Wireless Remote Graphics Rendering

- Remote rendering of high quality graphics
- Output scales to resolution of remote device
- Designed for wireless connection
- Optimized OpenGL protocol
  - <20 Mbps bandwidth
Wireless Device Discovery & Setup

• Makes wireless setup faster and easier
  - PIN Entry or NFC (Near Field Communications)
• Uses Layer 2 to enhance service discovery
  - Improved power efficiency
  - Avoids unreliable multicast messages
• Peer-to-peer connection improves performance
Adaptable Compression for Wireless Display

- Provides HDTV quality over wireless
- H.264 compression technology
- Optimized for Desktop and video applications
- Balances quality with available bandwidth

Adaptable Compression for Wireless Display

Available Bandwidth Today

<table>
<thead>
<tr>
<th>Technology</th>
<th>Bandwidth</th>
</tr>
</thead>
<tbody>
<tr>
<td>WiFi</td>
<td>54 - 600 Mbps</td>
</tr>
<tr>
<td>UWB</td>
<td>480 – 960 Mbps</td>
</tr>
</tbody>
</table>

Available Bandwidth - Future

<table>
<thead>
<tr>
<th>Technology</th>
<th>Bandwidth</th>
</tr>
</thead>
<tbody>
<tr>
<td>WiFi</td>
<td>1+ Gbps</td>
</tr>
<tr>
<td>UWB</td>
<td>1+ Gbps</td>
</tr>
<tr>
<td>60GHz</td>
<td>3-8 Gbps</td>
</tr>
</tbody>
</table>

Multiple Monitors → + N x 20 Gbps
Multiple Devices → + 1-10 Gbps

Compression is Needed: Today and in the Future
Location-Based Services & New Input Methods

- Platform support enables context awareness
- Uses accelerometers and magnetometers
- Virtualized tour guide example
- Augmented with relevant Internet content
  - Maps, Points of Interest, History
Composable Computing

- Easily share nearby computing devices and peripherals
- Overcome display and input limitations of small computers
- Create multiple connections (composition) with one command
- Composition enables new usage models

Example: MIDs become multi-user game controllers; the right-side MID remotes its screen to the larger display at the same time
Context-Aware Technology: Adaptive Mobile Computing

- Applications adapt to user’s contexts:
  o Where you are, what you’re doing, what you like, what you need
- Extensible & Programmable Context Framework
  o 3rd party extensible
  o Programmable Analyzer: Customized contexts and Inferencing
  o Client applications utilize context information that provides a better user experience.
- Device Composition is automated through the use of the Context Engine.

Sources of Context Information

Interaction with External Devices & Services

Context Collection & Analysis
Cliffside Demo

- Cliffside is a new technology from Intel’s Mobile Products Group that enables a single Wi-Fi adapter to function like two independent Wi-Fi adapters.

- Imagine wirelessly syncing your audio and video files between your Centrino notebook and Wi-Fi enabled CE devices.

- Imagine wirelessly connecting your notebook to your Wi-Fi enabled TV to view HD movies.

- Imagine chatting and transferring files to other notebooks on a peer-to-peer BSS network.

- The benefit of Cliffside is being able to simultaneously have a connection to a WLAN (BSS) while also enabling a Wi-Fi Personal Area Network (BSS) with up to eight Wi-Fi enabled devices connected directly to the notebook.