



CyBOK Online: Providing an Online Platform for Hierarchical Knowledge Presentation, Visualisation and Mapping

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CyBOK

Project Background

- The Cyber Security Body of Knowledge (CyBOK) specifies Cyber Security Knowledge relevant in the professional and educational domain.
- In the UK, the NCSC Certified Degree Scheme is now based on using the CyBOK for universities to demonstrate focus, breadth, and depth of a cyber curriculum.
- A mapping framework exists to help identify CyBOK Knowledge Areas containing specific keywords and to understand their contextual structure.

Aims & Objectives

- This project aims to provide a novel mapping framework for the CyBOK based on a web-based searchable representation of CyBOK Knowledge Trees and, to deliver a tool to export mapping information into a range of document formats.
- Three objectives are proposed:
 1. To convert the CyBOK Knowledge Trees to a single online hierarchical outline, hosted on the Dynalist website [1,2].
 2. To create an export tool, converting mapping-related search queries into a range of standard text-based formats.
 3. To provide a companion website, cross-referencing the online CyBOK and providing additional documentation with alternative visualisations of the CyBOK.

Demo – The CyBOK Online

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CyBoK Knowledge Tree

- CyBOK Introduction
- Formal Methods for Security
- Risk Management and Governance
- Law and Regulation
- Human Factors
- Privacy and Online Rights
- Malware and Attack Technologies
- Adversarial Behaviours
- Security Operations and Incident Management
- Forensics
- Cryptography
- Operating Systems and Virtualisation
- Distributed Systems Security
- Authentication, Authorisation and Accountability
- Software Security
- Web and Mobile Security
- Secure Software Lifecycle
- Network Security
- Hardware Security
- Cyber-Physical Systems
- Physical Layer Security and Telecommunications

Strategic Benefits

- The provision of an alternative way to visualise, search and interact with the CyBOK will reduce the learning curve of understanding its Knowledge Areas, hence encouraging their use.
- The proposed tool simplifies granular mapping processes through keyword-based search results and includes convenient export functions to multiple formats.
- Ultimately this may lead to greater adoption of the CyBOK and improved-quality cyber programmes in the UK and internationally.

References

- [1] Dynalist Inc, Dynalist Outliner Homepage, Retrieved from <https://dynalist.io/>, 2020
- [2] Experimental CyBOK Online, Public Dynalist Link, Retrieved from <https://dynalist.io/d/OjohJB17QU5-aAJgSSGaR20s>, 2020