

The 5000-Mile Remote

by: Stuart Davidson, Labrador Ventures – June, 2005

As bandwidth improves globally and wireless devices populate the technology landscape, startups specializing in managing remote applications look very very attractive.



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As seen in the...



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It seemed like a fairly simple problem, almost too simple. A game developer in India needs to test his new software on a handset in Helsinki; in fact, he needs to test his software on about 50 different handsets – all at once if possible. The old solution? Fly to Helsinki and set up shop. Or, alternatively, pay a bunch of consultants quite a bit of money to do it for you.

For a couple of entrepreneurs in San Francisco who had faced that exact problem in their previous jobs, the old solution seemed needlessly inefficient – expensive, time consuming, clunky, and not altogether complete given the rapid introduction of wireless devices capable of running ever more robust games and applications. This was Silicon Valley, after all, and there was something that could be quite useful called the Internet; theoretically, a 5000-mile long remote control cable that should be able to solve exactly this type of problem.

Time and Distance

That was 2003 and the company was Mobile Complete, a San Mateo, CA-based 20-person startup that has recently closed its first venture round of funding from Innovacom, the strategic investment arm of France Telecom. What Mobile Complete's founder and CEO, Faraz Syed, discovered more than a year ago while working as a developer for Brience, a San Francisco-based company building applications for the mobile WAP market, was that "you could build something but then you'd have to test it, and there was simply no mechanism for alleviating all of the bottlenecks in technology testing."

What Syed saw as a short-term problem was only going to get worse over time, gaining in complexity as "lots of applications and lots of devices and lots of platforms began to appear on the market." Moreover, as most developers, device manufacturers, and carriers know all too well, testing is actually the greatest technology expense incurred in launching any new application. Lower those costs and create higher quality applications for mobile devices and customers should beat a path to your door.

In Mobile Complete's case – even for an early stage startup – those customers are already pounding away. Having deployed its first product in Septem-

ber 2004, the company now claims at least 21 customers including AOL Mobile, Google, Swisscom Mobile, Ascend Mobile, Digital Bridges and others. "From a remote access perspective, if AOL wants to launch on Vodafone in Europe, it will need to first test on all of Vodafone's products. Yet, instead of sending consultants over there, it can now do it from its desktop computers in Virginia, connecting with live handsets in any of Vodafone's target networks," says Syed.

What's makes Mobile Complete's solution so unique is that you can do virtually anything on that phone that you could do manually if it were in the palm of your hand – including listening to audio, watching video, pressing any button, or seeing if it vibrates. This isn't just server side software where testing what works on each end of the network connection might not take into account sudden changes or disruptions in network architecture or transmissions. Mobile Complete can actually set up a variety of devices at different locations within a network and actively monitor and report in real-time the access, usage and continuous quality of an application. Moreover, the company can boast it supports 100 percent of the devices on the market today and can grab information off of any of those devices at full frame rate video of 30 frames per second.

Yet, what Mobile Complete represents for early stage investors is not just a technology solution but the concept of an entirely new market opportunity for a broad range of startups – startups that we affectionately call '5000-mile remote' types of companies. Or, companies with the ability to test, manage, develop, monitor, create, use or change any form of technology application from anywhere on the planet. This goes far beyond the basic notion of the Internet as a two-way interactive communications medium. Now, as Mobile Complete and other remote applications management startups emerge, early stage investing could play a pivotal role in the build-out of these technology solutions.

Take the FOTA

"Would Mobile Complete have existed 3 years ago? Probably not," says Nagraj Kashyap, investment manager for Qualcomm Ventures. "The explosion of wireless games alone requires more cost efficient

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testing given there's now more and more cross geography development than ever before." Yet, such cross geography development has spilled over into the creation of other markets and, in turn, the needs of those markets – far beyond video games.

Kashyap outlines an emerging area of technology where the concept of 'the 5000-mile remote' represents a brand new category of fundable startup companies helping to reshape and/or respond to the needs of the wireless industry: firmware-over-the-air updates (or FOTA for short.) "Given that the cell phone is now a consumer device and no longer just a phone, a lot of its features revolve around ever more complex and creative software applications. Yet, what happens if the phone breaks and the user doesn't know why? Up until now the consumer had few choices. They could bring it back to the store, call customer service, trigger warranty coverage on the phone, all of which wind up costing the carriers quite a bit of money in lost usage time," says Kashyap.

With FOTA updates being capable of fixing most problems on the fly, the across-the-board benefits of this type of new technology become obvious: the customer saves time, carriers or cell phone manufacturers save money on reduced customer service costs or warranty coverage, and the customer continues to use the phone – racking up those precious high margin minutes the service providers depend on for revenue. Thus, for the carriers, and in the future for some enterprise customers, FOTA updates will fall into the category of 'must have features' on any wireless phone or device.

No one understands this business proposition better than Gene Wang, CEO of Bitfone, a Laguna Niguel, CA-based private company, funded partly by Qualcomm Ventures that's focused purely on over-the-air technology solutions for mobile phones. Bitfone's '5000-mile remote' device management can offer firmware updates for mobile phones – specifically for operating systems, drivers, applications, application engines

and communications stacks. It can also offer remote diagnostics for wireless carriers to help test and repair customer's devices in the same way Symantec offers its technology solutions for PCs downloadable over broadband connections. "Where all of this comes in handy," says Wang, "is that up until now mobile phones have remained as static as toasters. Now, with new hardware capabilities and new software features, these devices can evolve over time as more and more new applications are loaded onto new phones."

It's that combination of advanced software driven features, advances in hardware capabilities (such as cameras or video phones, MP3 players or the like), and the buildout of more ubiquitous and robust broadband networks worldwide that now allow these "5000 mile remote" startups to bring their technologies to market in ways not possible 3-years, or even just one year ago. And the problems that companies such as Bitfone can address in the future will only grow larger. According to Wang, "The launch of the 3G network has caused all kinds of problems. NTT Docomo felt that at the very minimum it needed FOTA as an insurance policy against any future network problems. And that doesn't even get to the notion of security issues that must be detected and addressed, where viruses, worms and security breaches still need pioneering breakthroughs to address those problems."

Blending Wireless and Wireline

Yet, "5000-mile remote" solutions need not merely be limited to wireless technologies. Traverse Networks takes the concept of staying in touch anywhere/anytime and elevates it to a higher level of integration for all of us trying to keep track of far too many wireless and/or wireline voicemail and email accounts.

Traverse Networks, a Fremont, CA-based private company offers consumers and business professionals the ability to remotely control their communications from anywhere to anywhere. You can forward your home phone or office phone to a cell phone. Voice mail can be configured to look like email, describing who the message is from,

the length of the voice message, whether it should be prioritized into letting that specific caller through next time, or whether the system should turn voice mails into text messages. All communications, though invisible to the caller in how the emails or voicemails are being forwarded, can be remotely controlled, configured or prioritized by the end user at any time – a trick that sounds far easier to pull off than it actually is.

In fact, the reason why Traverse Networks and many of the other remote control companies are gaining traction now is simply because many of the technology advances and market dynamics that have evolved over time are finally intersecting to create market opportunities that only now warrant investment. According to Doug Brackbill, CEO of Traverse Networks, "handsets themselves had to first evolve to allow them to run all different kinds of visual applications and display them through much higher resolutions. High speed data networks had to evolve at the same time as when all of our communications devices made life too complex and burdensome to the point where they had lost their efficiency." Combine all of that with the simple technology advances of being capable, on the back end, of communicating with all different types of networks, capable of moving from PBX's to IP PBX's, and of connecting traditional legacy systems with next generation networking technologies and a company like Traverse Networks can finally see that the market opportunity ahead is about to become a reality.

Though all of the examples above approach the concept of the '5000-mile remote' in different ways, the theme for early investors remains the same. If defensible technology can help solve a real technology or business problem – as Mobile Complete or Bitfone or Traverse Networks do – by allowing end users ever greater ease of use of software applications even while connecting remotely, the future rewards should be there for those willing to place their bets now. At Labrador, we view the opportunities within '5000 mile remote' startups as clearly the next best thing to being there.

This is one in a series of monthly columns on seed and early stage investing that Labrador Ventures was selected to contribute to the *Venture Capital Journal*.

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