Explore New Opportunities from 1xEV-DO Rev. A

Unique Applications Enabled by 1xEV-DO Rev. A
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Agenda

- Mobile Services Trend
- Get Prepared for the New Services
- Typical Technologies and Services Application Scenario
PeerMe Lets Sprint Customers Make Unlimited Global Calls
Sprint Nextel to launch Qualcomm's QChat in 2008
KDDI enhances their EZChannel by adopting BCMCS
SKT will launch BCMCS soon

Services based on DORA begin to be popular!
Market Driver: Reflect on Convergence

Convergence is the trend of telecom industry

The convergence driven by Customer’s need.

Computer Industry

Media Industry

Telecom Industry

Other Industry

What will happen? A new value chain is emerging

Network is the marketplace and applications, contents & services are the goods

Convergence Industry

Terminals

 Networks

Services and Content
## Value Proposition
- Higher Data Peak rate: FWD and REV Links
- Enabling Real Time Applications
- Higher User Capacity

## Low Latency
- E-E QOS for consistent service and user experience
- Robust Airlink (robustness vs. delay tradeoff)
- Support high, medium, low mobility and FWA traffic

## Forward link Enhancements
- Higher peak data rate up to 3.072 Mbps
- Improved rate quantization
  - More new rates: 4.8Kbps to 3.072Mbps
- Improved packing efficiency
  - Adding four new packet sizes: 128, 256, 512, and 5120 bits
- Multi-User Packets (MUP)
- More Mac Indexes

## Reverse link Enhancements
- Higher peak data rate up to 1.8423 Mbps
- Physical layer hybrid ARQ
- MAC algorithm enhancements to allow quick ramp up time and reduce delay
- Higher Access Channel Rates
- Short RL Frame sizes and boost mode on reverse link to reduce latency

## E-E QoS Features
- Multiple flows per user
- Multi-Flow RLP
  - Allows Intra-user QoS to differentiate packets from different services
  - Allows disabling RLP retransmission

## Real time services enhancement: VoIP
- Improved slotted mode: Shorter paging cycles
- Improved session configuration: GAUP
- Faster Sector Switching
- Integrated operation of 1X and 1xEV-DO
- Improved standby time in hybrid terminals

## BCMCS
- Broadcast Control Protocol
- Broadcast MAC/PL Protocol
- Broadcast Framing Protocol
BCMCS, New Data Services Provision Architecture

- Introduce IP Multicast into wireless network
- BCMCS technology and architecture can be used for many services.
- Traditional: unicast mode, dedicated radio resource for each streaming
- BCMCS: Sharing traffic channel, thousands of users can receive the same data traffic with the same quality.

Not a services, but a technology can be used for ...

- Optimized in each layer
- IP multicast and broadcast services application X.P0022
- Forward sharing traffic bearer path A.S0019
- BCMCS sharing radio channel C.S0054

- BCMCS Application Server
- Core Network BSN
- Radio Access Network
- Core Application Layer
- BCMCS Client

- MS
- Radio Component
Multi-Services Instance, Foundation of VoIP and Mobile DSL

**Bandwidth control based on user**

- Bandwidth control according to the priorities of the user
- Local user, VPN user, Roaming user, different user different rate mode

**Bandwidth control based on services**

- Different services flow have different QoS control for one user
- User can enjoy multiple services at the same time with different QoS quality
- Charging according to different QoS quality

Supporting mass VoIP application!
Perfect PTT Based on DORA is Deploying

- **Low performance**
  - Call setup time over 7 Seconds
  - Limited group capacity

- **High performance**
  - Call setup time less than 2 Seconds
  - Limited group capacity

- **Very high performance**
  - Call setup time less than 1 Second
  - BCMCS sharing channel, large group capacity
  - High voice quality
  - Seamless convergence with other IP data services

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**CDMA20001X**

2001

**CDMA2J00 1X RELA**

2004

**DORA**

2006

**Target segment:** Enterprise, Utilities, Mass Market

- Construction and Emergency Repair
- Enterprise VPN
- Hotel & Hospital Management
- Vehicle Management
New Mobile Multi-Media Commercial Mode

EZChannel like Services are launching

7:00
Musick in the morning (Voice broadcast)

8:00
News

8:30
Subway time: hot news

10:00
Online horse racing

11:00
News

12:00
Entertainment

Content Charging Broadcast

New Commercial Mode for Mobile TV

Fashion Advertisement

Entertainment Advertisement

Traffic information

Free Streaming
Convergent Services – When DORA Meets IMS

- Lifestyle Services
  - Gaming
  - Music, VoD
  - Instant Messaging
  - Share Content
- Huawei IMS
  - Session Control
- DORA Access
  - VoIP
  - Voice
  - Video phone
  - Mobile DSL
  - UE

Groups
Presence
VoIP
Mobile DSL
UE
xEV-DO Rev.A : a Full Service Bearer

E2E QoS, support Inter-User and Intra-User QoS
1X/DO seamless handoff

BALANCE

Coverage  Capacity  Quality  Cost
Huawei - A reliable Partner

2006 H1 sales up 50%

- 1.2 billion CDMA system contract sales in 2005
- Worldwide deployment, 40 million lines in over 60 countries
- No.1 in emerging CDMA market in 2005
- 20 EV-DO commercial applications
- CDMA Softswitch ranks No.1 in the industry

Wishes to have a cooperation with CDMA carriers
Conclusion

Convergence, trend of future services

EV-DO REV A, Provide new opportunities for IP telecommunication services
  • Technical prepared, BCMCS, multi-instant services
  • New services are launching

Huawei - A reliable Partner
  • Wishes to have a cooperation with CDMA carriers
Thank You

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