# Remote Server Administration via Cellphone

Peter Sinclair, Michael Partridge & Dr Samuel Mann
Otago Polytechnic
Dunedin, New Zealand
smann@tekotago.ac.nz

## Aim Of Project

PowerNet is an Invercargill based company, responsible for managing the power lines, substations and line charges for Southland (http://www.powernet.co.nz/). The computer network run by the company is crucial to the ongoing supply of power to 47,071 customers. On several sites, NT servers provide maintenance control, GIS, and power supply management, along with the usual functions of a large organisation. It is essential that their computer network is well monitored to ensure any problems are actioned immediately.

The authors of this paper are undertaking a project whose aim is to allow users to remotely manage a computer using a WAP phone. Initially the application is designed for use on a Windows NT 4.0 and Windows 2000 computers. The user will be able to perform basic administration tasks such as;

- View computers running on a network.
- Shutdown and restart computers.
- View services running on a computer and shut-down/ restart services.
- View NT event log and performance counters.
- Receive alerts generated from the client computers.
- Monitoring of any electronic equipment including the substations and transformers if required.

## Technical Description

The Windows Scripting Host (WSH) or Perl Win32 scripting is being used as a method of interacting with computers via WAP. Windows 98, NT 4.0 and Windows 2000 have the WSH engine allowing scripts to be written with either VB or Java script. Perl scripting can be integrated by installing Perl on the network servers and/ or any other client machines. From these scripts functions such as monitoring the NT event log, stopping and restarting services and rebooting machines should be possible.

The computers being monitored run NT 4.0 or Windows 200 and are connected to a web server that holds the WML files and scripts. This web server will be able to serve the WML cards to the WAP phone if requested by the network administrator or if a pre-determined alert is generated from a computer being monitored.

It is intended to implement the WAP Push Protocol to enable alerts generated by the client computer to be automatically sent to the WAP phone. Embedded in the push message will be a URL enabling the user to obtain further information on the alert generated.

As with any type of network administration security concerns are paramount and will be an important part of the project. WAP has a security layer as part of the protocol stack and we are investigating the use of RSA encryption to further enhance security. New generation mobile phones have built-in authentication ensuring that information is being sent from a trusted source.

## References

Powernet (2001) PowerNet EMS-WASP computer project goes ahead Across the lines 95: May 2001