

# **Mobile Storage Considerations**

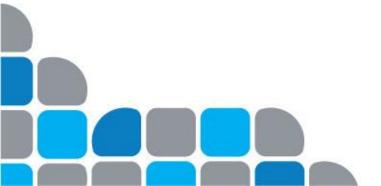


Melody Howard Yuhn, CEH, CISSP Chief Technology Officer

Carrier Services Division
CSS Corp | www.csscorp.com



# Who is CSS Corp?





## **Our Services**



### **Analytics-led Support**

- Enterprise Tech Support
- Analytics & Insights
- Customer Experience Management
- Consumer Tech Support



### Cloud-led Infrastructure

- Cloud Adoption & Migration
- Infrastructure Transition & Management
- Information Security
- IT Helpdesk

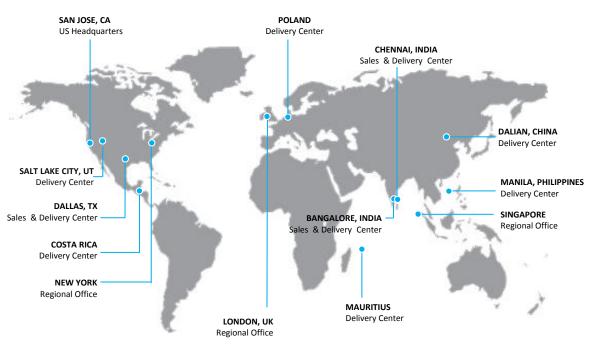


### **Mobility-led Applications**

- Mobile Enablement
- Application Development & Lifecycle Management



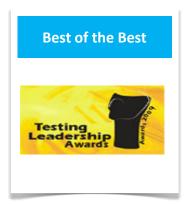






# **Industry Awards & Accolades**











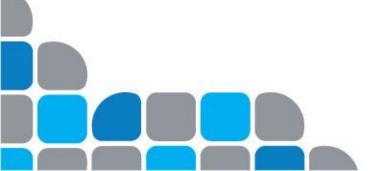






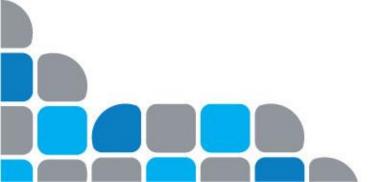


# **Issues for Mobility in Cloud Computing**



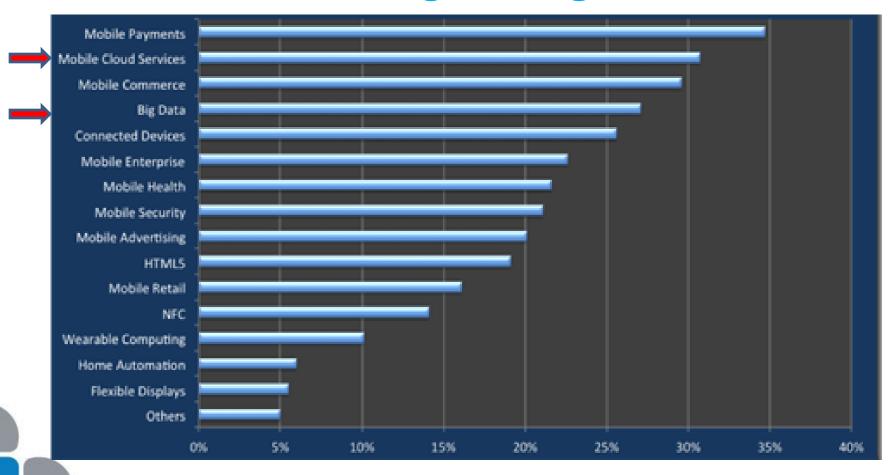


Why is "Cloud" important to Mobility?





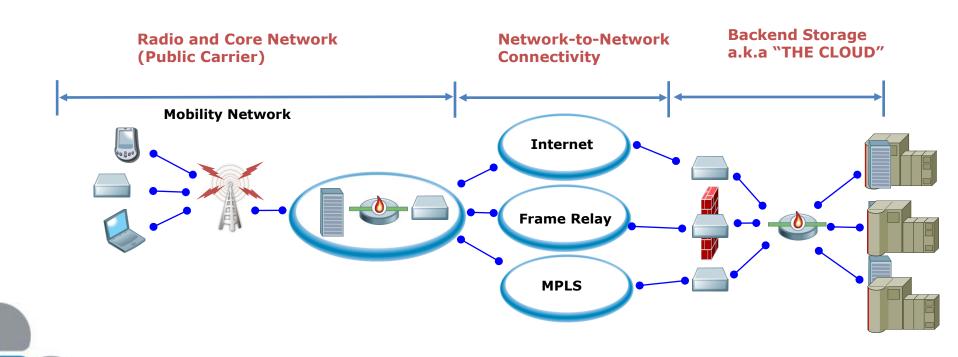
# **Mobile Breakthrough Categories 2013**



Source: Chetan Sharma consulting



# **Quick Reference Architecture**







# **Mobile Cloud Computing Challenges**



# Key factors in user-perceived performance of cloud Mobility (vs. Fixed)

Processing time at the data center

**Equal** 

Processing time on the device

Much worse

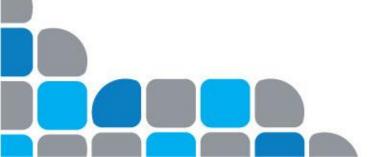
Network latency

Worse ... and

coverage

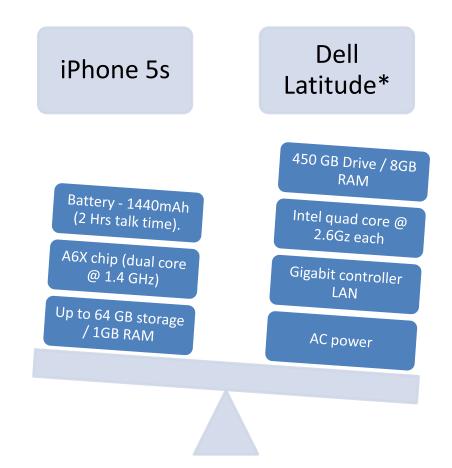
concerns

Data transport time





# It's a resource poor environment

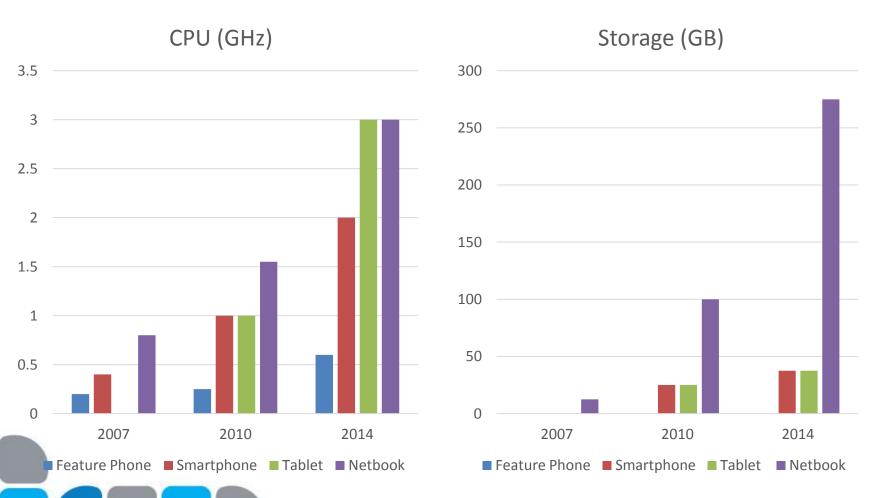


\*Typical business configuration Nominal and for discussion only

# ... but getting better...



### Mobile Device Computing Trends



Source: TechZine Alcatel-Lucent "Mobile Cloud Computing Challenges"



# Add to that...

- Battery life
  - Radio selection(s) multiband
  - Display (Phablet)

- Last Mile
  - Fixed est. 50 ms latency
  - Wireless est. 200 ms latency (and highly variable!)



# **Power Consumption**

- Daily Charging
- Immersive Applications
  - Increased power
  - Execution offload to Cloud
- Smart use of Radio Resources
  - GPRS
  - Wi-Fi
  - Multi-technology







# What do we do?



# **Strategies to Address**

**Network Bandwidth Network Latency Battery Conservation App Elasticity** 



# **Considerations for Cloud Based Mobile Apps**

# Data Access

- Coverage Concerns
- Caching Strategy?

# Session Persistence

- UMTS / EVDO / HSPA+ / LTE / LTE-A
- Wi-Fi
- Synchronization

# Smarter Apps

- Context Sensitive Behavior
- Conserve Network Resources



# **Thank You!**

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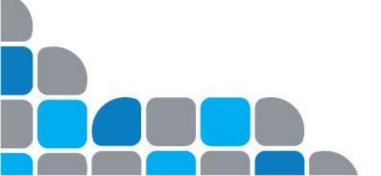
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# **APPENDIX**





# **Analytics-led Customer Support**

- Enterprise/Consumer technology support
- Premium Support Services
- Metrics driven approach
- Support provided in 13 languages
- Round-the-clock support





# **Cloud-led Infrastructure Management**

### **Cloud Readiness & Strategy**

- Build Cloud Adoption Plan
  - Public/ Private
  - Hybrid
- Financial Assessment
- Technical Feasibility Study
- Design & Architecture
- Proof of Concept
- Tools Identification
- Disaster Recovery and BCP
- Business Case
- Investment Benefits

### **Cloud Transformation**

- Cloud Deployment
  - AMI Development
  - Provisioning Systems
  - Automation
  - Backup/ Restore
  - Application and Infrastructure Testing
- Application Migration
- Data Migration
- Fork Lift / Hybrid Migration
- Service Optimization

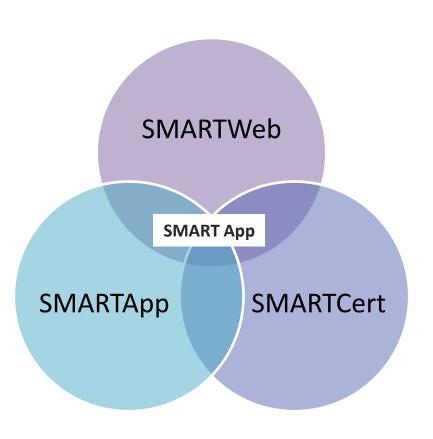
### **Cloud Support & Security**

- 24x7 NOC Services
- Auto-Scaling
- Application Monitoring
- Security Incident & Event
   Management
- Multi-lingual Global Delivery
- Multi-channel support
- Knowledge Engineering
- SLA Management
- Billing Management
- Capacity Planning
- Performance Engineering





# **Mobility-led Business Transformation**



- Better customer connect
- Higher employee productivity
- Quicker decision making
- Better information security
- Social/community participation

# **Maximizing ROI**

# **Business Value**

### Rationalize



- Skills re-alignment and improved utilization
- Customer-centric and revenue enhancing process implementation
- Technology usage & analysis
- Tool utilization
- IT asset inventory analysis & redeployment

### **Optimize**



- One-World Delivery Model, Cloud Services & Tools
- Knowledge Management
   Framework, Managing OPEX
   & CAPEX
- Guaranteed Performance Enhancement
- NO INVESTMENT REQUIRED

### Innovate



- Automation Tools to Drive Efficiency
- Platform for Paid Service
- Product Rejuvenation
- Up-Sell & Cross-Sell Solutions
- Managed Support



### **Our Assets**

### **Organization**

### **Global Presence**

Operations in USA, UK, Poland, India Philippines, Mauritius, Singapore, Australia, Costa Rica and China.

### **Global Services**

Transactions in 13 languages.

### **Human Capital**

6000+ engineers and growing.

### **Technology Partnerships**

Over 15 alliances with technology leaders; IBM, Amazon (AWS), VMWare, Microsoft, Oracle and Salesforce.com

### **Financial Performance**

Consistent YoY growth Debt-free organization

### **Thinking Ahead**

### **Intellectual Property**

Over 10% of revenue investment

### **Delivery Model Innovations**

Global Delivery Model Shared Services Platformized Services White-label Partnerships

### **Tools & Platforms**

Cloud adoption & migration
Mobility tools and applications
Edge™ tech & process backbone
Business Intelligence Dashboard
Platforms for Customer Service
Reporting Dashboards for Projects

### **CSS Corp Labs**

IP creation for Cloud, Mobility, Social, Voice Activation, Storage & Networking, and NaaS.

### Service Excellence

**100% Referenceability**Over 150 blue-chip customers

### **Quality Assurance**

ISO 9001:2008 CMMI Level 4/5 P-CMM

ISO 27001

IEEE ISTQB

ITIL

ISO 20001

TL 9000

**PCIDSS** 

COPC

Six Sigma - Gold CISO Award



# **Our Differentiator – CSS Corp Labs**

- Research & Development arm of CSS Corp
- 10 % of the revenue is being invested on R&D Labs
- CSS Corp R&D Labs constantly works to ensure effective use of our client's IT
- Areas of R&D
  - Application Development
  - Cloud
  - Mobility
  - Analytics
  - Networks





# **Industry & Technology Partnerships**



