First Mile

Europe Reaches the Million-Subscriber Mark for Fiber

By year-end 2007, European network builders had passed nearly 5 million homes with fiber and broken the "magic barrier" of 1 million subscribers.

These numbers were announced at the FTTH Council Europe conference by Roland Montagne of IDATE, the research and consulting firm that the Council commissioned to provide an overview of fiber deployments. Unlike the FTTH Council in the US, the European Council collects statistics for both fiber to the home and fiber to the building. Inside an FTTB building, services are typically distributed to individual housing units over twisted pair or coax. Fiber-to-the-node (FTTN) deployments were not included in the study.

IDATE identified 201 FTTH/B projects in Europe, including 88 new initiatives since June 2005. Table 1 shows significant European FTTH/B and VDSL deployments at year-end 2007.

As in 2005 and 2006, the majority of the fiber projects (61.2 percent) were initiated by municipalities or power utilities. However, alternative operators are increasingly involved in FTTH/B deployments, accounting for 21.4 percent of the projects. At the end of 2007, the five largest alternative operators (Fastweb, B2, Iliad/Free, Neuf Cegetel and T2) had more than 470,000 subscribers among them – nearly half of all European fiber subscribers.

There were 1,005,402 FTTH/B subscribers in the 31 European countries surveyed and around 4.9 million homes/buildings passed. The total of homes and buildings passed grew by 79 percent in the 18 months ending December 2007, while the number of FTTH/B subscribers grew more slowly, at 23 percent.

IDATE identified 201 FTTH/B projects in Europe, including 88 new initiatives since June 2005.

Most subscribers (86 percent) are still concentrated in Sweden, Italy, Norway, the Netherlands and Denmark. However, major operators in France (France Telecom and Iliad/Free) and in Eastern Europe (Telekom Slovenia and Orange in Slovakia) launched their first commercial FTTH deployments during 2007.

Many European incumbents are still committed to FTTN+VDSL architectures, including Deutsche Telekom (Germany), Belgacom (Belgium), Eircom (Ireland), KPN (Netherlands),

Significant European FTTH/B and VDSL deployments at year-end 2007

Country	Operator	Type	Homes/ Buildings Passed	Notes
Denmark	EnergiMidt	Power utility	50,000	
	DONG Energy	Power utility	100,000	
France	Iliad/Free	Alternative operator	241,000	
	France Telecom/ Orange	Incumbent	146,000	
	Neuf Cegetel	Alternative operator	120,000	
	Numericable	Cable operator	2,000,000	Includes FTTLA and FTTB
Iceland	Reykjavik Energy	Power utility	15,000	
Italy	Fastweb	Alternative operator	2,000,000	
Germany	Deutsche Telekom	Incumbent	8,000,000	VDSL
Switzerland	Swisscom	Incumbent	1,800,000	VDSL
Belgium	Belgacom	Incumbent	1,800,000	VDSL
Sweden	B2	Alternative operator	390,000	
Norway	Lyse	Power utility	110,000	
Netherlands	KPN	Incumbent	500,000	VDSL
	ReggeFiber	Civil Engineering	200,000	

IDATE report on some of the largest European deployments.

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TDC (Denmark), Telecom Italia (Italy) and Swisscom (Switzerland). But others, such as Telefonica (Spain) and Telenor (Norway), have announced plans to deploy FTTH in the near future. Some VDSL deployers, like KPN, are already deploying FTTH on a small scale.

GROWTH RATES VARY AMONG COUNTRIES

Even among European FTTH leaders, there were differences in deployment rates. Denmark, Norway and the Netherlands surged ahead between June 2006 and December 2007, increasing the number of homes passed by 139 percent, 104 percent and 161 percent respectively and consolidating their dominant position in the FTTH market. Italy and Sweden, which were also FTTH pioneers, slowed their deployment rates during the same period (28 percent and 22 percent respectively). France, which is just beginning commercial deployments, showed a 547 percent growth in homes passed in 2007.

Sweden and Norway lead Europe in terms of penetration rates, with 44.8 percent and 60.6 percent respectively.

Active Ethernet is still the dominant technology in European FTTH/B deployments, especially in the Nordic countries. Iliad plans to deploy fiber to 4 million homes using Active Ethernet (241,000 homes have already been passed), and Telekom Slovenia made the same choice.

However, PON technologies, mainly GPON, are being deployed by several major players, including EnergiMidt in Denmark, the Government of Asturias in Spain, France Telecom and its subsidiary Orange Slovakia.

BARRIERS AND PROMISING SIGNS

Europe lags behind the US (with 2.9 million FTTH subscribers) and Japan

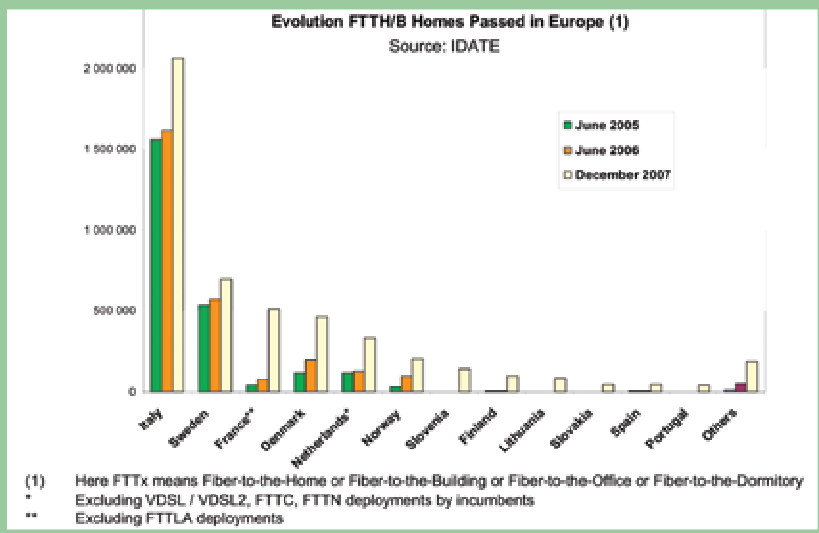
Penetration rates in top European FTTH markets

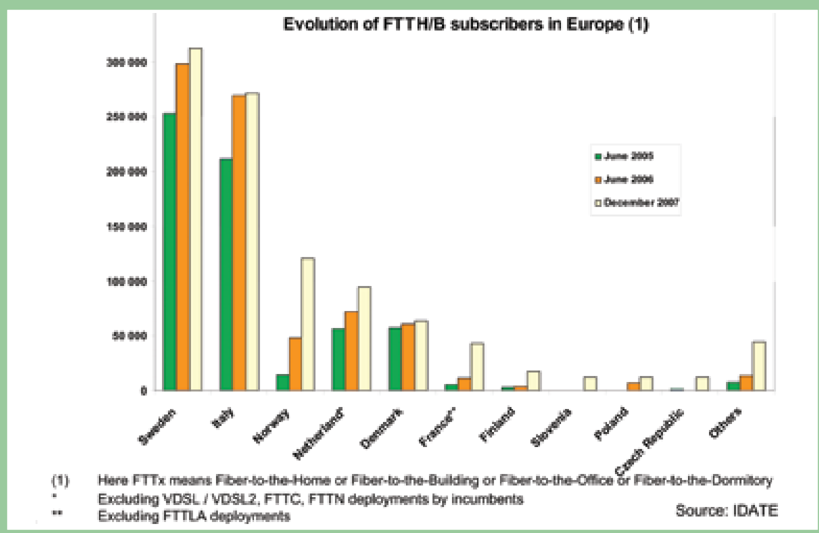
Sweden	44.8%
Italy	13.2%
Norway	60.6%
Netherlands*	28.6%
Denmark	13.7%
France**	8.5%
Finland	18.1%
Slovenia	8.7%

Source: IDATE

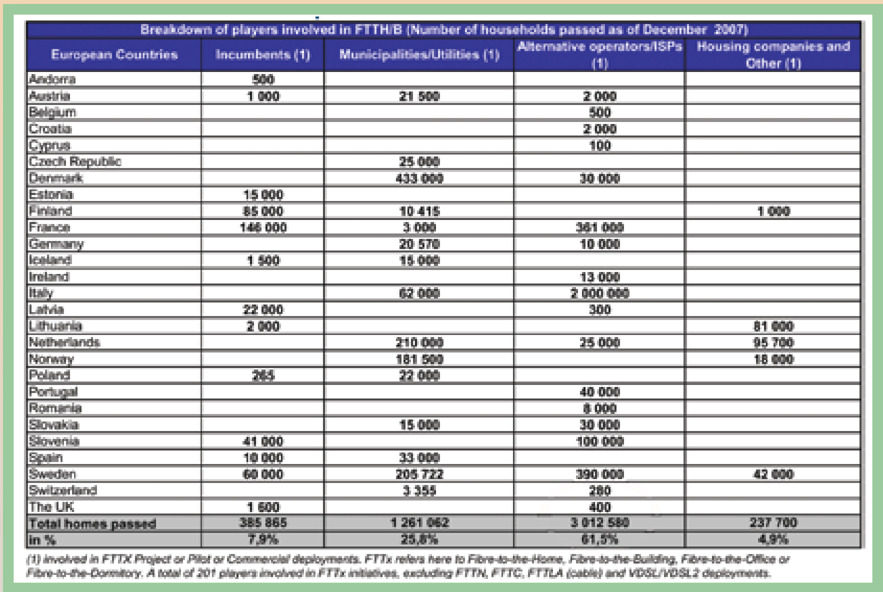
* excluding VDSL

** including Numericable FTTB subscribers





Within the past year France moved up several places in homes passed by fiber, according to IDATE compilations. But the builds are so new there that the number of subscribers has lagged.



Breakdown of players involved in FTTH/B (Number of households passed as of December 2007)				
European Countries	Incumbents (1)	Municipalities/Utilities (1)	Alternative operators/ISPs (1)	Housing companies and Other (1)
Andorra	500			
Austria	1 000	21 500	2 000	
Belgium			500	
Croatia			2 000	
Cyprus			100	
Czech Republic		25 000		
Denmark		433 000	30 000	
Estonia	15 000			
Finland	85 000	10 415		1 000
France	146 000	3 000	361 000	
Germany		20 570	10 000	
Iceland	1 500	15 000		
Ireland			13 000	
Italy		62 000	2 000 000	
Latvia	22 000		300	
Lithuania	2 000			81 000
Netherlands		210 000	25 000	95 700
Norway		181 500		18 000
Poland	265	22 000		
Portugal			40 000	
Romania			8 000	
Slovakia		15 000	30 000	
Slovenia	41 000		100 000	
Spain	10 000	33 000		
Sweden	60 000	205 722	390 000	42 000
Switzerland		3 355	280	
The UK	1 600		400	
Total homes passed	385 865	1 261 062	3 012 580	237 700
in %	7,9%	25,8%	61,5%	4,9%

(1) involved in FTTX Project or Pilot or Commercial deployments. FTTx refers here to Fibre-to-the-Home, Fibre-to-the-Building, Fibre-to-the-Office or Fibre-to-the-Dormitory. A total of 201 players involved in FTTx initiatives, excluding FTTN, FTTC, FTTLA (cable) and VDSL/VDSL2 deployments.

Since the beginning of large-scale fiber deployments, European incumbents have accounted for less than 10 percent of homes passed. Most European fiber networks are built by opportunistic alternative carriers ("competitive" in American terminology). This compilation comes from IDATE.

(with 11 million FTTH/B subscribers), and IDATE identified several of the reasons for the gap:

- In European cities, most people live in multiple-dwelling buildings, and building access is problematic.
- Outside the cities, the business case for fiber is weak.
- The regulatory landscape is still uncertain.
- Mechanisms for competitors to share the cost of building common infrastructure have not yet been worked out.

Still, IDATE found many signs that European fiber deployment was accelerating in 2007:

- Three major city networks in Germany have announced ambitious FTTH rollouts.
- In the UK, the government may intervene to promote the deployment of FTTH despite the reluctance of the main British players.
- Large incumbents such as Telefonica and Telenor have announced rollouts of FTTH in the near future, and others that began with VDSL are now launching, or considering launching, FTTH.
- Infrastructure companies such as Dutch civil engineering company Reggefiber or H20 Networks in the UK (which is negotiating to deploy FTTH through sewers to several English towns) are planning to play leading roles in FTTH deployment.
- Municipalities and utilities all across Europe are deploying open access FTTH networks. Municipalities will be also key players in helping other deployers share civil engineering costs. **BBP**

The total of European homes and buildings passed by fiber grew by 79 percent in the 18 months ending December 2007. However, the number of subsubscribers has grown more slowly, by only 23 percent, because marketing efforts have ramped up more slowly.