New Bluetooth application will let sport fans share experiences in real time

July 9 2009

Imagine watching a football match, seeing a foul and being able to immediately swap comments with friends who saw the same incident from the other side of the stadium.

By enabling mobiles to communicate with each other without sending messages via a network, new technology being developed will enable people in different parts of a stadium to share banter, photos and video clips instantly, reliably - and free of charge.

The application makes innovative use of short range communications which would even enable complete strangers to share information and experiences.

With Engineering and Physical Sciences Research Council (EPSRC) funding, researchers at the University of Glasgow have developed a series of computer programs that make so-called 'ad hoc networking' possible for any number of fans wanting to swap thoughts with each other at a live event.

The programs enable a fan's phone to connect with up to seven other users at the same time, without using mobile phone masts. They do this by harnessing Bluetooth, a well-established form of wireless networking commonly used to connect a headset to a phone, for example.

However, ad hoc networking has never been used before for direct phone-to-phone communication in real-world settings. The programs are

the first to enable recent advances in ad hoc networking to be applied to phone-based end-user applications. They simply have to be installed onto standard iPhones to make mobile communications faster and more direct.*

Currently it can be hard to get a mobile phone signal in a crowded sports stadium where there is a lot of interference. Even if a signal is obtained, messages can take a long time to be delivered to the recipient's mobile.

"Chat and banter need to be immediate," says Dr Matthew Chalmers, who is leading the project. "If a disputed goal is scored or a yellow card awarded, you want to hear what others have to say about it straight away, from their vantage point in the stadium. Direct mobile-to-mobile communication can make this possible."

"Our aim is to let fans share information in real time and build up banks of images and conversation clips that can provide a unique memento of the day," Matthew Chalmers adds. "It's really about extending a Social Networking philosophy to sports stadia and giving spectators a richer experience by making them feel better connected with each other."

If picked up by industry, the new technology could start reaching the market within the next year or two.

In the long-term, mobile-to-mobile communications could play an important role in assisting emergency healthcare, by allowing people at an accident scene to communicate with each other even in areas remote from a mobile phone mast.

The research work uniquely combines the expertise of computer scientists and sociologists. They are three months into a year long period of working with around 15 football fans. This involves studying how they use the technology in and around matches, and obtaining input from

them for changes and additions to the technology design.

Note:

* Ad hoc networking among large numbers of mobile phones is not believed to have been done before in any system beyond lab demos. Such networking has been used in high-end Personal Digital Assistants (PDAs) in many research prototypes, but not in commercial applications. In handheld game consoles, ad hoc networking has been used between pairs of Nintendo DS consoles, in the Nintendogs game.

Phones using the new computer programs can also collect messages and images swapped at a sports event and send them to Social Networking site Facebook when in range of a mobile phone mast. This lets fans in the stadium share some of their experience with friends who couldn't make it to the event, and also creates a lasting reminder of the event that can be shared easily. In addition, the details of long-term use can be observed and documented.

Source: Engineering and Physical Sciences Research Council (news : web)