British APCO (BAPCO) initial response to 'Call for Input' on 'Developing a framework for the long term future of UHF spectrum bands IV and V'

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Confidentiality: OFCOM may publish any part of this submission. Publication of any of the attachments (listed below) requires specific permission as they were generated by APCO International (our parent organisation, of which we form the European arm):

- Phoenix_Center_Study_-_March_2011.pdf
- smse-018-10-public-safety-sub2.pdf

I have read and understand the declarations made on your electronic instance of this submission as http://stakeholders.ofcom.org.uk/binaries/consultations/uhf-spectrum-band/summary2/condoc.pdf

1 Demand and Supply of Services

Presently, OFCOM will be well aware of the method, deployment and usage, spectrum allocations and specifications of the Emergency Services radio networks in use in the UK and across the EU. Our primary membership use TETRA and TETRAPOL networks, with some non-critical use of other DMR and PMR and of course commercial cellular services.

The majority of this usage has been push-to-talk voice. There are difficulties, globally, let alone at country level, where out-of-area Civil Contingency and Public-Safety personnel attempt to interoperate, and BAPCO is working on a number of research (EU) activities in this space on our members' behalf already. The missing piece is harmonisation at many levels, from global and international down to adjacent locales.

Pace of change, and the never-ending quest for improved public-safety, now demands richer applications and capabilities across Public-Safety, and while radio (voice) networks as they exist today will doubtless continue to provide essential communications at the sharp end and in command and control, parallel developments of higher-technology solutions are emerging and moving towards being seen as equally critical.

2 Technical developments

British APCO and APCO International released the following statement during British APCO's annual Conference and Exhibition in April 2011, underpinning the importance of mobile broadband applications to first responders:

APCO GLOBAL ALLIANCE ADOPTS LTE AS WORLDWIDE STANDARD
Action Follows Recent FCC Approval of US Public Safety LTE Request

***April 13, 2011, London, England** – At Monday's meeting of APCO International's Global Alliance, delegates representing public safety communications professionals from Europe, North America, Asia-Pacific and elsewhere around world passed a formal policy statement entitled 4th Generation (4G) Broadband Technologies for Emergency Services. As passed*

unanimously, the statement was adopted to include:

"The partner associations of the APCO Global Alliance recognize that Long Term Evolution (LTE) is emerging as the leading standard in 4G technology; being adopted worldwide by the largest mobile communications service providers. Since LTE is a global standard, it is capable of providing emergency service agencies and governmental organizations with a cost-effective way to meet their broadband communications needs and one that gives them a greater selection of devices and applications – a capability that has been sought for years."

The Global Alliance's statement went on to explain the benefits of adopting LTE as the international public safety broadband standard, as follows:

"Further, LTE's all-IP architecture, spectral efficiency, and bandwidth flexibility will improve overall network economics. Coupled with economies of scale to be gained as commercial carriers build their own LTE networks, it is anticipated that emergency services worldwide will reap substantial benefits by adopting LTE as the global standard for emergency broadband networks from the start by capitalizing on research and development currently underway."

The Global Alliance's actions today will further attract, stabilize and accelerate commercial development and investment in public safety broadband markets worldwide," stated APCO International Executive Director George Rice. "The benefits of global standardization for emergency broadband networks will create a rich ecosystem of devices spurred by the standards-based designs, open intellectual property environments, commitments from chipset manufacturers, large communities of developers and interest from consumer electronics manufacturers."

Added APCO International's Immediate Past President Dick Mirgon, "The partner associations of the APCO Global Alliance endorse LTE as the global standard for 4G emergency communications broadband networks, in part, to increase our ability to influence the development of LTE standards in support of critical emergency services; and to accelerate development of suitable LTE devices in support of emergency services at reduced equipment costs, providing greater create economies of scale for manufacturing, and promotion of competition."

In discussing new technology capabilities in parallel with TETRA and other legacy (and effective) technologies today, it is important to recognise the 'parallel' nature of initial emergence. Possibly using commercial-band, non-critical services, these will likely proliferate as additional value capabilities, adding to an increasing cry for dedicated networks, typically harmonised at 700MHz. It will be an evolutionary process, but one that must be planned for now.

4G/LTE and mobile broadband applications will improve public-safety and civil-contingency hugely, as the sophisticated technology and applications provide faster, safer, more informative and accurate information to and from first responders. The key second ingredient is interoperability and harmonisation internally (globally). Increasingly international co-operation and local mixed services tackle issues with increasing success rates, and the need for ubiquity and harmonisation is self-evident as public-safety resources from diverse resource centres converge at critical moments.

3 International developments

APCO International has been highly successful in lobbying and achieving support for the allocation of (the D-Block) a 20MHz block at 700Mhz, specifically for the deployment of 4G and LTE broadband applications for saving lives. British APCO has been solid in its support of APCO's approach to the government in the US.

I returned on 9th June 2011 from European meetings with public-safety workers and representatives from across Europe, where we discussed harmonisation, spectrum needs

(including 4G/LTE) and also listened to Pearce O'Donohue from the EEC. I have received, since attending last week, various letters and emails urging British APCO to respond and lobby for harmonisation and reservation of a similar block to the US at 700MHz. Supporters include various European Emergency Services members, and even a written approach from a major manufacturer and technology provider (the leading UK handset provider).

I also returned in late May from meetings in Washington (with APCO and various US partners, provders and members) to ensure our alignment and stay appraised of the latest in the US and Canada.

In our view, the Executives and members of British APCO, and indeed of APCO International agree strongly on the need to preserve the 700MHz 20MHz-wide block as globally as possible, and certainly within the UK and Europe.

4 Benefits to citizens and consumers

It is worth noting that (at 800MHz typically) the 'consumer', (not our choice of word) meaning the individual making contact with first responders, demands to interact using the wide choice of media and technology at their disposal. These include the mobile devices, text messages, live video, image sending, Facebook, Twitter, et al.

4G/LTE interfacing at IP can connect the public 800MHz world so effectvely (and 2.5G, 3G, Internet, etc) to 700MHz Public-Safety professionals and public-facing elements of Command and Control effectively, bringing about new capabilities in the civil-contingency and public-safety space. Excellent examples of this are already occurring, around wildfires, floods, and other examples, from as far away as Australia. There is a sizeable increase in the capability to warn and protect citizens in the event of major catastrophe, whether naturally or terrorism generated.

The main benefit to citizens remains the increased capabilities and improving success-rates and response times that will come as a direct result of harmonised first responder spectrum at 700MHz

5 Future timescales

British APCO (BAPCO) understands that this is a first gathering of 'interested parties' and their initial responses. BAPCO strongly commends the thorough approach, and I am committing our organisation to supply whatever effort is required on our behalf in assisting your work here.

British APCO already represents a direct path to real,sharp-end experience (in communications especially) to EU projects and various bodies in the UK and beyond, in carrying out research and studies of the kind that OFCOM is embarking upon here. Please use us to leverage that value as much as you can!

6 Additional comments

I would draw your attention to various attachments (to the email under which this letter is also attached). I hope they are of value at this stage.

I look forward to further dialogue with yourselves, I again thank David Harrison for his valuable time and advices, and I pray we see you at the BAPC2012 event.

In the first instance, please contact me on the email address or telephone number I included at the beginning of the Response section.

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