



City of Milpitas

Telecommunications Commission

Telecommunications Master Plan Update

April 2010

INTRODUCTION

In 1995 the City developed and adopted the Telecommunications Master Plan. This plan was designed to act as a blueprint for the implementation of technology in the City over the next 5 years. In 2002 the Telecommunication Commission authored an updated Master Plan based on the changes in technology and the changing needs of the City. Again in 2005 the Commission reviewed and updated the 2002 Master Plan. One recommendation of the 2005 review was that a new Telecommunications Master Plan be completed by 2007. This document was designed to serve as the City's next five year plan covering the period 2007-2012. It also contained a provision for a mid-point review to be conducted in the 2009-2010 timeframe. This document reviews the status of the 2007 plan and makes several additional recommendations.

Status of 2007 Master Plan Recommendations

CABLE TELEVISION AND PUBLIC INFORMATION

The City's new Public Access Studio and channel are a major community resource that should be utilized to its fullest potential. The recommendations below concern both the technical and organizational aspects of the Public Access Channel.

Cable Television

Recommendation:

The City should explore the possibility of forming a private non-profit corporation to manage and operate the Public Access Facility and channel.

This will allow expanded fund raising activities, opportunities to apply for grants and provide a governance body outside the City organization to deal with programming decisions and other issues that may be potential liabilities to the City.

A private non-profit corporation has been formed and is contracted with the City of the operation of the Studio and Public Access Channel

Recommendation:

Obtain additional capabilities for the Public Access Facility to include: Mobile/Wireless recording/broadcasting, webcasting, and additional channels.

This will expand the functionality of the studio and foster local programming as well as an expanded core of volunteers.

Webcasting of Channels 15 and 26 is operational.

Recommendation:

Expand cooperation with the Milpitas Unified School District and provide more training opportunities on studio operation and video production.

This will provide additional educational opportunities for the community and provide a pool of trained volunteers.

An agreement has been signed with the school district to allow adult education classes to use the Channel 26 facilities. Additional recommendations are made within this report concerning cooperation with the School District

TELECOMMUNICATIONS

Telephone

Recommendation:

While the 2003 plan recommended retention of the existing phone system, planning should begin to replace the phone system during the next 5-year plan and consideration should be given to new technologies such as Voice Over IP (VOIP).

The existing telephone system is nearing the end of its useful life and newer technologies can provide greater capabilities at a lower overall cost.

The 2009 network upgrade included design criteria for the use of VoIP technology in the future. Funding is currently not available for a VoIp conversion.

Recommendation:

In order to support a new phone system and other technologies such as video streaming, the City's telecommunications network should be reviewed and if necessary, replaced.

The existing network was installed in 2002 and is nearing the end of its useful life. Replacement of failed equipment will become more difficult and more expensive in the future. Newer, lower cost technologies can provide greater capabilities at a lower overall cost.

Network upgrade costing approximately \$400,000 was completed in July of 2009 utilizing a leasing program to spread costs over a five year period. The current network should be viable until the 2014/2015 timeframe

Recommendation:

The existing Wireless Antenna Permit process should be reviewed and modified to streamline the process and account for the newer types of simple installations that are being introduced to the City.

The current process is designed around the installation of a large cellular tower and the many considerations that come with such a structure. Today the

Commission is seeing a number of small, simple antenna installations that do not require an extensive review. A certain set of parameters can be established and allow for an administrative review and approval of an application rather than a Commission review.

Open Item

Public Safety Communications

Recommendation:

The City should maintain its current Public Safety radio system while maintaining their involvement in regional interoperability projects.

The existing radio system has been upgraded and expected to remain functional for at least five more years. The City should maintain this investment, but be involved in regional efforts that may shape the next generation of Public Safety radio systems.

The City has continued to maintain its conventional radio system and has a maintenance contract in place. The City is involved in the Silicon Valley Regional Interoperability project and is now part of a County-wide microwave communications network. Developments in a regional trunked digital radio system are being monitored however there are no definite plans at this time

Recommendation:

The City should review the use of technology in the Emergency Operations Center (EOC).

Technology can be crucial to the management of emergency or disaster situations. Many of the City's existing technologies may be of benefit in the EOC.

A technology refresh of the EOC has been completed with the replacement of all workstations/laptops and monitors. A "Smart" board and projector have been installed.

APPLICATIONS

Recommendation:

The City should explore technologies for expanded data storage and retrieval.

In the future the amount of information stored by the City and the demand for such information will only grow. The City should explore technologies that will more efficiently store and retrieve information.

The City has moved from tape storage and backup media and now exclusively uses magnetic disk storage. Due to cost constraints, a centralized storage solution has not been implemented. An automated backup system has greatly reduced the amount of staff time required for this function.

Recommendation:

The City should expand its web presence and when possible, add capabilities to the City website.

The web is becoming the predominate means for obtaining information and services. The City should look to offer more information and services to the citizens via the internet. This not only provides more convenience, it will allow the City to provide services at lower cost

The website upgrade project has been completed and the number of on-line applications increased. These include online permitting, utility bill payment, recreation program enrolment; police report filing, online document access and video streaming.

GENERAL RECOMMENDATIONS

Recommendation:

The City should develop a mechanism to fund the on-going replacement of technology.

As new technologies are added, the City should plan for the eventual replacement of the technology. Given the City's focus and dependence on technology, funding for replacement of critical equipment must be planned.

An equipment replacement fund and a line item of \$90,000 per year has been established for technology equipment replacement. A leasing program is being used to fund the network upgrade. Various grant programs have been utilized to fund the replacement of mobile computers for public safety. A total of approximately \$170,000 is allocated each fiscal year specifically for equipment replacement.

Recommendation:

The City should coordinate the efforts of the traffic video system and look to providing real-time traffic video over the Internet.

This capability would be a great aid to citizens and may help to reduce traffic congestion. The cost of such technology is relatively low and may yield great benefits.

Open Item.

Recommendation:

The City should review the security of key technology facilities.

Given the City's dependence on technology, the physical and electronic security of the City's key facilities should be reviewed and if necessary improved.

A centralized card key system has been installed that included access control to City Hall, the Public Works and Police Building, the Library and Library garage and the Main Lift Station. This system is planned to be used for the new Senior Center and has the capability to be expanded to other facilities

2010 New Recommendations

Many of the previously mentioned accomplishments such as Public WiFi and the Cable Studio have provided direct services to the residents of our community. This is somewhat of a new direction for the Master Plan and the Telecommunications Commission. Previous plans have dealt with technology issues internal to the operations of the City. Today we find that many of our recommendations provide direct benefit to our community and the members of the Telecommunications Commission feel that there is great value in exploring new ways to promote and encourage technology in Milpitas as a whole. The following recommendations are submitted for consideration and inclusion in the 2007 Master Plan:

Recommendation:

The Telecommunications Commission should develop a plan to promote the high-tech nature of the City.

This type of effort can compliment economic development activities and help to establish Milpitas as a vital part of the Silicon Valley technology industry.

Recommendation:

The Telecommunications Commission should develop a plan to promote and encourage technical education.

Preparing the next generation to move into high-tech is crucial to the survival of any tech based economy. Sponsoring science fairs, coordinating programs with local technology companies and schools will help to promote and encourage technical education.

Recommendation:

The City should obtain additional capabilities for the public access studio and pursue non cable broadcast media.

Television and video are areas of rapid growth. This media is migrating from traditional cable television to Internet based streaming video. Obtaining these capabilities will ensure Milpitas remains in the forefront of digital media.

CONCLUSION

The above recommendations are to serve as the basis for the remainder of the existing five year plan which will conclude in 2012/13. Prior to this time, it is suggested that the Telecommunications Commission review the status of efforts to date and author the next Master Plan for the period 2012-2017. This will continue the cycle of development of a five year plan, followed by a mid point review. The Commission will maintain its historical practice of reviewing and approving specific technology projects in support of the Master Plan recommendations.

Given the rapid pace of development, any technology plan needs to be periodically reviewed and updated to take advantage of changing technology. Again, these recommendations are intended to provide high level direction, not specific guidance on a particular technology implementation. The Telecommunications Commission is proud to have provided guidance on the progress to date and appreciates the trust and support provided by the City Council.