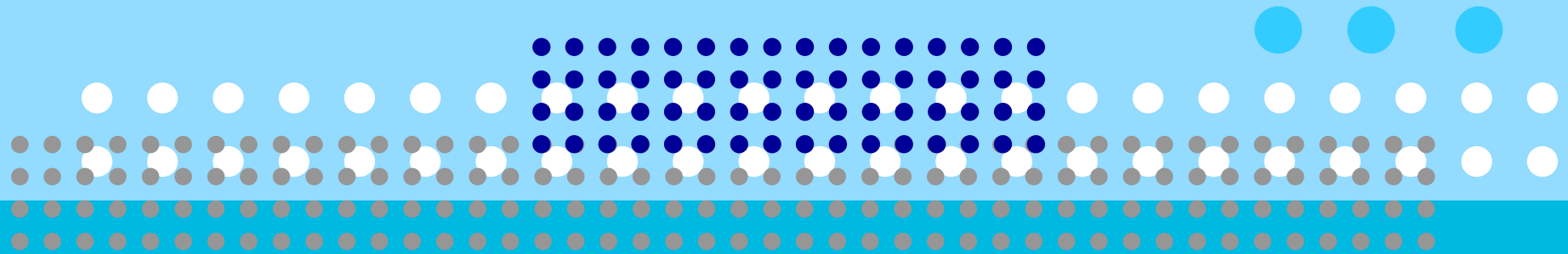


Alcatel·Lucent



Status of 3G deployments and interoperability with 4G

Mike Hobby
CDMA Data Marketing



Value of Existing networks

LTE is the technology currently getting significant attention in the press

- 59 LTE Operator Commitments in 29 Countries
- 15 Trials are active and 2 Commercial Networks Launched
- 14 CDMA Operators announced plans to deploy LTE

Often overlooked is the value remaining in existing CDMA2000 Networks

- LTE will rely on CDMA2000 1X Voice for CSV for many years to come
- EV-DO will provide Extended Coverage and Roaming for LTE for many years to come
 - eHRPD Allows CDMA Operators Benefits of EPC in advance of LTE

CDMA Continues to Evolve

- 2 operators have commercially launched MC EV-DO (Rev. B) and another 4 operators have announced their plans to deploy the software upgrade
 - Pakistan Telecom and Smart Telecom are commercial
 - China Telecom, KDDI, LG Telecom and Inwi (previously known as Wana) have announced plans to deploy
 - An additional 10 operators to announce

2 operators (MTS & Leap) to deploy 1X Advanced, 6 additional operators to announce

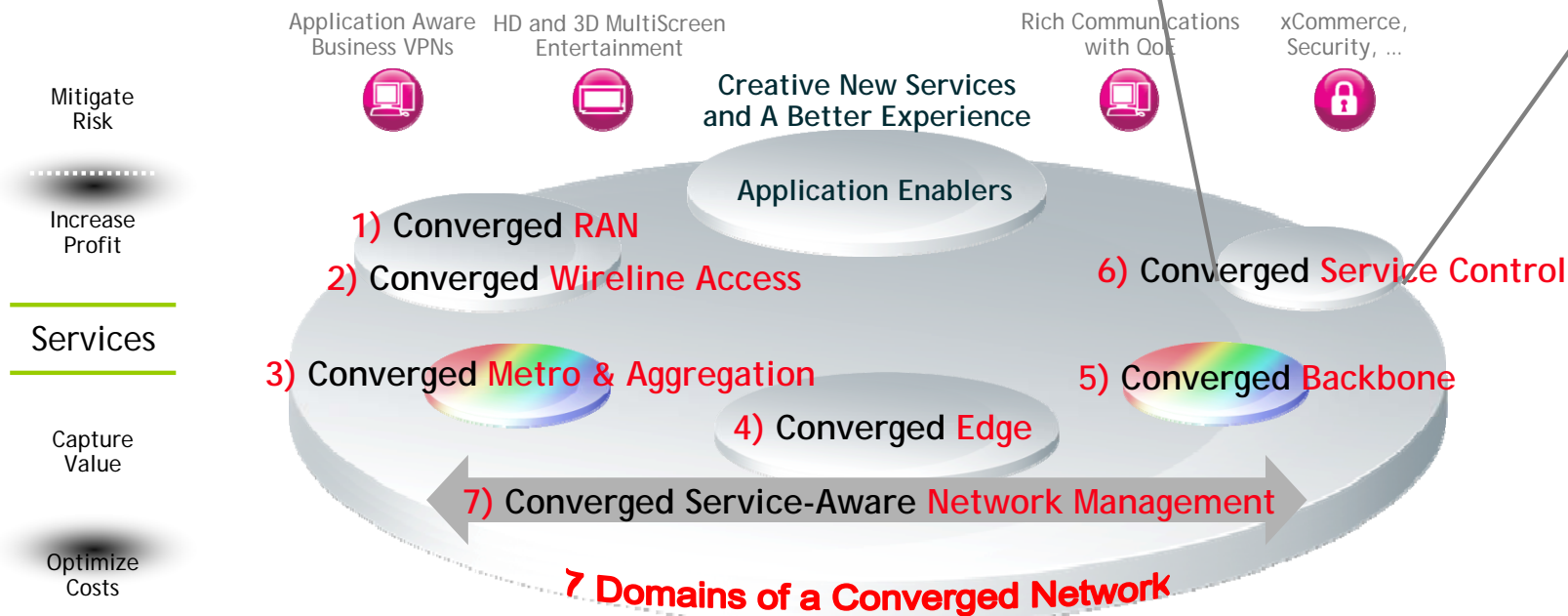
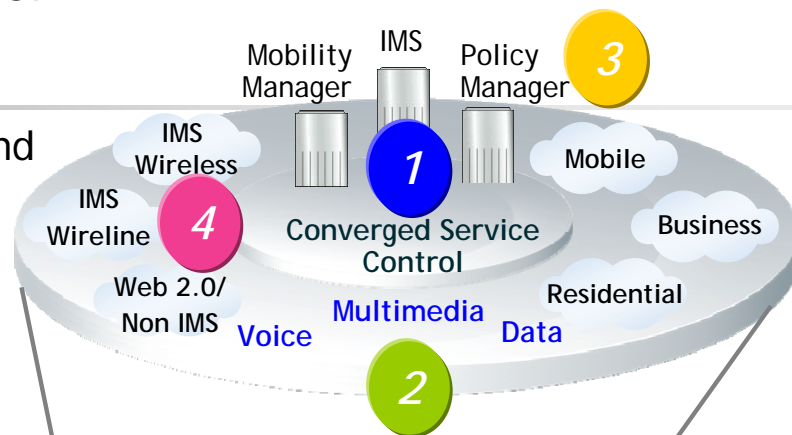
Sprint advertising 4G with WiMAX (Clearwire)

Converged Networks combine 3G & 4G assets to Benefit Operators & User's Experience

With 4G technologies encouraging even stronger data growth, operators need to leverage all available mobile data technologies, particularly EV-DO to meet these customer demands

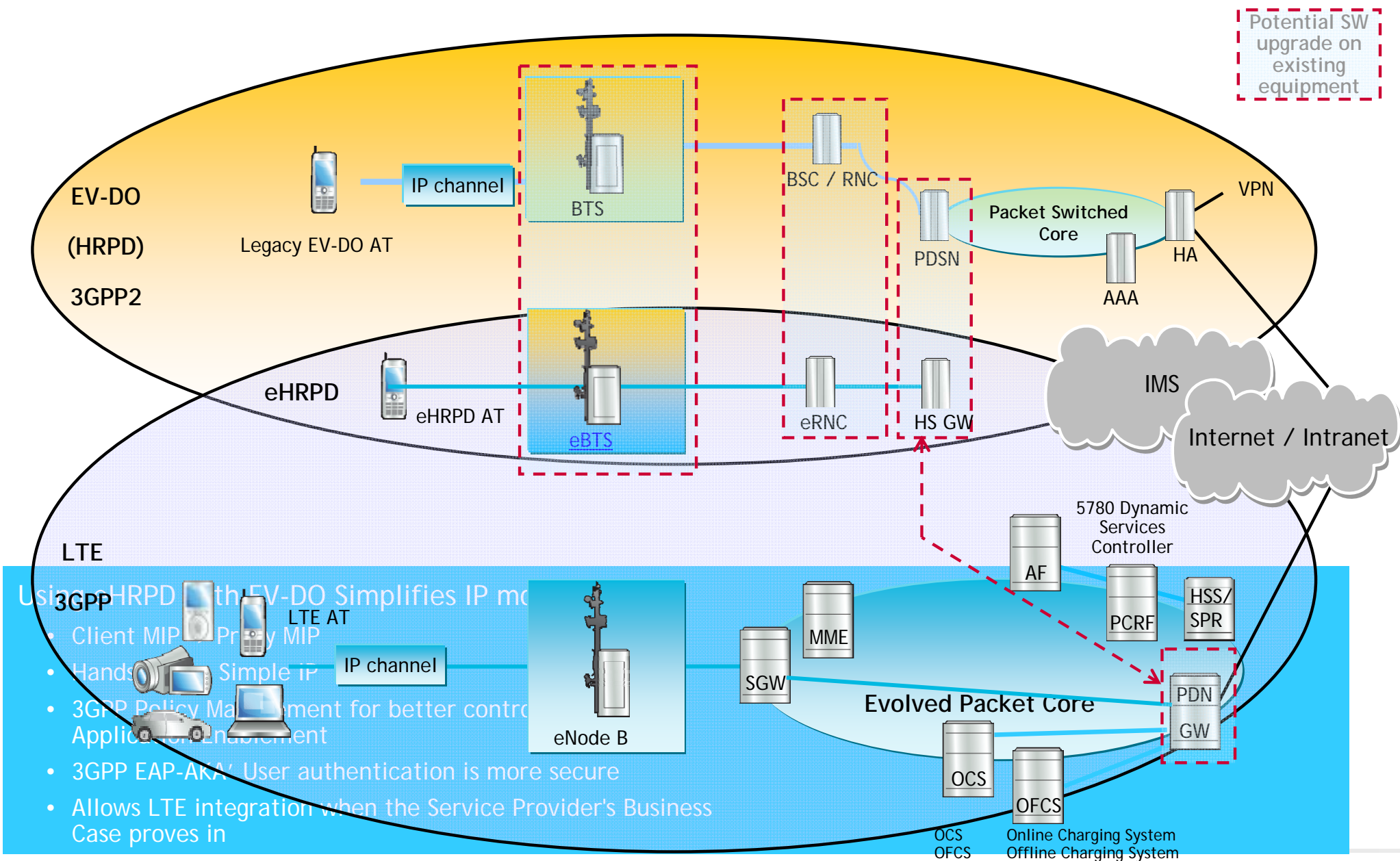
Converged Networks Leverage 3G and 4G Assets for Enhanced Operator and End User Benefits

- 1 Common and seamless service control across narrowband and broadband, fixed and mobile
- 2 Control of rich multimedia communications and entertainment services with customizable business rules
- 3 Per application, per subscriber policy enforcement with automatic application discovery and tight security
- 4 New user experience with guaranteed service quality, security, consistency and personalization for any communications app, whether native IMS or Web service



CDMA Operators can Implement Controls on Existing Networks that Optimize and Manage Increasing Data Loads Without Needing to (or prior to) Implementing LTE

Benefits of Introducing eHRPD & PCRF (Policy & Charging Rules Functions) in Advance of Launching LTE



Using eHRPD with EV-DO Simplifies IP mobility

- Client MIP Proxy MIP
- Hands off Simple IP
- 3GPP Policy Management for better control Application Enablement
- 3GPP EAP-AKA User authentication is more secure
- Allows LTE integration when the Service Provider's Business Case proves in

Take Aways

CDMA2000 hit a major milestone passing half Billion Subs in 2009 - the next half Billion will likely be data users

- Capacity relief will come with MC EV-DO & 1X Advanced but heavy data traffic will need new approaches to managing the flow of users traffic - particularly low-latency Apps
 - Implementing eHRPD offers EPC benefits for EV-DO networks prior to deploying 4G
 - Policy Management & Charging Rules Functions will enable operators to better manage the flow of data as EV-DO data traffic and usage ramps up
 - EV-DO networks will be LTE ready; Operators can choose the appropriate time to deploy 4G

LTE deployments will target high data traffic areas first

- CDMA/LTE Seamless Mobility will be critical for a successful LTE deployment
 - Users will continue to demand uninterrupted coverage and EV-DO will provide extended data coverage
 - Interworking LTE with eHRPD (EV-DO) data and 1X voice maximizes ROI on all assets
 - CDMA2000 1X will provide voice coverage

CDMA Will Continue to Play a Vital, Viable and Valuable Role in Wireless Data
for at least the Next Decade