

# Looking for Trouble: The FCC's Mobile Competition Report

BY RICHARD BENNETT | JUNE 2, 2010

On the face of it, the market for mobile network services in the United States appears healthy: we're first to get the latest smart phones and all the applications they enable; we pay the lowest price per minute for cell calls in the world; and we have more meaningful choice among providers than any other country. You'd be hard-pressed to convince the typical American that he would be better off ditching his iPhone or her Droid in favor of one of the Nokias that Europeans pay three times as much per minute to use. While everyone would prefer a lower bill and even more choice among handsets and applications, by the global standard the U. S. is in excellent shape.

Or so you might think. But according to the FCC's recent Mobile Competition Report,<sup>1</sup> trouble is brewing in the United States unless regulators take control of policy levers to alter the shape of our mobile marketplace. The Commission expresses a number of concerns about the future market, based in indications of increasing market concentration, decreasing network investment, and increasing profitability among major operators. Let's examine these issues one at a time.

## MARKET CONCENTRATION

The FCC uses the standard Herfindahl-Hirschman Index (HHI) to measure market concentration. The mobile network market, like its sister market for wireline

broadband, is characterized by high costs for infrastructure relative to operations expense. In other words, fixed costs are high and marginal costs low. These kinds of markets don't easily support the level of competition that we find in less capital intensive markets such as those for professional services or banking, for example. In fact, a strong case can be made that more competitors would lead to higher overall industry costs and therefore higher prices for consumers. Therefore, the question that has to be asked about market concentration is how to benchmark the HHI number (which the FCC puts at 2,848 out of 10,000.) There are two ways to do this, one historical and the other comparative.

Historically, HHI increased (higher numbers mean more concentration; a market equally divided among four firms has an HHI of 2500, one divided among three is 3333, and so on) between 2003 and 2005, decreased between 2005 and 2007, and increased again in 2008; it now stands higher than it has been in the last five years.

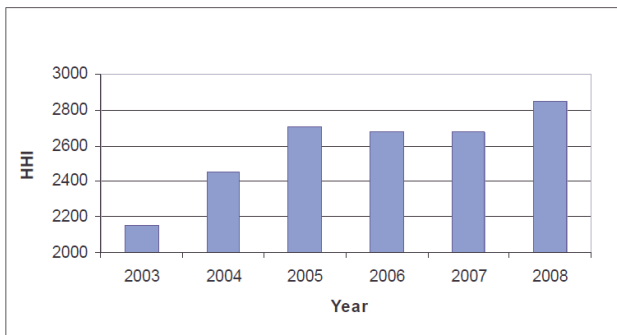
The reason for the recent increase in HHI is increased numbers of subscribers by AT&T, Verizon, and T-Mobile alongside a corresponding decrease by Sprint. The FCC's chart illustrates recent history.

Figure 1 illustrates that a post-2005 trend toward reduced concentration and increased competition was disrupted in

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**Figure 1: Average Herfindahl-Hirschman Index (source: Annual Report and Analysis of Competitive Market Conditions With Respect to Mobile Wireless, Including Commercial Mobile Services, FCC, May 20, 2010.)**



2008, the year Apple opened the iPhone app store.<sup>2</sup> AT&T gained market share very rapidly in 2008 thanks to its exclusive arrangement to market the iPhone, while competitors didn't have a credible alternative until 2009, when Google launched its Android platform, Palm debuted the so far less-than-successful Pre and Microsoft updated Windows Mobile. The rise of Android in particular and multiple App Stores in general have radically altered the nature of the market for mobile networks and applications since 2008, but the FCC's report unfortunately doesn't capture these recent effects on market concentration, despite its use of recent data in other parts of its report.

A comparative analysis of the U. S. HHI views it in the international perspective, the familiar method that we apply to wireline broadband when criticizing the price and speed of American offerings against those in Korea, Japan, and Sweden that have been built with government support.<sup>3</sup> The FCC report cites international HHI data drawn from a Merrill Lynch study using a different benchmark. These data are presented in Table 1.

By the international standard, the U. S. is clearly in good shape; only one comparable nation, the U. K., had more major competitors in 2008, and two of them have subsequently merged, so no national market in the Merrill Lynch comparison is less concentrated than the U. S. Clearly, there's not much source for anguish about the U. S. position in the international mobile ranking. This is actually quite similar to intermodal wireline broadband rankings, in which the U.S. and Canada lead the world.<sup>4</sup>

## DECREASED INVESTMENT

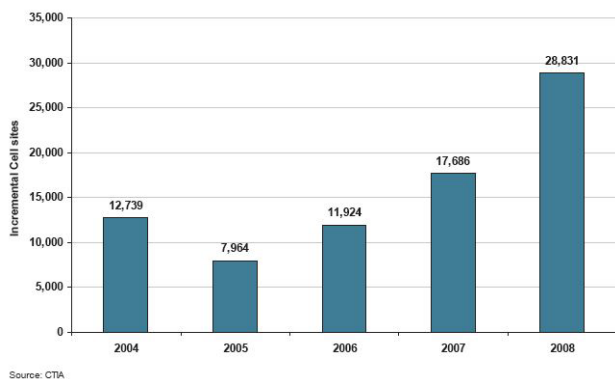
The FCC expresses concern about a decreasing level of ongoing investment in network infrastructure relative to market size. Depending on which source of data one selects for ongoing investment (the choices are \$20B/year or \$25B), the growth in market size (e.g., sales) dilutes the ratio of investment to revenues from 20% to as little as 14% from 2005 to 2008. However, despite the decreased level of investment, FCC data indicates network operators added cell sites at a faster rate in 2008 than in the previous five years (see Figure 2). Doing more with less is a good skill to display in the bad economy of recent years, and it also naturally follows that operators should invest more in networks during generational upgrades than at other times; 2008 was a transition year between 3G and 4G upgrades.

Investment in new cell sites is one way of improving cellular network coverage, but there are others. During the period in which the FCC sees decreased investment relative to revenues, the major cellular operators added significant numbers of cell site by acquiring smaller networks, often at great cost. Verizon acquired Alltel for an aggregate transaction value of \$28.1 billion, AT&T acquired Centennial for approximately \$945 million, T-Mobile acquired Suncom for \$2.4 billion, and Sprint invested in the Clearwire 4G network as a partner. Network expansion generally follows subscriber growth, and is therefore unlikely to follow a neat curve year after year. At the outset of 2008, the Verizon network was more exten-

**Table 1: Mobile Market Structure in Selected Countries (source: Merrill Lynch Calculation cited on p. 197 of FCC report.)**

Country	Nationwide HHI	Number of Competitors	Top 2 Share
USA	2220	4	55.2%
UK	2240	5	50.6%
Germany	2920	4	70.2%
Italy	3020	4	71.7%
Canada	3110	3	67.4%
Australia	3120	4	73.3%
Sweden	3370	4	75.9%
France	3390	3	78.1%
Finland	3490	3	77.0%
Japan	3590	3	77.6%

**Figure 2: Incremental Cell Sites (source: FCC report)**



sive than the AT&T network (formed in large part by the acquisition of Cingular) and during the year, Verizon didn't add subscribers as rapidly as AT&T. Therefore, Verizon's operating conditions didn't justify the same level of investment as AT&T's in that particular year; the figures for 2010 are likely to be substantially different thanks to the uptake of Android devices and the roll out of 4G networks.

Moreover, the FCC's investment figures unfortunately omit the \$19.6 billion mobile operators spent in 2008 to acquire licenses in the 700 MHz spectrum auction. Simply adding auction costs to the cited investment figures doubles total investment independent of merger and acquisition expenses and would mean that overall investment actually increased quite substantially. There is also no conceptual difference between a carrier buying cell towers and buying the spectrum that enables them to utilize these towers. The omission of auction expenses from the report's investment analysis leads to a faulty conclusion.

### EXCESS PROFITABILITY

The Commission's report seems to suggest that some operators are earning excess profits. It devises a profitability metric based on gross earnings (EBITDA) minus capital expenditures (CAPEX) per subscriber.

According to this calculation, two major operators are increasing profitability while two are decreasing. Perhaps coincidentally, CDMA operators (Sprint and Verizon) are more profitable than GSM operators (AT&T and T-Mobile.) This result would be expected during the transition from 2.5G to 3G technology, however, as CDMA has a less expensive upgrade path than GSM. GSM requires hardware upgrades to accomplish a feat

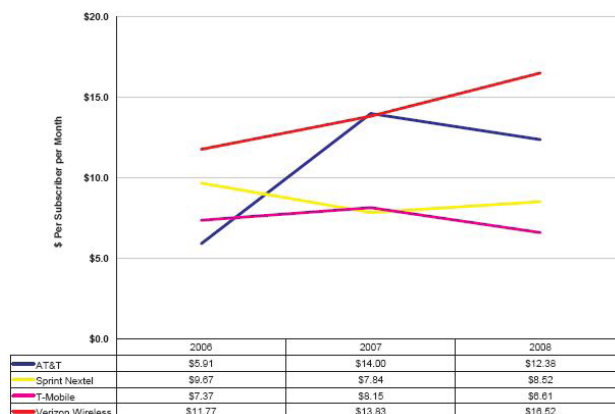
that CDMA does with a software upgrade. This factor is important at generational upgrade points such as the one that began in 2007 relative to 3G and can influence relative rates of profitability since overall prices are set by markets but costs temporarily differ.

In terms of gross profits, network operators generally come in well below large Internet services companies: AT&T's gross margin is 17.68%, while Google's is 35.78%, for example.<sup>5</sup> By the relevant standards for network businesses, the mobile operators aren't earning excessive returns. Moreover, a key question to ask is not just if profits are "excessive" but what level of profitability mobile operators need to produce in order to maintain the capacity to invest continually in technology upgrades. If extreme competition reduces prices modestly but raises overall industry costs (as is likely to occur in industries with high fixed and low marginal costs), consumers might actually be worse off as upgrades would be more slow to come and less evenly distributed. In this case, society as a whole would be worse off as total economic welfare would be reduced by duplicate efforts in advertising and customer acquisition at the expense of technology investment..

### CONCLUSIONS

A number of critics have expressed displeasure at the FCC's lack of willingness to declare the mobile marketplace "competitive," to which the Commission replies that it sought to offer a deeper analysis than the rather simplistic one that its predecessor offered year after year. The Commission is on solid ground in terms of its aspirations, but it's difficult to regard this report as a success: important data are missing, the analysis is

**Figure 3: EBITDA minus CAPEX per Subscriber per Month (Selected Providers) (source: FCC report)**



often superficial, and much of the data is too old to be fully enlightening. Mobile is a dynamic, rapidly changing marketplace, and 2008 conditions have little importance to “policy lever operators” working in 2010. In 2008, we were at the end of the 3G transition, but we’re now at the beginning of a 4G rollout. In 2008, Apple had the only significant App Store, but now each platform has one. Networks that were over-built and under-populated in 2008 are now gaining subscribers at a rapid rate, and two new mobile platforms will debut this year.

Perhaps most disturbing is the FCC’s disregard for the changes in the dynamics of the mobile marketplace itself. Five years ago, mobile devices were simple and network operators competed on the basis of price and coverage. With the advent of the smart phone, it also became important for the operator to offer the most

attractive platform and the best data handling capability, and at present applications have become increasingly important. So the number of operators and their systems of base stations, backhaul, and spectrum no longer determines the competitiveness of the mobile marketplace; it’s also a matter of applications, App Stores, and their policies.<sup>6</sup> Consumers benefit as much from competition between Apple’s iPhone, Google’s Android, RIM’s Blackberry, Hewlett-Packard’s Pre, and Microsoft’s Windows Mobile 7 as they do from competition among network operators.

It’s difficult for an agency with as much history as the FCC to break from the past and take a more holistic view of the markets it regulates, so we should appreciate the attempt to offer a non-traditional analysis of the mobile marketplace. We hope that the next edition will be more comprehensive and up-to-date.

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## ENDNOTES

1. Federal Communications Commission, “Mobile Competition Report,” May 20, 2010, [http://hraunfoss.fcc.gov/edocs\\_public/attachmatch/FCC-10-81A1.pdf](http://hraunfoss.fcc.gov/edocs_public/attachmatch/FCC-10-81A1.pdf).
2. “App Store,” *Wikipedia*, [http://en.wikipedia.org/wiki/App\\_Store](http://en.wikipedia.org/wiki/App_Store).
3. Rob Atkinson, Daniel K. Correa, and Julie A. Hedlund, “Explaining International Broadband Leadership,” Information Technology and Innovation Foundation, May 1, 2008, <http://www.itif.org/index.php?id=226>.
4. Ibid.
5. See SEC filings at <http://finance.yahoo.com/q/ks?s=T+Key+Statistics> and <http://finance.yahoo.com/q/ks?s=GOOG+Key+Statistics>.
6. Richard Bennett, “Sharing the Risks of Wireless Innovation,” Information Technology and Innovation Foundation, October 19, 2009, <http://www.itif.org/index.php?id=303>.