

Assessing the cross-disciplinary accessibility of CyBOK

Executive Summary

Dr Xavier Carpent and Prof. Steven Furnell
School of Computer Science, University of Nottingham

This CyBOK-funded mini-project was proposed to investigate the accessibility of the current CyBOK resource to participants coming from outside the cyber security sector. The project ran from September 2022 to May 2023, and was undertaken by the academic investigators from the University of Nottingham, with support and oversight from Prof. Andrew Martin and Helen Jones in the CyBOK project team.

The project as a whole, and the workshops in particular, provided insights with regard to making CyBOK more accessible or usable for wider audiences.

Context and Motivation

Cyber security is typically associated with computer science and IT as its primary parent discipline. However, it is clearly relevant to a wider audience and regularly draws upon other discipline areas. As such, we sought to investigate the extent to which CyBOK can act as a meaningful reference point for participants coming from outside the computing / computer science discipline area.

This motivates the notion of a CyBOK “Sector Lens”, allowing alternate views of CyBOK to be established that are geared towards supporting better understanding for participants in different sectors, framed in a manner that speaks from their discipline rather than being computing-led.

Key activities

The project involved participants from various backgrounds in two activities:

- (1) a web-based survey, used to establish the participants’ perception of cyber security, and what aspects of it are relevant for their discipline/sector. The aim was to secure ~30 responses from across a range of different sectors.
- (2) a series of follow-up online workshops, used to determine whether the CyBOK material covers expected aspects, and whether the presentation is meaningful to them. The target was to involve willing volunteers that had already participated in the earlier survey activity.

Participants were incentivised for both phases, with a £15 voucher for survey participation and £30 for the workshop (the increased amount reflecting the greater time commitment involved in the latter activity).

The overall participant group was ultimately composed as follows (noting that the inclusion of participants from the cyber sector was intended as a comparison group, based upon what could be considered the default target audience for CyBOK in its current form).

Sector	Survey	Workshop
Cyber	5	4
Design and Creative Industries	1	-
Education	5	3
Finance and Insurance	5	-
Healthcare	3	-
Government	4	-
Law	5	3
Policing	5	3
Total	33	13

The overall level of workshop participation lower than hoped for (due to participant availability), but nonetheless provided an interesting basis from which to discuss the results from the survey phase.

Outcome

Based on the experiences from the survey and the accompanying workshop sessions, the accessibility experience for the non-cyber audience was mixed in terms of both *locating* material from within CyBOK and then being able to *understand* it.

It was apparent that wording of much of the text is not globally accessible (meaningful) to non-practitioners, although there were exceptions. Discussions highlighted the heterogeneity of the reading level or technical level of the text and indicates that it is to some extent possible to make the text accessible to non-practitioners.

The main recurring themes that came out of the various discussions were:

- (1) the need for separation and/or clear identification of non-technical and technical content;
- (2) challenges in the accessibility of CyBOK in its current form, and the relevance of the Mapping Reference; and
- (3) questions around the maintainability of CyBOK and its update model.

Overall, it can be concluded that, on one level, the findings support the desirability of further exploring the idea of a 'sector lens' approach for CyBOK. There is clear recognition of the relevance of both the broad issue and the individual KA topics from the perspective of all of the wider (non-cyber) sector respondents and participants. At the same time, the actual realisation of this would appear to be challenging from the basis of the current content and structure of the CyBOK material.

Accessibility to other sectors would potentially be eased by a more granular and layered approach to the content, which could then enable key topics to be segmented into layperson and technical/practitioner versions of material, and with references to the wider body of knowledge also differentiated based on the audiences that would find the resulting material most accessible. If taken forward, this would clearly represent a considerable further development of the CyBOK work, but at the same time would serve to increase its accessibility (and potential utility) for a wider audience.