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REGULATORY ISSUES FOR NEXT GENERATION NETWORKS

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DEFINITION OF NGN

The starting point: ITU-T definition

NGN is a packet based architecture fostering the provisioning of existing and new/emerging services through a loosely coupled, open and converged communications infrastructure

NGN ARCHITECTURE

Separation of:
services and applications
access and transport

CONTENT

CONTROL & APPLICATIONS SERVERS

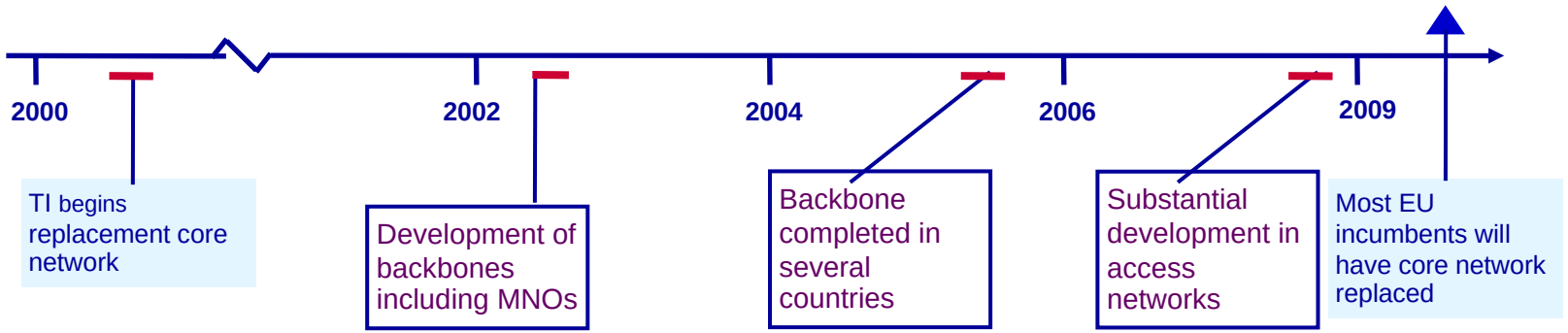
Competition at access and transport level captures the largest part of the economic benefits of competition

IP TRANSPORT NETWORKS

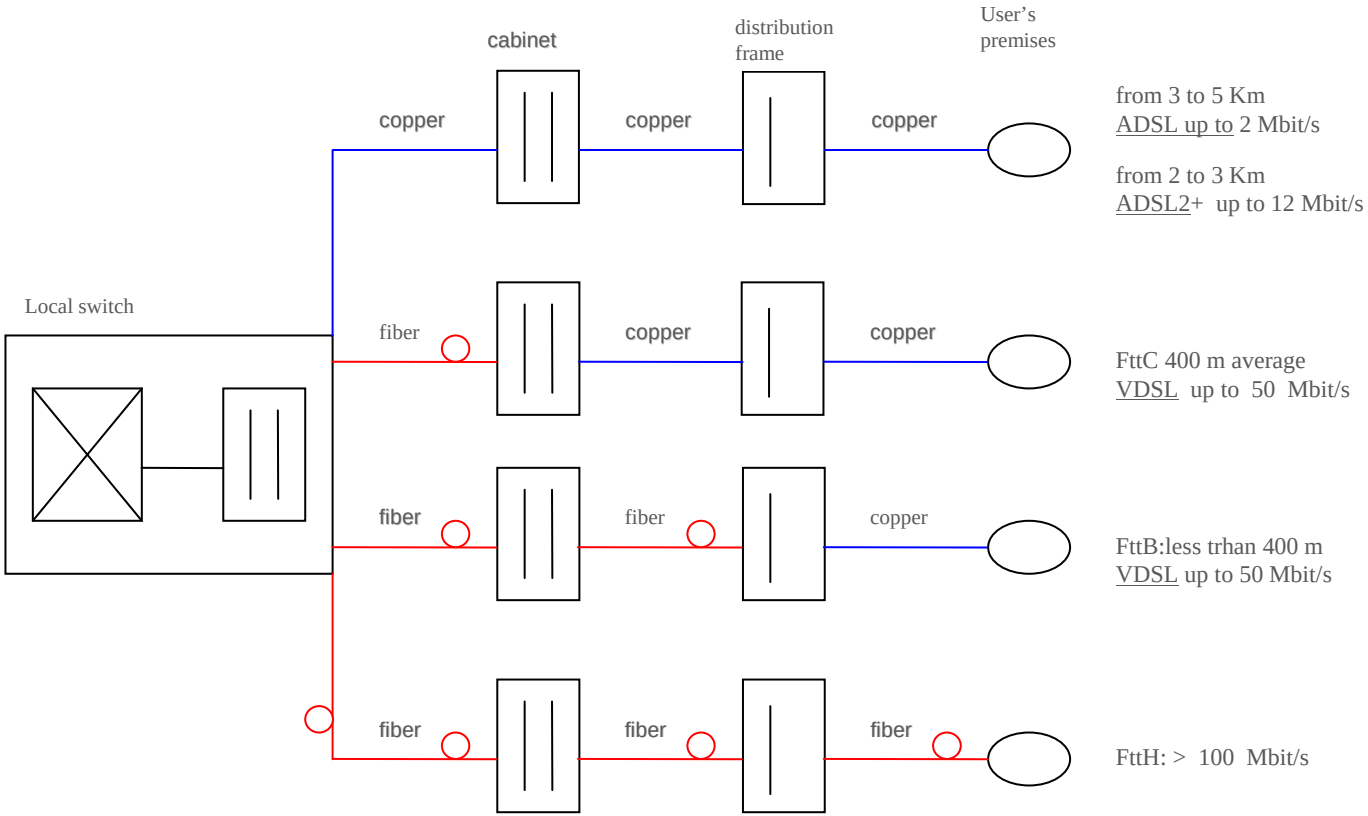
FIXED AND MOBILE ACCESS NETWORKS

NGN IN ITALY AND EUROPE

MOST EUROPEAN OPERATORS ARE HEAVILY INVESTING IN THE MODERNIZATION OF THE CORE NETWORK



THE ACCESS NETWORK



TERMINOLOGY

FttE: Fiber to the Exchange – service nodes (SL – narrow band and DSLAM – broadband) are both in the local switch; the access network is wholly copper

FttC: Fiber to the Curb and Fiber to the Cab – the DSLAM is in the cabinet (connected by optical fibre); the last 400 m of network are copper

FttB: Fiber to the Building – the DSLAM is in the distribution frame inside the building and is connected by optical fibre; the upper distribution network (50 m) is copper

FttH: Fiber to the Home – the whole network is optical; no more use of copper

INVESTMENTS IN THE ACCESS NETWORK

- The installation of new generation access networks requires heavier and less flexible investments than those needed for transport networks.
- The return on the investment is directly related to the customers response to the introduction of new services as VoD, video calls, gaming on line, etc.
- The operators have a strong need for a clear and stable regulatory framework for access networks.
- On the other side the NRAs are focused on limiting the incumbents' advantage which might limit the development of a competitive market.

PROPORTIONATE REGULATORY INTERVENTION

Two major factors:

- **The installation of fiber on access NGNs is generally made *ex novo* and the incumbents' advantage originated by the legacy copper network ownership is limited;**
- **For commercial reasons there is a geographic overlapping between the areas currently open to unbundling and the areas chosen for priority development of the access NGNs: so the regulatory intervention ca be lighter.**

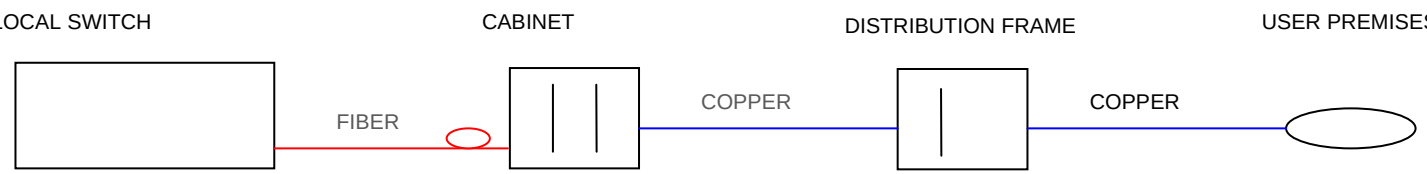
A PROPOSAL FOR REGULATING BB ACCESS – FIRST PHASE

FIRST PHASE (2006 – 2012)

REGULATORY OBLIGATION	SCOPE OF OBLIGATION
Mandatory offer of some network elements: **• copper links between the cabinet and the user premises** **• ducts for the fiber layout** **• co-location in the cabinets and in the distribution frames**	**No advantages for the incumbents in installing NGN** **Promotion of infrastructure based competition**
NRAs to keep in place current obligations for wholesale BB access when the historical operator has SMP	**Transition towards NGN does not lead to sudden unavailability of wholesale BB access**

A PROPOSAL FOR REGULATING BB ACCESS – SECOND PHASE

SECOND PHASE (2012 - ….)



REGULATORY OBLIGATION	SCOPE OF OBLIGATION
Mandatory offer of some network elements: **•ducts for the fiber layout** **• co-location in the cabinets and in the distribution frames** **Only if WiMax, WiBro, etc solutions are not available:** **• copper links between the cabinet and the user premises**	**No advantages for the incumbents in installing NGN** **Promotion of infrastructure based competition**
NRAs remove current obligations for wholesale BB access	**Increased efficiency due to the reduction of the number of different platforms (VDSL, ADSL, etc)** **Incentiveto the development of new and competitive access networks**

OPEN REGULATORY PROBLEMS

- How to regulate new actors as ASP (*Application Service Providers)*, Content Providers and Broadcasters?
- Competitors with “no network”: interconnection, pricing for bandwidth?
- No regulation for retail converging services and bundled offers by the incumbents?
- *Best effort quality* vs *guaranteed quality*?
- Services interconnection vs networks interconnection?