

## **Additional comments:**

The Ofcom Call for Input on the release of VHF spectrum is of significant interest to many FCS members. However, because the CfI relates to business-critical matters such as access to radio spectrum, they may choose to keep their views confidential at this time.

Because of the possibility that members may find themselves competing against each other for access to the spectrum in the future, FCS cannot express views that might directly or indirectly advantage one member over another. The FCS therefore refrains from comment on several questions.

Some members are expected to provide input directly to Ofcom.

## **Question 1: What future uses might this spectrum support:**

The FCS notes that this spectrum contains significant blocks of spectrum in England and Wales. This increases the value of the spectrum because it allows wide-area deployment on a self-coordinated basis. It might therefore be considered suitable for a wider range of potential users than would be the case were the spectrum completely fragmented.

The FCS takes the view that congestion in urban areas is an increasingly serious problem with some bands in some urban areas already having significant difficulties. Additional spectrum such as this will inevitably be useful to carry the increased air traffic in the future. Importantly, this band lies within the tuning range of globally harmonised radio equipment. It should therefore represent a viable alternative to the congested bands. However, as noted above, fragmentation of this spectrum may reduce its attractiveness for some members.

Taking this into account, and under the assumption that spectrum congestion proves impossible to remedy through changes to the TFAC licensing policy criteria, it was felt that some of the spectrum should be passed to the licensing pool to alleviate congestion in specific areas like London and other major cities. Licences should be assigned on a first-come-first-served basis.

Recognising the difficulty of predicting the future digital landscape in detail, there is a view that there is merit in retaining much of this spectrum for a period to allow future needs in this sector to be addressed as matters become clearer.

Recognising the strong growth of sales of digital technology solutions and recognising there may be interference problems arising from inter-mixing analogue and digital technologies in heavily utilised conditions, there was also some support for making this band digital-only. It was felt that because there is more than one digital technology, this would not contravene the principle of Technology Neutrality.

The FCS also notes the opportunity such spectrum provides spectrum managers to perform band adjustments and even re-alignments if these are considered desirable.

## **Question 2: What implications might these possible future uses have for the way in which this spectrum is configured in terms of transmit powers, bandwidth and geographic coverage? For example:**

- **Could these possible future uses be accommodated under the existing Business Radio licence products? If so, would they need the channel widths of the existing Business Radio licence products to be increased above 25 kHz ?**
- **Alternatively, would they require an entirely new licence product to be developed?**
- **Do you think that we should allocate (at least) some of this spectrum for licence exempt use?**
- **If (at least a part of) this spectrum is made available for use under the existing Business Radio licence products, do you think that more spectrum should be allocated for light licence products as against technically assigned or area defined products?**

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Several members noted that the professional radio sector is in need of spectrum resources to support an increased amount of data applications. It is therefore noted that it may be beneficial if this spectrum were to be configured such that it could be used in blocs of several channels rather than on a (logically fragmented) channel-by-channel basis. This may appear simple at first sight. However, it implies that such blocks could require a new approach to management to avoid future fragmentation, interference arising from sharing and losses in efficiency arising at the time of any future re-assignments.

The FCS is in favour of having standard technical conditions placed on these VHF BR frequency ranges. Thus the current regime as it appears in the relevant issue of the TFAC at any given time should be applied to these frequencies also.

The discussion on the applicability of the different licence products is felt to be worthwhile but not specifically linked to this spectrum.

There was no support for using these frequencies to provide further licence-exempt capability.

It was acknowledged that there may be a case to use these frequencies to enhance the light licensing spectrum pool but this was not considered a high priority.

**Question 3: What factors should Ofcom take into account in deciding how to make this spectrum available (both in terms of the choice of release mechanism and in terms of the timing and speed of release)?:**

Some members took the view that there may be an advantage in re-farming the new spectrum to maximise the size of the offered blocks(s). It was felt that having larger blocks may offer the potential of permitting some improved level of future data service.

Whilst some members were open to consider the possibility of participating in an auction, this would only be under condition of very specific circumstances being in existence which may take a long time to develop. Other members noted that the total amount of spectrum was relatively limited and so any form of auction, irrespective of any other consideration, carried

the very real risk of creating a monopoly in the provision of services. Thus it appeared that this spectrum would be unable to support a viable auction process as it is today.

Some members took the view that because of the size of this spectrum allocation, its arrangement and its band, it may be applicable for certain types of public utility use, especially in the public transport arena. As such, there may be a case to allocate parts of this spectrum to these uses.

Assigning this spectrum to a private band manager was considered by some members as a possible policy option that might be attractive to Ofcom. However, there was no indication that a positive business case, based on this spectrum, had been or even could be developed.

**Question 4:What total bandwidth in megahertz (MHz) would you require to operate the prospective service (whether the authorisation is provided under licence or is licence exempt)? (eg. if answering 25KHz, please make clear if this is 1 x 25 kHz or 2 x 12.5 kHz):**

No comment

**Question 5:Would this bandwidth need to be contiguous?  
If so, please explain why your service requires contiguous blocks only.  
If not, what would be the size of individual channels within the overall bandwidth?:**

No comment

**Question 6:If you think the prospective use would be suitable for licence exemption, please indicate the transmit power levels you are likely to require:**

No comment

**Question 7:In which geographic area are you likely to use the spectrum (eg. UK Wide, Regional, Conurbations, Rural):**

No comment

**Question 8:Please give a brief description of the technology (ies) that you will be using with the spectrum that you license:**

No comment

**Question 9:Would you require a minimum licence tenure for you to consider operating your service? If so, how long (in years) would you want this minimum licence tenure to period to be (noting that you might need to pay for the full minimum tenure period on licence issuance)?:**

No comment

**Question 10:**As explained in section 2, the existing [Business Radio licence](#) products are currently made available in bandwidths of 6.25, 12.5 or 25kHz, although it would be possible to make them available in larger bandwidths where there is enough spectrum to enable this (as is the case with this newly available Mid Band VHF spectrum). In light of this, would your prospective use of this newly available Mid Band VHF spectrum:

Be possible using one of the existing Business Radio licence products in the currently available bandwidths (of 6.25, 12.5 or 25kHz)? Be possible using one of the existing Business Radio licence products, but in a bandwidth greater than 25 kHz (but with other licence conditions remaining as now)?

Require a new type of licence

Require licence exemption

Don't know:

No comment

**Question 11:**If your prospective use of this newly available Mid Band VHF spectrum would be possible using one of the existing Business Radio licence products, which existing licence product would it require?

Simple Site

Simple UK

Suppliers Light

Technically Assigned

Area Defined

If your proposed use is Technically Assigned please indicate if the use will be shared or exclusive:

No comment

**Question 12:**Which existing [Business Radio licence](#) type do you currently hold? (Please type in product name ) Simple Site, Simple UK, Suppliers Light, Technically Assigned, Area Defined, Combination of the above, None, Don't know :

No comment

**Question 13:**Would additional spectrum allow you to consolidate existing assignments? (If so, please provide information on the assignments that you may hand back to Ofcom as a result of consolidation):

It is undoubtedly the case that future holders in the band could seek more consolidated spectrum packages on a case by case basis. While not essential for low data rate services, technology may offer a future possibility of dynamically concatenating channels, were this to be permitted, to create blocks upon which to send faster data.

The FCS also agrees that this spectrum provides the opportunity to perform some consolidation of the assignments, if that were deemed advantageous, on coexistence grounds.

Some FCS members believe that this spectrum offers the opportunity to make spectrum assignment more technology conscious and so more efficient. For example, there is a view that assigning only clearly compatible technologies would avoid overly mixing digital technologies with analogue technologies which some stakeholders consider will likely to prove problematic as utilisation approaches saturation. In reality, much of the current growth in sales is in digital equipment. Thus the most effective technology allocation policy would be towards digital technology.

There was a view that users having assignments in bands not included in the scope of the latest technology, may seek to transition to this band to allow them to re-equip with new technology systems. This would vacate their current holdings which could then be used by other licensees. This is clearly a very complex decision that would have to take in to account a wide range of factors that would probably be unique for each user. There should be no expectation of a general migration in to the VHF band.

Members noted that there may still be licensees using UHF channels for mobile (as opposed to hand-portable) applications. It was felt that these systems could be better catered for using these VHF channels. This would result in some channels being made available in the more congested UHF band.

#### **Question 14: Do you have any further comments:**

The FCS notes the growth of sales of digital equipment continue at 20% per annum. The majority of this is towards new users.

Over a five-year period, this implies a doubling of Ofcom activity in the BR arena.

The FCS further notes that mixing fundamentally different technologies may prove problematic as utilisation tends towards saturation. It is therefore considered appropriate that consideration is given towards an assignment policy that seeks to group compatible technologies together. It is not believed that this contravenes the principle of Technology Neutrality. Approaches can be envisaged that provide equal opportunity of access to adequate spectrum irrespective of technology.