



The Societal Benefit of Fiber to the Premises (FTTP)

By Jeffrey K. Waltke
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Introduction

Telecommunications providers across the world have been burdened with resolving the dilemma of ever-increasing demand for additional bandwidth to both residential and business premises. For many, the clear cut solution is replacing older and restrictive copper networks with an all fiber network reaching from the central office all the way to the customer premises. While the build-out of an all-fiber network is certainly a formidable enough subject of discussion on its own, this paper briefly examines the beneficial implications of a Fiber to the Premises (FTTP) network on society as a whole. Specifically, this essay will touch upon the FTTP enabled potential to raise quality of life, the marriage of Green (good for the environment) solutions, and an abbreviated description of some key service offerings which benefit society.

Quality of Life and FTTP

While realizing the benefits of FTTP in end-user applications and cost-effective significance may be easy to perceive, understanding FTTP implications on one's way of life requires a deeper look into the subject. No matter your definition of life quality enhancement, FTTP is sure to accommodate your requirements. Whether you measure satisfaction in time spent with your family or fewer taxes spent on local government projects, FTTP measures up on the positive side of the equation. Due to the unparalleled reliability of broadband over fiber to the home, physically transporting oneself to the point of the interaction to shop, communicate with friends, or conduct meaningful business is no longer a necessity. These opportunities are at least facilitated by the virtual ability of a FTTP broadband connection to network involved parties efficiently. The following illustration supports this point. By creating near identical levels of business Internet connectivity to the home enables telecommuting from the home to a worker's place of business; or to work as if physically located at the employer's location. This option reduces automobile commuting congestion, while encouraging improved productivity, with increased personal time for workers as an individual advantage. By keeping the worker's automobile parked, telecommuting reduces required repairs on the roadway system; resulting in a positive offset to municipal infrastructure maintenance costs and that should translate to lower tax overall. Keeping the automobile parked also decreases vehicle expense and increases disposable income utilization. This is just one example of how overlapping positive outcomes of advantage may be realized in quality of life as facilitated by FTTP. The limit of benefit is limited solely to the extent of our cumulative imaginations.

Green Telecom

"Treat the earth well: it was not given to you by your parents, it was loaned to you by your children. We do not inherit the Earth from our Ancestors; we borrow it from our Children."

Although the source of this quote is unknown, it is widely thought to be grounded in an ancient Native American proverb. Regardless of its origin, this quote encompasses the values of Green Philosophy. These philosophic principles rely on the certainty that if we support our existence with unsustainable resources, our existence is ultimately doomed.

Continuing with the automobile as a central focus in this discussion, we illustrate the Green advantages of virtual communication. Finding environmental advantage to FTTP is easily accomplished. However, to provide a continuing and relatively thoughtful direction, we will continue to feature the automobile in this essay as a powerful example of what a broadband enabled FTTP network may accomplish for society.

A major disrupter facing our environment is the use of fossil fuels to propel our access to acquire needs and perceived wants. The most obvious and prominent challenge for automobile use in today's society is the reduction of pollutants being expelled into the air from fossil fueled vehicles. If FTTP were to be utilized universally, society could measurably reduce fossil fuel dependence to the benefit of the nation and the world by achieving a majority of needs based goals virtually. Individual areas of interest and personal need could be significantly satisfied from a virtual platform of ubiquitous "pollutant free" communication.

From a municipal focus, increased information centralization and accessibility offered by FTTP could plausibly diminish or eliminate the need for multiple public service centers, increase efficiency of public service delivery, reduce municipal costs by centralizing operations data, and take city vehicles for meter readers or other data gatherers off of the city's roadways. Broadband and FTTP can truly change the world we live in.

Service Offerings

FTTP will allow for a vast number of high quality services to be accessible by consumers. Some contemporary examples follow:

IPTV

IPTV utilizes computer based IP packets to provide high resolution, lag-free, enhanced entertainment equal to, or better than, the product performance by traditional TV cable systems. Telco's with an FTTP network are poised as serious competitors to traditional cable companies as the leading source of consumer television via an IPTV delivery system in the upcoming years. "Global IPTV subscribers will rise to 103 million in 2011, expanding at a whopping Compound Annual Growth Rate (CAGR) of 92.5% up from 3.9

million in 2006, iSuppli predicts. This translates into \$39.1 billion in revenue, up by a factor of more than 40 from \$960.5 million in 2006.”

“103 mln IPTV subscribers globally by 2011,” [www.itfacts.biz/index.php?id=P8443], May 2007.

- **Telemedicine**

Telemedicine is the opportunity to network the medical community into a multi-faceted and efficient network of intelligent communication for the benefit of those needing medical assistance in the short and long-term. Such a system connects doctors with each other, doctors with patients and various support environs. Speed in delivery of healthcare can often times be the difference between life and death. Broadband FTTP bridges the gap of need on a local basis, or worldwide.

- **Video on Demand (VOD)**

VOD systems allow users to select and watch video and clip content as part of an interactive television system. VOD systems either "stream" content, allowing viewing in real time, or "download" it in which the program is brought in its entirety to a set-top box before viewing starts. The latter is more appropriately termed "store and forward". The majority of cable and Telco based VOD systems use the streaming approach, whereby a user buys or selects a movie or television program and it begins to play on the television set almost instantaneously. Today, Video on Demand refers not only to set-top boxes, but also to computers, cell phones, Blackberries, or any device capable of accepting the content over a network.

- **High Definition Content**

The HD world requires more bandwidth, and FTTP can provide exactly that, and at very high capacity. Telecommunications companies developing this technology plan to support 100+ Mbps bandwidth per home. Many view fiber optic cabling as the best technology for high-speed, high-quality residential area networking, eventually replacing both telephone and cable TV lines. The technology is beginning to take hold, with Verizon's FiOS FTTP service for example, currently being offered in markets around the United States.

Both local and Federal municipalities across the nation utilize HD broadband service to both streamline their work responsibilities and increase productivity. For example, a multiple frequency band is licensed specifically for systems are currently used for public safety personnel, first responders, and homeland security applications.

Summary

The benefits of Fiber to the Premises for society can be measured on many different scales. As you have seen in this short narrative; whether you are a family, business, municipality, an environmentalist, or an entertainment enthusiast, FTTP provides what you need to enhance your life. In the coming years, after we realize many of these benefits, FTTP will likely be seen as one of the great innovations of our generation.