From FTTH pilot to pre-rollout in France

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Agenda

- The case for higher bitrates and the beginning of the end of the copper era
- the status of France Telecom’s FTTH in France
- Lessons learned from our pilot
- Competition and Regulatory implications
digital equipped customers keep asking for more bandwidth

- % of equipped French households -

- Max. speed available in Mbps -

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Is there place for VDSL2 solutions in this race towards more speed?

acceleration to higher speed seems to follow “chipset Moore’s law”:
Different geographies will call for different paths
France Telecom’s FTTH: the lessons learnt from our pilot
customer pilot began June 1st 2006

- 5 cities in the Hauts-de-Seine
  Asnières-sur-Seine
  Boulogne-Billancourt
  Issy-les-Moulineaux
  Rueil-Malmaison
  Villeneuve-La-Garenne

- 6 districts in Paris
  3rd, 4th, 6th, 7th, 13th, 16th

all-included offer
- 100 Mbps symmetrical Internet access
- simultaneously 2 HDTV streams on TV and 1 stream on PC
- unlimited VoIP
- dedicated Web 2.0 portal
- on-site home installation and services activation
- dedicated hotline
€ 70 / month

11 500 homes passed
650 agreements with managing agents for collective buildings (“syndics”)
500 customers (5% penetration)
100 000 km fibre installed
Optimizing Civil Works upstream, minimizing opex at MDF level, scaleable bandwidth.
Comparison of cable sizes!

Assumption: 20,000 clients

GPON (• 64) 3 cables 144f fibres • 13.5 mm

P2P 28 cables 720f • 25 mm

Duct GC • 80 mm (transport)
| customers | high level of interest for FTTH symmetrical bandwidth and reliability, with technical support required for mass market adoption  
main applications are: HDTV, multi-access, photos, video, home working, sharing of user generated content | 70% of customers own 2 or more TV sets  
30% of customers own a HDTV set |
| --- | --- | --- |
| roll-out | key parameters are:  
Lead time to get agreements from “syndics”  
Lead time to connect and install customers on-site  
pilot helped define end-to-end roll-out processes in various habitations (old or recent apartment buildings, detached houses) | several months to get agreement with “syndics”  
between 4 and 12 hours for on-site home connection and service activation |
| technology | our technology choices (GPON, FTTH livebox) proved effective  
we learned how to best leverage our working relationships with industrial partners | first consumer box to have been upgraded for 100 Mbps symmetrical throughput  
France Telecom is 1st major incumbent to deploy GPON |

deploying a FTTH infrastructure takes time and resources
pilot helped us to accurately assess our cost structure

for a 10% penetration rate (subscribers / home passed)

we have launched action plans to reduce these costs for most efficient deployment
Outlook

2007 - 2009
FTTH now entering phase 2: pre deployment in 2007 and 2008

offer FTTH in 10 additional major and medium cities

starting with Lille, Lyon, Marseille, Poitiers, Toulouse on top of the Ile de France area

with 150 000 – 200 000 active customers by 2008

total Capex: around 270 million euros cumulated 2007-2008

with pragmatic, focused tactical roll out

2007 CAPEX estimates

- 80 M€

2008 CAPEX estimates

- 190 M€

subscribers  home passed
new offer starting march 1st 2007

la fibre
une expérience du très haut débit

**Internet 100Mb**
up to 100mbps download & up to 10mbps upload

- Web 2.0 portal, TV on PC

**Orange TV**

- free access to 45 French and international channels

**unlimited voice**

to fixed numbers in mainland France

**fiber optics livebox**

€3/month

**entry level pricing, premium options and strong customer support**

- €44.90/month*
  * 12 month subscription

**options**

- multi screen TV in order to watch different channels on 2 TV sets

- HD time control in order to control live TV, record one’s preferred programs, watch them anytime and enjoy high definition programming

- symmetrical 100mbps, a throughput of up to 100 mbps for upload and download, in order to send one’s photos, or videos even faster

**services**

- optical connection fees offered until june 2007, including installation of the optical plug and optical line termination

- Included TV decoder and optical line termination

- free technical and commercial hotline (0800 10 75 75)

- domestic network installation on sale for €1 until june 2007 (Internet, TV, Phone)
pre-rollout in first semester 2007

Areas where fiber is passing residential buildings

Hauts-de-Seine

Paris

Plus

progressive coverage in boroughs of Lille, Lyon, Marseille, Poitiers, Toulouse
phase 3 to begin in 2009: mass market roll out

after 2006 pilot successful completion, pre-rollout will start in 2007-2008, to be followed by mass market coverage

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competition and implications
The main competitors of France Telecom are already taking position.

Lancement de l’offre très haut débit de Neuf (FTTx)

- Offre FTTx à 29,90€ TTC par mois disponible en avril sur Paris
- 1 million de logements raccordés en FTTx fin 2009

Free commercialisera à compter du 1er semestre 2007 une offre à très haut débit reposant sur la fibre optique pour 29,99 euros/ mois

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Implication for competition

**ducts**

“we are working to create a propitious environment for very high-speed network development by encouraging infrastructure sharing and particularly the reuse, whenever possible, of existing ducts in the local loop.”

(Paul Champsaur, November 16th, 2006)

**indoor wiring**

“we feel that sharing indoor wiring is crucial”

(Paul Champsaur, November 16th, 2006)

**access to content**

“first, the stakes and risks involved in very high-speed network investments (...) would seem to demand, from an economic standpoint, that a share of the revenues earned by service providers go to access providers. (...) I also think that the best guarantor of consumers’ freedom of choice is lively competition, as is currently the case, not only in the downstream broadband and very high-speed access market, but also lively competition in the upstream content and services market, particularly for audiovisual services”.

(Paul Champsaur, November 16th, 2006)
Key success factor for FTTH roll-out (Arcep position)

- Civil work existing capacity
  - Identify and usage of existing ducts
  - Install space capacity during any new civil work

- Building cabling
  - Equip new buildings (greenfield)
  - Share of building cabling between telco operators

Mobilizing telco and non-telco infrastructures
  - Paris and few other cities: sewers is an attractive proposition
  - Arcep has mandated a consultancy company to do an analysis in H1 07
Sharing of internal cabling:
  - where to locate the « flexibility point »? 1 per building?
Preliminary conclusion

- Different routes to fibre (country, geography)
  - Ex-ante regulation of FTTH is not appropriate in the absence of bottlenecks

- Infrastructure-based competition in big cities – using existing infrastructures suggest that market entries is possible – and should be encouraged

- Setting a geographic limit to future developments would be wrong
  - « Initially, the expectation was that ADSL coverage would only reach around 70% of UK homes. This led to calls for interventions to increase the overall coverage. However, as the market demand became clearer, the level of coverage delivered by commercial operators increased beyond these initial expectations to over 95% of households, before public intervention to fill in the gaps became necessary » (Ofcom-DTI)

- Priority should be given to creating the conditions for investment rather than to regulating the future
Thanks