

Inside the Mind of a VC

Wires Are, Like, So Twentieth-Century

The children gathered around their grandfather's knee. "Grandpa, tell us some bedtime stories about the olden days. Not just the ones about black-and-white TVs, transistor radios, or rotary-dial phones. Tell us about the time when voice and data all came over wires. Pleeese!"



Gerry Langelier
OVP Venture Partners

It's all happening so fast, it's hard to believe that we'll soon be talking about wired delivery of voice and data services with the same nostalgia as the electronic marvels of the 1950s, but we will. To put this in perspective, consider this: The concept of the cellular phone was introduced in the late 1940s, but real work did

not ensue until the early 1970s. The first portable cell phone went into service in 1983—the year that OVP was founded. It took 20 years, but the cell phone has moved from novelty to ubiquity. There are now more cell phones in use in China than in the U.S. In just a couple of years, there will be more cell phones in China than *all* phones in the U.S. Why? Because wires are twentieth-century technology! China has no need to wire the whole country for telephone service, so it never will. Think about the impact. In the late 1940s and early 1950s, the Marshall Plan helped rebuild the devastated industrial

infrastructure of WWII Japan and Germany, which gave rise to their more modern and more competitive industrial engines that caused U.S. companies fits in the 1970s and 1980s. Today, there is a new Marshall Plan, not funded by governments but driven by wireless technology. It is allowing developing nations to leapfrog the communications infrastructure of the developed ones.

802-dot-what?

Let's look at some recent events. Most people are aware of 802.11 (or Wi-Fi as it is commonly known). Yet few realize that the specification for that standard was approved as recently as 1999. In just four years, 802.11 is in every laptop and every Starbucks, not to mention a host of corporations, as a replacement for the local-area network (LAN), and

it's in many homes as well. With the recent arrival of 802.11g (a faster, compatible version of the popular b implementation), we now have the ability to stream real-

time video and audio on that wireless LAN. Once you get data to the premises, the need for an old wired LAN is gone—period.

Ah, you say, what about the nasty issue of the "last mile"? How do you get broadband data and voice from the street to the premises without wires? Here comes 802.16. This new standard, also known as WiMAX, is the

Wireless technology lets developing countries leapfrog developed ones.





Telephone poles will be like ruts on the old Oregon Trail.

WAN (wide-area network) companion to 802.11's LAN. Designed to serve an area as large as 20 miles in diameter, with very high bandwidth, and allowing for intelligent meshing of access points to share the load, the 802.16 specification was just approved in 2003. We expect to see chips and systems utilizing the new standard by the end of 2004. Sometime in the middle to later years of this decade, we all should be able to put a little box on the outside of our homes (not a dish, mind you) and send and receive broadband communications. Who needs the cable companies or the DSL line from your phone company? Who needs all that copper on the poles and fiber in the ground? Those telephone poles will be as reminiscent of days gone by as the old wagon-wheel ruts on the Oregon Trail.

Are you a FAN of the LAN and WAN?

Even on the factory floor, wires are going away. Yet another standard, called 802.15.4, or ZigBee for those in the know, is coming on swiftly. It offers the possibility of revolutionizing everything from industrial automation to

HVAC. These very low-power and low-data-rate chips have been designed to mesh and communicate with each other much as their larger and more powerful 802.16 brethren do. ZigBee promises to change the way in which companies utilize their fixed assets, creating a FAN (factory automation network) to complement the LAN and WAN of the other 802-dot-somethings.

So what does it all mean? It means chaos for a number of existing twentieth-century enterprises, and opportunity for twenty-first-century start-ups. Exactly how all this plays out, at what speed, and with what requirements will be determined by bright entrepreneurial teams.

Now, let's check back in with the bedtime story.

Grandpa finished his tale and looked into the sleepy eyes of the little ones. He picked up his new 802.11n phone and placed a VoIP (Voice over Internet Protocol) call to his brother, who was vacationing in India. As the phone rang, he whispered softly to his young audience, "Another night, I'll tell you about the time people still had to pay for long-distance phone calls."



VENTURE PARTNERS

OVP Venture Partners is a leading technology-focused venture capital firm in the Pacific Northwest. The firm makes equity investments in early-stage companies primarily in the western third of North America, with a leading market-share position in the Pacific Northwest. OVP's emphasis is on firms in software technology infrastructure, communications infrastructure, and process solutions.

*Gerry Langelier, General Partner
(503) 697-8766
langeler@ovp.com*