

## **ALTUS TIMES – JANUARY 13, 2007**

### **City of Altus-owned wireless**

Broadband system in the works

The Altus City Council considered in special session this week the adoption of a city-owned wireless broadband system and the establishment of Altus as a wireless hub for smaller Southwest Oklahoma towns; the project would become almost budget neutral as the city generates new revenue and eliminates utility-billing losses.

The council authorized Mayor T.L. Gramling and City Administrator Mike Nettles to work with the Community Communications Authority and Cherokee Connex to develop a contract agreement with CCA and a plan for construction and operation of the licensed microwave broadband system by Cherokee Connex. Gramling and Nettles will present the completed plan to the City Council and Altus Municipal Authority.

CCA and Cherokee Connex are currently installing the digital technology (as reliable as underground wire) for the city of Ardmore and previously built systems in Vinita and Corpus Christi in Texas.

According to Alan Holt, director of Strategies and Business Development for the Oklahoma Municipal League, "One of the things the Chinese talked about when they decided to build MG reproductions in Ardmore was the fact that Ardmore was going to be unwired. Europe and the Far East, they've already got this, guys. They're way ahead of us; we're way behind. There are 650 jobs going to Ardmore because of this."

Holt and Darrell Lewis of Cherokee Connex outlined features provided by the proposed high-security wireless system (using Advanced Encryption Standard approved by the National Security Agency). Primary advantages would be for first responders-police, fire, emergency medical personnel-whose vehicles could utilize wireless connections for high-speed internet, full-motion video, handheld cameras, fingerprint scanners. Cameras on the vehicles could provide fulltime, live motion for viewing at command center during fires or police encounters, and physicians could monitor patients en route to the hospital in ambulances.

In the city's utility department, mobile employees with laptops and cellular telephones could use the technology to great advantage. "There is absolutely no way to give somebody high-speed communications and internet connectivity and give him mobility, except wirelessly," Holt said. "You can't attach cable to the back of the car."

From city offices, police could provide real-time camera surveillance of public areas. The city could meet federal mandates by remotely monitoring the water supply.

In addition to increased public safety, community users could gain whole delivery services: access to super-fast, high-speed internet (faster than DSL or cable); interactive digital television (ITTV); videos on demand; voice-over internet protocol (VoIP); basic telephone service with flat-rate long-distance dialing in the United States and Canada; and cellular telephones. Schools could use the technology for distance learning; businesses could receive up to 45 megabits of affordable and reliable bandwidth.

"The entire community will become a hotspot; that means, we build a microwave backbone, a huge 655-megabit bandwidth up in the air, to run the whole city," Holt said. "Anywhere you happen to be in the city, you can get high-speed connectivity to the wireless internet-driving down the road, in a park, in a restaurant, in a store. You'll be able to watch different football games on your TV, the home computer and on the cell phone."

City Administrator Mike Nettles gathered information at numerous conferences about the continually evolving broadband communications technology. He said OML this year made a concerted effort to bring communities opportunities to consider broadband communications as a utility or as a franchise.

“Broadband systems are being looked at by a number of cities. This is only one technology: you have fiber to the home, broadband over power lines, etc.,” Nettles said. “In my estimation, this technology is the best out there; it’s as good as any of the others, but none of the others offers the mobility.”

#### Competing with other providers

Holt said the system directly competes with Cox, AT&T, Southwestern Bell, Cable One and cellular telephone companies. According to Holt, Oklahoma is “lucky” because the constitution allows cities to deliver the new technology service.

“In eight other states it’s a battle ground, a war going on; when we first got into this, we tried to get federal community facility loans from the USDA, but AT&T filed a lawsuit against the USDA, purposely to prevent me from telling you about this today,” he said. “Competition is good; that’s the way America is built.”

Although the city holds a contract with Cable One, City Attorney Catherine Coke called the contract a non-exclusive franchise, basically a permit, because Oklahoma law does not allow cities to grant exclusive franchises. Nettles said anyone with the finances could operate internet, cable or telephone within the city. Nettles cited the city’s task as one of developing a plan to capture a market share by providing better service at less cost.

#### Finding revenue for funding

Due to AT&T’s litigation, OML sought alternative funding sources to generate revenue and make the system budget neutral. OML created CCA, a non-profit public trust with Vinita, Pawnee and Miami as beneficiaries. They established a \$100 million line of credit with a Little Rock, Ark., firm to provide long-term, low-interest funding. Holt said CCA would require a contract with the Altus Municipal Trust Authority to guarantee a monthly lease payment (the amount determined through a free study made by Cherokee Connex engineers) until the debt is retired.

CCA, partnering with Cherokee Connex of Tulsa, found eliminating billing losses, through automatic meter reading, an avenue to pay most of the lease payments. They discovered that the average city “under bills” water customers 12 to 34 percent, due to antiquated meters, undetected water leaks and water theft. Typically, electrical utilities with old meters lose a revenue-recoverable 2 percent, which could total \$60,000 to \$80,000 monthly in Altus. Cherokee Connex would replace the city’s approximately 8,000 water meters and 8,000 electric meters and install antennas on each new meter that automatically send real-time readings to City Hall and contain some leak detection capacity.

The city would own the broadband system, which Cherokee Connex (51 percent owned by the Cherokee Nation) would install. Cherokee Connex would be responsible for maintenance, marketing and billing; they would operate a store in Altus for customer support and hire local employees. Altus would receive 70 percent and Cherokee Connex 30 percent of the commercial revenue generated; Cherokee Connex would pay most expenses, except the debt retirement.

#### Building the broadband system

Cherokee Connex would use the city’s infrastructure—electric poles, water towers, building roofs—to create a network of antennas—a microwave ring around the city with hub and spoke-type connections. If one tower went down, the signal would travel the other way around. The router-based system would pass along a spider web of different frequencies that do not interfere with each other, and the system could easily be updated with new technology. Because Altus would own the electric utility and poles, installation costs would be considerably less. For citizens that subscribe to the service, “We will bring an antenna to your

house that you mount near a window,” Lewis said.

Nettles discussed opportunities to increase city revenue by expanding the market area to smaller communities. Microwave signals travel about 30 miles--penetrating trees, clouds, wind and adverse weather with no performance loss--but cannot go through mountains. Although big carriers provide the service to large cities, Nettles said the return on investment prevents their consideration of small communities as viable telecommunications opportunities.

Fire Chief J.R. Wheeler said, “Altus is the hub for five counties. We're either moving forward or going backwards; we've got to move forward and the only way to do that is to start thinking into the future.”

According to Randy Marple, Parks and Recreation director, “Based on what we are paying right now at our residences, we're going to save a lot of money on individual services.”

Jerry Gibson, systems manager, thought the system would be good for public safety and for connecting the city's outlying buildings. “I don't know how much penetration we'll get into the customer market, we're up against some pretty good odds,” he said.

Nettles said communications technology is paramount to any community's success, “whether it's retaining existing businesses, attracting new business, providing educational opportunities for the youngsters or supporting community services-especially public works and public safety.

“We see this as a golden opportunity for Altus. I think most of us realize that we live in a technology age and our children are growing up knowing more than we do about it. This is something we need to look at to create opportunities that will allow some of them to stay here. I think Altus is poised to take a leadership role in Southwest Oklahoma; if we don't do it, I don't know who will.”