Short Introduction to PMSE

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PMSE
PMSE - Programme Making and Special Events

Why are wireless microphones so successful?

- Film
- Recording
- Theater, Musicals
- Broadcast, Sports
- Live Music
- Wireless Monitoring
- Conferences
- Visitor Guidance

Wireless Mics ...

- Guarantee everywhere high speech intelligibility
- Can be used by anyone - spontaneously
- Operate without interference
- Allow large scale productions without cables
- Are efficient, flexible and reduce production costs drastically

...to achieve all that:

- PMSE requires sufficient quality spectrum
PMSE – Spectrum needs

Spectrum use on the election eve of the German Bremer Bürgerschaft on May 10th, 2015

all data taken from the frequency coordination list of the host broadcaster

Usable range for terrestrial TV and PMSE: 470 - 862 MHz

Digital Dividend: 790 - 862 MHz

470 MHz

790 MHz

862 MHz

Astronomic use

blocked for other applications

TV Channel

21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69

TV usage

TV TV TV TV TV TV TV IMT-LTE IMT-LTE

PMSE user

18 2 25 6 3 9 6 4 0 21 7 4 7 26 6 25 6 12 10 3 4 6 2 5 22 6 9 7 6 2 1 7 0 4 0 8 3 9 0 1 4 2 10 1 0 0 0

Sum: 332 PMSE links in operation
PMSE – Spectrum needs

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Usable range for terrestrial TV and PMSE: 470 - 862 MHz

Digital Dividend 1: 790 - 862 MHz

Digital Dividend 2: 694 - 790 MHz

Digital Dividend 1: 790 - 862 MHz

Sum: 332 PMSE links in operation

Effect of Digital Dividend 2: loss of the 700 MHz Spectrum

remaining range for TV and PMSE: 470 - 691 MHz

470 MHz

691 MHz

Digital Dividend 2: 694 - 790 MHz

Digital Dividend 1: 790 - 862 MHz

reallocation of TV transmitters from the 694 - 790 MHz range
27 PMSE links are affected

Mobile operators
74 PMSE links have to be moved below 694 MHz
**PMSE – Spectrum needs**

**Spectrum use on the election eve of the German Bremer Bürgerschaft on May 10th, 2015**

All data taken from the frequency coordination list of the host broadcaster.

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### Usable range for terrestrial TV and PMSE: 470 - 862 MHz

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**Astronomic use blocked for other applications.**

**Effect of Digital Dividend 2: loss of the 700 MHz Spectrum**

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**Astronomic use blocked for other applications.**

**Reallocation of TV transmitters from the 694 - 790 MHz range**

- 27 PMSE links are affected.
- Mobile operators: 74 PMSE links have to be moved below 694 MHz.

27 + 74 PMSE links are affected by DD 1&2 – these will not fit into the remaining spectrum!
PMSE – Spectrum needs

- Olympic Games London 2012: estimated 18,000 links
- Eurovision Song Contest: 150++ PMSE links
- Formular 1 Racing Abu Dhabi: 350+ links
- 1st League Soccer Game: 150+ links
- Elections: from 250 up to 425 links
- TV Shows, News production, Filmmaking
- Touring Concerts, Musicals, Theaters
- Education - Universities
To maintain the PMSE support of our society
Politicians have to provide substitute spectrum

Quality Spectrum: no interferers

Long term reliable spectrum: > 15 years

Now!
PMSE – needs protection

Contradiction:

- The Primary user of the UHF-TV Band, terrestrial TV, is protected against interference for distributing his content.

- The production of content is not protected! PMSE is secondary user. In the past this was no problem as there was sufficient spectrum to avoid interference during production.
PMSE – needs protection

- PMSE lost about 50% of its spectrum by Digital Dividend 1&2

- Today in fewer spectrum with higher density of users and more applications using the spectrum the risk of interference goes up significantly.

- PMSE status needs to be upgraded to secure wireless productions - protect it against interference from other applications
Economic Power of the Culture and Creative Industry

- PMSE is the major communication tool for the Culture and Creative Industry.
Economic Power of the Culture and Creative Industry

Culture and Creative Industry delivers 4th important input to the Gross Domestic Product

Study of the German Ministry of Economy from 2013
Economic Power behind PMSE

Economic Power of the Culture and Creative Industry

Study of the German Ministry of Economy from 2013

Culture and Creative Industry is the Number 1 for jobs!

No. 1 for Jobs!
Economic Power behind PMSE

Culture contributes significantly to the Economy

"We are all very much aware of the direct contribution that culture makes to our economy and to our society as a whole. It contributes to our identity as Europeans, it fosters mutual understanding and participation, and it is an important factor in defining Europe's place in the world.

We are also aware of the considerable economic activity culture generates: approximately 4.4% of Europe's Gross domestic product. And 3.8% of its workforce are employed in this sector.

But we also know that those figures could be higher, that Europe should do more to harness culture's potential to the full. There is a lot of untapped potential in the cultural and creative sectors for boosting economic growth and job creation, and for improving European citizens' well-being."

Tibor Navracsics
European Commissioner for Education, Culture, Youth and Sport

"Cultural and Creative Crossovers“
Riga, March 12th, 2015
Economic Power behind PMSE

Culture contributes significantly to the Economy

PMSE is the major communication tool of the Culture and Creative Industry.

PMSE needs spectrum to support the activities of the Culture and Creative Industry.

PMSE is an established application that has proven it’s value for the society already. It deserves attention and protection to maintain and expand its activities.

The Culture and Creative Industry generates national income: these jobs cannot be exported!
The Future of PMSE

- We need national political support to continue PMSE operations.
- You have to support political activities for informing decision makers.
- Large productions need about 320 MHz of quality spectrum.
- This spectrum needs to be accessible reliable and long term: >15 years.

Who supports these activities?

- PMSE user organizations.
The Future of PMSE

Organizations that require your attention: your input of your applications and your support:

www.apwpt.org

User organisation that takes care of PMSE user interests at international conventions, like the World Radio Conference, and in Standardization and Regulation
The Future of PMSE

Organizations that require your attention: your input of your applications and your support:

- UK based organisation discussing with Ofcom UK and the UK Government Audio PMSE issues
- Negotiated over the funding scheme around the 800 MHz clearance
- Engaging with Ofcom over spectrum to mitigate for the approaching 700 MHz clearance and with the UK Govt. with regards to a ‘Help Scheme for PMSE’
The Future of PMSE

Organizations that require your attention:
your input of your applications and your support:

www.save-our-spectrum.org

Information platform for
decision makers -
politicians, journalists
and users on PMSE
spectrum needs

Currently mostly German
with English translations
The Future of PMSE

save our spectrum