Infrastructure sharing and ultrabroadband policies: an operator's perspective

3-4 April 2008

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TELECOM ITALIA

Agenda

▸ **Infrastructures sharing: the rise of wholesale markets!**

▸ **Telecom Italia's experience with infrastructure sharing of:**

　　▸ **Its own infrastructure**

　　▸ **Other telecom operators infrastructure**

　　▸ **Municipalities and utilities infrastructure**

▸ **Public Policies to foster infrastructure sharing**

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Infrastructures sharing: the rise of wholesale markets!

▶ There is no basis for assuming that the traditional monopoly vision of end to end service provisioning is a natural and inevitable product of technology.

▶ The idea of wholesale markets in telecommunications was brought to consciousness only once the sector was privatized and opened to free entry/exit.

▶ The question for incumbent management became, is there greater profit to be gained by cooperation or is this policy change only a question of sharing "my" existing market with others ?

Source: De Fontenay,Liebenau, Savin C& S (2005)

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Towards Ultrabroadband Networks & Sharing last mile facilities

▶ Traditional monolithic view that entire last-mile access service as provided by single telco is what constitutes the "bottleneck" is not sufficiently granular and nuanced.

▶ Technical and economic trends impacting both network architecture (FTTx) and construction (new ways to install fiber) and market growth make sharing of essential inputs both more necessary and more feasible, thus creating new opportunities for wholesale markets

▶ Desire to transition to market forces from traditional public utility regulation – process that has been underway for last several decades – means that markets are to be preferred wherever they are viable and feasible, and that the tendency of wholesale markets to develop through commercial agreement needs to be sustained.

Is last-mile access service a real bottleneck ?

▸ Conduit

▸ Rights of way

▸ Dark fiber

▸ It is conceivable that the existence of wholesale markets in appropriate essential facilities , it provide alternative way to allow for last mile competition based on greater facilities based competition than on LLU.

Economics trends impacting NGAN architecture:
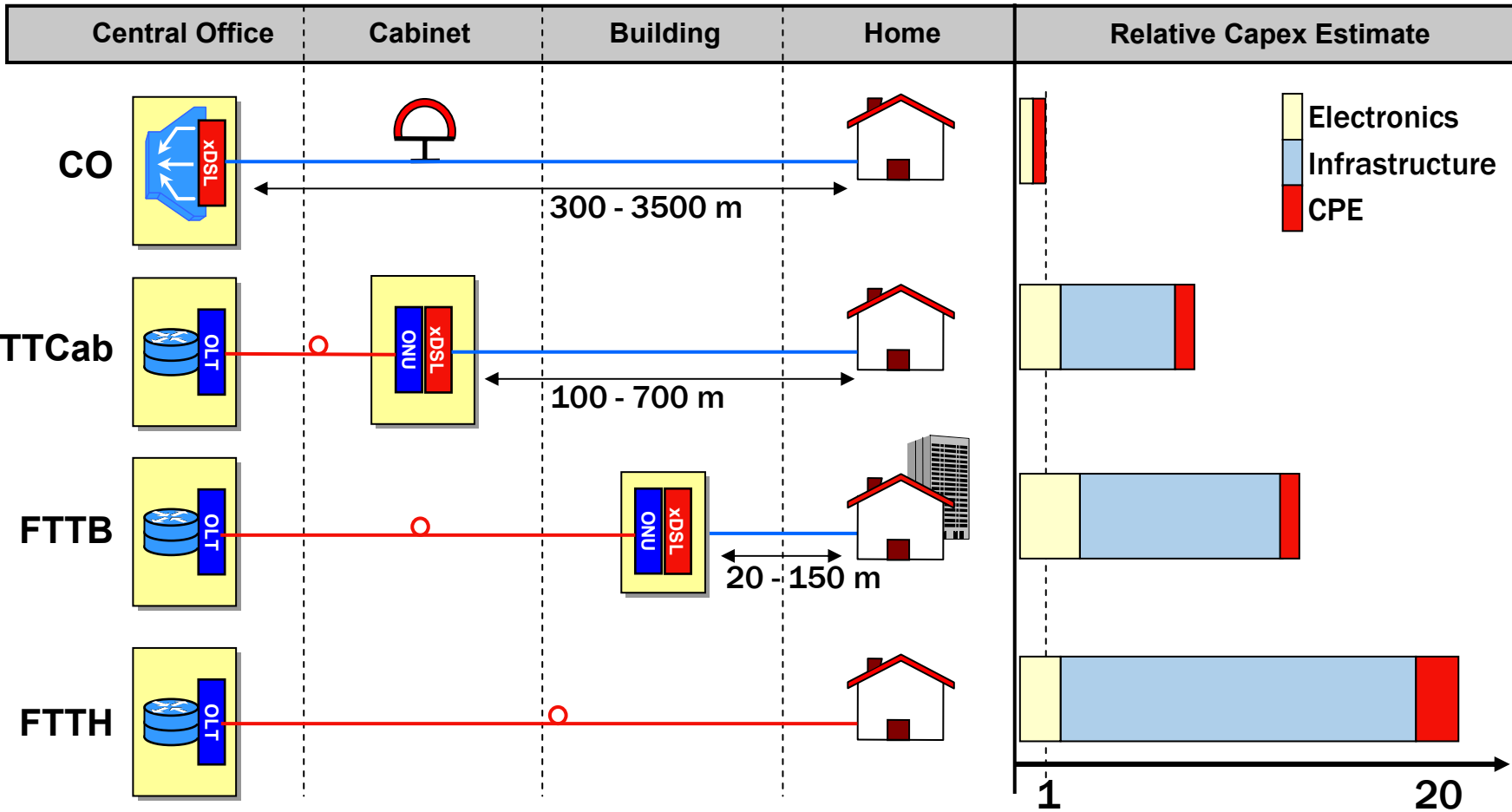
Source: Telecom Italia (2007)

FTTH Alternative operators in Europe

**Adding Fastweb (Italy), B2 (Sweden), Iliad/free &Neuf Cegetel (France) and T2 (Slovenia)**

FTTH subscribers at end of 2007, we reach nearly 50% of the European FTTH subscribers base

Players involved in FTTH/B (Number of players)				
	June 2005		December 2007	
Incumbents	8	7,1%	17	8,5%
Municipalities/ Power Utilities	78	69,0%	123	61.2%
Alternative operators/ISP	12	10,6%	43	21,4%
Housing companies & Other	15	13,3%	18	9,0%

Source: IDATE 2008

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Technical trends impacting network constructions: new ways to install fiber
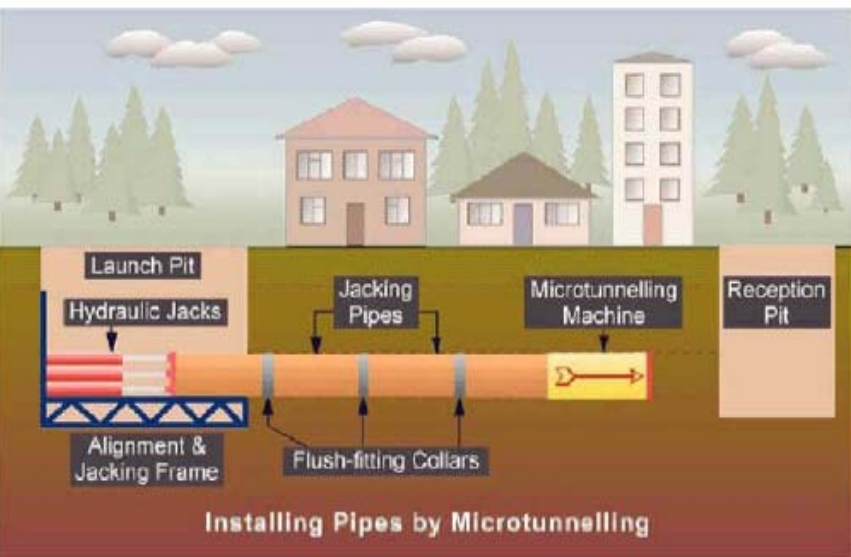

▶ **Micro cables in mini tubes**
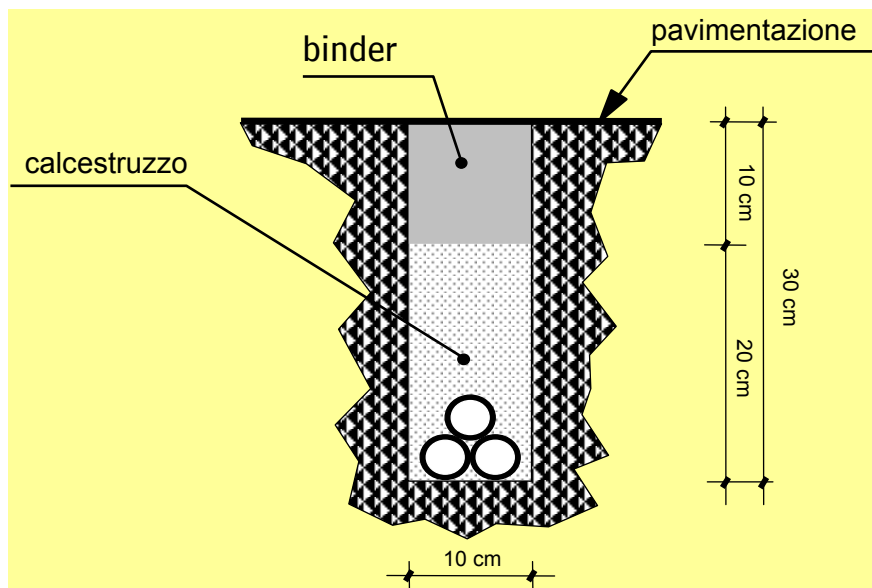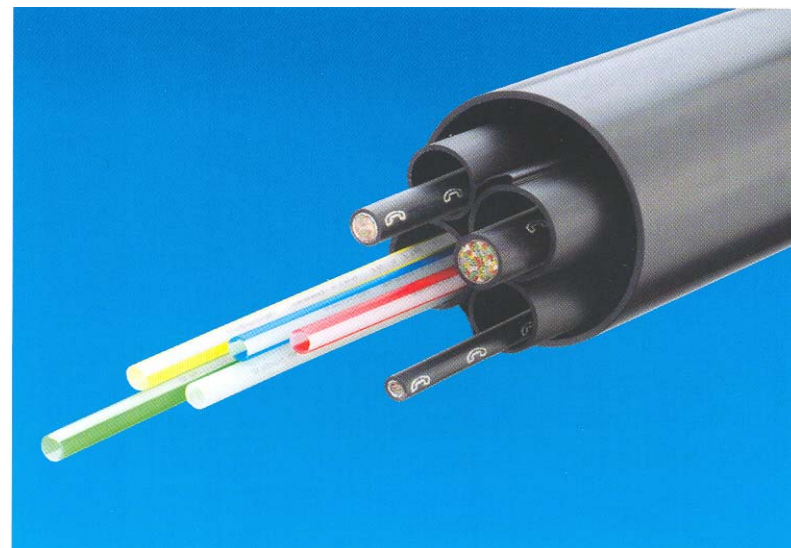
▶ **Minitrenching**

Technical trends impacting network constructions: new ways to install fiber

Trenchless or no-dig techniques

▸ **Directional drilling**
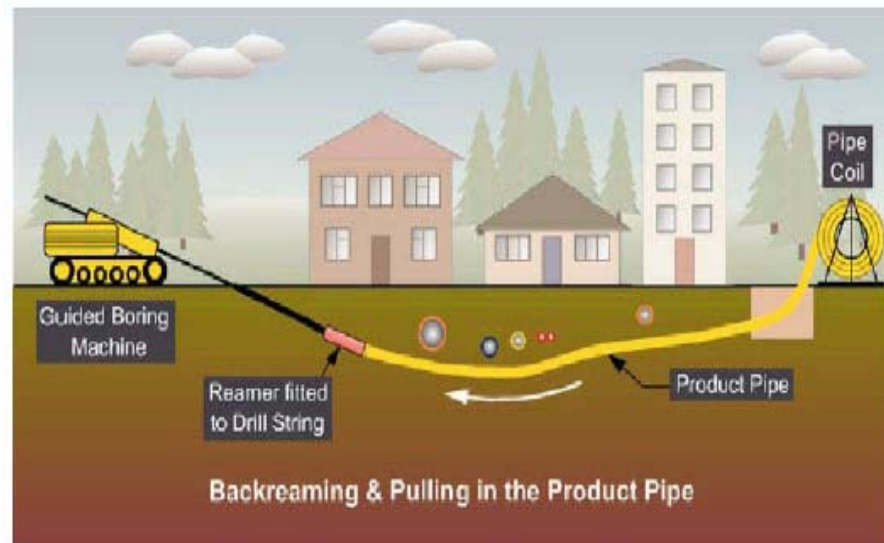
Guided Boring Machine

Reamer fitted to Drill String

Pipe Coil

Product Pipe

Backreaming & Pulling in the Product Pipe

▸ **Microtunneling**

Launch Pit

Hydraulic Jacks

Jacking Pipes

Microtunnelling Machine

Reception Pit

Alignment & Jacking Frame

Flush-fitting Collars

Installing Pipes by Microtunnelling

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TRANSITION TO MARKET FORCES

▶ Markets are to be preferred wherever they are viable and feasible

▶ Commercial agreement among operators for infrastructure sharing should be the starting point of any request of infrastructure access

▶ Only in case of commercial failure, regulation should play a role allowing for simmetric agreements.

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DUCTS FROM SOCRATES NETWORK

▶ Telecom Italia's Socrates Project was conceived In the middle 90's with Hybrid Technology HFC (fiber + coax) to bring Pay TV and multimedia Services to Italian households. Although this project was stopped after TI privatization In 1999, it left TI's networks with an endowment of fiber and ducts for 1.6 M home passed

▶ On Jan, 23, 2001, AGCM, the Italian Competition Authority, approved a concentration whereby SEAT PAGINE GIALLE (Telecom Italia) acquired control of Cecchi Gori Communications subject to conditions. One of the conditions was that TI, from March 1° 2001 onwards, must provide access to ducts so that alternative operators can place their fiber optic lines "*for the provision of interactive and multimedia services*" in TI's existing duct infrastructure. The access must be provided at non-discriminatory terms and at cost oriented prices. See AGCM (2001)

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METROWEB – TI AGREEMENT for NGAN DEVELOPMENT IN MILANO

▸ On May 30° 2007, Telecom Italia signed an agreement with Metroweb (MW), to use MW fiber to deploy TI next generation access network in Milano.

▸ MW operates as an independent open network access provider that offers its infrastructure to third party providers of telecommunications services such as Internet Service Providers, telephone operators including mobile, government agencies and other distributors of digital multimedia contents. Top quality conncetions are guaranteed through service levl agreements. 76.5% of Metroweb is owned by the Stirling Square Capital Partners Fiber Holding SCA and the remaining 23.5% by Azienda Elettrica Milanese S.p.A. (AEM).

▸ Through this 15 years agreement (renewable for aditional 15 years) TI will be able to reach with FTTB solution 70.000 building in Milano

▸ Metroweb's fiber will be used by TI only in the secondary access network

▸ TI will be using no more than 8 fibers out of a cable made by 24 to 96 fibers

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Alternative infrastructure in Italy

▶ Utilities and municipalities (fiber & ducts):

	Utilities	Local Municipalities
Piemonte e Valle d'Aosta	Torino : IRIDE	Comune Torino ; Provincia Alessandria; Comune Cuneo/Savigliano; Comune Novara
Lombardia	Milano : Metroweb; Brescia: ASM; Mantova: TEA Bergamo: ASM, BAS-COM, TEB; Cremona : AEM	
Veneto, Trentino e Friuli	Verona: AGSM, Acque Veronesi; Venezia: VENIS e INSULA; Padova: APS, TELETRETE NE; Trieste: ACEGAS/APS e MERCURIO	Comune Venezia; Provincia Trento; Comune Trento; Comune Rovereto
Emilia Romagna , Marche Umbria	Bologna: HERA-Acantho/Lepida; Modena: HERA-Acantho/Lepida; Reggio Emilia : Lepida/ENIA; Parma : LEPIDA/ENIA; Piacenza : LEPIDA/ENIA	Comune Bologna; Comune Piacenza; Comune Reggio Emilia; Comune Modena; Comune Assisi e Comuni PIR
Toscana e Liguria	Genova:SASTERNET; Firenze:Aziende municipalizzate	Comune Siena; Comune Genova
Lazio, Abruzzo, Molise e Sardegna	Roma: ITALGAS, ACEA, ATAC, ATI ROMEO; Termoli: Consorzio Industriale	Comune Roma (Municipio III); Comune Cagliari Comune L'Aquila
Campania e Puglia	Napoli: ARIN, NAPOLETANA GAS, ANM Società Tangenziale, ACEA, ENEL; Salerno: FINAGEN	Comune Bari; Comune Napoli
Calabria e Sicilia	Palermo : AMG e AMAP; Siracusa: Siciliana GAS-Gruppo ENI, ENEL	Comune Catania; Comune Messina; Comune Reggio Calabria; Comune Siracusa

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How close to the building are the municipalities and utilities' infrastructure?

Network/opportunity	Capillarity			
	City backbone	Street backbone	Building	
Water				
Gas				
Electricity				
Teleheating				
Sewage				
Public lightening				
Traffic lights				
Third parties ducts				
Trasportation (rail,subway, tram)				
Third parties fiber networks				
Maintenance and new additions				Spot
New Construction areas				Spot

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PUBLIC POLICIES TO FOSTER INFRASTRUCTURE SHARING FOR ULTRABROADBAND NETWORKS 1/ 4

▶ Promote commercial agreement between operators for sharing ducts, poles and rights of way.

▶ Promote symmetric – i.e. not related to the finding of SMP/dominance-facility sharing for all ducts capable of carrying e-communications networks, also outside the e-communications sector, i.e. by municipalities, public utility providers, established and new entrant telecommunications providers.

PUBLIC POLICIES TO FOSTER INFRASTRUCTURE SHARING FOR ULTRABROADBAND NETWORKS 2/ 4

▶ Reducing barriers associated with obtaining authorization for access and use of right of way

▶ Harmonising administrative procedures for access to rights of way and ensuring consistency in the application of these procedures across a country

▶ Reducing or eliminating any fees associated with using rights of way

▶ Examining the role of public-private partnerships for duct sharing

▶ Examining possibility of ad hoc measures to impose pre-wiring of new residences for sharing in-house wiring

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PUBLIC POLICIES TO FOSTER INFRASTRUCTURE SHARING FOR ULTRABROADBAND NETWORKS 3/ 4

▸ In order to lower entry barriers in the local access network, the current REVIEW of the EU REGULATORY FRAMEWORK should be used to develop a set of rules tha should in the future govern access to ducts and other facilities in the local loop irrespective of the SMP-position of an electronic communications provider

▸ In particular, new Set of rules in Art 12 of the EU FRAMEWORK DIRECTIVE, to encourage facility sharing for all ducts capable of carrying e-communications networks within the e-communication sector including new entrant telecommunications providers

▸ Furthermore, National Governemnt and local municipalities should promote ad hoc initiatives to allow for facility sharing of all ducts including those owned by municipalities and public utility providers, following , for instance, the model developed by the French Government (DGE).

PUBLIC POLICIES TO FOSTER INFRASTRUCTURE SHARING FOR ULTRABROADBAND NETWORKS: IN HOUSE WIRING 4/ 4

▶ The best option for in house wiring is to encourage market forces to find out the right balance. In fact, infrastructure sharing can be the result of freely negotiated agreements rather than the outcome of a regulatory intervention.

▶ However, in case of market failures, the second best solution is to address the in-house wiring by means of simmetrical regulation. In other words, each operator owning in house wiring should offer access to it

THANK YOU .... FOR SHARING !!

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