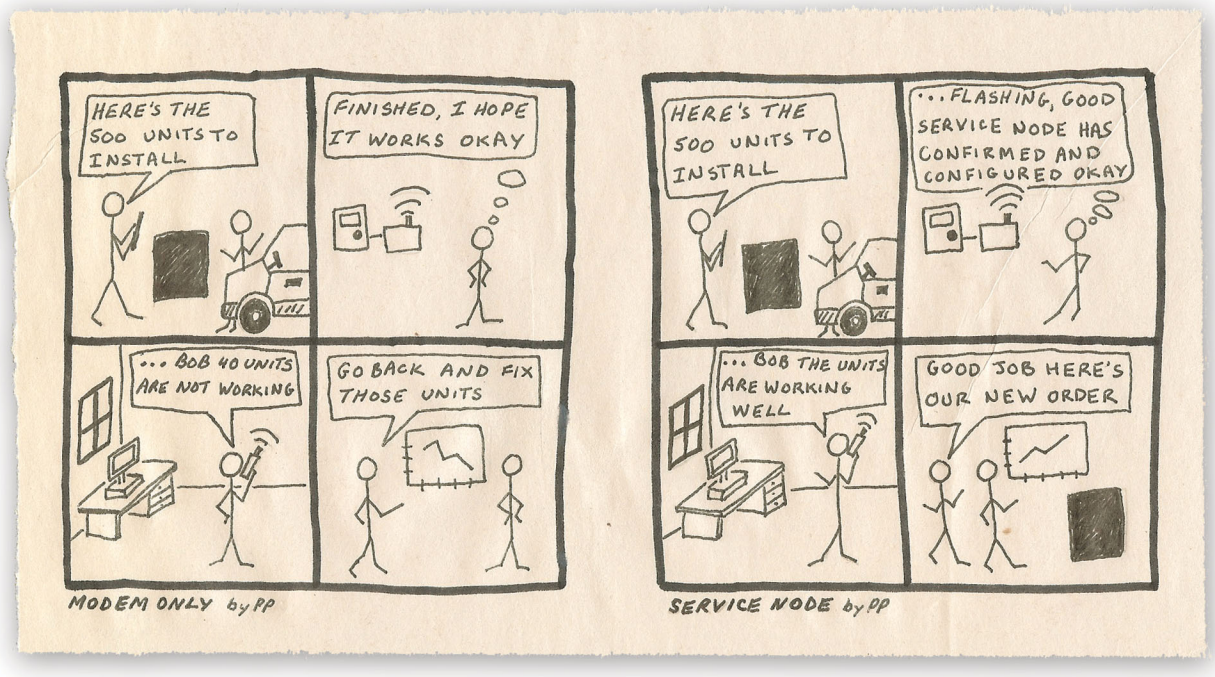
ETM Service Node

Communications Maintenance and Installation tool for GPRS/UMTS M2M Deployments



Improve Communication Reliability

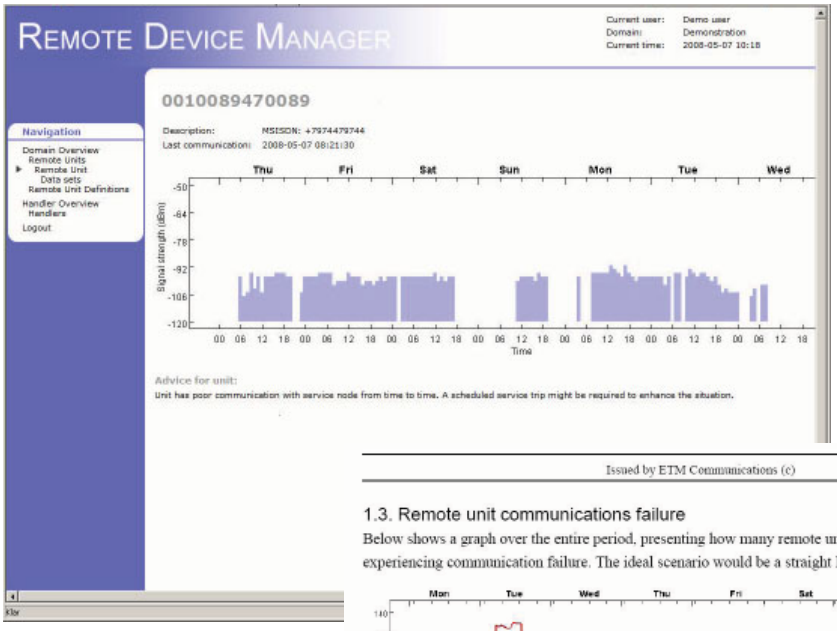
Lower Installation Costs

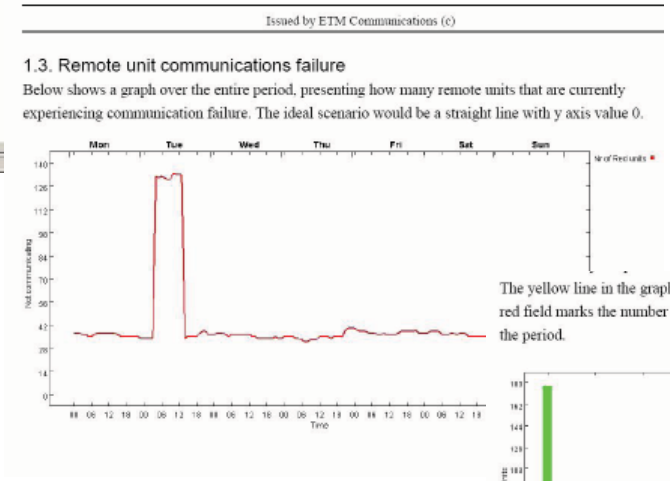
Reduce Maintenance Costs

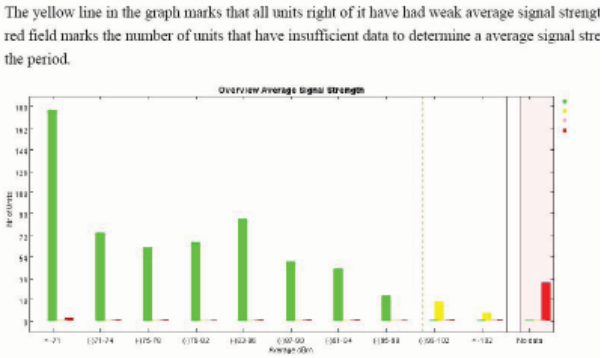
What is the ETM Service Node?

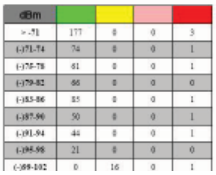
The ETM Service Node is an application designed to enhance communications reliability or operate as a data retrieval system for M2M applications using GSM/GPRS/UMTS technologies.
The key functions of service node are;

- Confirmation of correct installation
- Monitoring Communication Status and reporting by exception
- Re-configuring units in the field “over the air”
- Data retrieval/forwarding









User Interface & Reports

Users can access the system through the Remote Device Manager’s web interface, with each user having a unique username and password. There are two levels of users. Normal users, that use the system as a tool to attain information relating to overall communications status, or details of specific remote units as required. Administrators, that have the right to define; new remote units, configuration settings and parameters.

In addition to the Web interface the users can have specific reports provided by email/FTP which summarise overall performance and/or provide details relating to units which have unsatisfactory communications status.

How it Works

The communications integrity of each unit is continuously monitored using data sent to the Service Node. If a unit has issue such as poor signal strength, the problem may be attended to during a planned service visit, thereby avoiding critical data being lost.

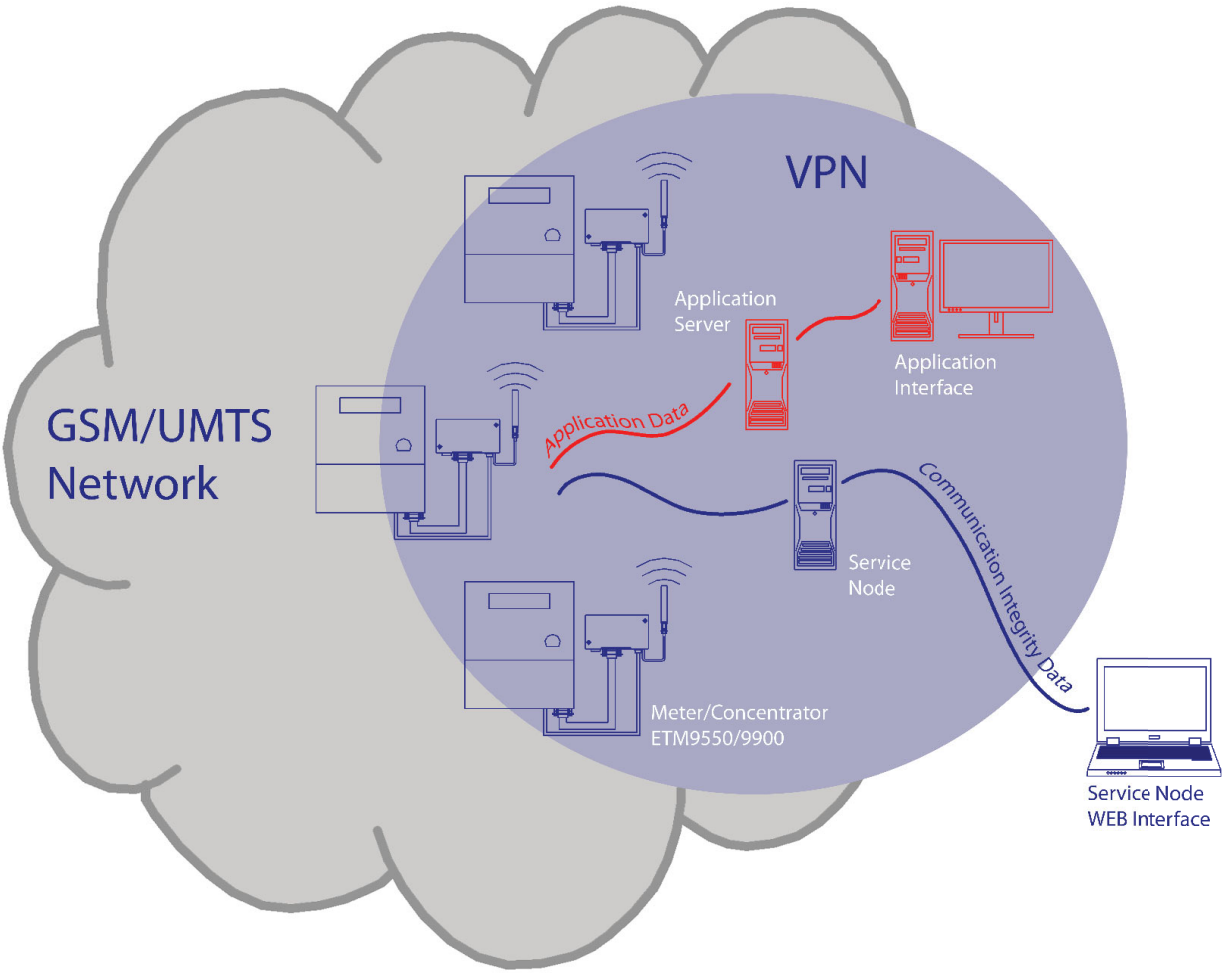
GPRS allows this functionality to operate effectively by enabling frequent (up to once per hour) transmission of communications integrity data to the Service Node cost effectively.

Installation

At installation Service Node can load the correct configuration and confirm adequate signal strength

Re-configuration

Should remote units require reconfiguration Service Node can send and confirm re-configuration of nominated remote units

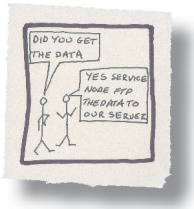


Monitoring

Service Node monitors the communications status of remote units and provides; condition and exception reports, plus alarms and repair suggestions

Data Retrieval/Forwarding

The service node can act as a data retrieval service, receiving data from the remote units and forwarding (using FTP) the data to a designated IP address



ETM Service Node – System Requirements

Communications Methods

The service node supports several ways of communicating with the remote units, where the most cost-efficient method is used for each particular task.

- TCP/IP
- UDP/IP
- GSM data call
- SMS

Terminal

The service node can be applied to many GPRS &/or UMTS devices however, we recommend the ETM9550 or ETM9900 terminal.

The ETM9550 or ETM9900 terminals are able to “push” data to multiple IP addresses allowing one path for data and another to be directed to the service node to allow for the flow of communications integrity information.

SIM

Ideally any SIM utlised would be provisioned for SMS, CSD and IP communications. A SIM residing within a VPN with a fixed IP address provides the greatest flexibility in relation to two way communications which is required to allow for reconfiguration. Note that reconfiguration can be achieved without a fixed IP SIM by updating the unit once the terminal has delivered its data and the socket remains open.

Service Node Installation

The service node may be set up in a number of ways depending on the application. A VPN can be used but is not required and hardware may vary from a single server through to clusters of servers depending on redundancy and load balancing requirements.

ETM can host the Service Node or it can be installed within the clients infrastructure.

ETM9550 2G GSM/GPRS Modem

- Dual-Band GSM/GPRS Connectivity
- TCP/IP Stack
- Standard RS232 9DBF serial port
- 6v to 36v power input on RJ12 connector
- 7 x configurable I/O’s on RJ45 connector
- 1 x pulse counter
- FME M antenna connector
- Sleep Mode for reduced power consumption
- User configurable via ETM9550 configuration tool
- -20°C to +55°C operating
- temperature range
- Short Messages (SMS)
- Circuit Switch Data (CSD)

ETM9900 3G UMTS/HSDPA Modem

- 3G (Tri-band HSDPA/UMTS) Connectivity
- TCP/IP Stack
- Standard RS232 9DF serial port
- 6v to 36v power input on RJ12 connector
- 4 x configurable I/O’s on RJ45 connector
- 1 x pulse counter
- SMA M antenna connector
- Sleep Mode for reduced power consumption
- User configurable via ETM9900 configuration tool

ETM Matteknik AB
Ekbacksvägen 32
SE-168 69 Bromma
Sweden
Tel: +46 (0)8 25 28 75
Fax: +46 (0)8 80 11 10
Email: etm@etm.se
Web: www.etm.se

ETM Communications AB
Nioörtsvägen 28 A
SE-126 32 Hägersten
Sweden
Tel: +46 (0)8 5490 2070
Fax: +46 (0)8 5490 2060
Email: info@etmc.se
Web: www.etmc.se

ETM Pacific Pty Ltd
LGF, 275 Alfred Street
North Sydney NSW 2060
Australia
Tel: +61 (0)2 9956 7377
Fax: +61 (0)2 9956 5791
Email: info@etmpacific.com.au
Web: www.etmpacific.com.au