

EU Harmonisation activity for shared use

Centre for White Space Communications
Inaugural Event
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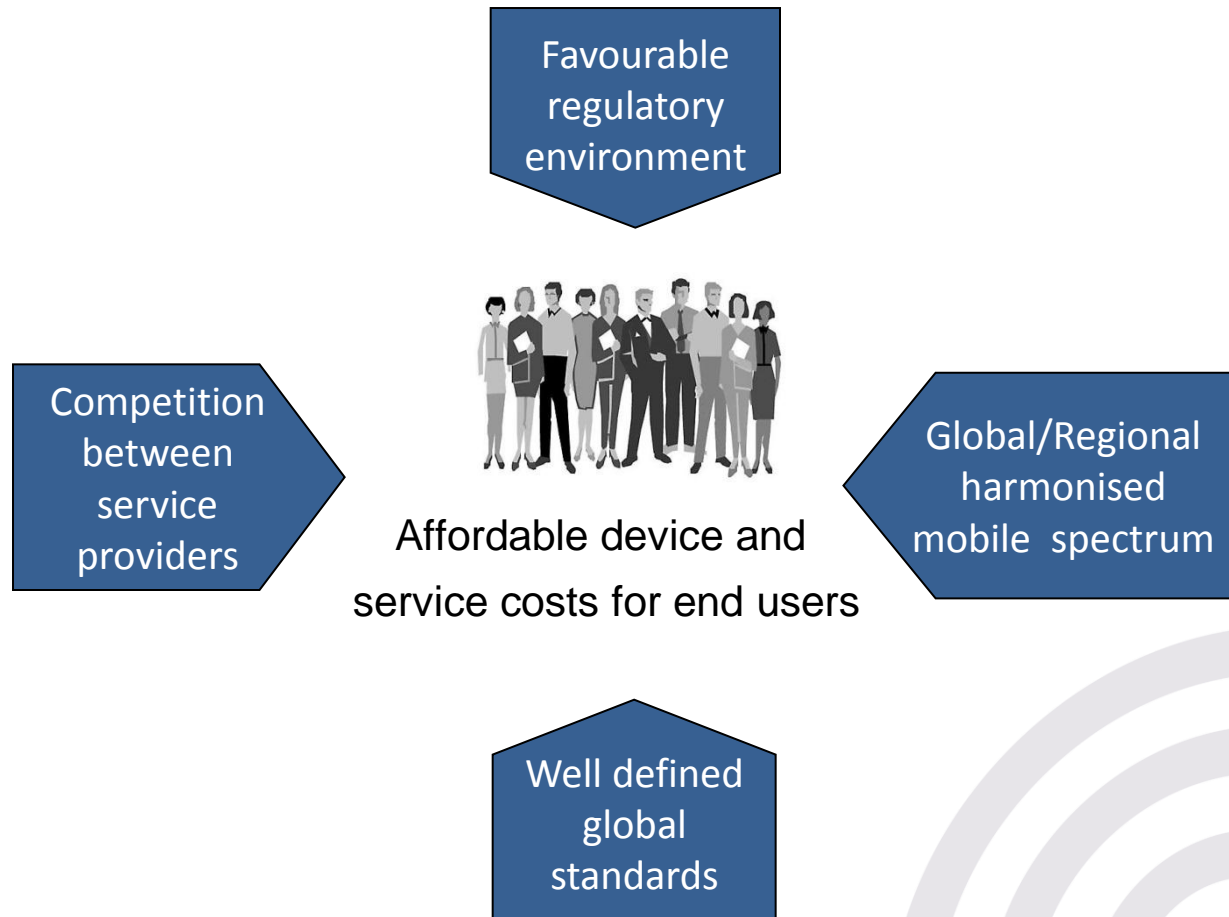
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Outline

- Harmonised standards in the EU
- EU mandate on RRS
- European Commission position on shared use of spectrum
- CEPT role
- Conclusions

Smarter radios do not negate the need for harmonisation!

- Every different spectrum band supported adds cost and complexity to a device
- Benefits of scale as important to an agile radio than to a dumb radio
- Piecemeal approaches in individual countries will not enable investment and market emergence



Harmonised standards in the EU

- Harmonised standards in the EU are intended to streamline the market entry of radio and telecom equipment
- HS is developed by one or several of the three ESOs based on a mandate from the European Commission
- Under the Radio & Telecom Terminal Equipment (R&TTE) regime, a manufacturer can pursue market entry through fulfilling the requirements of a Harmonised Standard
- HS are listed in the Official Journal of the EU, and the ones under the R&TTE support one or all of the essential requirements of the directive

Why R&TTE?

Take advantage of the entire EU single market

Benefits of scale

Place products directly



Demonstrate compliance with Directive 1999/5/EC (R&TTE)

Fast placing on the market

Free movement

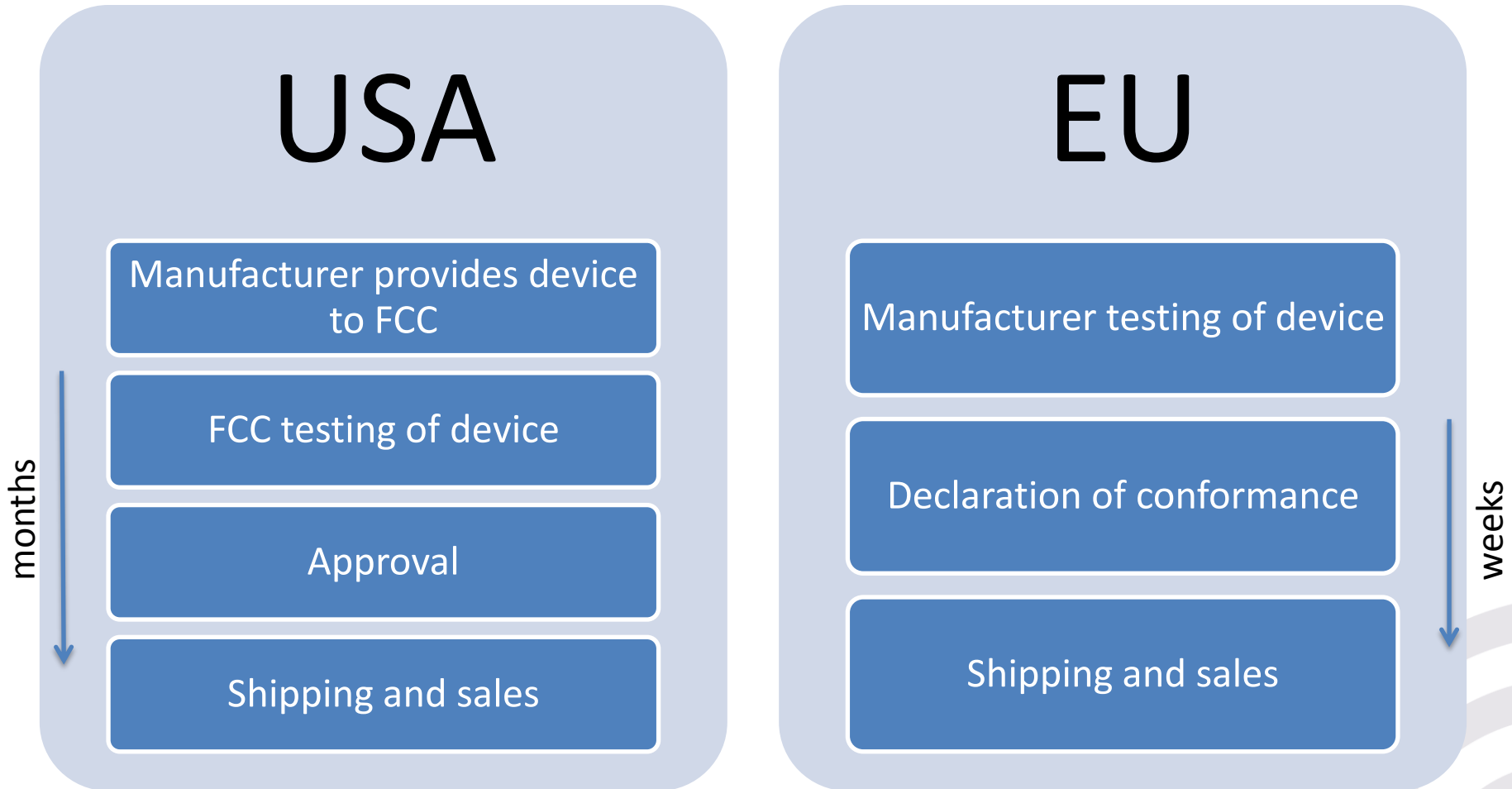


Show conformance to the relevant European harmonised standard

Compliance with R&TTE

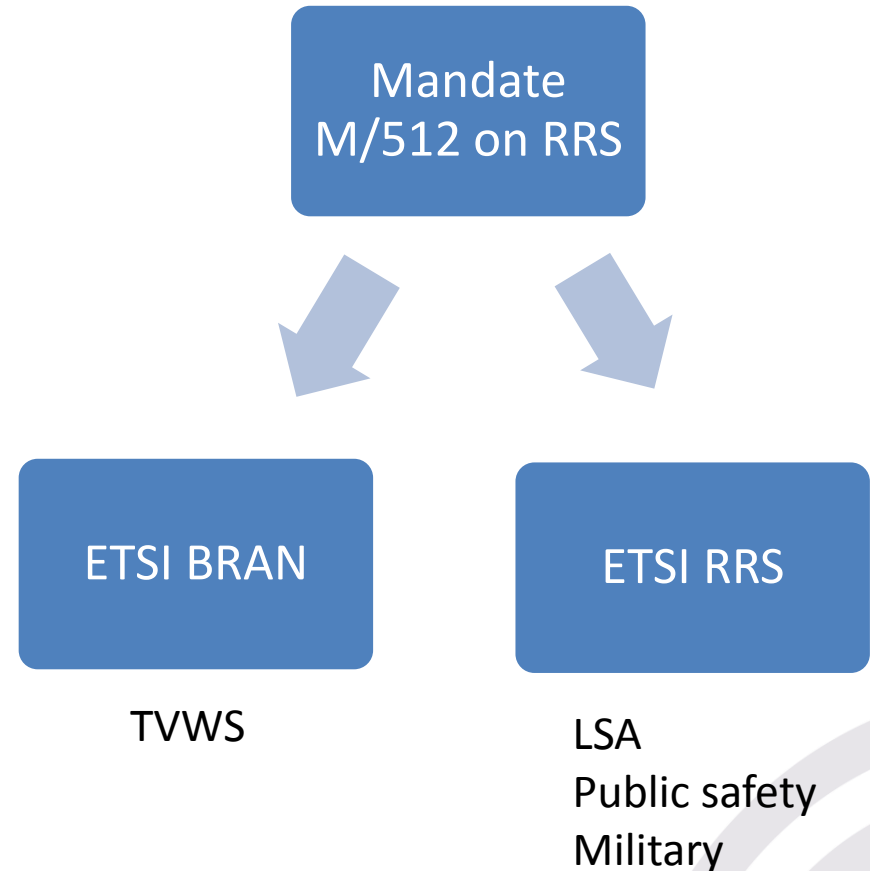
No need for notified bodies

Device entrance to market



EU mandate on RRS

- Submitted to ETSI, CEN and CENELEC in October 2012
- Aims to bring together commercial, military and public safety areas in RRS
- Sufficiently innovative – informs what level of awareness ESOs need to have to produce something that has a role of making regulatory framework available for these devices
- Two year process to develop harmonised standards for the commercial side



EC goal on spectrum sharing

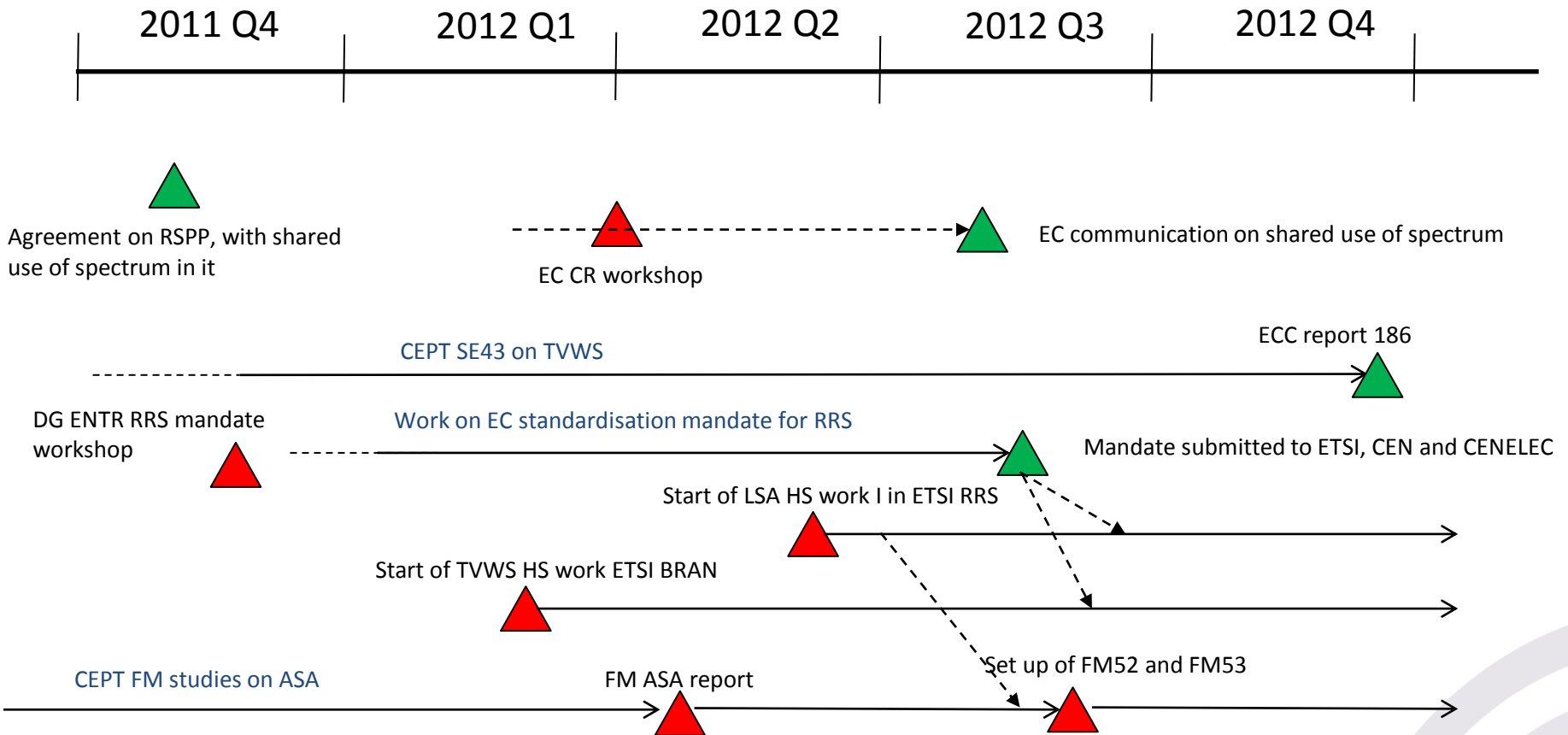
Licence- exempt sharing

- In bands already allocated for LE
- Promotes innovation
- Internet of Things

Licensed Sharing (LSA)

- Based on sharing agreement between incumbent and new user
- Regulatory guarantees
- Quality of Service

Shared use of spectrum: regulatory timeline



European Commission position on shared use of spectrum

- The Commission proposes to develop two additional tools to provide more spectrum access opportunities :
 - An EU approach to identify beneficial sharing opportunities in harmonised or non-harmonised bands; and
 - Shared spectrum access rights as regulatory tools to authorise licensed sharing possibilities with guaranteed levels of protection against interference.

Beneficial Sharing Opportunity

- Identifying BSOs in a specific band requires transparency about the sharing arrangement that would be applicable, in particular
 - (i) the *sharing conditions*, i.e. the technical parameters defined by a NRA that determine the access hierarchy in a shared band; and
 - (ii) the *sharing rules*, i.e. the common usage provisions that allow sharing.
- TVWS in UHF bands is a first opportunity here

UHF band

UHF spectrum used for broadcast is found all over the world



That spectrum allocation is harmonised due to its previous use



But its assignment for other purposes such as TVWS is not harmonised

Geolocation databases

- Under the R&TTE, GLDB is a component, similarly to software component
 - It has an interface to WSD, that is a radio equipment
- In the case of interference, end user must not be liable
 - In the absence of HS, the NRA needs to find a single entity that the responsibility lies with
- Harmonised standard removes the ambiguity through having a regulatory status that the manufacturers can refer to
 - GLDB-to-WSD interface falls under the HS for RRS

Geolocation databases and harmonisation

- TVWS opportunity is today small, but it will grow
- Country borders are areas where different requirements meet
 - GLDB in one country has only information on the regulatory requirements of that country
 - Interoperability in providing full information to a device is important
- This applies both to the GLDB-to-WSD (under HS) and GLDB-to-GLDB interface

CEPT role

- SE43 worked on TVWS devices on UHF bands for a number of years and produced two reports ECC159 and ECC186
- FM53 starts in January (this week) and looks into
 - To provide a master set of the overall requirements for CEPT countries that will be needed to facilitate communication and interaction between a WSD and geo-location Data Base;
 - To provide information on issues and requirements that need to be addressed when setting up a geo-location database and/or the management of independent database providers.
 - To study the potential requirement from industry for future use of TV WS
 - To study, and develop if appropriate, harmonised regulatory measures to complement current standardisation activity in ETSI (e.g., on geo-location database), with the aim of enabling the development and deployment of WSD.

Thank You!

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