



**Press release  
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## **THE HMI MARKET - REVISED AND UPDATED BY HAND-HELD TERMINALS ?**

There are numerous SCADA products available on the market today that can be used in a vast array of applications. These go as far as being digital control systems, with full alarm and event handling and data archiving and analysis, which provide complete factory automation systems by fully integrating with the enterprise IT systems. But don't forget that a SCADA can also be a simple console based graphic interface, which gives the operator the ability to view and set the data, situated directly next to, or integrated into, a machine.

Normally, in the latter case, users simply ask each machine builder to supply a console or local control panel with each machine so that the operators can have access to the machine's data on a screen situated at that machine. The main criteria of these types of applications is the cost. The price of the equipment and the software must be realistic and the integration must be simple and quick.

With the arrival on the market of cost effective hand-held terminal technology, there now exists an approach to these applications that is both more modern and above all, more economic.

For example, most individuals these days have a mobile telephone that allows them to access, e.g. train timetables and even to book a ticket electronically whilst they are out and about. This avoids them looking for a alternative automatic unit from which they can access the data, that is actually working and is not already in use by someone else. The cost of such mobile equipment is clearly more economic and generally offers a better service, since it is not necessary to install such equipment in as many places and then to individually maintain all of these installations.

It is the same case for integrated operator consoles used on specialist machines or on dedicated desktops. The users and the integrators have to define a physical place to put the console which is based upon the best fit in terms of ergonomics and available space. They have to configure and maintain these systems one by one each time they require an evolution or when there is a breakdown. The major concern of the industrial end users is to reduce the complexity of these systems, and their cost of ownership, investment and that of maintenance.

Why buy, install and maintain 10 terminals at 10 " specific " control or monitoring points around the shopfloor if only 3 operators can use them at any one time ?

The answer is to " equip yourselves with 3 terminals " !

But with hand-held wireless terminals that the operator can carry around the shopfloor with him, and which allow him to monitor and control the process from anywhere with flexibility and the maximum efficiency.

Indeed, PDA (Personal Digital Assistant) PocketPC computers or laptops/tablets/notebooks (TabletPC) are today capable of running SCADA applications. These applications are connected to the data acquisition systems servers using wireless ethernet standards, such as wifi 11/55 Mbits or 802.11b/a (usable up to 300 m) or through a 2 Mbits Bluetooth network (usable up to 10m). Installing wireless networks using broadcast stations and repeaters is often more economic than laying cables in either new cable ducts or by trying to lay them in existing cable trays that are already full to their capacity.

Besides the economic aspects, putting fixed and mobile terminals onto the same networks as the company's office and industrial servers is becoming much easier and quicker, as PocketPCs, Laptops and Tablets all now come with wireless ethernet 802.11 connections integrated as standard.

Whenever Wireless Ethernet is mentioned, the question on everyone's lips is how confidential is the information and how secure is the operation of the system, especially when it is a critical SCADA application that we are considering.



It's necessary to understand that the solutions discussed here do have much more protection compared with the GSM networks that are used for standard mobile phones. Indeed, the reassurance comes from several things :

- Wireless network technology :

The 802.11 wireless network adapters encrypt all of the data exchanges in 128 bit format

- IT network technology :

The network is based upon TCP/IP that has filtering and integrated security features

- Windows Technology / Operating System

The access to the server's domain is protected by login.

- SCADA Technology :

The SCADA application also contains it's own login, held as part of the configuration which allows access to the control and monitoring features within the application.

Furthermore, if the company already has a SCADA system in the central control room, it is of greater benefit, since the existing application can be used as, or as a basis for, the application on the web server (providing the existing SCADA product allows this) so that you can take immediate advantage of the existing proven graphical views, etc.. Thus avoiding having to develop the same configurations again using the tools that are shipped with the shopfloor terminals, which themselves also have to be mastered, then having to commission these, and also having to repeat this two-fold process every time some redevelopment work is necessary. So, the integrator can now just simply install one global application and there is no need for the end user to neither master nor maintain any other software in order to have a homogeneous Human Computer Interface.

When further machines are acquired by the end user, it is necessary only to ask the machine builder to supply the machines with its PLC complete with the appropriate communications protocol (an open protocol like Modbus TCP/IP for example also allows freedom in the choice of PLC manufacturer) so that they can be connected to a universal network. It is then only necessary to integrate this new data into the shopfloor or factory SCADA system.

In conclusion, beyond the obvious functions it offers, a SCADA system that is based upon new technologies brings some different viewpoints to the market from which more simple modern ways of working can be based, which lead to greater gains in productivity and a reduction in overheads.

## About Europ Supervision

Europ Supervision, the technical support and sales organisation, and Codra, the product development organisation have combined to form a group of around 60 people, with a turnover of 8 million Euros and its own capital of 3 million Euros. The group is now the number one producer of SCADA Software in France and one of the leaders within the European market.

Panorama has been developed since 1987 by SCADA specialists to allow technicians, process engineers and integrators to configure and use their own applications running under the Windows environment. Panorama offers a set of functions essential for monitoring and controlling processes in order to provide an optimum working environment for the operators.

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