Master Thesis – Evaluating External Standards for Describing Product Dependencies and Bill of Materials

Background
Telecom systems include a lot of software and there are high requirements on those software components working well together, knowing the dependencies, and being secure and trustworthy. You want to know what you deploy in your network and do not want your telecom network to be hacked. Therefore, we need to be able to show our customers exactly what software we provide and that it was created in a secure way. This is an important trend in most software industries and there are several emerging solutions for describing software dependencies and how they were created. We want to investigate what the main solutions in the industry are and how adapted they are to Ericsson needs.

Thesis Description
The following steps are envisioned as part of the thesis work:

- Describe what external best practices and standards exist for describing product dependencies and Bill of Materials (BOM) that show what was included in the software.
- Describe what requirements and implementations does Ericsson have in the area.
- Implement and evaluate selected external solutions to investigate match with Ericsson requirements. Possibly also show a translation between Ericsson implementation and external standard.

Qualifications
This project aims at students in computer science, computer engineering or similar.

Extent
1-2 students, 30hp each

Location
Ericsson AB Mjärdevi, Linköping

Preferred Starting Date
Spring 2023

Keywords
SBOM, software supply chain, CI/CD

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