Call for Inputs on 5G spectrum access at 26 GHz

Responses to the Call for Input questions

Question 2.1: What are your planned timelines for commercial availability of network equipment and devices for the 26 GHz band? When will equipment for testing and trials be available? Please specify the specific mmWave tuning ranges supported and their timing.

We are keen to connect the Basingstoke test-bed to other nearby facilities - it is conveniently located close to the main railway station. Linking up test beds is both in line with Government policy as we understand it, and could play a part in helping to speed up the path to commercial deployment. We are just beginning to reach out to other Councils and organisations to see how we might be able to co-operate with them.

Question 2.2: Given the 3GPP studies into NR-based operations in licence exempt spectrum, when (if ever) do you expect to support licence exempt operation and/or coordinated sharing in the 26 GHz band in your products?

Where licence exempt spectrum, such as that used for Wi-Fi around Basingstoke public areas, is available it is heavily used. It would be helpful if some provision could be made for such use in the 5G world too.

Question 2.3: When do you expect to support standalone New Radio in the 26 GHz band in your products?

No comment.

Question 3.1: Are there any other aspects related to the existing use of 26 GHz not covered in this CFI that you believe need to be considered?

No comment.

Question 3.2: What options for the existing services in the 26 GHz band do you believe need to be considered to allow for the introduction of new 5G services? Please give as detailed a response as possible along with all relevant information and explain how you would see any potential option you provide working in practice.

It is our understanding that the future use of the band is likely to be for mobile services but current use is for Fixed Services. Sharing should be possible at this higher frequency with fewer problems than with today's mobile frequencies.

Question 3.3: Should a moratorium be placed on issuing new licences in the 26 GHz band for existing services? E.g.to ensure that the 26 GHz band is not unnecessarily encumbered prior to the development of a new authorisation / licensing approach for 5G services?

There seems to be no obvious merit in a moratorium when co-existence is less of a problem

Question 4.1: What service would be delivered and to which consumers and/or organisations?

No comment.

Question 4.2: Where in the UK would the 26 GHz spectrum be used to deliver services? For example, will deployments be focussed on:

a) Areas of existing high mobile broadband demand?

The band is particularly well suited to deployments in dense urban areas.

b) Rural areas?

No comment.

c) Rail and road corridors?

No comment.

d) Specific types of enterprise or industrial sites?

We have several industrial areas where 26GHz deployments are likely

e) Indoors or outdoors?

Predominantly outdoors in the first instance until the technology in the band becomes more mature.

f) Specific nations or regions of the UK?

Just as was the case with broadband, which emerged on a patchy basis with all regions having problem areas, there is no nice simple map with "haves" and "have nots."

26GHz could have a role in any major urban conurbation – and potentially first in those where the band is already not being used. Connecting current 5G test sites wherever they are could be a way to accelerate mmWave 5G deployments.

As was once commented "Let 1000 fibres bloom."

Question 4.3: Where 5G cells are deployed, are they expected to be individual cells or as clusters of cells required to give wider areas of contiguous coverage?
What would be the area of a typical contiguous coverage cell cluster?

Both are perfectly possible.

Question 4.4: What capacity and bandwidth (i.e. Channel Bandwidth in MHz) would be required at each cell to meet initial capacity requirements? How will this change over time?

No comment.

Question 4.5: What quality of service is required? How sensitive is the service being offered to variations in radio interference from other operator's 5G cells and other spectrum users?

No comment.

Question 4.6: Will end users be fixed or mobile?

No comment.

Question 4.7: What are the characteristics of 5G at 26 GHz which make this band particularly suited to the service you plan to deploy? What other spectrum bands could be used as an alternative, or in preference to, the 26 GHz band? To what extent could carrier aggregation and other techniques reduce your reliance on 26 GHz?

No comment.

Question 5.1: Should Ofcom consider licencing options other than the 3 examples set out above (licence exempt, shared co-ordinated and area defined) for the 26 GHz band? If so, what other options do you consider should be included?

No comment.

Question 5.2: What methodologies could be used to pre-define 'high demand areas' for area defined licences?

Is there a need to predefine such areas or should the market decide?

Question 5.3: What mechanism could be used to co-ordinate cell deployments by different operators in shared spectrum?

No comment.

Question 5.4: What methodologies could be used for determining the proportion of spectrum to allocate using area defined licences and co-ordinated deployment?

Hybrid Authorisations would seem to be appropriate

Question 5.5: Do you agree that the 26 GHz band should be released progressively? What risks do you envisage with such an approach and how can these be best mitigated?

Yes. Beyond this we are not qualified to comment