

**Comment Response Document**

This document contains ATSD responses to all those comments received in respect of the CAP 670 Amendment 12 consultation, 3 October 2011 to 9 January 2012. It contains all responses to all sections of the consultation.

Comments were received from:

Isle of Man Airport  
Serco  
NATS Services Ltd (NSL)  
NATS En Route Plc. (NERL)

The CAA thanks contributors for their comments and for the care and attention that they afforded to this consultation.

No.	Section/ paragraph	Comment	CAA Response	Response sent
1	ATC 02	The 'Required documents' column (a) for civil ATCOs at mil units should include RA 3000 series (ATM). The RA 20000 series (fly) are predominantly aimed at Aircrew although they may be useful reference for ATCOs.	"RA 2000 series (fly)" will be replaced with "RA 3000 series (ATM)"	27/01/2012
2	COM 02 Para 7.1.2.3	There is a reference to CAP 670 Part A Sect 5.9 Change Notification requirements. Looking at my current copy I believe the reference should be sect. 6.9.	Noted and corrected.	27/01/2012

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3	SUR 10 paragraph 5.3	<p>Paragraph 5.3 requires the use of “lossless compression” for At The Glass recording. We understand that this capability is only provided by one of the major suppliers of ATC recorders. Other systems that have already been installed at various airports (Manchester, Belfast, East Midlands, Manston, Norwich, Teesside, Liverpool, Humberside, Exeter, IOM and Jersey, we understand) use non-lossless compression, as is permitted under the current version of SUR 10. Introducing this requirement would appear to narrow the market, initially to one supplier, and potentially means that existing systems will not meet the regulation. It is also likely to increase the cost of systems due to increased data storage.</p> <p>We would contend that the aim of regulatory requirement should be to achieve the capability set out in paragraph 1.1 of SUR 10 (to allow post accident/incident investigation and provision of SAR data). This should require that replay of screen recording is of sufficient clarity to ensure that all data is accurately and clearly represented. This can be adequately achieved by systems using lossy compression techniques, as has been demonstrated at airports where such systems have been deployed and approved into operational service with no adverse comments on replay capability.</p> <p>We request that consideration is given by the CAA to modifying the proposed paragraph 5.3.</p>	<p>Rationale: Lossless compression techniques should be employed in circumstances when it is important that the original and the decompressed data be identical because the subsequent replay of data retained by such systems is unlikely to be subject to a legal challenge.</p> <p>The respondent is also reminded that data replayed from a system which employed a non-lossless (i.e. lossy) compression technique has already been challenged in the UK courts and the same courts could oblige the user of “lossy” compression to demonstrate that the continued use of, and reliance upon, such techniques has no adverse effect upon the integrity and voracity of the replayed data.</p> <p>The lossless compression technique referred to in paragraph 5.3 is based on work jointly conducted between Eurocontrol and a Bristol based manufacturer of screen recording devices. An internet search will reveal that other lossless techniques are available. It is therefore incorrect of the respondent to suggest that “this capability is only provided by one of the major suppliers of ATC recorders”.</p> <p>The CAA will however re-word the first sentence in paragraph 5.3 thus: <i>“Surveillance data obtained “ATG” shall preferably be recorded using a lossless compression technique to ensure no loss of accuracy or detail.”</i></p>	27/01/2012

**CAP 670 Air Traffic Services Safety Requirements**  
**External Consultation – 3 October 2011 to 9 January 2012**

**Amendment 12**

No.	Section/ paragraph	Comment	CAA Response	Response sent
4	SUR 10 General	SUR 10 is lacking in clarity regarding which items are requirements, what are desirable or recommendations and what is simply discussion. Requirements and recommendations should be clearly identified and numbered as described in CAP 670 Part A, paragraph 2.8.	<p>In line with the other SUR sections in CAP 670, Part 1 of SUR 10 is Preliminary Material, while Part 2 is “General Requirements” and the title of Part 3 is “Specific Requirements”, hence it is quite clear that the two latter sections contain requirements.</p> <p>CAA requirements containing “shall or must” statements are mandatory and this is consistent with the nomenclature used in the ICAO SARPs.</p> <p>Any non-mandatory requirements are clearly stated as either “Guidance” statements or “NOTES” which we believe are self-explanatory.</p> <p>The only “should” statements in SUR 10 were found amongst the requirements were found in paragraphs 18.2 and 18.4, and these will both be changed to read “<i>shall</i>” to clarify that they are requirements.</p>	27/01/2012
5	SUR 10 Part 1, paragraph 2.1	“Dependent” is misspelt in paragraph 2.1.	Noted and will be corrected to read “ <i>Dependent</i> ”.	27/01/2012
6	SUR 10, Part 1, paragraph 3.1	Given that 1 January 2012 has now passed, does it make sense to have a historical date in the General Requirement?	The CAA has revised the text in paragraph 3.1 to read thus: <i>With effect from 31 December 2012 it shall be mandatory for all ATS Units which use surveillance data as an aid to air traffic services to have in place surveillance data recording systems for recording operational screens at the glass (ATG) and surveillance data obtained through the wall (TTW) together with the ability to provide a time synchronised replay of voice and surveillance data.</i>	27/01/2012

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7	SUR 10, Part 2, paragraph 8	Despite the title of this section, there are no requirements stated regarding flight path reconstruction.	<p>For the avoidance of doubt, the CAA has re-ordered the numbering of these paragraphs. Thus paragraph 8.3 is renumbered as 8.1 and re-worded to read thus: <i>“The reconstruction of aircraft flight paths cannot easily be derived from screen recordings made ATG so.....external source”</i>.</p> <p>Text in the current paragraph 8.1 therefore becomes paragraph 8.2 and text in the current paragraph 8.2 is amended to read <i>“...aircraft accidents can be assisted by data etc.....”</i> before re-numbering as paragraph 8.3.</p>	27/01/2012
8	SUR 10, Part 2, paragraph 9.1.2	Analogue radars are by definition <u>not</u> displayed in a plot extracted form. It is radars that are plot extracted that present the recording problem, and which are excluded from the need for TTW recording.	An older airfield radar sensor will often transmit analogue video and turning information to the control tower building or approach control facility and it is this complexity which determined the rationale for exempting a non-plot extracted radar system from the CAA requirement to record and retain surveillance data obtained TTW.	27/01/2012
9	SUR 10, Part 2, paragraph 9.2	The overall title of this section is “Circumstances which only require “ATG” Recording”. We read paragraph 9.2.1 to describe a situation where neither TTW or ATG recording is mandated. Therefore the title should be amended.	<p>The CAA understands the point being made here but the reason that “Surface Movement Surveillance Systems” are included in Section 9.2 is because whenever the data captured by surface movement surveillance systems is to be recorded, screen capture (ATG) alone is sufficient to meet CAA requirements.</p> <p>To clarify the situation the CAA will delete paragraph 9.2.1 and to promote the current paragraph 9.2.2 to paragraph 9.2.1.</p>	27/01/2012
10	SUR 10, Part 2, paragraph 9.3	By implication, ATMs need not be recorded except as stated here. Could this be stated explicitly?	The CAA believes the statement in paragraph 9.3 is explicit enough. The difference between what the respondent is suggesting and what is currently in this text is that instead of focusing on circumstances where ATM need not be recorded, whereas the text in SUR 10 is focusing on those circumstances where data displayed on the ATM must be recorded.	27/01/2012
11	SUR 10, Part 2, paragraph 9.4	This position seems to deviate from the position explained by CAA to NATS previously. This requirement is likely to act as a disincentive to equipping CVCRs with contingency displays. It would reasonable for the need to record in CVCRs to be determined on a case-by-case basis, in agreement with CAA.	The CAA position, as discussed and agreed with the Head of ATS Operations (SRG), remains as set out in paragraph 9.4. NSL are, of course, at liberty to offer an alternative solution for this requirement if they believe that they are able to meet the objective by recording elsewhere.	27/01/2012

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12	SUR 10, Part 2, paragraph 11.3	Back up power is indeed desirable. However we are not aware of a regulatory requirement for back up power for surveillance displays. This could result in the recorders continuing to be powered whilst the displays are blank. It would be preferable to require the recorders to have the same level of power backup as the rest of the surveillance system.	The CAA believes that standby power arrangements would normally be in place to ensure the ability to continue ATS operations in the event of a failure of the incoming OES. The surveillance display system would normally form part of this service and the existing text requires the surveillance recording system to be similarly protected. If the surveillance displays are "blank" the recording system will, of course, capture and retain this event. We therefore see no need to revise the text in paragraph 11.3.	27/01/2012
13	SUR 10, Part 2, paragraph 11.4	The guidance seems out of place now that the rest of the section has been removed and unhelpful.	The CAA will remove paragraph 11.4 from SUR 10.	27/01/2012
14	SUR 10, Part 2, paragraph 17.3 & 18.3	Could the CAA replay systems be identified?	<p>The requirement to record, retain and when necessary, extract data obtained TTW was primarily driven by the needs of the air accident investigators. TTW data obtained from surveillance recording systems installed to meet the requirements set out in SUR 10 has already proved useful to the AAIB but this data has not always been supplied in the format which NERL are currently able to source from the RADNET.</p> <p>The intention behind the text in paragraphs 17.3 &amp; 18.3 was to prompt the suppliers of surveillance recording &amp; replay systems to work with the AAIB to ensure compatibility with their replay tool and the CAA has been pleased to introduce two of your current suppliers to the relevant persons in the AAIB. The CAA may additionally acquire the appropriate replay tools if our business needs dictate that these are necessary to meet our obligations to those whom we are required to regulate.</p>	27/01/2012

No.	Section/ paragraph	Comment	CAA Response	Response sent
15	SUR 10, Part 2, paragraph 17.4	"Hard copy" should be defined more clearly. Does it mean a text listing of the surveillance data (which could be in the form of a paper copy or electronic file), or a copy on a removal medium (eg CD).	<p>This means capability to obtain a printed copy of the surveillance data (in the form of text lines of surveillance information) in circumstances when an electronic format such as an Excel file cannot be produced for the CAA or AAIB.</p> <p>For clarity, the CAA will revise paragraph 17.4 to read thus: <i>The surveillance replay system shall also be capable of producing recorded aircraft track data in a printable format and this printout shall be made available to either the AAIB or the CAA when required (743).</i></p>	27/01/2012
16	SUR 10 General	In May 2011 we discussed, established and agreed with SRG a range of provisions which demonstrate our compliance with SUR 10 and we believe that those provisions hold true for this amendment (12).	The CAA has re-examined the compliance statement issued on behalf of NERL in May last year and we are satisfied that the majority of these claims are still valid. We would however encourage NERL to re-examine the recording, retention and subsequent replay of data-link messages displayed at ATC positions and to re-submit the claims for continued compliance with SUR 10 after due consideration of the data-link mandate which comes in to force on 7 February 2013.	27/01/2012

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17	SUR 10, Part 2, paragraph 5.5	<p>The implication of this requirement is that the loss of surveillance recording shall be followed by the shutdown of the ATS as some units are not approved for procedural control. This is not logical, as the provision of an ATS is perfectly safe in the absence of surveillance recording. It will also potentially inhibit the use of safety nets, such as MSAW, AFDAS, STCA and CAIT</p> <p>This requirement will force the engineering of surveillance recording to a level equivalent to that for the provision of surveillance data to the controller. Records of clearances and controller actions will be kept though voice recordings and strips so the controller plan can be reconstituted from that.</p>	<p>The CAA understands that an air traffic service can be continued perfectly safely whilst the recording has failed and we do not therefore require that the provision of an air traffic service must be ceased following a failure within the surveillance recording system and our expectations in these circumstances are set out in paragraph 11.1.</p> <p>However total failures are unexpected circumstances and it is expected under normal circumstances that surveillance recording is maintained during operational hours and at all times <i>“when surveillance data is being used in support of an air traffic service”</i>, hence appropriate measures must be in place in to ensure the continuity of power supplies to the surveillance recording systems.</p> <p>In the remote event of a total loss of the surveillance recording capability, air traffic services services do not need to be stopped but this can only be acceptable for a limited time period hence the requirement contained in paragraph 11.2 describes the actions which the CAA expects to be taken by the ANSP in such an event.</p> <p>For absolute clarity, the CAA will reword the text in paragraph 5.5 to read thus: <i>“.....without interruption, whenever the ATS Unit is using surveillance data as an aid to air traffic services”</i>.</p>	27/01/2012
18	SUR 10, Part 2, paragraph 3.1	<p>We do not record operational screens ‘At The Glass’ for TC, however we previously clarified and agreed with SRG our arrangement where NODE records data from its internal LANS rather than from taps in the connections to the displays, this was deemed Compliant as it produces the same outcome of recorded processed surveillance data as presented to the ATCO.</p>	<p>The “Safety Objective” statement contained in Section 4 of SUR 10 includes the provision of data “to support search &amp; rescue” activities when needed. So although NERL does not currently record ATG within TC the CAA are presuming that the requirement (please see our reply to Comment No.4 from NSL) set out in paragraph 18.2 for the replay of data previously displayed at the relevant operational position to be made available either on demand or as soon as possible “to support search &amp; rescue” can be provided and demonstrated by NERL.</p>	27/01/2012

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19	ATC 02, paragraph 1.3.10	NATS has in the past used longer duration TOI's to support radar outages whilst entire systems are replaced. This restriction does not seem reasonable.	The background to this change came about due to a request made by the Inspectorate as some TOI's had been valid for a particularly long period of time and controllers were no longer familiar with their content. After consultation with the ATC Procedures Working Group, a maximum validity period of six months and an ability to re-issue the TOI after it has expired to cover periods greater than six months was decided.	27/01/2012
20	COM 02, paragraph 7.1.2.3	This will cover maintenance actions and does not appear to be justified. We would require a new notification mechanism to support this. It is unclear how a service could be provided if there is neither Main nor Emergency RT then we would be operating under loss of Comms procedures.	The text intended to capture simultaneous withdrawal of all comms facilities.  Text has been amended appropriately.	27/01/2012
21	SUR 10, Part 1, paragraph 2.1 note	Clarity required on the phrase 'aid to air traffic services' as it occurs routinely with the document. We have a number of systems (For example, the Height Monitoring Unit) which could be considered an aid to air traffic services, as it is used to determine if aircraft are RVSM compliant through comparing the reported height against their measured height. But this is an administrative process that happens in slow time in the background. ATC do not use the system in real time, or use its output to tactically influence how they separate aircraft. Consequently we do not record its data and keep it for 30 days.	In previous discussions with Head of ATS Operations (SRG), it was agreed that the recording and retention of surveillance data would only be required in situations where tactical decisions are based upon the information obtained from those systems (please see our reply to Comment No.11). Hence systems such as the HMU would not need to be retained in order to demonstrate compliance with SUR 10 but the data obtained from such systems might be of use for internal compliance monitoring or to aid the investigation of technical problems and potential prosecution of non-compliant aircraft.	27/01/2012
22	SUR 10, Part 3, paragraph 7.1	TTW recording is not local to the ATS Unit as specified in CAP 670. This was agreed with SRG at the time of the RRRS project.	The text contained in paragraph 7.1, permits an ANSP which obtains some or all of the surveillance data used at that ATS Unit to apply for an exemption from the requirement to record and retain surveillance data obtained TTW. The exemption is however dependent upon a written agreement between the ANSP and the third party provider of such data. The fact that surveillance data gathered by NERL via RADNET is actually recorded off-site is therefore irrelevant.	27/01/2012