SCSC Data Safety Initiative – WG Meeting 60

7th April 2021, Zoom

Minutes

Attendees

Mike Parsons (MP) – AAIP, Divya Atkins (DA) – MCA, Paul McKernan (PMK) - DSTL, Paul Hampton (PH) – CGI, Michael Green (MG) – Ecomergy, Tim Rowe (TR) – GTR Safety Management Ltd, Oscar Slotosch (OS) – Validas, Andy Williams (AW) – NewTechNo, Carl Tipton (CT) – Johnson Matthey

Apologies

Mark Nicholson (MN) – University of York.

Agenda

1. Welcome and Update
2. Version 3.3 of the DSG Update
3. Sufficiency Issue
4. Planning for 2021/22
5. Data for Public Good
6. Covid-19 and Data
7. News Articles
8. SCSC Events

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/60th_DSIWG_Slides_v1-1068.pptx

1. Welcome and Update

MP welcomed the group and new member OS introduced himself and spoke about the relevance of data safety to his area of interest in tools qualification and model-based methods.

2. Version 3.3 of DSG Update

MP said there have been 160 downloads of the DSG v3.3 (ie. over 2 per day). There have been no sales of the physical document.

MP presented the download map for the data safety guidance PDF from the start of the year. This showed that downloads are mainly from the UK and Europe but there are also many internationally, which confirms the global relevance of the guidance.

3. Sufficiency Issues

MP introduced an issue raised by Mark Templeton (MT) around the possibility of a missing HAZOP guide word related to "sufficiency" when a system receives a message it was not expecting. The group discussed whether a new guideword is required or whether it could be covered by existing HAZOP guidewords. The issue was parked as MT was not in the meeting.

4. Planning for 2021/22

MP proposed a list of topics to be covered in the next edition of the guidance including areas such as ML Training Data, Covid-19 Data Issues, Blockchain, Fraudulent data and Digital Twin. For example, there may be particular challenges with Digital Twins of machine learning systems related to modelling the learning behaviours.

MG said that Lei Zheng has given a presentation on how blockchain concepts can be used in track and trace. The benefits are that it is not a centralised system and it is anonymous: https://www.ieee-ukandireland.org/future-directions/blockchain/

GAO has been reviewing its projects and has been critical of the F35 programme stating that it didn't have enough data to assess how long it would take to complete the project: https://www.gao.gov/products/gao-21-226

CT highlighted an interesting paper suggesting that there is still a place for models in managing large data sets rather than relying purely on machine learning purely from data: https://www.nature.com/articles/s43588-021-00040-z.epdf

MG discussed the activities by NASA to model foam damage after the Space Shuttle Colombia accident and their conclusion that a standard was required for modelling, which is now embodied in NASA Standard 7009 on Models & Simulation: https://onlinelibrary.wiley.com/doi/abs/10.1002/sys.21266

MG noted that fidelity and credibility of data is an important distinction. Genevieve Flanagan's thesis in 2012 summarises the 4-box matrix linking model fidelity with credibility: https://drive.google.com/file/d/0BxjtZ3fc1NB1RUx1U1Y5d0RWUmc/view

PMK noted that Public Health England is publishing information in the area of Infodemiology about managing misinformation. For example, the "antivax" campaign is thought to be costing lives already. https://www.openaccessgovernment.org/infodemic/99221/ [Post meeting note - CT noted this government disinformation kit: https://gcs.civilservice.gov.uk/publications/resist-counter-disinformation-toolkit/]

5. Data for Public Good

MP showed a document published by NIC https://nic.org.uk/app/uploads/Data-for-the-Public-Good-NIC-Report.pdf with many recommendations on data and illustrates the maturing of data as a 1st class citizen, ie. data is recognized as infrastructure in the same way as other assets. MP noted the use of the "house" graphic to present how data underpins other processes and wondered if a similar graphic might work for other areas of data safety?

Data As Infrastructure

Peter Kawalek[1] and Ali Bayat[2]

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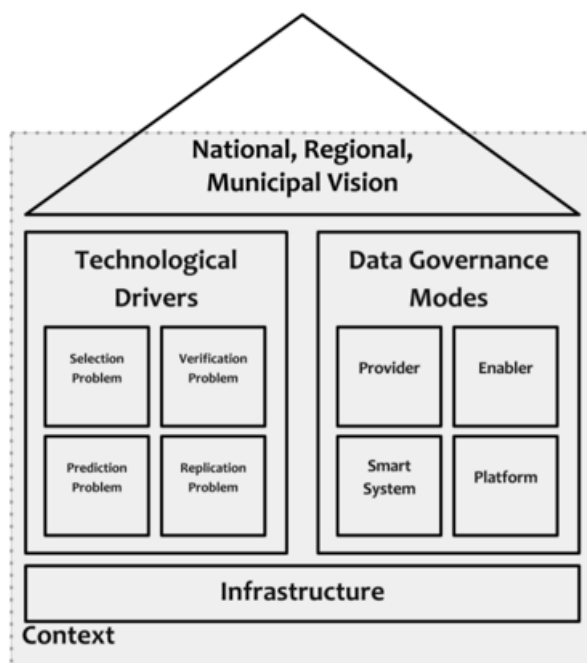
6. Covid-19 and Data

MP presented the wide range of data-reliant systems and shows the large use of data in all areas of Covid-19. A number of links were shared (see the list in the meeting slides).

The group discussed concerns around the seemingly excessive capture and handling of data through a complex supply chain. Having many 3rd parties in the loop increases the exposure to attacks and if breached would mean that a large volume of data is compromised.

CT noted that there are ethical issues where safety is put before privacy as in this BCS article: https://www.bcs.org/content-hub/digital-vaccine-passports-must-not-put-everyday-rights-at-risk-warn-it-experts

SO noted a GDPR issue in Germany around keeping staff records where a company was subject to a large fine for keeping records longer than required. This raises the questions of how long it is legitimate to keep data; for example, it may be beyond its practical use but may need to be kept for safety reasons.

SO also noted a new law in Germany relating to autonomous road vehicles. The cars do have to collect data about the environment and so there are security and privacy concerns about the data as 3rd parties may be potentially interested in the data. OS said that in Germany, priority is being given to safety over privacy: https://www.bmvi.de/SharedDocs/DE/Anlage/Gesetze/Gesetze-19/gesetz-aenderung-strassenverkehrsgesetz-pflichtversicherungsgesetz-autonomes-fahren.pdf?__blob=publicationFile

7. News Articles

The following articles were discussed:

1. Covid: Under-30s offered alternative to Oxford-AstraZeneca jab: https://www.bbc.co.uk/news/health-56665517

8. SCSC Events

Future events are shown below:

Seminar: Safety Culture Developments
April 13, 2021 - Zoom
This online seminar, held from 14:00-16:45 UK time (GMT), will look at new developments in Safety Culture and will feature results from the SCSC SCWG Online … »

Anniversary: Club 30th Birthday
May 1, 2021
The club marks its 30th anniversary of formation in 1991 on May 1st!

»

Seminar: Software Maintenance: Legacy and Archaeology
May 6, 2021 - Zoom
This seminar considers the issue of software maintenance in a safety context: Much legacy software is not properly documented and historically poorly maintained, even though it may be performing a … »

Seminar: Can we quantify risk?
September 23, 2021 - London, UK and blended online
In many areas of safety attempts are made to quantify risk. Some of these are apparently more successful than others, but some areas are notoriously difficult to quantify, especially those which … »

Seminar: Safe Use of Multi-Core and Manycore Processors
November 11, 2021 - London, UK and blended online
This is the event postponed from 2020. It will be held in London as a blended online / in-person event
Confirmed speakers are:
Oliver Charrier, WindRiver - Multicore Processors usage … »

Symposium: Safety-Critical Systems Symposium (SSS'22)
February 8 - 10, 2022 - Bristol, UK and blended online
The Safety-Critical Systems Symposium 2022 (SSS'22) will be held 8-10th February 2022 in person in Bristol, UK and as an online (blended) event.
It is our 30th Symposium and as such will … »

9. AOB

OS has a process modelling tool (a compliance machine) as part of a research project that may be of interest to the data safety tooling community: http://www.validas.de/en/services/qualification/#pmt and offered to demo this at a future meeting.

10. Actions, etc.

See table at end.

11. Next Meeting

Next meeting by Zoom 18th May 2021 3:30-5:00 with possibly a blended meeting end of June. MP to arrange.

It may be possible to hold a blended (in-person / online) meeting at the end of June.

12. Thanks

Thanks to all participants. Thanks to MP for chairing the meeting and for PH for taking the minutes.

Summary of Open Actions

Action 55.1 was closed.

Ref	Owner	Description	Target Guidance Version
42.6	PH	Define the process to publish a document developed in Overleaf via Amazon	3.4
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.	3.4
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.	3.4
55.1	MA	Create additional 'war story' for the Excel data loss for version 3.3 of the guidance. Now re-assigned to MA.	3.4
56.2	DA	Consider impact of Dark Data on the Data Safety Tool	N/A