Open-Source Mobile Telephony Goes Legit

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While big business may be crowning open source as the king of server-based computing, most enterprise movers and shakers vehemently deny any such moves in telephony. Yet, open source in telecom is long past its debut and is, in fact, already in play in much of the Fortune 500. So why is open source a legitimate option in enterprise computing but bastardized so much in telephony?

 "Legacy telecommunications providers have spent a lot of marketing dollars on driving home the 'open source is bad' message," says Garrett Smith, director of marketing and business development at VoIP Supply. "Enterprises know that some of the public and the telecommunications community carry this world view and that their use of open-source telecommunications has the potential to cause 'damage.'"

Given the souring economy, hemorrhaging corporate bottom-lines and the panic in many a shareholder's eye, will this "as advertised" fear hold sway much longer?

Not bloody likely. "We're just seeing too many cases operating in open source for it not to go in the enterprise market," says Gerry Purdy, Ph.D., chief analyst of mobile and wireless at Frost & Sullivan.

Certainly, signs of an upcoming wave of open-source telephony adoption in the enterprise market are everywhere.

In fixed telephony, open-source projects are spreading like wildfire, the majority of them in VoIP form rushing to replace the expensive

and restrictive PBX systems. Most such projects are powered by or built upon Digium's Asterisk, the world's largest open-source telephony project, with 1.5 million downloads in 2008.

"Asterisk is free. We require no registration or anything so there is no concrete data on who's using Asterisk; but based on forums and other communications, my suspicion is that every Fortune 100 company is testing or using Asterisk in some way," says John Todd, open source community director at Digium.

Asterisk allows deployers to build new telephone systems or to gradually migrate existing systems to new technologies by blending traditional and VoIP services. Several members of the Asterisk community have reversed-engineered proprietary VoIP protocols by Cisco, Nortel and others, so that companies' existing (and expensive) phone sets and hardware work with Asterisk-based telephony projects. Such projects are then easily customizable so that phone calls and company data can merge to fingertip usefulness.

One pioneer in the open-source telephony space is Fonality which in 2008 recorded a record 3.3 million open-source commercial installations. "But the truth is that open source is only the first layer of our overall solution," explains Chris Lyman, Fonality's CEO. "We started with an [open-source] stack, using components such as Linux, Asterisk, Apache and Perl. But, on top of that, we layered 5 million lines of our own proprietary code."

"Because of the muddying waters, we have started to use the word 'open source-based' to be a more accurate description of what we and so many companies now do," he added.

Indeed, hybrid and blended solutions are beginning to emerge as a strong trend swell. It's also becoming more difficult to determine where one telephony open-source project ends and another begins.

"SIP [Session Initiation Protocol] and other key standard compatibility is already there in the Asterisk code, so the mobile

phone compatibility component already exists. A mobile phone can easily be an extension of the office system," explains Todd.

The mobile front itself is immersed in a sea change of open-source adoption. Among those changes are:

Funambol's mobile synchronization server and development platform for mobile applications which renders Blackberry-esque capabilities on commodity handsets.

Nokia's recent outright purchase of Symbian and its subsequent pledge to take the operating system open-source. The Nokia Symbian Foundation says it already has RIM-like capabilities to compete successfully for Blackberry users.

LiMo, the Linux-based mobile organization, is building for towards enterprise mobile phone use. It isn't open-source yet, but given that LiMO is Linux, the prevailing expectation is that it will be open-source soon.

Palm's PRE uses a Linux-based operating system called WebOS, which makes use of CSS, XHTML and JavaScript for broad compatibility with many applications.

Google's Android has a true open-source operating system for mobile devices and competes with Microsoft, Symbian and Qualcomm.

It previously could be argued that handset movement toward open source could amount to nothing in the end, given U.S. carriers' ironclad hold on which handsets and features actually make it to users' hands. But that argument dissolves in the face of Verizon's recent bid to open its cellular network to compatible and certified devices. That play potentially breaks the locked device environment permanently. "If Android gets certified on the Verizon network, any phone that runs Android could complete calls on Verizon," says Gary Zimmerman, director of product marketing at Avotus. "So the switch between carriers no longer requires a swap of equipment."

This disconnection from the previously heavily-guarded and closed domains of carriers denotes a major and important shift. In essence, the opening of carriers' systems enables enterprises to achieve true unified communications: The holy grail of all things corporate.

But that is not to say that mobile open source is ready for activate-and-play corporate use.

Rapidly converging technologies can frustrate enterprises when they try to reconcile service and product issues with their providers, points out John Klustner, senior vice president of Proudfoot Consulting, a 60-year-old consulting firm operating in 14 countries. "Their providers have not yet figured out how to support wireless, broadband and content issues simultaneously-not even for their major enterprise accounts," says Klustner.

Frost & Sullivan's Purdy says that most enterprises are covered in silos and chose their mobile telephony elements accordingly. For example, Windows Mobile works as an extension of Microsoft Exchange; that's good for Exchange users but it doesn't help the 20 million Novell GroupWise users or over 50 million IBM Lotus Notes users. RIM's Blackberry connects to multiple backends and appeals to both Lotus Notes and MS Exchange users. GoodLink, recently purchased by Motorola, has an advantage here, according to Purdy, as it works with multiple devices and networks, including polar opposites Lotus Notes and Microsoft Exchange.

Although by and large these are costly arrangements, says Purdy, the proprietary solutions do offer two key elements that open-source mobile does not: security and manageability. Open-source telephony will soon provide better security and manageability options, but probably as peripherals-which means that in the end, these open-source solutions will not be free. For example, Purdy says Nokia hopes to sell hardware and support to enterprises using its "free" open-source-based mobile service.

Still, the advantages of convergence in corporate communications will likely far outweigh the support and maintenance costs.

One prime example of the advantages posed by convergence via open-source mobile telephony is the Obama campaign's use of an open-source iPhone application. Supporters could download the app from the iTunes store, and organize and prioritize their contacts on their iPhone by key battleground states. This allowed supporters to make an immediate and effective impact and enabled the Obama campaign to keep a record of calls made (although no personal information was recorded). We all know the outcome of that presidential race, but the value of making supporters race against each other to rank highest on the list of number of calls made is nearly incalculable in terms of supporter morale and retention as well as voter turnout. All along the campaign trail, Obama's people had more real-time intelligence than any public poll could possibly provide and leveraged an army of supporters who often elected to share their friends' contact info with the campaign.

 "It speaks to the power of open source that iPhone, a closed proprietary system, has over 40 new open-source projects underway, and not all of them are apps," says Peter Vescuso, senior vice president of marketing at Black Duck Software. "All Software as a Service (SaaS) products and services are built on open source too, which is further proof that a paradigm shift is underway." Two other examples seem to point to the same conclusion: Microsoft's open-source project hosting website, CodePlex, and the prevailing interest in cloud computing fueled by Microsoft and other computing industry giants.

Without doubt, the cost savings are potentially huge to corporations desperately seeking to cut budgets. Mobile phone costs are one of the biggest line items. The lusted gains in efficiency achievable only thru

unified communications could also net considerable hard and soft cash savings.

"Enterprises are looking for ways to save money, says VoIP Supply's Smith. "And when you can save hundreds of thousands, even millions, in a time where every dollar matters, I believe that more enterprises will embrace open source." Smith also expects those who use open-source solution to become a little more forthcoming, since open-source adoption will be perceived as a business positive-especially to shareholders-demonstrating how you are decreasing costs without sacrificing quality, performance or functionality.

Analysts expect the enterprise market to embrace open source telephony by 2010.

There are a few brave CIOs out there willing to openly concur now with Smith's opinion on not only the draw of open source telephony, but the inherent responsibility to make the move posthaste.

"If you are a CIO and are not at least piloting open-source software, then you are failing in your responsibilities to provide a strategic roadmap for reducing costs and increasing functionality for your enterprise," says Russell Clarkson, CIO of Matrix Business Technologies, a provider of voice, data, and Internet services and a subsidiary of Platinum Equity.

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