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The Mt. Hood Cable Regulatory Commission Community Communications Technology Needs Ascertainment

Part of the



Initiative

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EXECUTIVE SUMMARY

The Mt. Hood Cable Regulatory Commission (MHCRC or “Commission”), in conjunction with CBG Communications, Inc. (CBG) and its team partners, Riley Research Associates and Dr. Constance Book of Elon University, has conducted an extensive community communications technology, including cable-related, needs and interests ascertainment covering a wide variety of Communities of Interest (Communities) within the jurisdictions that are members of the MHCRC (Cities of Fairview, Gresham, Portland, Troutdale and Wood Village and Multnomah County, Oregon).

The term “Communications Technology” was broadly defined and included infrastructure, services, service platforms, end-user devices and applications. An emphasis was also placed on cable communications-related needs and interests since the MHCRC is currently engaged in the cable franchise renewal process, which requires an understanding of such needs and interests as part of the overall ascertainment.

The Communities ascertained were broad-based and covered a variety of components and sectors of large communities such as residential, government, education, non-profits, community media, immigrant and refugee, ethnic and cultural, business and others.

A variety of ascertainment methodologies were utilized , including a statistically valid telephone survey, a variety of on-line surveys, focused discussions (from small group to workshop), interviews and review of a wealth of related studies, technology plans, and other materials and research.

At a high level, the MHCRC wanted to gather information that would help answer six communications technology-related questions, as they pertained to the Communities in Multnomah County. These questions were:

- 1) What is the level of communications technology in our communities today?
- 2) What are our communities' immediate (up to 3 years) communications technology needs?
- 3) What are our communities' future (3-15 years) communications technology needs?
- 4) What are the differences in communications technology needs and interests among our communities?
- 5) What is the role of local government in meeting the communications technology related needs of our community?

6) What has been the impact within our communities of existing public benefit requirements of the cable communications franchise agreement?

It was determined that the key questions could best be answered by focusing on six major categories of ascertainment. These categories are:

- ◆ Access to Technology
- ◆ Content
- ◆ System Capacity
- ◆ Economic Development
- ◆ Civic/Community Engagement
- ◆ Regulation in the Public Interest

These categories and the elements that comprise them became the major focus of the Communications Technology Ascertainment Study. Below are some of the most critical findings that came out of the Study:

◆ *Access to Technology*

Access to communications technology in Multnomah County was explored from a variety of perspectives including: the level and type of technology access; who does and doesn't have access from both a demographic and geographic perspective; the characteristics of technology adoption and lack of adoption, including issues like affordability and technology literacy; and where a digital divide exists, ways that can promote digital inclusion.

Critical findings under this category include:

Finding: Multnomah County residents face equity issues in access to communications technology similar to other communities across the country – Consistent with nation-wide trends noted by the National Telecommunications and Information Administration (NTIA) and the Federal Communications Commission (FCC) in recent studies, the lower the household income, education level and perceived value of communications technologies, the lower the adoption rate of such technologies. Seniors, women, non-caucasian and non-english speaking households also tended to have lower adoption rates. The inequities noted caused a significant divide among school age children and reduced technology access also results in reduced economic opportunity.

Finding: Public libraries continue to play a key role in providing technology access throughout the geographic area – Twenty percent (20%) of respondents to the residential telephone survey, both with access at home and those without, indicated that they access the internet at a public library. Multnomah County libraries public access computers are in use 90+% of the time across all locations.

Finding: Affordability is the single biggest factor across Communities of Interest concerning whether they are able to access the communications technologies that they need – One in four residents are not able to access the communications technologies that they need. The primary reason (60%) was affordability. Consistent with this, one in six cable subscribers indicate affordability as the reason that they choose a basic cable service package.

Similarly, organizational communities indicated significant challenges in overcoming affordability issues related to access to communications technology for both their organization and their constituencies that they serve.

Finding: The affordability of the network bandwidth provided on the Institutional Network (I-Net) has enabled schools, libraries and local governments to expand related network services – I-Net users indicated that use of the network must remain affordable to publically funded organizations as bandwidth capacity will need to expand to provide for the increasing demands from their constituencies.

Finding: Community media producers and nonprofits identified PCM and Metro East as an affordable way to access multimedia communications technology – There is significant value to the affordable (no or low cost) assistance that PCM and MetroEast provide multiple communities of interest concerning access to video production and multimedia technology and distribution of content over the cable channels and the internet. This value further extends to the constituencies that these communities serve.

Finding: Technology literacy and training opportunities and outreach must increase in order to increase communications technology adoption in Multnomah County – Such an increase would especially be helpful to older populations, immigrants and refugees and non-english speaking households.

Finding: Many Communities of Interest expressed the need for a common understanding about communications technology literacy standards – Such standards would be helpful to have a common understanding when someone has achieved communications technology literacy. Such standards could also be set as basic requirements to meet in school, thus contributing to an increase in overall technology literacy in the community.

Finding: There is a significant need to increase the capacity of residential internet access networks to provide higher connection speeds – One in six respondents to the public on-line survey indicated that they were not satisfied with their speed. These respondents indicated a wide range of current needs spanning up to 15 Gigabits per second (Gbps). Residents indicated that they did not have such speeds now because their provider doesn't offer them or the speed they need is too expensive.

Finding: The use of mobile devices and technology is high and on the rise in Multnomah County – Residents report a high ownership of mobile devices, with the

highest being cell phones. It was indicated by many communities that mobile phones and their related data capabilities provide an affordable “access point” to communications technology for many in Multnomah County.

Finding: It will take the continued and increased work of multiple communities to expand digital inclusion in Multnomah County – For example, local government must continue their critical role in fostering public access to the internet, such as through the public library as well as providing support for other organizations that provide public internet access. Educational entities need to continue to push for equity in access, including providing expanded capabilities at school and perhaps keeping schools open in the evening in order to provide an environment where students could continue to have access and continue to learn beyond the regular school day. Community groups and non-profits need to continue their work to promote digital inclusion, including providing access to technology and increasing the literacy skills of underserved populations.

Additionally, the Community Access Capital Grant program should be continued and expanded because grantees indicate that the funding that they received has helped overcome factors that create inequities in access to and use of communications technology.

◆ *Content*

Populations within Multnomah County desire to access and use communications technology to send and receive content. Accordingly, it is important to understand how that content is created, distributed and accessed, as well as the roles that relevancy, localism and the interactive nature of the content play in the need for varying types of content.

Finding: Lack of perceived relevancy is the second largest factor contributing to non-adoption of communications technology in Multnomah County – Just over 1 in four Multnomah County residents indicated that they do not have internet access at home. After cost, the next most frequent reason was don’t need or want. Relevancy, though, is defined differently by various populations, which means that specific strategies to boost relevant content for particular segments of the population are needed. For example, the development of relevant content in the Spanish language would be one way to address significantly low levels of internet adoption by Hispanic populations in Multnomah County. Additionally, relevant on-line content for older populations would also help increase their relatively low level of internet adoption.

Finding: Local community media, local community programming and other local content is seen as highly important across Communities of Interest, especially by and for marginalized and underserved populations – Seventy-two percent (72%) of cable subscribers watch local community channels. It is notable that high viewers include Latinos, seniors, the disabled, and those with low income, showing the importance of local community media to those segments of the population. Additionally,

non-profit organizations indicated the high value of community media to their organizations. Moreover, ethnic and cultural representative organizations indicated that funding, training and technology provided to diverse populations is facilitating development of diverse local content.

Finding: Critical local emergency communications content is facilitated by the cable system and the institutional network – Local government and educational entities indicated that the current use of the cable and institutional networks were helping to supply emergency communications. This needs to continue to be maintained and updated, including providing capabilities to facilitate delivery of reverse 911 information.

Finding: Access to content operates along a continuum of users and technologies – Because of the broad spectrum of levels of communications technology usage and adoption, content providers in Multnomah County must be prepared to provide everything from traditional and basic services and content to content in formats and over platforms that appeal to high-end, ground-breaking users. This enables the content provider to remain technologically relevant and facilitates meeting the needs and interests of all types of content recipients.

Finding: Cloud computing will be increasingly utilized to access content in the future – By making software and applications a centralized resource, they can be provided more efficiently and accessed by those that can't otherwise afford them on an individual basis. It will also expand the reach of variety of computing resources.

Finding: Local community media channels need to be displayed and be able to be accessed on the cable system through the on-screen menu system – This will enable subscribers to easily access the channel programming information and the channels' content. The majority of residents indicated that the digital on-screen menu guide along with their remote is the preferred way that they utilize to find out when a show is on and to be able to access it.

Finding: PCM and MetroEast provide the facilities, training and assistance needed to successfully create content – The vast majority of individual community media producers are either “very satisfied” or “satisfied” with MetroEast’s and PCM’s operations, including the training and education and facilitation assistance that they have received. In order to continue to fulfill this critical content creation assistance role, PCM and MetroEast and other community media providers will need a significant investment in capital equipment and advanced technologies.

Finding: Video is increasingly used by multiple communities to distribute content - There were numerous examples of the rapidly growing use of video. This includes school districts for both classroom and staff training use; city and County use for outreach and training; immigrant and refugee and multicultural communities for outreach, storytelling, community engagement and civic participation and the non-profit and small business community for both internal and constituent service operations.

Finding: Capacity for local community access is needed across multiple distribution platforms – Community media producers, providers and viewers all indicated the importance of ensuring that distribution platforms for community media are able to advance with technology. This includes expanding on-line, streaming and on-demand distribution. In fact, cable based video on-demand viewership of local community programs has more than doubled in the past year. It also means the need for high definition distribution of local community programs and use of other emerging distribution platforms in the future.

Finding: The interactive component is increasing for communications both on the internet and through television – The internet is increasingly being used for high capacity downloads and uploads and television is moving to integrate interactive applications. It will be important for local community media organizations to incorporate interactive television (iTV) applications as their audience migrates viewing preferences to iTV content.

◆ *System Capacity*

The exploration of system capacity focused on the capacity that communications systems in Multnomah County currently have as well as the system capacity that is necessary for the future in order to meet the needs of Multnomah County residents and organizations. This included a review of: emerging technologies; bandwidth capacity and management; universal coverage; connectivity; mobility; and transport systems.

Finding: Four key emerging and evolving technologies are most likely to drive increased system capacity in the near and long term - This includes expanded video use in all of its forms, in-home services accessed remotely; evolution and rapid growth of applications for portable mobile devices; and collaborative, real-time, high capacity applications.

Finding: Emerging technologies will positively impact several key network attributes – This includes ease of use; highly scalable bandwidth; centralized data storage and network reliability and redundancy.

Finding: Communications networks need substantial increases in bandwidth capacity to handle the current and future applications demonstrated/documentated by Multnomah County populations – This includes exponential expansion in bandwidth requirements for networks in general, as much as ten to 100 times what capacity is now, as well as specific growth for:

- Wired backhaul networks to support wireless network growth
- A higher capacity institutional network for users whose data transport requirements are nearly doubling every 18 months

The predominant need is for symmetrical bandwidth versus the current dominant provision of asymmetrical bandwidth.

Finding: Fiber-to-the-Premises (FTTP) is the current and future infrastructure which is able to meet the full range of demonstrable needs of the community in terms of interactive, scalable, network capacity – Because of the exponential growth forecast by residential, business, non-profit and institutional users of the internet for multiple, interactive, basic and advanced services, the highest capacity technology, FTTP, will be needed to meet the needs demonstrated.

Regarding residential fiber-to-the-home infrastructure (FTTH), currently this type of capacity is generally not available in Multnomah County, except in certain East County areas where Verizon provides FIOS.

Finding: Local government should spur development of, or expansion of existing, high capacity communications systems in order to help pursue universal coverage – Many communities expressed a desire for local governments to be involved in efforts to expand and develop higher capacity communications systems at an affordable cost for their constituencies, including everything from developing robust public infrastructure to creating an environment that would be attractive to capital investors that would, in turn, stimulate more competition.

Finding: The Institutional Network has provided the network connectivity that school districts and government locations need to facilitate both administrative operations and services to students, residents, businesses and customers – The current network provides reliable stable connectivity that will facilitate current public entity applications related to video , voice and data systems and access to the internet. It is further seen as a highly reliable transport system. I-Net users also note that key factors contributing to reliable stable transport include regular maintenance and upgrades to the network, and a stable cost for service.

◆ *Economic Development*

Communications technology capability and use have a significant impact on local, as well as national and global, economic development. Here it was important to explore: multimedia literacy skills; local workforce development; new IT business development; local economy and employment; and private sector contributions and partnerships.

Finding: The current insufficient level of skills to use communications technology effectively, commensurate with the level of need, is problematic for job seekers, employees and employers – This insufficiency relates to lack of technology literacy and access, and must be addressed or it will impede the ability of the Multnomah County community to stay competitive.

Finding: The Community Access Capital Grant program is helping to increase multimedia skills – The large majority of grantees indicated that the funds that they received have helped to develop multimedia skills for both clients and employees.

Finding: Multiple communities are utilizing communications technologies to contribute to workforce development – This includes classroom instruction at all levels of education, distance learning for health care training, increased training and associated bicultural and bilingual capability development by those representing diverse populations and access to on-line resources for businesses.

Finding: Communications technologies are very important to the operation of a home-based business – Residents that operate a home-based business indicate that communications technologies are very important. These residents constitute over 1 in 5 of all residents in Multnomah County with an internet connection.

Finding: More than half of Multnomah County residents (57%) with internet access use the internet for activities related to work or employment services – This is slightly higher than the national average reported by the Pew Internet and American Life Project.

◆ *Civic/Community Engagement*

Increased and enhanced civic and community engagement is an outgrowth of increased access and use of communications technology. In this category, civic participation, open government, community building and sustainability were explored as they pertained to communications technology.

Finding: Communications technologies and systems are increasingly used by local government to engage the community and encourage civic participation – This includes everything from web-based services to video to assistive technologies such as closed captioning, language translation and texting.

Finding: Local community media has contributed to community building in a variety of ways - For both Portland Community Media and MetroEast community engagement and community building is at the core of their missions. This includes extensive outreach, working with diverse organizations and individuals that utilize their equipment and facilities and facilitating the development of diverse community programming that is beneficial to both target audiences as well as the community at large.

◆ *Regulation in the Public Interest*

Governmental regulation, policy making and initiatives, especially at the local level, play key roles in various aspects of communications technologies, services and infrastructure.

Findings here were centered on: the role of local government; the value of a local franchise; consumer protection and neighborhood aesthetics.

Finding: The public believes that local government has a critical role in consumer protection – Residents in Multnomah County have significant consumer protection concerns and they want local government involved in addressing them. This includes everything from cable customer service standards to protections against the sale or sharing of personal information.

Finding: Local government has a local planning role in order to meet the community's communications technology needs - More than $\frac{3}{4}$ of public on-line survey respondents indicated that the local government should help plan for the local community's communications technology future.

Finding: The high value of the franchise is well documented by its impact on the multiple communities who receive, or are the beneficiaries of, the public benefits under the franchise – These communities want to ensure that local government continues to require provision of the I-Net, local community media organizations and channels and funding for the Community Access Capital Grant program.

Finding: Certain cable franchise customer service standards are not being met – Cable subscribers indicated problems with service response, telephone response time and system outages.

Finding: There is a level of concern about the visual impact of communications technology infrastructure – A little over 40% of on-line survey respondents indicated that they were concerned about the visual impact of communications technology infrastructure in local neighborhoods.

Overall, the Community Communications Technology Needs Ascertainment that follows has determined a wealth of information that provides a solid foundation for developing initiatives and activities by the MHCRC and its partners concerning future communications technology planning to meet community needs, as well as demonstration of cable-related community needs and interests to be discussed and met as part of cable franchise renewal.