CITY OF SEATTLE DRAFT NEEDS ASSESSMENT REPORT

CHAPTER I
Regulatory Framework

A. Context

Seattle's Comcast franchise renewal process is taking place during a time of rapid technological change and regulatory uncertainty. Existing regulations were adopted prior to technological advances such as Voice over Internet Protocol (VoIP) and Internet over cable. Current communications law applies different rules to different classifications of communications services such as telecommunications, broadcast (tv/radio/wireless) and cable television, which were historically delivered over separate platforms.

Today, however, with the proliferation of digital technology, the distinctions are ceasing to exist. The technologies are, in fact, converging and all services can be delivered using packets of data bits over Internet Protocol (IP) over the same network or across multiple networks. IP separates the applications from the physical transmission medium (e.g. fiber or copper) without regard to the application. The bit packets are converted at the ends of the networks by software and electronics into a variety of applications and services using voice, video and data.

In light of these technological developments the 1996 Telecommunications Act may be out of date. The 1996 Act, which ushered in the most sweeping changes in telecommunications law since the 1934 Communications Act, may be inadequate to respond to changes in technology and it is expected that it will be reviewed by the next Congress. It is unclear if, and to what extent any, changes to the Act will affect the City's ability to regulate cable operators in the future. The City will follow legislative developments and do what it can to ensure that our citizens continue to receive the advanced services and consumer protections to which they are entitled; the City receives fair compensation for use of its right of way; and negotiates franchises that allow the City flexibility in regulating cable operators.

B. Franchise Renewal Process

1. Formal and Informal Tracks

a. General provisions

The franchise renewal process is governed primarily by federal law (47 USC § 546), which provides for both formal and informal renewal procedures, which can, and often do, run concurrently. A franchise renewal period begins three years before the expiration of a current franchise (in Seattle, January 20, 2003 through January 20, 2006) and the renewal process can be initiated by the cable operator or the franchise authority. A key element of federal franchise law is the presumption that the incumbent operator may renew its franchise.

b. Informal process
In the informal process, a city and cable operator negotiate for their mutual needs and interests and attempt to arrive at a mutually satisfactory franchise without the strictures inherent in the formal process. Congress intended that most renewals would be obtained through the informal process as are the great majority. Under the informal process the City and cable operator can reach agreement on a new franchise at any time even if the formal process has been initiated. Although the City and Comcast hope to negotiate a new franchise agreement through the informal process, the City will also fully comply with all formal procedures and deadlines imposed by federal law while our negotiations continue in order ensure the interests of Seattle residents are met should the formal process become necessary.

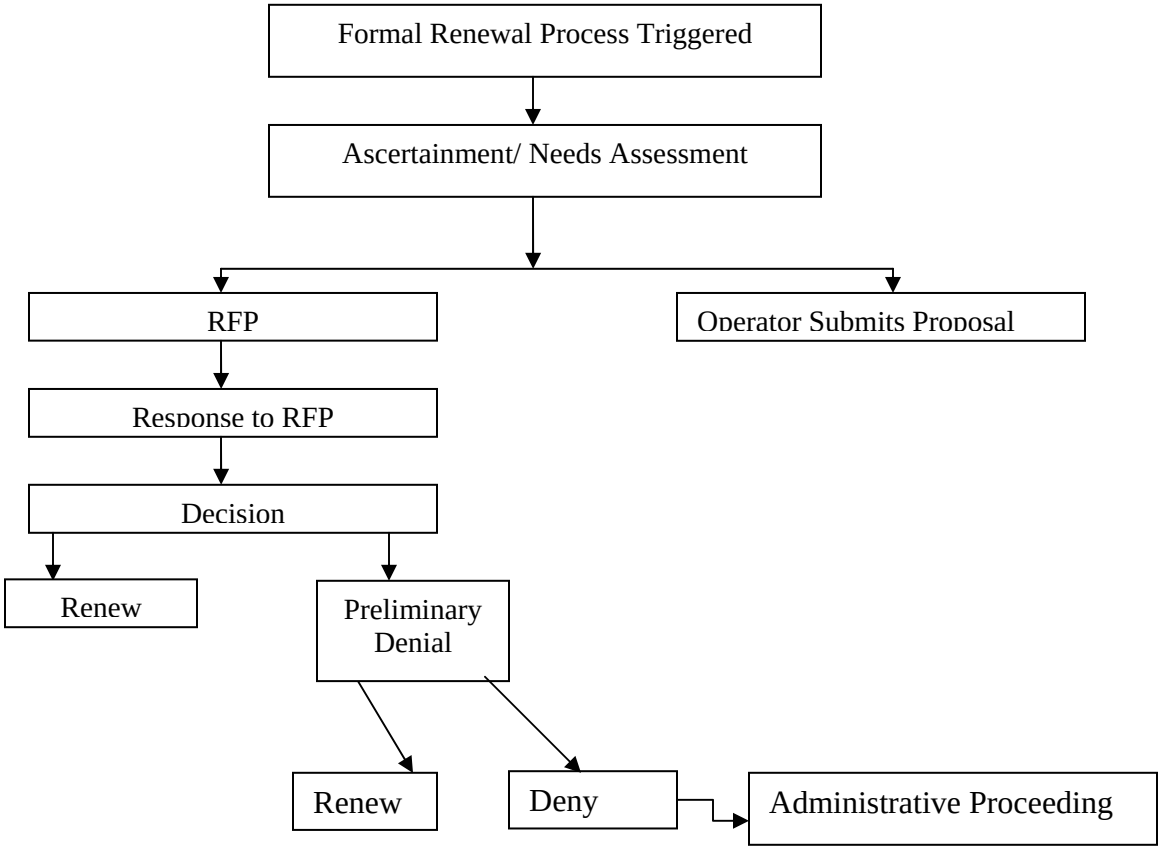
c. The formal renewal process (See figure 1)
Under the formal rules renewal is initiated by either the cable operator or the franchise authority. If a cable operator notifies a local franchise authority (LFA) of its desire to renew its franchise and invokes the formal renewal procedures, the City must within six months "…commence a proceeding which affords the public in the franchise area appropriate notice and participation for the purpose of (a) identifying the community's future cable-related needs and interests and (b) reviewing the performance of the cable operator under the franchise during the then current franchise term…" (47 USC § 546 (a). This process is referred to as an ascertainment.

Once the City has concluded the ascertainment process the cable operator may submit a renewal proposal on its own initiative or in response to a request for franchise proposal (RFRP). The proposal shall reasonably satisfy the needs and interests of the City (as determined by the City through its ascertainment), while taking into account the costs of meeting those needs and interests. Upon receipt of a proposal from the cable operator, the City must provide prompt public notice that it has received a proposal and review the franchise proposal to determine if it is consistent with the guidelines set forth in the RFRP. The City Council shall render a decision within four months as to whether to accept the proposed franchise or issue a finding of preliminary denial.

If the City Council were to deny the proposed franchise, the cable operator would have the right to request an administrative proceeding where both parties can present evidence and question witnesses. At the administrative proceeding a hearing examiner will render a non-binding determination whether the Council's decision to deny the franchise proposal was appropriately based on an adverse finding on any one the following four factors:

a. The cable operator has substantially complied with the material terms of the existing franchise and with applicable law;
b. The quality of the cable operator's service has been reasonable;
c. The cable operator has the requisite financial, technical and legal capabilities to fulfill its obligations; and
d. The cable operator's proposal is reasonable to meet Seattle's future cable-related community needs and interests, taking cost into account.

Figure 1
Formal Franchise Process



Source: City of Seattle, March, 2005

Following the decision of the Hearing Examiner at the administrative proceeding the Council may grant or deny the franchise proposal and must state the reasons for its determination in writing. The City Council, however, will not be bound by the determination of the hearing officer. If Council again denies the proposed renewal franchise, a cable operator can appeal the Council's decision in U.S. District Court or in state court.

Under federal law, the Court will conduct a review of the findings made during the administrative proceeding. The court will determine if the City Council's decision to deny renewal was justified based on a preponderance of the evidence supporting an adverse finding in any one of the four factors listed above. The court must also determine

whether the City complied with all the procedural requirements under federal renewal law.

C. Current Status of Renewal Process in Seattle:

1. Proceeding Commenced

On February 12, 2003 Comcast officially notified the City of its desire to renew its franchise. Comcast expressed its desire to reach agreement on a new franchise through informal negotiations and, at the same time, invoked the formal renewal process because it affords Comcast certain procedural safeguards during renewal. In response, on May 27, 2003 City Council adopted Resolution 30602 officially commencing the renewal proceedings, satisfying this initial procedural requirement under federal law and alerting the public and Comcast that the renewal process had officially begun. Since that time the City has developed and initiated an ascertainment process designed to determine the community's future needs and interests - as they relate to services provided over the Comcast cable system - and to review Comcast's past performance.

2. Ascertainment process

To learn what Seattle's future cable related needs and interests are, the City has been canvassing a broad cross section of residents, business people, those affiliated with institutions and non-profit organizations, and City and other government staff. The City has been pursuing a broad public process to hear from as many different user groups in as many different ways as possible. The multi-pronged approach consists of citizen surveys, meetings, and comments from individuals, elected officials, and user groups And has included a random, statistically valid survey of 1000 people, an on-line survey, and over 20 meetings.

The City is also conducting a past performance review which consists of:

- a franchise fee audit to determine if Comcast has paid all franchise fees due under the franchise;
- a technical audit of the Comcast network to evaluate the picture and sound quality, network capabilities, headend, plant maintenance records and compliance with electrical and construction safety codes;
- an audit to determine the extent of Comcast's compliance with the City's existing franchise and subsequent amendments, local and federal law, and an examination of the number and nature of complaints about Comcast received by the Office of Cable Communications.

This draft report describes the results of our ongoing community needs assessment including identification of Seattle's future cable related needs and interests (see Chapter II). The past performance review, including the franchise fee and technical audits, will be completed in spring of 2005 and will be included in the final needs assessment report.

The results of the past performance review and the identification of community needs and interests will form the basis for the City's priorities in preparation for negotiations with Comcast for a new franchise and could also determine any changes to the City's Master

Cable Communications Ordinance that may be necessary. This information will also provide Council with the information it needs in its renewal decision making process.

In the event that the City and Comcast are unable to arrive at a negotiated agreement on a new franchise under the informal process, the City will use the information gathered in the ascertainment to continue with the next steps in the formal process and issue a request for a franchise proposal (RFRP) for a franchise that would reasonably satisfy the needs and interests of the City (as determined by the City through its ascertainment), while taking into account the costs of meeting those needs and interests. Under federal law Comcast's proposal may not be denied because another operator proposes to provide the City a better package of services.

D. General Franchise Requirements Under Federal Law
Among the items that a city can require are:

- a franchise fee payment of up to 5% on gross revenues from the provision of cable services;
- channel capacity for public, educational government (PEG) access programming;
- funds for facilities and equipment to support those channels. (in excess of franchise fees);
- broad categories of programming such as Canadian programming (but cannot require specific channels or programs);
- regulations over the lowest tier "basic" rate, (but not over expanded, digital, or Internet rates);
- customer service standards beyond those required by federal law;
- privacy standards consistent with those required under federal law;
- an Institutional Network ("I-Net") communication network which is constructed or operated by the cable operator and which is generally available only to subscribers who are non residential subscribers. (47 U.S.C.A. §531(f)).
- insurance and indemnification.

Under federal law, the City cannot require:

- operating funds for PEG access;
- the provision of telecommunications or Internet service;
- specific equipment or transmission technology such as the use of fiber optics (although the City could require certain functionality) to meet community needs and interests.

E. Summary of Seattle's Current Franchise Provisions

- Annual ascertainment of subscriber preferences
- Parental control devices at actual cost
- Cable to City buildings and all schools
- Public Educational and Government (PEG) programming:
  PEG channels (10 initial 6 mhz analog allocated: (2P, 6E 2G) + 3 more when triggers are met + additional 12 digital
  Funds for operations of the public access station

Interactivity on 1 G + 1E channel
Interconnection with Millennium Digital Media and other jurisdictions
$5,000 and promotional assistance if Comcast moves location of PEG channel

- Emergency Alert System
- Senior; low income discounts (10% off cost of basic cable in franchise)
- Insurance and indemnification requirements
- Up to 3.5% in franchise fees
- Reporting requirements
- Customer service requirements.

Other benefits Seattle enjoys through other arrangements with Comcast include:

- Senior and low income discounts over and above the franchise amount.
- 500 cable modems and Internet service to community technology programs
- Customer service requirements significantly above those in the franchise
- The strongest cable privacy standards in the country.

CHAPTER II
Identification of Future Cable-Related Needs and Interests
Seattle's Process and Findings

A. Introduction

Looking at the Comcast franchise set to expire in 2006, it is clear that since its adoption in 1996, there have been significant and substantive changes in the cable industry and the role of broadband. In 1996, the Internet was not in wide use; today, broadband is virtually a necessity for business, government, and citizens. Two way services are now essential to provide information, communicate with government, consult with health providers, run emergency systems, and stay in touch with family and friends. Video services themselves have also undergone a substantial transformation from a limited number of analog channels and content, to numerous digital channels with the potential for unlimited niche content, video on demand, and high definition television. Cable operators will also be introducing Voice Over Internet Protocol (VOIP) in 2005.

These advances – and those we haven't yet imagined – are critical to Seattle's future. In addition to the importance of Seattle's image as a technology leader, the real benefits to the economy, health and welfare of citizens, and ability to connect disparate parts of the community with each other, government, and business are inestimable. We are fortunate that Comcast recognizes the importance of technology to Seattle. In an interview on October 3, 2004 in the Seattle Times, Chief Operating Officer Stephen Burke commented: "The Seattle Market is one of our best markets for new products. So we're going to roll out a lot of things there first."

B. Approach

To learn what Seattle's future cable related needs and interests are, the City has been canvassing a broad cross section of residents, business people, those affiliated with institutions and non-profit organizations, and City and other government staff. The City has been pursuing a broad public process to hear from as many different user groups in as many different ways as possible. The multi-pronged approach consists of citizen surveys, meetings, and comments from individuals, elected officials, and user groups.

The City of Seattle initiated the public process on the Comcast franchise renewal community needs and interests at the end of January, 2004, at which time the City commissioned Applied Inference and Pacific Market Research to develop and conduct a random, statistically valid telephone survey of 1000 Seattle residents (Appendix A). Since that time, the telephone survey was completed, an on-line survey posted (it is still open for comment), and a third, postcard, survey mailed to citizens who have contacted the Office of Cable Communications.

In addition, the City co-sponsored with the Citizens Telecommunications and Technology Advisory Board (CTTAB) 20 meetings with organizations and business representatives as well as numerous citizen user groups (Appendix D). The meetings ranged from groups such as the Puget Sound Alliance for Community Technology and Seniors Training Seniors to the Seattle Community Access Network and the Mayor's

Youth Council. Staff also discussed Comcast franchise renewal with the City Council at a televised meeting and also held discussions with the Mayor and executive staff. Additional public comment was obtained when CTTAB and the Council held a televised public meeting in April, 2004. The City continues to receive responses to the on-line survey, as well as written, email and telephone comments from individuals and groups expressing their needs and interests for the Comcast franchise renewal.

C. Results of the Public Process

1. Surveys

a. Applied Inference and Pacific Market Research

Beginning in January, 2004, Applied Inference and Pacific Market Research conducted a random, statistically valid telephone survey of 1000 Seattle residents about technology and the cable system. The survey had an error rate of +- 3% and 8% of those called could not answer the survey because of language barriers. The survey over sampled in zip codes with high ethnic minority populations and corrected with weighting to reflect a more accurate representation of Seattle's population.

In general, the survey confirmed that Seattle citizens value and enjoy very high levels of technology. Compared to 79% nationally, (Investor's Business Daily, January 9, 2004), 83% of our citizens have a home computer, with 91% of home computer users (76% of the total population) having Internet access. The survey indicated that 55% with home Internet have high speed broadband access (Applied Inference, September, 2004), although a recent survey by Nielsen/NetRatings (August, 18, 2004) indicates that Seattle enjoys 63% broadband access.. This compares with national figures ranging from 39 to 51% (of the lower national percentage baseline) of those with home computers who have high speed broadband access (Pew Internet and American Life Project, April 19, 2004; Nielsen/NetRatings, Inc, August 18, 2004). In this and other measures, the "findings indicate that the community's lowest income residents may have disproportionately less access to community information as technology expectations for access, and the associated costs, increase (AI)," pointing to a need and interest to maintain a strong network of easily accessible community technology centers.

Similar to national statistics, 65% of survey respondents subscribe to cable TV. When people were queried about viewing the Seattle Channel, Seattle's government channel that broadcasts City Council meetings, public affairs programs, local news and events, and cultural offerings, 56% of all respondents said they had watched the channel, with 22% watching at least once a week and an additional 19% watching at least monthly (AI). It is significant to note that between 2000 and 2004, the percentage of cable subscribers has increased from 57% to 69% (AI), and the percentage who watch once a month or more has increased substantially from 31% in 2000 to 41% in 2004. These increases indicate a strong and increasingly significant connection between citizens and government via their cable television. As with home Internet use, the disparity between those with and without cable, and their ability to connect to outside events and government, speaks to a community need and interest for affordable cable service for those most in need.

The Applied Inference survey also measured people's satisfaction with the amount of community news and found that people are, on the whole, satisfied with the level of community news. It is important to note, however, that those who do not have cable TV are less satisfied with community news. As for other elements, the digital divide exists for access to community news and substantiates the need for affordable service.

Similarly, 55% of respondents indicated their preferred access to City services is by email – even from those who do not have Internet access, and 64% said it is very important for adults to have access to a computer and the Internet. Again, this compares with national figures of 46% of 18-54 year olds whose preferred medium is Internet (InternetWeek.com, September 23, 2004).

In addition, when asked whether groups or organizations they participate in use the Internet for communication, Internet use ranged from 66% to as high as 95%. Lack of affordable cable modem service widens the digital divide for lower income populations and makes civic participation and access to government more difficult, especially in Seattle, with higher rates of technology.

The survey also queried people about the Seattle Community Access Network (SCAN), the public access network. SCAN provides facilities, equipment, and free or low cost training for individuals and groups to create and broadcast their own programming. The survey showed that 78% of respondents said they think it is important or very important for residents and organizations to have access to SCAN (AI). This response clearly indicates a community need and interest in public access television.

In regard to customer service, the survey revealed that, on the whole, Comcast customers are satisfied with their customer service. According to the study, 73% of the Comcast respondents are either satisfied or very satisfied with their service. On the other hand, however, it should be noted that 76% of Comcast subscribers had experienced a problem and those who had and attempted to work with Comcast, were significantly less satisfied (20 percentage points lower). Moreover, when compared to other cable companies and satellite dish service, Comcast video services are below the industry average and its High Speed Internet service rated only two of five on customer service and four other categories, with nothing higher than three of five (J.D. Powers, August 18, 2004). It would appear that although Seattle citizens seem to enjoy better service than other parts of the country – attributable, at least in part, to the City's Cable Customer Bill of Rights – customer service could still be improved and continues as a need and interest for Seattle citizens.

In terms of programming, almost half, or 47%, of cable subscribers surveyed indicated that they would like a la carte programming, the ability to choose their own cable package (AI). Even though it might be more costly, these respondents wanted to be able to pick and choose what they want to watch, not what Comcast prepackaged. With almost half the population willing to spend more money for a la carte programming, that would indicate both a marketing opportunity for Comcast as well as a community need and interest for such a programming option.

When questioned as to what future applications they would like to use, respondents, particularly young people, indicated a likelihood of high definition TV (HDTV), more video on demand, and remote wireless Internet connections (AI). These findings point to additional community needs and interests, with a system with sufficient broadband capacity to deliver these services.

Applied Inference also queried people about price. Fully two thirds (68%) said that rates are too high and 37% of the 350 non-subscribers said that the reason they did not have cable TV was because it is too expensive. Of great concern, 83% of digital subscribers indicated that rates are too high. Given that Comcast may become all digital within the next couple of years, it is clear that price moderation is a strong community need and interest. It is also clear that if digital is considered too expensive by 83% of the early adopters, there is a very strong community need and interest in finding a way to make digital service affordable in the coming all digital era to those who can least afford it.

The survey also asked people whether they would like to be contacted by the Office of Cable Communications to find out about their cable rights and discounts for seniors, and low income and disabled populations. This portion of the survey found that older citizens, and those with lower educational levels and incomes wished the contact, and fully 200 responded that they would. A majority of the 200 contacted were interested in senior or disabled discounts, again indicating a community need and interest in keeping service affordable.

b. On line Survey

Since being posted in March, 2004, nearly 850 people have taken the on-line survey, and the survey is still open for comment. Although not statistically valid, the on line survey provides another avenue for the community to express its needs and interests. In addition, because of the time limitations of a telephone survey, the City had more flexibility with the on line survey, and asked more in depth questions. As those responding to the on line survey have access to and are comfortable enough with computers to respond to the survey, it would be expected that cable subscribers in this group would be higher than in the general public. This was born out with 82% saying they subscribe to cable TV and 79% having high speed Internet access (City of Seattle, August 2004).

Closely paralleling the statistically valid Applied Inference (AI) survey, 58% of respondents to the on line survey said that they watch the Seattle Channel, with an additional 21% saying that they have seen it. Of those who watch the Seattle Channel, 36% watch at least once a month, and as much as 7% watch daily. Also comparable to the AI survey, the online survey found that 73% of respondents believe it is important or very important to have public access opportunities.

When asked whether they would like a la carte 65% said they were somewhat or very likely. It should be noted that this response was given even with the caveat that it would entail an additional cost. This indicates both a strong community interest as well as a profitable marketing opportunity for Comcast.

Citizens responding to the on line survey also expressed strongly held opinions about programming options they would like to see. When asked what types of programs they would like to see, 25% responded that they would like more high definition channels and almost 24% wanted more international programming, both in English and in foreign languages. Given Seattle's technology savvy and culturally diverse population, these figures would be expected and point to strong community interests

When asked about service for cable TV, only 43% said they were either satisfied or very satisfied, and 39% indicated they were either dissatisfied or very dissatisfied. These percentages are significantly greater than the AI survey, and likely reflect that people who take the on line survey are both more technologically adept and, since they took the time to take the survey, may have a particular viewpoint regarding Comcast. With the opportunity to find out what problems, if any, people had experienced, fully 44% said poor picture or sound and 48% indicating loss of picture or sound. In addition, 36% indicated they had had a long wait to receive a return message or telephone call from Comcast. These findings indicate that Seattle customers have an interest in improvements in customer service and the quality of their TV signal. These figures are comparable to the 46% of Comcast Internet subscribers who responded that they have had service outages and an additional 38% reporting slow speeds (CoS).

When asked about price, fully 78% of the on line survey respondents said that cable TV is too expensive (CoS), In addition, 73% indicated that price increases have been too frequent, too high, and/or unreasonable (CoS). Closely related, 69% of respondents supported discounts for low income elderly and the disabled.

c. Postcard Survey

In April, 2004, the Office of Cable Communications (OCC) notified people who had previously contacted OCC to inform them of the upcoming public meeting on the Comcast franchise renewal. An email was sent to those for whom the Office had an email address, and a post card sent to those without an email address and for whom there was a mail address on record. Taking advantage of this opportunity the OCC also included five broad questions related to the cable franchise (Appendix C). OCC received 45 mail back responses and six emails.

Of the 51 who responded, 75% said service was fair, poor, or bad. Additionally, many of them reported that they had other issues with Comcast since contacting the Office of Cable Communications. Even more than the on line survey, 76% of these respondents indicated that it is important to have discounts for low income seniors and the disabled.

2. Meetings

Office of Cable Communications staff and CTTAB hosted 19 meetings with citizens, user groups, government representatives, and elected officials (Appendix D). Many issues were identified by the various groups, with a significant number appearing across the diverse groups consulted. Some of the most frequently heard issues echo those heard in the surveys. Needs and interests most commonly identified include (but are not limited to):

- maintaining affordable TV service;
- providing affordable Internet;
- maintaining and enhancing the network of community technology access centers;
- preserving and expanding the public access channel;
- preserving revenue for City government to use to support e-government and its TV channel;
- additional channel capacity to meet the demand for local programming of community interest;
- ensuring sufficient bandwidth for future technologies;
- providing the option for a la carte programming;
- greater representation in both employment and programming for people of color and in multiple languages;
- choice of public and private providers of service;
- providing two way communications from remote sites to facilitate public meetings and hearings;
- static IP addresses for community organizations and institutions.

3. Public Comments

In addition to testimony at the public meeting and comments received in the discussion groups, City Council and the Office of Cable Communications received numerous emails and calls (Appendix F for a list of all the comments submitted). The comments were comparable to those expressed in the surveys, ranging from specific complaints about customer service; degradation of the quality of TV and Internet signals; opposition to censorship; unknown and unannounced bandwidth limits; and a request for closed captioning. In addition, there were several comments expressed by many of the respondents. These include:

- desire for a la carte programming;
- free or very reduced TV and Internet for low income residents, particularly to enable connection to government;
- prices have gotten too high;
- lack of competition/apparent monopoly.

D. Conclusion

It is clear from the surveys, conversations, and public comment that people in Seattle care about their cable TV and Internet. Although Seattleites are, on the whole, technologically advanced, the digital divide continues. To help bridge this divide, people in Seattle support discounts to low income populations, culturally diverse programming, and more affordable service. People also strongly wish to engage in civic life both on the Internet and by watching the Seattle Channel and public access TV. Interest is high in future applications such as high definition TV and other technologies as they become available.

CHAPTER III
Decision Framework

A. Background

The Mayor and City Council will make many decisions about components of the Comcast franchise, as well as ultimately whether to grant a franchise renewal. The City will negotiate with Comcast over a period of many months for those things the City believes meet the needs and interest of its citizens. To determine these needs and interests, the City conducted an extensive ascertainment process (see Chapter II). By integrating the results of the ascertainment with existing City policy, several principles arose that will guide decisions for the franchise renewal. These principles reflect longstanding Seattle values as well as our needs for the future. The four principles are:

- Providing for and maintaining a state of the art cable system to meet current and future broadband needs and interest of the community;
- Maintaining and enhancing community access to technology and using technology to expand civic engagement and public discourse;
- Promoting the City's interests in the health, safety, and welfare of its citizens; and
- Enhancing the lives of our citizens, particularly those most in need.

B. Principles

1. State of the Art Broadband Networks

Seattle is a dynamic City with an international reputation as a center of innovation and leading edge technology. We are home to many high technology companies and some of the most advanced thinkers in the world in software development, electronic commerce, and bio medical research and development. In addition to the private sector, City government reflects this technology leadership and employs the latest innovations in networking and communications technology to engage its citizens, keep Seattle's neighborhoods safe, and provide many critical City services.

Seattle enjoys its position as a technology leader among cities, but there are challenges on the horizon that, if not successfully met, could jeopardize Seattle's leadership position. The current environment of rapid technological development challenges the City to make sound and timely public policy decisions and implement strategies designed to ensure that the City maintains its position at the vanguard of technological sophistication. Seattle must ensure that the broadband networks serving the city remain state of the art. Failure to take action could threaten our ability to attract and retain the high tech industries that are so essential to our economy and way of life and diminish our standing as a technology center.

Because technology is so central to Seattle's economic base and to its quality of life, the City faces a clear choice: it must ensure that its citizens, businesses and research institutions have the advanced infrastructure necessary to support tomorrow's economy or risk becoming a digital "also ran." High tech industries create living wage jobs and attract intellectual and financial capital. The City has a highly educated workforce (47% of adults have college degrees), its citizens are very technology savvy and the City has

very high penetrations of home computer usage and broadband Internet connections (Over 61% of Internet users subscribed to Broadband service - August 2004 - Nielsen/Net Ratings.).

Jobs in the "information and communications cluster" (ICT, as defined by a new Report for the Office of Economic Development: Cluster Study: Seattle's Information and Communications Technologies Cluster) in 2002 generated more than $3.5 billion in annual revenues and employed 18, 000 people in the City with wages over twice the average. As the "Cluster Study" correctly points out: "…Tech infrastructure fosters innovation. Maintaining cutting edge bandwidth infrastructure attracts the software development community." If we do not ensure that Seattle maintains state of the art networks, it is possible that, despite the City's many physical and cultural amenities, high tech companies and talent will chose to locate to other communities with more advanced infrastructure.

High capacity, interactive Broadband networks -- both wired and wireless facilities -- will be as important to the future of Seattle's business, education and government sectors as roads, electricity and water were in the past. Broadband networks have the potential to offer high levels of upstream and downstream bandwidth. This bandwidth is the essential ingredient that will allow for ongoing experimentation. The wealth of Seattle's technology talent must have this level of bandwidth to develop new or enhanced applications and services using integrated layers of voice, video and data, as well as new software and hardware products. These advances will help keep the City in the forefront of technology, keep our high tech industry competitive, create jobs and allow the City to better engage with its citizens.

Advance broadband networks offer Seattle many other potential benefits; they:

- Strengthen our research institutions by facilitating real time collaboration among peers, an important consideration given Seattle's status as an emerging center of bio medical research and development. These networks improve the delivery of medical care available to our citizens and help maintain a healthy population. As recent news headlines indicate, doctors will be able to monitor heart rates, blood pressure and other vital indicators remotely over broadband connection.

- Help the City mitigate traffic congestion by facilitating the development of intelligent transportations systems. Real-time video conferencing made possible by such networks could also finally make telecommuting a more viable option in the future, reducing auto congestion and pollution.

- Enhance distance learning opportunities and allow us to educate more of our citizens and reduce the cost of education. Studies indicate a strong correlation between the quality of images and the engagement with the material and quality of learning that takes place.

- Increase entrepreneurial activities and foster small business development. It will allow small businesses to successfully compete against larger, more established companies in providing goods and services and more efficiently perform such functions as on line ordering, payment, and inventory control.

- Foster the use of technology to enhance the democratic process and allow for new ways to engage citizens with their elected officials and community organizations.

2. Community Access to Technology and Civic Engagement

Seattle places a high value on citizens having access to technology and, through technology, two way communication with government. The City is a national leader in fostering community access to technology, with such programs as the technology matching fund and community cable modem program. In addition, the City's Democracy Portal – the Seattle Channel integrated TV and website – has received national awards for excellence, and is continually improving avenues for two-way communication between government and citizens.

Like many cities, Seattle is at a crossroad regarding citizen access to technology. According to the Applied Inference survey conducted for this needs ascertainment (Appendix A), parts of Seattle are not keeping up with technology. There is a digital divide for the elderly, African Americans, citizens with disabilities, and those with less income and education. Individuals in these groups have lower technology access and literacy. Public meetings conducted for this needs assessment supported this finding that, in many cases, people do not have home Internet access because they cannot afford broadband connectivity. Ensuring equitable access to government – and the world at large – is a need Seattle increasingly faces.

Seattle also maintains a strong program of community access centers. These programs provide training, access to information and opportunities to use technology tools. Beyond that, there is a wide range of program offerings, locations and communities served. What ties Community Technology Centers (CTCs) together is Seattle's commitment to help build strong communities and to ensuring digital opportunities for all. Community technology centers are based in housing projects, human service agencies, libraries, places of worship, schools, and community centers. They serve families, youth, immigrants, single parents, job seekers, and seniors. Some provide "open access" to the public, while others are members only, students, or housing project residents. The technology services include Internet access, computer training, video production facilities, web sites and more. In many cases, the CTC's provide the only affordable opportunity for immigrants to communicate with friends and family in their native land; for others it is the opportunity for people to find out what is going in City government and in the city in general.

Currently, many of the CTC's enjoy complementary Internet service from the cable companies. In needs assessment discussions with different community groups and non-profit agencies that provide community computer access and training, they indicated a strong desire to participate in the free or reduced cable modem Internet program. If

Seattle is to bridge the digital divide, greater opportunities for convenient, inexpensive or free Internet access must become more readily available.

Another important component of community access and civic engagement is the City's website and the Seattle Channel. Currently, the Seattle Channel provides 24 hour a day video programming and Internet streaming. The Seattle Channel offers a wide variety of programming, including locals arts, news, in depth community stories, and entertainment news. More important, perhaps, the Seattle Channel hosts a monthly call in talk show with Mayor Nickels and broadcasts all City Council meetings. Programming is video streamed live and available on demand through the SeattleChannel website if a citizen is unable to watch it when originally broadcast. Seattle considers it essential that citizens be able to able to see what their elected officials are doing and to provide opportunities to make government as transparent as possible. The City needs to enhance e-democracy by providing two way communications during City Council meetings, so that citizens can weigh in on issues and have their questions answered without having to come downtown.

3. Health, Safety and Welfare

The City uses many technologies in performing its critical function of protecting and promoting the health, safety, and welfare of its citizens. To this end, the City employs many systems and programs ranging from education about public safety issues to the 911 emergency system to Homeland Security measures. The City operates emergency 911 technology to allow rapid, efficient dispatch of officers, fire fighters, and emergency medical personnel to requests for service anywhere in the city, even when the caller is unable to identify the location. A 2005 City of Seattle technology initiative includes developing a "reverse" 911 system which will call citizens in areas affected by emergencies, and it can be expected in the not too distant future that such a system could be expanded to include email notice. Similarly, the City has a system for automatic call up of City employees for emergency response and also has fiber between City Hall and the City's Emergency Operations Center to enable live broadcasts during an emergency.

Technology is increasingly providing the means by which citizens manage their medical care. Whether consulting Internet based medical websites, emailing physicians with medical questions and updates, or ordering prescriptions on line, technology is playing an increasing role in promoting the health of our citizens. Locally, on very practical matters, for example, Seattle King County Public Health provides 24 hour information in text and streaming form of topics ranging from obtaining a food worker's permit to rat control, flu news, and autopsy reports.

Recent print and television news articles describe the increasing role of telemedicine. In Seattle, intensive care patients are being monitored by remote cameras to provide continuous observation by limited medical staff. Doctors in India are reading x-rays for American patients and reporting instantly to hospitals and medical practices short on trained radiologists. Additionally, technology is providing the means by which doctors can operate on patients thousands of miles away by directing sophisticated computers and surgical equipment. Maintaining networks with sufficient broadband capacity is essential to expanding on these medical frontiers.

The Seattle Channel is a leading resource for information on public safety and welfare issues. The Seattle Channel produces and makes available to the public as streaming video a variety of programs dealing with public safety issues. These include programs about earthquake and other emergency planning, police information, domestic violence, and vehicle relicensing. Some of these programs are available in multiple languages. The City's own fiber network between City Hall and the Emergency Operations Center will permit the City to broadcast live coverage in an emergency. In addition, the cable system includes an override that posts emergency information for all cable viewers.

The City is also leading the nation in Homeland Security efforts. In 2003, Seattle was chosen by the Department of Homeland Security to participate in Operation Topoff 2, the most comprehensive emergency preparedness exercise ever undertaken. Topoff presented the City with a mock crisis, enabling the City to determine the adequacy of emergency preparedness in Seattle and the greater region. As a result of Topoff, the City and region have installed a new radio system that interconnects responder organizations in all the local jurisdictions in the region. The City has also been the recipient of over $8 million in federal Homeland Security funds for additional projects such as wiring fire stations and providing software for the Emergency Operations Center.

Other applications of technology to modern fire fighting include using computers to determine the fastest route to the fire. Similarly, fire fighters can use laptops on site to view building plans to be able to pinpoint a fire's location and how best to access the fire and safely remove occupants.

4. Enhancing the Lives of Our Citizens

Technology plays a varied role in enhancing the lives of our citizens. In addition to providing entertainment, cable television and the Internet are able to promote citizen awareness and engagement with government, thereby helping to engage citizens. To help ensure access to such information, the City has an extensive community access network (see number 2 above), maintains a vibrant government channel and has negotiated a program of cable discounts for low income seniors, disabled people, and those living in subsidized housing. In 2005, the City will be embarking on a program, SeaStats, to develop GIS information that citizens can readily access from home. SeaStats might include information such as neighborhood parks, schools and community centers, as well as crime statistics, employment, and health data. Citizens can now, or will soon be able to, pay utility bills, parking tickets, and reserve parks facilities on line.

Technology also provides a strong employment base in Seattle and contributes significantly to our tax base. The City's Office of Economic Development, for example, indicated that 7600 people are employed in Seattle in biotech/medical devices industries for 60 % of the sector's regional work force. Local technology companies support the City's economy directly through taxes and indirectly through new construction as well as rehabilitating older buildings.

Technology is playing an increasing role in education. Families in the Seattle public schools can go on line to find information ranging from lunch menus to inclement weather school closures to transcripts and test scores. At the college level, the Washington network of colleges, universities and community colleges offers many classes via distance learning, using the Internet and video on demand (VOD). Because of projected increases in matriculation rates and cost and distance issues for on-site attendance, the college system expects to meet much of projected demand through distance learning. University of Washington officials have indicated the need for increased bandwidth to be able to meet this need and have determined that for VOD the greater the bandwidth, the longer people will watch a given program.

Networked homes, which will also require greater bandwidth, can be expected to become more integrated into the fabric of every day life. Home security systems and nanny cams are no longer considered high tech, and people are beginning to have "intelligent" home appliances that, it is predicted, can monitor everything from refrigerator contents to blood pressure. Home networking via Wi-Fi has become commonplace as have personal video recorders and VOD.

C. The Role of Cable

Cable company networks, along with Qwest's digital subscriber lines (DSL), are one of two current broadband networks serving Seattle residents. It is expected that the Comcast cable network will contribute toward meeting the future technology of Seattle and its residents. Comcast has picked Seattle as one of its first cities to roll out advanced two-way services, such as video on demand and video conferencing that are leading the way toward future applications. Seattle strongly encourages Comcast to develop a network that is sufficiently robust to support continuing innovation and provide the City and its residents timely access to the latest advances in networking technology. Moreover, its network should be adaptable and upgradeable to meet the future information, communication and entertainment needs and interests of Seattle's businesses and residents.

We also hope that Comcast will continue to assist the City in bringing the benefits of broadband technology to those who can least afford it. In order to ensure that our city does not become a place of technology haves and have nots, it is important to ensure affordable cable -- TV, Internet, and whatever else the future holds – for those most in need.

Although no one can predict with certainty what applications and services will become available or when, we know that we can look forward to significant advances in the years to come. It is in everyone's interest that Comcast work with the City to identify, develop and use services made possible by its network to increase our economic vitality, promote civic engagement and help create a City where technology is integrated into the daily lives of its citizens to improve their quality of life.

Chapter IV
Conclusion

Seattle is a vibrant city in the vanguard of technology. Through the needs ascertainment process, the City heard from thousands of citizens and government officials about future needs and interests that can be addressed by the cable system. In the thousands of comments received, there was a commonality in underlying principles. Citizens, staff, and elected officials articulated their core values as:

- Providing and maintaining a state of the art cable system to meet current and future cable related needs and interests of the community;
- Maintaining and enhancing community access to technology and using technology to expand civic engagement and public discourse;
- Promoting the health, safety and welfare of our citizens;
- Enhancing the lives of our citizens, particularly those most in need.

In line with these core values, citizens articulated a wide variety of needs and interests, with several recurring across the spectrum of participants. Based on these comments, Seattle's needs and interests are:

- Support for greater discounts for those least able to pay – low income seniors and the disabled - and applying those discounts to Internet as well as television;
- A state of the art system capable of delivering advanced services to Seattle and its citizens that foster economic development and community;
- Choice in programming and providers from both the public and private sectors: citizens have indicated that they would like competitive choice both in their cable operator and in the programs they watch;
- Continued expansion and enhancement and interactive capacity for the SeattleChannel/Democracy Portal;
- Diversity in cable operator work force to better reflect Seattle's population;
- Lower cost TV and Internet;
- Additional channel capacity to meet the demand for local programming of community interest;
- Support for the public access TV channel;
- More channel space and bandwidth for public purposes.

The City will use the findings of the needs assessment comments and the components of the performance audit as we negotiate with Comcast for our new franchise. We will try to obtain as many of these benefits as we can, bearing in mind the federal mandate to consider reasonable costs and our desire to keep cable rates as low as possible. As the technical and financial audits become available, we will post them -- and any updates -- on line at www.seattle.gov/cable.

Appendices*

A. 2004 Information Technology Residential Survey, Applied Inference University of Washington, Pacific Market Research, November, 2004

B. City of Seattle Cable Television and Cable Internet Survey, posted March, 2004

C. City of Seattle Mailer, April, 2004

D. Summaries of Public Meetings on Franchise Renewal 2004

*****Available upon request and on line at www.seattle.gov/cable.