City Bee to the rescue of those at risk in busy cities

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A recently launched project could make it easier to rescue vulnerable people lost in the urban jungle.

The CityBee project, funded by the EU's Sixth Framework Programme,is working on developing a low-cost wireless metropolitan network based on Location Based Services (LBS) wireless technology, which could be used for locating and providing useful services to lost citizens.

Each network will be specifically designed and tailored to meet the needs of vulnerable groups within society, such as children, the elderly and the disabled (both physically and mentally).

The proposed solution will use the IEEE 802.15.4 radio frequency standard (Zigbee), which provides a license-free radio frequency band at 2.4GHz and has sufficient capabilities for the development of a flexible, easily extendable, robust private wireless network.

The network is being designed to be flexible and scalable, to cover a variety of scenarios, from large metropolitan areas up to entire cities. The network will be divided into clusters and a multi-cluster network/transport layer will be implemented. The CityBee network will be formed by fixed and mobile devices and a Control Centre.

One of the partners in the project, Steve Lane, explains: 'One possible future application of such an infrastructure could be the communication

with vulnerable or at risk people who require specific care.

'For example Alzheimer's sufferers can have their freedom rights restricted because of the risk of finding themselves in unusual surroundings. This network infrastructure would enable them to continue with their lifestyle because of the security measures the technology creates and the flexibility of being able to wear smaller, smarter devices for monitoring and management purposes. The IEEE 802.15.4 offers the possibility to create complex networks with relatively low power consumption for the mobile nodes, and permits high distances between nodes compared to other wireless network standards, making it ideal for this type of patient monitoring.'

The project is banking on using the lower cost Zigbee technology, instead of other location and communication technologies, because of its belief that the benefits for installers, operators and users of the CityBee network will ensure as wide as possible an uptake.

The town council of Barcelona will be the first to commission and evaluate the CityBee network in the district of 'Nou Barris', where a public institution for impaired people is located.

Other potential applications for the technology include a vehicle tracking solution for small businesses, and a live information service which could offer such services as waiting times at bus and tram stops, urban guides and synchronising traffic light signals with the arrival emergency vehicles.

The project began on 1 October 2006 and will run for two years.

Source: CORDIS