

# OVERVIEW OF KEY REGULATORY ISSUES

Presentation to  
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# Widespread Voice/Text/Data Usage

- U.S. is #1 for:
  - Most minutes of use (MOUs) – 830 MOUs per month in Q1 2009.
    - ~2x MOUs of the next highest ranked OECD country (Canada).
    - >3x MOUs of the highest ranked European country (France).
    - ~3x MOUs for the highest ranked Asian country (Korea).
  - Largest mobile data market.
  - Most mobile Internet users than any other country.
  - Adoption of Wireless Web, accounting for 29.3% of all mobile Web surfing.
- 2008
  - >84% of handsets were Web-capable.
  - >89% of handsets were data capable.
  - 1 trillion text messages were sent and received.
  - 2.2 trillion MOUs
  - 14.9 billion MMS were sent and received, up from 6.1 billion in 2007.
- Text messaging traffic grew 1,200% from 2005-2008.

# Value of Voice/Text/Data

- U.S. is #1 for:
  - Lowest revenue per minute of OECD countries
    - Average revenue per minute is 60% lower than the average of the other 25 countries.
    - Average revenue per minute is nearly 65% lower than the average European country.
- The FCC's Wireless Competition Report released in January 2009 found an average monthly Minutes of Use (MOUs) of 769 per subscriber, resulting in an average cost per minute of \$.06, down from \$.07 in 2007 and \$.10 in 2003. This is a significantly cheaper per minute price than Western Europe and Japan.

# Consumer Satisfaction

- American Customer Satisfaction Index (ACSI) and Consumer Reports have noted that the wireless industry has high consumer satisfaction.
  - In 2008, 60% of the nearly 52,000 Consumer Reports readers said they were “completely or very satisfied with their service.” This was primarily a result of carriers:
    1. Increasing call quality.
    2. Reducing connectivity issues.
    3. Ending the policy to extend contract when subscribers make changes to their plans.
    4. Prorating Early Termination Fees (ETFs).
  - ACSI found a record high 69% of wireless users were satisfied in the first quarter of 2009.
- The four top carriers have policies that allow consumers to either bring or take their wireless device from carrier to carrier.

# Consumer Satisfaction Cont'd

- More than 30 carriers, including the largest providers, have voluntarily adopted CTIA's "Consumer Code." This code mandates that carriers will:
  - Disclose Rates and Terms of Service to Consumers.
  - Make Available Maps Showing Where Service is Generally Available.
  - Provide Contract Terms to Customers and Confirm Changes in Service.
  - Allow a Trial Period for New Service.
  - Provide Specific Disclosure in Advertising.
  - Separately Identify Carrier Charges from Taxes on Billing Statements.
  - Provide Customers the Right to Terminate Service for Changes to Contract Terms.
  - Provide Ready Access to Customer Service.
  - Promptly Respond to Consumer Inquires and Complaints Received from Government Agencies.
  - Abide by Policies for Protection of Customer Privacy.

# Infrastructure Investment

- Wireless economic contributions have grown faster (16%) than the rest of the economy (3%).
- Wireless capital expenditures totaled \$217 billion from 1998-2008.
- Carriers reported an average combined investment of \$22.8 billion per year from 2001-2008 to upgrade their networks.
- Wireless services provided \$100 billion in “value added” contributions to the U.S. GDP in 2007.
- Wireless carriers deployed 240,000 cell sites (as of Dec. 2008).
- Over the last 10 years, the industry has invested more than \$200 billion (not including the cost of spectrum) in improving infrastructure -- ranging from adding new cell towers to R&D, with about \$20 billion of that coming in the last year.

# The Evolving Wireless Ecosystem

- Carriers
- Infrastructure Suppliers
- Handset Manufacturers
- Operating System Providers
- Applications Developers

# “Virtuous Cycle”

Consumers  
continue  
to consume &  
want more

Spectrum is  
available

So app/content  
developers are  
creating new  
apps/content

Since networks  
can handle more

Device  
manufacturers  
offer new  
capabilities

# Innovation – Carriers

- Carriers
  - Over 150 licensees
- >95% of the U.S. population can choose from at least 3 competing carriers.
- >65% of the U.S. population can choose from 5 or more providers.
- The top four U.S. carriers represent 86% of the market, making it the most competitive market of the 26 OECD countries.
- In 23 of the 26 OECD countries the top four carriers own 100% of the market.
- U.S. has the lowest HHI (measurement of market concentration) of OECD markets.

# Innovation – Infrastructure

- Battle for 3rd and 4th generation contracts.
  - Sprint / Ericsson Relationship
- High-Speed Packet Access (HSPA)
  - 3<sup>rd</sup> generation GSM technology.
    - #1 - AT&T
    - #12 – T-Mobile
  - U.S. = 32 million subscribers out of 131 million total.
  - Means U.S. had 23% of all HSPA subscribers in the world.
- Evolution-Data Optimized (EVDO)
  - 3<sup>rd</sup> generation CDMA technology.
  - Verizon Wireless, Sprint and other carriers.
  - U.S. = 63.1 million subscribers in Q1 2009 out of 106.78 million total.
  - Means U.S. had 59% of EVDO subscribers in the world.
- 4th Generation Development
  - LTE and WiMAX testing and deployment.

# Innovation – Handsets

- 630 different handsets and devices are manufactured for the U.S. market
  - In UK, 147 handsets are available
- 32 companies manufacture devices in the U.S.
- Significant evolution in the last 3 years.
- New entrants: HTC, Apple, Dell, etc.
- 23% of wireless handsets sold in the U.S. in Q4 2008 were smartphones.
- Some of the most advanced handsets have been launched in the U.S. – Apple iPhone 3G, Apple iPhone 3GS, Google's G1, LG Voyager, Blackberry Storm, Blackberry Bold, Blackberry Pearl, Blackberry Curve 8900, Samsung Instinct and Palm Pre.

# Innovation – Operating Systems

- > 8 wireless operating systems:
  - Android (Open Handset Alliance)
  - Blackberry OS (Research in Motion)
  - BREW (Qualcomm)
  - Java (Sun Microsystems)
  - LiMo (Open Source Linux for Mobile)
  - OS X iPhone (Apple)
  - Palm OS (Palm)
  - WebOS (Palm)
  - Windows Mobile (Microsoft)

# Innovation – Applications

- “App” stores
  - iTunes App Store first launched in July 2008
  - In 14 months, nearly 100,000 applications are available from 6 stores on 6 different platforms. Platforms are:
    - Apple’s iTunes
    - Google’s Android
    - Nokia’s Symbian
    - Palm’s PalmOS
    - Palm’s WebOS
    - Research in Motion’s BlackBerry
  - Another app store (Windows Mobile Marketplace) is expected to open soon.

# But FCC Action is Needed ...

- Tower Siting – Grant of CTIA’s “Shot Clock” Petition
  - CTIA is asking for a tower siting policy which would establish a timeframe for zoning authorities to act on applications (45 days for collocation; 75 days for other facilities).
  - Currently, there is no timeframe. Of the 3,300 tower and antenna applications pending in the spring of 2008 for 7 wireless carriers, 760 were pending for more than one year. 180 were pending for more than three years. 135 of the 180 applications pending for more than three years are collocation applications where towers have already been approved.
- Pole Attachments – Access for Wireless Attachments
- Focus on Interference Concerns
  - 700 MHz Wireless Microphones; Repeaters
- USF Reform – Repurpose to Match Consumer Demand for Mobile Broadband Services

# And FCC Support is Needed ...

- Access to additional licensed mobile spectrum – a crisis is brewing: the applications, speed, devices and other innovations of the wireless industry – all could be in jeopardy unless we get more spectrum.
  - CTIA is asking policymakers to pass S. 649 and HR 3125 – Radio Spectrum Inventory Act which would tell us who's using what spectrum and where there's available spectrum.
- Clearing of AWS Spectrum