A PERSONAL SECURITY SYSTEM IN THE NEW TELEPHONE NETWORKS

Many of the technologies that we now take for granted were first developed by tiny companies, largely unheard of at the time. In EUREKA project EU 235, two such companies have displayed adaptability and resourcefulness in modifying their original ideas so as to bring their innovative technology to a changing marketplace.

P-PHONE had as its original objective the production of a personal security system for the domestic market. P-Phone Control AB (PPC), the Swedish firm co-ordinating the project, will contribute a revolutionary security sensor, offering clear advantages over alternative devices.

A concept ahead of its time

Unlike other security devices, PPC's sensor does not detect movement. It registers the electrical conductivity of its environment, which the presence of an intruder inevitably increases. The human body is 70% fluid, and there is no way for a person entering the sensor's field to avoid detection.

The sensor is small enough to be invisibly installed in a domestic phone. Using very little current, and capable of detecting even a perfectly immobile intruder, the sensor will use the telephone system itself to relay this information to the outside world.

warning messages to other subscribers on the telephone network.

Lars Wern, P-Phone's project leader, has worked in the telecommunications industry since 1962. As long ago as 1978, when he founded his first company, he foresaw the rapid world-wide adoption of digital switchboards and exchanges, and recognised their potential as the platform for a personal security system. He recalls: "With so-called 'intercept' systems and existing phone lines, we thought we could reach a very broad market. The user would control the device via the normal telephone keypad.
The processing of sensor data would be done by means of the intercept system, so we could employ the existing computing power of the new digital exchanges.
The scheme would be simple, reliable, and inexpensive."

Applications In Corporate Communications

However, the partners found it necessary to adapt this technology to other applications, applications which would attract the financial backing they needed. The absolute reliability of the sensor, and its unique ability to operate over a precisely determined range, make it ideal for protecting art exhibits. Sensors have been installed in Sweden's National Gallery, where they have operated successfully for a number of years. Visitors can move freely in front of the exhibits, but as soon as they come closer than 20 centimetres an alarm is triggered.

The real strength of the P-PHONE system, however, is its ability to offer logging services as well as alarms. The partners are currently exploring more sophisticated applications in the field of corporate communications and security, where they hope that its far-reaching potential will be demonstrated. They are now collaborating with another Swedish firm, which imports and adapts American software designed to add voice response systems to office building switchboards. Staff in each office will be able to pre-define the parameters for a security alarm, as well as the actions to be triggered.

to provide the Swedish government with a pilot system for a building in Stockholm in 1993.

Mr Wern still sees the project's recent success principally as a gateway to the domestic market. But he acknowledges that the original concept was ahead of its time: "We have had to wait for the market itself to change. The new GSM telephones, currently being launched in Sweden and across Europe, are expected to win a broad market. They will open the way for the P-Phone personal security system. Our intention is to license the system for installation in the new digital telephone networks in Europe, the USA, and around the world."

Project Profile

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