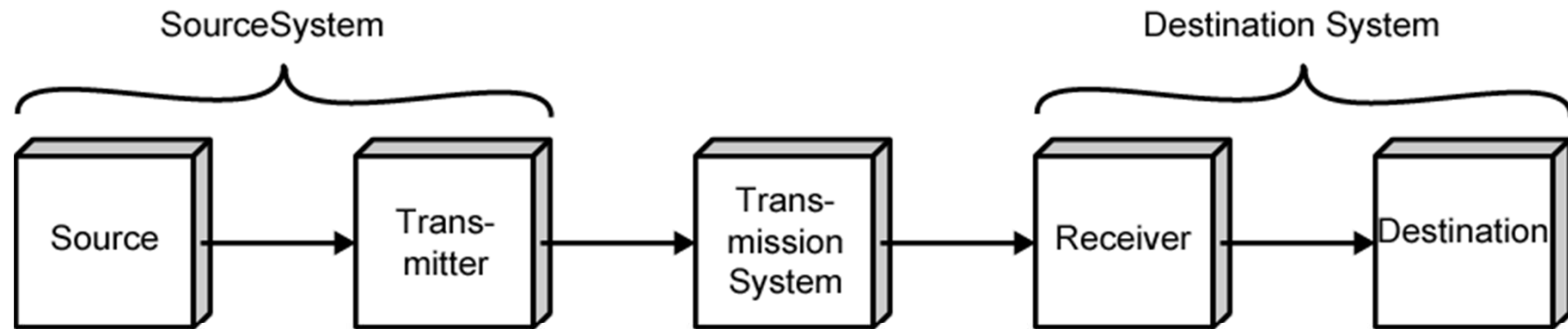


Part 1. Introducció

Introducció

- El paquet IP a les Xarxes de Computadors
- Regulació internacional sobre xarxes

A Communications Model



la informació està en format binari

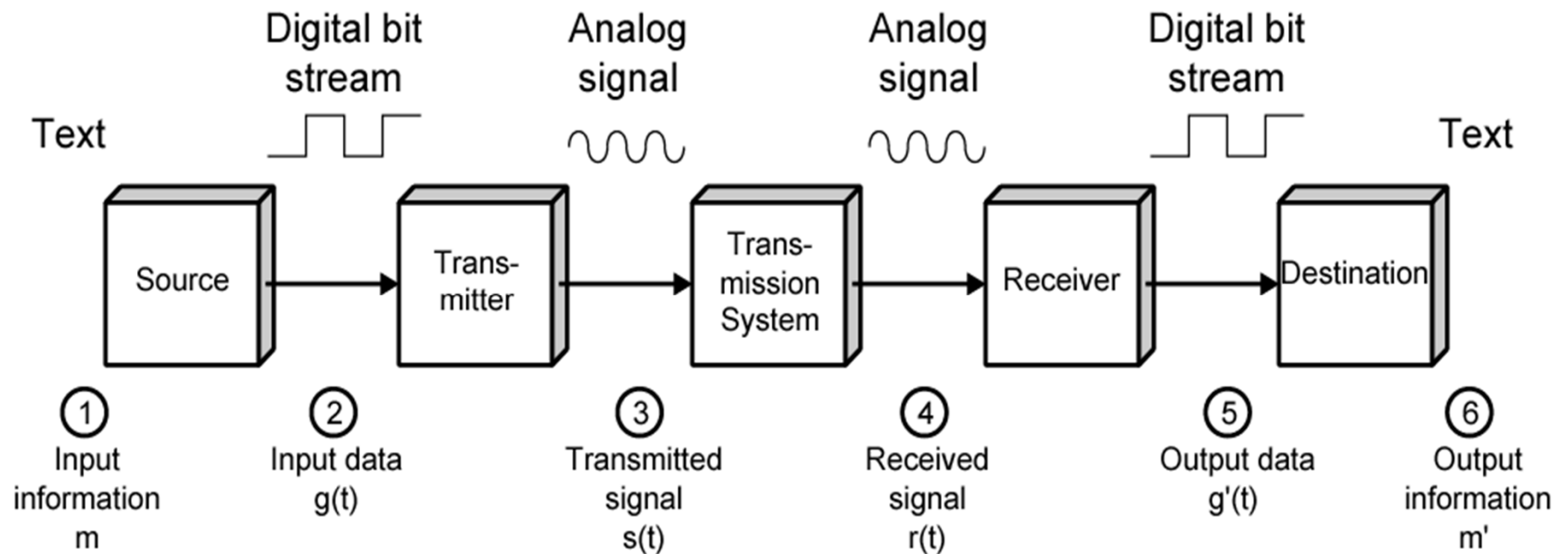
model de comunicació de Shannon (simètric)

(a) General block diagram



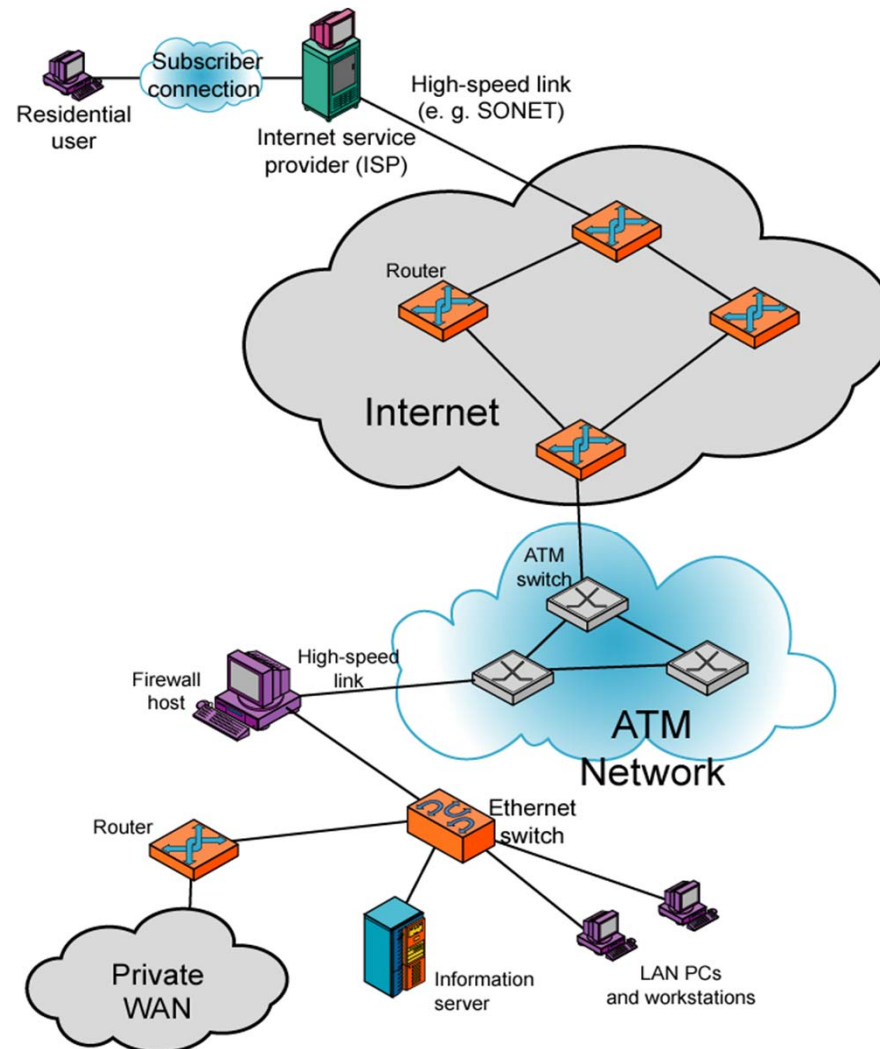
(b) Example

Data Communications Model

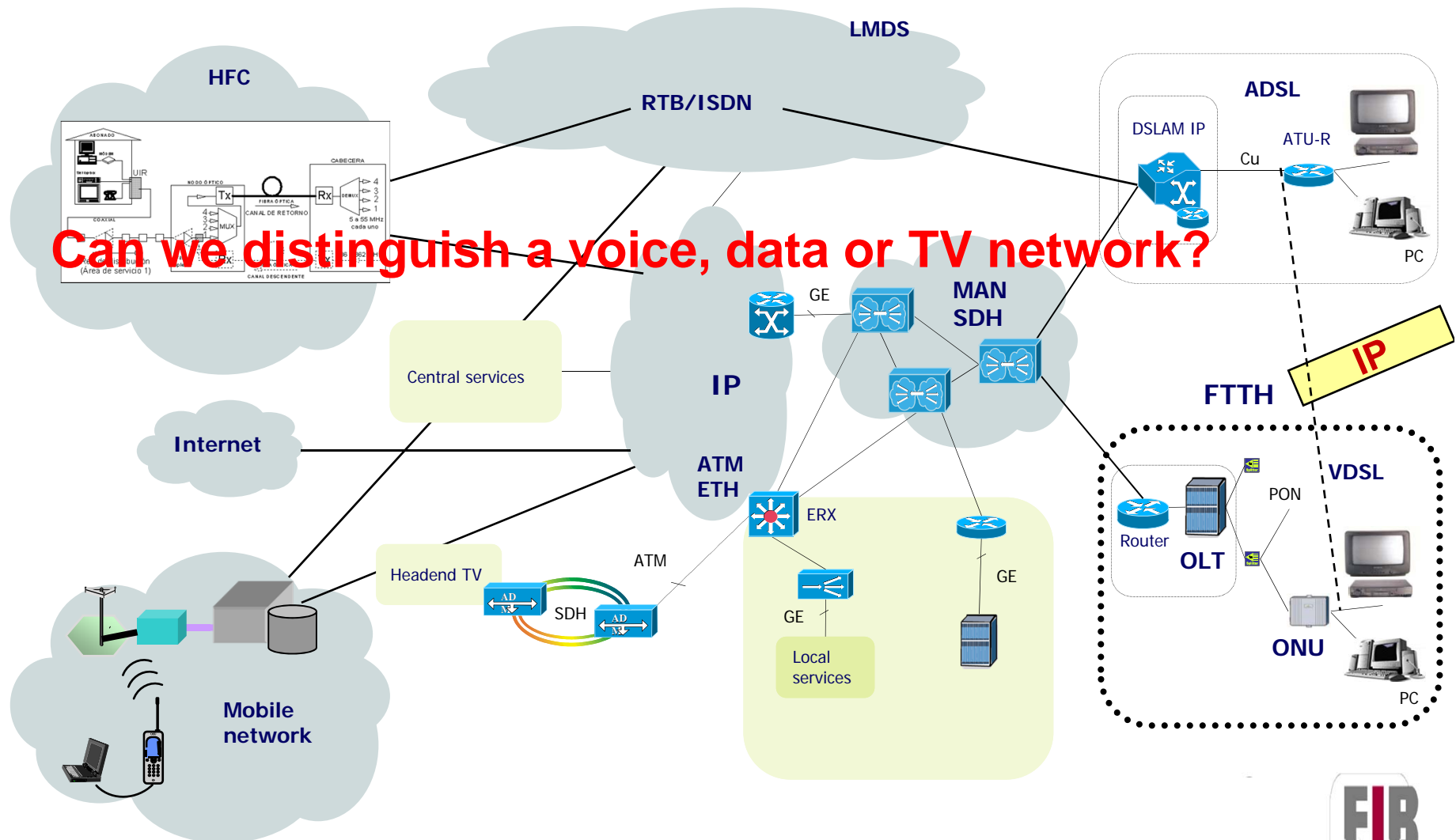


es posa tot en funció del temps, perquè el que ens interessa és saber sempre la taxa de bits per unitat de temps (sol ser segons)

Example Configuration



Public Networks



The Telecoms review

- Telecoms are more than ever central to our lives and work. Economic and social activities alike have come to rely on telecoms services and infrastructure. The sector is changing rapidly, however. Major developments since the 2002 regulatory framework was agreed include the growth in voice-over-internet (VOIP) telephony and the uptake of television services through broadband lines.
- In economic terms, the telecoms sector is one of Europe's most important, with annual turnover of around €290 billion, and around 4% of the jobs in the Union. More widely, the prices charged by the telecoms sector represent a direct cost of doing business in Europe. Liberalization in the telecoms sector in the EU, launched in the mid 1980s, has brought significant benefits for consumers. The price of telecoms services have fallen, on average, by around 30% in the past decade. Moreover, the introduction of competition has raised standards of service all round, making former monopolies much more respondent to the needs of consumers.

Regulatory authorities

- A new European Telecoms Body that will help ensure fair competition and more consistency of regulation on the telecoms markets has been set up. It will be called BEREC (Body of European Regulators of Electronic Communications and will replace the loose cooperation between national regulators that exists today in the “European Regulators Group with a better structured, more efficient approach. BEREC decisions will be taken, as a rule, by majority of heads of the 27 national telecoms regulators. A decision on the seat of BEREC still needs to be taken by the Governments of the 27 Member States.
- In Spain the regulatory authority is CMT (Comisión Mercado de las Telecomunicaciones) www.cmt.es

Topics regulated

- Interconnection networks
- Competition in access networks
 - Mandatory renting for user loops
 - Shared bandwidth
 - Shared networks
- Tariffs regulated
- Removing barriers to competition
 - Incumbent / dominant operator
 - Reply ability
 - Positive discrimination
 - Own networks (under discussion)