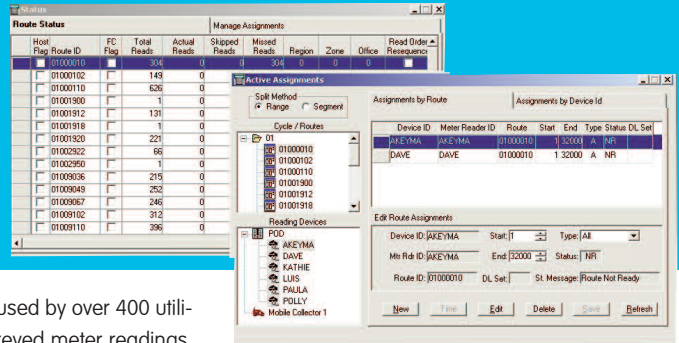


MV-RS™ Meter Reading System



Optical Probing. As an industry leader, UTS' data acquisition capabilities are used by over 400 utilities world-wide. In addition to providing a standard, easy-to-use system for keyed meter readings, UTS has made a commitment to the industry to support protocols for all viable electronic metering devices that are developed by manufacturers of electric, gas, and water metering hardware. The MV-RS probing software was designed to retrieve data with minimal meter reader intervention. The following features are supported by the system:

- partial reads of load profile data (read only the data stored since the last reading)
- automatic protocol detection for an unknown field device
- totally integrated with MV-90 for load profile data processing

OMR/AMR Solutions. The MV-RS System supports the use of Itron's RF technology for Off-Site Meter Reading (OMR), Mobile Automatic Meter Reading (MAMR) and Automatic Meter Reading (AMR). With support for OMR, UTS combines radio technology with DOS based handheld computers to remotely interrogate high cost read meters. The MV-RS Open Communication Interface provides support for Itron's Mobile AMR to collect meter data via radio hardware mounted in a passing vehicle. Along with Itron's Fixed Network AMR communication solutions, this takes advantage of today's ever changing AMR technologies.

Network Architecture. The MV-RS System can be utilized on a single PC or a Utility's local or wide area network. The Network System is based on a client-server network architecture and supports centralized data collection and/or distributed operation from multiple districts or service centers. While avoiding the use of network specific functions, the MV-RS System takes advantage of standard network functionality such as print queues, security, multi-user data base support and the OSI communications reference model.

The MV-RS software operates in a distributed processing mode. The software operates simultaneously on multiple networked PCs to form a multi-user and multi-tasking route management system.

Utilities are now faced with operating in a highly competitive environment which requires new innovative systems to expand traditional product and service offerings while enhancing overall customer service. The MV-RS™ Meter Reading System developed by UTS and offered by Elster AMCO Water/Itron supports water, electric and gas meter reading technologies in one integrated route management system. Specifically, the MV-RS system supports keyed meter readings, water probing, optical probing of electronic metering devices, and the use of Itron's radio frequency (RF) meter reading with the latest in software technology operating on the new generation of Itron DOS based handheld computers.

The Windows 95/NT based MV-RS System utilizes UTS' proven multi-vendor capabilities on a local or wide area network platform to meet the route management and data acquisition requirements of the utility industry today and in the future.



PROVEN MULTI-VENDOR PROBING TECHNOLOGY

Water Probing. UTS' multi-vendor capabilities have been expanded to include the probing requirements of the water utility industry. The MV-RS System supports universal and manufacturer specific water probes which incorporate a wide range of remote meter reading protocols and technologies.

Open Communication Interfaces.

Communications with handheld computers is supported by direct connect and remote access through modems with UTS developed communication software. The MV-RS System supports both out-bound communications initiated from a workstation and in-bound communications initiated from the handheld computer. High performance transfer of data between the handheld computers and the workstation PC is attained through the use of compression routines at both the PC and handheld level.

Additionally, the MV-RS System has the flexibility to be easily enhanced to utilize existing Utility-owned communication networks. Unnecessary and on-going telephone toll charges can be eliminated by supporting a Utility's communication networks and protocols like TCP/IP.

ADVANTAGES FOR THE FUTURE

Support for New Metering Technologies.

UTS plans to continue its unmatched support for new metering technologies including new types of registers and meters, new metering quantities, and communication advances.

Adaptable System Configuration. Only buy today what you need today. As your data acquisition requirements change, the MV-RS System will grow with you by simply adding additional handheld computers, upgrading to a Network platform, or adding additional processors or workstations to an already existing Network.

Support for New DOS Based Handhelds. The MV-RS System utilizes standard hardware which enables the Utility to select the handheld unit that meets its requirements including maintenance and support. Also, the Utility has the flexibility to take advantage of new hardware technology by upgrading or replacing handheld units over time without having to purchase new meter reading software.

MV-RS for Windows. A Windows 95/NT based application to meet the ever changing route management requirements of meter reading operations of the future. Key system features including manage route assignments for permanent and contract meter readers, view system-wide route status information, and schedule standard and utility defined reports are presented in an interactive graphical user interface (GUI).

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