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Ingenuity for life

FOSSology and SW360: Updates

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FOSSology and SW360

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Component Analysis Tool

Software Catalogue

FOSSology – Linux Foundation Collaboration

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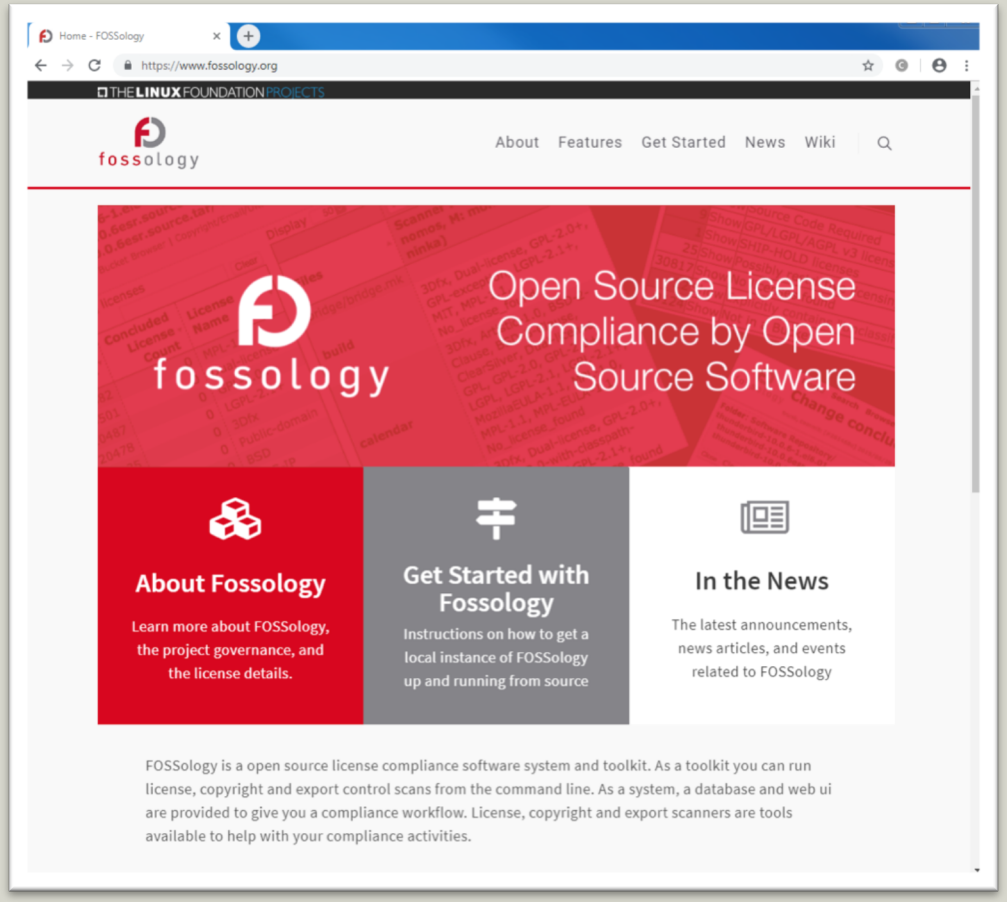
www.fossology.org

- 2008 initial publication by HP
- 2015 Linux Foundation Collaboration Project
- It is a Linux Application
- Different tasks for OSS license compliance
  - Scanning for licenses
  - Copyright, authorship, e-mails
  - ECC statements
  - Generation of documentation
  - Export and import SPDX files



FOSSology – It is about Overview

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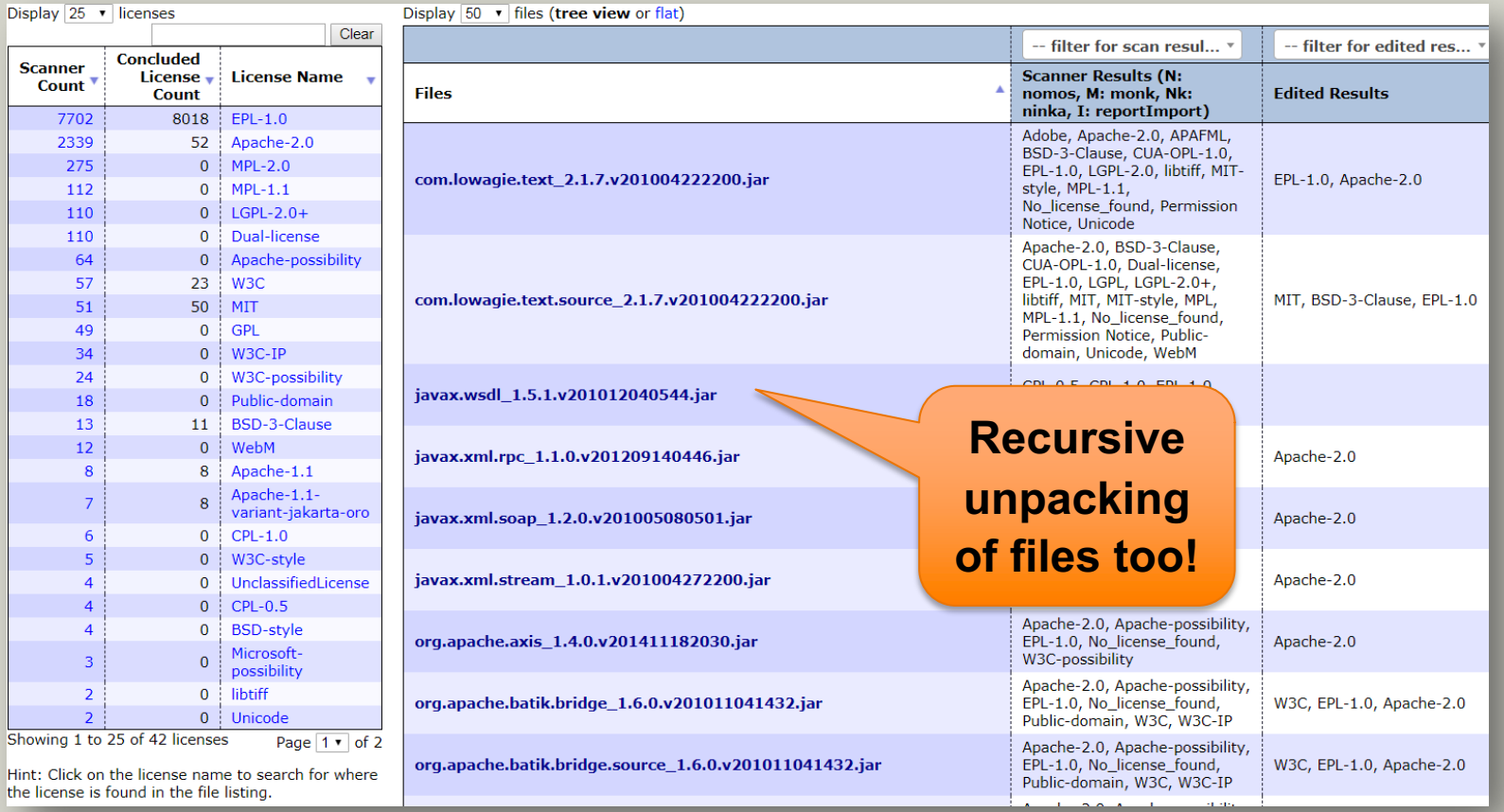
High Level and Drill Down

- Aggregation
  - Folder hierarchy of license findings
  - License-statement oriented view on files
  - Copyright aggregation
- Drill down
  - Navigate into folders
  - Filtering
  - Identify “the single” file



Display 25 licenses Clear

Scanner Count	Concluded License Count	License Name
7702	8018	EPL-1.0
2339	52	Apache-2.0
275	0	MPL-2.0
112	0	MPL-1.1
110	0	LGPL-2.0+
110	0	Dual-license
64	0	Apache-possibility
57	23	W3C
51	50	MIT
49	0	GPL
34	0	W3C-IP
24	0	W3C-possibility
18	0	Public-domain
13	11	BSD-3-Clause
12	0	WebM
8	8	Apache-1.1
7	8	Apache-1.1-variant-jakarta-oro
6	0	CPL-1.0
5	0	W3C-style
4	0	UnclassifiedLicense
4	0	CPL-0.5
4	0	BSD-style
3	0	Microsoft-possibility
2	0	libtiff
2	0	Unicode

Showing 1 to 25 of 42 licenses Page 1 of 2

Hint: Click on the license name to search for where the license is found in the file listing.

Display 50 files (**tree view** or flat)

Files	-- filter for scan resul...	-- filter for edited res...
	Scanner Results (N: nomos, M: monk, Nk: ninka, I: reportImport)	Edited Results
com.lowagie.text_2.1.7.v201004222200.jar	Adobe, Apache-2.0, APAFML, BSD-3-Clause, CUA-OPL-1.0, EPL-1.0, LGPL-2.0, libtiff, MIT-style, MPL-1.1, No_license_found, Permission Notice, Unicode	EPL-1.0, Apache-2.0
com.lowagie.text.source_2.1.7.v201004222200.jar	Apache-2.0, BSD-3-Clause, CUA-OPL-1.0, Dual-license, EPL-1.0, LGPL, LGPL-2.0+, libtiff, MIT, MIT-style, MPL, MPL-1.1, No_license_found, Permission Notice, Public-domain, Unicode, WebM	MIT, BSD-3-Clause, EPL-1.0
javax.wsdl_1.5.1.v201012040544.jar		
javax.xml.rpc_1.1.0.v201209140446.jar		Apache-2.0
javax.xml.soap_1.2.0.v201005080501.jar		Apache-2.0
javax.xml.stream_1.0.1.v201004272200.jar		Apache-2.0
org.apache.axis_1.4.0.v201411182030.jar	Apache-2.0, Apache-possibility, EPL-1.0, No_license_found, W3C-possibility	Apache-2.0
org.apache.batik.bridge_1.6.0.v201011041432.jar	Apache-2.0, Apache-possibility, EPL-1.0, No_license_found, Public-domain, W3C, W3C-IP	W3C, EPL-1.0, Apache-2.0
org.apache.batik.bridge.source_1.6.0.v201011041432.jar	Apache-2.0, Apache-possibility, EPL-1.0, No_license_found, Public-domain, W3C, W3C-IP	W3C, EPL-1.0, Apache-2.0

Recursive unpacking of files too!

FOSSology – Review Findings

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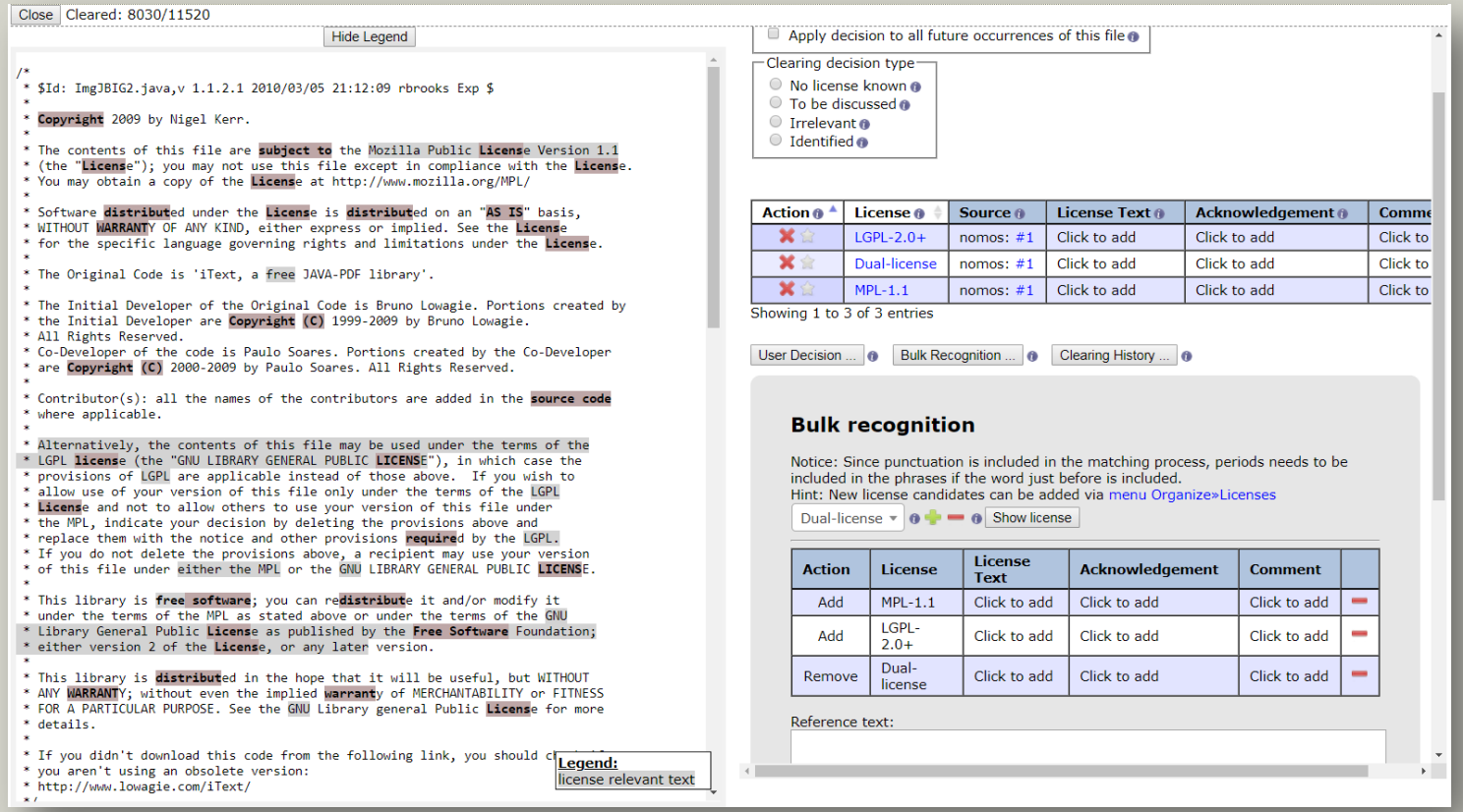
Specialized in Review

- Single file review
  - Highlighting of license relevant content
  - Reference text comparison
  - License statement decisions on statement level (“bulk scan”)



FOSSology SPDX Import and Export

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Import = Consuming SPDX

- Consistency!
  - Handling SPDX conclusions
  - Handling copyright statements
  - Handling new licenses
- Goal was to consistently import the data given existing records

Multiple Use Cases:

- *Checking SPDX from supplier*
- *Correcting existing SPDX and regenerate*
- *Using SPDX of one software package version to generate SPDX for updated verson*
- *Transfer conclusions between different FOSSology instances*

FOSSology – Of course you can automate!

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REST API

- Manage folders, uploads
- Trigger scans and options
- Download reporting
- More info at: https://www.fossology.org/get-started/basic-rest-api-calls/
- (complete flow explained)

FOSSdriver

- Python based library
- Write your own Python workflow
- Not only what REST API can do
  - … but also manage bulk scans
- More info at: https://github.com/fossology/fossdriver

Command line tools

- Many functions and agents have command line interfaces
  - Nomos license scanner
  - Copyright scanner
  - License listings
  - …
- Upload and download tools

FOSSology – License Obligations

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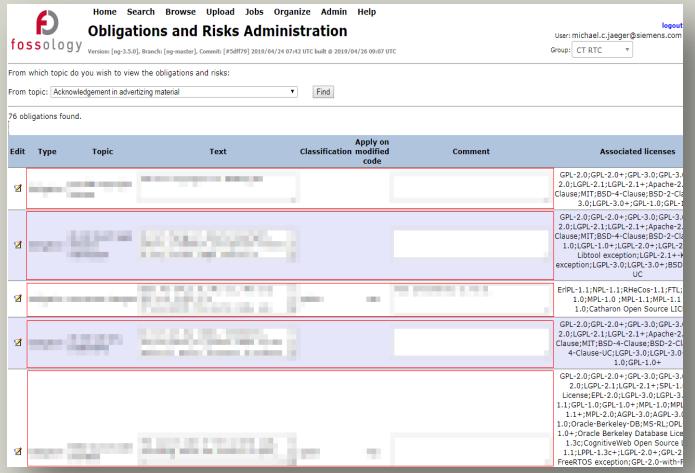
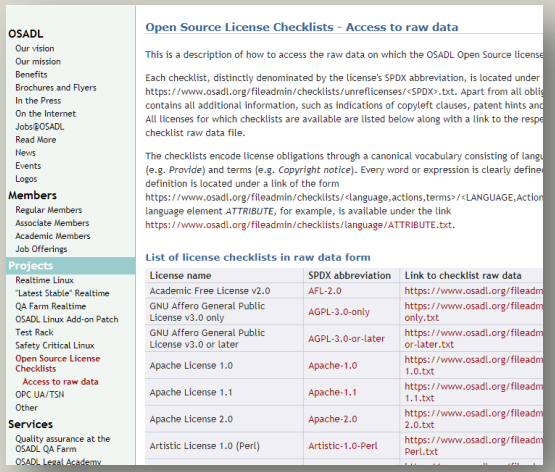
Obligation Mngmt

- Attach obgligation entries to licenses
- Admin management UI
- Report documentation for components



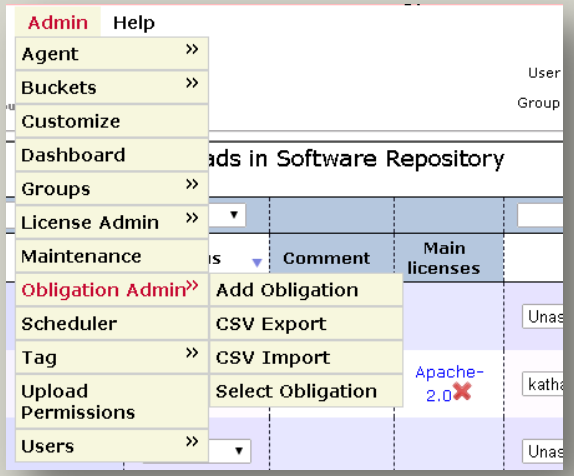
Obligation Source

- Different sources available
  - OSADL License Checklist
  - FINOS OSS Handbook
  - Github: Choose-a-license
- Machine readable formats



Obligation Import

- FOSSology can import records
- Currently: Convert your own data
- Potentially hosted conversion of obligations



FOSSology and SW360

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Component Analysis Tool

Software Catalogue

SW360 Quick Recap

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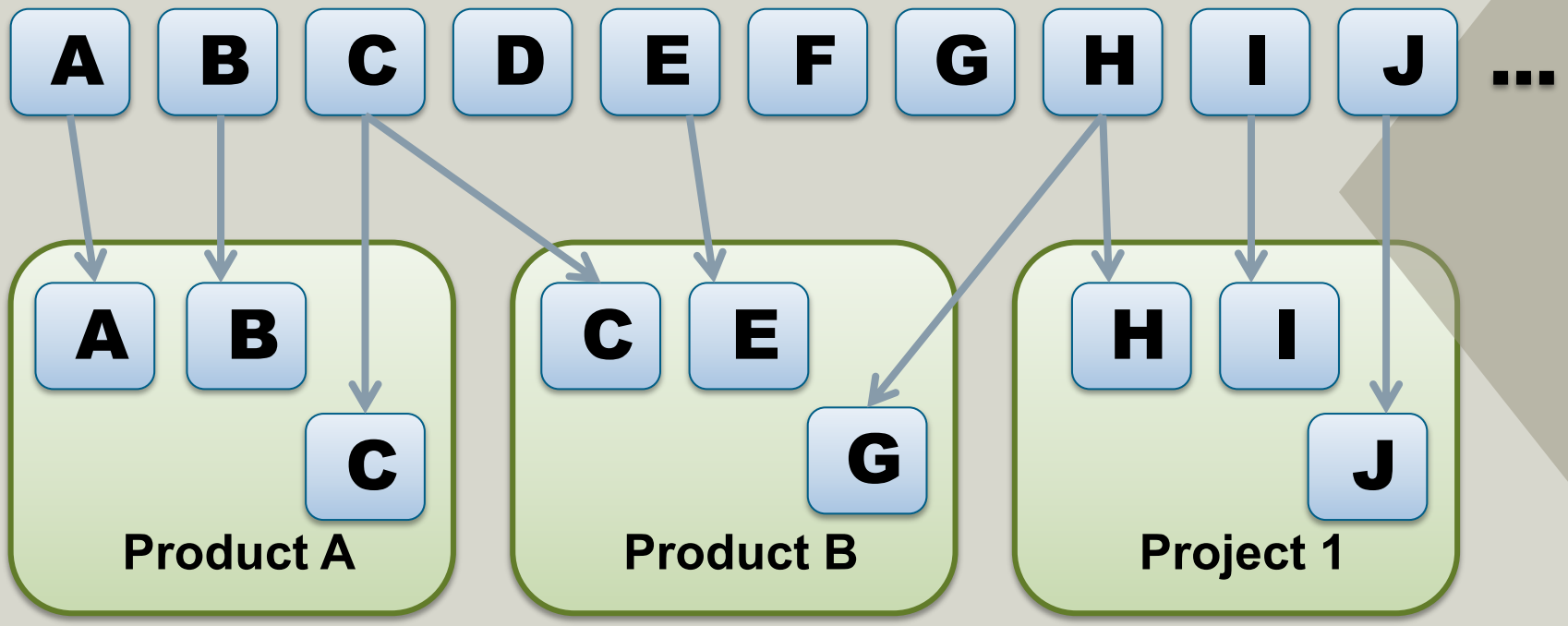
SW360 is a 3rd party software component catalogue

Assigns 3rd party components to products or projects



Inventory (in use)

vs.

Component Library (generally available)

S-BOM-Driven View

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S-BOM: Bill of Material

- Once the software contents are in a number of new use cases:
  - License compliance documentation
  - Collection of source code
  - ECC
  - Vulnerabilities
  - Statistics

SW360 cannot determine the S-BOM, but other OSS tools can:

- *SW360antenna*
- *OSS Review Toolkit*
- *Qmstr*
- *Tern*
- *…*

Compliance Documenation

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Different Use Cases per Product / Project

- Component approval
  - Listing approval status of components
- Compliance documentation
  - Generating license texts,
    copyrights from SPDX as HTML or Text
- Source code bundle generation
  - Covering the work of source code collections
- Product approval documentation
  - WIP: Major updates to data model: project obligations

SW360 – Next Feature: Product Approval

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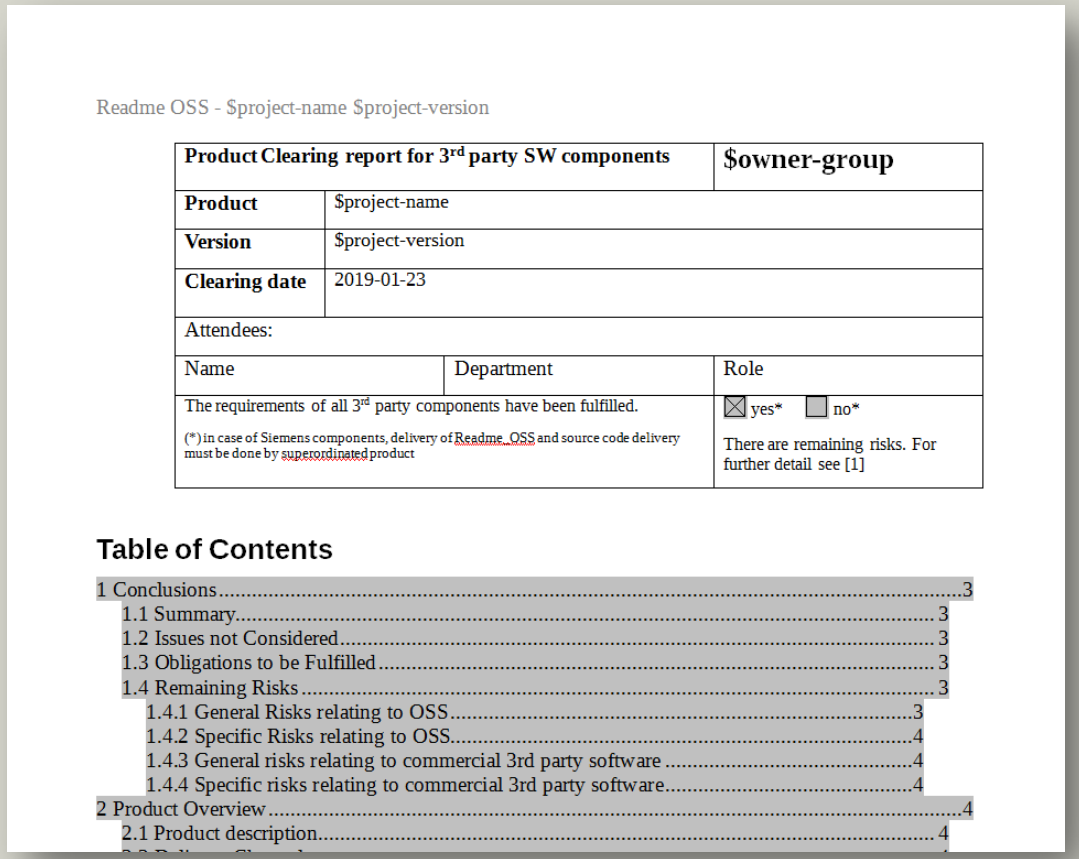
The next use case: Product Approval Document

- Work on product approval document
- Product approval:
  - Do all components fit together?
  - What is the big picture?
  - What is the BOM?
  - What are the total obligations?



Readme OSS - $project-name $project-version

Product Clearing report for 3rd party SW components		$owner-group
Product	$project-name	
Version	$project-version	
Clearing date	2019-01-23	
Attendees:		
Name	Department	Role
The requirements of all 3rd party components have been fulfilled. (*) in case of Siemens components, delivery of Readme_OSS and source code delivery must be done by superordinated product		☒ yes* ☐ no* There are remaining risks. For further detail see [1]

Table of Contents

SW360 –Product Approval Documents

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Proposed Document Structure

1 Conclusions

1.1 Summary

1.2 Issues not Considered

1.3 Obligations to be Fulfilled

1.4 Remaining Risks

1.4.1 General Risks relating to OSS

1.4.2 Specific Risks relating to OSS

1.4.3 General risks relating to commercial 3rd party software

1.4.4 Specific risks relating to commercial 3rd party software

2 Product Overview

2.1 Product Description

2.2 Delivery Channels

2.3 Development Details

2.4 Overview 3rd party components/services

3 Obligations

3.1 Common Rules

3.2 Additional Requirements

3.3 Disclosure Document

3.4 Build Instructions

3.5 Source Code Bundle

SW360: REST API

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Integration with other tools

- Check of approved components
- Create S-BOM
- Automated upload of SPDX files to components
- Synchronize component catalogue with other tools

On a normal SW360 instance, full documentation is available:

https://[hostname]:[port]/resource/docs/index.html

SW360: More Projects

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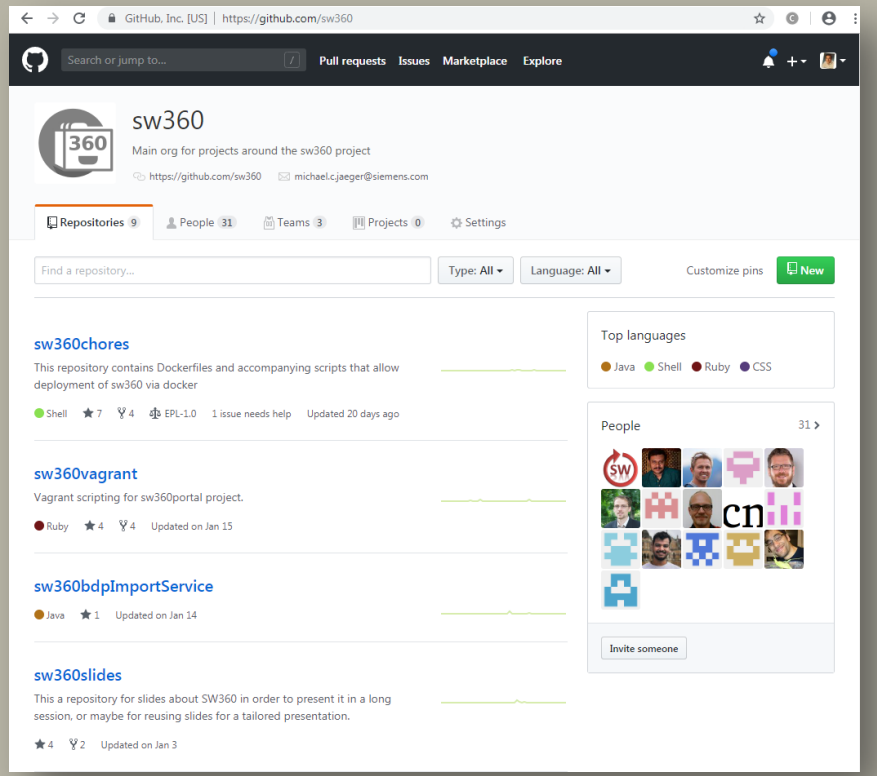
SW360 has a number of smaller projects

- **sw360antenna**
  Analyses the build and pulls data from other sources
- **sw360vagrant**
  Full instance deployment, including AWS
- **sw360chores**
  Docker deployment scripts
- **sw360slides**
  Documentation (also in Japanese)



https://github.com/sw360

Thank you for your attention … questions?

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FOSSology links
https://www.fossology.org/
https://github.com/fossology/fossology

SW360 links
https://sw360.github.io/
https://github.com/sw360/sw360portal