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The 4G Battleground: Providing Content or Internet Access

Gary Breed
Editorial Director



I recently attended the CTIA Wireless trade show. Featured in the center of the entry hall were pavilions for different technologies, each under the banner of “The Road to 4G.” It was quite clear that the convergence of services that will become the so-called “4G” wireless is being approached from different directions. I see two main factions hoping to get there first.

First, most companies with cell phone origins are touting services as the way to utilize new broadband channels. These most basic of these services include subscriptions to weather reports, stock quotes, news headlines, etc. “Yellow Pages” type directories tied into GPS navigation is one of the more advanced services being offered. The companies following this approach are using HSDPA or 1xEV-DO broadband technologies, which are part of the “3G” family of technologies, supporting data transmission up to 3 Mbps (downlink).

Then there is the approach from the computer side of the business, where the future of wireless communications is seen as extending the reach of the Internet to handheld portable devices. Their efforts are focused on display technology, including new small-screen protocols for Internet content that is targeted to wireless devices. These broadband access technologies are a combination of WiFi® and WiMAX™, which offer downlink speeds from 5 Mbps up to tens of Mbps. While the “phone” part of these devices may initially use existing wireless networks, some providers anticipate converting to VoIP (Voice Over Internet Protocol).

There is plenty of overlap between these two approaches, so what I am describing is more of a trend than an either/or decision. The point I want to make is that the evolution of wireless is still underway, and that a single “winner” is not likely. None of the companies involved should have a business plan that depends on future domination of the marketplace!

I have occasionally noted that the laws of supply and demand have been absent from the wireless communications arena—that companies have selected services to offer based on available technology and willing development partners, such as the providers of the content noted above. Thus, consumers are limited to choosing from what is available, rather than getting what they really want.

Now I think that this scenario is changing. At some point not too far

into the future, wireless will achieve performance and coverage equivalent to today's wireline DSL and CATV-based broadband services. With that performance, consumers should be able to choose an appropriate level of service.

The proponents of WiMAX are quick to suggest that their technology is the best route, since it has the necessary bandwidth. They believe that a conduit into the Internet is the best way to allow consumers a full range of wireless services. The limitation, however, is that it will take a very long time for WiMAX to achieve coverage anywhere near what the "cell phone" industry already has achieved.

For reach beyond urban areas, we also need to see how the new 700 MHz spectrum development unfolds. This piece of spectrum and the new services it will support,

may be the key to achieving wider coverage of advanced broadband services.

Supremacy or Coexistence?

Back to the concept of a battleground—I think the main battle will be in the near-term, pitting an extension of current technology against developing technologies. I expect both approaches to have strong marketplace support, since each has distinct advantages in certain areas. The best long-term solution, from the consumers' perspective, may be two or three types of systems in the final mix. Then there is a choice from basic phone services (plus enhancements), to mid-level bandwidth with an attractive cost/performance ratio, or full-bandwidth, full-feature service for business and advanced personal wireless users.

Already, we are seeing major wireless companies investing in both approaches. I suppose that's what convergence is all about—finding the best uses for the available technology, even if it means supporting what once was considered a "competing" technology.

As with all competition, each technology and business model will be tested. Some will work well, some will fail, most will be adjusted and adapted as the market preferences develop.

And the market includes many different types of users; no single solution will work. As the battle unfolds, interested observers like me will watch with interest. After all, the mix of advancing technology, new business approaches and the needs (and budgets) of customers makes a fascinating story.