

RemVRS

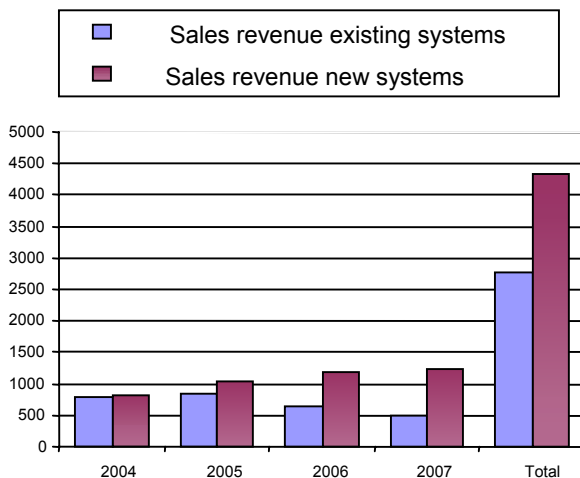
Remote surveillance of vapour recovery system for fuel dispensers

Malte Products AB has developed a wireless system for remote surveillance of fuel handling information for petrol stations. The system runs the applications for Price signs and Tank Inventory. The new system provides a high flexibility by the means of Bluetooth communication with the store computer or a handheld computer (PDA). Or, as in the case of no station computer, the system is remotely accessible over GSM. An embedded web-server provides the Internet/intranet communication facilities.

Malte Products AB has been developing and producing equipment for fuel pumps since 1909. The company has a first-class know-how of these products and techniques and makes big efforts to provide the market with unique products in this area. As a leading European company for vapour recovery fuel systems they are a major supplier to oil companies that due to legislation (or voluntarily) are obliged to enhance their equipment with vapour recovery to improve the environment.

Malte Products AB	
Employees	174
Turnover	25,7 M€
Industrial sector	Distributing systems for petrol industry
Technologies Introduced	Embedded Internet, Linux, TCP/IP, GPS and Bluetooth

ECONOMIC BENEFITS



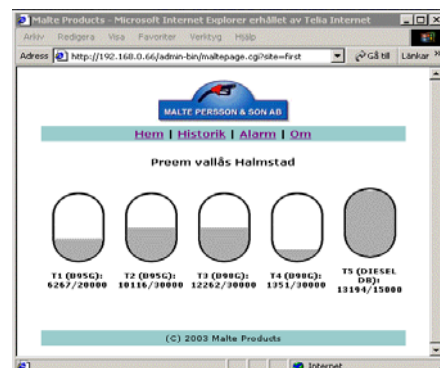
The new RemVRS will enable the company to provide a complete "Remote access service package" for petrol stations. The estimated sales contribution from the new system is approx 1M€ over a four year period.

- 1,6 m€ increase in sales revenue over a 4 year period
- 24 months payback period
- Return of investment of approx 200%

PRODUCT IMPROVEMENTS

15-20% of the petrol stations today have an electronic tank gauging system. Malte Products AB is supplying the stations with systems, and the number is increasing. Current systems up to now are only wire connected. Civil work and cabling is costly and this share of the total installation cost is considerable. The companies in this project have showed that they can:

- Via Bluetooth get data exchange between the store computer and the tank gauging system.
- Via Bluetooth get contents data from tank gauging system to handheld computer (PDA).
- Via GSM get contents data from tank gauging system to external computer.



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How to go about it

TECHNICAL CHOICE OPTIONS

Today fuel equipment is connected by wire only for business transactions. It's seldom connected to network regarding supervision of system, and certainly not wireless.

Bluetooth is the fastest evolving technology for the moment, and it offers a high quality connection at an affordable price. To provide a communication facility of the system, the TCP/IP and Internet technologies were chosen, as they are becoming the world wide standard for communication. The use of Linux ensured a reliable and well supported OS independent of microprocessor choice. Main decision factors were:

- TCP/IP for its wide acceptance and standard solutions
- Linux for low cost, easy TCP/IP implementation and embedded Internet facilities
- Bluetooth for communication with standard devices such as PDA
- GSM for its wide coverage and established technology

TECHNICAL IMPLEMENTATION

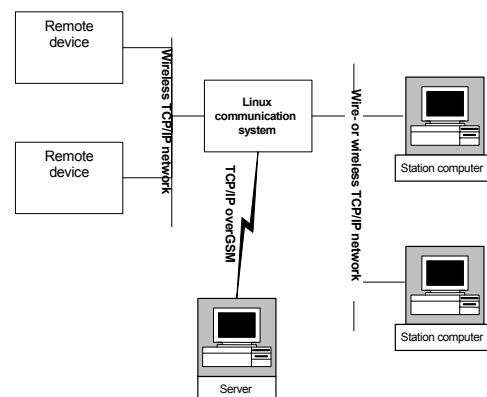
The system is composed of off-the-shelf components:

Sensor unit: Process I/O module equipped with Bluetooth link

Main communication unit: Embedded system running Embedded Linux with TCP/IP and Bluetooth communication functionality. The system has a flexible process I/O and an embedded web-server allowing process values to be presented on a web site accessible over the Internet. The unit will have the possibility to communicate over GSM for remote access in the case that no station computer is available.

Station computer is a PC communicating with a main communication unit over a Bluetooth link or over Ethernet. The station computer can be connected to the Internet via a dial up connection.

The remote computer is principally any computer on the intranet/Internet. An oil company, a fuel depot or a service company hosts the intranet.



BENEFITING FROM BEST PRACTICE

EC IST Programmes aim to improve the competitiveness of European enterprises by promoting the adoption of under deployed or emerging technologies. This will enable these enterprises to increase their competitiveness and enhance their economic growth. The demonstrator described here is one example of the many Best Practice projects undertaken. Further details of projects covering a wide span of applications, industry sectors and technologies can be found on www.euroines.com

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