EFFECTIVE CUSTOMER SOLUTIONS

A leading supplier of water treatment products for industrial applications has a team of 25 technicians that provide a comprehensive water treatment program for maintenance of water in large heating and cooling systems.

While on site, technicians perform several tests to grade the condition of water circulating through the system. Tests include measurement of pH, alkalinity, hardness, etc., along with the concentrations of corrosion inhibitors, glycols and other treatment products.

In addition, technicians maintain the working condition of biocide and chemical feeders and other controls.

Test results and service work were recorded on a special multipart form and submitted to head office where some data components were entered into a custom database application. A reporting application at head office produced various customer reports used for preventative and predictive maintenance.

Challenge ...

- Turn around time was too slow. For example, a customer with a glycol problem could experience frozen pipes before the technician's observations worked their way through the system and a problem letter was dispatched.
- Errors or incomplete data caused by poor handwriting and rushed data entry could potentially result in poor customer service.
- Costs associated with data entry, filing and long term storage of paper were excessive.
- Not all data on the form was entered into the database so it was effectively lost once the forms were filed.
- Competitors were becoming more sophisticated and hi-tech.
- The customer profile sheets used by technicians were often out of date.

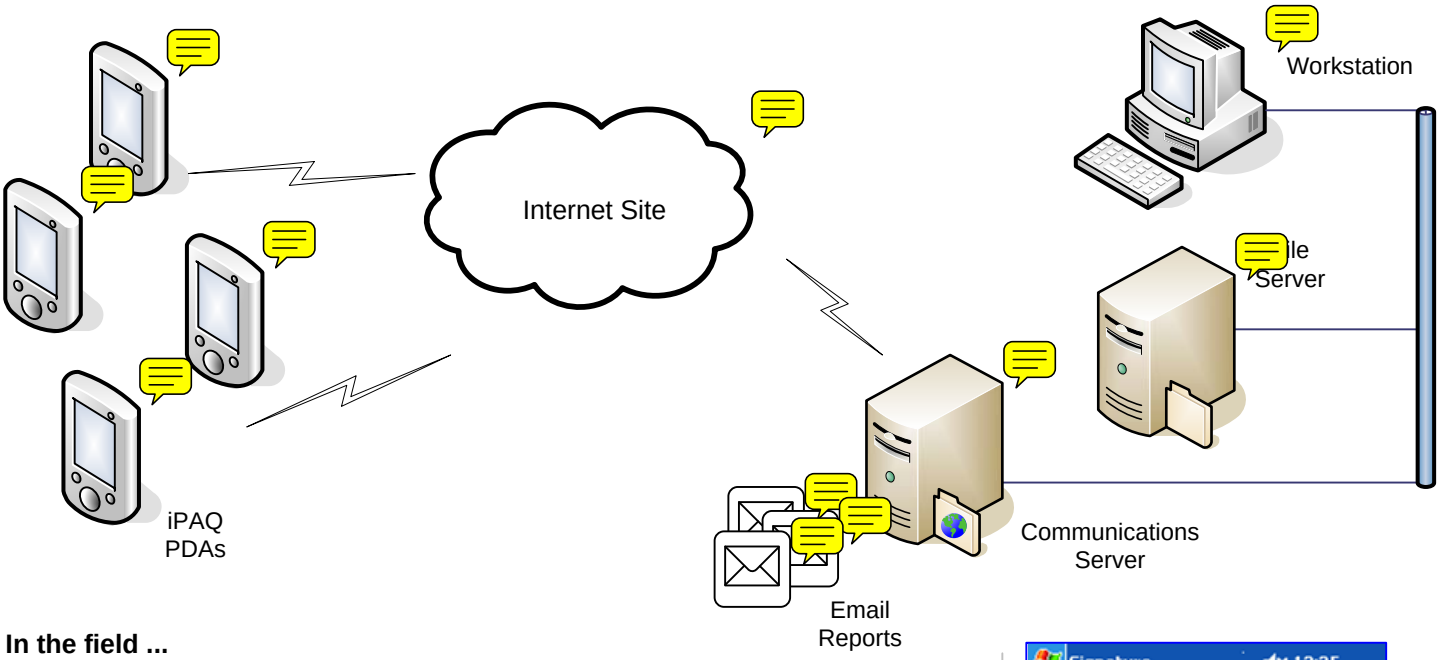
Solution ...

- A database application was developed for the Pocket PC to replace the paper-based data entry form.
- Technicians collect data on site and transmit it to head office each day, where it automatically updates the master database.
- Correspondence can now be sent via email instead of Canada Post.
- Updated customer profiles and broadcast messages are automatically downloaded to the technicians each day.

Results ...

- Problem letters are dispatched within 24 hours instead of up to several days after a call.
- Administrative staff has significantly less work due to reduced time entering data, filing, etc.
- All collected data is now saved in the main database and is available for reports and analysis.
- New system creates customer confidence and is well received by customers and staff.
- Customer service has improved measurably.

WWW.ELMCOMPUTERS.COM
ELM Computer Systems Inc. || 502 Gordon Baker Road || North York, Ontario M2H 3B4 Phone: (416) 495-1624 Fax: (416) 495-0044



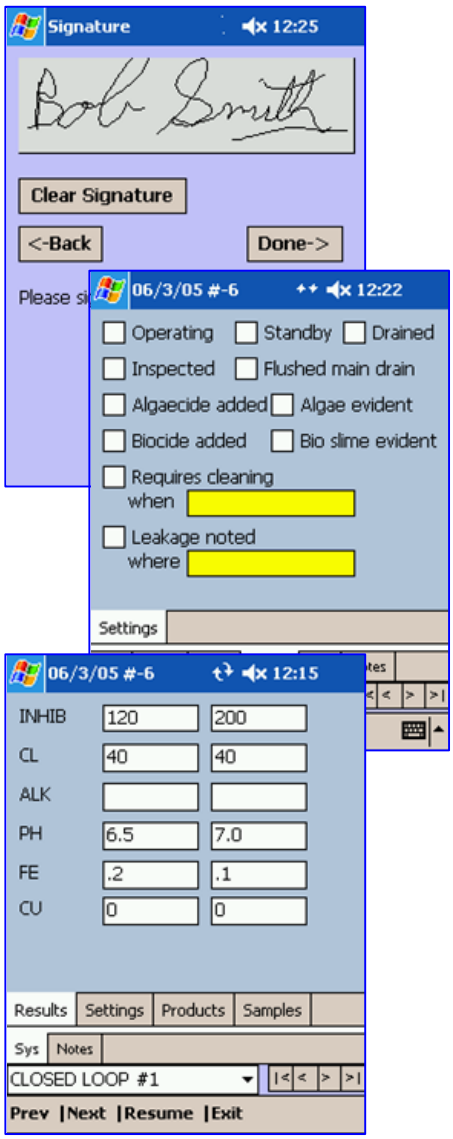
In the field ...

Each technician is assigned the following:

HP iPAQ 2410 with Windows Pocket PC 2003
HP 56K Compact Flash modem

128MB SD memory card for redundant data backup and quick recovery

Service representatives enter testing and inspection results on the electronic form on the iPAQ. At the end of each call, data is backed up to a memory card for added security. At the end of each working day the technician plugs into a phone line and synchronizes with head office. The synchronization process takes less than 5 minutes.



Data collected during the day is compressed and is quickly uploaded to a FTP server on the Internet. At the same time any updated customer survey data that has been prepared for the technician's service area is downloaded. If a new version of the software is available it will be automatically downloaded and installed.

Back at the office ...

A dedicated communications server polls the FTP site every thirty minutes to check for new service data. This data is imported into the database on the file server where it is immediately available for analysis by the service managers.

Copies of the service reports are emailed as a PDF file or printed and mailed depending on the customers' preferences.

Changes made to customer service profiles are uploaded to the FTP transfer site every afternoon so they can be downloaded to the technicians' PDAs.

Data Integrity assured ...

Automatic backups are performed at critical points in the communications path to ensure that data is not lost due to an Internet problem. Sophisticated algorithms built into the communications routines ensure that data is not duplicated or lost.