Intel’s Next-Generation Communications Platform

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Agenda

- What’s the News
- What Happens in an Internet Minute
- Worldwide Service Provider Challenges
- 4:1 Workload Consolidation
- Introducing Crystal Forest Platform
- Robust Ecosystem Support
- Summary
What’s the News

- Intel’s next-generation communications platform will consolidate packet, application and control processing on Intel® architecture for more efficient processing of multimedia content without sacrificing security.

- The scalable platform will enable faster time to market and lower development costs for equipment manufacturers with better network efficiency for service providers.

**Intel’s next-generation communications platform is uniquely qualified to deliver the best in applications, control and data plane processing.**
What Happens in an Internet Minute?

- 20 new victims of identity theft
- 204 million emails sent
- 47,000 app downloads
- 1,300 new mobile users
- 100+ new Linkedin accounts
- 320+ new Twitter accounts
- 61,141 hours of music
- 20 million photo views
- 3,000 photo uploads
- 639,800 GB of global IP data transferred
- 277,000 logins
- 6 million Facebook views
- 2+ million search queries
- 1.3 million video views
- 30 hours of video uploaded

And Future Growth is Staggering

Today, the number of networked devices = 1
the global population

By 2015, the number of networked devices = 2
the global population

In 2015, it would take you 5 years

IP

to view all video crossing IP networks each second
Worldwide Service Provider Challenges

Go Faster

More Secure

Lower Costs

How do the Telecom Equipment Manufacturers respond?
4:1 Comms Workload Consolidation

2010

Application Processing

Control Processing

Packet/Content Processing

Signal Processing

Intel® Xeon® C5500 / C3500 (Jasper Forest)

Network Processors (NPU)

Digital Signal Processors (DSP)

Crystal Forest

Next Gen Platforms

Intel® QuickAssist Software Library

Intel® Data Plane Development Kit

Intel® Signal Processing Development Kit
# Intel Next-Gen Communications Platform

**Codename: Crystal Forest**

<table>
<thead>
<tr>
<th>Scalability</th>
<th>Efficiency</th>
<th>Investment Protection</th>
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| • 1 to 16 cores (dual socket)  
• 0-100 Gbps crypto  
• Up to 160 million packets per second | • Standard rack mounted appliances  
• Industry standard ATCA and AMC boards | • Processor roadmap  
• Common programming tools  
• Wind River Simics* simulation |

**Intel® Data Plane Development Kit (DPDK)**

- Packet Processing Acceleration

**Intel® QuickAssist Technology**

- Crypto  
- Compression  
- Deep Packet Inspection

**Data Processing IO**

- SATA  
- USB

**Comms IO**

- 1, 10 and 40 Gb Ethernet
A Robust Ecosystem Supporting Crystal Forest

Data Plane ISVs
• Real Time OS
• Network Stacks
• Packet Processing
• Professional Services

Security ISVs
• VPN/Firewall
• SSL Acceleration
• Deep Packet Inspection

Board Manufacturers
• ATCA
• AMC
• CGRMS
• cPCI

Live demos of the Crystal Forest platform will be featured at Mobile World Congress, RSA and Embedded World.
Next Generation Communications Platform “Crystal Forest” -
*Helping to Transform the Network*

**Go Faster**
- **Intel® Data Plane Dev Kit**
  - Packet Processing Acceleration
- **Up to 160 million pps**

**More Secure**
- **Intel® QuickAssist Technology**
  - Crypto
  - Compression
  - Deep Packet Inspection
- **1 to 16 cores (dual socket)**
- **0-100 Gbps Crypto**

**Lower Costs**
- **Data Processing IO**
  - SATA
  - USB
- **Comms IO**
  - 1, 10 and 40 Gb Ethernet