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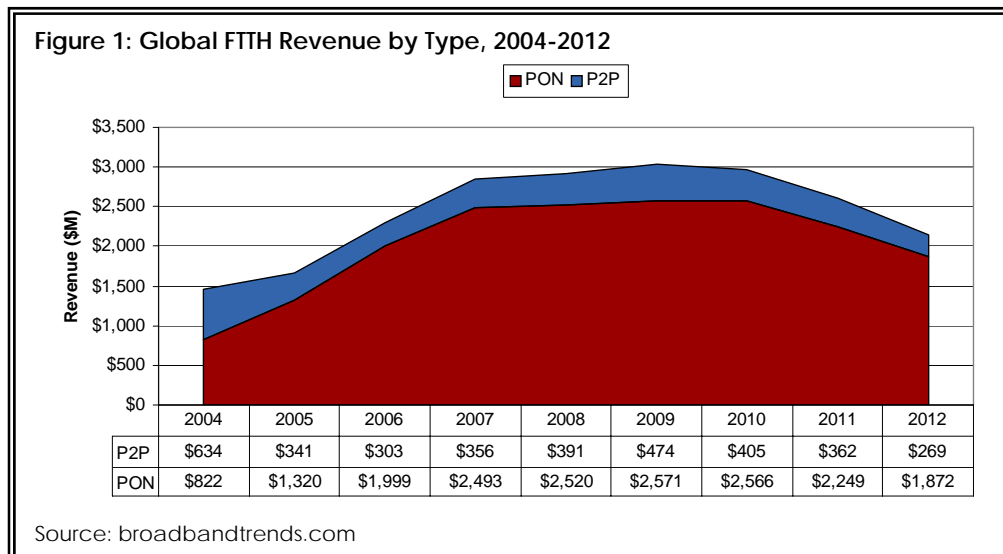
Featured Research

Market Outlook Report: FTTH Equipment Market Begins to “See the Light”

Broadbandtrends.com recently published their global forecast for FTTH Equipment and Subscribers. Major report highlights include the following:

- ▶ Global FTTH Systems Revenue is expected to reach its peak value of \$3.0 billion in 2009
- ▶ PON Systems revenue will dominate the global FTTH Market throughout the forecast period
- ▶ GPON will overtake EPON revenue by 2009 and shipments in 2010
- ▶ Asia Pacific will consume the largest portion of FTTH equipment through 2011, when North America takes over
- ▶ North America share of FTTH subscribers will grow from 10 percent in 2006 to 22 percent by 2012
- ▶ Nearly 170 million homes will be passed by FTTH by 2012

The Global Fiber-to-the-Home (FTTH) market is currently entering a period of growth as an increasing number of Tier 1 operators across Asia Pacific, EMEA and North America deploy FTTH networks on a large scale. Additionally, demand for higher bandwidth, particularly in support of multi-stream HDTV IP-TV video services; strong competition from cable and alternative operators; escalating costs to maintain copper infrastructure; continuing innovations and cost reductions in optical infrastructure; increasing FTTH interoperability activity, as well as the ability to converge all services onto a single network, is helping to reinforce the attractiveness of FTTH for many operators. As shown in Figure 1, PON systems will experience the strongest growth, and account for greater than 85 percent of total FTTH¹ systems revenue, throughout the forecast period. At the present time, total FTTH systems revenue is expected to reach its' peak value during 2009, before experiencing downward pressure, primarily due to declining price points.



¹ This does not include other fiber-based architectures such as FTTN or FTTC

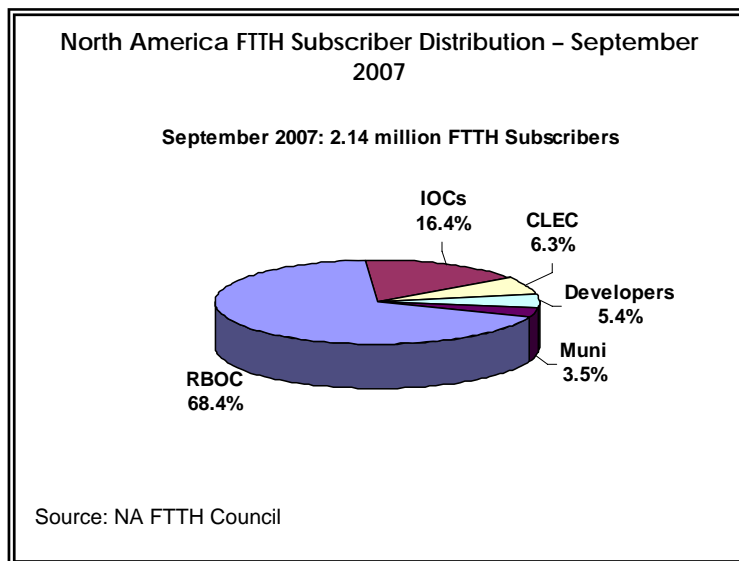
This 63-page report contains (53) Figures, (13) Tables and includes a detailed excel spreadsheet. It is included as part of broadbandtrends.com continuous information service, or is available on a stand-alone basis for \$3995(USD). For more information about this report, please contact us at sales@broadbandtrends.com.

Check out all of our research at <http://www.broadbandtrends.com/Research.htm>

Industry News

North America FTTH Council Says 2M FTTH Connections – Show Us the DATA!

At the North American FTTH Council Annual Meeting, it was announced that FTTH connections now exceed 2 million (2.14 million to be exact) at the end of September 2007. According to the research, FTTH subscribers were distributed as shown with Verizon accounting for the majority of subscribers, at 1.44 million. If this is in fact true, then Verizon will have nearly doubled the number of net additions over 2Q07. While we believe that Verizon will announce strong growth in FTTH, we are doubtful that it will have grown at those levels. We also find it very interesting that both Verizon and Non-Verizon FTTH subscriptions are growing at the same rate (60 percent) and that both make up the same percentage of total broadband lines (13 percent).



While we are aware that we will be called out for criticizing this data, we continue to believe it is too aggressive and they continue to be evasive as to the actual data that makes up these numbers.

According to the latest data, non-RBOC FTTH subscribers grew 60 percent over the numbers reported by the FTTH council back in April 2007. To put it in perspective – this means that non-RBOCs FTTH subscribers have grown from 436,141 to 702,038 (266K net adds) in just six months. SureWest is the single largest non-RBOC FTTH network, and they are only growing at an average of 1200 subscribers per quarter.

Another data point that is questionable is the 369 FTTH providers with an average of 1902 subscribers each. This is an interesting data point given the fact that nearly 50 percent of the IOCs deploying FTTH have less than 5,000 access lines (average line size = 2800) and it is doubtful that they are supporting greater than 60 percent of their access lines on FTTH. While we agree with the operator distribution: 184 IOCs, 71 CLECs, 61 Developers and 39 Muni/PUD, we don't agree that FTTH deployment numbers are that high, particularly for developers.

Finally, vendor shipment data into North America does not even come close to supporting this kind of growth.

If I am wrong – let me know. But more importantly show me the data. And while it is too early to report quarterly subscriber numbers – we predict FTTH subscribers to be around 1.8 million at the end of 3Q07.

Conference Highlights: 2007 Broadband World Forum Europe

Broadband World Forum (BBWF) Europe took place October 8-11 in Berlin, Germany. IPTV was again a big theme as a number of operators including Deutsche Telekom and Telenor discussed how important video will be to driving broadband revenue in the coming years. In fact, the ability to "monetize" broadband was discussed in a number of sessions as operators move beyond the deployment phase of broadband. However, along with this discussion came the realities of home networking, ability to scale the network and most importantly the ability to ensure both Quality of Service and Quality of Experience of multiple services.

Regulatory issues remained in center stage, particularly as the European Commission gets closer to proposing new regulations on how EU states apply telecom regulation (more on this subject below).

From a vendor perspective, most majors were represented, but ZTE and Huawei definitely had some of the largest and well-staffed booths at the event with ZTE being a lead sponsor for the event this year. Both companies made it clear that EMEA is an important region to the growth of their businesses.

Some notable announcements included the following:

- ▶ NEC introduced its Service Convergence Integrated Platform (SCI Platform) that enables VoIP and multimedia services, by bundling all functions necessary such as SIP server, an operation & maintenance server, and service enablers, into a compact, all-in-one set.
- ▶ NEC also launched two new additions to its AM3100 Series MSAN (Multi-Service Access Node) product range – the AM3110 and AM3160 for deep fiber applications such as FTTN, FTTC and FTTH. The platforms support POTS, VDSL2 as well as GPON.
- ▶ Alcatel-Lucent announced its Mobile Evolution Transport Architecture (META). The META architecture enables mobile network operators (CDMA/EV-DO, GSM/UMTS and WiMAX) to aggressively expand the scale of their networks to more efficiently and cost effectively support the transport of voice and data traffic from the cell site to the core.
- ▶ Alcatel-Lucent also announced the next-generation of its access network management portfolio, the 5520 Access Management System (AMS) which supports the entire Intelligent Services Access Manager (ISAM) product portfolio for both DSL as well as fiber-based access networks.

European Commission Set to Propose New Regulatory Framework November 13

After numerous consultations, the European Commission is set to propose its new regulatory framework for telecom reform on November 13th. The first major part of the reform will be to reaffirm the need for effective competition on the telecom markets in Europe and make sure that national regulators are even better equipped to deal with competition problems. As such, the Commission plans to strengthen the role of the National Regulatory Authority (NRA) under the new rules. One of the plans to give the NRA the ability to apply "functional separation" to the incumbent operator when other remedies have been tried, but have failed to deliver the desired regulatory outcome.

A second major area of work is the establishment of a single market for telecom operators and users, which includes the creation of a European Telecom Market Authority (similar to the FCC in the US). According to the commission, "the ETMA will allow a true and effective partnership between expert regulators and the Commission. The national regulators through the new European Telecom Market Authority will contribute to this partnership their expertise and experience. For its part, the Commission will contribute the authority it derives from its powers under the Treaty to build a real internal market."

The telecom reform package will likely enter into force in early 2010.

Occam Networks Acquires Terawave's GPON Assets

On Thursday September 27, 2007, Occam Networks announced its acquisition of certain assets of Terawave Networks including its GPON and Metro Ethernet Product Portfolios. Occam will pay Terawave \$3.4 million in cash, forgive bridge financing of up to approximately \$1.9 million and assume certain liabilities and purchase commitments. The acquisition will fill a major gap in Occam's product portfolio, by adding a much desired FSAN-compliant GPON solution, but perhaps more importantly, providing opportunities for Occam to expand its market opportunities beyond North America. Additionally, the acquisition allows Occam to assume the current licensing agreements in place with Ikanos and Mindspeed as well as a strategic partnership with Fujitsu UK (FTEL), which all have the potential to generate significant future revenues.

Mergers, Acquisitions, Funding

- 2Wire Acquires Kenati Technologies (October 16, 2007)
- BlackArrow announces funding; unveils solution (October 15, 2007)
- MOBIVOX Rings up \$11 Million in Funding (October 11, 2007)
- Verimatrix Raises \$5M (October 4, 2007)
- Occam to Acquire GPON Products from Terawave (September 28, 2007)

Selected News Highlights (September 25 to October 18, 2007)

- DS2 Introduces 400Mbps Powerline Communications Technology (October 18, 2007)
- Iceland's Síminn selects Alcatel-Lucent for GPON (October 11, 2007)
- NSN Wins Rural Broadband Project at BSNL (October 11, 2007)
- Belgacom selects Alcatel-Lucent for VDSL2 FTTN (October 10, 2007)
- More than 40 Products Pass HomePlug AV Certification (October 10, 2007)
- Wal-Mart to sell Hughes Broadband Services (October 9, 2007)
- Zhone Adds to EFM and Ethernet over Copper Product Portfolio (October 9, 2007)
- Neuf Cegetel Selects Alcatel-Lucent for GPON (October 8, 2007)
- Movial Unveils IP Converged Quintuple Play
- Ruckus Wireless Picks Up a Couple of Big Wins
- Hanaro uses Cisco for 100Mbps HFC Broadband Service (October 4, 2007)
- Telenor Launches WiMAX (October 2, 2007)
- Alloptic Picks up another Cable FTTH Win
- Wave7 Adds Compact OLT To Trident7 Product Line (October 1, 2007)
- Telecom Italia Deploys ECI for Rural Broadband (October 1, 2007)
- eAccess and Softbank form WiMAX Strategic Alliance (September 26, 2007)

Next Issue: November 12, 2007

Highlights from Telco TV 2007 and new Research Reports!

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