

A STUDY OF U.S. FTTH AND BROADBAND CONSUMERS

FOR THE FTTH COUNCIL - JULY 2009

FTTH IMPACT ON WORK FROM HOME

FOR THE FTTH COUNCIL



FTTH
council | fiber to the home

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***FTTH IMPACT ON WORK FROM HOME
2009 FTTH AND GENERAL BROADBAND CONSUMER STUDY***

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I. INTRODUCTION AND METHODOLOGY

In April/May 2009, RVA LLC conducted surveys of broadband subscribers for the purpose of comparing consumer usage patterns and attitudes among and between fiber to the home (FTTH) subscribers and those who receive their broadband access services over other technologies. The first survey included more than 600 FTTH subscribers who were drawn from a national online panel of more than 50,000 consumers. Consumers were asked questions about type of Internet used, and those who noted that they have direct fiber connections were given a much longer follow-up survey that included a series of perceptual questions. These FTTH respondents were also asked to test and report their current Internet speeds (via www.speakeasy.net/speedtest).

A second survey was conducted among an online panel - exclusive of FTTH and dial-up users. This comparative sample, representing more than 600 DSL and cable modem, as well as other non-FTTH, broadband users, were asked questions similar to those in the fiber study.

Similar studies have been conducted among FTTH users for three years, providing data and timelines for review and comparison of longer term trends.

The results and findings of the study are published in three documents: "FTTH Performance and Satisfaction," "FTTH Marketing," and this volume, "FTTH Impact on Work from Home". The additional volumes are available on the FTTH Council website www.ftthcouncil.org, with the "FTTH Marketing" document available to Council members only until a later date.

II. EXECUTIVE SUMMARY

FTTH users report that they work from home an average of two additional days a month, specifically because of their FTTH connection. This has wide-ranging implications for economic efficiencies and environmental sustainability, particularly with regard to the impact of telecommuting on energy consumption and transportation infrastructure. Certain occupations such as sales consultants, managers and business owners are especially likely to work from home.

FTTH users also noted that their connection allows more flexibility in work schedules. Speed and reliability were mentioned as primary benefits of FTTH that facilitated more work from home.

A total of 17% of FTTH users say they operate a home based business. Of these home business operators, 77% say that their business is more efficient or would not be possible without FTTH.

The findings in this survey offer further evidence to support the conclusions of an FTTH Council commissioned study that was conducted by PricewaterhouseCoopers (PwC) in 2008, which predicted that upgrading America's telecommunications networks to end-to-end fiber will deliver substantial environmental benefits that will outweigh the costs of deployment in as little as six years. In its methodology, PwC applied only one prospective benefit of deploying FTTH networks, that beyond 2010 an estimated 10 percent of the working population with FTTH service would telecommute an average of three days a week (or one day a month, on average, for all FTTH users) because bandwidth improvements will make working from home more feasible – with benefits being calculated from savings estimates related to reduced gasoline consumption and savings on road maintenance and construction.

The PwC estimate was based on a 2008 FTTH Council survey measuring actual FTTH subscriber behavior, in which FTTH users reported working an additional one day a month from home because of their high speed broadband service. With that figure increasing to two days a month in the 2009 survey, and FTTH market penetration continuing to grow at a robust pace, it appears that the original PwC estimate may be conservative and that FTTH deployment will be a significant factor in reduction of carbon emissions and the greening of the North American economy within the next few years.

III. REVIEW OF KEY FINDINGS

A. FTTH IMPACT ON WORK FROM HOME

On average, FTTH users say they worked two additional days from home per month because of FTTH. As may be expected, the increase in work from home is not uniform among subscribers. In the study, a total of 17% said they worked significantly more from home (12 more days per month). This behavior averages to nearly two more telework days per month for all FTTH users – up from about one more telework day per month in 2008.

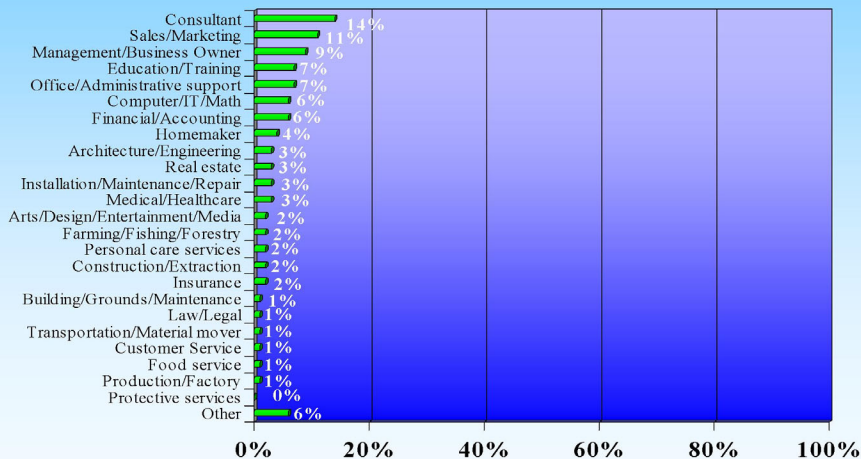
2009 Research Shows FTTH Users Work Nearly Two Additional Days Per Month At Home Due To FTTH



Days worked from home increased:

- Nearly 17% work more from home directly because of FTTH – an average of 12 days more

Work From Home By Occupation



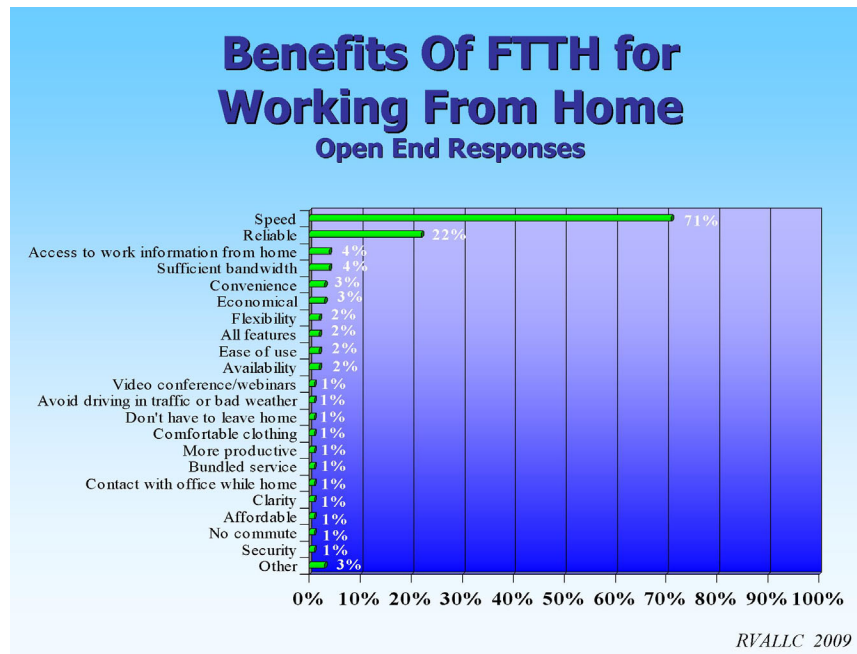
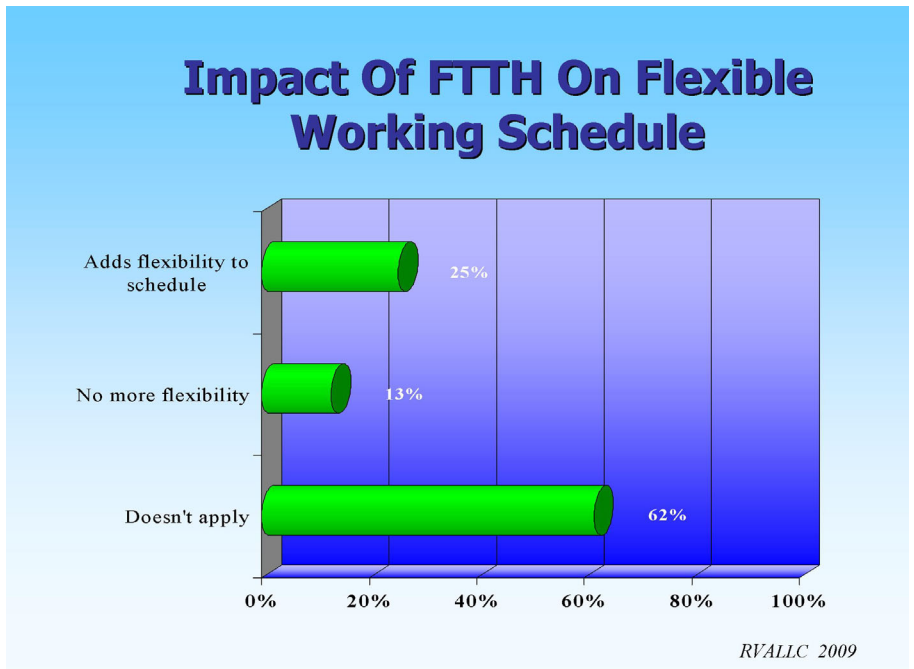
The study confirmed that certain occupations are most likely to work from home. Consultants, sales and marketing personnel, and management/owners were reported to be the most likely occupations for work from home.

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Survey respondents were also asked if FTTH added more flexibility to their work schedule, such as allowing more flexible hours to avoid rush hour traffic. A total of 25% of the respondents indicated that the use of FTTH does add to such flexibility.

Among those working from home, a total of 20% said they

utilized a virtual private network to communicate with their office server.



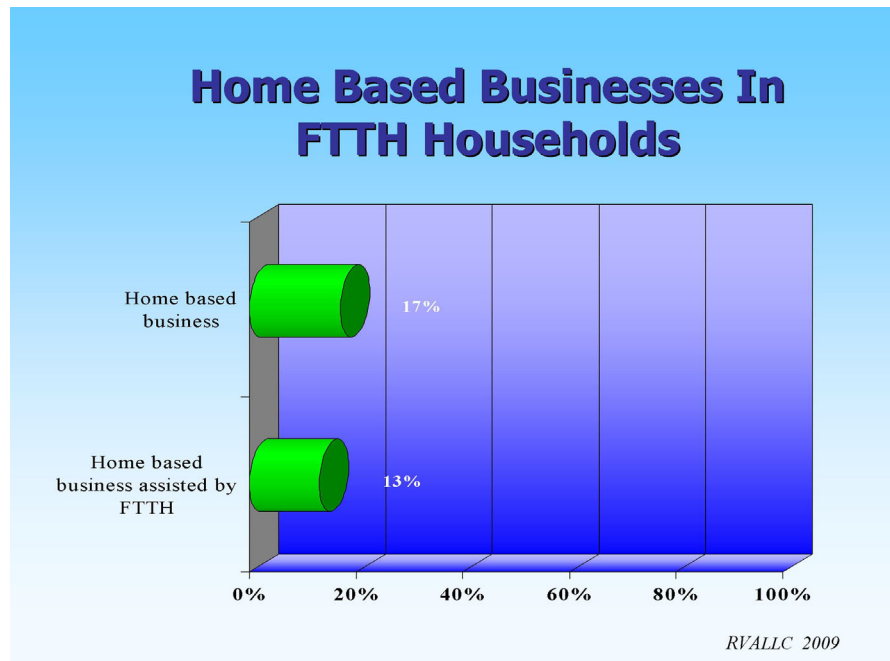
In response to an open ended question, respondents stated that speed and reliability were the major benefits of FTTH for working from home.

B. FTTH IMPACT ON HOME BASED BUSINESSES

A total of 17% of the FTTH user sample noted that someone in the household operates a home-based business. More than three-quarters (77%) of home-based business operators noted that the business was either more effective or would not be possible without FTTH. Thus in total, 13% of FTTH households operate a home-based business that in some way benefits from FTTH.

The percentage saying they operate a home business on their FTTH system (17%) is up from 11% in 2008. The

percentage saying their home based business is more effective or would not be possible without FTTH (77%) is up from 65% in 2008.



IV. CONCLUSIONS AND RECOMMENDATIONS

- FTTH users work (on average) an additional two days a month from home. This has profound implications to the US environment and infrastructure, and should be highlighted by FTTH providers. Increased market penetration of FTTH is demonstrated to advance telecommuting opportunities and thereby reduce private and public expenditures associated with energy and transportation.
- Certain occupations that are less likely to require a physical presence to perform a job are especially likely to work from home. These occupations include marketing, management,

and consulting. FTTH communities and developments could effectively target market such occupations.

- Besides working from home, one-quarter of FTTH users report that the service adds flexibility to their daily schedule such as being able to avoid commuting during rush hour periods.
- Users report that higher speeds and more reliability are the most important aspects of FTTH that facilitate more work from home.
- A total of 17% of FTTH users report a business in their home. More than three-quarters of these businesses were said to be more efficient because of FTTH or not possible without FTTH. The importance of home based businesses to economic development should be highlighted in FTTH communities, especially in these trying economic times.