



National Future Internet initiatives : France

Francis JUTAND

Scientific Director of Institut TELECOM





French initiatives for the future internet

Step by step France mobilizes to prepare the future of internet

- The government launched two months ago a “digital initiative”
 - High rate or very high rate for everybody
 - To stimulate production of content
 - The Diversification of services
 - To foster the digital ecosystem : SME’s, research labs, state organization, involvement in European governance
- The Ministry in charge of industry launched a working group for the Future Internet in the fall of 2007
 - Analyses and proposals for the future internet in last April
- The strong activity of French clusters of ICT in Digital networks and services associating large companies, SME’s and academic research
 - Platforms : mobile, very high rate, contents and services at French and European level
 - Advanced R&D projects funded by FUI, ANR, OSEO, and European programs

French initiatives are in phase with European consensus



The GRIF initiative

- **GRIF : Research Group for the Future Internet**
- **Initiated by DGE a state service of ministry of industry**
- **Steering committee :**
 - F Jutand (Institut TELECOM) and J.P. Verjus (INRIA)
- **Members**
 - F Baccelli (INRIA-ENS), D Kofman(Institut TELECOM), S FDIDA(UPMC), V Badrinath(Orange), C Diot (Thomson), F Bourdoncle(Exalead)
- **Deliverable**
 - Analysis of the Future Internet in phase with EuroNGI, and EuroNF asset
 - Main proposals : create excellence research labs and back the SME's
- **Main result**
 - A cooperation between INRIA, Institut TELECOM and universities to create 3 “laboratories of excellence” in Paris, Brittany and Sophia

As an illustration : the Institut TELECOM

Institut TELECOM, a french national institute

- 3 interleaved missions : teaching, research and innovation
- More than 5000 students (engineer, manager & master level)
- By 2000 researchers, R&D engineers, PHD students, and post doc
- More than 250 start up created since 2000

A vision : 6 challenges to build the future of internet

- *Future networks of Internet*
- *Digital Multimedia contents and services*
- *Digital Usage and cultures*
- *Digital health*
- *Digital Sustainable development*
- *Digital Security and privacy*

Strategy :

- Create for each challenge a dedicated research institute, open to partnerships
- Launch common research initiatives with : INRIA, CEA, CNRS, Universities
- Foster innovation into the triangle : large companies, SME's and academic's
- Involve in European initiatives



What is the strategy!



Trends

Traffic

Mobile access
Peer To Peer
Cloud computing
Network as a media
Fibre to the home

Usage

Comm& content
Web as a memory
User centric
services Ambient
services
Internet of things

Services

Interfaces

Architecture

components

Telecom

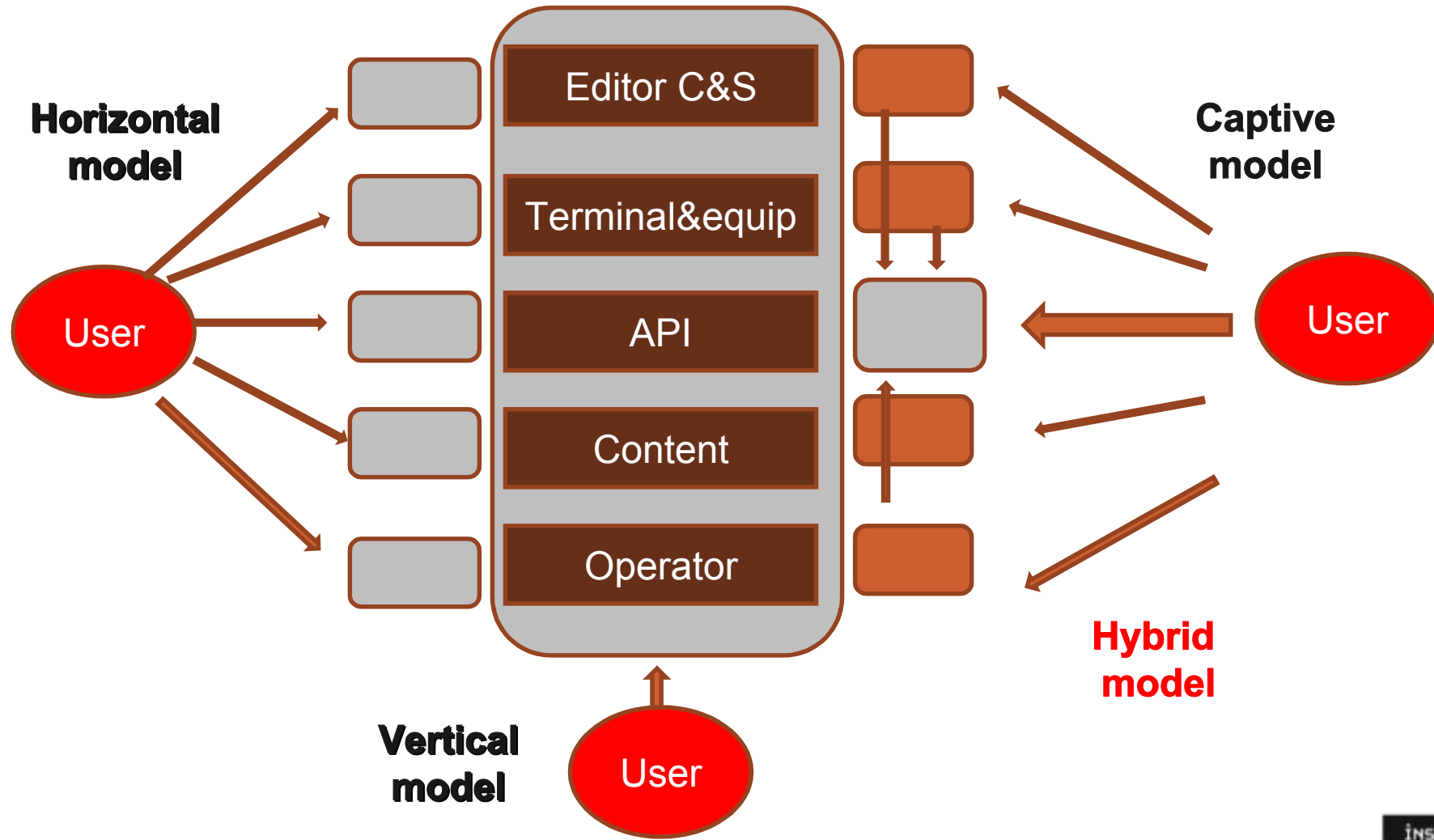
Data

Media

Converge

**Global & ubiquity &
mobility & services
interworking networks**

Evolution of the share of value



Business trends

Evolution of business models

- more and more interactions between networks, services and contents
- shift of value from communication carrying toward services and content
- room for new actors working in overlay
- the disturbing irresistible growing of free models

Evolution of actors and share of markets

- the main market share is today for operators giving them a strong market power
- the roles of outsiders coming from equipment, terminal, content, search engines actors
- the key point of net neutrality that could lead to drastic structural evolutions and is a today a global lobbying field

The role of Europe

- to create a global and innovative telecommunication market
- to back a global sustainable model of value sharing between actors
- to foster innovations in business models
- Not to be too “angelic” with US strategies

Technical trends

The future of internet

- 1.Global mobility**
- 2.Services networking ubiquity**
- 3.Internet of things**
- 4.Superfast and Smart network :**
- 5.Ambient communication**
- 6.Terminal as a communication node**
- 7.Spontaneous networks**

SWOT for Europe strategy

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- A strong and very developed European market
- Leading positions in mobile and infrastructure
- Innovative positions for triple play

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- Lack of massive investment for high rate large experiments
- Still too low rate of use of internet
- Lack of investment in basic research activities

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- Ecosystem between industrialists, SME's and academic labs
- New fields for internet services
- Development of social networks

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- Strong investment of research agency in the US for NGI
- Aggressive newcomers from both advanced and new countries
- Delay in developing the internet of things applications
- Accept the unilateral US point of view of net neutrality exclusively for network

5 paths for a new leadership in ten years

In addition and to back commission and national initiatives for Internet of the future and Web3.0

- **Foster cooperations** between large companies, SMEs and research labs : consortium, bilateral, and open innovation
- **Invest in laboratories of excellence** : create a scientific leadership in Europe, as the ground for disruptive innovations
- **Set up leading positions in new field as** :
 - Smart networks and networked services
 - Digital life services on NGN, and future NGI networks
 - Communicating objects and internet of things
 - Digital health
 - Security and privacy
- **Create platforms of experiment** for usage of digital life and social networks.
- **Fund high level teaching programs** attractive for best European and international students



as a conclusion

- **The European industry exhibits still strong positions**
- **Its strategic agenda seems not yet to be well established**
- **Rate of innovation is still to low**
- **The convergence open the door to major disruptions in business**
- **We need to combine all our resources and initiatives, coming from**
 - key companies, SME's and Academics
 - Commission , Eureka (ITEA, Celtic) and Regional clusters
- ***“We need a global long term road map, taking into accounts the potential of research, laws of economy, strategies of other global actors, and the vision of the digital society we want to build.”***
- ***We need clear steps and results.***