

Wireless Replication of Enterprise Data for Instant Access by Mobile Workers

Develop a wallet-sized, wireless server for America's mobile workforce that will provide medical, sales, and service personnel with secure, instant access to all e-mail and automatically updated data files, everywhere.

Sponsor: Rosetta-Wireless Corporation

Suite 201
2700 International Drive
West Chicago, IL 60185-1658

- Project duration: -
- Total project (est.): \$2,391,080.00
- Requested ATP funds: \$2,000,000.00

By 2004 there will be more than 50 million U.S. mobile workers, including medical professionals, sales personnel, field service engineers, and executives. They will be most productive if they can have instant, secure, and cost-effective access to all their latest e-mail and data files when not in the office. Rosetta-Wireless Corporation (West Chicago, IL) plans a two-year project to develop and demonstrate hardware and software technologies for creating a portable server system. The Wireless Intelligent Personal Server (WIPS) is envisioned as a wallet-sized device that receives and stores encrypted data, then streams it to the worker's personal digital assistant or other computer for viewing. The system can receive and transmit messages from remote locations as well as modify shared files. These file updates are then relayed by the WIPS system to the rest of the organization. Key challenges include maintaining the correct version of a file when it is simultaneously accessed by multiple users, and maintaining continuous synchronization and optimization, across non-continuous WWAN and WLAN networks, without human intervention. The company will develop software to precisely deliver files, provide two-way data replication, and automate communication-fault recovery. Innovative engineering methods will be required to achieve the necessary technical advances, including an order-of-magnitude increase in the reliability of data transfer over radio frequency networks. In addition, a knowledge base and procedures will be developed to identify and opportunistically switch communications to the most efficient wireless network connection available at a given time, thereby minimizing airtime costs and latency. These technologies will be integrated with data security into a prototype system. The ATP funding is required because this startup company has been unable to obtain private support for research involving such high technical risk. The project's success could spark large productivity gains across the U.S. economy through improved information sharing, reduced transportation time and costs, and other benefits. In addition, a new market for "outsourced servers" could be created, potentially generating billions of dollars in revenue for hardware manufacturers, wireless carriers, and software integrators.

For project information:

C. Keith Campbell, 630-561-0410
KCampbell@RosettaWireless.com

ATP Project Manager

Erik Puskar, (301) 975-8619
erik.puskar@nist.gov



ATP website comments: webmaster-atp@nist.gov • Technical ATP inquiries: InfoCoord.ATP@nist.gov.