

# Association of Service Providers

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## Digital Television: The Principles For Spectrum Planning

**The Association of Service Providers (ASP) wishes to respond to Section 4 of the paper. ASP represents Manufacturers, Hires and users of SAP/SAB<sup>note 1</sup> equipment, but in this instance is concentrating on the issue of Radio microphones.**

ASP has been active in the Spectrum and Regulatory areas since 1986 and via the expertise of its members has had a major input to the various ETSI and CEPT groups covering SAP/SAP issues.

We wish to respond to Section 4 of the paper "Clearing spectrum for reuse".

Whilst this section mainly deals with the number and position of channels to be cleared it does not address the vexed issue of other existing users.

At present, the vast majority of professional radio microphones are used in the UHF TV bands 4/5. They are interleaved with TV transmissions and other users. From the work being carried out within CEPT, project teams FM41 and SE27, it would appear that there will be little room for sharing spectrum in this manner with digital television, after the analogue switch off.

To give a feel of the number of these devices in use a recent survey by ASP on behalf of CEPT, European sales over the last 10 years gave a figure of **1,921,377 radio microphones in TV bands 4/5.**

The use of radio microphone extends to many areas of the UK economy. Without sufficient spectrum the production of TV programs, films, theatre and concerts will badly impact both the companies concerned and the export potential of the UK.

A brief example of this is the London Theatre; in the early 1980's Andrew Lloyd Webber was one of the first to expand the dimensions of musical shows by the use of large multi channel radio microphone systems. "Cats" which is closing after 21 years and 9000 performances has been seen by eight million in London (many of whom will have been tourists) and some fifty million world wide. It has played in 250 cities and taken £1.4 billion.

When deciding which channels to clear please consider the financial impact on the broadcasting, program making, film and theatre industries. One of the proposals was to clear the top 10 channels. Some 60-75% of radio microphones are used in these channels. At present the cost of a 20 channel system is in the region of £150,000 and a 30 channel system some £250,000. Musical productions in London's theatre's use between 20 – 38 channels at present and some forthcoming shows such as Showboat may use up to 52 channels. Re-equipping could well be outside the financial limits of users. The larger multi stage studios producing programs will use at least these numbers of channels, also large numbers are used on a daily basis for outside broadcast, conferences, Churches, social clubs etc.

There is a large amount of information available on the SAP/SAB industry, rather than attempt to detail this we have provide links in the "Further Information " section and will be pleased to expand on our paper or attend any meetings.

<sup>1</sup> A number of abbreviations and references that may not be familiar have been used in this document, full details will be found in the glossary on the last page.

## **Further Information**

CEPT Web site <http://www.ero.dk/>

1. Click on: ECC Activities
2. Then: SAP/SAB & ENG/OB
3. Pick subject and browse

The following reports may be downloaded from the site:

1. at the home page:
2. Click on : ECC Deliverables
3. Than: Reports

Select and download the following:

### **ERC Report 042**

Handbook on radio equipment and systems radio microphones and simple wide band audio links

### **ERC Report 090**

Compatibility and sharing analysis between DVB-T and OB (Outside Broadcast) audio links in bands IV and V

### **ERC Report 088**

Compatibility and sharing analysis between DVB-T and radio microphones in bands IV and V

### **ERC Report 089**

Compatibility and sharing analysis between DVB-T and Talkback links in bands IV and V

## **Glossary**

**SAP:** Services Ancillary to Programme making (SAP) support the activities carried out in the making of “programmes”, such as film making, advertisements, corporate videos, concerts, theatre and similar activities not initially meant for broadcasting to general public.

**SAB:** Services Ancillary to Broadcasting (SAB) support the activities of broadcast service companies carried out in the production of their programme material.

**ETSI:** ETSI (the European Telecommunications Standards Institute) is a not for profit organization whose mission is to produce the telecommunications standards that will be used for decades to come throughout Europe and beyond.

**CEPT:** European Conference of Postal and Telecommunications Administrations