

British APCO (British Association of Public Safety Communications Officials)

Additional comments:

I am going to attempt to summarise the overall view of our members. Our membership constituency is roughly evenly split between Public Safety professionals and their telecommunications Supplier base. We are completely independent, and our 24 years of Knowledge Exchange in the Public Safety communications space is unique, highly respected and unparalleled. Note that we have strong links with APCO in the US (who successfully supported the D-Block campaign, providing 20MHz (2X10) for Public Safety use. We are also aligned with similar groups to ourselves across the EU (like PSCE), who hold similar views on the need for reserved, harmonised Public Safety spectrum.

Our main aim is to support a consensus that unanimously backs the call for 2X10MHz reserved band for Public Safety use within the 700Mhz band. How this is enabled is open to due consideration, and we would urge you to review the wider options, including PFI-style approaches like the US, working closely with the Mobile Operators, and including offering Operators 'reduced price' 20MHz allocation on the guarantee that they deliver Mission-critical LTE voice and data for Emergency Services and Public Safety use, underpinned by Law. We believe that thinking around the allocation of Public Safety 4G/LTE spectrum should include 2nd and 3rd tier Public Safety entities, like Councils, transport, airports, petrochemicals, fuel, grid and energy assets, etc.

We cannot respond to many of the questions, most especially where they are largely aimed outside our sector, so we are attempting to respond where it seems most appropriate. I hope that this short preface will urge you to note our critical request irrespective of possible non-alignment with your paper's layout, with our apology if appropriate.

This is a one-time opportunity to get it right for Public Safety; WRC 2015 represents an important moment. We have an opportunity to lead here, and if executed well, at no loss in revenue to the Government.

(Note: Kindly note that our position here is consistent with responses to previous OFCOM Consultations on this topic. I would refer to <http://stakeholders.ofcom.org.uk/binaries/consultations/uhf-spectrum-band/responses/bapco.pdf>)

We already have valued dialogue with a number of OFCOM professionals, and I'd urge you to bring any questions to me, Tony Antoniou, Executive Director.

Question 1: Have we correctly identified and characterised the potential costs set out above, and what other costs ? if any ? should be taken into account in our assessment?:

Question 2: What evidence, whether qualitative or quantitative, should we obtain and/or take into account in assessing each of these potential costs? Please identify any sources of specific evidence to which we should have regard.:

Question 3: Have we correctly identified and characterised the potential benefits set out above, and what other benefits ? if any ? should be taken into account in our assessment? :

Home Office (ESMCP) chose our Annual Event (April 30th, 2013) to announce their vision of future communications for Public Safety. Our interpretation is that they fully support our '4 C's' of the requirements for Mission-critical voice and data for Public Safety. (Coverage, Capability or functionality, Capacity, Criticality or priority and resilience).

Their intent is to move Public Safety Mission-critical voice and data to 4G/LTE, in such steps as technology will allow. This is consistent with a joint statement by British APCO and APCO International in 2011, stating that 4G/LTE is the platform of preference for these services.

The Home Office potential solution design clearly rules in options around partnering with the Mobile Operators to provide the underlying infrastructure. British APCO envisages a partnered supply, possibly like the US model (FirstNet / PFI-style), where it is in the Operator's (there may be several) interest to manage the 20MHz allocation and provide the platform, and each entity (Government, Operators) effectively gain as a result. There would be no loss of revenue to the Government (from auctioning off the allocation elsewhere) as the Operator would still use it to derive revenue (hence Tax and repayments) and the Public Safety needs are met.

Management of the Mission-critical service would be ensured using QoS (Quality of Service) / EoS capabilities, must be measureable and evidenceable, and importantly, must be underpinned in Law. Under normal circumstances, a fixed upper-limit throughput would be guaranteed in the allocation for Public Safety use. In the event of a major incident, when usage must increase dramatically, this limit increases to an agreed emergency-situation larger limit (calculated to be more than could possibly be demanded) and this would still leave the majority of the throughput available for commercial use. Prioritisation can be guaranteed using the same toolset.

Harmonisation with the EU and other regions (at 700MHz) will bring the obvious operating benefits. But most of all, the price of devices for Public Safety (a serious expense for the Government - everything wears out) will be kept low by common chipsets thanks to harmonisation.

Question 4: What evidence, whether qualitative or quantitative, should we obtain and/or take into account in assessing each of these potential benefits? Please identify any sources of specific evidence to which we should have regard. :

It should not be possible to value the need for Public Safety to have mission-critical voice and data services in a guaranteed allocation 4G/LTE spectrum space. Just one life would justify this, and we are discussing thousands and thousands of lives.

At a time when spend on Public Safety is under pressure, the math is simple. Increased capability (most especially data) on the mission-critical platform will save more lives while still allowing cost reduction. Existing, very expensive, TETRA-based annual costs can be

ended as the service spreads across Public Safety. Other demands from 2nd and 3rd tier responders are included at no increased cost. The Operators will still return healthy income to the Government.

Question 5: In particular, what is your view of the likely future demand for additional sub 1 GHz spectrum for the provision of mobile data services, and what evidence supports this view?:

Without doubt, demand will follow a well-evidenced trend. Even in the face of amazing levels of growth, even in times of absolute disaster, Public Safety total throughput across the 20MHz allocation will be very small as a percentage. This model is future-proof.

Question 6: Should we place different weights on some costs and benefits than on others, for example depending on whether costs would be borne by consumers, DTT operators, or mobile operators? :

Although the above case is self-evident, and very widely supported indeed, the ethical element of this being about saving lives, and the lives of Public Safety professionals also, affects weighting arguments! What price saving lives?

Question 7: Do you have any other comments on the work we are currently undertaking on potential costs and benefits? :

Question 8: Have we correctly identified the costs and benefits that could vary depending on the timing of release, and the impact of those factors? Are there other costs and benefits which would vary depending on the timing of release of the 700 MHz band which we should take into account?:

Question 9: How quickly could the 700 MHz band be released? What would be the impact on DTT infrastructure costs of releasing at the earliest possible time compared to a later time? What would be the factors which affect these costs?:

Question 10: How, and to what extent, are the costs for existing (PMSE) and potential (WSD) interleaved users of the 700 MHz band likely to vary depending on the timing of release? What would be the factors which affect these costs?:

Question 11: Should we consider any other cost-related arguments / evidence in favour of an earlier or later release date?:

Question 12: What would be the impact on mobile broadband delivery and competition of releasing the 700 MHz band later rather than sooner? :

Question 13: Should we consider any other benefit-related arguments / evidence in favour of an earlier or later release date?:

Question 14: Is the range of potential dates for release likely to be wide enough to merit consideration of an incentive auction approach?:

Question 15: If so, what are the challenges to designing an effective incentive auction in this case, and how might these challenges be addressed? :

Question 16: If we followed an incentive auction approach, how should we take account of wider costs and benefits ? i.e. those not felt by participants in the auction?:

Question 17: Do you have any views at this stage as to the parameters of an incentive auction, such as the default date and payment mechanism?:

Question 18: Is there a version of the overlay auction approach which could be suitable for 700 MHz release?:

Question 19: What are the benefits and risks of conducting an overlay auction in this case?:

Question 20: Have we correctly identified and characterised the potential impact of 700 MHz release on consumers accessing DTT? What other impact ? if any ? should be taken into account in order to identify pre-emptive measures to reduce this impact?:

Question 21: Do you have any comments on the pre-emptive measures relevant to DTT identified above? Are there other pre-emptive measures we should be considering?:

Question 22: Have we identified the correct measures to support consumer adoption of DVB-T2?:

Question 23: What regard, if any, should we have to wider technical evolution of the DTT platform, such as HEVC? :

Question 24: Have we correctly identified and characterised the potential impact of 700 MHz release on PMSE users? What other impact ? if any ? should be taken into account in order to identify pre-emptive measures to mitigate this impact?:

Question 25: Do you have any comments on the pre-emptive measures identified above? Are there other pre-emptive measures we should be considering?:

Question 26: Do you have suggestions for how we can assess the impact on PMSE users and equipment if 700 MHz is no longer available for PMSE use?:

