Instilling Confidence in IP Convergence

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Glocomp Systems (M) Sdn Bhd

Cisco Malaysia 2010 Summit
About Glocomp

- More than 12 years in SP industry
- Experience, capabilities & infrastructure
- Delivering quality services to Service Provider partners
- Partnership commitment
- Delivering solutions add value to clients business growth

Partnership . Technology . Innovation
Glocomp & Cisco Partnership

- Partnership since Year 2000
- Cisco Direct $1$st Tier Partner
- Specialization in Advanced Routing & Switching, Advanced Unified Communication and Advanced Wireless Technology
- Close collaboration in Service Provider market space with many strategic wins.

Comprehensive SP wide solutions and services:-
- Carrier Grade IPv6, Carrier and Metro Ethernet, Core & Edge networks.
- 3G Mobile Data Off Load, Unified RAN Backhaul & Mesh Wireless
- IP-MPLS, IP-VPN, Traffic Engineering, IP Audit & IP SLA
- Leader in Carrier Grade solution (e.g GSR, CRS-1, IOS-XR) deployment in Malaysia
Glocomp & Cisco Partnership

- Spearheading the Service Provider development towards IP-NGN 2.0
Glocomp & Cisco Offerings for Service Providers

**INNOVATIVE SOLUTIONS**
- Best breed products
- Latest technologies

**CONSULTANCY & ADVISORY**
- Strategy
- Assessment
- Design
- Optimization

**RAPID DEPLOYMENT**
- Best practices
- Effective project management
- Timeliness with quality

**TESTING & QUALITY ASSURANCE**
- Solutions Testing
- Configuration Audit
- Stability Monitoring
- QA Check

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Glocomp & Cisco Offerings for Service Providers (cont.)

- Nationwide Spares for Hardware Replacement
- 24x7 email & remote support
- 24x7 Toll-Free HelpDesk
- Knowledge Base
- Nationwide Spares for Hardware Replacement
- SLAs for Onsite Response & Resolution Time
- Nationwide Support Engineers
- Health Check & Remote Monitoring
- Worldwide Access Knowledge Base

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Product & Solution Offerings

Computing & Information Management
- System Consolidation & Virtualization
- High Performance Computing
- Database
- Application Middleware
- Storage Consolidation
- Information Availability
- SAN Infrastructure Solutions
- Tape Drive & Media Technologies
- Electronic Documents Management

IP Communications
- Data Network Foundation
- Data Center Foundation
- WAN & MAN
- Unified Communication Streamlines Operations
- Mobility Solution
- IP NGN Application Convergence
- Domain Name IP Services
- IP Services Load Distribution
- Service Provider Solution

Security & Privacy
- Identity and Access Management Solution
- Threat and Vulnerability Management Solution
- IT Security and Compliance Management Solution

IT Management
- IT Service Management
- IT Infrastructure Management
- IT Service Continuity Management
- Enterprise Project Management
Consulting Methodology ‘SADO’

- **Strategize**
  - Strategy Review & Development
  - Policy Review & Development
  - Enterprise Architecture Review & Development

- **Assess**
  - Current Architecture
  - Challenge Analysis
  - Recommendation

- **Optimize**
  - Benchmark
  - Checkpoint
  - Improvement Plan

- **Design**
  - Solution Architecture
  - Transition Plan/Roadmap
  - Investment Justification

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Service Methodology

- Project Planning & Management
- Detailed Design & Analysis
- Site & Infrastructure Readiness Assessment
- Install & Configure Solution
- Migration, Integration & Customization
- Testing & Commissioning
- Knowledge Transfer & Training
- Production Rollout
- Support & Maintenance
- Infrastructure Management

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Panel Discussion

Today’s Service Provider Challenges

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Service Director, Glocomp Systems

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APAC Systems Engineering and Business Development Director, Netscout Systems, Inc

*Paul Palmer*
VP of Sales Asia Pacific, AdaptiveMobile Security Ltd
Global Mobile Data Traffic

Global Mobile Data Traffic Growth / Top-Line
Mobile data traffic will increase 39X from 2009 to 2014


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Global Mobile Data Traffic Growth / Content

Mobile video will be 66% of mobile data traffic by 2014

108% CAGR 2009–2014

- Mobile VoIP: 4%
- Mobile Gaming: 5%
- Mobile P2P: 8%
- Mobile Web/Data: 17%
- Mobile Video: 66%

Trend in Business Transformation and IP Service Convergence with Service Providers

- Key drivers with Telco service providers
  - Business Transformation
    - iPhone, Android, Smartphones
    - Strategic Personal Business Tools
    - Mobile broadband
    - Rapid increase of Smartphone Subscribers
    - Shift from Voice to IP VAS revenue growth
  - IP service convergence
    - Data, Voice, Video convergence
    - VOIP, YouTube
    - Triple Play
    - Multimedia streaming
    - Valued Added Services
    - Location Base services
    - Instant Messaging
IP Transformation - From Access to Data Center

IP Network Transformation
- Carrier Ethernet
  - Ethernet over SDH/SONET
  - Ethernet over radio
- IPRAN, Gb, IuPS over IP
- WiMax
- Fiber/WDM
- MPLS
  - 10G Data Center
  - and Internet Links

Access/Backhaul  Mobile Core  Services and Applications
Service Provider

Opportunities
- innovative and dynamic services
- efficient revenue management

Challenges
- Security?
- Service Level?
- Quality of Service?
- Manageability?

Precaution
- ensure sustainable proposition such as protecting customer, infrastructure and safeguarding reputation

IPC

IPT
Growing Threats for Mobile Networks

**Web Protection**
- Subscribers visiting more Malware infected web sites

**SMS Spam**
- Spam accounts for 11% traffic

**Mobile Viruses**
- Virus infections in 12% traffic

**Email Protection**
- Bot-net Activity Increasing

**Subscriber Bandwidth Usage Increasing**
AM Analysis:
- Subscriber usage of high bandwidth content is increasing significantly due to Video services including YouTube and catch-up TV.
- Average per-sub usage is >323 Kbps vs. 30 Kbps for Web browsing.

**Spy-Ware usage on the rise**
AM Insight: We are monitoring rising usage of surveillance applications on smart-phones (Blackberry, Nokia, iPhone, Windows Mobile) that copy all sent & received messages, eavesdrop on calls and enable handset to bug rooms.

**P2P File-sharing usage growing**
AM Insight: Analysis shows that mobile data traffic is increasingly reflecting that seen in fixed networks (DSL substitute)
- P2P usage creates RAN bottlenecks

**Legislation**
- France have passed File-sharing law (3 Strikes)
  - AM View: Increase in P2P usage on mobile networks through 3G / HSDPA data cards driving Policy enabled DPI for P2P detection & user throttling to reduce overhead on Radio network.
- EU Regulation passed for voice & SMS roaming charges
  - AM View: Impending regulation on roaming data usage will require subscriber notification during usage. Studies show web interaction most effective for notification & up-sell.
- Asia expanding legislation on web content filtering
  - AM View: Anti-terror laws calling for more control over subscriber usage & activity log archiving in Asia & EU.
Why Criminals Are Going Mobile?

**PC Spam**
- 35 Million Spam Emails Sent
- 28 people bought products
- Total $500
- $3M in pharmaceutical sales in 2008
- Conversion rate of 0.000008%

**Mobile Spam**
- 10 Million SMS Sent
- 28 people signed up to service
- 134,700 recipients called number
- 27,000 recipients replied to SMS
- Total $5,000
- Total $7,800,000
- Total $124,000
- $10M in a single 3 day attack
- Conversion rate of 1.6%
- Fake Prize Draw text message sent in a single 3 day attack in 2009
- An analysis of a single Operator's cost
Mobile Malware, Viruses & Spyware Trends

1 infected subscriber
Attempts to infect 7 other users of a mobile network

Less than 1% of (Infected) subscribers
Consumes almost 1/5th of mobile network capacity

AdaptiveMobile’s solution improves:

- Your subscribers experience
  - By removing the virus in the network – preventing its spread
  - Saving them cost due to unwanted traffic
  - Saving their reputation - avoiding virus spread of personal information
- Your network capacity
  - By blocking traffic before it consumes core network assets

Mobile Spyware
Unauthorised 3rd party tapping of:

- Emails
- SMS
- Phone Calls
- Location
- Audio Bug

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Challenges in managing the Mobile Data Tsunami and IP convergence

- Retain Customers
- Reduce Churn
- Service Velocity
- Revenue Growth
- Reduce Opex
- Improve Quality
- Improve Collaboration
- Customer Experience

User Perspective
- Always on connections
- Higher speeds
- High quality experience
- Same quality as wired
- Same services everywhere
- No boundaries

Mobile Operator Perspective
- Data tsunami and bandwidth growth
- Fix it right and fix it fast
- Lack end to end and in-depth visibility
- Predict & prevent issues
- Workflow simplification
- Manage user experience

Costly Customers Churn!!
Costs 30-40 times more to attract a new customer than retain an existing one – Gartner!
Transformation of Service Assurance to Support the IP Transformation

Unified Service Delivery Management
- Business Critical Data-oriented bursty traffic
- Service-focused workflows
- End to end performance visibility
- Predictive and proactive
- User & control plane + flow analytics

Circuit Management
- Call set-up / control-plane signaling statistics
- Fixed circuits
- Reactive troubleshooting

Device Management
- MIB-based network view of connected elements
- Manage each device independently
- Device-oriented fault management

Connection Management
- Control plane call tracing
- Voice-oriented traffic
- Call-oriented workflows
- Reactive troubleshooting

TDM

IP Packet-Centric
- Voice, Data Video
- Voice & SMS
- Circuit-centric

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Case Study 1: Leading US Wireless Service Provider

Background
- 5 Network Center, 3 Data Center
- 75 Infinistreams

The Challenge
- Lack end to end visibility, from critical MPLS to Gn, Gi, Gp, Service Enables/VAS server farms for quick problem isolation
- Lack 3G IP data services and services enables performances early warning and visibility

Delivering Business Value
- Superior customer experience: Greater network visibility, faster problem detection and resolution, higher levels of service assurance
- Improved business revenue with timely prepaid credit diameter transactions
- Improved capacity planning, resource optimization: Detailed traffic monitoring and reporting provides key network metrics, improved utilization of costly MPLS/DWDM backbone connections
- Enhanced operational efficiency: Enables assured 3G service on IP network and simplifies transition to all-IP environment

NetScout Technology Advantages
- Multi-purpose platform is critical component of MPLS core and 3G/LTE network; simplifies and reduces infrastructure costs
- Provides deep visibility into network and service performance to mitigate effect of network complexity
- Delivers advanced flow traffic monitoring to ensure peak performance of important subscriber services and provide assured service delivery
The Convergence Challenges on Mobile Networks

Uncontrolled Services
- Services launched without mobile operator control

New Services
- Service Suppliers

New Transactions
- Traffic

Network Capacity Release
- Spam / Viruses
- Unwanted / Unvalued Content
- Protection against attack
- Traffic volumes / profitability

New Open Devices
- 3rd party Application quality
- PC & Internet Connectivity
- Cross platform attacks (J2ME)

Mobile Broadband
- Bringing PC problems to mobile networks

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AdaptiveMobile Policy Control
Cisco Policy Enforcement Points

Mobile Security
Parental Controls
Content Controls
Corporate Controls

Administration Interfaces

Subscribers Policy Register
Policy Decision Engine
Security Filter Manager
AV Lists
Images
URL DB’s
Age Verification
Spam Lists

Policy Enforcement Adapters

Cisco Starent ST40 / ASR5000
Web Filtering

Cisco SCE
Web Filtering
IM Filtering
Bandwidth Control

Cisco CSG2
Web Filtering

Cisco ITP
SMS Anti-Spam
SMS Content Filtering
SMS Retention

Deployment Options
Centralised
Standard Linux / Solaris

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Case Study 2: Operator Business (10m subscribers)

IP Services Impact: 3.9m EUR pa

Malware Impact: €2.8m pa

SMS Abuse (up to 7.2m pa)

Mobile Security Controls [Cost Savings]
- SMTP Filter: €11.7m p.a.
- SMS Filter: €21.6m p.a.
- Malware Filter: €7.2m p.a.

Total of €40.5m potential loss over 3 years

Parental & Corporate Controls [Revenue Generation]
- Personal/Parental: €55.6m
- Corporate mobile data: €36.4m

Incremental gain of €92.0m over 3 years

Business Case
Our Solution for Service Provider - SECUREConverge Security Offerings

- **SECUREConverge Enabler**
  - comprehensive and adaptive
  - safeguard prominent IP convergence threats
  - works across all wireline and wireless bearers

- **SECUREConverge Visualizer**
  - unified visualizer of control, data and user domains
  - unprecedented core-to-edge visibility
  - Adaptive Intelligence
Our Secure IP Convergence Infrastructure

In Developing and Emerging ASEAN Countries such as Malaysia, Cambodia and Sri Lanka

GPRS, EDGE, 3G, HSDPA & HSPA Mobile Technologies

10.87M Subscribers

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Want to know more?

Visit Us @ Glocomp’s Booth

to witness the preview of enabling Service Provider Security building blocks that INSTILLS Confidence in IP Convergence.

SECUREConverge Enabler and Visualizer, next generation IP Convergence Security toolsets that delivers sustainable convergence performance and reputation across bearers and contents.
THANK YOU

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