

Networks: Overview

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Networks are (almost) everywhere (1)

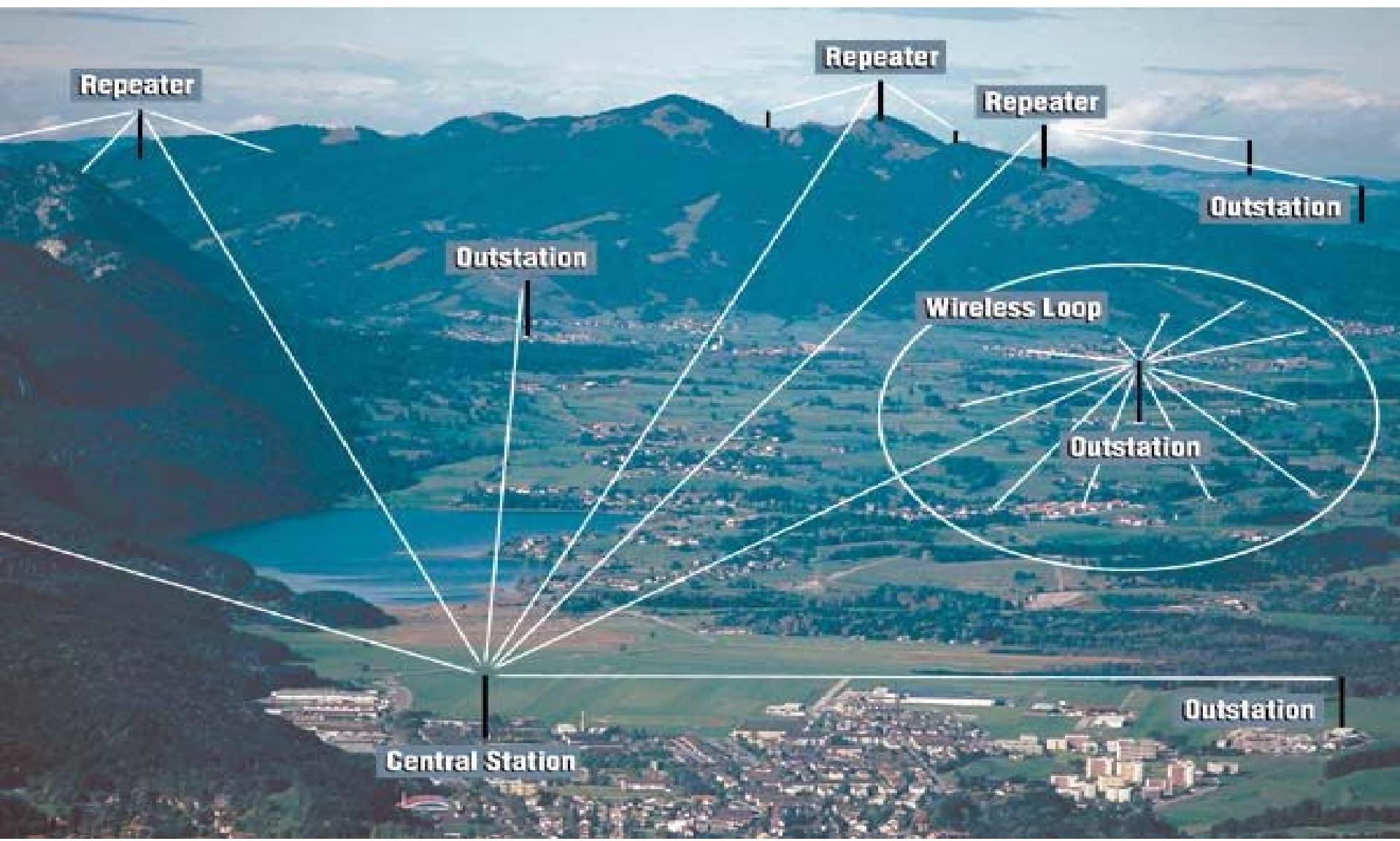


Ethernet, SDH - SONET, xWDM, etc

ADSL, GPON, Wi-Fi, Wi-MAX, 3-4-5G, etc.

Source: Google Earth + Publicly available images

Networks are (almost) everywhere



Fonte: www.motorola.com/gsm_outreach

Networks are (almost) everywhere



Source: author's photos (Seoul, 2008)

Networks are (almost) everywhere



Source: author's photos (Asturias, 2002)

Networks are (almost) everywhere...



...and make themselves visible in many different manners:



Source: author's photos (Viseu, 2002, Aveiro 2005, Ovar, 2013)

Networks are (almost) everywhere...

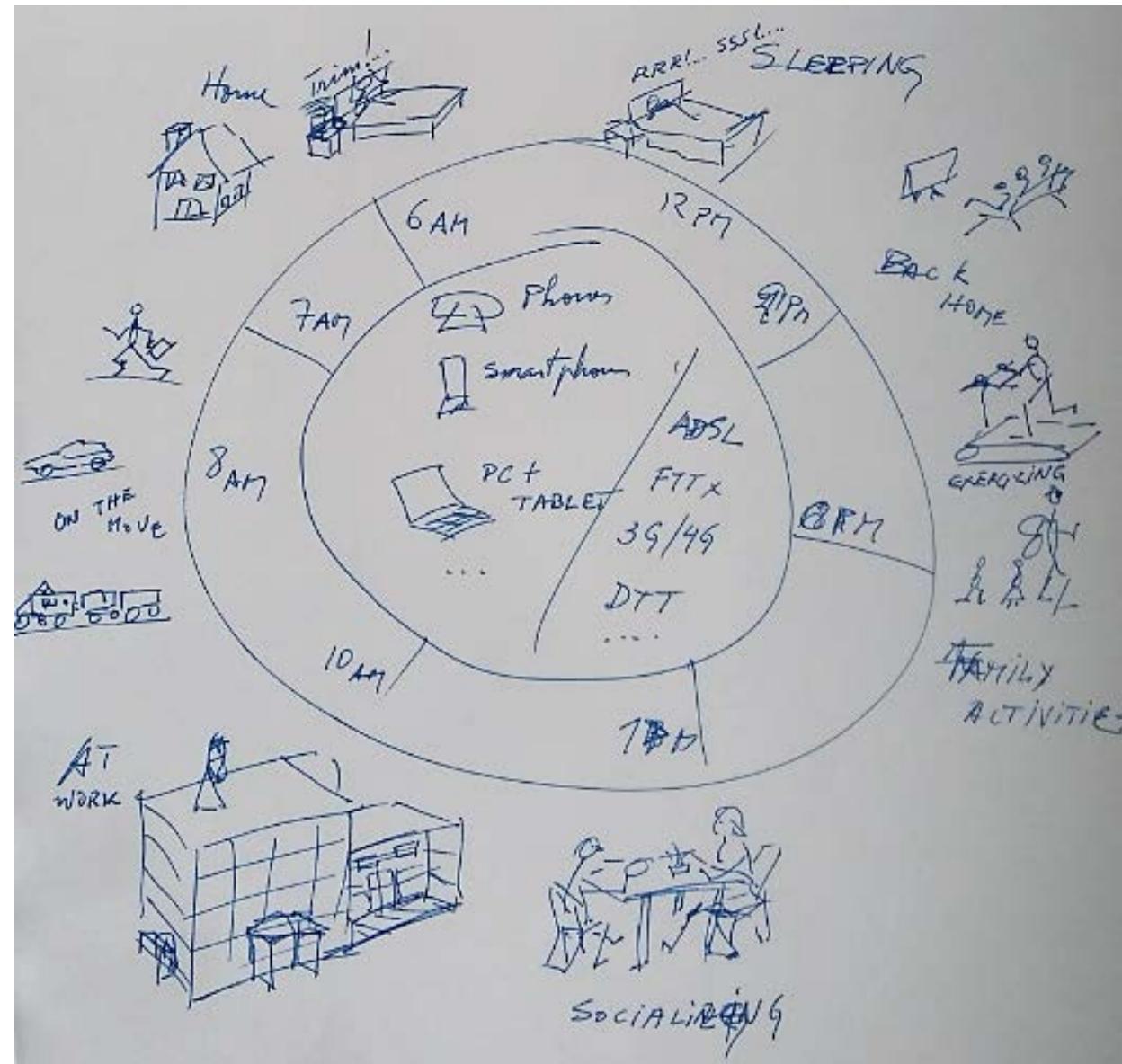


- ...and make themselves visible in many different manners:



Source: author's photos (Seoul, 2008)

Networks deliver services in many different life contexts:

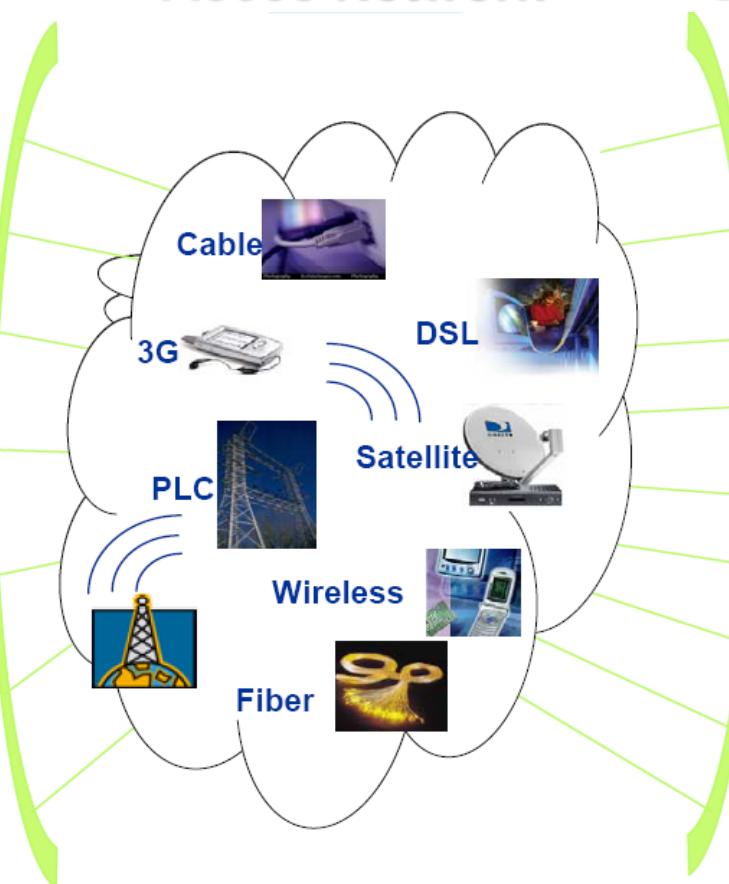


Networks connect people through a large variety of devices:

Access Terminal



Access Network

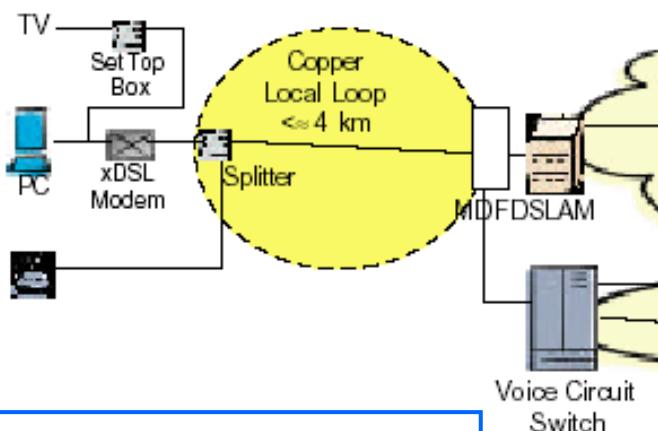


Services and Applications

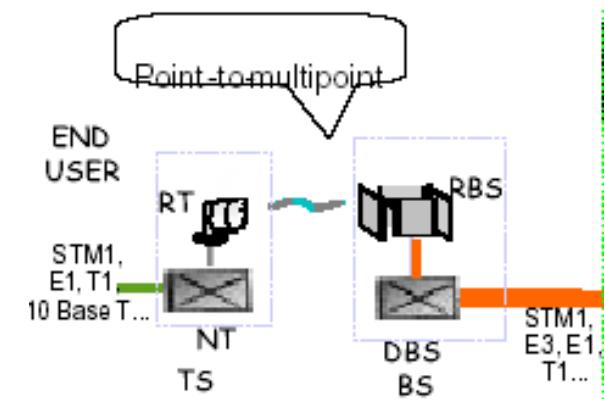
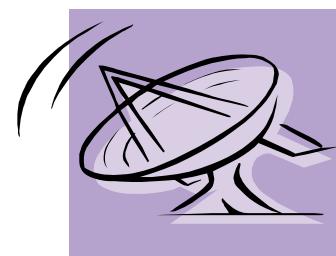


Fonte: <http://www.itu.int/osg/spu/presentations/2006/ponder-ngn-access-10-april-2006.ppt>

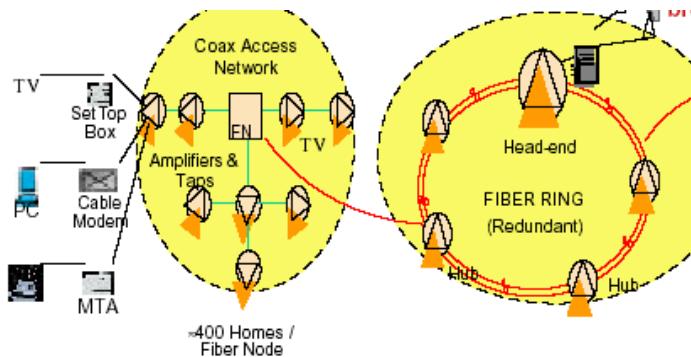
Networks rely on various physical access technologies:



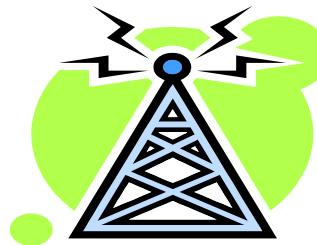
xDSL (Copper)



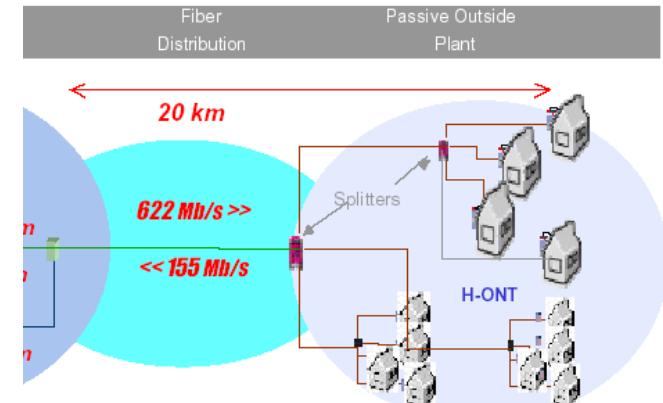
Wireless (Space)



**HFC – Hybrid Fibre Coax
(Copper + fibre)**



**Power line
(Copper)**



FTTx (Optical Fibre)

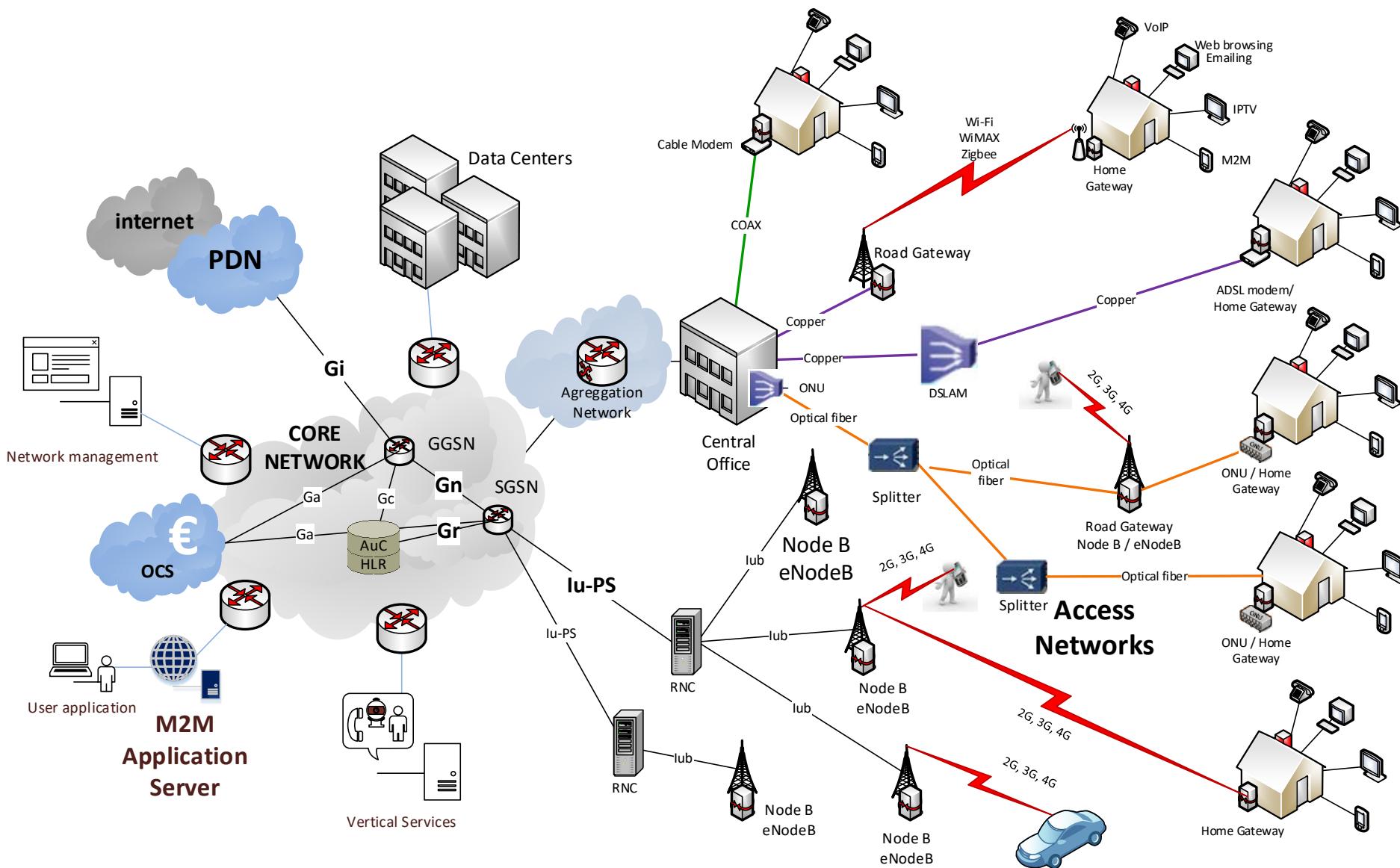
Fonte: ITU-D Forum, Chisinau, Moldova, 24 – 26 August 2009, Session 5_IS - 10

Networks influence, virtually, all types of human activity:

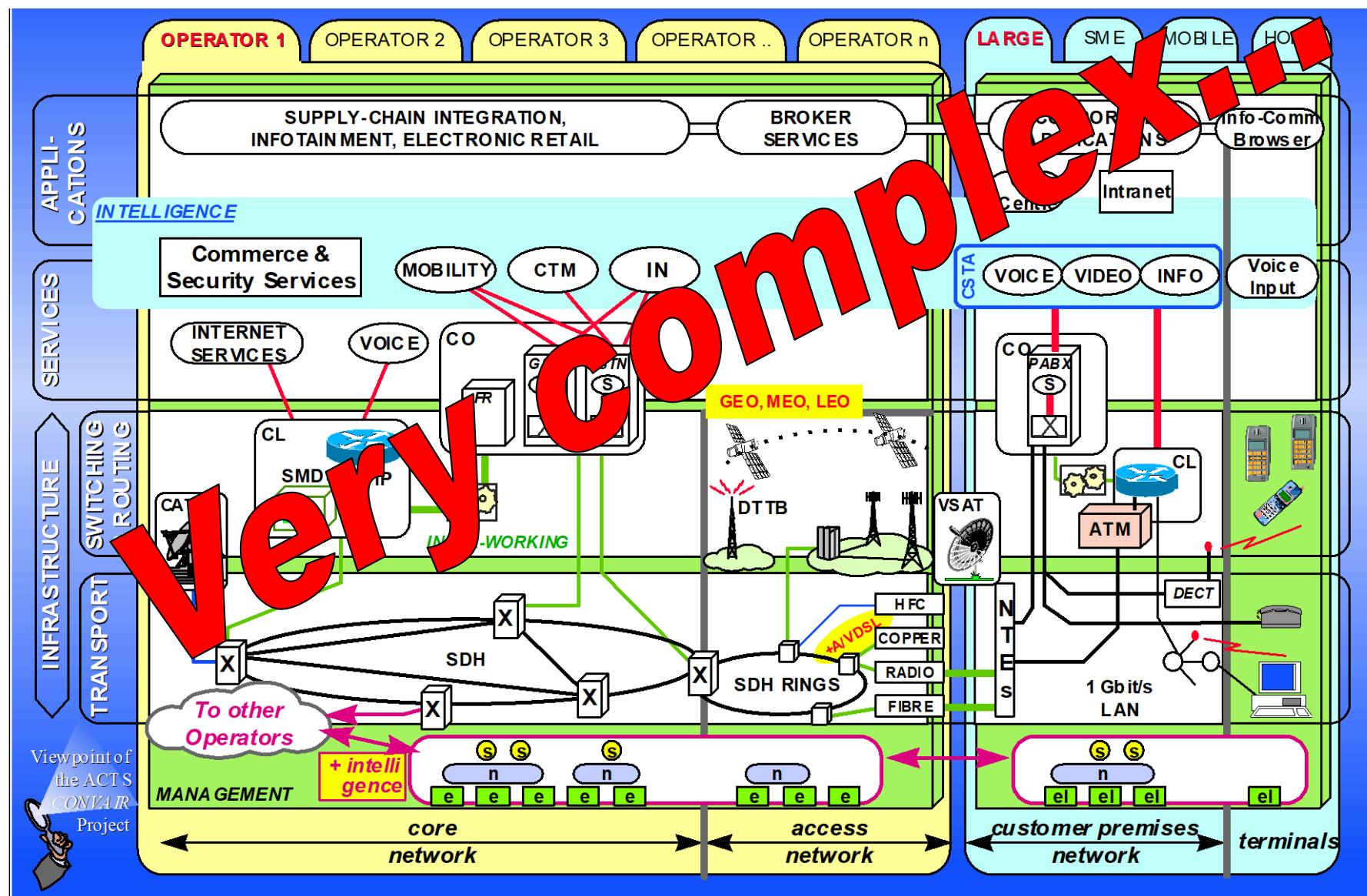
...such as:

- Banking
 - Administration and government
 - Commerce
 - Manufacturing
 - Health
 - Education
 - Transportation
 - Tourism
 - Culture and Entertainment
 - etc ...
- **Communication Networks and Services** are, currently, an essential part of social morphology.
 - Being **networked** has a strong influence in a large variety of situations and forms of life.

Networks are complex structures:



Networks are complex structures:



Networks are so important that they even deserve celebrations in some countries:



Source:

[https://commons.wikimedia.org/wiki/Category:Republic_Day_parade_2004_\(India\)#/media/File:The_tableau_from_Department_of_Telecommunications_titled_%22Telecom-life_Line_of_India%22_projecting_mobile_revolution_presently_encompassing_India,_passing_through_Rajpath_on_the_occasion_of_55th_Republic_Day_Parade-2004.jpg](https://commons.wikimedia.org/wiki/Category:Republic_Day_parade_2004_(India)#/media/File:The_tableau_from_Department_of_Telecommunications_titled_%22Telecom-life_Line_of_India%22_projecting_mobile_revolution_presently_encompassing_India,_passing_through_Rajpath_on_the_occasion_of_55th_Republic_Day_Parade-2004.jpg)

End . . .

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