

## **SPDX Product History Utility**

Members: David Le, Nick Boeckman, Zac McFarland

### **Charter and Description:**

The Software Package Data Exchange (SPDX) specification is a formatting standard for communicating the licenses and copyrights associated with a software package. Being able to explicate this information is a required function for operations support system management within an organization.

The SPDX Dashboard, located at <http://spdxhub.ist.unomaha.edu/> will serve as the central repository for SPDX documents, facilitating uploads, retrieval, modification, and sharing of SPDX documents. The goal of the Product History Utility (PHU) is to enable a company to create a relationships between the SPDX documents and the products that contain those licenses.

The Product History Utility will be created as a component of the SPDX Dashboard. Having the Product History Utility as a part of the SPDX Dashboard will remove the headache of maintaining two separate databases of license documentation, and hopefully make the entire toolset more usable.

The PHU will create a relationship between a company's products, such as televisions or computers, and the software packages that apply to them. This will allow the Product History Utility to establish relationships between revisions of software, thereby allowing for report generation of license changes to products and packages over time.

One of the requirements of companies that distribute licensed software is to notify the consumer of any license changes that may occur to their products. The PHU will provide a simple solution, by generating QR codes that will link the consumers back to the license change page and can be attached to the product at the time of sale. The PHU concept is an offshoot of the AIRS project developed by Samsung.

### **System Service Request:**

- GitHub Repository for code/documentation
- Open Source IDE for HTML development
- SPDX Data base
- Google Docs for documentation collaboration.
- Coding languages: JavaScript/HTML/CSS/PHP
- Dashboard API - <https://github.com/joerter/spdx-dashboard>
- System specifications for host server - SPDX dev
  - Domain name: [spdx.ist.unomaha.edu](http://spdx.ist.unomaha.edu)
  - Processor: 4 Ghz
  - OS: Ubuntu 12.04 LTS
  - Dependencies: Apache, mySql
  - Memory: 16 Gb

**Stakeholders:**

SPDX Dashboard team  
Database Administrator: Liang Cao  
SPDX OSS Community

**Community Management Plan:**

Our team plans to hold regular meetings every Tuesday at 5:30, in addition to class times on Mondays and Wednesdays. We have utilized a number of correspondence methods, including email, Google Docs, Trello, and the GitHub repository.

Communication with the SPDX community will take place within the GitHub repository :  
<https://github.com/zwmcfarland/ProductHistoryUtility>

In order to fully engage the community, we first need to inform them of our project. We are planning to make an announcement to the SPDX-General mailing list describing our work and what our goals are shortly after February 26th. In the announcement, we will release a working prototype and a link to our GitHub repository to the community so they may get an understanding of our project.

Since we will need to use the API created by the dashboard team for communication with the server, we will relay any additional needed queries through email, in-class discussion, and the SPDX Tooling Trello Board <https://trello.com/b/lfA3olhe/spdx-tools>.

**Distribution System:**

All of our assignments, documentation, and source code will be uploaded to the project's GitHub repository. Any requests for these items will be directed to the aforementioned repository.

We will also be monitoring related GitHub Repositories, including the Dashboard GitHub specifically. Any information we may have that will be useful to other groups, such as data schema changes, will be posted to the SPDX Tooling Trello Board.

**Description of Community Representation:**

A prototype will be hosted at: <http://54.218.86.78/SPDX/index.php>

A GitHub repository will contain source code and use cases.  
<https://github.com/zwmcfarland/ProductHistoryUtility>

**Code Contribution Management Plan:**

Through the duration of this academic semester, any contributions from outside the development team will be reviewed by the team and then decided by a vote from the team. After the release of the PHU, additional contributions will be decided through a community vote.

Any changes to SPDX tooling standards will be brought to the appropriate advisory boards within the class.

**Structure Data Flow Diagram:**

The data flow diagram listed at

<https://github.com/zwmcfarland/ProductHistoryUtility/tree/master/Documentation> is an overview of the system as it related to the SPDX Product History Utility module, including the different components of the module, and how they interrelate with the dashboard and database.

**Database:**

The Product History Utility will use a mySQL database hosted at [spdx.ist.unomaha.edu](http://spdx.ist.unomaha.edu). PHU will connect to the database via a web api being created by the SPDX Dashboard team. All changes to the database will be revised by the Database Advisory Board, which include members from every SPDX tooling team.

**Data Schema:**

The data schema used in our project will be the same as the rest of the SPDX Tooling groups.

To view the schema please visit the following url:

<https://github.com/zwmcfarland/ProductHistoryUtility/blob/master/Data%20Schemas/SPDXDatabaseSchema.xls>

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