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**TELECOMMUNICATION ASSOCIATION
OF THE UK WATER INDUSTRY**

- TAUWI -
RESPONSE TO
OFCOM CONSULTATION

on

BUSINESS RADIO TRADING & LIBERALISATION

INTRODUCTION

This response is provided by CSS Spectrum Management Services Ltd., on behalf of the **Telecommunication Association of the UK Water Industry (TAUWI)**.

CSS act as the main point of contact for TAUWI members and represent the members interests on a range of topics including regulatory issues.

This response has the option to be reviewed by each of the 26 member organisations that form TAUWI and thus avoids the need to provide 26 separate submissions.

The Association was formed in April 2004 and replaces the Telecommunications Advisory Committee (TAC) which for the last 14 years had acted as the central point of focus for the UK Water Industry in relation to Fixed and Mobile communications and Scanning Telemetry from the technical and regulatory aspects.

TAUWI is Chaired by Mr Pete Easey, of Anglian Water Services Ltd. The scope of TAUWI is broader than that of TAC and aims to capitalise on new opportunities resulting from emerging technologies and regulatory changes. In addition more emphasis is being put on strategic issues in relation to other sectors of an organisation's operation, such as IT, general communications infrastructure and changing business needs.

The membership is drawn from representatives from the following Industry Groups:

10 Water Service Companies
13 Water Supply Companies
Scottish Water
Environment Agency

Dept of Regional Development -Water Service, Northern Ireland
Jersey Public Services Department
Land Drainage Boards

The Water Industry has been a major user of Private Business Radio systems. They now operate a limited number of analogue trunked, and stand alone PBR radio systems. In addition, increasing use is being made of Public Cellular, provided by the UK Service Providers on the 2G, 2.5G and 3G systems for voice and data communications. It also uses a range of technologies to provide alternative communications in case of limited radio coverage or emergencies.

The Water Industry is also a major user of licensed Radio Scanning Telemetry systems which are designed and assigned to the IR 2037, VNS 2111, RA375 (previously the MPT 1411) specification.

The Industry makes considerable use of data and information in the provision of its core services and also when dealing with its many millions of Supply and Recovery domestic and business customers. The Environment Agency also make use of telemetry data as part of their flood defence management schemes.

The previous Committee provided input into a wide range of Public and Industry Consultations. Since the formation of Ofcom the members of TAUWI have provided input to a considerable number of Consultations and related Workshops.

Management and support for matters related to Water Industry mobile communications and Scanning Telemetry are provided by CSS Spectrum Management Services Ltd. This relationship provides the RF engineering and planning necessary to ensure that the most effective use is made of the radio spectrum. It also acts as a focus for the Industry and deals with engineering, licensing and financial matters related to the DTI and Ofcom. CSS also acts as the main point of contact for the Equipment Manufacturers and Service Providers.

The Water Industry has access to radio spectrum in the VHF and UHF bands. This is managed on a National Licensing basis by CSS Spectrum Management Services who act as the Spectrum Management Organisation for the UK Water Industry and all other non Utility Organisations using the UHF Licensed Scanning Telemetry Spectrum. In addition the Industry Members have the option to have the benefit of the Electronic Code.

The Water Industry use Communications and Telemetry to support the various aspects of the Supply and Recovery of Water, Control and Monitoring of Quality, Flood Defences and Water Management. The Industry is regulated by the Water Industry Regulator, OFWAT.

Increasing Environmental regulatory requirements increases the need for good quality and reliable information both via voice services and data services.

Part of the telecommunications and telemetry systems used by the Industry are mission critical and as such it is important that the services they provide remain available regardless of changes within the licensing regime.

GENERAL COMMENTS

The Water Industry welcomes the opportunity to provide their input into the Consultation process on Business Radio Trading & Liberalisation. The Industry supports the opportunities that could arise as a result of changes to the way in which spectrum is allocated, managed and licensed. It also recognises that a more flexible approach to licences can offer considerable benefit to a wide range of radio spectrum users. There are however a number of issues that should be taken on board while introducing further Business Radio Trading and Liberalisation. The Industry is keen to support change subject to ensuring that the needs and future requirements for current licensees are recognised and considered. The responses in this document need to be read in association with the TAUWI response to the Ofcom Consultation on Business Radio Trading.

RESPONSES

Question 1

Ofcom would welcome comment on its proposals for the Business Radio Technically Assigned Licence class

The proposal has considerable benefit for new applications, especially those which will be able to use new technical developments which are designed to coexist with other “intelligent technologies” in order to reduce the effect of interference and which operate in a manner which will not wipe out other users.

The case for existing licensees is not so clear cut as much of the equipment circuit design and capabilities were based on relatively low levels of interference and interference from similar types of technologies.

Many of these systems were installed at considerable capital expense and are still operating within their capital cost recovery window.

It is suggested that a degree of flexibility be available during the introduction of the new process, it should include a transitional phase. Where new licences are introduced under the new regime an objective might be to introduce the same license type in an area.

A process could be put into place to monitor the effects or provide a larger degree of manual intervention to ensure that older systems continue to operate at a level which will ensure they remain “fit for purpose”.

If early equipment replacement became necessary OFWAT could approach Ofcom to justify the unplanned additional expenditure.

Question 2***Ofcom would welcome comment on its proposals for the Business Radio Area Defined Licence class***

This process has potential to provide a more simplistic approach to the management of the spectrum.

There is however a concern about how this can be introduced without effecting the existing users in the defined area. In fact many of the comments in response to question 1 apply to this proposal at least during the initial phases of its introduction.

It is important that Ofcom remain involved to ensure that the theoretical approach works in practice to an acceptable level. It could well be that many existing systems cannot meet the arbitrary boundaries and the associated spectral power density. The issue of the defined boundary level field strength is a complex issue in practice as RF prediction models are not necessarily calibrated against physical measurements.

It is important that Ofcom recognise that they will have a responsibility to ensure that in the early stages of the introduction of the area defined approach, they act to deal with boundary issues until it is clear that the link to power, coverage and interference propagation are providing a workable method of spectrum management and adjacent system operation.

A consequence of agreeing a boundary condition is that it will in effect sterilise a protection zone either side of the boundary. It would be interesting to know the effect on the efficient use of the spectrum as it could result in large areas without access to the spectrum.

Question 3***Ofcom would welcome comment on its proposals for the Business Radio Light Licence class***

This approach has the potential to provide further flexibility for suppliers and users. It is important that the technical restrictions are recognised and respected. Ofcom must be in a position to respond to the use of non-authorized power level, aerial types or other accessories which cause the equipment to exceed the specified technical criteria as appears to have occurred with some of the broadband delivery systems. It is assumed that Ofcom has ensured that in its proposal the power level and height limitations it has specified will not cut across or reduce the effectiveness of the systems operated under the existing licenses.

A key requirement is to ensure that the technical restrictions can be enforced and can be seen to be enforced in order to ensure that “light touch” does not become interpreted as “light regulation” and perhaps lead to the use of non compliant accessories or installations which could cause long range interference.

Question 4***Do you agree with the Ofcom proposals to extend trading in the Business Radio sector?***

The proposal in principle to extend spectrum trading to the business radio sector is supported but an area of concern is the results of the subdivision of the existing channel plan under certain circumstances. This concern is not within the main area of operation but at the boundary areas where the effects of interfering signal may be different to that of standard bandwidth channels due to, what could be in effect the combining of two transmission masks. The benefit of sub-division must not be lost but the issues which might result from unusual signal combining or interfering must not be overlooked, especially if sub-divided spectrum is traded or hired to different users in close geographic proximity.

Question 5***Do you agree with Ofcom proposals to extend trading flexibilities?***

The proposal for extending trading in the Business Radio sector offers flexibility in making the most effective use of the spectrum and is therefore generally supported.

However the implementation of this flexible trading fits far better for new system or assignments. Many existing systems were engineered to cater for specific requirements, based on existing technology and were modelled using specific modelling tools. They do not necessarily fit well into the 50km standard matrix. It is important that some interim option is put into place to ensure that these systems can operate as originally planned for a period which enables the present incumbent systems to reach the end of their operational life and then migrate to a new system based on newer technology and the new trading requirements.

There is always an element of risk from interference when considering the use of shared channels. Not only from radio interference but also channel occupancy. Although there may be a perceived capacity this could be reduced by the sharing process and could lead to a reduction in the sharers grade of Service.

As regulatory standards are increased and the environmental requirement grow it is important that radio based telecommunications remain available to the UK Water Industry and other Utilities. Ofcom must ensure that the flexible approach does not have a detrimental impact on radio systems which can play a key part in enabling the Water Industry to meet its statutory requirements.

Question 6***Do you agree with Ofcom proposals to extend trading to the UHF 1 band?***

In view of the other changes to trading it would seem viable to include UHF 1. An issue is the cost versus benefit ratio as this spectrum will need extra management and will not in effect allow more RF energy to be used per kHz. Certain technologies which used the whole of the transmission mask for 100% of the time will have a more marked effect than certain existing technologies, it would therefore appear that the type of use will also have to be included in the management process and this might cut across the technology and use principles that are being introduced.

Question 7***Do you agree with Ofcom's proposals to extend information currently available about tradable licence classes to those licences made tradable as a result of the proposals set out in this document?***

As you will be aware in the current climate there is a recognition of the potential risk from third parties to many organisations and the locations from which they operate. This is especially relevant to organisations such as the Utilities. As has been discussed in previous consultations the Water Industry has made its views clear that it is concerned that licensing information should remain confidential. As the Industry already have a support organisation, CSS Spectrum Management Services Ltd it is considered that the proposals are manageable but the issue of security must be recognised and taken into account and that the information in relation to a number of organisations remains confidential as per the current legislation.

Question 8***Do you agree with Ofcom proposals to extend licence term to 5 years notice period***

The Industry support the proposal to extend the license notice period to 5 years.

SUMMARY

In responding to the various questions some of the issues raised in our response have already been recognised by Ofcom in their consultation document. The Industry recognises the benefits of Business Trading and Liberalisation as part of the process to implement the Spectrum Framework Review. As it introduces some radical changes to the way in which coverage and interference is addressed it is important to ensure that the methodology works for the benefit of all those wishing to use the radio spectrum.

As stated earlier it is important to ensure that the theory of the mix and match that could result from Business Radio Trading and Liberalisation process can be confirmed by close monitoring of the results of the initial trading phases. It is suggested that the Field Work Force (RIS) are involved this process. In line with the ongoing relationship that the Water Industry has with Ofcom, the Members are always willing to meet and discuss with Ofcom staff any issues of mutual interest or concern.

David Tripp. C.Eng. MIET.

Chairman of the TAUWI Strategy Management Group
Managing Director CSS Spectrum Management Services Ltd
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