



# Co-ordination of spectrum management in the EU

Chiang Rai – July 30-31, 2009

**Philippe Defraigne**

Cullen International

[phil.defraigne@cullen-international.com](mailto:phil.defraigne@cullen-international.com)

# Outline

- European spectrum policy – who does what?
- Radio Spectrum Decision
- Radio Spectrum Policy Group (RSPG)
- RSPG Opinion on Collective Use of Spectrum
- Radio Spectrum Committee (RSC)
- RSC and RFID

# Spectrum policy – who does what in Europe?



**27 Member  
States**

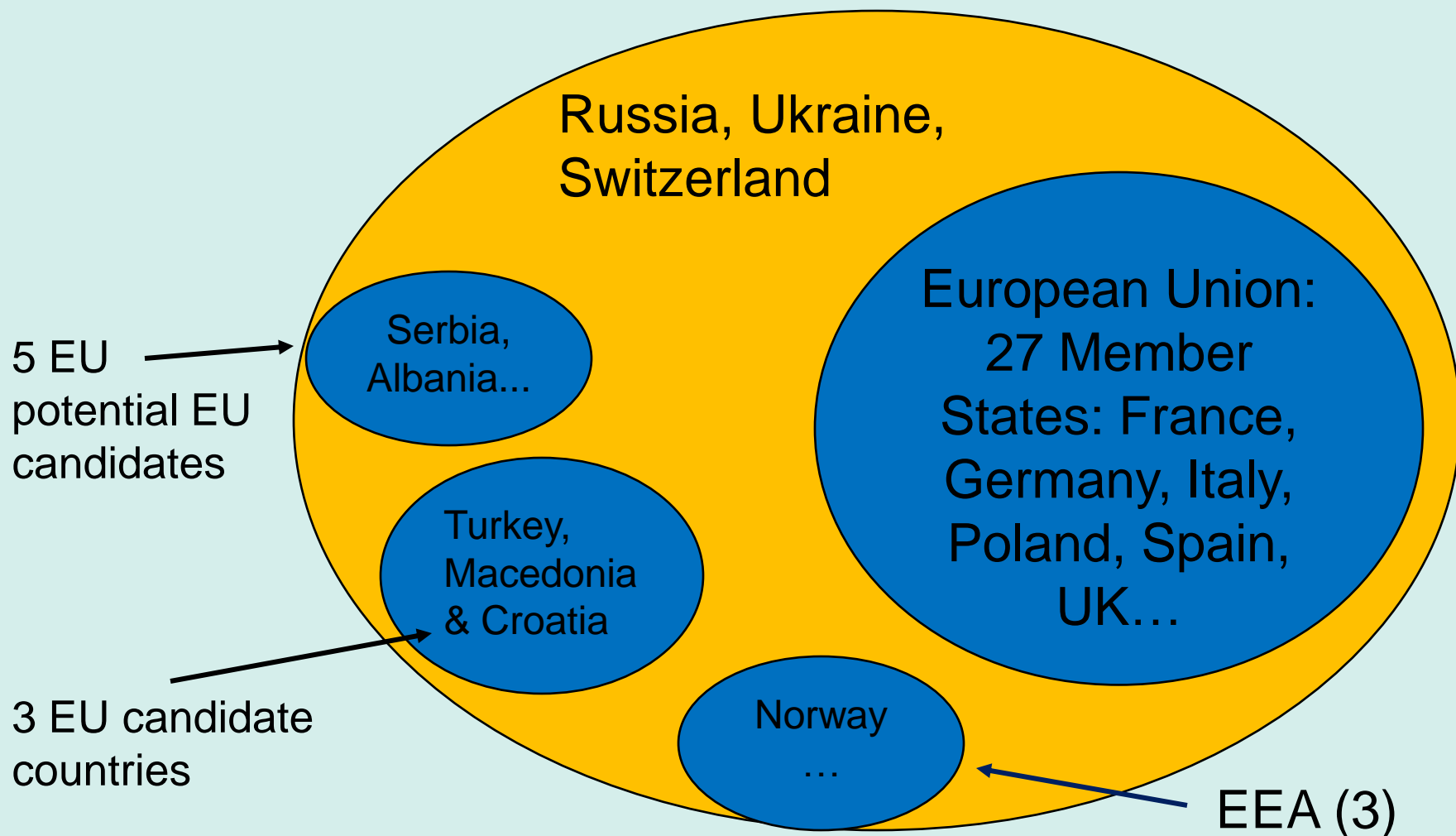


**united by  
a Union  
Treaty**



**but also  
members of a  
broader club**

# CEPT – 48 countries



# Allocation versus assignment

- Spectrum allocation
- Spectrum assignment

# Outline

	Int'l level	National level	
		Allocation	Assignment
EU Member States (MSs)	Negotiating as individual parties	National allocation plans	Issuing spectrum usage rights at national level, setting conditions
European Union	Policy input: guardian of "acquis"	Harmonisation measures (binding) Conformity of equipment	EU regulatory framework (ECS) Equipment regulation Coordination of assignment in certain cases
CEPT	Coordination technical negotiation positions	Technical advice; consensus position (non-mandatory)	-  Source: Ruprecht Niepold – Spectrum 20/20 Conf. – Ottawa – June 1, 2009

# Radio Spectrum Decision (RSD)

- Decision 676/2002/EC of the European Parliament and of the Council of 7 March 2002 on a regulatory framework for radio spectrum policy in the European Community
- Legal basis: Art. 95
- RSD provides for the creation of a **Radio Spectrum Committee (RSC)**
- Complementary decision: Commission Decision of July 26, 2002 establishing the **Radio Spectrum Policy Group**.

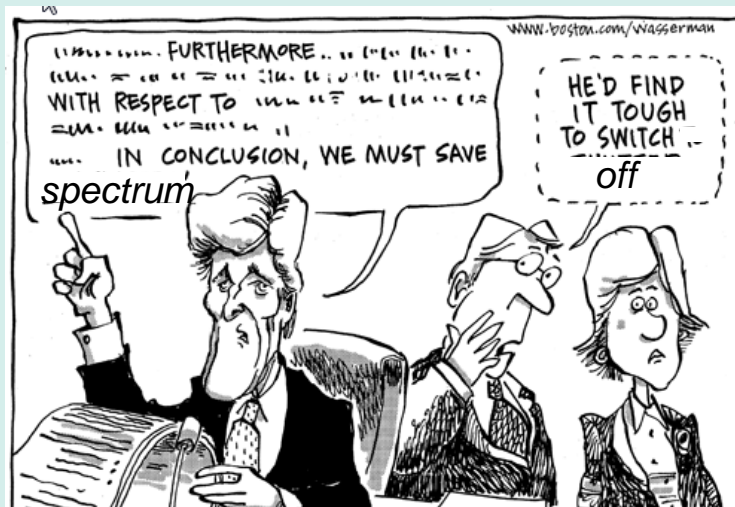
# Radio Spectrum Decision (RSD)

Four aims (Art. 1 RSD)

- **Policy making:** Strategic planning and harmonisation of the use of radio spectrum in the EU
- **Implementation of policy:** methodology to ensure harmonised conditions for availability and efficient use of radio spectrum
- **Provision of information:** coordinated and timely information re. allocation, availability and use of radio spectrum in the EU
- **International negotiations:** effective coordination of EU interests in int'l negotiations where spectrum use affects Community policies

# RSC and RSPG

**RSC** assists the Commission in the adoption of **technical implementing measures** for the availability and use of radio spectrum.



**RSPG** adopts opinions to advise the Commission on **broader radio spectrum policy issues** than the technical measures covered by the RSC.

# Radio Spectrum Policy Group

- Legal basis: (RSPG) established under Commission Decision 2002/622/EC
- Membership: senior representatives of the 27 Member States
- Observers: EEA, Candidate countries, European Parliament, CEPT, ETSI
- Output: RSPG adopts opinions to advise the Commission on broader radio spectrum policy issues than the technical measures covered by the RSC.

# Radio Spectrum Policy Group

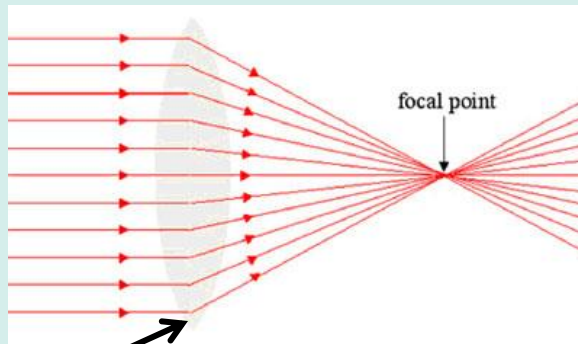
27 Member States



**RSPG**

*Opinion to  
European  
Commission*

**New EU policies**



- Freq. trading
- Digital dividend
- WRC
- Public sector
- CUS

Observers

EEA,  
Candidate countries,  
European Parliament  
CEPT, ETSI

- Consolidated national views:
- Economic usages (TV, Telecom...)
  - public order and security
  - civil protection and defence

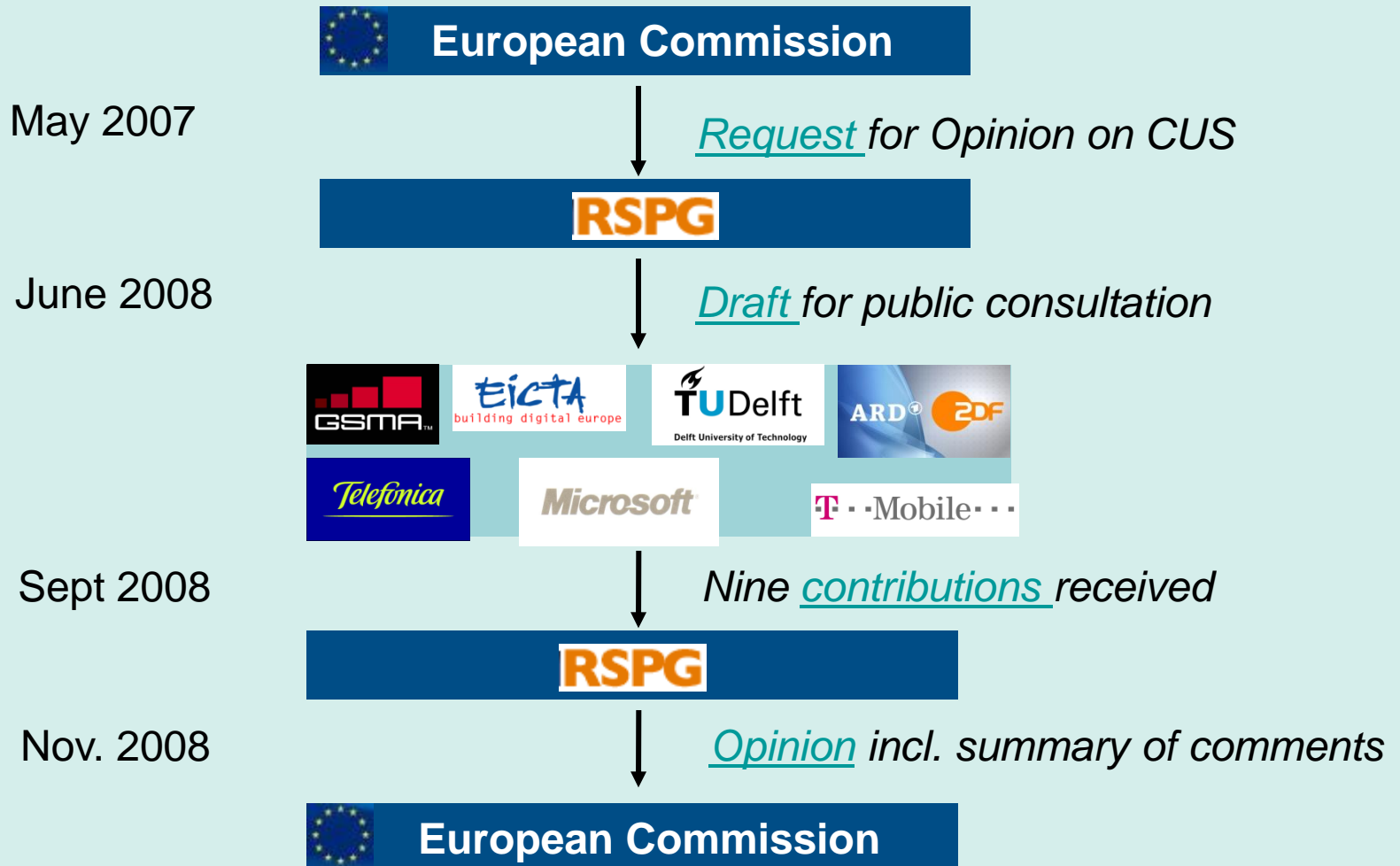
# Radio Spectrum Policy Group

- Examples of Opinions sent to the European Commission
  - Best practices re. use of spectrum by public sectors
  - Digital dividend
  - Streamlining the regulatory environment for the use of spectrum
  - Collective Use of Spectrum
  - WAPECS (liberalisation of spectrum)
  - WRC 07, WRC 11
  - Multimedia Services in bands allocated to broadcasting services
  - Scientific use of radio spectrum

# Example of functioning of RSPG: CUS

- Collective Use of Spectrum (CUS) allows an undetermined number of independent users and/or devices to access spectrum in the same range of frequencies at the same time and in a particular geographic area under a well-defined set of conditions
- Examples of application of CUS: Short Range Devices (SRDs) such as WLAN and RFID or Short Range Radars for the automotive industry

# CUS – RSPG opinion – the process



# CUS – RSPG Opinion

A few Key points:

- RSPG strongly supports the use of generic CUS allocations
- RSPG identifies **markers** to help determine where CUS is likely to be appropriate:
  - Short distances (but exceptions e.g. maritime applications)
  - Low-power level applications
  - High frequencies (less congested + ideal for frequency re-use)
- allocations and associated regulations should be made as generic as possible and should not impose unnecessary constraints on the technologies or services that may be deployed in the band.
- Regulators should be encourage to remove existing constraints.
- R&D efforts for development of technologies >40GHz for CUS applications

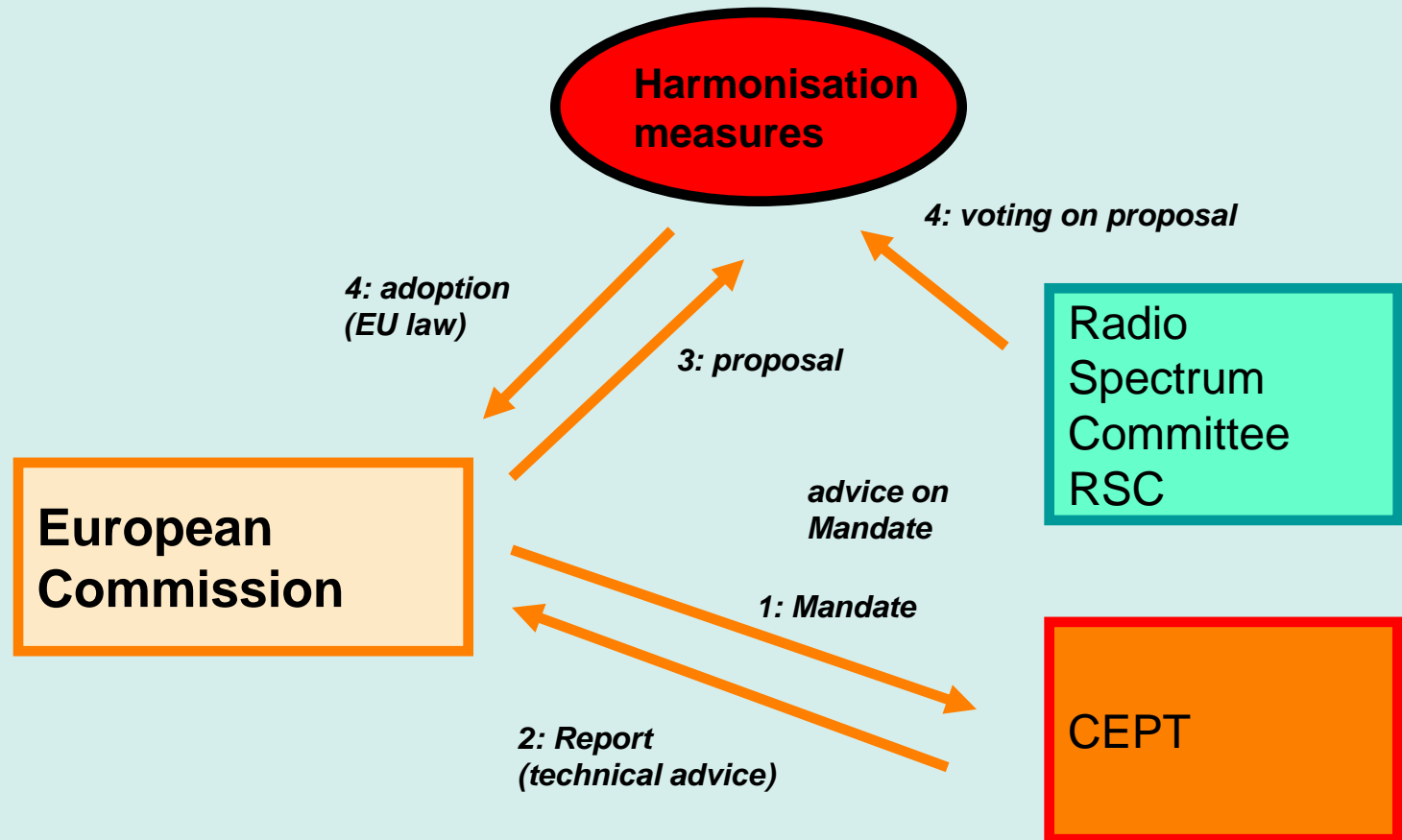
# Radio Spectrum Committee - Role

- Assists the Commission by verifying draft study mandates addressed to CEPT
- Assists the Commission in the adoption of technical implementation measures (see slide on comitology)

# “Comitology”

- In the European Union, for most matters, responsibilities are as follows:
  - The European Commission has the right of initiative
  - The Council (national governments) and European Parliament (directly elected by EU citizens) have the final say
  
- For specific “technical matters”, the Council and E.P. May delegate the decision to a committee composed of representatives of EU Member States.

# RSC – Harmonisation measures



Legal basis: Radio Spectrum Decision 676/2002/EC

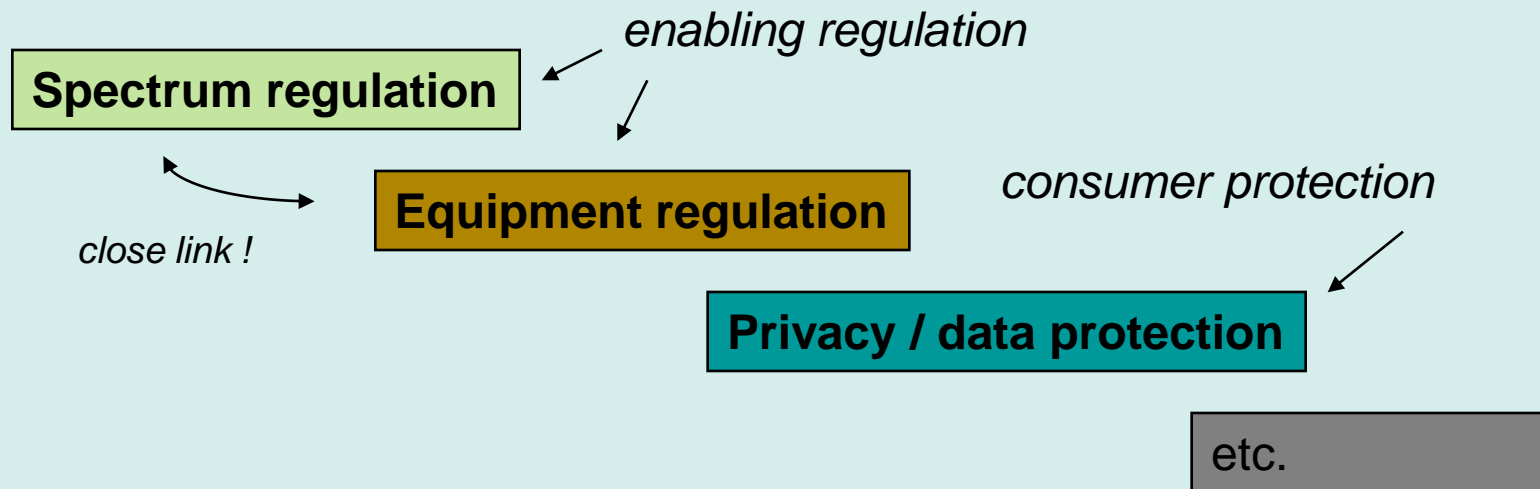
Source: Ruprecht Niepold –  
Spectrum 20/20 Conf.  
Ottawa – June 1, 2009

# Harmonisation measures (RSC)

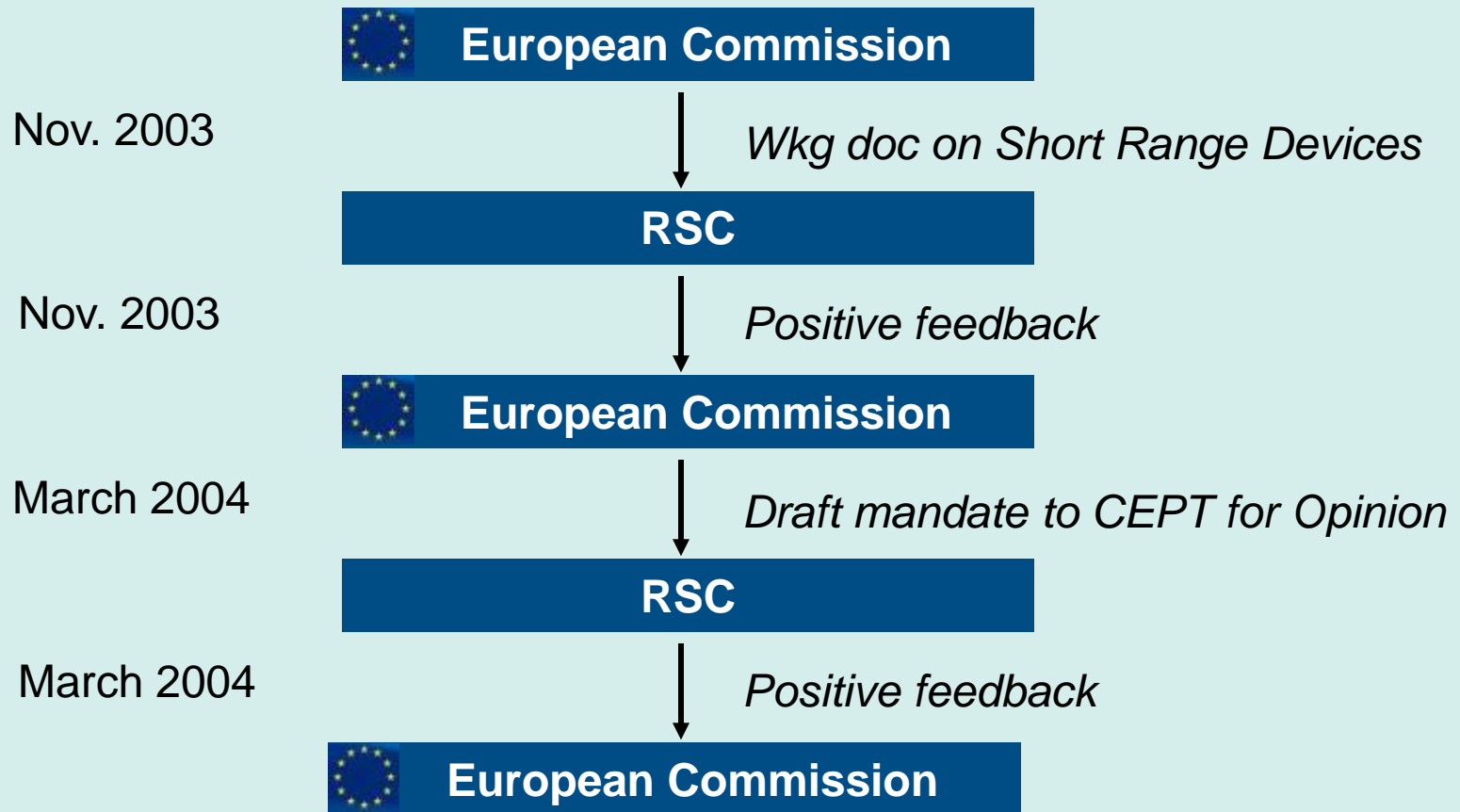
<b>Areas</b>	<b>Applications</b>
<b>Short range devices</b>	<b>large variety of applications</b>
<b>RFID</b>	<b>object tagging</b>
<b>SRR 24 GHz and 79 GHz</b>	<b>road safety</b>
<b>ITS</b>	<b>road safety</b>
<b>Ultra wide band (UWB)</b>	<b>high bit-rate communication; specific applications</b>
<b>5GHz R-LAN</b>	<b>ECS</b>
<b>Mobile communications on planes and vessels*</b>	<b>ECS</b>
<b>MSS*</b>	<b>ECS</b>
<b>900/1800 MHz, 2.6 GHz, 3.4 GHz 800 MHz, 2 GHz</b>	<b>ECS</b>

## Example: RFID

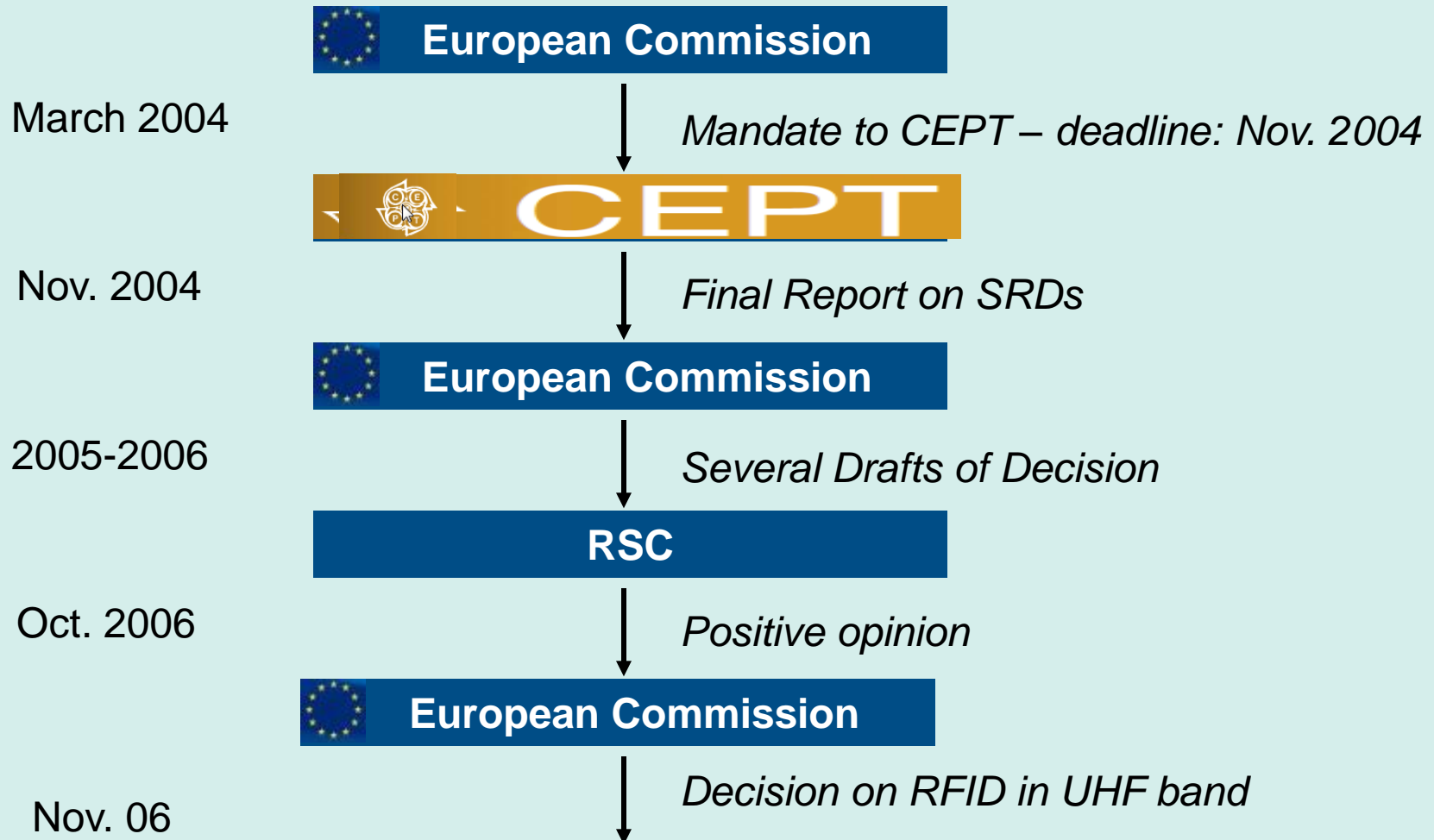
- RFID identified as generic technology with multiple fields of application: retailing,, security, counterfeiting combat, “internet of things” etc.
- Need to define adequate regulation at several layers; spectrum regulation is one element in a wider context



# RFID – spectrum harmonisation measure

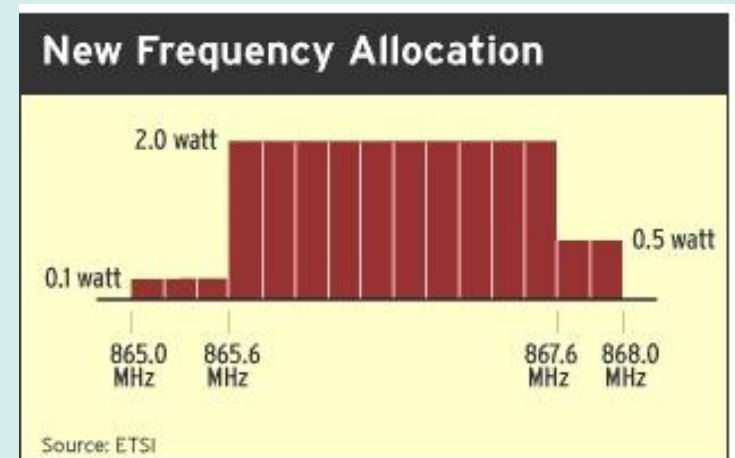


# RFID – spectrum harmonisation measure



# RFID – spectrum harmonisation measure

- European Commission Decision on RFID devices operating in the UHF band – November 23, 2006 (OJ L 329/64)
- MSs to designate and make available, within 6 months, specific frequency bands for RFID devices
- The Annex to the Decision defines
  - Three sub-bands (3MHz in total) at the top of the UHF band
  - Maximum power/Field strength
  - Channel spacing: 200 kHz

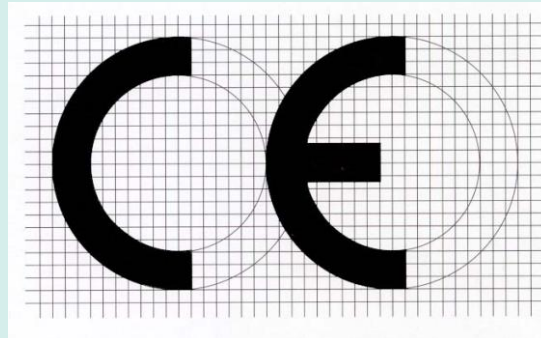


# RFID – equipment regulation / standards

- “Listen Before Talk” (LBT) technique was specified via a standard established by ETSI for Short Range Devices operating in the band
- LBT created difficulties for certain RFID reading situations (palettes with multiple RFID tagged goods passing one reader station)
- Solution: ETSI revised the standard for short range devices readers
  - identifying 4 channels where RFID readers could transmit with absolute priority (no LBT), whereas RFID readers would outside of the sub bands be restrained to much lower powers than permitted by the spectrum regulation
  - The new standard avoids the problem, while being fully compatible with the emission mask defined in the spectrum regulation

# RFID: equipment regulation / standards

- RFID readers and transponders (e.g.) tags fall under the equipment regulation (R&TTE Directive 1999/5/EC)
- The revised standard is adopted as “harmonised standard”, i.e. is used as reference for declaring compliance
- Compliance with harmonized standards gives rise to a presumption of conformity to the essential requirements (e.g. ensuring no harmful interferences)
- Compliant products can may be placed on the European market and operated without the need for further approval (CE mark)



# RFID : Privacy and data protection

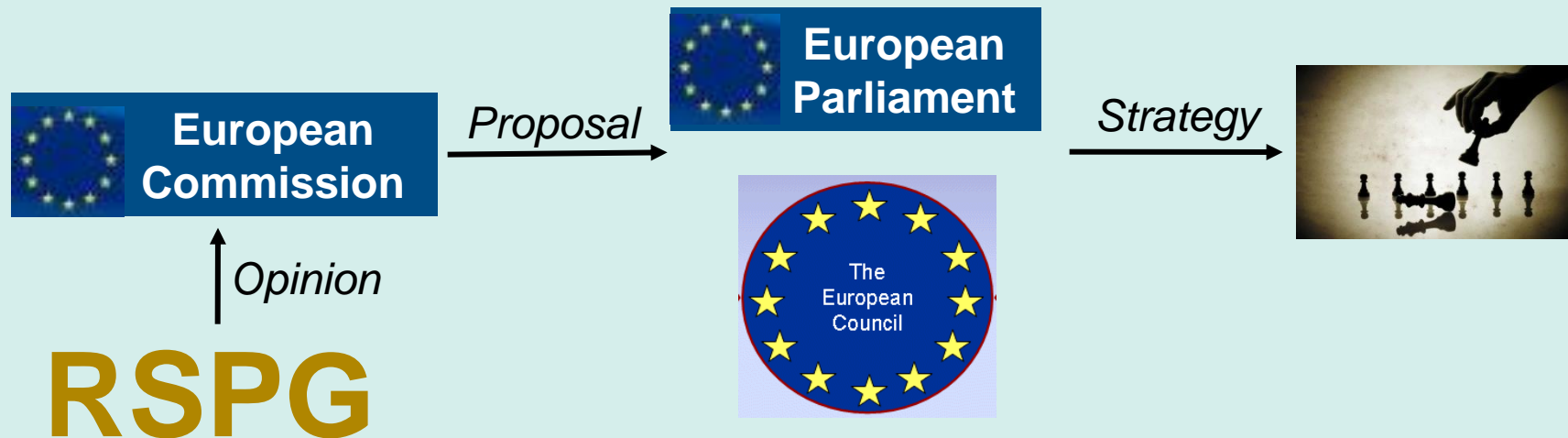
- European Commission Recommendation on privacy and data protection in the context of RFID – May 2009
- ‘security and privacy by design’ principle (i.e. privacy aspects to be complied with by new applications since the design stage)
- Industry, in collaboration with civil society, should develop a ‘framework’ for privacy and data protection impact assessments
- RFID operators should publish accurate and easy-to-understand information policies for each RFID application, including identity and address of the operators, purpose of the RFID application...

# Outlook – The review

- EU institutions are in a final round of talks re. a review of the Regulatory Framework for Electronic Communications
- The procedures described above - notably for spectrum harmonisation measures - will remain in place but the framework for the spectrum policy will evolve in two respects:
  - Multi-annual spectrum policy strategy to be debated at inter-institutional level
  - Role of RSPG

# The review – Multi-annual strategy

- The Commission, taking the opinion of RSPG may submit legislative proposals to the European Parliament and the Council for establishing multi-annual radio spectrum policy programmes.
- Such programmes shall set out the policy orientations and objectives for the strategic planning and harmonisation of the use of radio spectrum



# The review – New role for RSPG

- European Parliament and the Council would have the right to request opinions or reports, either orally or in writing, from RSPG on spectrum policy relating to electronic communications



- The new role of RSPG will be anchored in revised legal basis for the RSPG



TELECOMMUNICATIONS & ELECTRONIC COMMERCE REGULATORY SUPPORT SERVICES