

2007-5-21

Take Your Network to ALL IP

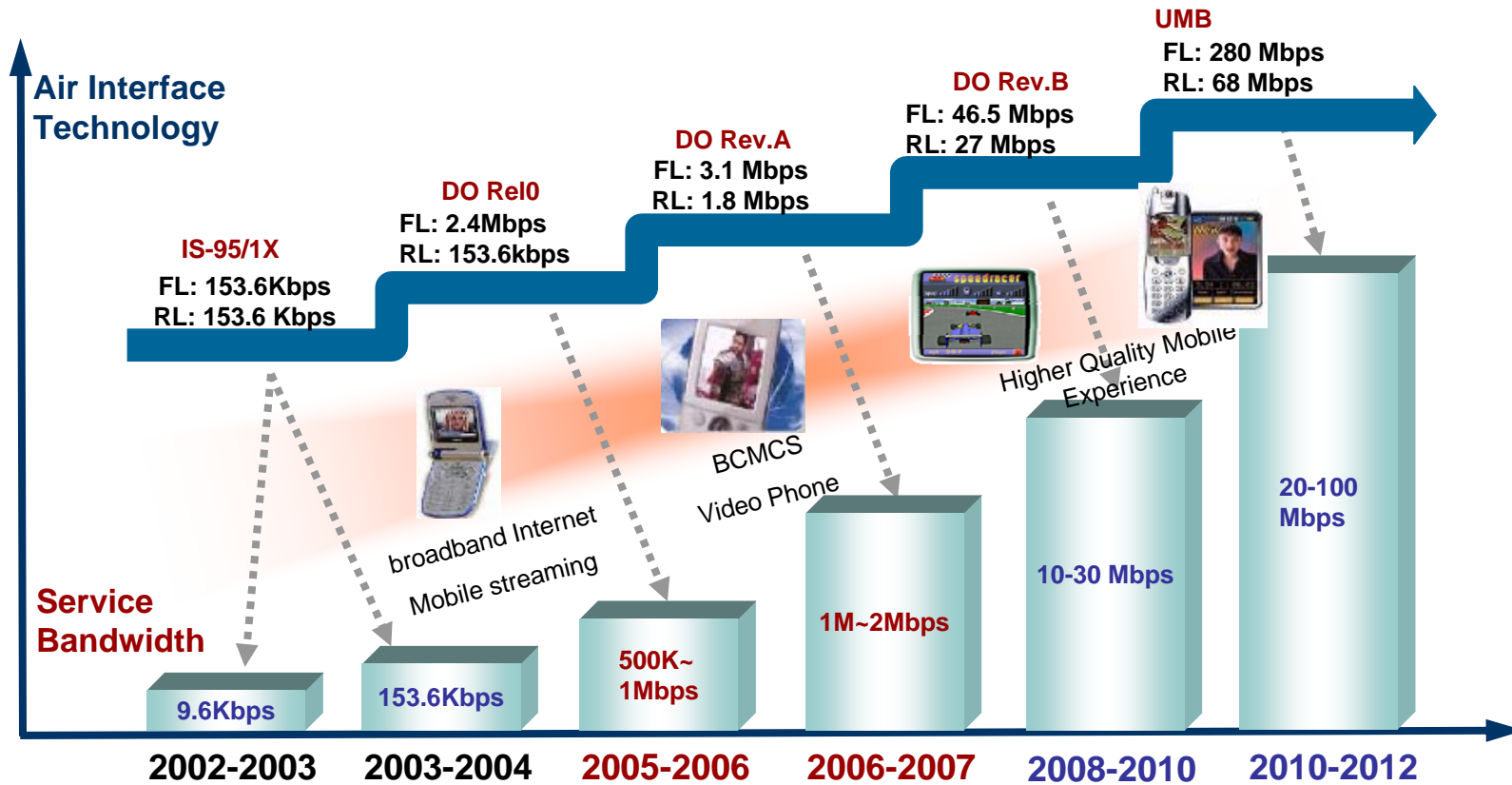
mdesdier@huawei.com

www.huawei.com

HUAWEI TECHNOLOGIES Co., Ltd.

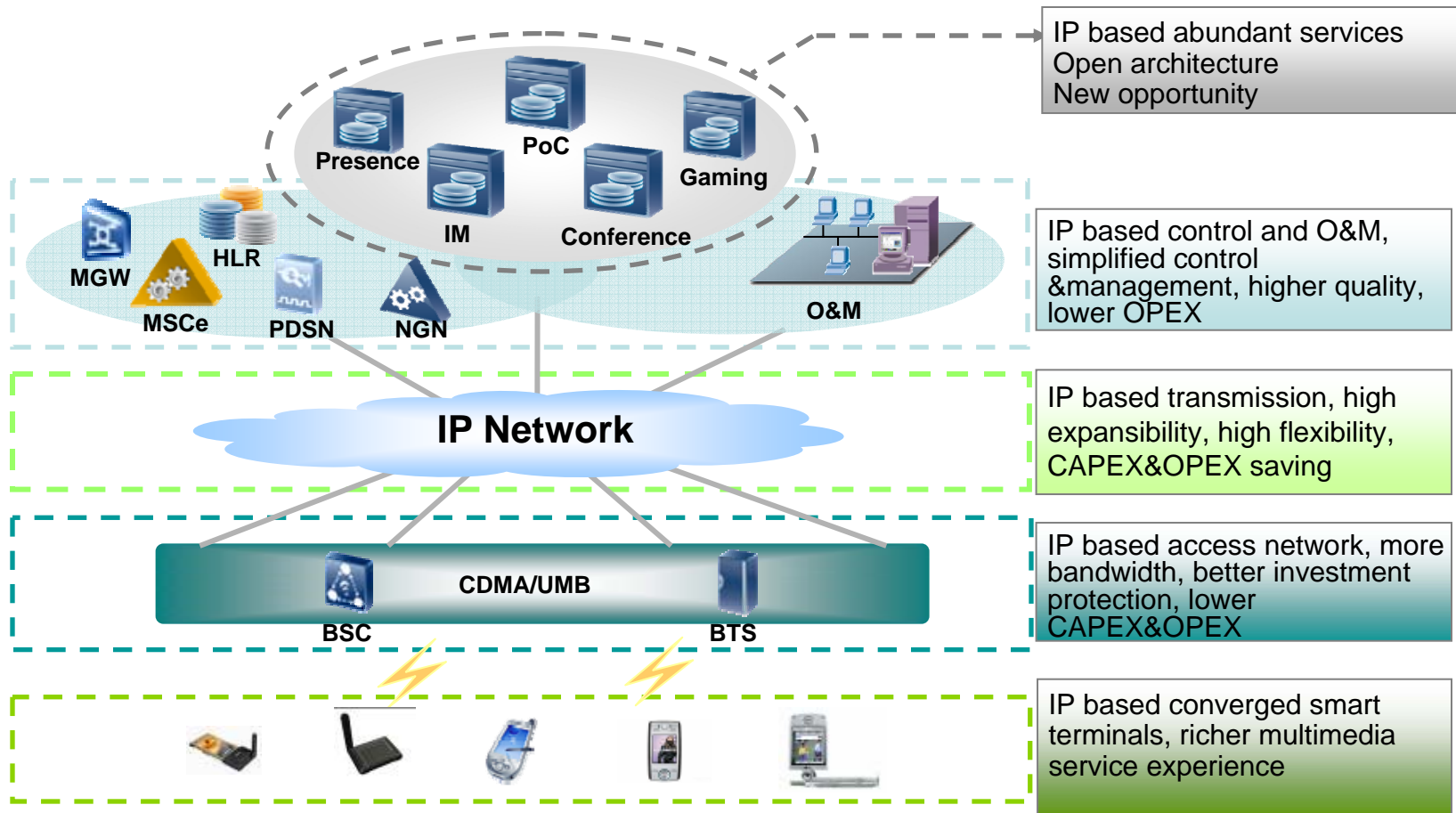


Broadband Era Is Coming



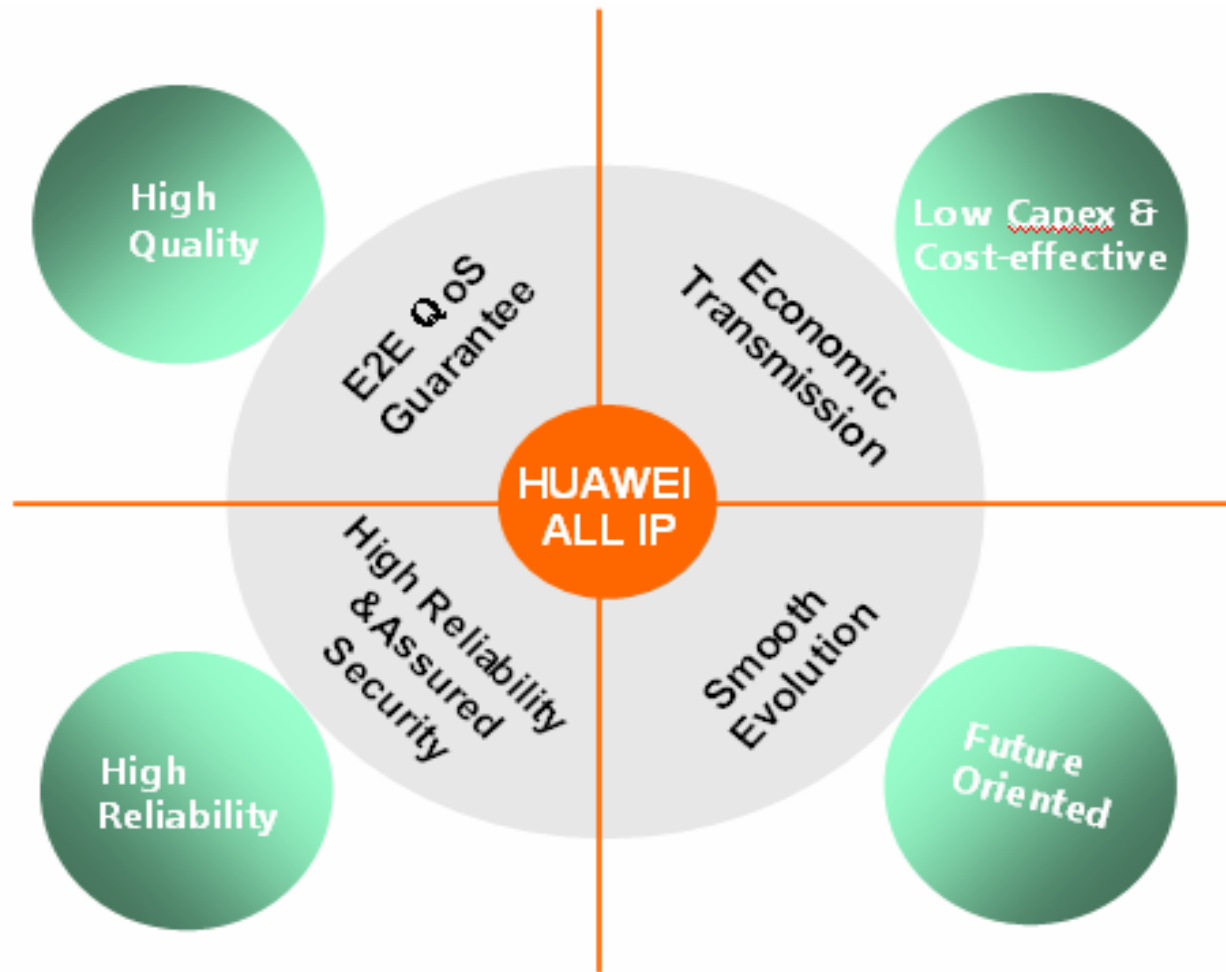
Broadband era is coming, also for CDMA450
 Most CDMA operators require DORA;
 DORA systems and devices of CDMA450 are already available in current market.

ALL IP Is an Inevitable Evolution Trend



ALL IP is coming: IP based Service; IP based Network;
IP based Transmission; IP based Terminal.

What An Optimal CDMA IP Solution Means



Huawei CDMA All-IP End-to-end Solution

Mobile

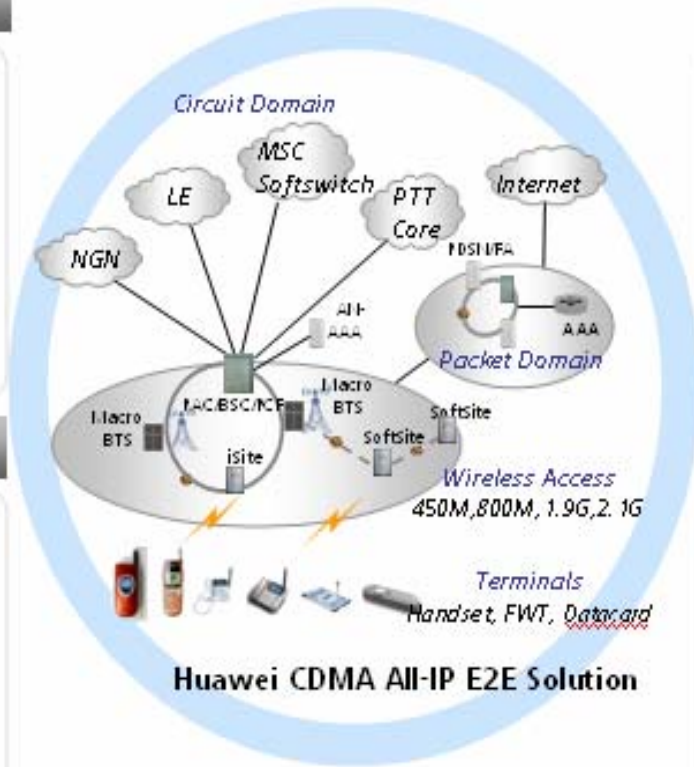


- High capacity & multi-carrier BTS
- ALL-IP networking
- Abundant tailor-made VAS

Universal Service



- Ultra coverage capability
- Distributed BTS
- Various series of terminal



Fixed Network Extension



- Inherited fixed service
- High efficiency transmission
- Smooth migration to mobile

High-speed Data Access

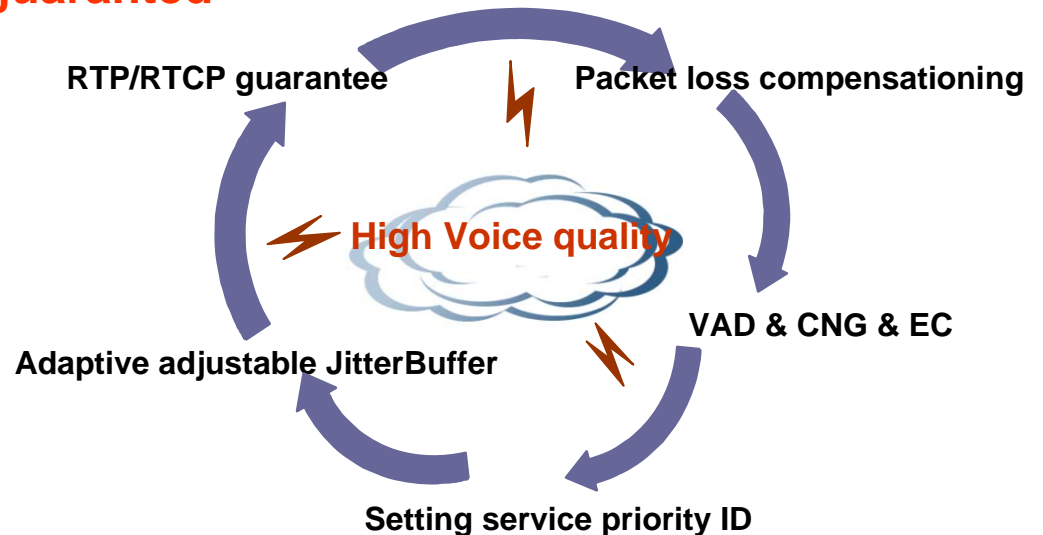


- Superior EV-DO performance
- Profitable wireless ADSL
- Smooth migration to UMB™

High Quality: E2E QoS Guarantee

◆ IP bear network solution: QoS is guaranteed

- ◆ Different service, different priority
- ◆ SCTP retransmission
- ◆ MPLS + DiffServ.
- ◆ Call Admission Control
- ◆ Jitter Buffer
- ◆ CNG, Echo Cancellor and etc.

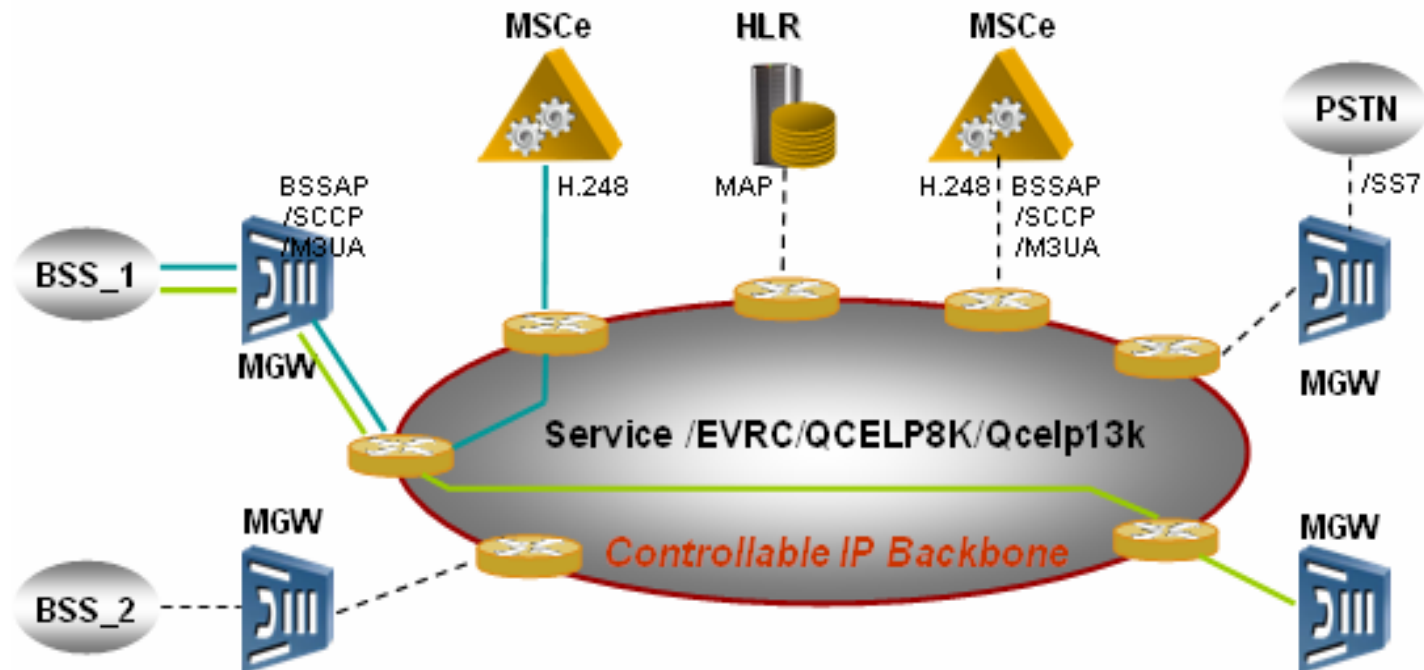


◆ QoS Guarantee Signal and Traffic

- ◆ SCTP retransmission ensures the quality of the signal.
- ◆ Packet loss compensation/ VAD & CNG & EC/Adaptive adjustable JitterBuffer/RTP/RTCP guarantee
- ◆ Packet loss detection achieved through the sequence number in the feature vector

◆ User-QoS : Enhance the Operator's business cases via better billing strategies for Golden, Silver, Bronze users

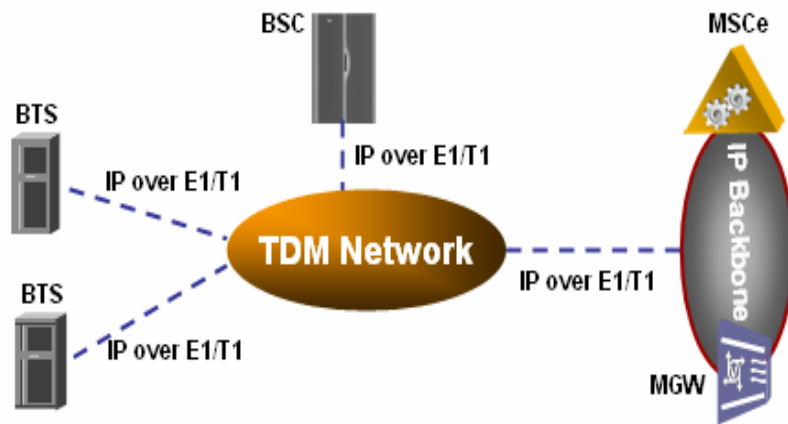
High Efficiency Transmission: IP Based Core Network



- ◆ FE or GE or IP over E1, also TDM
- ◆ abundantly open standard protocol interfaces
- ◆ Serviced as VMSC/GMSC/TMSC supporting VoIP
- ◆ Share transmission bandwidth

High Efficiency Transmission: IP over E1 & FE

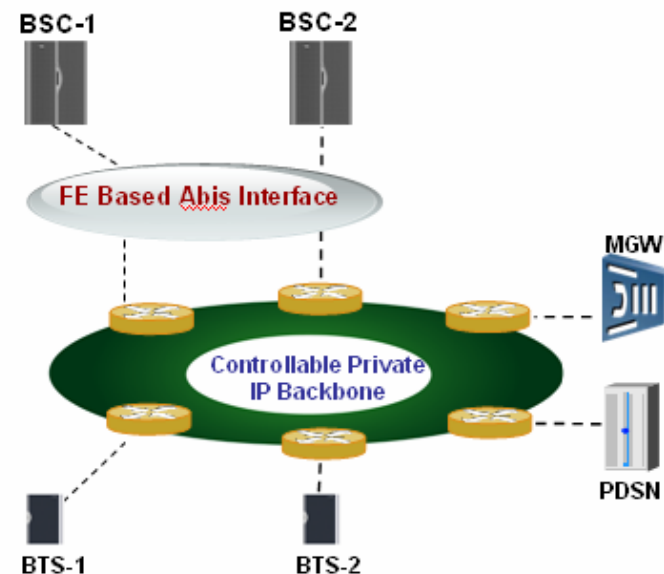
IP over E1



- ◆ A interface support IOS5.0
- ◆ Using exiting TDM transmission
- ◆ High transmission efficiency by IP Header Compression technology
- ◆ one E1 supports **270 users on A** interface,
- ◆ On **Abis** interface , one E1 supports **240 Users**
- ◆ Low initial investment

IP over FE

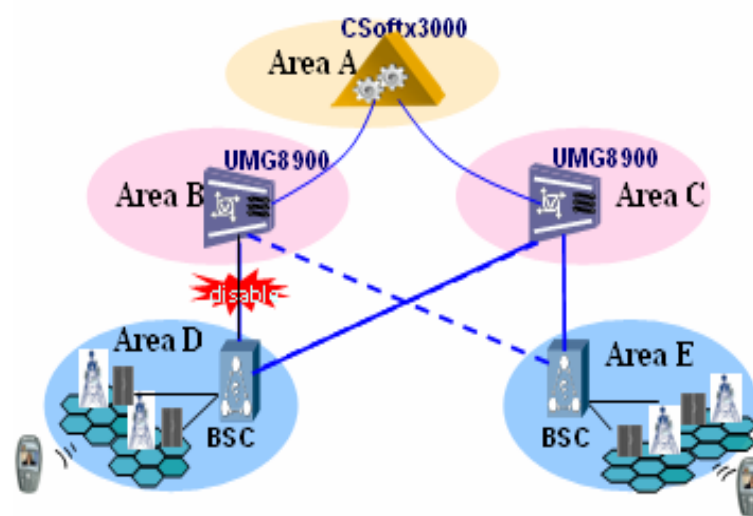
- ◆ A and Abis interface support FE
- ◆ Private IP transmission network for QoS, Security guarantee



High Reliability – Dual Homing & Mini Flex

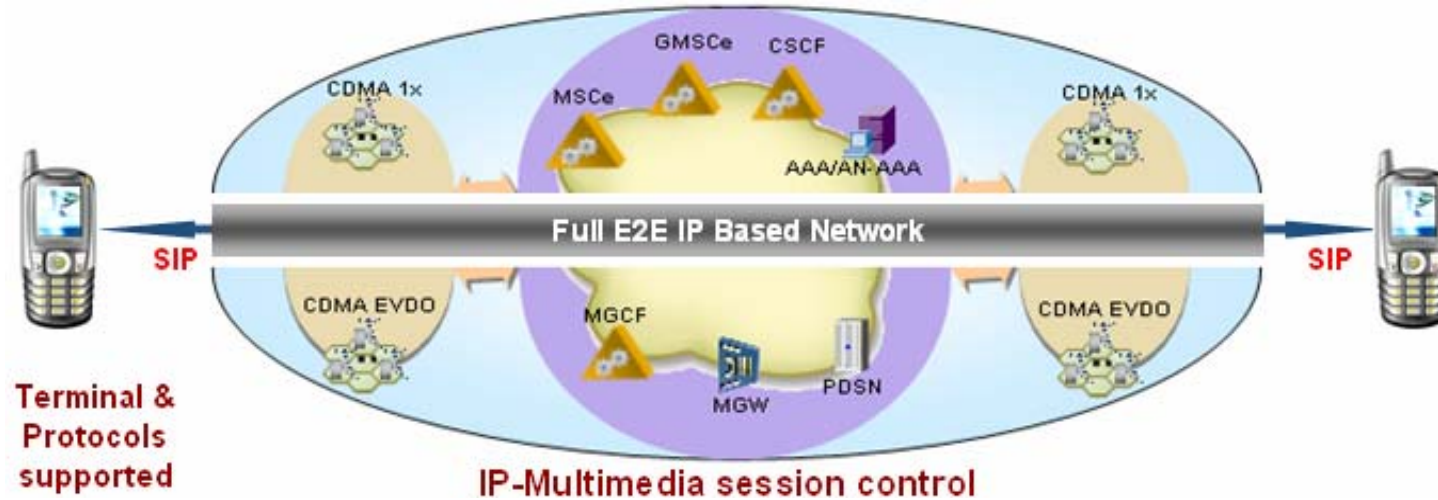


- ◆ UMG8900 can be controlled by two CSOFTX3000, UMG8900 automatically handover when serving CSOFTX3000 fails
- ◆ CSOFTX3000 can work in the mode of backup or sharing load.



- ◆ With Huawei MINI-FLEX technology, BSC could connect to more than one UMG. If one UMG fail, BSC could switch to another automatically.
- ◆ Load balance between UMGs in local network.

Future Oriented: Smooth Evolution to IMS



- ◆ Only software upgrade to evolve to IMS
- ◆ Voice over IP with SIP from terminal to terminal
- ◆ All the service based on IP

Case Study: First CDMA All IP Network in USA



Opportunity & Challenge

- High quality network
- Control the budget
- Saving transmission

Benefits for LEAP, USA

- Ensure the highest quality: Fully compliant with US standards and FCC mandatory features



- **Softswitch and IP-based BTS**
 - Saving **60%** on transmission rental
 - Outdoor BTS hugely reduce OPEX
- **CDMA2000 1X & EV-DO Rev.A mixed configuration**
 - Satisfying different services requirements
 - Co-cabinet & Centralized OMC great saving on manpower

LiteFME - Best All IP Choice facing Convergence

Huawei's advantages in FMC

- Overall advantages in terms of fixed network, Mobile network and IP
- Leader in providing FMC solutions based on ALL IP
- Heavily invests in key areas including 3G/4G, multi-play and IMS solutions



- **LiteFME : Lite (Light, means low cost) Fixed Mobile Experience**
- **Simplified IMS-based FMC solution**
- **All-IP based solution**
- **Convergent access (Fixed and CDMA Mobile, TDM and IP) and convergent services**
- **Obvious TCO saving via unified CN and shared service platform**
- **Abundant services abilities**
- **Smooth evolution to IMS**

LiteFME

Unified Network – Cost Saving TCO

Unified core network:

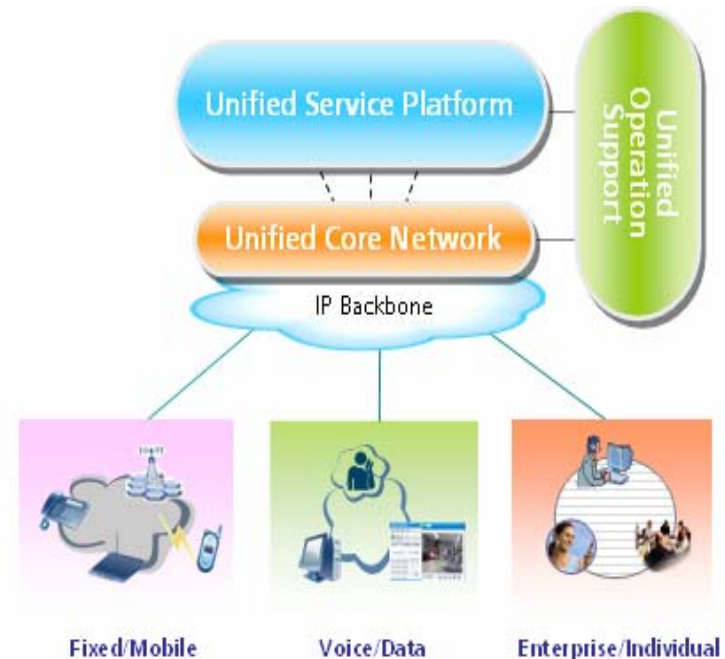
- › Unified Subscriber Access Authentication
- › Unified Call Control
- › Multi-service Processing

Unified service platform:

- › Reuse the existing fixed service platform for mobile subscribers
- › New services shared by both fixed and mobile subscribers
- › Multi-media and convergent service ability

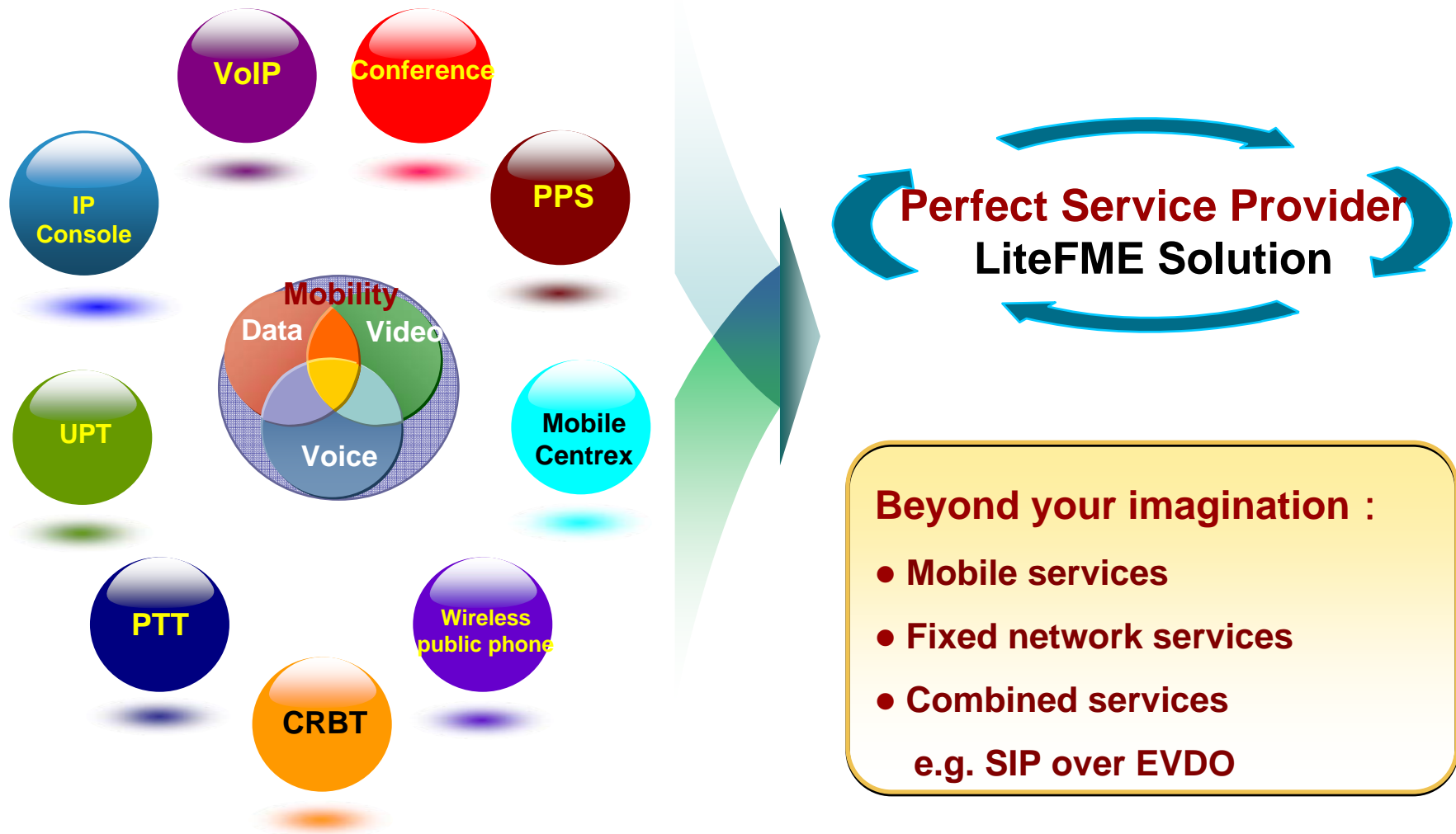
Unified operation support:

- › Unified service provisioning process
- › One billing ticket for diversified services



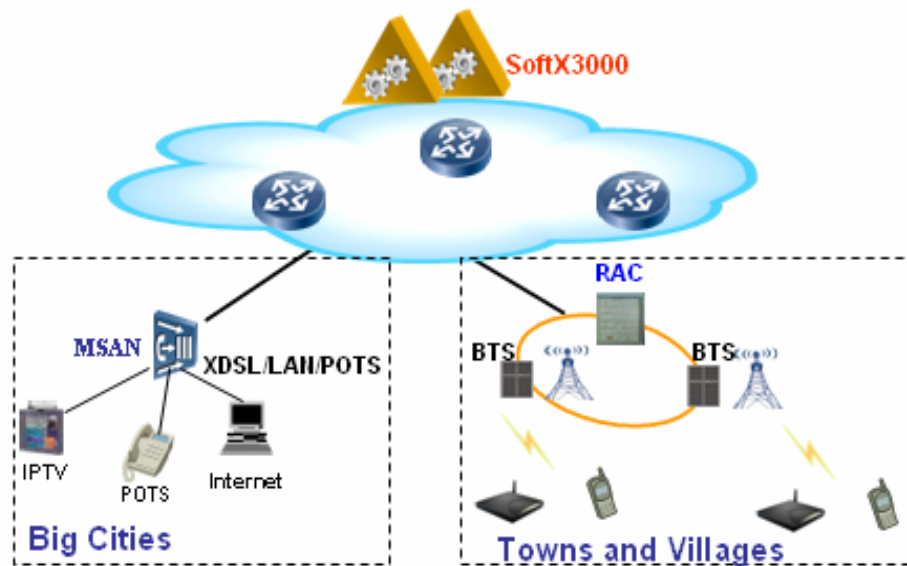
Convergent access (Fixed and CDMA Mobile, TDM and IP) and convergent services

Abundant Services Abilities



LiteFME in China Telecom (Guangxi)

- ◆ Centralized core network in capital city for both wireline and wireless access
- ◆ Scaled network distributed in 12 cities with total capacity of 1.1M subscribers



Succeed with Huawei CDMA & IP Solution

- ◆ No.1 CDMA vendor in emerging market since 2005
- ◆ Leader of CDMA Softswitch, 41 commercial applications.
- ◆ Leading EV-DO Rev.A Solution
- ◆ Top CDMA450 vendor with over 65% market share worldwide
- ◆ Leading vendor of CDMA-WLL with 68% market share world wide



- ◆ No.1 in China telecom NGN/3G IP bear Market share, including China Mobile, China Netcom, China Telecom, China Unicom
- ◆ 49 National IP backbones in Brazil, China, Germany, Hungary, India, Indonesia, Romania, Russia, Spain, Thailand, UAE, UK, etc.

Thank You

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