

# PLC Needs TLC

Efforts to run telecom services over the electrical grid face some big obstacles in the U.S.

BY TIM KRIDEL AND DENISE CULVER

IT'S NETWORKING'S EQUIVALENT OF EXTRACTING uranium from seawater: Find a way to piggyback telecom services onto the power lines that already run into homes and businesses. So far, most attempts at that networking alchemy have fizzled mightily.

But reports from Germany that power-line communications are being deployed with real paying customers offer hope that a technological breakthrough has been made. This past fall, German utility RWE started offering a data service that delivers 2 megabits per second over power lines to some markets in that country. RWE predicts it will have 100,000 customers for that service by the end of this year. It also hopes to expand its offering to include voice service.

Chances are, the success of RWE and other German utilities won't be easily replicated in the U.S., where similar efforts to merge communications and power have ended in futility. One big obstacle here is the nature of the power grid. In Europe, local power is distributed on a 220-volt system, enabling a single transformer to serve about

300 homes. The U.S. has a 110-volt grid on which each transformer typically serves no more than a dozen homes. Power-line telecom gear needs to be installed at each transformer, making deployment on 110-volt networks prohibitively expensive, notes Nancy Bedard, a Yankee Group analyst who tracks wholesale communications services.

Another driver in Europe is access to capital. That's partly a by-product of the utility industry's ties to government. In Germany, for example, many of the 1,000 or so utility companies are owned by the local government.

"In most developed countries outside the United States, the power companies can still tap into significant government funds and have deeper pockets, which are needed to fund unproven and difficult technologies," says Paul Budde, an industry watcher based in Australia. "U.S. companies are more driven by the financial market and can't take such risks anymore."

Many German utilities also already have telecom experience via subsidiaries, so PLC isn't their first foray into telecom. The German PLC market also got a boost last March, when regulators created technological guidelines for offering PLC service. That's a key factor that other European countries lack.

But Berezak-Lazarus warns telecom watchers not to place too much stock in whether PLC efforts succeed or fail in Germany. "If PLC flops in Germany, it may not be because the technology is bad but because the marketing strategy isn't the best," she says.

Translation: The quest to extract telecom services from power grids will continue as long as the promised payoff looks good. ■■■