

Neda Communications, Inc. and LEAP: One Alternative to WAP

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wap lash

BY MEG MCGINITY

It's funny how quickly the Internet's Next Big Thing becomes everybody's whipping boy. Wireless Application Protocol is the latest butterfly to wake up as a caterpillar. The reason for this reverse metamorphosis? The hype surrounding the protocol that was supposed to free us from our wires. "Part of my job is to manage the expectations more," said Scott Goldman, chief executive of the WAP Forum.

The politics of WAP

Among the more outspoken critics of WAP is Mohsen Banan, founder of the Free Protocols Foundation (www.freeprotocols.org) and president of Neda Communications (www.neda.com), which is developing an alternative to WAP dubbed Lightweight and Efficient Application Protocols (LEAP).

One of the biggest problems surrounding WAP, Banan said, is that it's "booby-trapped with patents." For example, a few months back, wireless company Geoworks (www.geoworks.com), a member of the WAP Forum, laid claim to a protocol patent that it asserts is integral to WAP. In April, Phone.com sued Geoworks, challenging the validity of its patents. In June, Geoworks countersued Phone.com. Starting July 1, Geoworks began seeking licensing fees of \$20,000 from large companies.

Banan and others, including Carl Zetie, director at consulting firm Giga Information Group, said there could be more companies like Geoworks lurking. They warned that developers could license WAP, only to be hit with licensing fees from the outstretched hands of dozens of companies laying claim to portions of the WAP formula.

But Scott Goldman, CEO of the WAP Forum, said such a scenario is unlikely. For one thing, he said, the WAP Forum agreement specifies that members will license any intellectual property on a fair, reasonable and nondiscriminatory basis. For another, he added, many companies have already dealt with patent issues in closed-door negotiations, instead of bringing the matter to court. Litigation is the last resort, Goldman said.

Banan also criticized the WAP Forum as being a rich man's club that locks smaller players out of WAP's benefits. Dues are \$27,500 for full members, who can run for the board, and \$7,500 for associate members, who can't be on the board. WAP Forum executives said that frequent meetings held in global locations eat into the dues, and public relations programs and development

programs take the rest. The group's books are open to members, Goldman said.

That's beside the point, Zetie said, because it's not the dues that most burden developers, but the process followed by the WAP Forum for licensing intellectual property: "Nothing about claims on potential royalty should be known to the participant and secret to the user. It harms the acceptability of WAP, because if everyone comes forward, the WAP solution starts to look very expensive."

Another possible political problem is the WAP Forum's dealings with other industry organizations to ensure that WAP meets standards and is compatible with technologies being developed elsewhere in the Internet community. The WAP Forum is working with the European Telecommunications Standards Institute (www.etsi.org), the Internet Engineering Task Force (www.ietf.org) and especially the World Wide Web Consortium (www.w3c.org).

But some say that crucial communications between the WAP Forum and the W3C are strained.

"My understanding is that the talks are not as friendly as we are led to believe," Creative Digital's Mann said. "If Web standards and WAP standards don't merge, then WAP will become a splinter group. In order to ensure its long-term survival, it needs major Web standards, or WAP will die on the vine."

Yet another sticking point for the protocol is its status among developers. Although they seem to be embracing WAP, Mann said, some developers still see the protocol as a hassle. With WAP, developers have to rewrite Web pages in order to make a site's content viewable on a mobile device.

"Depending on the nature of the site, this can be a trivial undertaking or extensive," Mann said.

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wap

zap

A new technology arises from some perceived need. It's developed. It's hyped. It's hyped some more. Then WHAM! It's smashed, gnashed and fed upon like some carcass at an early-bird buffet for vultures.

BY MEG MCGINITY

the technology that's getting its bones picked clean at the moment is Wireless Application Protocol. Like all protocols, WAP is an attempt to set a standard procedure for regulating how data is exchanged between digital devices - in this case, various portable devices with tiny screens, such as wireless phones, handheld computers and all those Internet appliances that are supposed to take over the world any day now.

But while WAP holds the promise of a more personal, portable, pocket version of the Internet, it has met a rising tide of criticism in recent months - and many in the wireless industry say the hostility is warranted.

David Levin, chief executive of U.K.-based handheld computer maker Psion, has publicly demanded "less hype, more delivery." David Rensin, former chief technology officer at mobile technologies developer Riverbed Technologies, declared: "WAP [as we know it] is dead." And Gerry Purdy, CEO of research and consulting group Mobile Insights, described WAP as "the DOS of wireless."

But that's not all. That level of criticism is matched by the design and development challenges WAP is facing.

First there's the issue of size. Users want their mobile phones to be sleek and small, but they also want mobile Internet access. The Lilliputian proportions of today's mobile devices require that WAP services work on a four- or eight-line monochrome screen. Plus, using the touch pads on wireless phones as keyboards is a major frustration. Ditto the six-button interfaces on many handheld computers.

Then there's the bandwidth issue: Slow transmissions plague today's wireless networks, yet any solution must maximize efficiency without adding to the weight or dimensions of the portable device. Just imagine trying to cram a visually loud Web site onto a slow mobile phone with a screen the size of a matchbox, and it becomes easy to understand why wireless Internet hasn't yet lived up to its screams.

Unquantified hype

As the main protocol for delivering Internet content to wireless devices, WAP is fighting the existing hardware in the marketplace, looking over its shoulder at other technologies being developed and, at the same time, dealing with patent issues that have been distracting.

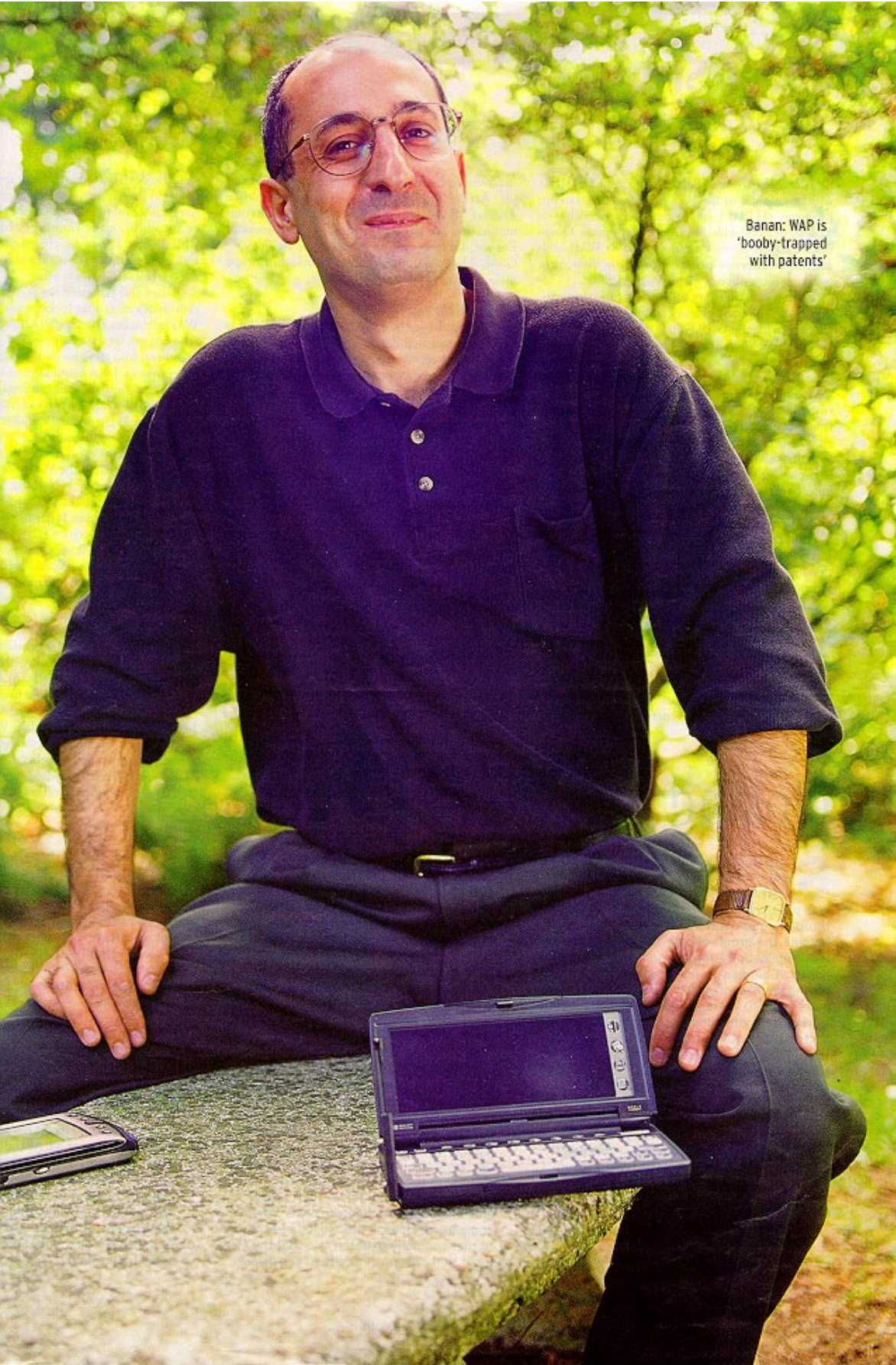
"The basic problem with the hardware is the user interfaces are pathetic, and the screens are too small," said Steve Mann, an

author and CEO of Creative Digital Publishing (www.cdpubs.com), a software development publishing firm. "It's almost impossible to write [anything] but very trivial applications without some selecting from a list of things. It makes for a limited experience."

What has made WAP the whipping boy of the wireless Web, a relatively new technology that began development in 1997, is the constant hyping of WAP-enabled services and phones by suppliers and providers.

One sign that a technology is overhyped is the lack of credible numbers. Trying to determine how many WAP phones actually exist may be the year's most frustrating practice for industry analysts. Tens of millions worldwide is one figure floating out there. Another estimate has 50 percent of all phones in the U.K. WAP-enabled. But many critics brush off such numbers. Just because a WAP-enabled phone was manufactured and shipped, they say, doesn't mean it's being used for wireless Internet access.

According to Chuck Parrish, executive vice president at Phone.com, an originator of WAP and vice chairman at the WAP Forum (www.wapforum.org), there are more than a million phones already in the marketplace equipped with Phone.com's >>



Banan: WAP is
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>> Handheld Device Markup Language (HDML), which is similar to the Web's HyperText Markup Language (HTML), but is designed specially for mobile devices with limited screen space. Once these HDML phones are upgraded to WAP, and carriers and service providers upgrade their own software, these phones will be WAP-enabled.

Parrish said there are 69 carriers now supporting WAP. A member survey is being planned this fall to provide the WAP Forum with an actual measure of penetration of WAP phones.

If concrete numbers for WAP phones are nebulous, there is at least agreement that the protocol has momentum. Wireless giants such as Motorola (www.mot.com), Nokia (www.nokia.com), Samsung (www.samsung.com) and Sony (www.sony.com) are all members of the WAP Forum. Some critics contend that these big-name partners are not aggressively deploying WAP, but want "to be involved in the inner circle" to hedge their bets and stay educated on all technologies related to what could be the next big thing. But others point to the fact that, collectively, the 500 or so companies that are members of the WAP Forum have trillions of dollars to throw at development - certainly enough support to give the technology at least a short-term thrust.

To some extent, one's view of WAP depends on where one lives. "Japan is WAP-negative. Europe is WAP-obsessed, and the United States is WAP-pessimistic," said Andrew Cole, head of wireless practice at Renaissance Strategy, a telecom consultancy in Boston.

One reason WAP hasn't caught hold in the U.S. is the disparate wireless network technologies deployed in North America. Code Division Multiple Access (CDMA), Time Division Multiple Access (TDMA) and global system for mobile communication are all used in the states, whereas in Europe, there is one predominant technology - GSM. The uniformity of the networks in Europe makes it easier to deploy WAP there.

The politics of WAP

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Still others insisted that, whatever its drawbacks and weaknesses, WAP is the sole entrée on the menu. "Right now WAP is the only game in town, and it has the support of a number of manufacturers," said Ivan Zasarsky, CTO at EC-Gate, a wireless application service provider.

Said Zetie: "Everyone is acknowledging that WAP is hard to write for. But the hard part isn't the markup

language, but designing services that work well on limited screens with limited input."

What's more, there is no killer app looming. Today's wireless Internet services are largely limited to stock quotes and sports scores, information that serves a very limited audience. Attracting a mass market will require applications appealing enough to persuade consumers to shell out the kinds of additional fees service providers are looking for.

"The biggest failure of WAP is the failure of imagination," Zetie said.

The WAP Forum's Goldman, however, disagreed, suggesting: "We may not see a killer application, but we will see thousands of manslaughter applications. The phone is already the killer app."

If critics and defenders agree on anything, it's that WAP is becoming a victim of its own hype. Outlandish promises of everything from delivery dates to features and power have left consumers confused by the claims and disappointed with the results.

"There is no comparison between the reality of WAP and the hype," Zetie said. "That's not to say that WAP is not real, but it's nowhere near as real as the hype made it out to be."

And, warned Patrik Fälström, applications area director at the IETF: "WAP people claim that WAP is access to the Internet. It is not. It is access to some data that is also accessible on the Web."

WAP providers can control which sites are available to users. For instance, if a user has a wireless phone, he may only be able to view Amazon.com, CNN.com and Yahoo! from his portable device, because those are the only content sites that hammered out a deal with the service provider. While this is a service provider issue, many consumers will inevitably blame WAP, which has been touted for general Internet access.

Adding to the equation is the fact that, while the WAP Forum deals with all these issues, competing technologies are being developed and deployed. Perhaps the biggest threat is Japan's I-mode, which is built on compact HTML. Supported by NTT DoCoMo (www.nttdocomo.co.jp) and already available to some 8 million users - by far the largest base of wireless data customers - I-mode has already generated a successful business model.

There's no reason I-mode couldn't be adapted to short messaging service (SMS) in Europe, or to personal communication service in the U.S., Mann said. The long shot is that I-mode would require hardware support from manufacturers, and while it is gaining some interest in Europe, it really hasn't found much support outside Japan.

Microsoft (www.microsoft.com) is another wildcard in the WAP stakes. While Microsoft is a member of the WAP Forum, experts said the company is also working on its own version of an HTML browser for wireless products. There have been reports that two other WAP Forum members, Motorola and Psion (www.pSION.com), are working on a next-generation operating system that promises to beat the experience of WAP.

And in the next three years, there will be more development on so-called third-generation or even 2.5G systems. 3G systems could improve speeds from today's 9,600 bits per second to 384 kilobits per second. While Goldman and WAP Forum members said these high-bandwidth pipes will still require WAP technology for efficient delivery to wireless devices, others said a newer version of HTML could bump WAP out of the limelight.

The much-ballyhooed 384-Kbps throughput of a next-gen network is a shared connection, so it's doubtful that users will enjoy even a quarter of that speed. But by the time the 3G networks are up and running, devices themselves will have evolved. Most are expected to have the capabilities and screen clarity of a handheld computer, but with voice capabilities like a phone. The change in the device screen may also alter the need for WAP.

"You'll have WAP remain an important way for cell phones to access the Internet for some time, but other ways will become more important, and WAP will eventually move to the sidelines," Renaissance Strategy's Cole predicted.

WAP next

So what must happen for WAP to survive? It has to be nimble and quick, both critics and supporters said. Today, WAP uses circuit-switched and SMS networks to deliver data. But technologies such as 3G and general packet radio service are peeking around the corner, and industry insiders said the WAP Forum needs to determine how WAP works with them.

"If the WAP Forum doesn't move quickly," said Rhonda Jobe, vice president of marketing at Geoworks, "it [WAP] may be relegated to the sidelines."

WAP will survive only if it can compete with upstart technologies for the attention and support of users.

"Everyone realizes that lots of advances will be made," said Dennis Patrick, president of America Online's wireless division. "We'll be supportive of the most consistent technology with the best of the mass market. We want it to be easy for the mass market." ▲