4G/TV Co-existence Oversight Board Meeting: 26 January 2017	
Chair's report to Ministers and Ofcom	
Attendees (in person)	(**via teleconference**)
David Hendon, Chair	Greg Thompson (Three)
Roger Darlington (Non-Executive)	Paul Rosbotham (Vodafone)
William Webb (Non-Executive)	Robin Vernon (O2)
Inge Hansen (EE)	Alan Boyle (BBC)
John Ballard (Arqiva)	Sue Ramroop (DCMS)
Ben Roome (DMSL)	**Apologies**
Graham Plumb (Ofcom)	Philip Milton (Channel 4)
Ian Dewhurst (DCMS)	Erol Hepsaydir (Three)
Andrew Dumbreck (Technical Advisor)	Nick Munn (DCMS)
Michelle Brownrigg (DUK)	Alexandra McNair (ITV)

1. Executive Summary

1.1   There were 18,582 confirmed cases of 4G interference at 800MHz as of the end of December 2016. The levels of interference remain within the revised estimates, based on actual experience, made by at800 in 2014.

1.2   The first KPI breach since August 2015 and SLA breach since October 2015 occurred in December. Due to a combination of issues with third-party suppliers and the contributing factor of the festive period, KPIA7 and SLAB1 did not meet agreed performance targets. at800 has taken action to rectify the situations and reduce the likelihood of a recurrence.

1.3   As per the agreement with Ofcom in December 2013 regarding sub-KPIs, the Board will not recommend Operational Conditions at this time as at800 have three months to improve performance. It is not within the Board remit to recommend action for the SLA breach as this is an internal performance measure.

1.4   The Coexistence Oversight Working Group (CTWG) outlined the work they will be undertaking for the next six months, which will continue to focus on improving interference predication with subsequent operational benefits in reducing mailing volumes and engineer visits, thereby decreasing time and cost resources. The CTWG will report progress to the Board.

2. at800 update

<u>Roll-out</u>

2.1 As of the end of December, there were 18,582 confirmed cases of DTT interference caused by 4G at 800MHz, which includes the 35 cases found during the pilots conducted in 2013.

<u>Mast Analysis</u>

2.2 DMSL reported that the highest number of mast activations occurred across all mobile network operators in each of the months of November and December 2016 than during any other month since rollout began in July 2013.

2.3 Despite this increase in activations, there has not been any correlating rise in the level of contact from viewers or in reported or confirmed cases of interference.

2.4 The numbers of cumulative cases reported within 28 days of mast activation remain steady for 900m and 1.5km at 0.31 and 0.41 respectively. For monthly cases, the number of cases reported within 28 days decreased with 0.16 in November (from 0.24 in October) for 900m and 0.19 (November) from 0.31 in October for 1.5km.

2.5 The average number of cumulative cases per active mast was 1.07 in December (from 1.11 in November), the same level last seen in June 2015. The rolling average of confirmed cases per activated mast across a three-month period to December decreased from 0.69 in November to 0.59.

<u>Installer Scheme and Audit Summary</u>

2.6 Over the life of the programme there have been 47,648 engineer visits to unique addresses, from an overall total of 52,605 engineer appointments, of which 3,079 have been subject to audit.

2.7 There were 2,092 visits originally scheduled to take place in December; the majority, 1,961 were undertaken and closed as arranged; 8 visits were rearranged by at800 and 123 were cancelled by viewers. 97% of the completed appointments took place within the three working day target.

2.8 A total of 60 audits were completed in December for engineer visits originally undertaken in October (1), November (52) and December (7). The lower than usual number of audits (86 in October and 97 in November) is a reflection of the shorter

working period due to the Christmas and New Year holidays and viewers not wishing to be disturbed both in the lead up to, and during, the break.

2.9 at800 used the holiday period to develop the understanding of the contact centre team of the end-to-end audit process by improving the existing in-house training materials and for some of the senior agents to observe actual audits in viewer homes, for first-hand experience on the steps taken in dealing with reported issues.

2.10 The December audits focussed on the work of twenty-four engineers across all three regional contractors. There was one overturn from 4G to non-4G. The engineer, who had not worked on the project for several weeks, confused high LTE signal readings with amplification issues; the auditor resolved the interference - which had returned after the engineer had installed a filter that had temporarily cleared the issues - by fitting an attenuator. There was one form-completion error, also from 4G to non-4G.

2.11 All overturns have been raised with the respective regional contractor management teams with actions for them to follow up with the relevant engineers.

Communications

2.12 In September I reported that at800 were ensuring formatting compatibility and ease of use of the mobile version of their website in response to the increasing trend for website access using mobile devices.

2.13 Since then at800 has seen an average 4% increase month-on-month in mobile handset access (44.4% in October, rising to 56.9% in December) and a decline of desktop access (from 33.7% to 19.4%) in the same period; website access via a tablet has remained steady around 23.2% on average each month. These statistics appear to support the preference of consumers to access online information 'on the move'.

Customer Service

2.14 To ensure that at800 maintains its focus on customer service excellence, a market research project has been underway since summer 2016 to evaluate consumer expectations and identify methods which help meet, or even exceed, those.

2.15 Initial results indicated that whilst at800 does an excellent job, there are areas for improvement including sharing positive viewer experiences on the website (to demonstrate legitimacy) and the suggestion of an online chat facility.

2.16   An outcome report, which will include an evaluation of all the results and feasibility of suggestions, will be provided in February.

3. KPI Report

3.1   at800 reported two breaches against the KPI and SLA targets in December 2016. These are the first breaches since July 2015.

3.2   Whilst all 560 confirmed 4G interference cases were resolved within the ten working day target, achieving a 100% pass rate for KPIA1, the 94% target for despatch of filters within three working days (KPIA7) was not met with a pass rate of 93.66%.

3.3   at800 reported that of a total of 2,257 filters requested in December, the majority (2,069) were sent within one working day, 45 within two working days and 143 (6.3% of the total) took between four and nine working days, outside the three working day target. Of the 143 requests, 35 were for satellite/cable viewers so primary television viewing was not affected, 1 household had already received a filter before and for another 7 households, engineer visits had been arranged in addition to the filter.

3.4   The delay in despatching the 143 filters was caused by an update in the contact centre's system which had the unexpected consequence that for several days, one of the twice-daily cumulative requests were not sent to the fulfilment provider as they should have been. It was expected that the update would not impact upon at800's operations.   As a result of the contractual breach, the third-party suppliers have provided service credits to at800.

3.5   In addition, the automated alerts, which flagged the error in the week between Christmas and New Year, were not followed up by at800 staff because of confusion over the number of working days involved due to the Bank Holidays in that period (the alerts were reported in elapsed hours and staff receiving the alerts have to offset for weekends and public holidays). DMSL accepts that this should not have been overlooked.

3.6   To avoid a repetition of the situation, at800 has taken steps to improve the follow-up process within the management team to ensure all alerts are dealt with and closed within an appropriate period.   Additionally, DMSL has refreshed its business continuity approach and will review this periodically in the future to ensure it is up to date and functioning correctly.

3.7   The SLA target for previously un-mailed properties to be mailed at least once before forecast mast activation (SLA B1) was breached by 0.23%, achieving a 98.77% pass rate rather than the 100% target.

3.8   The breach was caused when six masts were activated in December by the MNO's where either the site had not been previously submitted in a forecast plan to at800 or had been forecast but the activation had triggered a set of newly identified properties that had not yet been mailed.

3.9   This out-of-process activation is not unusual; however, normally in these circumstances at800 will request that the MNO(s) lock down the relevant masts until checks are made on whether nearby viewers/properties require a mailing. Once at800 has established it is 'safe', the MNOs are notified and the mast can be unlocked/reactivated. In these situations where masts are immediately locked down until at800 have identified and mailed applicable properties, a breach will not occur.

3.10   Unfortunately, these particular out-of-process activations occurred close to or within the holiday period and there were contributing varying factors that included a lack of operational support at an MNO, which mean that one mast could not be locked down as standard procedure when at800 discovered that the out-of-process activation had occurred during their internal reconciliation checks, and that the mailing process had already commenced for another so it was too late to add more property addresses.

3.11   In total 884 households were subsequently identified that should have received a mailing. By the end of January, at800 had mailed 748 of these properties and the remaining 136 households will be sent postcards no later than 2 February.

3.12   I note that of the six masts, two masts did not generate any mailings at all and of the 884 'missed' properties, only 71 had one of the remaining four masts as its strongest signal interferer and that, to date, no viewers from any of the 'missed' properties have contacted at800 for support.

3.13   As a result of this breach and the circumstances surrounding it, at800 and the relevant MNO's have re-assessed the internal operations procedures to ensure there is alignment between the submission and activation processes.

3.14   The Board thanked Ben Roome (CEO, DMSL) for his clear and candid explanation of the December 2016 breaches and whilst it was recognised that action had been taken to address both breaches, it was also noted that the situation could have

deteriorated, especially because of the holiday period, with impacts upon viewers (i.e. without television) and subsequent reputational damage.

3.15   However, the Board acknowledged that at800 had achieved passes on all KPI's and SLA's since October 2015 and that the circumstances for December were atypical. In preparation of the extended holiday period, at800 had arranged contingencies by opening the contact centre and securing engineer capacity on one of the Bank Holidays so that viewers with television issues would not be without support for the whole time.

3.16   As per the agreement with Ofcom in December 2013 regarding the automatic application of Operational Conditions (OCs) to sub-KPIs, the Board will not make any recommendations to impose OCs for the breach of KPIA7 as at800 has a period of three months (i.e. March 2017) to bring performance into the agreed targets. However, if after that period, the targets have not been achieved, the Board will re-consider.

3.17   As an internal performance measure, SLA B1 is not within the remit of the Board or licence obligations, therefore there is no further action necessary.

4. Coexistence Technical Working Group (CTWG): Future work

4.1   Andrew Dumbreck presented the outline of future work for the Coexistence Technical Working Group (CTWG) which aims to further improve interference predictions by assessing various factors including line-of-sight between base stations and household antennas.

4.2   It is anticipated that as the accuracy of interference predictions improves, there will be additional benefits to the at800 programme resource with a reduction in the volume of associated mailings and required engineer visits to assess reported cases of television disruption, whilst viewers are not unnecessarily contacted about an issue that might or might not affect them.

4.3   The Board agreed to the programme of work; the CTWG will keep the Board aware of progress and report back formally in summer 2017.

5. AOB & Next Meeting

5.1   The Board reviewed the current frequency of meetings and agreed to hold the next meeting in March (as arranged) and then meet on a quarterly basis thereafter (i.e.

June, September and December). If necessary, the timetable will revert back to bi-monthly meetings.

5.2   DMSL offered Board members informal ad-hoc meetings to discuss any aspect of the operation, including performance, outside the Oversight Board timetable.

5.3   The next formal discussion will take place on Wednesday 29 March 2017.

David Hendon
Chair
4G/TV Co-existence Oversight Board