



Cambridge White Spaces Trial Policymaker Event

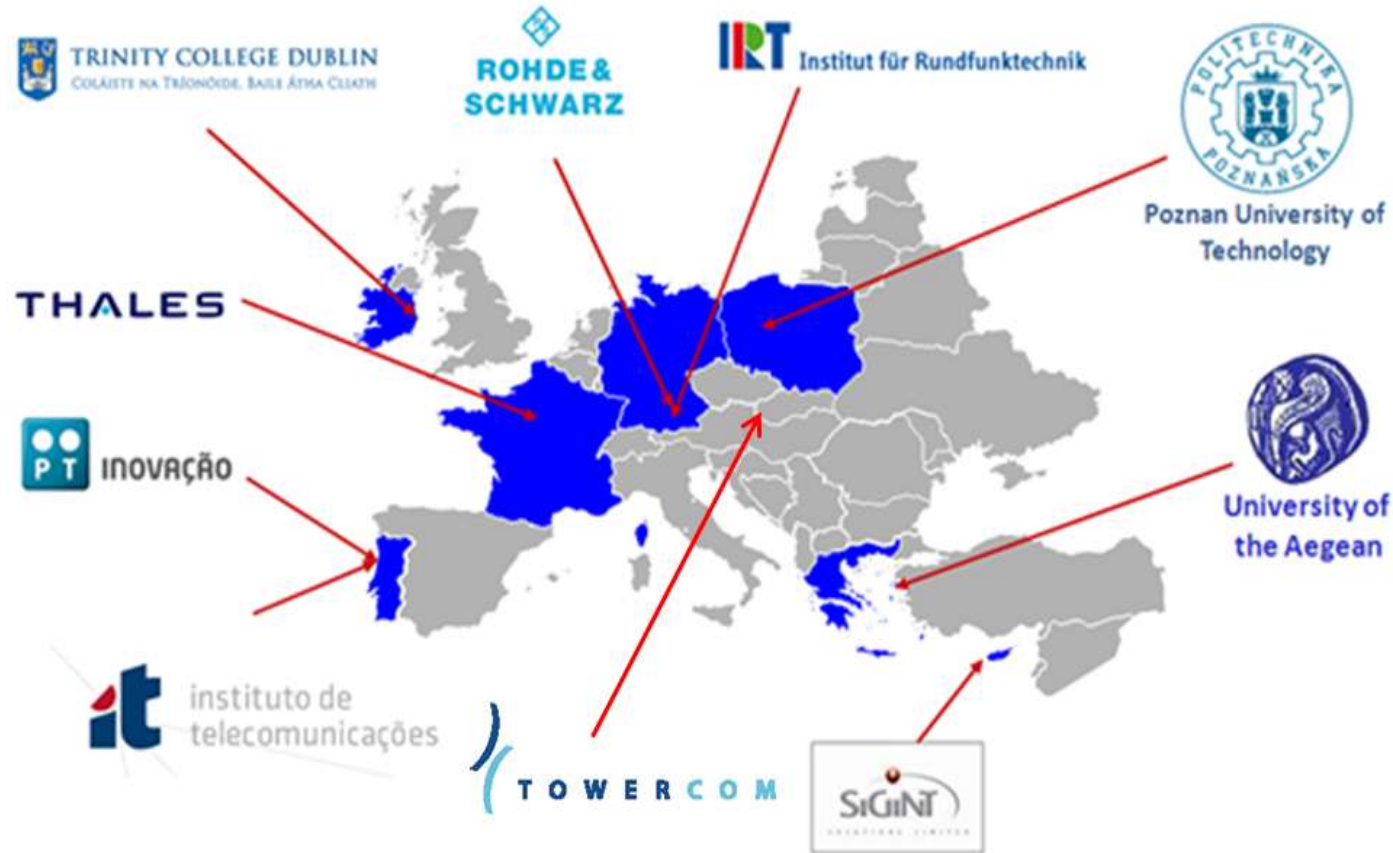
13rd December 2011



**Cognitive radio systems for efficient sharing
of TV white spaces in European Context**

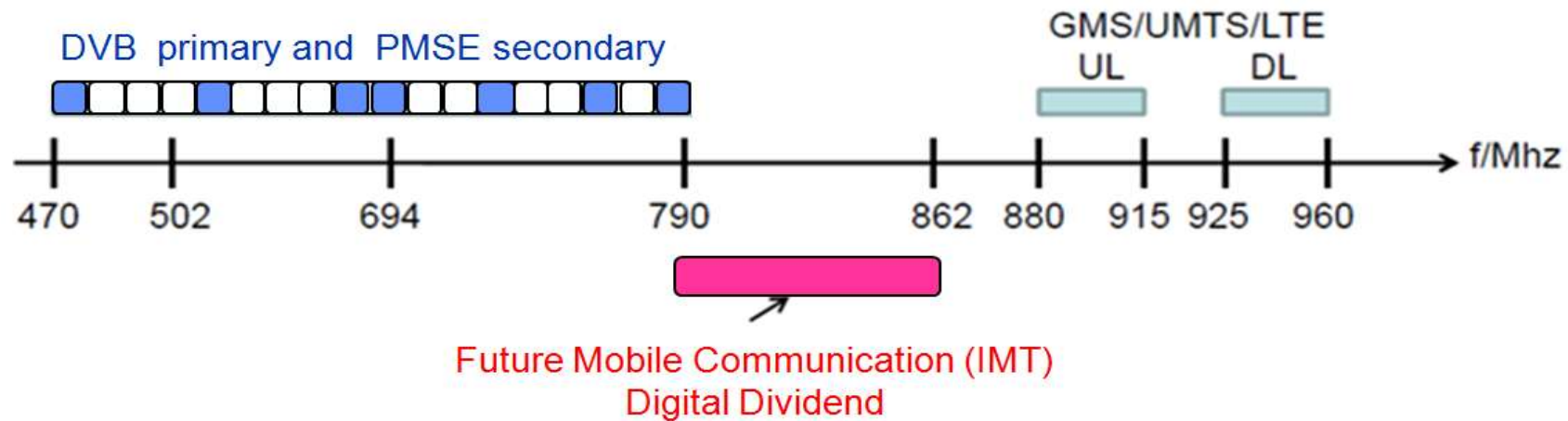
Paulo Marques – Instituto de Telecomunicações, Portugal

The COGEU consortium



January 2010 – December 2012

- After the digital switch over, not all channels from 470 MHz to 790 MHz are occupied at each location. **This locally unused channels are called TV White Spaces (TVWS).**
- How to transform the TV White Spaces into social benefits and economic growth ?



COGEU and the Digital Agenda for Europe

The European Union (EU) released its *Digital Agenda for Europe: 2010–2020* in May 2010 setting out the following objectives:⁶⁶

- > ensure broadband coverage of all EU citizens by 2013
- > offer broadband coverage at 30 Mbps or more for at least half of EU households by 2020.

The *Digital Agenda for Europe: 2010–2020* also included a strategy designed to improve spectrum allocations in Europe through the creation of a coordinated and strategic spectrum policy directed at the EU level that would increase the efficiency of spectrum management and, in turn, maximise the benefits for consumers and industry. The details of this strategy are expected to include recommendations on stimulating investments and propose a comprehensive spectrum plan, in accordance with *Recommendation 4 – Very Fast Internet*.⁶⁷ However, these details are yet to be released.

NOTHING



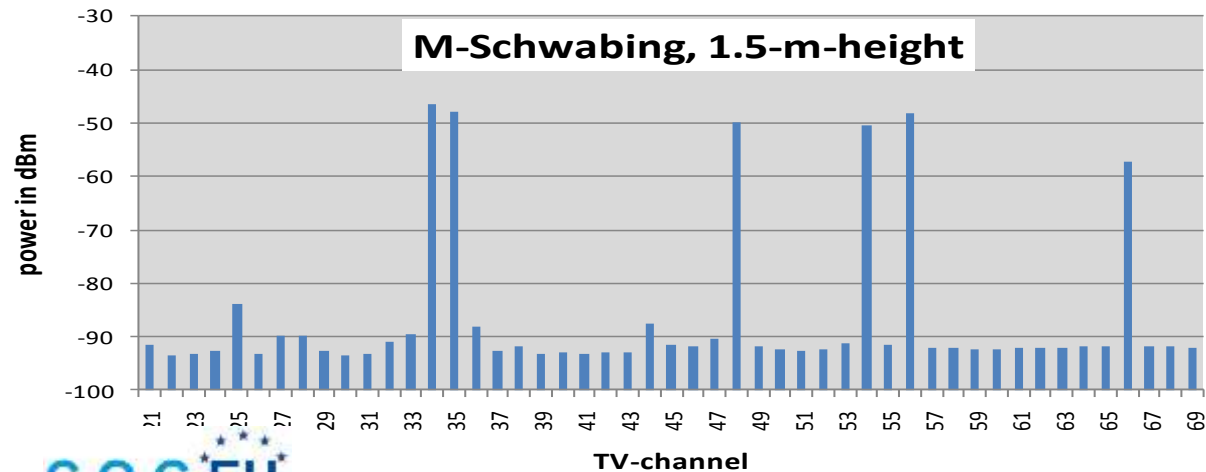
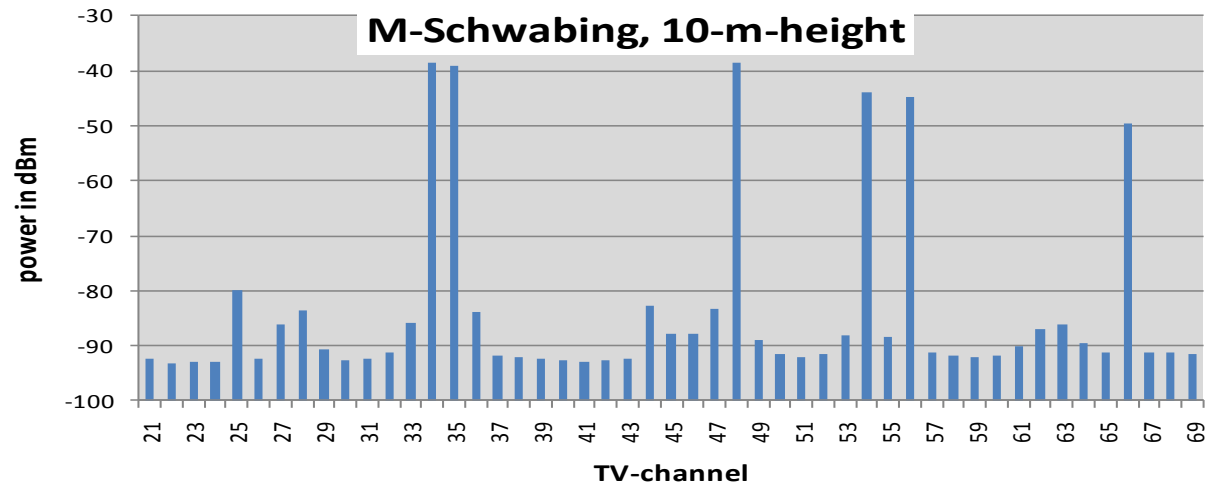
HIGH-SPEED INTERNET



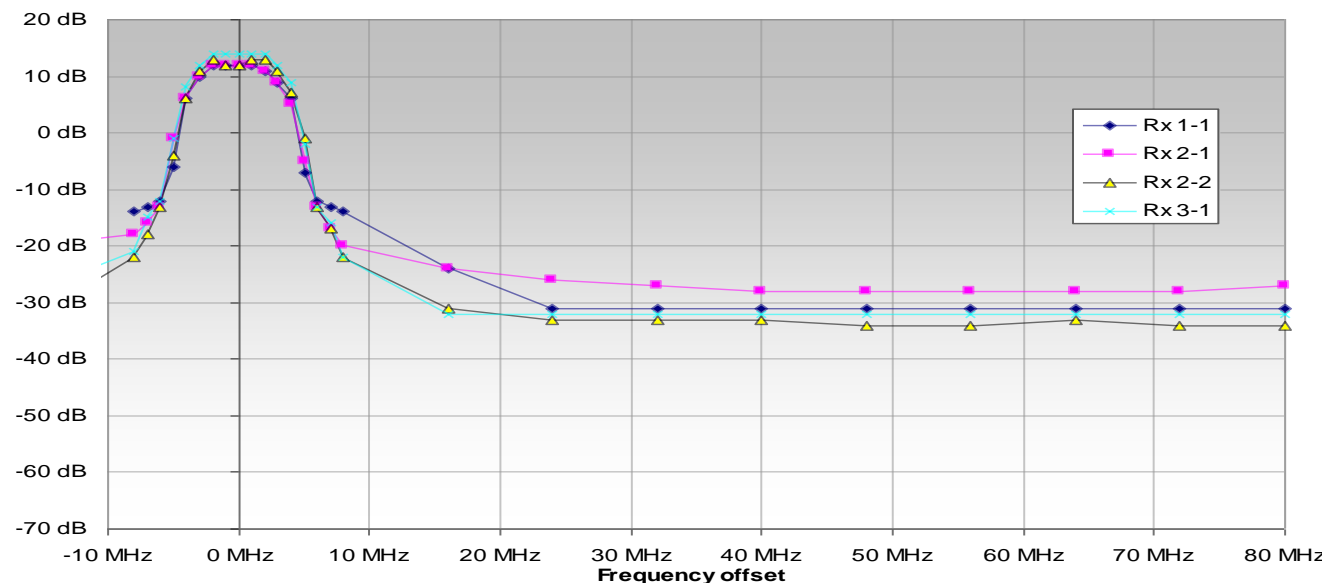
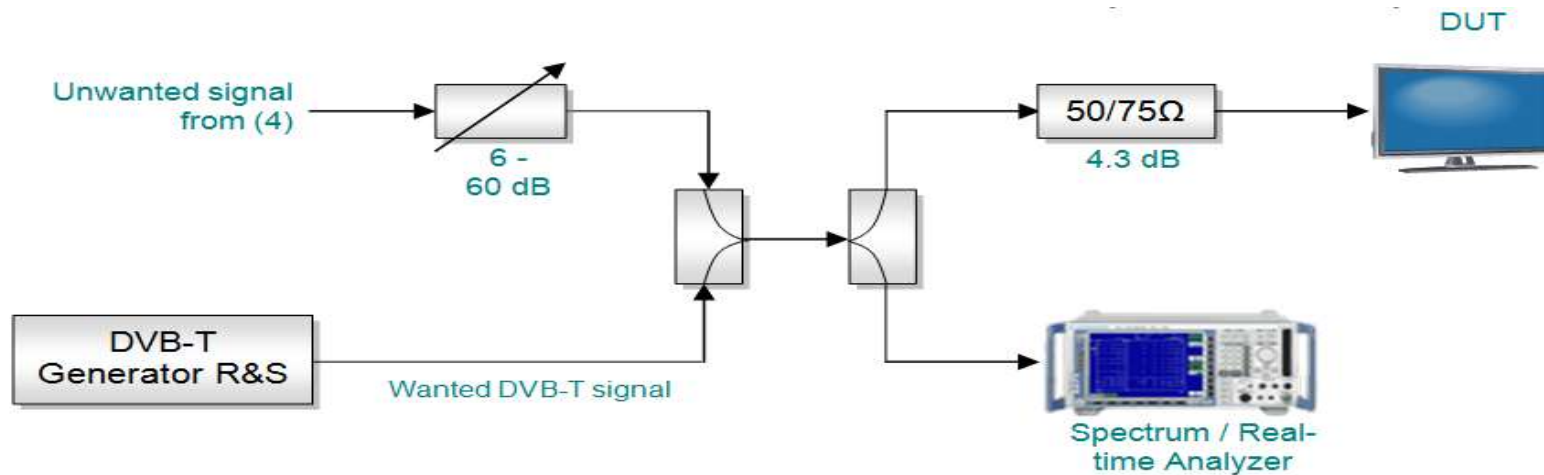
Measurements campaign in Munich

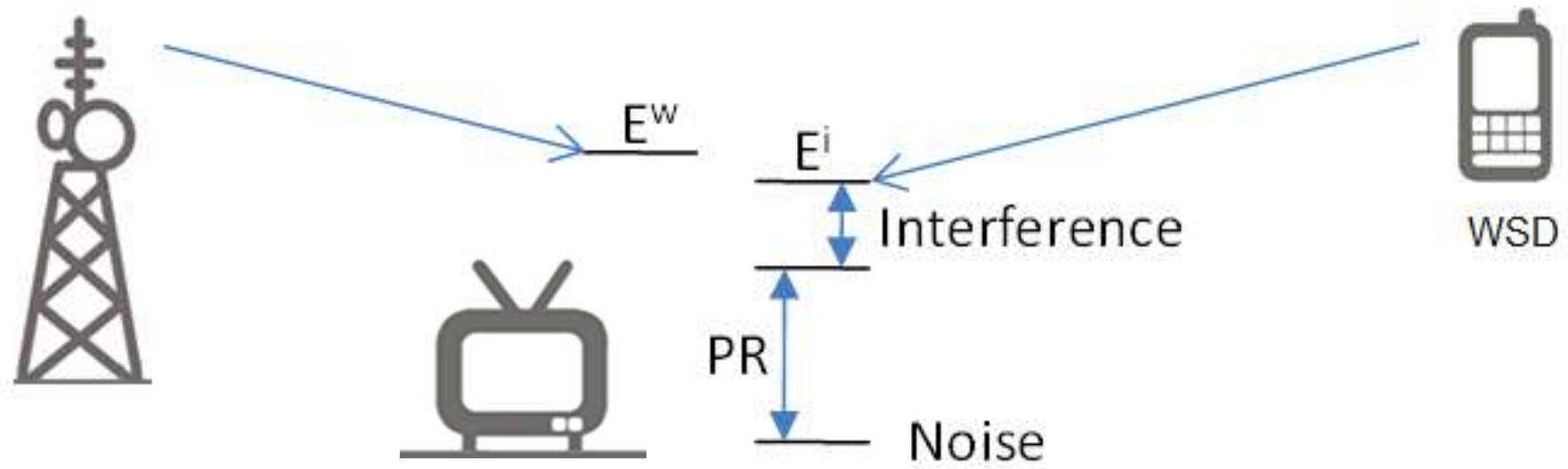


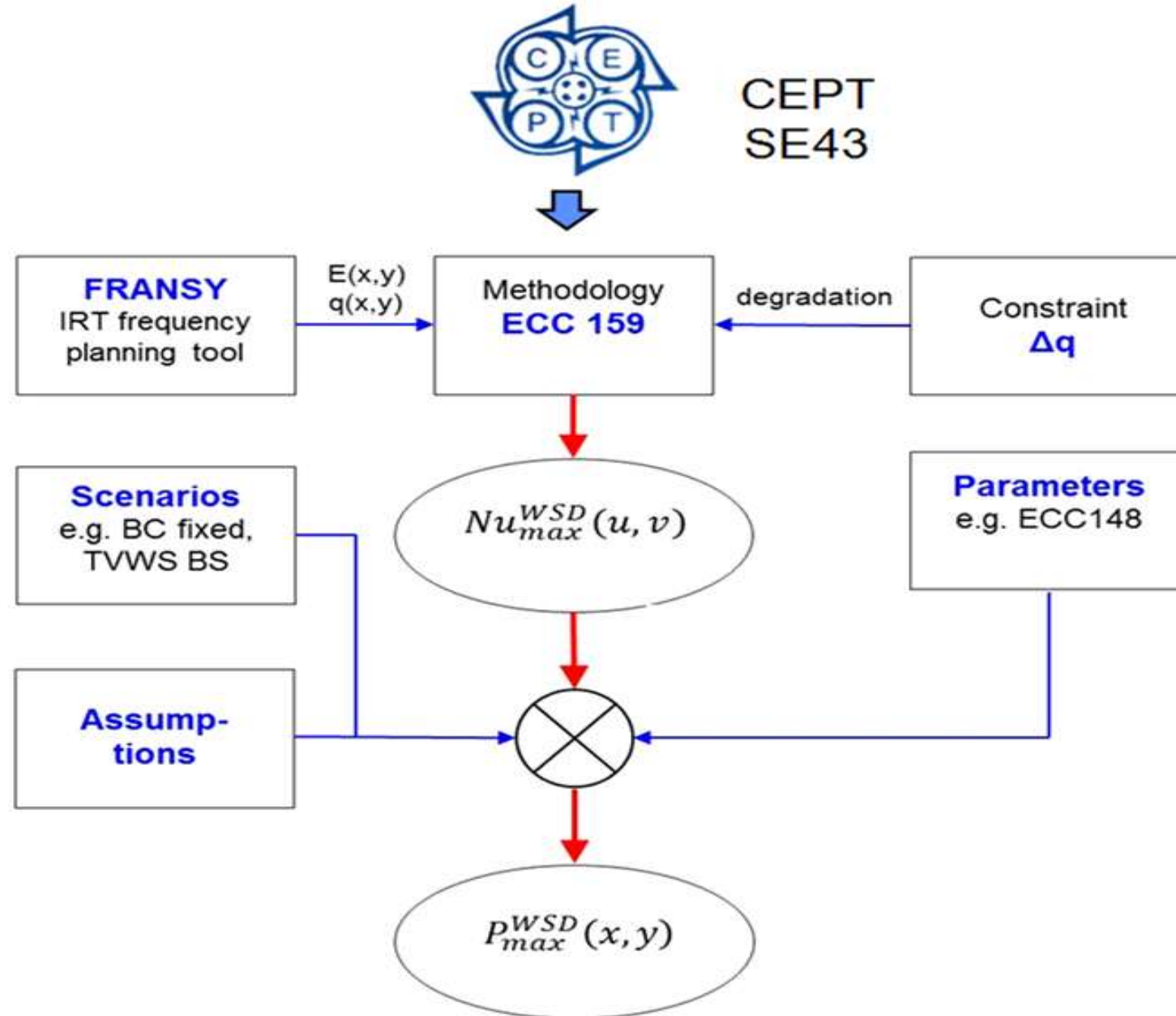
Measurements campaign in Munich



Coexistence testbed



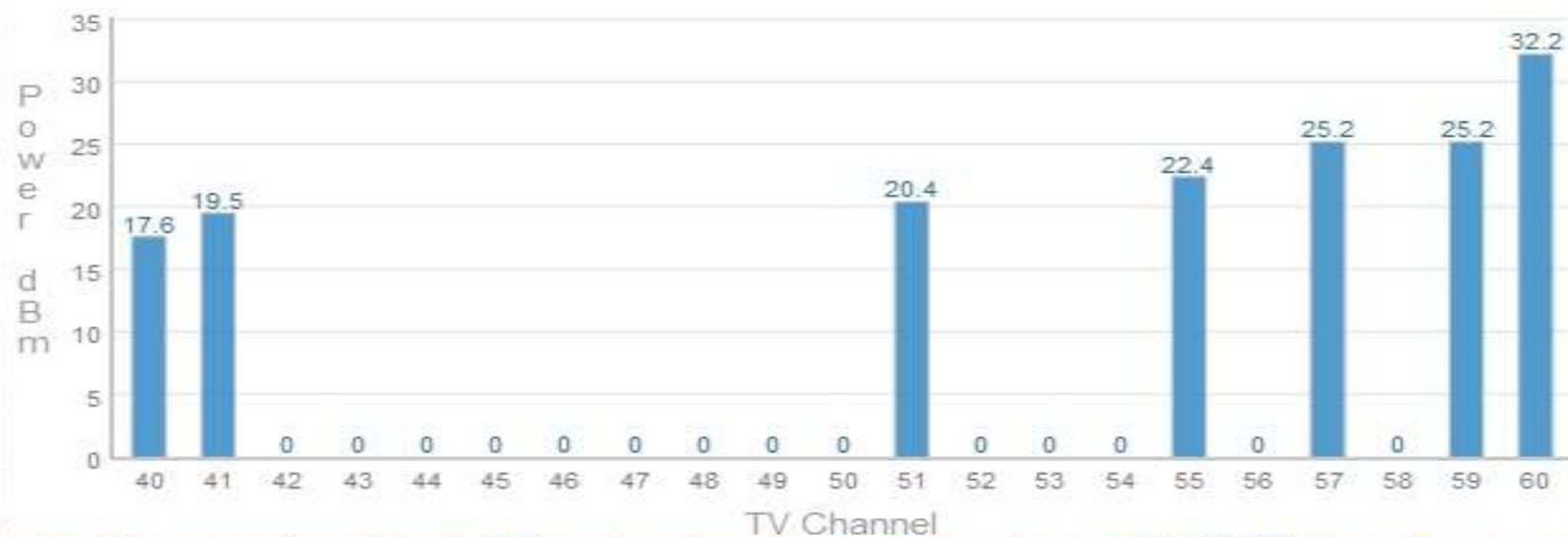




CENTER MAP



White Space Device Location(Lat,Lng) = 48.1913609040937, 11.6201976479833





COGnitive radio systems for
efficient sharing of TV white
spaces in European context



HOME

MAPS

BOOKING

ABOUT

WELCOME TO COGEU PMSE BOOKING PLATFORM

We provide the freedom of spectrum YOU need

Booking on frequency, time and spatial dimension

User-friendly platform

Real-time spectrum coordination



SUMMARY:

Sun Oct 02 2011 01:23:33 GMT+0100 (GMT Daylight Time)

ALL BOOKED PMSEs: **18**

TODAY's BOOKED PMSEs:

0Welcome:
id: 3, user2Your account balance:
300€

Map

Your Books



Ch	Latitude	Longitude	Date	Nº of Links		
20	38.7192	-27.2771	2011-10-08	1	Show	Erase
28	39.1997	-7.6555	2011-11-25	2	Show	Erase
21	39.8079	-7.5237	2011-10-01	5	Show	Erase
20	38.7192	-27.2771	2011-10-07	1	Show	Erase
20	38.7192	-27.2771	2011-10-13	1	Show	Erase
20	38.7877	-7.7434	2011-11-19	3	Show	Erase
20	39.7741	-8.6004	2011-11-03	4	Show	Erase
20	39.7741	-8.6004	2011-11-02	4	Show	Erase
20	39.4356	-7.6775	2011-11-19	3	Show	Erase
20	39.8079	-7.5237	2011-11-01	5	Show	Erase

QUERIES:

PMSEs TODAY:

[See on Map](#)

ALL PMSEs:

[See on Map](#)Search PMSEs
by Channel:[-- Choose Channels](#)

Search by Date:

From:

Oct ▼ 2 ▼ 2011

To:

Oct ▼ 2 ▼ 2011

[See on map](#)

Channels:

[Add new book](#)[Logout](#)[Recharge Account](#)**Try it – just web search COGEU !**

INTERFERING SIGNAL

PRIMARY SIGNAL

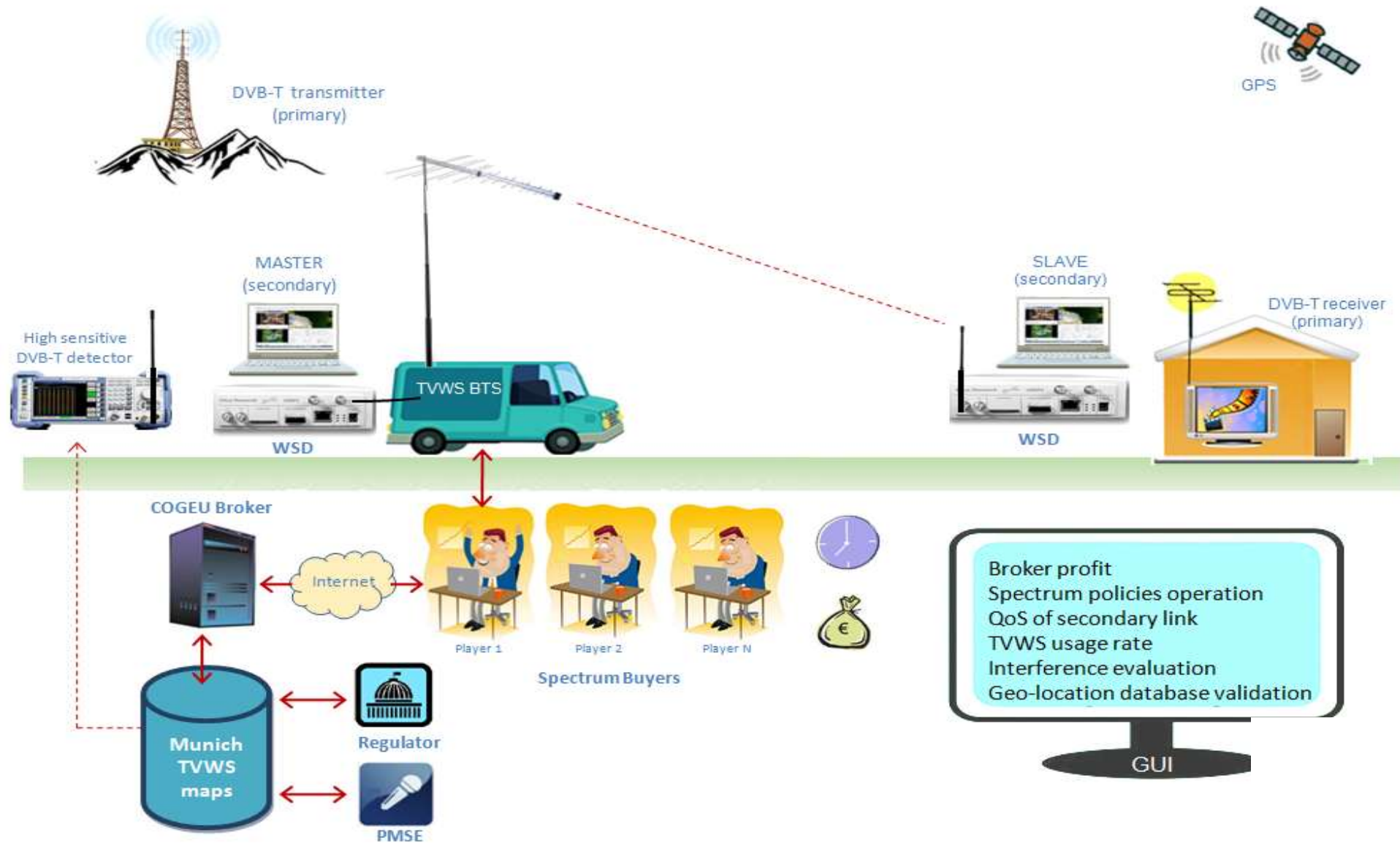


INTERFERING TX

PRIMARY RX

PRIMARY TX

COGEU use case demonstrator







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