

Wi-Fi in Marietta, and Why

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By Tom Lotshaw The Marietta Register A Panopticon for the River City? Hundreds of cities have jumped on a Wi-Fi bandwagon in recent years. But even as many of them have watched their dreams of providing free or reduced-cost Internet access to all crash and fizzle (a few have succeeded), many more have taken a whole new focus in the fastest growing sector of Wi-Fi projects: public safety and surveillance. Skeptical? Oklahoma City launched its ubiquitous wireless network this summer, covering 555 square miles. It entails no public access, but does link police officers and firefighters in the field with the city's network and real-time footage from hundreds of surveillance cameras placed throughout the city. Still skeptical? Run a quick Google search on "Chinese surveillance" to see what Beijing, with help from large American multinationals like Panasonic, Honeywell, and General Electric, has accomplished in a year preparing for the Olympics.

With wireless Internet access now found in airports, homes, offices, coffee shops, hotels, and even on airplanes, it shouldn't be a tough search to do — just pull out your laptop (or any number of other increasingly don't-leave-home-without-it electronic gadgets), punch in your password and credit card number, and hope you've got adequate data security measures in place. China's focus on control and surveillance aside, true believers will tell you the sky is the limit for wireless technologies, and Marietta Mayor Michael Mullen has definitely been sounding like a true believer for the past few years. (Corpus Christi, TX uses wireless technology for automated water meter reading, he points out.) And a new breed of municipal wireless networks is apparently emerging here in Marietta. With \$23,850 appropriated by City Council, Mayor Mullen has the funds and support contracts in place to proceed with the first real steps of his own "Wi-Fi initiative" for the city. As in many other cities, Mayor Mullen's initiative — which he has long touted (in debates, past quotes, and current conversations) for its potential to bridge some digital divide he perceives to exist in downtown Marietta — puts its immediate emphasis on wireless inter-governmental communication, public safety projects, and surveillance. The appropriation authorizes the purchase of four industrial-strength Octopus backhaul radios manufactured by Shireen, Inc. and a number of other components, including surveillance cameras, for the City of Marietta to build a wireless computer network between all of its departments and facilities to transmit voice, video, data, and camera feeds in real time. "Our primary focus is to build a wide area network. Instead of the current configuration connected by modem, it will all be wireless and give us, in places, connections that are 23-times faster than what we currently have," Mullen said. The system will also allow the city to purchase bandwidth through OARNET, a state network operated by the Ohio Supercomputer Center — savings the city between \$400-\$500 a month in SuddenLink ISP bills. Additional radios and access points included in the equipment purchase from ZzzipNet, of Parkersburg, would allow the city establish limited Wi-Fi hotspots — whether made public or not — at the Marietta Aquatic Center, the Ohio River Levee, Harmar School, and Phillips School. A pending \$78,000 grant request would equip MPD cruisers with laptops to give them access to the city's wireless network — and all of its tools — from their cars so long as they're parked in one of the established Wi-Fi hotspots, providing a stronger and more visible police presence in the community, Mullen said. "We've also got asks in to our federal legislators for appropriations. This is the third consecutive year we've tried to get some funding to do what will ultimately become a ubiquitous mesh network to cover the entire city. Right now we just have the funding to do small areas," Mullen said. Laptops in MPD cruisers and a ubiquitous mesh network would allow police officers to access the network from anywhere in the city, meaning they could swipe licenses for a full criminal record read or punch in Social Security numbers for identity verification from state and federal databases — as well as generate police reports instantaneously using digital templates, Mullen said. A ubiquitous mesh network would also enable the city to position real time wireless surveillance cameras anywhere in the city. "Twenty-two inner tubes were slashed at the Marietta Aquatic Center a couple weeks ago, and we will be able to provide much better security with motion sensitive Wi-Fi cameras at that site, and at the skateboard park. The ultimate goal would be the ability to deploy mobile cameras in locations as needed if we're having vandalism or seeing high incidence of certain types of crime," Mullen said. Mullen said any potential risks to privacy from his initiative would be outweighed by improved public safety — though he acknowledges such an initiative would have sounded Orwellian to him 25 years ago. "With five or six cameras we could put in essence a Wi-Fi camera ring on the city. It has a lot to do with prevention — the deterrent of saying, 'If you're acting like a thug out here you're going to soon find yourself in the local pokey.' Even if we had twice as many police officers, we still couldn't be in all the nooks and crannies in the 10 square miles of Marietta to have the presence and deterrent. I think an ounce of prevention is certainly worth a pound of cure," Mullen said. Public Internet access through the city's wireless network is just one small component in the first phases of his initiative, Mullen said, noting that the city could not resell bandwidth to the public or private businesses through OARNET. "We can put in limiters so if you're in a free zone you can't come in and download every movie in Hollywood, and we're going to be able to monitor and control that use so it's not being abused," Mullen said. Mullen said he sees wireless cameras at places like the MAC functioning as not only a crime fighting tool, but a marketing tool once their feeds are posted online for people to see near and far. "I've talked to people who drove from one or two counties away, and got here to find we were having a thunderstorm. It's a real marketing piece to have a bird's eye view of the MAC in action on the website." Mark Zelinski, the owner of ZzzipNet, said the wireless initiative in Marietta is a joint project between his company, an ISP and full network and data engineering firm, the City of Marietta, and Shireen, Inc., a private industry company in the Washington, D.C. area. "This is going to be a new breed of wireless infrastructure that's starting. There are going to be national press releases about this. The [Octopus backhaul radio] technology we're talking about has been used extensively in South America, Europe, China, and the Far East, but it's not prevalent in the U.S.," Zelinski

said. ZzipNet also maintains sole distributor rights to wireless technologies from Shireen in the U.S., Zelinski said. "They are very excited about this. It's a big opportunity for Shireen in the U.S. and they are hands down sending these radios all over the world." Without the collaboration the initiative would have cost the city about \$135,000, Zelinski estimated. "I think there has been some confusion among the public. People think Marietta is putting up this wireless infrastructure just to throw up a few [little] Wi-Fi hotspots out there for public access. That's not it," Zelinski said. "Depending on where the city wants to go — again, I'm a consultant, not the city — we've already shown them where Voice-Over-Internet-Phone technology could eliminate the need for additional phone lines. The city could integrate police, fire, emergency services, ambulance services, disaster services, and hospital coordination. We're talking about meter reading, flood monitoring, whatever. This collaboration allows Marietta to play with every developmental tool the two of our companies comes out with. We plan on making Marietta a test bed for all of these things," Zelinski said. In many regards the first phase of the initiative is the creation of a wireless communications infrastructure for city government more than anything related to wireless Internet access for the public, Zelinski said. "If the city wanted to do the Wi-Fi thing, is everybody going to be able to tell SuddenLink and everybody else, 'See you later, I'm getting on the free thing?' Well no. There's no way possible you could deliver that kind of horsepower to everybody. And to presume that, I think, would be foolhardy," Zelinski said. "But could people who wanted to spend a day at the MAC or the park use it there? Sure," Zelinski said, noting that the city or ZzipNet will be able to throttle use in the limited Wi-Fi hotspots for specific events or functions. "I can't speak for Marietta, but look at Blennerhassett Island. How many teenagers are going to be that excited about sitting all day on a deserted island looking at an old house. Light it up with Wi-Fi and mom and dad can say, 'OK, you can bring your laptop and while we're taking the tours you can do whatever it is you're going to do,'" Zelinski said. Mullen said he hopes to have the first wireless camera and limited Wi-Fi hotspot up and running at the Ohio River Levee in time for this year's Sternwheel Festival.