Global Market Outlook Report

Fixed Broadband Subscribers 2017-2023

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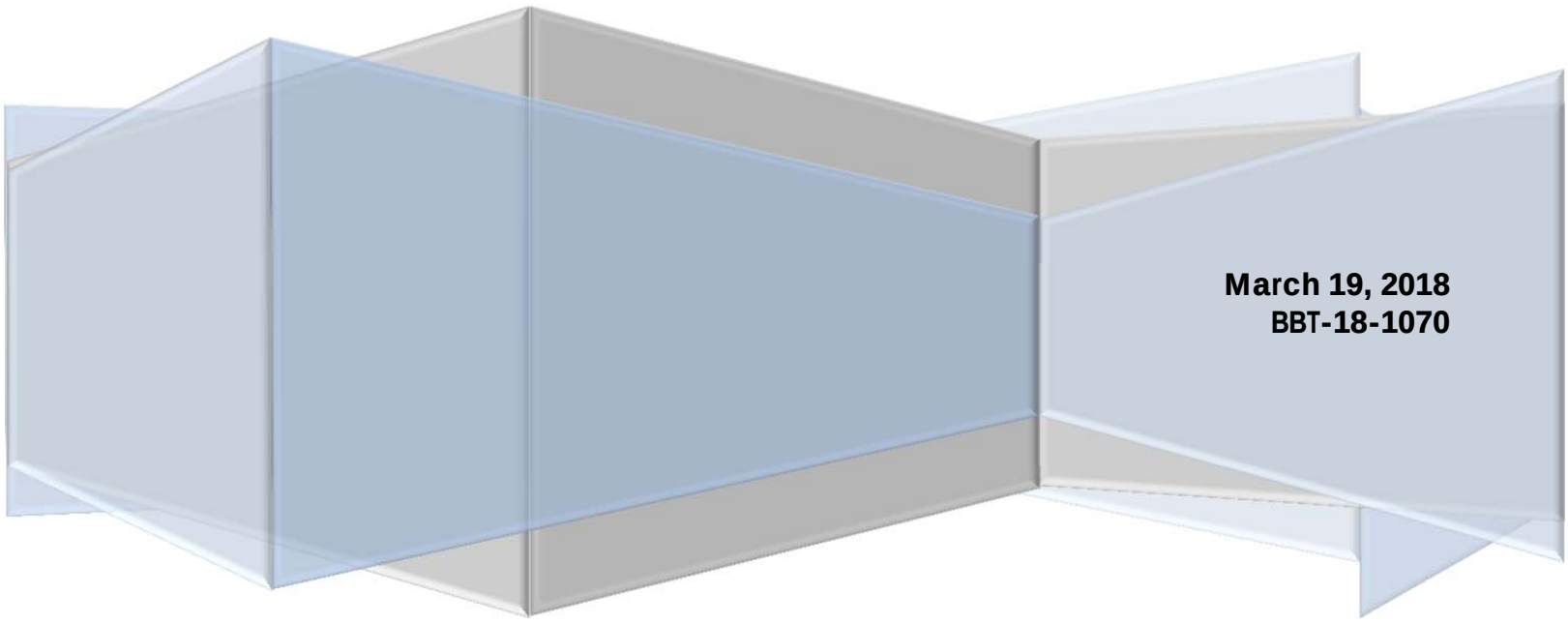

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Supplemental Excel Spreadsheet

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Each page provides the following information:

- Total Broadband Subscribers
- Total DSL Subscribers
- Total Cable Modem Subscribers
- Total FTTx (FTTH + LAN) Subscribers
- Total Other (includes Satellite, PLC, FWA)
- Broadband Penetration by Households
- Subscribers by Speeds
- Country Specific Data

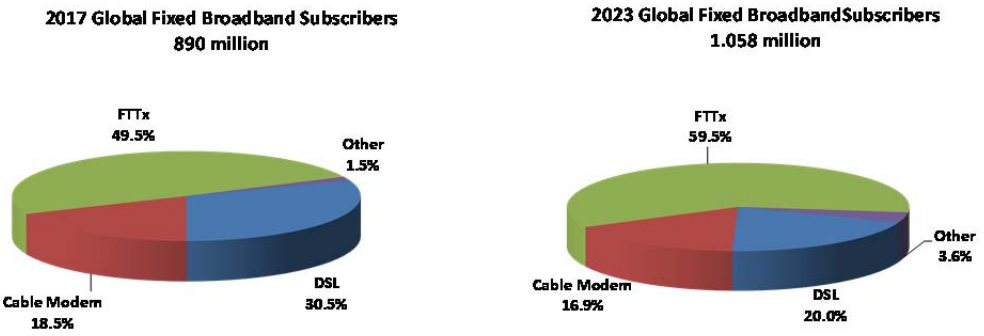
Executive Summary

Global fixed broadband subscribers are expected to grow from 890 million at the end of 2017 to 1.058 billion by the end of 2023, representing a CAGR of 2.9 percent. Global penetration of households is expected to reach 52.6 percent by 2023, up from 47.5 percent at the end of 2017.

Global Fixed Broadband Subscribers by Type is shown in Figure 1. DSL is no longer the dominant broadband technology as operators across all regions shift their spending towards FTTH networks to address the growing demand for more bandwidth. In Asia Pacific, FTTH surpassed DSL subscribers during 2014, while the shift is expected in North America by 2021. DSL is expected to remain the dominant broadband technology within EMEA during the forecast period – primarily in Western Europe, as both Eastern Europe and the Middle East & Africa region have been more aggressive in their FTTH strategy. Within CALA, Cable will be the dominant technology.

By 2023, FTTx subscribers will account for nearly 60 percent of all fixed broadband subscribers, while DSL will represent 20 percent. As expected, FTTx will offer the strongest growth opportunity at 6 percent CAGR.

Figure 1: Global Fixed Broadband Subscribers by Type, 2017 vs. 2023



Source: broadbandtrends

We expect to see an increase in subscribers in the "other" category – this would include satellite broadband, as well as fixed wireless access – which is primarily being delivered via LTE and going forward – 5G.

Broadband speeds are also expected to rise dramatically with nearly 36 percent of subscribers receiving speeds of 100 Mbps or greater by 2023, up from 10 percent in 2017. Despite an industry push towards Gigabit speeds; they are only expected to contribute 2.5 percent of total subscribers by 2023, with the strongest growth found in 500Mbps-1Gbps segment.

Mobile broadband delivered over LTE networks along with emerging 5G networks remain the biggest threat to fixed broadband, particularly in markets where penetration is low (emerging markets); mobile broadband speeds are comparable to fixed; and where mobile broadband pricing is on par with fixed broadband.

Services that require a reliable and consistent broadband connection, such as streaming video, 4KTV, whole home networking and Smart Home services will continue to play key roles in the continued growth of fixed broadband – offering new opportunities for fixed broadband operators to innovate in packaging and pricing.

About this Report

This Market Outlook Report provides a comprehensive forecast and analysis for global broadband subscribers.

This report provides details on broadband subscribers with the following segmentation:

- By Region (Asia Pacific, CALA, EMEA and North America)
- By Technology Type (DSL, FTTx, Cable, Other)
- Penetration of Households by Region
- Broadband subscribers by Speed Tier
    - 0-10Mbps
    - 10-25Mbps
    - 25-100Mbps
    - 100-500Mbps
    - 500-1Gbps
    - 1Gbps +

The forecast foundation is built using country specific data provided by the ITU and other sources. This includes the following statistics: population, housing, access lines (residential and business), PC Penetration, current internet and broadband subscriptions and GDP data.

The proportion of Internet subscribers that will migrate to broadband access is then forecast using a model which contains three ranges: high-range, most likely, and low-range. Penetration rates are calculated for each region based on typical broadband tariffs, and assumptions are made for when these penetration levels are likely to be reached. The proportion of the broadband access market share of the various access technologies is also modeled based on coverage, competitive advantage, and service provider strategies.

Demand for broadband access is highly price-sensitive. The penetration rates referred to above are modeled using an estimation of price elasticity of demand in each region.

Sanity checks are made based on quarterly subscriber data, historical growth rates, availability, and service provider earnings reports.

This 28-page report contains (30) Figures and (2) Tables and includes a detailed excel spreadsheet. It is included as part of Broadbandtrends Continuous Information Service, or is available on a stand-alone basis for $1795(USD).

For more information about our services, or to order this report, please contact us at 540.725.9774 or via email at sales@broadbandtrends.com. Additionally this report may be purchased online at http://www.broadbandtrends.com

About Broadbandtrends LLC

Broadbandtrends LLC is an independent market analysis and consulting firm specializing in the coverage of service provider transformation activity across the network, business and services segments. In addition, Broadbandtrends offers unparalleled coverage on the growing impact of broadband on the digital economy.

Broadband specific coverage is focused on the ubiquitous connectivity of ultra-broadband (both fixed and mobile) infrastructure, services and regulation; Connected Home, Multiscreen/OTT video, Smart Cities and IoT. Our goal is to provide unbiased, accurate and dependable research that will help drive tangible results for our clients.

For more information about our services and experience, please visit www.broadbandtrends.com.

About the Author

Principal Analyst - Teresa Mastrangelo

Teresa Mastrangelo, Founder, brings 31 years of telecommunications experience to Broadbandtrends LLC. She is regarded as one of the leading analysts covering fixed and mobile broadband infrastructure and services along with network transformation strategies.

In her role, Teresa works in an advisory position to equipment manufacturers, service providers, financial analysts and venture capital firms to identify emerging trends, new market opportunities and advise on product positioning, market development, and business plans. Her custom work includes Competitive Assessments and Market Entry Strategies, Product Portfolio Assessments, Market Validation Studies, Webinars and White Papers.

She has been able to successfully leverage her extensive product management, product marketing and strategic planning background to bring an unmatched level of expertise to her market research and analysis.

She is an invited speaker at industry events around the world, including the Broadband World Forum in Europe and Asia, and is frequently quoted in trade and business publications such as Washington Post, San Jose Mercury, BusinessWeek, Smart Money, New York Times, Wall Street Journal, Network World, and Lightwave. In addition, she contributes blogs and articles for many publications and sites.

Prior to founding Broadbandtrends LLC, Teresa worked for RHK as the Program Director for RHK's Broadband Network Strategies program, where she had responsibility for the development of global market research and analysis of broadband infrastructure and services; as well as circuit to packet migration and VoIP. Prior to RHK, Teresa held senior level product marketing and product management with Cisco Systems, Advanced Fibre Communications (now part of Tellabs) and NEC America, and Appalachian Power as a communications engineer.

Teresa was awarded her BS in Electrical Engineering from Virginia Polytechnic Institute in 1987. Post graduate work includes The Management Institute at Roanoke College as well as executive programs at Penn State University.