



# Assessment of Competition in the Wireless Industry

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# Procedural Background

- FCC prepares annually an assessment of competition in the wireless industry.
- In conjunction with preparation of 14<sup>th</sup> annual report, FCC sought comment during summer 2009 on the following:
  - Analytical framework, market factors, and data that would best facilitate Commission's assessment of competition and consumer welfare.
  - Scope of competitive assessment not limited to voice services, nor to wireless service providers.
    - E.g., broadband services
    - E.g., handset suppliers

# Overview of My Report

- An economically sound assessment of competition.
  - Pertinent marketplace indicia
- An economically sound assessment of vertical relationships.
  - Potential procompetitive and consumer welfare-enhancing outcomes arising from exclusive dealing
  - Competition and innovation in handsets
- Consideration of proposals for regulatory intervention
  - Open access – open vs. “closed” platforms
  - Price controls in special access services

# Assessment of Horizontal Competition

- Commission's mandate is to determine whether marketplace is "effectively" competitive.
  - Best understood as competition sufficiently intense to render unnecessary (and likely counter-productive) extensive regulatory oversight.
  - Should not be misconstrued as requiring a finding of perfect competition, or even competition that approaches this textbook paradigm.
- The following question thus presents: When is imperfect competition nevertheless effective?

# Assessment of Horizontal Competition

- **I propose that effectiveness of competition be demonstrated through the following market indicia and outcomes:**
  - Range of effective alternatives enable consumers to switch away from suppliers that do not satisfy their demands on reasonable terms.
  - Suppliers justifiably concerned about loss of business to rivals if they fail to deliver attractive price/quality combinations.
  - Empirical demonstration that these dynamics are at work.
    - Active price and non-price rivalry + consumer movements in response
    - Extent of diversity in sources of supply, conditions of expansion and entry, and access to key inputs
    - Expansion of consumer welfare through declining quality-adjusted prices and advancing innovation
- **Consistent with the Commission's current analytical approach.**

# Assessment of Horizontal Competition

- Commission's current analytical framework examines four broad categories of economic factors:
  - Market structure
  - Provider conduct
  - Consumer behavior
  - Market performance
- Commission should continue to employ existing framework.
- Commission should not modify current approach to place greater emphasis on static concentration metrics.

# Assessment of Horizontal Competition

- **Current approach should not give way to a greater reliance on simple concentration or profit metrics**, as doing so quite likely would yield misguided, and perhaps counter-productive, regulatory decisions.
  - In presence of significant economies of scale, scope, and density, atomistic competition is inefficient and pricing at marginal cost is not sustainable.
  - When significant economies of scope are present, fixed costs typically support numerous services – price/cost margin for a single service not highly probative of supplier's overall cost recovery.
  - Static concentration metrics unreliable in the presence of rapid technological change.
  - These same metrics especially unreliable when rapid technological advance is paired with a relatively nascent business.

# Assessment of Horizontal Competition (Market Structure)

- Numerous suppliers
  - Four nationwide carriers
  - Eight facilities-based with > 1M subs
  - > 150 separate wireless licensees
- Consumer choice
  - 94% of population can choose from among at least four carriers
  - 3.6 carriers on avg. available to consumers in least populated counties
- Conditions of entry and expansion
  - Release of additional spectrum has facilitated new entry (*e.g.*, Clearwire, cable companies)
  - Rapid growth of newer entrants (*e.g.*, Virgin Mobile, MetroPCS, Leap)

# Assessment of Horizontal Competition

## (Provider Conduct: Price)

- Falling service prices
  - 2003-2007: significant declines in avg. voice revenue/minute and avg. revenue/minute
  - 2005-1H2008: avg. revenue/text msg. declined by 65%
  - Higher aggregate prices in U.S. relative to other OECD nations do not suggest lack of effective competition
    - Do not account for greater intensity of usage by U.S. consumers
    - Do not account for variations in service quality
- Breadth of service plan configurations and features
- Falling handset prices
  - With subsidies, dozens of handsets available for \$50 or less
  - Steep declines in prices of smartphones

# Assessment of Horizontal Competition

## (Provider Conduct: Non-Price)

- \$Multi-billion spent on advertising
- Investments in network upgrades and advanced technologies
  - Improvements in call quality performance
  - Improvements in customer satisfaction levels
- Annual capital expenditures of around \$20B
- Diversity of handset offerings
  - > 600 unique wireless devices available to U.S. consumers
  - Increasing number of handsets that offer Internet access, Wi-Fi, and Bluetooth connectivity
  - Smartphones now account for > 40% of handsets sold in U.S., up from 27% in 2Q2008

# Assessment of Horizontal Competition (Consumer Behavior)

- Significant breadth and depth of information available from carriers and independent sources
  - Service plan pricing and options
  - Handset features and capabilities
  - Network coverage maps for both voice and data
- Subscriber churn rates evidence consumer mobility
  - > 20% annual churn = tens of millions of subs switch carriers each year
  - Churn rates on the decline, consistent with improvements in call quality and customer satisfaction

# Assessment of Horizontal Competition (Marketplace Performance)

## ■ Growth in subscribership

- > 270M wireless subs at YE2008, up almost 15M from a year earlier
- >70M wireless high-speed subs in Jan. 2009, greater than three times the number at YE2006

## ■ Growth in usage

- 2008 wireless minutes of use >2.2 trillion, up from 2.15 trillion in 2007 and 1.8 trillion in 2006
  - Increases in spite of general migration from voice to data
- Text messaging volume in 2008 just over 1 trillion, compared to 363 billion in 2007
- MMS messaging volume more than doubled in 2008 v. 2007, increasing from 6.1 billion to almost 15 billion

# Assessment of Device Competition

- Previously discussed indicators of robust competition
  - Numerous suppliers, > 600 handsets with significant differentiation, many available at low prices, rapid advances in functionality
- The iPhone
  - Success has spurred significant competition in smartphone segment, *e.g.*,
    - Blackberry Storm
    - Numerous Android-based devices
    - Palm Pre
  - and compelled Apple to continue to innovate
    - Latest generation 3G S offers better speed and performance, longer battery life, voice recording, hands-free voice control, and new operating system

# Assessment of Device Competition

- Market outcomes do not support the contention that exclusivity deals between carriers and device suppliers have stifled competition
  - Proliferation of handsets and rapid pace of innovation
- Exclusivity deals are specific to a handset
  - Device suppliers not foreclosed from obtaining distribution through any given carrier
  - Carriers not foreclosed from obtaining access to a supplier's handsets
- Why not relax exclusivity in areas where carrier does not have network coverage?
  - Because of intense rivalry in service and handset markets, incentives to form exclusive deals do not diverge from public interest on net
  - Interference in the details of exclusives thus unwarranted

# Proposed Regulatory Intervention (Open Access)

- No evidence of market failure to justify intervention
  - Service and handsets intensely competitive
  - Applications marketplace intensely competitive
    - Growth in supply of applications and in downloading activity
    - Operators of app stores stimulate app development
    - Legitimate procompetitive reasons to “control” app distribution
- Degree of control over platform can serve procompetitive objectives
  - Improved security
  - Content that best reflects tastes of target audience

# Proposed Regulatory Intervention (Open Access)

- Intervention especially unwarranted given two-sided nature of markets
  - Regulatory intervention on one side should account for welfare effects on other side – very difficult to determine *ex ante*
  - Platforms today differ in terms of their openness to developers, consumers, rivals
    - Unclear which arrangement(s) will deliver greatest overall benefits to all platform participants
    - Econ literature shows that closed platforms in some circumstances are more socially desirable
  - Some degree of control (lack of openness) permits more effective balancing between two sides
  - Sound public policy should focus on inter-platform competition, not a particular platform's “openness”

# Proposed Regulatory Intervention (Price Controls in Special Access)

- Proposed price controls should be rejected
  - Neither lack of supply nor prices have impeded competition among wireless carriers
  - Competition appears to be advancing
    - At least six fiber-based competitors in each of top 50 MSAs
    - Over one hundred thousand route miles of fiber already deployed
    - Cable company entry
    - Self-supply (*e.g.*, Clearwire's WiMAX network will reach 120 million people by YE2010)
  - Prices are declining
  - Future demand for wireless broadband projected to grow at 100%+



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