



FTTH Worldwide Market & Technology Forecast, 2006-2011

EXECUTIVE SUMMARY

It's been almost three decades in the making, but fiber to the home (FTTH) is finally emerging into the mainstream and is set to transform the telecom environment worldwide over the next decade. FTTH represents the first major upgrade to the access network since the deployment of cellular infrastructure in the 80s and 90s, and like cellular, it is likely to have a deep impact on the entire supply chain, including technology vendors and network operators.

Over the next 15 to 20 years, copper access networks worldwide will be largely replaced by a fiber access network, creating massive opportunities for vendors, network builders, and service providers. The most important catalyst for this change is a growing perception that copper access networks will soon no longer be able to meet the ever-growing consumer demand for bandwidth, driven mainly by the Internet, IP, and the many services running over it. At the same time, competition to move customers onto complex service packages that include video is leading some to conclude that they must be first to deploy fiber, pre-empting or frustrating future competition.

This environment has led to the beginnings of a mass migration to fiber in several countries, notably Japan, Sweden, and the U.S. They will be joined in the next year or two by China, France, South Korea, and the Netherlands, among others, and ultimately every city in which consumers are ready to pay for higher performance and richer services.

However, the transition to FTTH raises a whole range of complex questions. Can the high cost of deployment really be justified? What technologies best meet requirements? And will incumbent telcos dominate construction of fiber networks as they dominated construction of the last great transition to digital communications networks?

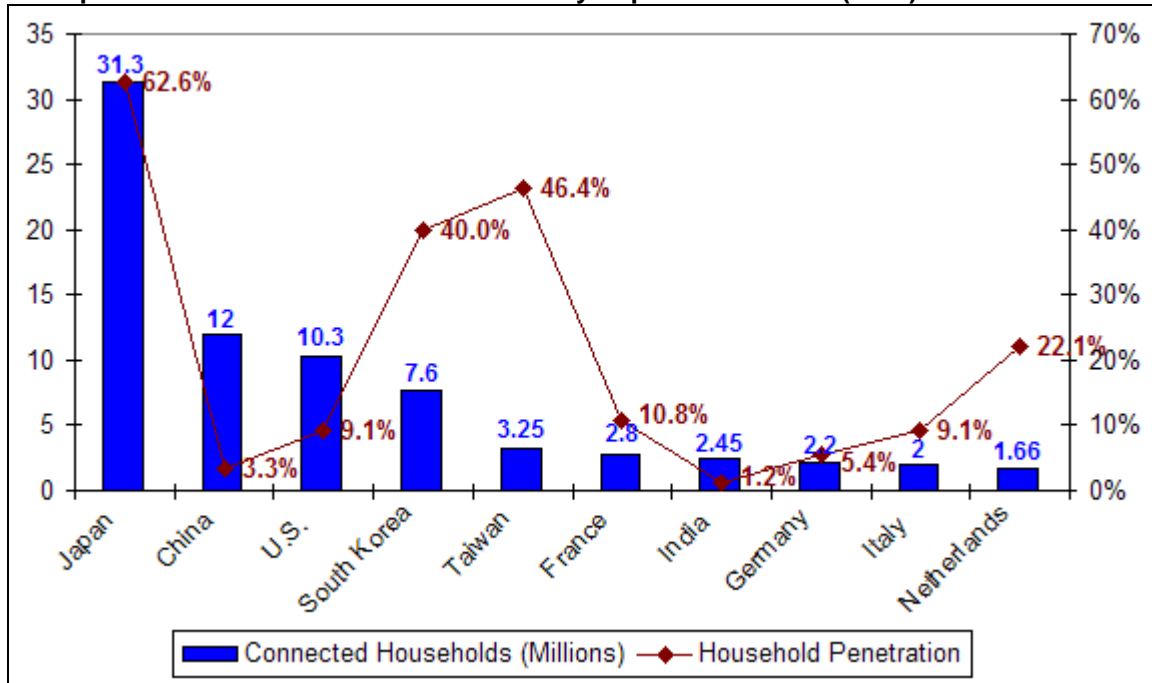
FTTH Worldwide Market & Technology Forecast, 2006-2011 addresses these and other questions, providing a comprehensive global view of the transition to FTTH. The report is based on a detailed analysis of current broadband markets, the shape of demand, and the key technologies.

The report provides a complete analysis of FTTH's market prospects, including:

- An overview of developments in all emerging fiber markets
- Case studies on pioneering fiber providers and the catalysts for their proposed or actual networks, including KT, NTT, Verizon, and four municipal network builders
- A detailed analysis of the two major controversies in the transition to FTTH: active versus passive optical approaches, and incumbent versus municipal network builders

- A comprehensive assessment of the various factors that can encourage or frustrate development, including the cost of construction, the cost of equipment, the impact on operating expenditures, the impact of housing construction, regulatory and government policy, and the impact of new services and demand
- A complete forecast of FTTH growth by region, type of technology, and type of builder

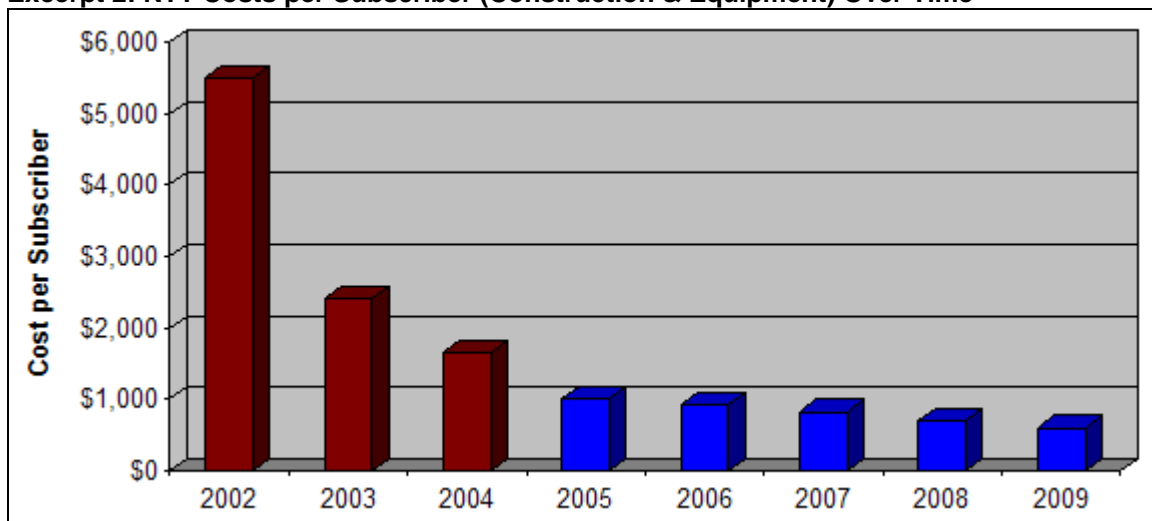
Excerpt 1: FTTH Households & Penetration by Top Ten Countries (2011)



Source: Heavy Reading

Along with a comprehensive market forecast, the report delivers an in-depth analysis of the costs involved in FTTH deployment, including construction and equipment costs, as well as projected operating expenses. Case studies of key FTTH deployments shed valuable light on the costs that operators are now facing with FTTH, and how those costs are likely to change in coming years.

Excerpt 2: NTT Costs per Subscriber (Construction & Equipment) Over Time



Source: NTT East; costs for 2005-2009 are estimates

From an architectural point of view, no clear winner has yet emerged in early fiber deployments. Choices are determined by a wide variety of factors, including type of building connected, geography, strategy, local regulation, legacy networks, and more.

FTTH Worldwide Market & Technology Forecast, 2006-2011 describes the key competing technologies, divided into two main categories – active fiber architectures, typically active Ethernet (though this can be a misnomer), and passive fiber architectures, usually known as passive optical networks (PONs).

Excerpt 3: Types of Fiber Deployment

FIBER TO THE...	DEFINITION
Home (FTTH)	Includes fiber to both individual houses and to apartment blocks
Apartment (FTTA)	Includes fiber from the basement switch to the apartment itself
Building (FTTB)	To an office/apartment block, but not to each floor, desk, or apartment
Premises (FTTP)	In other words, to any kind of building
Dormitory (FTTD)	Usually on college and university halls of residence
Node (FTTN)	Up to about 1,500 meters from the premises
Curb (FTTC)	Up to about 150 meters from the premises, but not in the final drop
"Whatever" (FTTx)	Up to any point in the network further than the central office

Source: *Heavy Reading*

Report Scope and Structure

FTTH Worldwide Market & Technology Forecast, 2006-2011 is structured as follows:

Section I is an introduction to the report, with complete report key findings.

Section II defines the various types of FTTH, and looks at two of the key debates in the FTTH market: whether FTTH will be dominated by passive or active optical network technology, and whether it will be built on open-access principles – available on a wholesale basis to all service providers – or as a closed network, with access restricted to or controlled by the builder.

Section III examines the main catalysts and barriers to FTTH, including, among many other factors, a detailed view of costs and an examination of the major demand drivers. These are augmented by a number of short case studies that look at the early experience of pioneers grappling with these issues.

Sections IV, V, and VI look at the major regional markets of Europe, North America, and Asia, respectively. These sections offer a detailed description of who is building and delivering FTTH and where; they also include some longer case studies on both incumbent and alternative providers of FTTH services.

Section VII sets out a global forecast for the number of FTTH households from 2005 to 2011, sub-dividing the market by major regions, technologies, and provider types, and dwelling types.

The report is essential reading for a wide range of industry participants, including the following:

- **FTTH technology suppliers:** How will demand for FTTH progress in coming months and years? Which regions are going to see the most FTTH buildout activity, and which network operators will be leading the way? Which technology choices are builders most likely to make? Are your products and marketing messages in line with customer plans and expectations? Are there significant gaps in your product line that need to be addressed to meet future demand for FTTH solutions?
- **Other equipment suppliers:** How will demand for your products be affected by FTTH deployment plans? Which technologies are emerging as the most likely winners for tomorrow's access networks? Is your company in position to take advantage of those anticipated changes?
- **Network operators:** How do your plans for FTTH deployment compare with those of your competitors? Does your access strategy deliver the best cost-control option for your network, or are there other alternatives that will deliver greater efficiency? How do your projected costs for FTTH deployment match up with the rest of the industry? What is the competitive threat posed by FTTH from other operators?
- **Investors:** Which technologies are emerging as the winning solutions for FTTH, and which companies are the leading providers of those solutions? How will FTTH affect profitability for the telecom service sector in the coming months and years?

FTTH Worldwide Market & Technology Forecast, 2006-2011 is published in PDF format.