FTTH situation in Europe

At end 2007 the "magic" barrier of 1 million FTTH/B subscribers has been passed in Europe and we reached nearly 5 million Homes Passed. Nevertheless FTTH is still concentrated to only a few countries as Europe remains far behind leaders such as Japan and the US.

As in previous years, IDATE has been commissioned by the FTTH Council Europe to give an overview of the FTTH deployments in Europe at end 2007. To date, IDATE has identified **201 FTTH/B[1] projects** in Europe of which **88 are new initiatives** since June 2005.

Significant European FTTH/B & VDSL deployments at end 2007

Countries	Players		Home/Building passed (end 2007)
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 FTTLA & FTTB	2 000 000
Iceland	**Reykjavik Energy**	Power utility	15 000
Italy	**Fastweb**	Alternative operator	2 000 000
Germany	**Deutsche Telekom**	Incumbent/VDSL	8 000 000
Switzerland	**Swisscom**	Incumbent/VDSL	1 800 000
Belgium	**Belgacom**	Incumbent/VDSL	1 800 000
Sweden	**B2**	Alternative operator	390 000
Norway	**Lyse**	Power utility	110 000
Netherlands	**KPN**	Incumbent/VDSL	500 000
	Regge Fiber	Civil Engineering	200 000

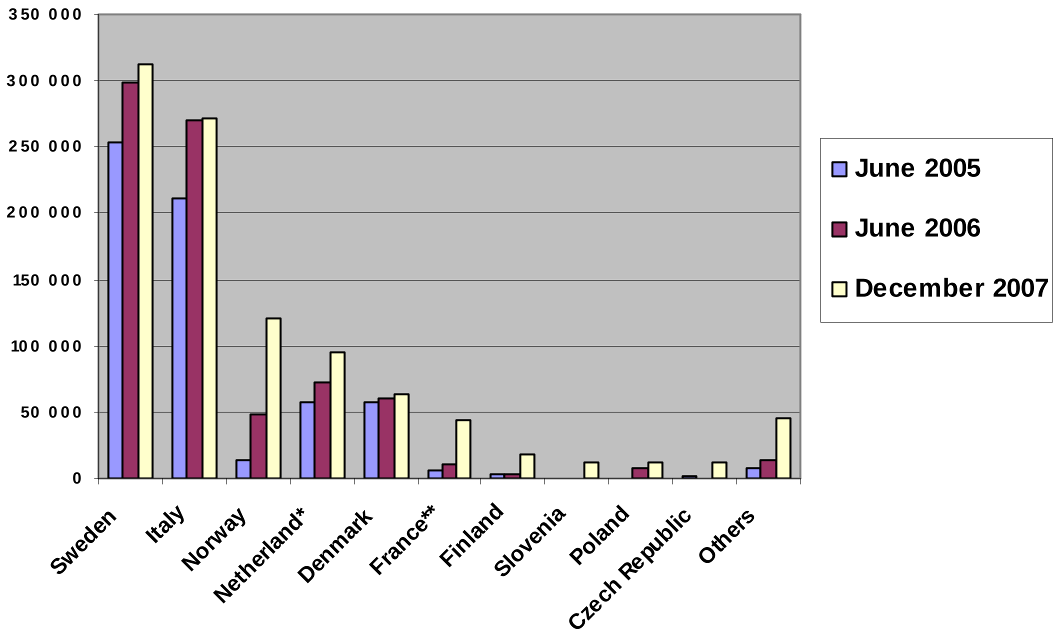
Source: IDATE

As in 2005 and 2006, during 2007 the majority of the projects (61.2%) were initiated by **Municipalities or Power utilities** but we are seeing now a stronger involvement of **alternative operators** in FTTH/B deployments: in June 2006, 10.6% of the projects were initiated by those players and now they represent 21.4%. Furthermore adding Fastweb (Italy), B2 (Sweden), Illiad/Free & Neuf Cegetel (France) and T2 (Slovenia)FTTH subscribers at end 2007, we reach 470 200 subscribers representing nearly **50% of the European FTTH subscribers base**.

- By the end of 2007, there were **1 005 402 FTTH/B subscribers** in EU 31[2] and around **4.9 million Homes/Buildings passed**. The overall **number of homes and buildings passed** has seen a significant growth in 2007 (**+79%**) compared to mid 2006 but during the same period the number of FTTH/B subscribers progressed more slowly at **+23%.**
- As the majority of subscribers is still **concentrated in 5 countries** (**86% of FTTH/B subscribers** are located in Sweden, Italy, Norway, the Netherlands and Denmark), 2007 has been the year of the first commercial FTTH deployments for some major European operators: France Telecom and Iliad/Free in France; but also in Eastern Europe: Telekom Slovenia or Orange in Slovakia.
- Also in 2007, major European incumbents confirmed their choices of FTTN+VDSL architectures: Deutsche Telekom (Germany), Belgacom (Belgium), Eircom (Ireland), KPN (Netherlands), TDC (Denmark), Telecom Italia (Italy) or Swisscom (Switzerland). Nevertheless others like Telefonica or Telenor announced in 2007 plans for the near future to deploy FTTH. Even those who choose first to go with VDSL are now looking to deploy FTTH, as it is the case of KPN (in 3 towns).

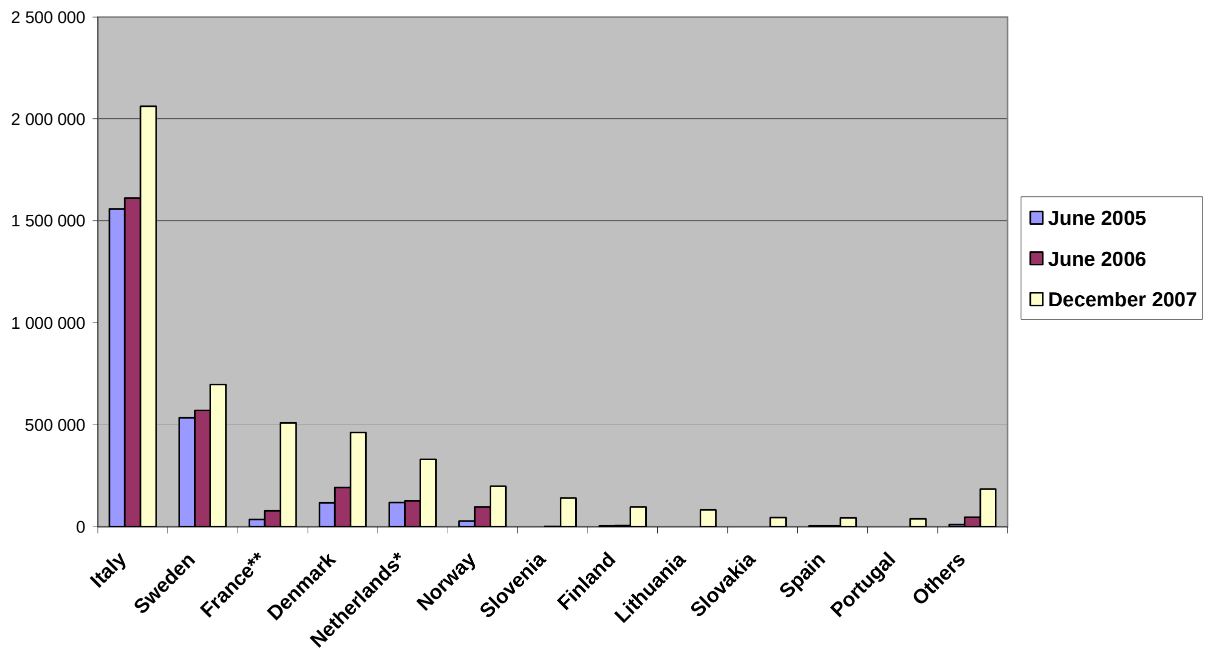
[1] Fiber The Home of Fiber To The Building (not FTTN+VDSL)
[2] EU 27 + Norway + Iceland + Switzerland + Andorra

Evolution FTTH/B subscribers in Europe



Source: IDATE

Evolution FTTH/B Homes Passed in Europe



Source: IDATE

Penetration rate subscribers/Homes passed for European leaders (end 2007)

Ranking	Countries	Subscribers vs. Homes Passed
1	**Sweden**	44.8%
2	**Italy**	13.2%
3	**Norway**	60.6%
4	**Netherland***	28.6%
5	**Denmark**	13.7%
6	**France****	8.5%
7	**Finland**	18.1%
8	**Slovenia**	8.7%

* excluding VDSL
** including Numericable, FTTB subscribers
Source: IDATE

In terms of **Homes/Buildings** passed, leading countries like Denmark and Norway showed a strong growth of 139% and 104% respectively between June 2006 and end 2007 and the same for the Netherlands with + 161%. This consolidates the dominant position of those countries in the FTTH market. Other pioneer countries like Italy and Sweden are now presenting slow growths in terms of Homes Passed (respectively 28% and 22%). Nordic countries like Sweden and Norway are leading Europe in terms of **penetration rate** with respectively 44.8% and 60.6%. **France is starting its migration to FTTH technology** with a 547% growth in 2007 in terms of homes passed as Iliad/Free and France Telecom continued their deployments. Interesting to notice is the development of municipality or local bodies-driven deals in countries such as France, Sweden or Eastern Europe. Precisely in **Eastern Europe**, countries like Slovenia, Poland, Czech Republic, Slovakia or Latvia lead the way in FTTx deployments presenting now major build outs in progress (Telekom Slovenia & T2 in Slovenia, Orange Slovakia).

Concerning **technical architectures**, **Ethernet** still dominates European FTTH/B deployments instead of **PON** especially in the Nordics. Indeed a player like Free / Iliad announced a deployment based on Ethernet of 4 million homes passed through 2012 (241 000 Homes Passed today). The same choice has been made by Telekom Slovenia. However we must notice that significant deployments are using PON technologies: EnergiMidt in Denmark (BPON/GPON), the Government of Asturias in Spain (GPON). France Telecom is now deploying GPON in France (146 000 Homes Passed) but also in Slovakia with his subsidiary Orange Slovakia (30 000 Homes Passed).

The panorama of FTTx deployments in Europe at end 2007 shows that the FTTH market in Europe **continues to grow** especially in terms of Homes Passed. Nevertheless with a little more than 1 million FTTH/B subscribers at end 2007, **Europe is still largely lagging behind** the US (2 million FTTH subscribers) and Japan (11 million FTTH/B subscribers).

However, we have seen in 2007 encouraging signs for the future that allows us to believe that this starting FTTH dynamic will accelerate in the months to come:

- In major European countries like **Germany** where three major City Networks announced ambitious FTTH rollouts, or in the **UK** where Government may intervene to promote the deployment of FTTH in front of the reluctance of the main British players.
- **Large Incumbents** announcing that they will rollout FTTH in the near Future (Telefonica, Telenor) and others that first choose to deploy VDSL and are now launching FTTH deployments (KPN) or considering launches.
- **Infrastructure companies** confirmed that they will also play a leading role in the future of FTTH deployments: it is the case of civil engineering company Regge Fiber in the Netherlands or H20 networks in the UK who is in negotiation to deploy FTTH through existing sewer networks to several English towns.
- Finally, 2007 confirmed the leading role played by **Municipalities and Utilities** all across Europe in deploying FTTH networks physical layer that can be operated on an Open Network Model. Municipalities will be also key players in order to mutualise civil engineering related costs.

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About IDATE

Founded in 1977, IDATE is one of Europe's foremost market analysis and consulting firms, whose mission is to provide assistance in strategic decision-making for its clients in the Telecom, Internet and Media industries. IDATE has also been instrumental in providing a forum for debate amongst the markets' key players, notably thanks to the IDATE Foundation, the DigiWorld Summit and the Communications & Strategies Review.

Consulting - IDATE has established its credibility and independence in conducting consultancy and study assignments on behalf of its clients:

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- Public policies: public policy definition and assessment, project management, regulatory benchmarking

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