

M2M


STRATEGIES:
M2M in Government

ENABLING TECHNOLOGIES:
Device Certification

THE GREAT CARRIER DEBATE



Are cellular network operators really onboard with M2M technology? Take an insider's look at this high-stakes debate and find out which carriers are the leaders in machine-to-machine—and which ones are lagging behind.

 www.m2mmag.com

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M2M Parking System

WIRELESS, SOLAR-POWERED PARKING SYSTEM IMPROVES SERVICES WHILE GIVING OFFICIALS UNPRECEDENTED CONTROL.

8D TECHNOLOGIES

8D Technologies Inc., www.8d.com, Montreal, Que., is a machine-to-machine solutions provider specializing in secure payment systems for point-of-sale terminals. Its product line includes 8D ECO, an embedded hardware unit; C9 MPX, the software component that runs inside the 8D ECO; and the C9 Payment Server and Console.

For more than a year, the city of Montreal, Que., has been progressively replacing 6,000 single-space mechanical parking meters with 500 wireless electronic terminals that form one of the most advanced parking systems available today. The M2M technology powering the system provides a number of advantages for the users and the city alike. To express it in simple terms, it transforms ordinary automatic payment machines into intelligent and programmable terminals that can accept secure electronic wireless payment in realtime, while managing all of the machine's hardware components. And the terminals are entirely powered by solar energy (in one of the North America's coldest cities), which means they are not physically connected to any type of network.

The system allows for secure wireless electronic payment in realtime—a great convenience for motorists and a valuable asset for the city. Most electronic parking machines process payments once or twice a day in batch mode, which increases the losses due to fraudulent or expired cards. The Montreal system operates in “pay and go” mode which means that users, after noting the number of their parking space (indicated on a small post), go to the terminal to pay and then leave with their receipt. Using the same number, they can buy more time later from any other station, even if they are miles away, since all terminals are centrally interconnected.



To enforce regulation, parking agents can check the payment status of parking spaces on their PDA and do their paperwork without getting out of their car to check receipts (which previously involved clearing snow in the winter). The PDA gives them a graphic view of the street with clear visual indication of paid and unpaid spaces.

“Furthermore, the city of Montreal can control, monitor, and modify its parking payment units from a central location (including rate changes, etc.), without dispatching personnel. Monitoring gives the operators at the central office clear indications on the status of the terminal's components and warnings before failure.

Along with all the current capabilities, the city of Montreal can add and modify functions almost infinitely and without extensive cash outlay. Cellular, RFID, or Internet payment could be easily added and, if the city decided to, it could even sell movie tickets from its parking terminals!

The M2M technology used for the Montreal parking system is based on a Java-based open platform so it can be adapted for a number of point-of-sale applications. The idea of a remotely programmable, secure payment point-of-sale terminal that can be installed anywhere without wiring is certainly attractive for several applications. As a proof of concept, the Montreal parking system has won the hearts of both citizens and city administrators, who forecast a very quick return on investment. No wonder other large cities are taking a close look at it.

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