Web 2.0 for the real world

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(PhysOrg.com) -- European researchers working on some of the most fundamental issues facing the future internet paradigm have developed - in their spare time, no less - a mobile platform that brings some of the most powerful and compelling Web 2.0 services to the real, mobile world. “Engineers like to play with toys too,” says Daniele Miorandi, coordinator of the BIONETS project, explaining why their team developed its U-Hopper platform, an “opportunistic” communication platform for mobile phones.

BIONETS was set up to tackle some of the fundamental scientific and engineering issues facing the future internet, and its loose aliases the ‘network of things’, or the ‘internet of everything’. It will link everything from clothing to cars, kitchenware to entertainment systems - a Web cubed.

It is a big, fundamental problem of the sort that scientists and engineers love to get their teeth into. But as Miorandi says, engineers like to have fun, too, so they developed U-Hopper in their spare time, as it were.

Simple bit of fun

It was a simple proof of concept for the engineers, but this almost casual exercise has managed to bring some of the most compelling and powerful Web 2.0 functionality to the real world of mobile devices. It is the sort of innovation that would be worthy of a project in itself.

The prototypes are impressive and, with a little work, would be ready for

application in the real world very quickly. Venture capitalists have already expressed interest in the idea, as have telecoms networks, but BIONETS is very interested in hearing from other potential investors or partners, too.

“We have developed some IPRs around this technology and it works well in our demonstrator models, delivering real benefits for users, so we are very keen to see it go further,” Miorandi explains.

U-Hopper is a middleware platform supporting context-aware, opportunistic communications in a mobile environment.

There are many scenarios where this type of functionality could be a real winner.

For example, digital advertising screens could match the adverts they display to the user or users near the screen at that time. This could be a goldmine of an application, because it makes advertising extremely focused.

But since users must set up their preferences and opt in to the service, it means they only get to see advertisements that interest them. It is a win-win for both advertisers and consumers.

Further, the service could work at conferences, seminars or large-scale meetings between work colleagues, where participants could automatically exchange business cards with contacts or potential partners in areas they are interested in. Again, this provides an impressive level of seamless service that could really add value to conferences.

Powerful concept

How does it work? Users select their preferences and list their interests.

They then gather data on the move and share that information - with data exchanges based on affinity, or shared interests.

The system can be significantly improved by capturing data from the local environment or other users. For example, if you are looking for a new coat and you pass a shop with a sale on, you could receive an alert on your mobile.

Take the idea one step further. Your friend passes a store where snowboards are on sale. As a friend, he has access to your current purchasing interests, and his phone automatically alerts you to the sale across town.

This service does not exist, but it is an example of how the system can create powerful, compelling functions that deliver real value to users.

It works essentially like StumbleUpon, the internet service that matches users' interests and presents web pages, recommended by other users with similar interests, on demand. StumbleUpon is one of the most successful social bookmarking websites on the internet and which created a Web 2.0 sensation.

But U-Hopper is much more powerful because it applies the same paradigm to your interests in the real world, on a mobile device, that can serve you with relevant information wherever you find yourself.

So, will we see it in the real world or will it remain a lab toy?

Miorandi is keen to see it out there in the real world. "We have already used it at an exhibition, for targeted advertising, and it worked very well, but if we can find the right partner we would be able to make this a much bigger service," he reveals to ICT Results.

“Really, though, this is just a taste of what the future internet could mean.”

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This is the second of a two-part feature on BIONETS.
Part 1. Web cubed -- the network of everything

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