Representing:

Organisation

Organisation (if applicable):

Digital Mobile Spectrum Ltd (DMSL)

What additional details do you want to keep confidential?:

Keep name confidential

If you want part of your response kept confidential, which parts?:

Ofcom may publish a response summary:

Yes

I confirm that I have read the declaration:

Yes

Additional comments:

Digital Mobile Spectrum Ltd (DMSL) is the organisation responsible for the 4G/TV co-existence mitigation programme. DMSL's role is to ensure that viewers who rely on Freeview for TV can continue to receive it, or are offered a suitable alternative, when 4G mobile services using the 800 MHz band are activated in their area. The company provides its service to viewers under the at800 brand.

We are funded by the UK mobile operators that hold allocations of 800 MHz spectrum: EE, Telefónica UK (O2), Three and Vodafone. We ensure they meet their licence obligations to provide a single consumer help scheme.

A 4G/TV Co-existence Oversight Board, consisting of independent members, mobile networks operators, broadcasters, Ofcom and Government representatives, monitors, advises and reports on our performance.

Further information about the support we offer and our work can be found at https://at800.tv

Question 1: Do you agree with our assessment of the number of viewers that will need to retune?:

1.1 at800 will not be responding to this question

Question 2: Do you any comments on how viewers will find the retuning process and whether there are particular groups of viewers which will require

greater consideration/assistance with the process? What help might they need?:

2.1 at800 does not advise viewers on retuning. Viewers we believe are not affected by interference from 4G at 800 MHz and who we believe need support on the DTT platform, which can include re-tuning, are referred to either Digital UK's Freeview Advice Line or the Radio and Television Investigation Service (RTIS). Eighty percent of at800's referrals are passed to Digital UK, making up a fifth (21%) of all our calls.

2.2 Indicative of viewers who may struggle to retune are viewers who, during at800 triage:
Cannot clearly explain the issues they are having
Do not know and cannot find the make and model of their equipment
Cannot discover the firmware or software versions present in their products.

2.3 We estimate that approximately 14% of callers to at800 struggle with these issues.

2.4 We would prefer not to categorise viewers - and make assumptions about their capability - based on pre-defined groups. We aim to provide our support based on a viewer's individual circumstances and need.

2.5 However, in our experience, older viewers are generally more likely to seek additional guidance and support when interacting with their TV system. This is often because of a lack of confidence operating digital equipment or the perceived risk that by making adjustments they may lose TV channels. The issues these viewers face are compounded if they live in areas where DTT signals from different transmitters overlap, and therefore require more complicated manual retune processes, such as entering individual frequencies for their serving transmitter's multiplexes.

2.6 In addition, a large proportion of older viewers that at800 supports use older, standard TV sets (as defined by Ofcom) and often use set-top aerials, and therefore require additional support. This is borne out by Ofcom's own 2016 research on Digital Media Take-Up and Use, http://stakeholders.ofcom.org.uk/binaries/research/media-literacy/adults-literacy-2016/Section-4-Digital-media-take-up-and-use.pdf showing that 90% of over 75s had a standard TV set, compared to 73% of all adults. However, we would reiterate that problems understanding digital equipment are never limited to specific categories of individual.

2.7 If viewers struggle with technical information while being helped over the phone, the only viable solution is to provide support in person at their home.

2.8 For the work that we do, Ofcom used categories of viewers eligible for additional support that closely followed the model used for Digital Switchover (DSO), although without access to Government data on eligible individuals. Viewers to whom at800 is obliged to provide additional home visit support are people: 75 years of age or over, are registered blind or partially sighted, or who receive any of the following benefits: personal independence payments (PIPs); attendance allowance; constant attendance allowance or War Pensioner's Mobility Support.

2.9 In addition, at800 extends this eligibility to any viewer who, in the view of its contact centre agents or home visit engineers, may struggle to look after themselves. at800 offers these viewers a home engineer visit. Of the viewers eligible for extra support that contact us,

84% go on to have an engineer visit. We also offer chaperone visits for eligible viewers whereby a local support organisation attends the engineer visit to ensure the viewer understands and is comfortable with the work being carried out.

2.10 If an at800 engineer attends a visit which requires a retune, they do a number of things to help if they believe a viewer may struggle with retuning in the future. These include:

Writing down the retune steps for the viewer to refer to in the future
Asking the viewer to demonstrate how they would do a retune before leaving, to ensure they have understood the process
Asking the viewer if they have another person that could help them with the process. Engineers sometimes contact viewers' relatives or neighbours to talk through the re-tune process so that they may assist in the future.

2.11 It is worth pointing out that the technology used by the viewer impacts retuning.
Some but not all, 'Freeview HD' models have technology that when receiving more than one transmitter signal provide a retune menu
Portable, set-top aerials can be knocked and hence be unable to re-tune to the serving transmitter
Energy saving mode can cause viewers to report that TVs are losing services
Resetting TVs to retune can change energy saving modes causing viewers to report that their TV keeps losing services or have no or low signal. The retune by factory reset or 'first time installation' procedure can lead to calls about picture quality or no sound
Finally, a relatively common issue is for viewers to retune their TVs - but then forget peripheral digital recorders which may require scheduled recordings to be reset.

Question 3: Do you have any information to suggest that our estimate for the number of households that will need to replace their aerials should be different?:

3.1 at800 has no information to provide in response to this question.

Question 4: Do you have any information relevant to our assessment of the average cost of an aerial replacement?:

(We have chosen to group our response to 'Question 4' with 'Question 7' - please refer to our response to both below.)

4.1 The cost of an individual element such as replacing or re-pointing an aerial is entirely dependent on the scope of work of any support scheme, its location and timing (see 4.7 below).

4.2 In at800's experience, at a bulk, trade level of work such as that provided by a large scale scheme of support, repointing a roof-top aerial incurs a similar operational cost to aerial replacement.

4.3 We contract aerial engineers and run our own scheme to train them to be at800-accredited to conduct visits to properties. During these visits engineers check for interference from 4G at 800 MHz and provide remedial action. The cost to at800's programme is in the time allocated

to each engineer visit. The cost of any materials used on a particular job (such as a new aerial or replacement cabling) are far outweighed by the cost of time for engineer visits.

4.4 We can provide advice and free filters to viewers in communal properties but they do not qualify for in-home support from our engineers. It is the responsibility of landlords to manage communal aerial systems providing DTT to residents at these properties. We understand that at communal properties, initial aerial replacement or repointing can incur a similar amount. However, time spent ensuring each residence has an appropriate signal, means that communal costs increase in line with the number of properties served.

4.5 We procure blocks of time for home visits from our engineers and aim to make the most efficient use of this capacity. For a support scheme of high-quality, specifically accredited engineers who have undertaken additional training, with ongoing quality audits, utilising an efficient visit booking process of known - or reasonably predictable - capacity, an average, national, home visit cost of £120 per individual (non-communal) household, assuming a standard domestic (TV) installation would be reasonable. Such a cost assumes that individual engineers, or teams of two where required, could visit and support at least five individual properties a day and were fully utilised.

4.6 For a communal property, costs vary greatly depending on the number of individual properties served by a communal system.

4.7 Our experience is that engineer utilisation increases during British Summer Time. Both available daylight and prevailing weather conditions are generally more conducive to safe roof-top work. These factors can significantly affect the cost of an overall Help Scheme and where possible should be taken into account during any clearance timetable.

4.8 Where a platform change to Freesat is required, at800 estimates its cost at £225.

4.9 Obviously, on an individual basis, installation costs also vary depending on factors affecting reception at properties. Situations vary from straightforward cases where strong reception is available from a single transmitter, to cases where local topography, building height and listed status needing special fixings or additional care. Where DTT transmitter coverage overlaps, there can be a need for amplification, splitters and attenuators.

Question 5: Do you have any evidence as to what proportion of viewers may struggle to bear the cost of an aerial replacement?:

(We have chosen to group our response to 'Question 5' with 'Question 8' - please refer to our response to both below.)

5.1 Our programme is built upon government decisions regarding who is eligible for support. A large proportion of complaints regarding our work relate to policy. Our support is focused on Freeview-only, individual households, as well as any individual household that contains a person eligible for additional support, as described above in 2.8. Viewers in communal properties, and viewers whose property receives cable or satellite TV and do not house a resident eligible viewer, do not qualify for a home engineer visit.

5.2 We receive multiple representations from local and national politicians, individual viewers and the press questioning the fairness of this policy. Many households rely on DTT

to provide viewing on multiple TV sets. For the viewers in those households to incur the costs (beyond the free filters we provide) associated with remedying 4G interference in these homes is often considered unfair. However, our co-existence programme does support the simultaneous rollout of new mobile broadband services. Viewers are able to benefit from the fact that these new mobile services are becoming active in their area.

5.3 During digital switchover (DSO), it is our understanding that an even greater, direct viewer benefit was perceived. A host of new TV and radio channels, at better quality, were being made available. In addition, for a large number of households, digital services and analogue ran simultaneously for a long period, allowing for a voluntary evolution, at a pace that suited individual viewers, to DTT. When analogue services were switched off, many viewers had already made the change and chosen to access superior digital TV, upgrading their own aerial system and TV equipment at their own cost due to the benefit.

5.4 In contrast, there is no immediate benefit to DTT viewers from 700 MHz clearance (albeit it will support greater capacity of mobile broadband services at some point in the future). In addition, no voluntary move, over an extended period, is available to viewers. Clearance will be imposed on a set timescale. All impacted viewers will be required to take action - from re-tuning, to aerial repointing or replacing, system improvements, and potential platform changes - just to retain access to their existing TV channels (although in the case of platform change, there is no exact like-for-like availability of channel line-up).

5.5 Whilst for many viewers a simple re-tune will be only a minor inconvenience, any viewer that incurs costs is likely to view it as unfair and may seek to obtain free support or want to recoup their costs.

5.6 Given this, taking into account solely the impact of 700 MHz clearance (as opposed to any future benefits that accrue) those with the least disposable income would incur the greatest penalty to continue to receive their current TV service.

5.7 Ofcom's own assessment is that newer equipment, including smart TVs, with automated tuning, may cope with clearance better than older, standard TVs. As previously highlighted, Ofcom's Adults' Media Use and Attitudes Report 2016 shows that the use of standard TVs increases with age groups from 55+, with a concomitant fall in the penetration of smart TVs. A similar, albeit less-pronounced, trend can be seen in the relative percentages of standard TVs versus smart TVs in socio-economic groups C2 and DE.

5.8 It is also worth noting that, for people 55+, TV is still the 'most missed device' by a considerable margin, rising from 40% most missed (over computer in second place at 19%) for 55-64 year olds, to 65% most missed (over radio at 10%) for people over 75.

5.9 Given these factors, it is at800's belief that 700 MHz clearance is likely to have a greater impact on viewers who are older than average and who have less disposable income.

Question 6: Do you have any information to suggest that our estimate of the number of viewers that may need to repoint their aerials should be different?:

6.1 at800 has no information on the estimate provided by Ofcom.

Question 7: Do you have any information relevant to our estimate of the cost of aerial repoints or platform changes?:

(We have chosen to group our response to 'Question 4' with 'Question 7' - please refer to our response to both in our submission to Question 4.)

Question 8: Do you have any evidence as to what proportion of viewers may struggle to bear the cost of an aerial repoint or platform change? :

(We have chosen to group our response to 'Question 5' with 'Question 8' - please refer to our response to both in the information submitted to Question 5.)

Question 9: Are there any other matters the viewer support scheme should cover?:

9.1 at800's response to the 2014 consultation on the future use of the 700 MHz band noted that responsibility for providing advice and support for TV reception issues is currently shared between multiple stakeholders. We observed that, in our view, the majority of viewers are not aware of the organisations available to provide some sort of support and advice and their specific role. At the time, we suggested that a single, integrated service, able to listen and respond appropriately to any viewer's DTT issues would provide significant benefits in terms of simplicity and clarity for viewers and the DTT platform. We still hold this view.

9.2 Ofcom's research on TV reception (http://stakeholders.ofcom.org.uk/market-data-research/other/tv-research/viewers-experience-of-television-reception/) shows that only 13% of DTT viewers who have experienced any sort of disruption to DTT have contacted anyone for support.

9.3 Since spring 2013, at800 has mailed 14 million UK households to alert viewers to our support.

9.4 We have been contacted by 380,000 viewers asking about our work or asking for support for problems with DTT.

9.5 We have built an excellent reputation with viewers eligible for our support: 99% of viewers that our engineers have visited rate our service as excellent. New, parallel communications and help schemes targeted to the same DTT viewers we support could significantly impact our operation and reputation.

9.6 The timetable for 700 MHz clearance indicates that the at800's mitigation scheme will overlap with viewer support for 700 MHz clearance. Given this, there is a risk that our operational costs could increase due to increased call volumes and increased installer visits generated by 700 MHz clearance related activity.

9.7 Should the relative support services be uncoordinated and lacking consolidated oversight, viewers could be handed between different schemes without it being clear where responsibility for providing support resides. The perception could be of support organisations absolving themselves of responsibility. We would seek to avoid any such negative operational and reputational impact.

9.8 Given the significant potential for overlap of the customers for both our scheme and that of 700 MHz clearance support, we believe that a single viewer facing point of contact should exist to respond to viewers requiring support for whatever DTT issues they face. At the very least, the 700 MHz clearance support scheme - its timing, audience and scope - would need to be tightly aligned and coordinated with at800.

9.9 Ideally, a single point of contact for viewers should sit ahead of - and be integrated with - the functions currently provided by our existing service and others, as well as any new 700 MHz clearance advice and help line.

9.10 Such a service should provide initial triage via a freephone line or online, acting as a virtual hub taking ownership of a viewer's issue and deploying the advice and support most appropriate to meeting their individual needs.

9.11 With the right data protection safeguards in place, such a service could have access to the history of support provided to households under the DSO Help Scheme (data controlled by the BBC), Radio and Television Interference Service (BBC), Freeview Advice Line (Digital UK), at800 (DMSL) and Ofcom's TV investigation service (Ofcom), and supplement this record with data generated from the emerging 700 MHz clearance support scheme.

9.12 Where further direct support costs - such as in-home visits - occur, such a scheme could ensure that costs were allocated appropriately, to at800 should 4G at 800 MHz be causing an issue, or to 700 MHz clearance due to aerial retuning or repointing, or to other interferers as is the case now with Ofcom and RTIS investigations.

9.13 Ofcom and government would need to consider how best to account for costs attributable to issues caused solely by faulty in-home equipment or set-up. It should consider whether allocating these costs, post-visit, to viewers could significantly deter viewers from accessing support services when they are unsure of the cause of the DTT reception problems they are experiencing.

9.14 Such a single service would provide viewers with a simpler, quicker and better customer service experience. Appropriate stakeholder oversight of such a coordinated support scheme, such as that used for 4G/TV co-existence, could ensure that ownership was taken of all viewer issues to ensure a consistent experience and approach.

9.15 Field engineers to such a support service could be accredited across multiple issues, including future-proofing DTT systems, diagnosing 4G interference, aerial repointing and replacement and ensuring most appropriate post-700 clearance transmitter use, through a training scheme similar to that we deploy today. The Confederation of Aerial Industries' (CAI) experience in providing overall, expert DTT-support could help foster its adoption across the installer industry.

9.16 at800's programme of support only started to properly take shape following work on commercial pilots of 800 MHz co-existence. These pilots allowed us to test our mailing, fulfilment, contact centre operations, interference modelling methodology, engineer and eligible viewer support. However, we significantly changed our programme of support five months after 800 MHz mast started activating.

9.17 Any 700 MHz clearance support scheme should aim to avoid similar issues by adopting two approaches: running large scale trials of any proposed approach to the communications and help scheme, and by allowing for changes to the policy underpinning, and approach to delivering, viewer support based on actual viewer feedback and the clarification of the real-world impact from the earliest 700 MHz transmitter clearances.

9.18 In our experience, overly restrictive, inflexible KPIs have the potential to lead to the development of support delivery mechanisms that can conflict with the ability to provide the fairest support for any individual viewer.

9.19 When looking at the effectiveness of the overall 700 MHz clearance support scheme, Ofcom should also consider the longer term benefits from all DTT support organisations to enable 700 MHz co-existence in the future. It would be counterproductive to only consider support for 700 MHz clearance now, and then consider support for any 700 MHz DTT/mobile coexistence issues subsequently.

9.20 The maintenance and enhancement of a core competence in providing clear, simple, effective support for the DTT platform would increase the marginal value of spectrum allocated to DTT, an assessment of which underpins current government policy and Ofcom's remit to support its most effective use. There is the opportunity to build on the experience gained during DSO and 4G/TV co-existence to ensure an effective, cost-efficient 700 MHz clearance programme, and to bring benefits from these programmes to bear on a coherent approach to 700 MHz co-existence from June 2020.

Question 10: Are there any other elements a viewer information campaign would need to include? Do you have any comments on or further evidence to inform the above estimates of the cost of providing information and advice to viewers? Please provide supporting evidence for any adjustments that you think may be relevant.:

10.1 As expressed in response to Question 9, viewer information regarding all support available should be coordinated to ensure consistency of understanding with respect to DTT support.

10.2 In addition to the methods outlined in Ofcom's consultation, we believe that social media platforms and online video provide an opportunity to both raise awareness of clearance, but also steer viewers toward self-help. A growing proportion of consumers increasingly use social platforms and apps to seek their own information quickly, and self-serve solutions. Much of this activity is driven by the rise in the use of smartphones. According to Ofcom research http://stakeholders.ofcom.org.uk/market-data-research/other/research-publications/adults/media-lit-2016/ in 2015, 70% of UK adults owned a smartphone, with 90% of adults owning any mobile phone. Smartphones are increasingly used for a range of activities. These smartphone activities include accessing social media (53% of all UK adults), watching short video clips (48%) and making purchases online (41%). Online information and support has the potential to decrease the direct burden required of any support scheme by using clear, mobile friendly communications to explain its operations and allow viewers to self-serve solutions.

10.3 As we've noted, many viewers that may require support could be older and not as

confident with digital technology, the support networks around them, including voluntary services, neighbours and family members, are likely to be more familiar with this media. In addition, nearly a half (46%) of 55-64 year olds and a fifth (21%) of 65-74 year olds use a smartphone to go online, according to the Ofcom research noted above. This spread of digital media familiarity is a useful reminder that crude categorisation of ability based on any specific demographic marker is unlikely to ever be truly reflective of any single individual.

10.4 On an annualized basis - and aside from the cost of on-screen pop-ups of which we have no direct experience - the estimates of the administration costs for the communications element of 700 MHz clearance appear to be appropriate. This assumes that the communications advice line and administration costs are shared across the overall support scheme (Question 11).

10.5 For this reason, at800 strongly believes that the communications and support functions of the new 700 MHz service should not be separated, and that each will be more effective by being combined. at800 recommends that the preparatory tests for 700 MHz clearance proposed in this consultation investigate this integration and other key issues, including the effectiveness of on screen popups, and whether they need to be supported by regional PR, social media, advertising, or direct mail.

Question 11: Do you have any comments on information which is relevant to our assessment of the potential costs of administering a help scheme?:

11.1 We think that the £1-4m estimate for an annualised cost of administering the 700 MHz clearance element of a DTT help scheme is reasonable. For comparison at800's annual administration costs, based on figures for FY 2015, were approximately £1.4 million.

Question 12: Do you have any evidence to further inform our assessment of the likelihood of viewers that suffer from un-related pre-existing reception problems erroneously making claims against a 700 MHz help scheme?:

12.1 Since at800 became operational in 2013, we have made over 39,000 home visits, of which just over 14,800 individual households were found to have an issue related to 4G at 800 MHz. This relative 'success rate' following initial contact centre triage of just 38% highlights that the majority of in-home support costs go to viewers not actually impacted by 4G, but whom we have been unable to triage remotely.

12.2 We have no evidence that any significant proportion of viewers purposely misconstrue their TV problems in order to access the free support we offer. The vast majority of viewers contact us when they believe they have a legitimate issue that 4G could be contributing to. In addition, our phone-based triage aims to focus our help on viewers where 4G could be causing their problem. However, any support scheme for 700 MHz clearance will be contacted by viewers with pre-existing reception problems, but who access the service in good faith.

12.3 As outlined in our 2014 consultation response, the challenge of effective triage for DTT support - at800 as well as 700 MHz clearance - is that costs are primarily incurred finding issues with the 'appropriate' cause, rather than resolving issues due to that cause. As stated in response to Question 9, Ofcom should consider where costs attributable to issues caused

solely by faulty in-home equipment or set-up, should be allocated to viewers who are likely to have requested support in good faith. It should consider whether any approach that seeks to recoup these costs could significantly deter viewers from legitimately accessing help when they are unsure of the cause of the DTT problems they have.

Question 13: Do you have any additional information to further inform our cost estimates and assumptions of the effectiveness for the different triage methods? Are there any other triage methods which should be considered? Please provide supporting evidence for any adjustments you think may be relevant to our current estimates. :

13.1 Cost estimates on the effectiveness of triage will largely depend on the scope of any help scheme. However, when combined with the communications portion of the costs, an annual sum of £2m-4m is likely to be suitable to run a contact centre with sufficient capacity, trained and experienced staff to support clearance. Further, it is our view that these overall costs would also likely be sufficient to cover a single front-end support centre for all currently available DTT support contact operations.

13.2 Missing from the estimates are costs of developing appropriate viewer relationship management systems and administration management systems, such as those currently used by at800. Our integrated systems maintain and make available viewer communications data, household information, engineer booking capacity management, engineer visit details, viewer satisfaction information and audit data on the effectiveness of our support scheme. Our experience of building such systems leads us to estimate that their initial specification and development would cost between £1m-£2m, followed by ongoing system maintenance costs.

13.3 In response to Questions 4 and 7 we outlined the cost of a home visit to conduct rooftop work. While at800 has no direct experience of operating 'triage-only' visits, a single, experienced engineer with appropriately managed capacity may be able to undertake eight successful home visits a day in a pre-defined area with an efficient booking system. As such, a cost of £65 per household is not unreasonable.

13.4 We have no direct observation to make on the cost of test transmissions for triage.

Question 14: Have there been any developments since 2014 which would affect our estimate of the amount of equipment that PMSE users will need to replace as a result of 700 MHz clearance?:

at800 will not be responding to this question

Question 15: Are you aware of any developments since the 2014 Statement that would affect our cost estimates?:

at800 will not be responding to this question

Question 16: Do you have any information or evidence of the likely unit cost of new equipment which operates in the 960-1164 MHz band?:

at800 will not be responding to this question

Question 17: Have we correctly identified the main categories of PMSE user that 700 MHz clearance will affect? If not, please provide examples of stakeholders which do not fit broadly into any of the groups mentioned.:

at800 will not be responding to this question

Question 18: Do you have any comments on our assessment of the proportion of equipment the different users types account for?:

at800 will not be responding to this question

Question 19: In addition to any information provided in response to the survey, do you have any other evidence as to how clearance may financially affect each of the different categories of PMSE equipment owner identified above?:

at800 will not be responding to this question