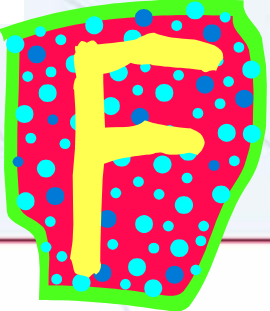# Flexibility, the magic word

Lilian Jeanty

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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**

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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:**

  o **Adapt the regulation in a timely manner to convergence**

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Classical vertical model

BROADCASTING

DATA

TELEPHONY

Converged horizontal model

Content

Applications
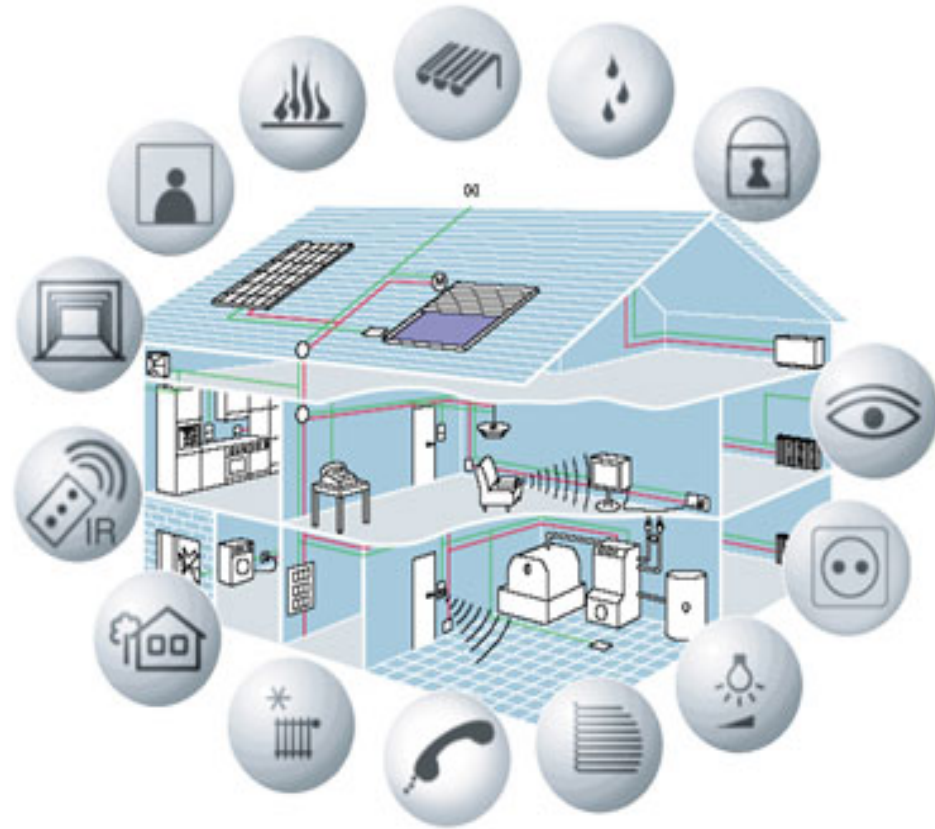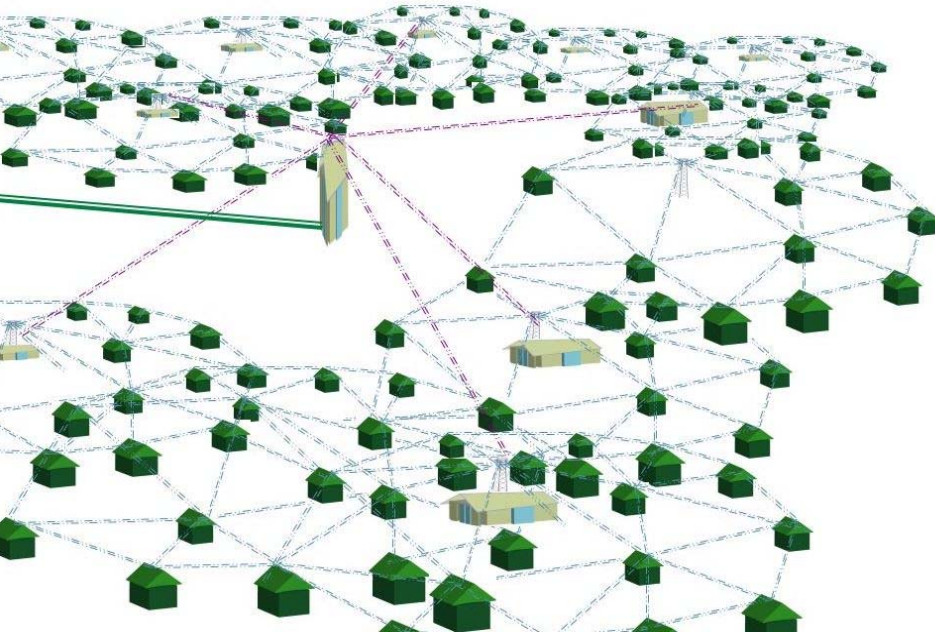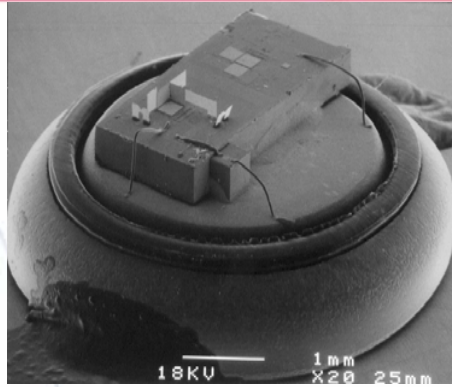
Internet Protocol

Network

Infrastructure

Public space (spectrum/soil)

The objectives of more flexibility

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

  - o **Adapt to technical innovation**
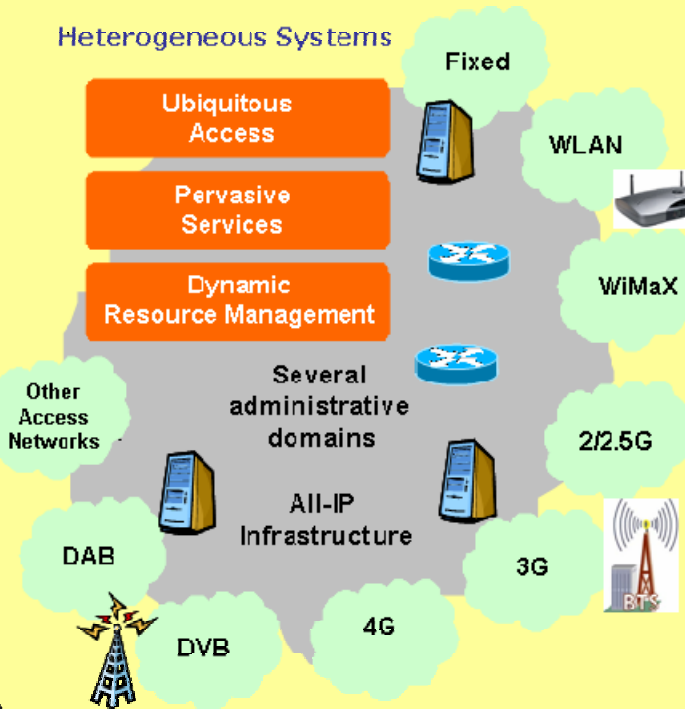
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Innovation

Convergence and Innovation: E²R Enabler of Seamless Experience

Beyond 3G (B3G) Systems

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

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:**
  - o **Adapt the regulation in a timely manner to convergence**
  - o **Adapt to technical innovation**

  - o **Reduce barriers to spectrum access and on the use of spectrum**

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The objectives of more flexibility
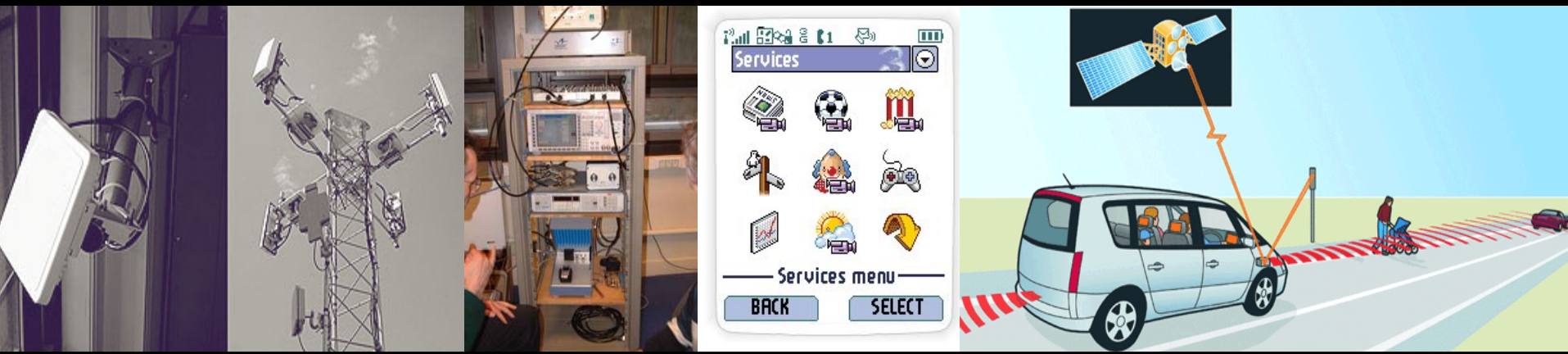
These efforts should lead to improvement of the spectrum regulatory framework

on all levels

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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:

  o **Option 1 – Keeping current practice**

  o **Option 2 – Reviewing and possibly revising some of the Current Service Definitions (mobile and fixed)**

  o **Option 3 – The introduction of a new provision in the Radio Regulations expanding the principle of substitutability**

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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)**
    - o **In selected bands all services and networks can be introduced**
- **Various other initiatives, such as studies on commons and sharing, increasing transparancy**

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**
  - o **what are the specific rules necessary for such bands (if any)**
- **Innovative use of sharing**
  - o **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**

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Reduce barriers on use

Licence	Registration	Commons
Conditions Restrictions Fees	~~Conditions~~ ~~Restrictions~~ ~~Fees~~	~~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

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View 2 on harmonisation and flexibility

- **Harmonisation should be vigourously 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**

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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…**

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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