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Fiber to the Home: Making That Business Model Work



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Agenda



- The fiber-to-the-home conundrum
- Building a generic business model
- Improving the business model
- Q&A

The fiber-to-the-home conundrum

- The copper network is on its dying legs.
- FTTH is the endgame and telcos know it.
- The amount of capex needed to replace the copper network is not aligned with the short-term telco vision.
- Cable upgrade to DOCSIS 3.0 and competitive fiber rollouts (from altnets, municipalities or utilities) threaten incumbent positions as network providers.

The question for telcos is:

How do I make a necessary but considerable investment in optimal conditions?

Building a generic FTTH business model

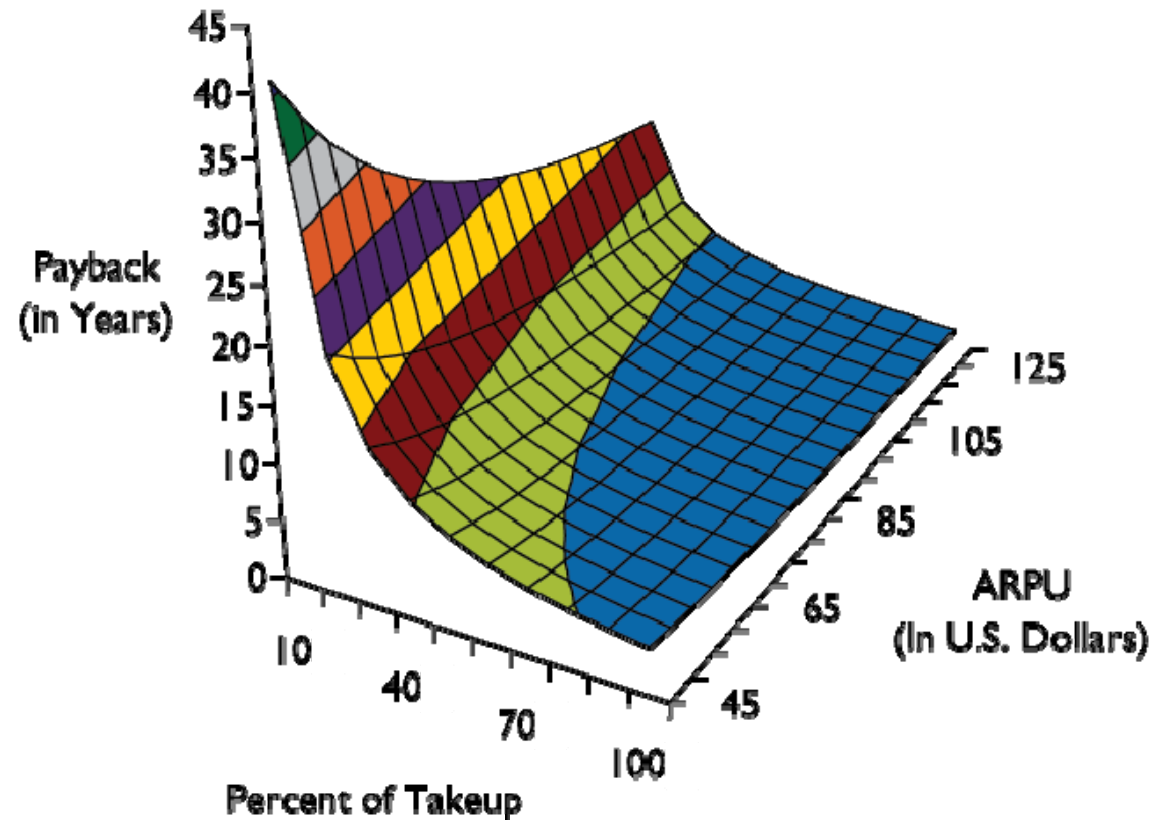
- To try and answer this question in a way that was relevant for all telcos we built a **generic FTTH business model**.
- The output of this model is **payback** i.e., the number of years it takes for the revenue generated by the investment to compensate for the capex invested.
- The model focuses on the access part and assumes **no pre-existing network** and **no pre-existing revenue**.
- The model revolves around four basic variables (**cost per home, ARPU, cash margin, takeup,**) and one advanced variable (**WACC**).
- The model is first run **without taking cost of money into account** (undiscounted) to identify the key levers, then run again with cost of money accounted for (discounted).

Key hypothesis

- **Cost per home connected:** This is the cost of connecting a home with fiber all the way. The model assumes a cost per home passed of \$1,000.
- **Average revenue per user (ARPU):** This an average monthly revenue generated by customers connected to the network who subscribe to at least one service. ARPU is a variable dimension in the model, ranging from \$45 (ARPU for Free in France) to \$130 (ARPU for Verizon in the U.S.). In the base scenario, it's fixed at \$80/month.
- **Cash margin on retail service:** Expressed as a percentage of ARPU and corresponds to the cash generated once operational expenditure has been accounted for. Yankee Group estimates the cash margin for FTTH retail service at 45 percent.
- **Takeup:** Takeup is the proportion of homes connected to the network that actually subscribe to a service. Takeup in the model is a variable and ranges from 0 percent to 100 percent.

Undiscounted model results and key lessons

- For payback lower than 5 years, takeup must be **at least 30 percent**
- Increasing takeup and reducing cost per home have the **strongest positive impact** on payback
- Increasing ARPU and cash margin have a much **lower impact** on payback



Undiscounted FTTH Payback Period (with U.S.\$1,000 per Home Connected and 45 Percent Gross Margin)

Source: Yankee Group, 2009

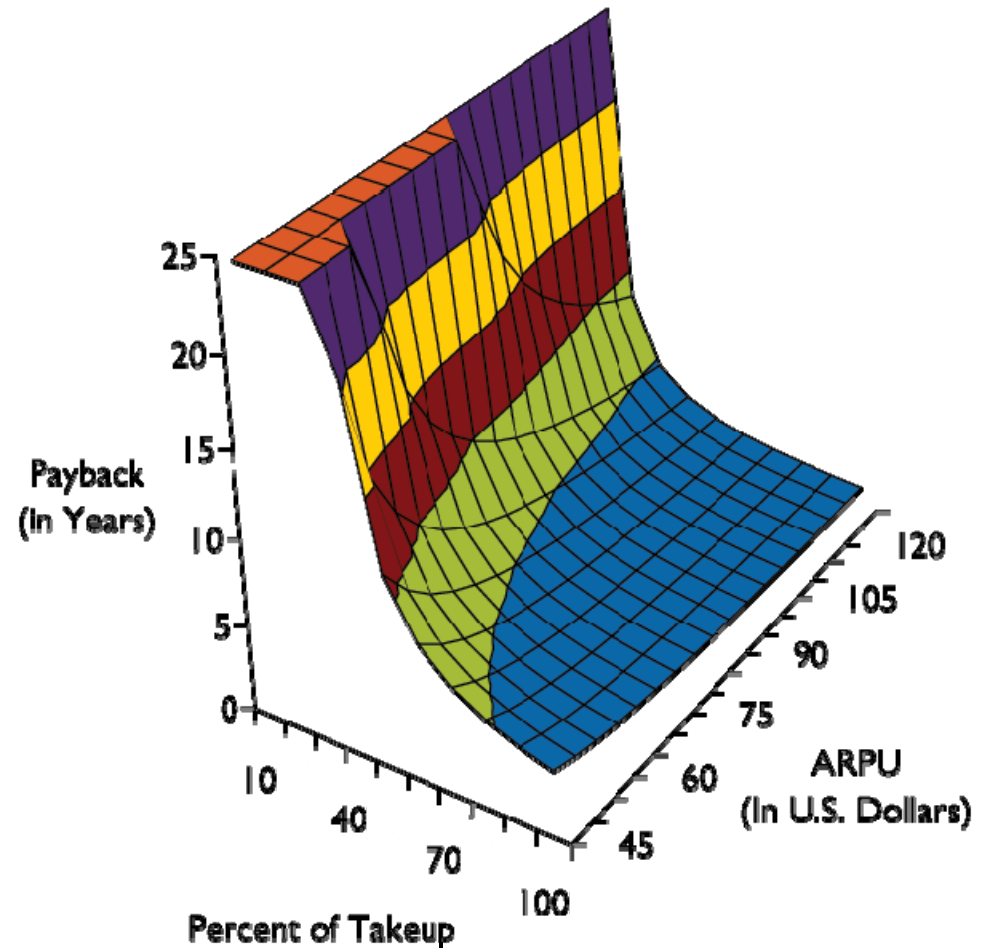
Sensitivity analysis

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- Increasing ARPU and cash margin have a much **lower impact** on payback

Variable	Variation	Absolute Value	Payback	Gain
Cost per home connected	-25 percent	\$750	5.75 years	2 years
ARPU	+25 percent	\$100	6.25 years	1.5 years
Gross margin	+5 percent	50 percent	7 years	.75 years
Takeup	+10 percent	40 percent	5.75 years	2 years

Introducing the cost of money

- To account for how financial markets might look at these issues, we introduced a cost of money component.
- Weighted average cost of capital was set in the discounted model at 12.5 percent.
- The results then become apparently scarier, but the sensitivity to any improvement also becomes higher.



Solutions to enhance the FTTH business model

Decreasing costs per home passed

Targeted deployment

Two-step build

Connection fees

Increasing ARPU

Increased ARPU from triple play

Generate revenues from new services

Increasing takeup

Broadband utility strategy

Opening up the network

Sensitivity analysis of various scenarios

Scenario	Cost per Home	ARPU	Cash Margin	Takeup	WACC	Undiscounted Payback (years)	Payback (years)	Gain vs. Base Scenario
Base Scenario	\$1,000	\$80/month	45 percent	30 percent	12.5 percent	7.7	16.3	n/a
Lowest Cost per Home	\$750	\$80/month	45 percent	30 percent	12.5 percent	5.8	8.7	-7.8
Higher ARPU	\$1,000	\$100/month	45 percent	30 percent	12.5 percent	6.2	9.8	-6.7
Higher Cash Margin	\$1,000	\$80/month	50 percent	30 percent	12.5 percent	6.94	12.5	-4.0
Higher Takeup	\$1,000	\$80/month	45 percent	40 percent	12.5 percent	5.8	8.7	-7.8
Two-step Build	\$1,300*	\$80/month	45 percent	30 percent	12.5 percent	4.8	11.9	-4.4
\$200 Connection Fee	\$1,000	\$80/month	45 percent	40 percent	12.5 percent	6.2	9.8	-6.7
Broadband Utility Strategy	\$1,000	\$55/month	45 percent	50 percent	12.5 percent	6.0	9.3	-7.2
Open Access	\$1,000	\$54/month**	51 percent**	50 percent**	12.5 percent	5.8	8.9	-7.7
Lower WACC	\$1,000	\$80/month	45 percent	30 percent	10 percent	n/a	12.48	-3.8

Embracing the paradigm shift of FTTH

Launch NGA services

- Considerable opportunity to address the underserved lower end of the business market
- Necessary to explore wider economy partnerships to leverage the new infrastructure (and other non-network capabilities)

Reconsider premium strategy

- Premium strategy (high ARPU, low penetration) doesn't coincide very well with the business of deploying a new network.
- Exploring more segmented service offerings or a low entry-point offer designed to generate upsell.

Reconsider wholesale strategy

- Exploring ways to generate wholesale revenue from lines not subscribing to a commercial service.
- Reluctance to open network to competitors might be displaced in an FTTH world (see KPN, Swisscom)

You hit the jackpot when takeup reaches 100 percent!

Additional resources

- Yankee Group Research Reports:
 - **Open Access Makes Economic Sense** by Benoît Felten and Wally Swain
 - **The "Free" Miracle: How Your Unbundling Costs Pay for Your FTTH Deployment** by Benoît Felten
 - **Finding the Right Neighborhood for FTTH in Emerging Markets** by Wally Swain
 - **Fiber to the World: A State of the Union Report on FTTH** by Benoît Felten and Vince Vittore

Download the reports at <http://www.yankeegroup.com>

- Yankee Group blog:
 - **From Canterbury to Kosovo: The Professor's Tale** by Camille Mendler
 - **30% ARPU differential between FTTx and xDSL** by Benoît Felten
 - **Beyond 'shovel-ready' stimulus projects** by Emily Green

Read more at <http://blogs.yankeegroup.com/>

- Fiberevolution blog

Hear more from Benoît Felten at <http://www.fiberevolution.com>



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Thank you!

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