

to manage and reduce the voltage delivered to SCE's customers through intelligent switching of capacitor banks located throughout SCE's electrical distribution system.

In operation, voltage data collected at customer locations is transmitted over the radio network to computers located at substations, which in turn transmit the necessary switching instructions back over the radio network. The resulting voltage reduction will reduce the amount of fuel required to generate electricity, reduce pollution, and reduce the cost of electricity to rate payers. The voltage reduction will also extend the life of customer equipment.

Other programs supported by SCE's Part 15 wireless data communications network include remote activation of electrical switches and outage detection, both of which will reduce the length of electrical outages.

Networks are being installed by 15 other electric utilities as well, each network having been justified on the basis of the benefits it offers to rate payers in terms of improved service, reduced costs, or energy conservation.

Waste water. Metricom networks are being installed to support improved automation of valves and pumping stations. Far more economical and flexible than conventional radio communications systems, Metricom Part 15 radio networks are being installed by two major waste water districts and are being considered by a

number of others. In each of these instances, improved communications will result in more effective management of the waste water system with the result that potential release of dirty water will be significantly reduced.

Gas wells. Recent federal regulations require much more frequent measurement and reporting of gas well output at the well itself. Metricom Part 15 radio networks are being evaluated now by a number of gas well companies and their suppliers. The networks will provide the robustness, topological flexibility, and low cost required for implementation in gas well fields.

Health Care. Metricom Part 15 radio networks will be used in hospital complexes and the surrounding medical communities to provide communications between doctors, the hospital, patients and pharmacies. Access to patient records, remote monitoring of patients and provision of "original" prescriptions to pharmacies, regardless of the location of the doctor or the patient, are just some of the activities enabled by Part 15 wireless data communications.

Education. At all levels, the ability of students, teachers and parents to communicate among each other and to access school and public on-line resources and the Internet will be a critical part of education in the information age. Metricom's Part 15 radio networks are now being evaluated at Stanford University for a variety of applications supporting students and faculty. A

program will begin soon to provide a significant part of the communications infrastructure required to "rebuild" the Los Angeles city schools.

Manufacturing. Metricom Part 15 radio networks will soon be enabling a variety of applications that are vitally important to efficient operation of businesses in the manufacturing sector. Capability to communicate from all locations where business is conducted will make employees more effective and businesses more responsive to customer requirements. Remote company network access, e-mail, service dispatch, point-of-sale and a host of other applications will use Metricom's Part 15 network as their communications medium.

Personal communications. Metricom Part 15 radio networks will also provide a location independent communications medium for a wide variety of personal communications applications. Included among the applications enabled by the networks will be access to on-line services, electronic bulletin boards, personal finance services and electronic shopping malls.

No other communication medium available today has the potential to provide the breadth of services described above with the cost/value relationship that can be achieved by Part 15 radio networks. To limit the usefulness of these networks would be to seriously impact the public interest in a very wide variety of areas. The descriptions above are related only to Metricom Part 15 radio networks. In combination with all of the other Part 15

products that are being developed, Metricom is certain that the contribution that will be made by Part 15 operations will represent one of the most significant advances in the efficient use of spectrum and provision of useful equipment and services to the public that the United States has ever witnessed.