

The Mobile Computing Tidal Wave

As tech strategists, we often get asked for our thoughts on the “*new new thing*” -- the breakthrough technology that’s supposedly going to revolutionize the world as we know it. As tech portfolio managers, however, we have learned two things: first, that the only constant in technology is change, making tech forecasting tricky, even for supposed “strategists”; and, second, that the human race, in general, has a pretty hard time accurately making long-range predictions, especially in tech. Just ask the strategists in the 1960s who predicted that, by now, we’d all be commuting to work in personal aircraft! Our inherent skepticism over prediction often prevents us from investing too much actual money in companies that are valued on the hope of nascent technologies, preferring instead to focus more on old-fashioned investment themes such as barriers to entry, economic value creation, and relative valuation.

However, every once in a while, a tech theme comes along that’s just too common-sense for us to ignore. In our view, one of these is the growing tidal wave of **mobile computing** demand. Some might define “mobile computing” as the ability to perform either work or play tech pursuits remotely, without being tied down to a computing home base. For example, the ability to access an employer’s network of computer files from home, or the ability to perform Web-based research or online shopping from the passenger seat of a moving car. If this sounds like a big potential market, it is; according to a BCC Research report from January 2007, the global mobile computing market is set to reach almost \$90 billion in revenue by 2011 (source: www.bccresearch.com).

However, in thinking about mobile computing, we’d like to take it a step further by also considering the growing reality of “cloud computing.” This separate but tangentially related concept refers to computing software and applications hosted “on-demand,” residing in a remote location rather than on an individual machine, meaning that not only could you put your Internet-enabled PC in your pocket, but you don’t even need to have your software, files, hard drive, etc., physically on the device. Cloud computing, like mobile computing, has profound implications for the type and amount of Internet bandwidth, software, and hardware needed for tomorrow’s computing environment.

Logical By-Products of Greater Growth in Mobile and Cloud Computing:

- 1. Growth of Internet bandwidth demand:** As Internet-friendly mobile technology grows in popularity, the demand for Internet bandwidth increases. This is good news for **Cisco Systems (CSCO-O-\$25.97)**, a company that benefits from the trends of both mobile computing and bandwidth demand growth. While trying to quickly explain CSCO’s core routing/switching products can be confusing, it’s instructive to think of CSCO as the Internet’s “plumber,” selling better pipes that keep the Internet flowing more smoothly and quickly. Furthermore, some of CSCO’s ancillary businesses, such as its pioneering work in virtual teleconferencing and its purchase of WebEx (remote conferencing) also makes the company a direct play in remote computing for the enterprise.
- 2. Greater demand for mobile connectivity software:** This benefits a company such as **Citrix Systems (CTXS-O-\$31.72)**, a world leader in software that, among other things, allows individuals to work from home or other remote locations. For example, the company’s Delivery Services division houses remote access software that allows business employees to access company files and tools remotely from anywhere with an Internet connection. Incidentally, recent weakness in CTXS stock related to an executive-level defection (CTXS’ head of sales recently accepted a CEO position at a competitor software company) may also be creating a short-term buying opportunity, in our opinion.
- 3. Greater demand for mobile hardware: Apple Inc.’s (AAPL-O-\$181.43)** revolutionary iPhone is the most famous (and some would say best-executed) smartphone in the world. In our opinion, the iPhone represents not so much a feature-laden phone, but rather a virtual PC in your pocket, replete with a mobile version of the well-respected Mac OS operating system. With an iPhone upgrade due in July (adding 3G data transmission speeds, Global Positioning System (GPS) capability and enterprise-level email capabilities to an already attractive feature set) and a recent subsidy deal with exclusive network provider AT&T (T-N-\$35.69) that will lower the price of iPhone admission considerably, we believe that management’s expectations for 10 million iPhones sold by the end of 2008 will prove to be very conservative.

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