CDG Webcast

CDMA2000: Insight into the Future of 3G Devices and Services

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Mobile Processing Power – Changing the Mobile Device

- **MSM2**: Intel 80186, 10 MIPS (~2.5 MHz)
- **MSM2300**: ARM MCU, < 20 MIPS
- **MSM3000**: ARM7TDMI, 23 MIPS* (27 MHz)
- **SnapDragon**: Convergence Dual-Core Scorpion + ARM 9, Up to 2370 MIPS* (1GHz)
- **MSM7500**: Convergence Dual-Core ARM9 + ARM11, Up to 740 MIPS* (400 MHz)
- **MSM6550**: Enhanced Platform ARM9, Up to 250 MIPS* (225 MHz)
- **Multimedia Platform ARM9**: Up to 160 MIPS* (146 MHz)

* Dhrystone 2.1
2006 3G Camera Phone Resolution Exceeds 2004 Consumer Digital Cameras

Technology Enables the New “Pocket” Devices

- Technology drives down chip size and power consumption
- Integration brings more features on board
- These trends enable a new class of “pocket devices” with a wide range of applications and tremendous market potential
### Segmentation Strategy

**Integration Yields Cost-effective Solutions at All Tiers**

*Specifics vary per chipset*

<table>
<thead>
<tr>
<th></th>
<th>Value Platform</th>
<th>Multimedia Platform</th>
<th>Enhanced Platform</th>
<th>Convergence Platform</th>
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</thead>
<tbody>
<tr>
<td><strong>3D</strong></td>
<td></td>
<td>50k Triangles/sec 400k 3D pixels/sec</td>
<td>225k Triangles/sec 7M 3D pixels/sec</td>
<td>4M Triangles/sec 133M 3D pixels/sec</td>
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<tr>
<td><strong>CAMERA</strong></td>
<td>Up to 3Mpixel</td>
<td>Up to 3Mpixel</td>
<td>Up to 5MPixel</td>
<td>Up to 8MPixel</td>
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<tr>
<td><strong>VIDEO</strong></td>
<td>Playback: 15 fps @ QCIF</td>
<td>Record: 15 fps @ QCIF Playback: 15 fps @ QCIF</td>
<td>Record: 15 fps @ QVGA Playback: 30 fps @ QVGA</td>
<td>Record: 30 fps @ VGA Playback: 30 fps @ VGA</td>
</tr>
<tr>
<td><strong>MEDIACAST &amp; PERIPHERALS</strong></td>
<td>Bluetooth 1.1/1.2</td>
<td>Bluetooth 1.1/1.2</td>
<td>Bluetooth 1.2 WLAN Mediacast</td>
<td>Bluetooth 2.0 EDR WLAN Mediacast</td>
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<tr>
<td><strong>DISPLAY</strong></td>
<td>QCIF [176 x 144]</td>
<td>QCIF+ [176 x 220]</td>
<td>QVGA [320 x 240]</td>
<td>VGA [640 x 480]</td>
</tr>
<tr>
<td><strong>uPROCESSOR / QDSP</strong></td>
<td>CPU – 50-180MHz QDSP-75MHz</td>
<td>CPU – 150-225MHz QDSP-75MHz</td>
<td>CPU – 225-300MHz QDSP-90MHz</td>
<td>Dual CPUs 400MHz - 1GHz QDSP-250MHz</td>
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Version 6.06
EV-DO Enables a Wide Variety of Compelling Services

- TV / Video Streaming & Download / Multicast
- High Speed 3D and Multiplayer Games
- Full Music Downloads & Streaming Audio
- Social Networks & User Generated Content
- High Speed Data Connectivity
- Location Based Services

- KDDI’s EZ ‘Chaku-Uta Full Downloads Exceed 100 Million
MediaFLO Momentum in the Marketplace

MediaFLO for Mobile Media Delivery
• MediaFLO is a mobile entertainment and information platform that delivers the most compelling, immersive, and interactive media experience

MediaFLO FLO Standardization Efforts
• TIA-1099 – FLO Air Interface Specification
• Additional standards added October 2006: TIA-1102, TIA-1103, TIA-1104
• 70+ companies in FLO Forum driving standardization worldwide

MediaFLO Gaining Traction in Wireless Market
• Product releases on schedule to support MediaFLO USA Verizon launch

Global Efforts put MediaFLO on the Map
• United Kingdom – Two trials with BSkyB (Cambridge & Manchester)
• Japan – joint venture with KDDI to encourage government’s release of spectrum and launch MediaFLO in Japan
• Taiwan – Trial planned with China Network Systems in Taipei
QUALCOMM is Focused on Driving Down CDMA2000 Handset Costs

Very Low End (VLE) handsets

- VLE: Voice plus SMS, bar type terminals
- Program has already led to sub-US$35 terminals in India

QUALCOMM Single Chip (QSC) solutions

- QSC1100: Voice, SMS, Multi-Band, 14.4 kbps, BREW support
- QSC6010: Voice, SMS, 14.4kbps data, BREW support
- QSC6020: 153 kbps data, MP3/AAC/AAC+ support
- QSC6030: Integrated 1.3 Megapixel camera, MPEG4 decode
- QSC6055: SGPS, Dual Band RF, 1.3 Megapixel Camera, Stereo Audio
- QSC6065: Integrated 3 Megapixel camera, Video/Camcorder support

Global Handset Requirements for CDMA (GHRC)

- CDG-led, chaired by CDMA operator, co-chaired by Motorola, Nokia and QUALCOMM
- Initiative develops a set of “standard” handset requirements documents with a consistent format, language, references, and definitions

CDMA Carrier Sourcing Group (CCSG):

- Working with CDMA2000 operators worldwide to aggregate volume purchases, further lowering price points
- Leverages work of CDG’s GHRC technical handset standardization work
EV-DO Offers Many Embedded Mobile Broadband Solutions Today
QUALCOMM Has Provided the Chipsets For All 54 EV-DO Embedded Notebooks

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