

SCSC Data Safety Initiative – WG Meeting 67

26th January 2022, Zoom

Minutes

Attendees

Paul Hampton (PH) – CGI, Michael Green (MG) – Ecomergy, Mike Parsons (MP) – AAIP, Mark Templeton – Qinetiq, Andy Williams (AW) – Consultant, Dave Murray (DM) – BAE, Richard Garrett (RG) – SQEP, Nick Hales (NH) – Consultant, Carl Jackson (CJ) – Johnson Matthey, Martin Atkins (MA) – MCA.

Apologies

Mark Nicholson (MN) – University of York, Sam Robinson (SR) – EDF, Paul McKernan (PMcK) – Dstl, Fan Ye (FY) – ESC, Tim Rowe (TR) – Consultant, Oscar Slotosch (OS) – Validas, Carl Tipton (CT) – Johnson Matthey, Paolo Giuliani (PG) – EDF

Agenda

1. Welcome
2. Presentation on Sensor Data by CJ, Johnson Matthey
3. Content of Guidance V3.4
4. SSS'22
5. Actions
6. Next meeting

NOTE: All comments or opinions in these notes are attributed only to individual attendees of the meeting, not to their respective organisations.

*[Note that actions are presented in the form **N.Mx** where **N** is the meeting number, **M** a reference number for the action raised in that meeting and **x** is an optional letter that differentiates related actions arising from the same discussion point].*

The meeting slides are available at: https://scsc.uk/file/gd/67th_DSIWG_Slides_v1-1324.pptx

1. Welcome

MP opened the meeting and welcomed those attending.

2. Presentation on Sensor Data by CJ, Johnson Matthey

This presentation: https://scsc.uk/file/gd/JM - 20220126_SCSCDataThoughts-1325.pptx generated a lot of interest and discussion. There was agreement that some of this work on the issues of sensor data could be developed into material for the next issue of the guidance.

3. New Guidance Document Version 3.4

There are a large number of changes included in V3.4, specifically:

- Collection of accidents enhanced: New subsection H.2: A configuration error in widely used logging software permitted remote execution of malicious code; New subsection H.3: 43,000 people with Covid-19 were mistakenly given negative Polymerase Chain Reaction (PCR) results
- New data category “Twinning data” added to Table 4 in section 6.1.6, and to Table 25 in Appendix E. Unfortunately, this addition has had the effect of causing the three entries for “Compliance and Liability” to be renumbered.
- Section 6.2.2 describes ways in which data can fail. The new failure type “Distribution” has been added, to address the trend in some sectors away from the monolithic storage of data, and the move towards more distributed data storage.
- Enhancements have been made to the Guidance to address communication or messaging issues. These are: New Goldilocks property added to list of data properties, to address the need for data quantity to be not too big, not too small, but just right. A brief explanation of the new property has been provided in section 6.2.3.1; New HAZOP guideword insufficient added to HAZOP Table 7 and Table 26; New section L to address issues caused by unexpected data. This kind of data may be referred to as Dazzle Data, Distracting Data or Disruptive Data.
- Clarification paragraph added to section 6.3.1 to encourage the development of project-specific approaches, both to the assignment of Severity and Likelihood, and to their combination into a Data Safety Assurance Level (DSAL).
- Appendix J has been updated to reflect developments in machine learning governance and guidance.
- Table 28 of section M has been updated to capture additional ways in which data management has been fundamental to the management of the Covid-19 virus.
- New section N to suggest ways that project-specific approaches to the calculation of likelihood may be developed.
- A number of small adjustments were also made to the text

MT explained that draft E is ready for review: <https://scsc.uk/file/gd/Guidance3.4draftE-1323.pdf> .

MP said that any effort on reviewing this would be much appreciated.

[Post meeting note - new version available next week at: <https://scsc.uk/scsc-127G>]

PH will upload the draft text to KDP to check for issues. The aim is to get the draft finalised in the next few days and get approved by KDP in time to order for SSS’22. MP has approval from the SCSC to buy 12 hard copies for members of the WG and a few others at SSS’22.

Some topics for inclusion in the next version of the guidance (V4?) include:

- Communication of data
- Data flows
- OS’s remaining comments
- Tool assurance
- Free format data
- Re-arranging the tables to make easier to use
- Conflicting / distributed data elaboration

- Only part of Thor Myklebust's earlier comments have been incorporated in V3.4. It has been agreed to include properties of 'Analysability', 'Verifiability', and 'Explainability' in the next version.

4. SCSC SSS'22

MP explained that the Safety Critical Systems Symposium, SSS'22 in Bristol has better than expected bookings with over 80 delegates so far (<https://scsc.uk/e797>). It would be really appreciated if each DSIWG member could consider attending as there is a chance to meet up in person and there is WG update presentation.

5. Actions, etc.

See table at end.

6. Next Meeting

Next meeting will be held March 2022 and ideally face to face. MP to arrange.

7. Thanks

Thanks to MP for taking the minutes.

Thanks to MP for chairing.

8. Summary of Open Actions

Actions greyed out are considered closed and will be removed from the list at next issue.

Ref	Owner	Description	Target Guidance Version
42.9	MP	Work out a matrix of data categories (previously 'types') and data properties (as per DB discussion)	N/A
43.4	MP	Write up a data focussed FMEA approach.	4.0
44.2	MP	To discuss with AK on how to get the Wikipedia article published	N/A
46.1	MP	Review the application of DSALs to higher level forms of aggregation	N/A
49.6	MT	Review Overleaf briefing material and aim to hold a briefing before end of March 2021 in the use of Overleaf in the production of the guidance.	N/A
53.1	MP	To talk to Kevin King about what we need to do in the guidance for digital twins.	4.0
56.2	DA	Consider impact of Dark Data on the Data Safety Tool	N/A
61.1	MP, PH, MT	Check existing data property definitions and add a case related to "Unexpected" data [Related to 'Sufficiency' issue – suggest encompasses this as well.]	3.4
61.2	AW	Research the relevance of digital currencies and report back to the group (with MA and MT)	4.0
62.1	MA	Create war story for the next issue of the guidance on the Buncefield data loss	3.4
62.3	MP/MT	Consider issues of porting and importation of legacy data	4.0
63.1	CT	Look at both Dark Data and Dazzle Data for sensors (e.g. when a sensor is saturated, in noisy environment or when readings are below the detection level floor)	4.0
64.1	MP	Contact Thor and establish the details of the guidance proposals in the paper.	4.0
65.1	MP	Contact Davy Pissort and see if any interest in this funding route for Data Safety	-

Ref	Owner	Description	Target Guidance Version
65.2	DA/MA	See if access to the tool can be given to TomTom for evaluation	-
66.1	MT	Draft some better words for inclusion below table 9.	3.4
66.2	PH	Draft numerical proposal for table 9 for group consideration.	3.4
66.3	MT	Add the 'Goldilocks' amount of data property to the tables in the guidance document.	3.4
66.4	MT	Consider adding Guidewords to Hazop from Section 3 of DSIWG meeting 62 minutes.	3.4
66.5	MP	Send MT the latest version of the Dazzle Data annex for inclusion.	3.4
66.6	MT	Add these three properties to the user-visible further work section. If time allows then develop into the guidance further.	3.4
66.7	MP	Send MT the latest Covid-19 data systems table	3.4
66.8	PH	Update the new cover with new back cover text and a new sticker on the front	3.4
66.9	ALL	Volunteers are needed for proof-reading the drafts of the new guidance document version. Please contact MP if you can help in January 2022.	3.4
66.10	OS	Produce an incident report about the Log4j security issue for the new issue of the guidance, if possible referencing safety issues caused by this data-related security problem	3.4