

## MEMORANDUM

**TO:** Ron Eldridge, Comptroller  
**FROM:** Bill DeJarnette, IS Manager  
**DATE:** April 10<sup>th</sup>, 2006

***SUBJECT: Down Town Wireless Update***

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### ***Background***

Money has been budgeted in the amount of \$18,600 to implement a downtown wireless solution.

The City of Urbana is working with the Champaign-Urbana Community Wireless Network "CUWIN" to implement and showcase an open-source hardware and software solution.

The City Lighting Division has installed and integrated into existing light poles at eight locations the necessary wiring for power and antennas. This design was approved by the Streetscape Committee and pictures are attached. See Attachment A

A node was also installed on the roof of the Urbana Free Library and two access points were placed on the second floor during the IMC Radio and Wireless Barn raising project Saturday November 12<sup>th</sup> 2005. While we have had some downtime issues the Library is interested in driving that access further into the building and City staff will be helping install another access point in the basement this month.

The 10<sup>th</sup> node exists on the roof of the City Building.

Attachment B shows lampposts that meet our installation criteria in yellow and the placed nodes in white or pink.

CUWIN is working with our staff to provide training so the City can handle all facets of installation, maintenance and support.

We expect to have all units operational by the end of April. We will then move or add units as necessary to fill in areas of weak access strength.

The units installed are designed to allow for further growth and will support dual radios thereby allowing the City to create access points integrated into the light poles as the software allows.

After these units are tested and considered stable and the coverage is adequate in the original area we will look at expansion. We have a limited number of light poles that we can use in a similar manner and we will look to other methods outside this area. See Map

The Primary Areas to provide Service to is:

- 1) Downtown
- 2) Other areas as designated by Community Development. These areas may need to be linked by backbone. An example would be Philo Road.
- 3) Wireless access to City lots immediately behind the City building to facilitate data download and upload for City services designed to use wireless.
- 4) Wireless access to primary City corridors for data downloads and upload. Examples would be parking, inspections, and emergency response.
- 5) Civic Center
- 6) Park District Facilities
- 7) Schools
- 8) Library
- 9) Designated areas within the community

Other issues include:

- 1) Partners to help provide bandwidth
- 2) Continued testing to fine tune access point density and equipment choices.
- 3) Development of a portal that provides targeted information to the users
- 4) Development of a long term plan that helps define the City's goals and role in providing a wireless community.









University Avenue

Race Street

Broadway Avenue

Vine Street

Main Street

Illinois Street