SECRIOUS

Serious Coding: A Game Approach To Security For The New Code-Citizens
Presenter: Manuel Maarek (Heriot-Watt University, Edinburgh, Scotland UK)

1 Informations

Project SECRIOUS Serious Coding: A Game Approach To Security For The New Code-Citizens

Investigators Lynne Baillie (Principal Investigator), Manuel Maarek, Hans-Wolfgang, Rob Stewart — Heriot-Watt University, Scotland UK
Sandy Louchart, Daisy Abbott — The Glasgow School of Art, Scotland UK
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Consortium Heriot-Watt University, The Glasgow School of Art, University of St Andrews, NCC Group (industrial partner), Civic Digits (consultant)

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TRL Elements of the toolkit developed are at different readiness levels spanning TRL 3-5

Additional Project Members Shenando Stals, Ryan Shah, Jamie Ferguson, Sheung Chi Chan, Olga Chatzifoti, Theodoros Georgiou, Laura Whyte

Although this submission, the project materials and the project publications are in English, Manuel Maarek’s presentation at RESSI 2024 is intended to be delivered in French.

2 Focus of the Presentation

The focus of the presentation will be on key outputs of the SECRIOUS project that are relevant to the RESSI community in terms of research, education, and potential for new collaborations. The outputs of the SECRIOUS project are available on the project website2 under open licences.

The SECRIOUS project focused on the issue of cybersecurity awareness and knowledge of the new generation of coders. Software development and deployment have become accessible to the wider public. This new generation, we named Code Citizens, needs cybersecurity training to improve the security of their code. The project developed and evaluated methodologies and tooling to engage non-experts Code Citizens in cybersecurity. This presentation will focus on the following SECRIOUS approach and toolkit elements.

1https://gow.epsrc.ukri.org/NGBOViewGrant.aspx?GrantRef=EP/T017511/1
2https://secrious.github.io/
• The **Slow Game Jam** methodology and the outcomes of its evaluation [1, 3, 8]. The methodology was used to assist non-experts in learning about cybersecurity and for co-designing games for code security. The slow game jam is a learning activity as well as a method to producing learning games.

• The **Provoking Games** we developed to stimulate reflection and inquiry when engaging participants with software security [2].

• The **Cybersecurity Cards** we developed based on CyBOK (the Cyber Security Body of Knowledge³) and evaluated within the project [7]. This deck is decomposed into attacks, defences and vulnerabilities cards to provide introductory knowledge about cybersecurity and to act as a medium to foster discussions between novices and experts.

3 Other Outcomes of the Project

Some outcomes of the project will not be the focus of the presentation but will be briefly mentioned such as the outcomes of the Future Forums [4] which were conducted prior to the Slow Game Jams, the Citadel Programming Lab⁴ (a code security serious game & computer lab aligned with CyBOK) [5], and the GitLab libraries ⁵ we developed for programming education [6].

4 References


³https://cybok.org/
⁴https://citadel-programming-lab.gitlab.io/
⁵https://doi.org/10.6084/m9.figshare.24916716