

19 March 2012

Item 2

Next Generation Telemetry Frequency Issues

Purpose of report

For discussion.

Summary

In December 2010, the Government directed Ofcom to begin preparations for the commercial sale of mobile spectrum bands (800MHz and 2.6GHz), which is expected to be used to deliver the next generation of mobile broadband services. This report sets out possible telemetry frequency issues for the Fire Service and what measures that the Government intend to take to mitigate the risks.

Recommendation

Members are asked to note this report and discuss its implications for the Fire Service.

Action

Officers to reflect Members' comments in taking this issue forward.

Contact officer:

Commissioner Ron Dobson CBE / Helen Murray

Position:

Commissioner, LFEPA / Head of Programme, LGA

Phone no:

020 8555 1200 / 0207 664 3266

E-mail:

helen.murray@local.gov.uk

19 March 2012

Item 2

Telemetry Frequency Issues

Background

1. In December 2010, the Government directed Ofcom to begin preparations for the commercial sale of mobile spectrum bands (800MHz and 2.6GHz). It is expected that this spectrum will be used to deliver the next generation of mobile broadband services, using fourth generation (4G) mobile technologies such as LTE and WiMAX. These mobile broadband services might have speeds approaching today's fixed broadband services, with coverage significantly better than existing 3G services. Once completed, this exercise would represent the largest single contract in the UK of internationally harmonised mobile spectrum.
2. The government see the award of this spectrum as vital to the UK's economic and social growth. It will enable mobile operators to meet the significant growth in demand for mobile data. This is being fuelled by growth in the take up of smart phones and tablets, offering services such as video streaming, social networking and mobile gaming, as well as applications such as messaging and email.
3. The two bands of spectrum to be awarded at 800 MHz and 2.6 GHz comprise 250 MHz of mobile spectrum. This is equivalent to three-quarters of the mobile spectrum in use today and 80% more than was awarded through the 3G auction in 2000.
4. The lower frequency 800 MHz band is part of the digital dividend, which is being freed-up as the UK switches from analogue to digital TV. This spectrum is ideal for widespread and indoor mobile coverage. In addition, this frequency is expected to be key to the economic delivery of next generation mobile broadband services in less densely populated areas. This award therefore represents an important opportunity to ensure that such services are made available in less urban areas, as well as in the more commercially attractive more densely populated areas
5. The 2.6 GHz band is at a higher frequency, and is ideal for delivering the capacity needed to deliver higher speeds and provide services simultaneously to many users. The combination of low and high frequency spectrum creates the potential for next generation mobile broadband services to be widely available across the UK, while at the same time having the capacity to cope with significant demand, even in urban centres.

Issues for the Fire Service

19 March 2012

Item 2

6. In 2011, an independent research report identified that the award of this mobile spectrum may have issues for Fire & Rescue Services as well as other emergency services organisations. This report identified that there was a risk of interference from next generation mobile devices that would be using the spectrum released by the government. The main area of concern was the 862-863 Mhz range which is used by emergency services organisations, including telemetry for Breathing apparatus (BA). Based upon various usage scenarios, telemetry range for BA kits could be reduced as the number of 4G devices such as new mobile phones increased. Without mitigation this risk would increase over time.

What is being done about this?

7. DCMS have recognised that there is an issue for emergency services in the 862-863 frequency range. They have stated that reasonable costs of moving BA telemetry to another band will be met, subject to analysis of options being carried out and ultimately a business case / recommendation being produced. This work is being carried out by a CFOA led task and finish group. This group, over the last year has been examining all the issues, conducting risk assessments and evaluating options for the future. The output for this group will be a fully populated business case that will be submitted to DCMS later this year (The group consists of representatives from many fire & Rescue Services as well as subject matter experts from Ofcom).

What are the Options?

8. The group has examined a number of options in an attempt to identify the most appropriate way forward. These include:
 - 8.1 Moving to the Short Range Device (SRD) band 869.5;
 - 8.2 Developing a solution for the 450 – 470 Mhz band; and
 - 8.3 Developing a solution for the 870 – 872 Mhz band
9. Whatever the eventual preferred approach is, the following factors will have been considered in reaching that conclusion:
 - 9.1 maintaining the current level of service;
 - 9.2 being technically robust;

19 March 2012

Item 2

- 9.3 providing value for money;
- 9.4 ensuring safety (the criteria will take the form of a risk assessment); and
- 9.5 following agreed timescales

10. The business case detailing the preferred approach will be finalised in the coming months.

Key Points

11. The key points to note are as follows:

- 11.1 The Government has directed Ofcom to award mobile spectrum bands (800MHz and 2.6GHz) to enable the roll-out of next generation mobile services.
- 11.2 The timescale for roll-out of new services in the 800 MHz band is the first quarter of 2013.
- 11.3 There is a risk of interference from next generation mobile services into emergency services use at 862-863 MHz – including BA Telemetry.
- 11.4 Without mitigation, the risk of interference will increase over time.
- 11.5 BA Telemetry is seen as an essential (rather than desirable) component when BA is replaced or upgraded.
- 11.6 The Government (via DCMS) has indicated that reasonable funding will be made available to FRS depending upon the result of the activities (below).
- 11.7 CFOA led task & finish group working with FRS and Ofcom with a view to producing a business case for DCMS later this year.