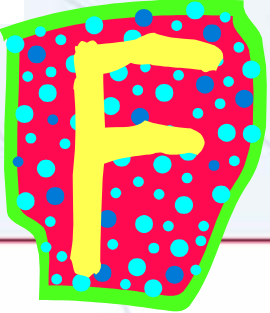




**Flexibility, the magic
word**

Lilian Jeanty

**Radiocommunications
Agency, The Netherlands**



What is Flexibility?

Increasing the ability of the spectrum regulatory framework to facilitate and adapt, in a timely manner, to user requirements and technological innovation by reducing constraints on the use of spectrum and barriers to access spectrum.



Content of the Presentation

- **Flexibility studied at all levels (global, European, national)**
- **The objectives of flexibility**
- **What is being done at the global level**
- **What is being done in Europe**
- **What is being done in the Netherlands**
- **What are the different views on the direction to take**

Flexibility in frequency management introduced at different levels

- At a global level (**ITU**)
- At regional level (**EU** and **CEPT/ECC**)
- Within **national** administrations



The objectives of more flexibility

- At all levels (global, European, national) the objective is to:
 - Adapt the regulation in a timely manner to convergence

Classical vertical model

BROADCASTING

DATA

TELEPHONY



Converged horizontal model

Content

Applications

Internet Protocol

Network

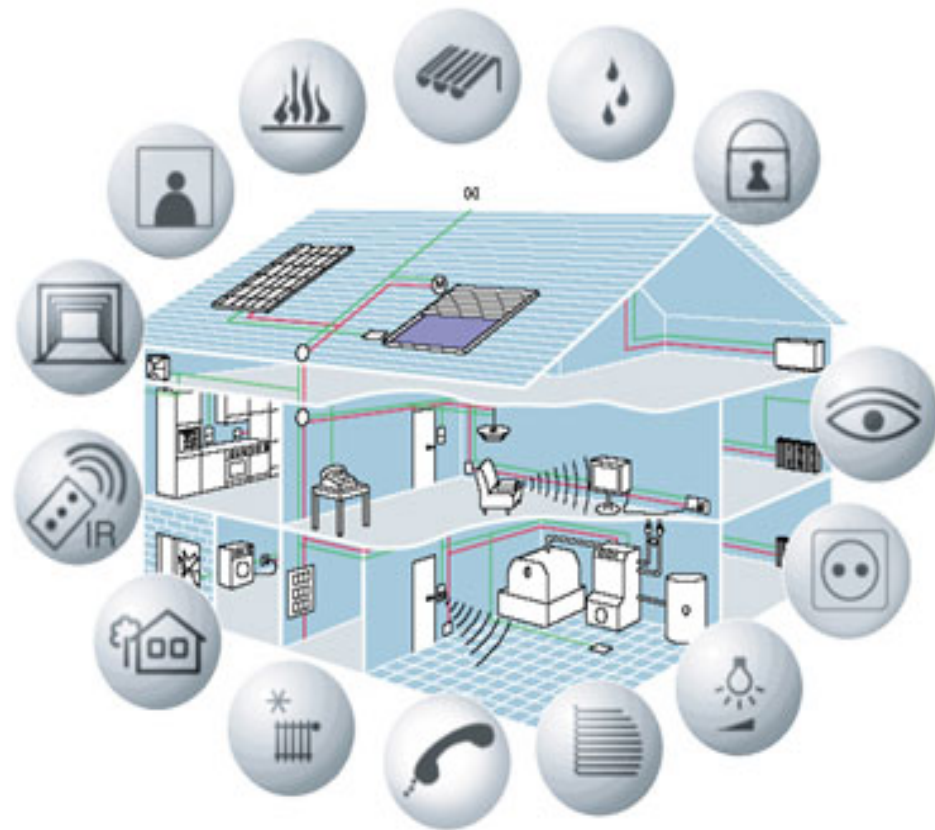
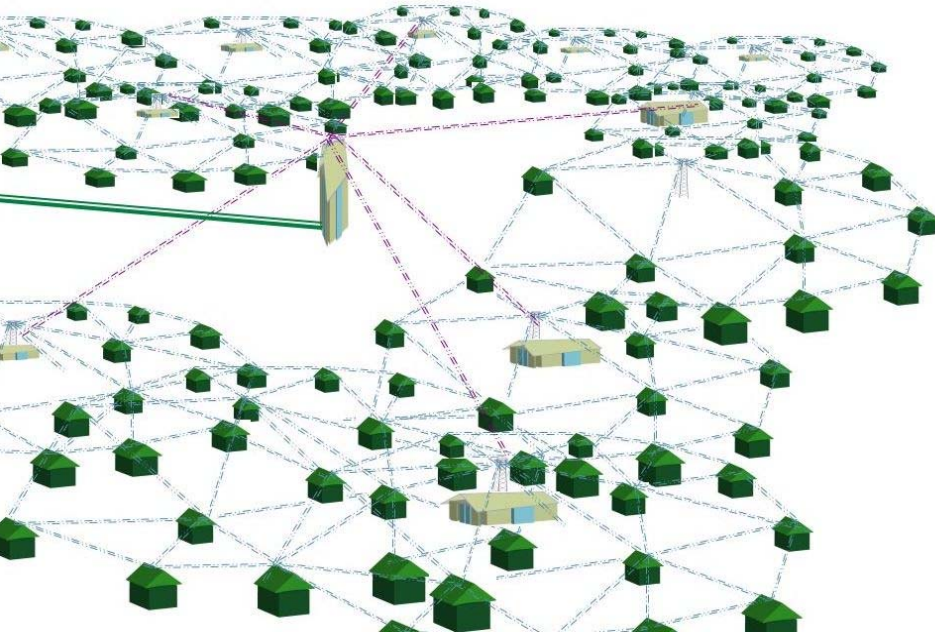
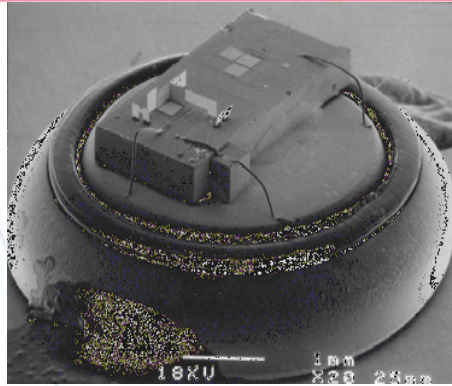
Infrastructure

Public space (spectrum/soil)

The objectives of more flexibility

- **At all levels (global, European, national) the objective is to:**
 - **Adapt the regulation in a timely manner to convergence**
 - **Adapt to technical innovation**

Innovation

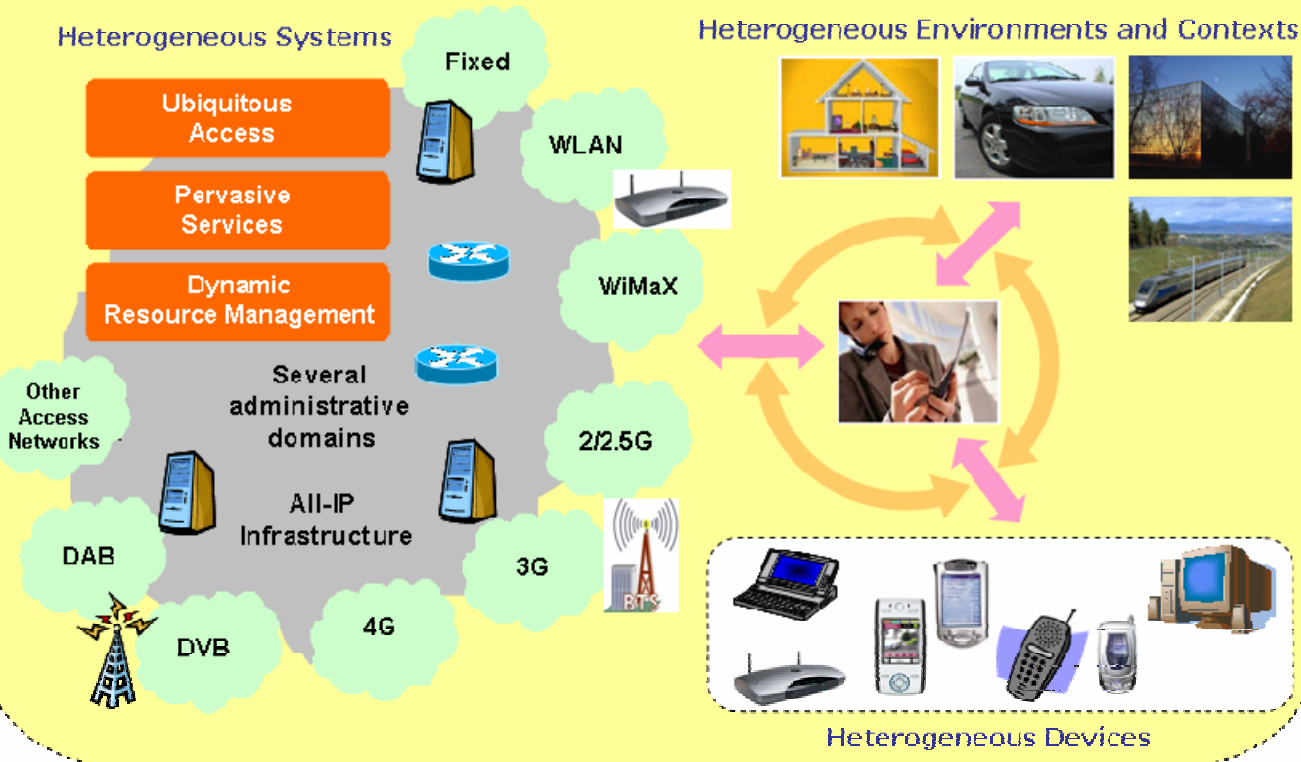


Convergence and Innovation: E²R Enabler of Seamless Experience

Beyond 3G (B3G) Systems

End-to-End Reconfigurability: Enabler of the Seamless Experience

Heterogeneous Systems



End-to-End Reconfigurability is the key enabler for providing a seamless experience to the end-user and the operators:

→ Managing and increasing resilience of growingly complex architectures

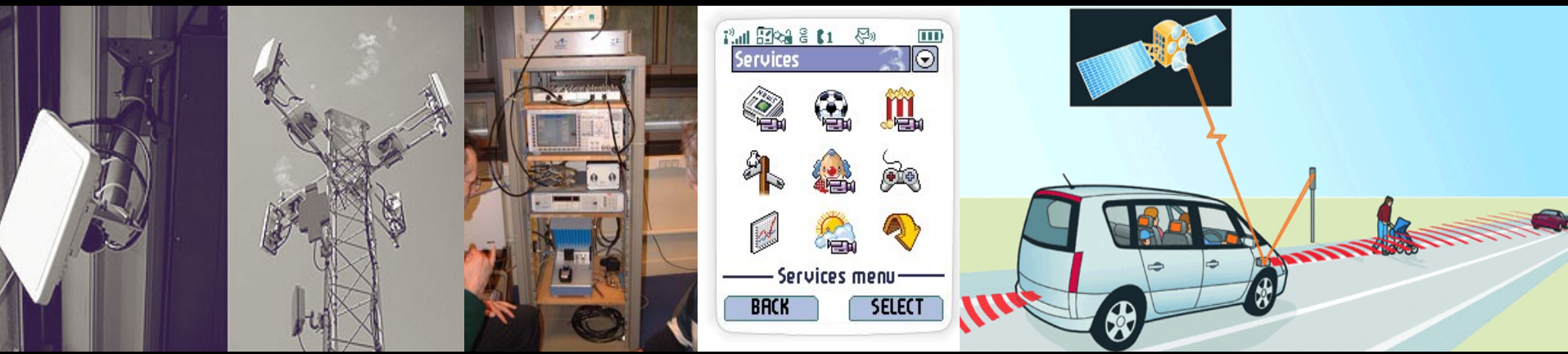
→ Reducing costs of deployment, evolution and operation of large communication systems

→ Providing opportunities to develop and experiment rapidly new services and applications

The objectives of more flexibility

- **At all levels (global, European, national) the objective is to:**
 - **Adapt the regulation in a timely manner to convergence**
 - **Adapt to technical innovation**
 - **Reduce barriers to spectrum access and on the use of spectrum**

The objectives of more flexibility



**These efforts should lead to improvement of
the spectrum regulatory framework
on all levels**



Global level



- Resolution 951 (WRC-03): Options to improve the international spectrum regulatory framework
- Work is going on in **ITU-R WP 1B** which will result in a report to WRC-07 by the BR Director with proposals
- Current proposals under discussion:
 - **Option 1** – Keeping current practice
 - **Option 2** – Reviewing and possibly revising some of the **Current Service Definitions** (mobile and fixed)
 - **Option 3** – The introduction of a new provision in the **Radio Regulations** expanding the principle of **substitutability**



Europe (EU)

- **Harmonisation** of spectrum to create a single market for applications
- A market based approach: introduce **trading** in a number of frequency bands before 2010 in a harmonised way
- **Wireless Access Policy for Electronic Communications Services (WAPECS)**
 - In selected bands all services and networks can be introduced
- Various other initiatives, such as studies on **commons** and **sharing**, increasing **transparency**

Europe (CEPT)

- **ECC Report 80**: enhancing harmonisation and introducing flexibility in the spectrum regulatory framework
- ECC Decisions will be **reviewed** three years after their adoption
- Definition of “to **designate** a frequency band”
- **Light licensing** regimes have been introduced in certain frequency bands
- ECC Decisions will be technological and application **neutral**

Europe (CEPT)

- Make bands available as **flexible bands**
 - what are the specific rules necessary for such bands (if any)
- Innovative use of **sharing**
 - what calculated risks can be taken concerning interference
- Study what **licensing conditions** are required for converging services / applications
- Introduce more **light licensing** and **commons**



The Netherlands

- **Leave more to the market, limit government interference**
- **Facilitate secondary trading of licences or part of licences**
- **More shared use**
- **Public services have to justify their frequency requirements**
- **Less individual licences and less licence conditions**

Reduce barriers on use

Licence
Conditions
Restrictions
Fees

Registration
Conditions
Restrictions
Fees

Commons
Conditions
Restrictions
Fees

View 1 on harmonisation and flexibility

- Harmonisation measures should be based on the results of a **cost benefit analysis**
- Harmonisation can also be achieved on a voluntary, **industry led** basis
- Flexibility is increasing the ability of the spectrum regulatory framework to **adapt**, in a timely manner

The introduction of market mechanisms, such as secondary trading and liberalisation could bring harmonisation and flexibility in balance

View 2 on harmonisation and flexibility

- Harmonisation should be vigorously **pursued**
- Harmonisation brings economy of scale **benefits**, enables roaming, stimulates investment, reduces risk of interference
- Flexibility could lead to **fragmentation** of spectrum use
- We should aim for **globally harmonised** spectrum and flexibility could endanger this
 - **Flexibility and harmonisation are mutually exclusive**



The best of both worlds

- **Both these views claim to be the road to success which will lead to a strong position of industry, investments and job creation**
- **A reconciliation of these different views would make the position stronger .. but...**

Who wants flexibility

- **Administrations are divided based on their perceived role or that of the market**
- **Operators are divided based on whether they have already or have not yet access to frequencies**
- **Manufacturers want economies of scale**

Balancing act

Harmonisation



Flexibility

WEB sites:

EU:

http://europa.eu.int/comm/dgs/information_society/index_en.htm

CEPT:

<http://www.ero.dk/>

Radiocommunications Agency Netherlands

<http://www.at-ez.nl>

E2R

<http://www.e2r.motlabs.com>