

# Open Source in M&A Transactions



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# Agenda

- Open source is inevitable
- Open source usage models
- Open source in M&As
- Source code audits
- IP audits
- Insights gained (technical, business, legal)
- Preparing for an audit (target, acquirer)
- Recommendations (target, acquirer)

**Open source is inevitable.**

## THE WALL STREET JOURNAL.

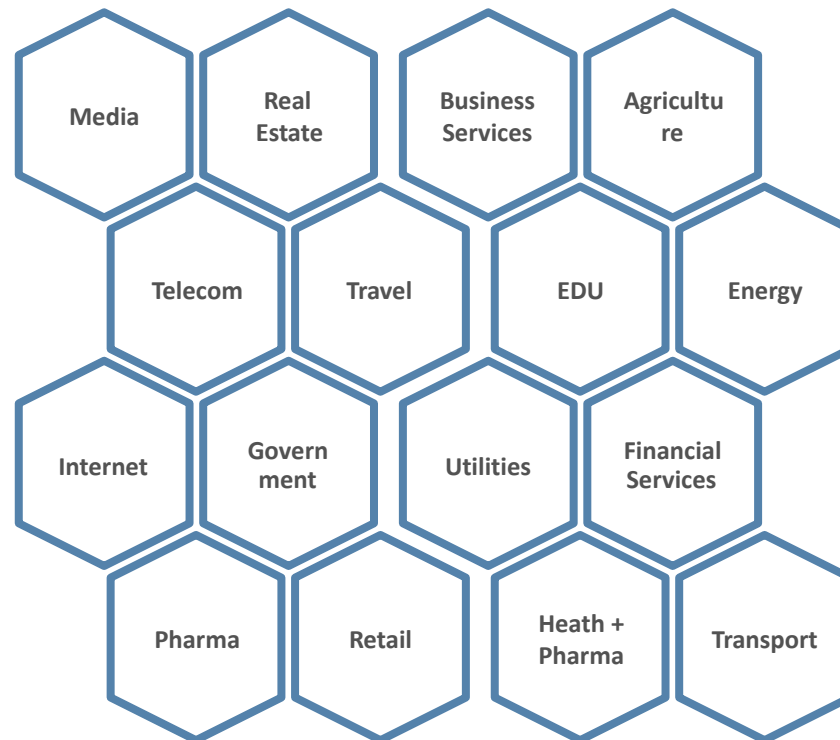
ESSAY

# Why Software Is Eating The World



By MARC ANDREESSEN

August 20, 2011



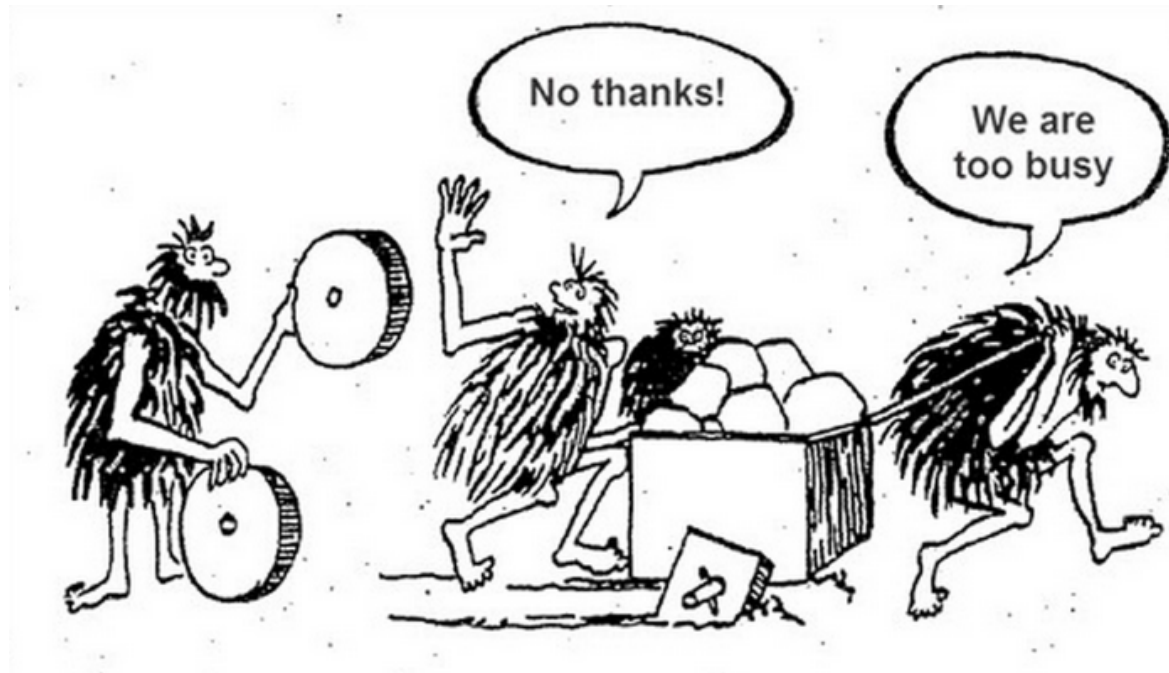
THE WALL STREET JOURNAL.

## Open Source 'Eating' Software World: Samsung

By RACHAEL KING

May 5, 2014 5:51 pm ET

San Francisco, Calif. — [Samsung Electronics](#) Ltd. is aiming for more of a leadership role in various open source projects partially because so many of its products – from refrigerators to mobile devices—now depend on open source software.

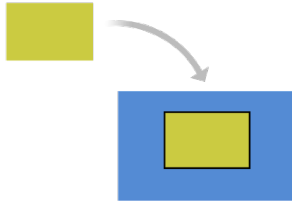


**Open source is the new normal.**

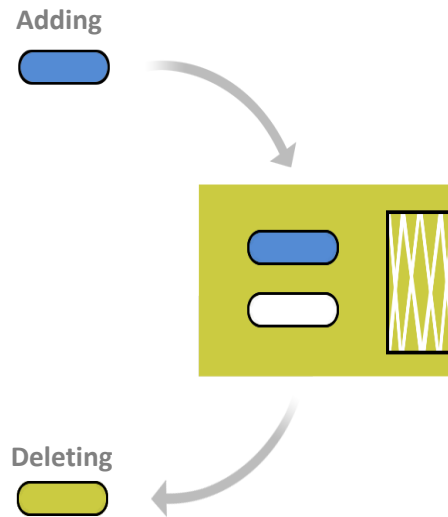
**Companies must master open source if they are to master software.**

# Common open source usage scenario

Incorporation



Modification



Linking





**Every deal is different.**

**What specific due diligence open source software is required in M&A transactions?**

***Start***

**Complete software stack:**

- Proprietary software
- 3<sup>rd</sup> party software
- Open source software



***Source code  
scanning and  
identification***



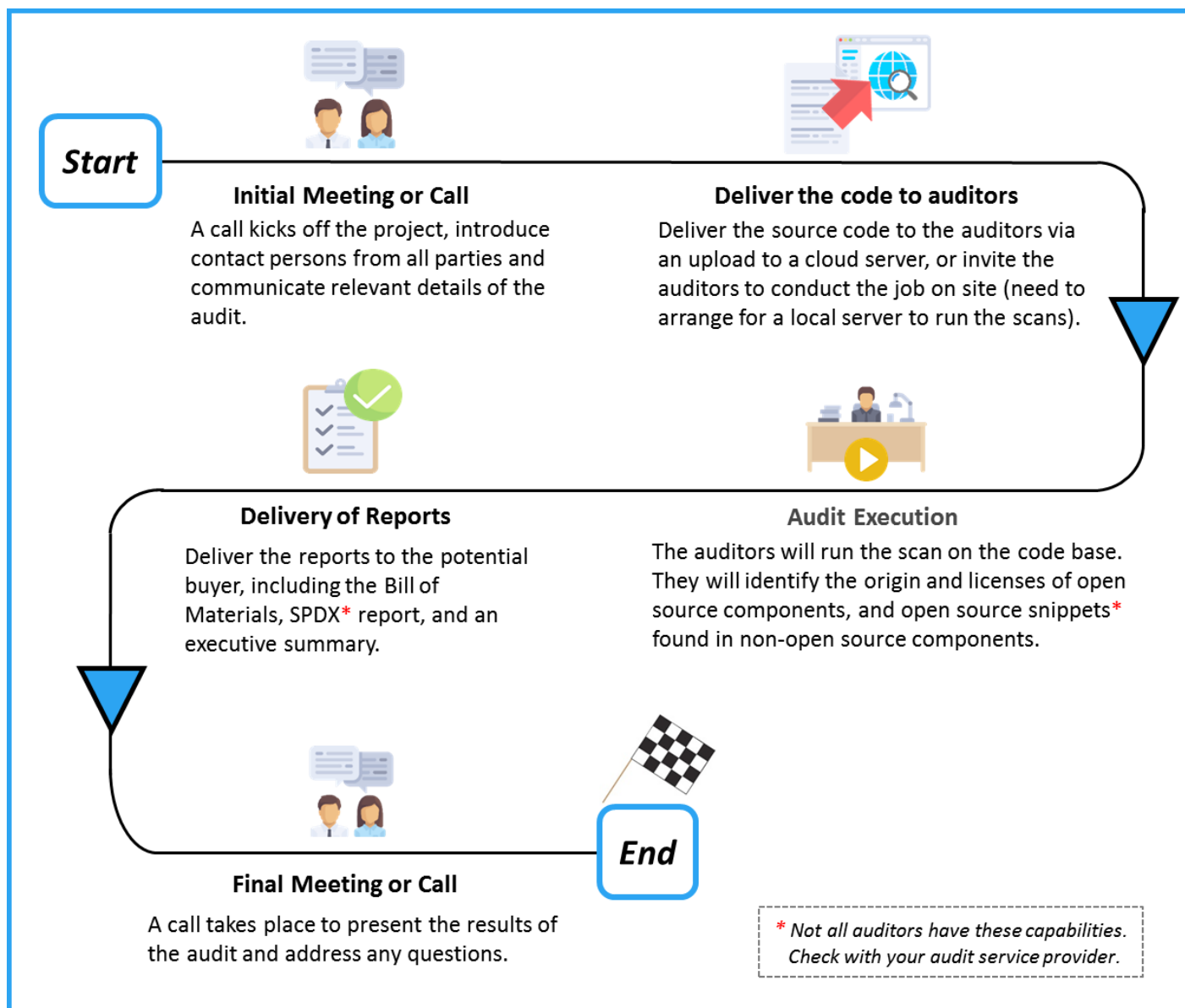
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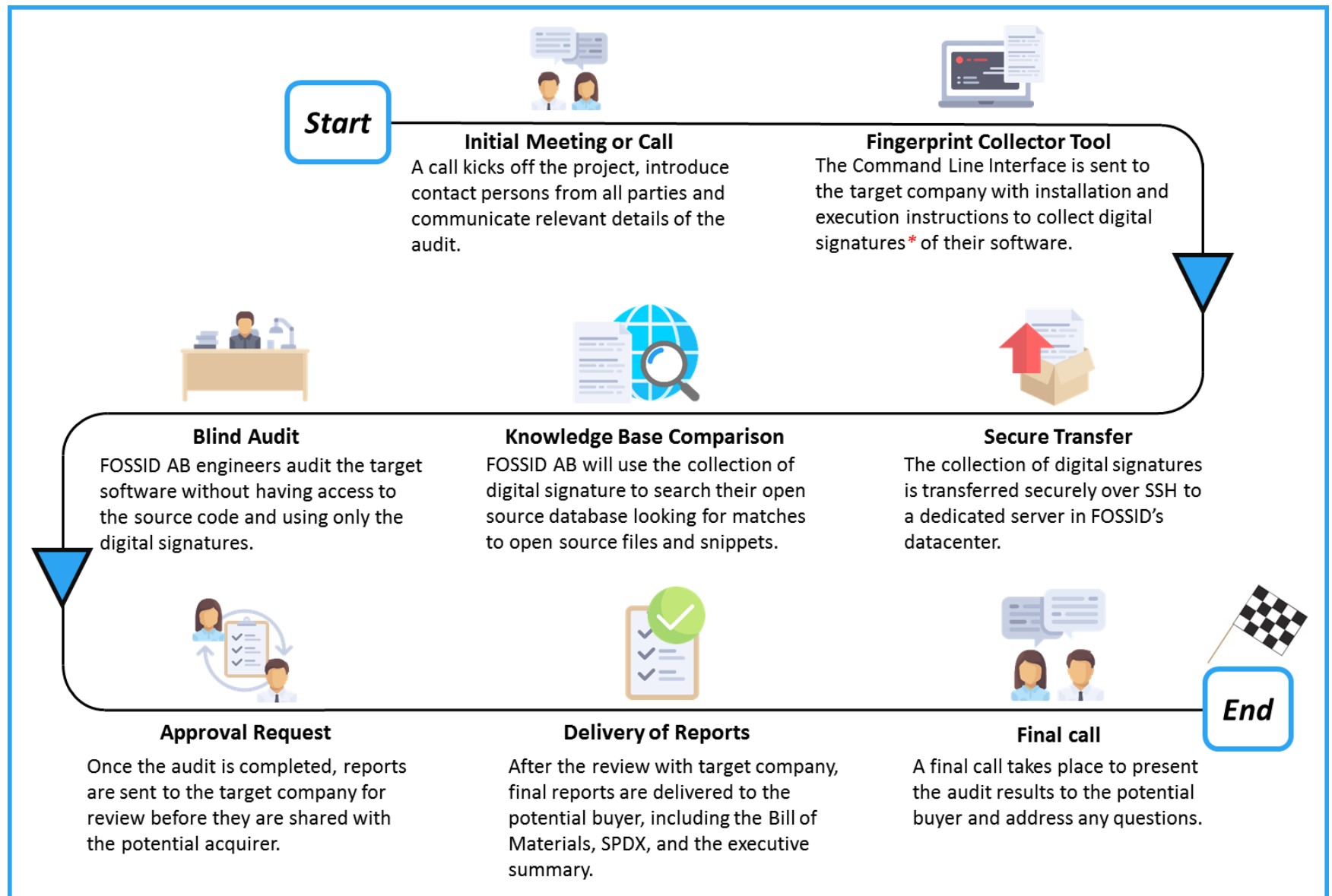


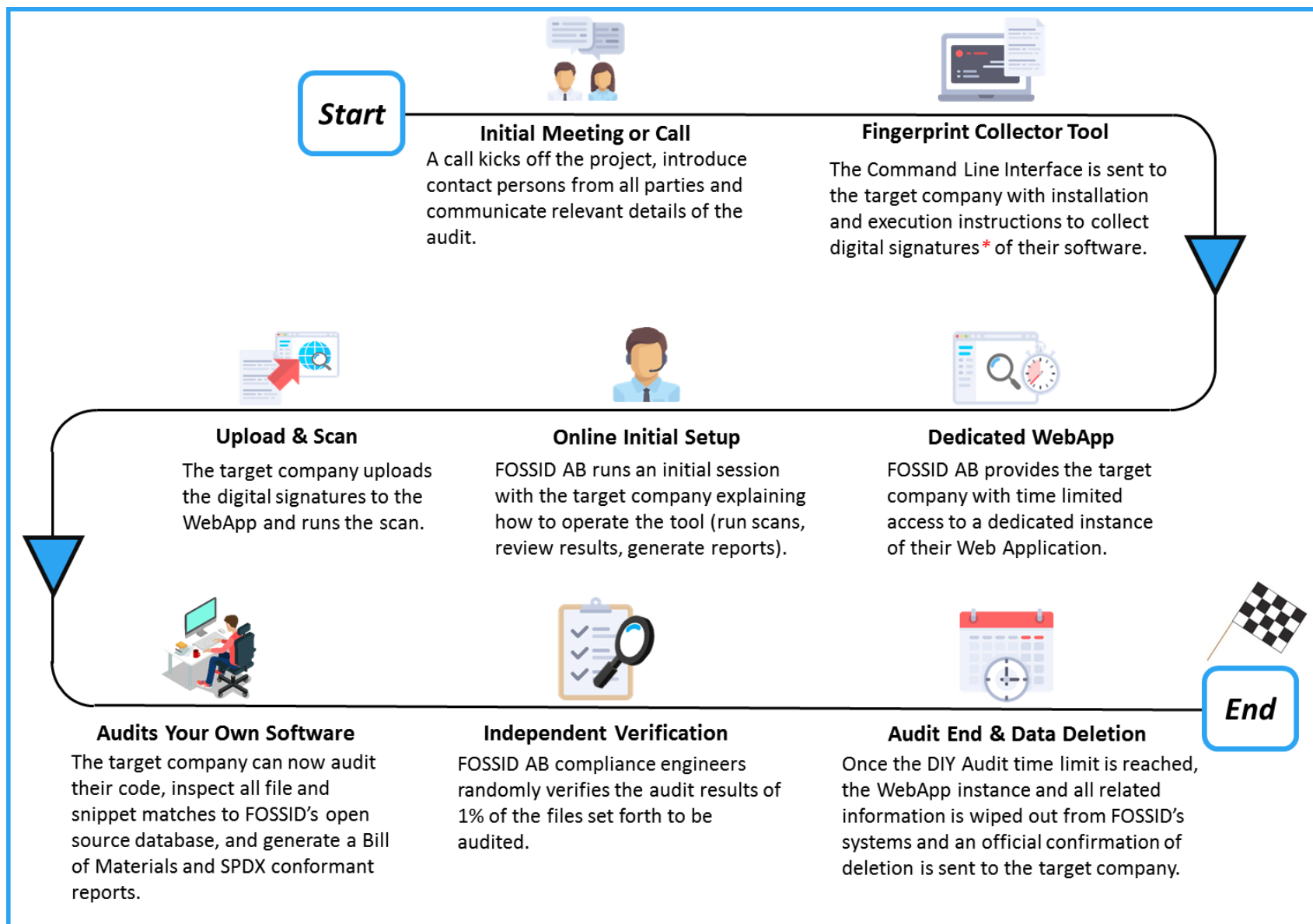
**Open Source Software  
BoM:**

- List of complete open source components, their origins, and licenses
- List of open source code snippets, their origins and licenses.

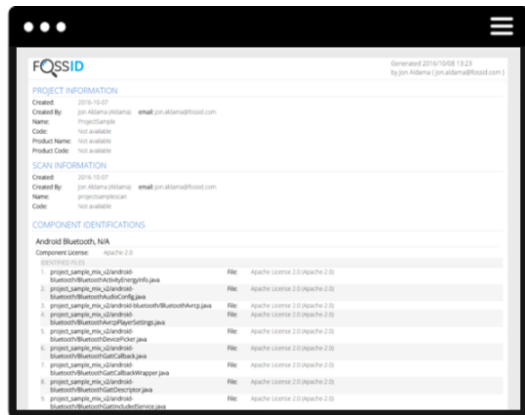
1. Traditional
2. Blind
3. Do-It-Yourself (DYI)







# Sample reports



Generated 2016/10/08 13:23  
By Jon Adams (jon.adams@fossid.com)

**PROJECT INFORMATION**

Created:	2016-10-07
Created By:	Jon Adams (jon.adams@fossid.com)
Name:	ProjectSample
Date:	Not available
Product Name:	Not available
Product Code:	Not available

**SCAN INFORMATION**

Created:	2016-10-07
Created By:	Jon Adams (jon.adams@fossid.com)
Name:	ProjectSampleScan
Date:	Not available

**COMPONENT IDENTIFICATIONS**

Android Bluetooth\_NIA

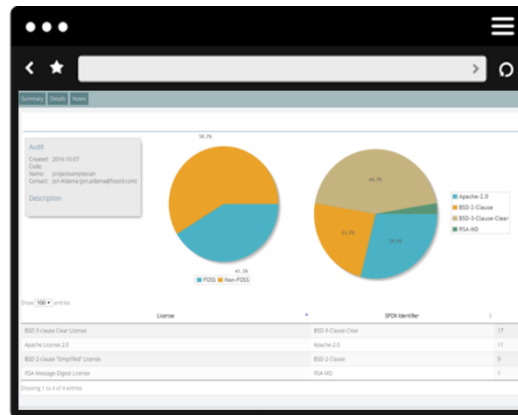
Component Name: Apache 2.0

Identified Files:

File	File	License
1. project_sample_android	BluetoothBluetoothEnergyInfo.java	File: Apache license 2.0 (Apache 2.0)
2. project_sample_android	BluetoothBluetoothRadioConfig.java	File: Apache license 2.0 (Apache 2.0)
3. project_sample_android	BluetoothBluetoothRadioBluetoothEnergyInfo.java	File: Apache license 2.0 (Apache 2.0)
4. project_sample_android	BluetoothBluetoothRadioBluetoothEnergyInfo.java	File: Apache license 2.0 (Apache 2.0)
5. project_sample_android	BluetoothBluetoothRadioBluetoothEnergyInfo.java	File: Apache license 2.0 (Apache 2.0)
6. project_sample_android	BluetoothBluetoothRadioBluetoothEnergyInfo.java	File: Apache license 2.0 (Apache 2.0)
7. project_sample_android	BluetoothBluetoothRadioBluetoothEnergyInfo.java	File: Apache license 2.0 (Apache 2.0)
8. project_sample_android	BluetoothBluetoothRadioBluetoothEnergyInfo.java	File: Apache license 2.0 (Apache 2.0)
9. project_sample_android	BluetoothBluetoothRadioBluetoothEnergyInfo.java	File: Apache license 2.0 (Apache 2.0)
10. project_sample_android	BluetoothBluetoothRadioBluetoothEnergyInfo.java	File: Apache license 2.0 (Apache 2.0)

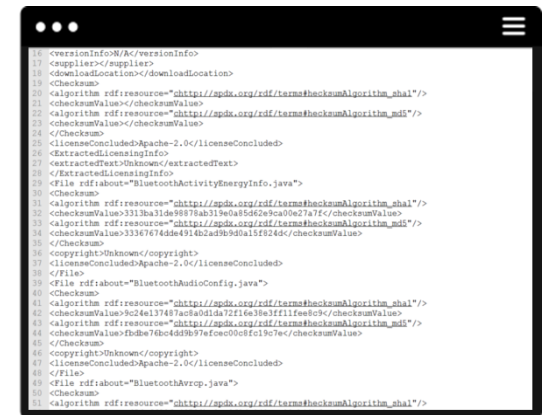
## Bill of Materials PDF

Basic Bill of Materials or software inventory categorized by component that includes all identified files and the corresponding metadata.



## Portable Dynamic Report

Interactive self-contained HTML report that provides advance features to filter and investigate the report results. It works offline.



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10. project_sample_android	BluetoothBluetoothRadioBluetoothEnergyInfo.java	File: Apache license 2.0 (Apache 2.0)

## SPDX Conformant Report

Software Package Data Exchange (SPDX) conformant XML file that serves as software inventory that can be imported into other compliance tools.



**NEW**

# IP Audits

## Extended M&A Due Diligence

Describe your idea or copy-paste a a full patent text or a **full text** product or invention **description**

Compare to millions of **full-text** patents

Visualize, explore or technology automate monitoring

TEQMINE

New search My searches My collections Administration My Profile

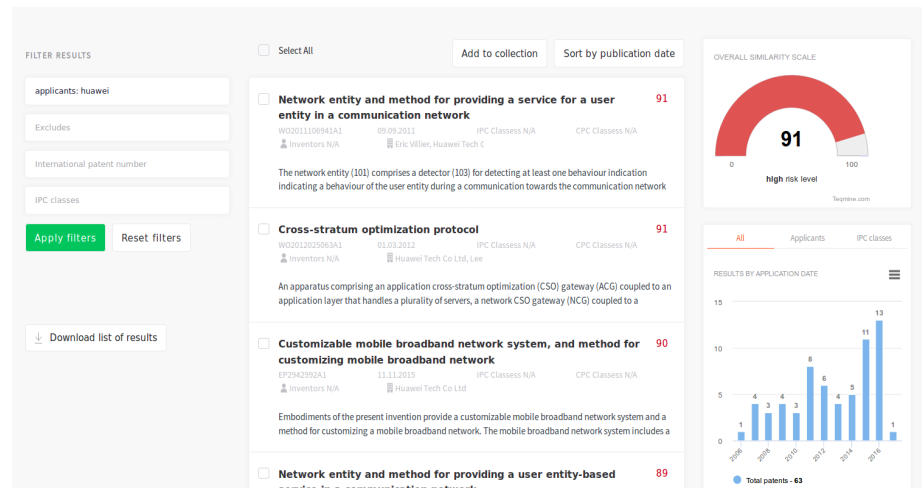
Start your similarity search

Paste a description longer than 6000 characters to get more relevant results.

0 / 6000

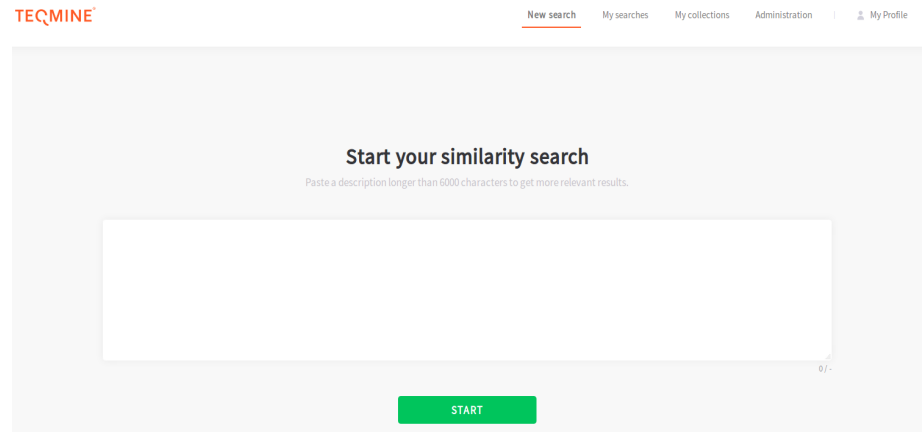
START

Analyze 12M+ patents in seconds

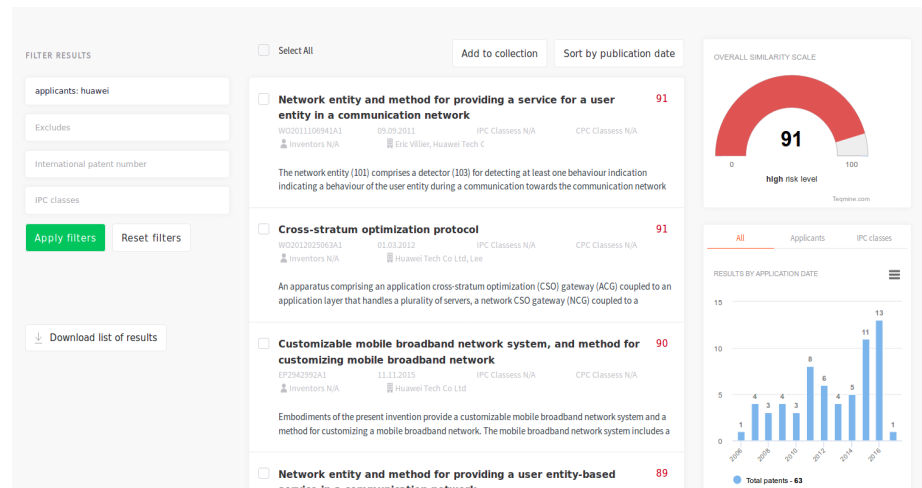


Ensure **freedom to operate** in the new area before you enter and understand Intellectual Property landscape for products based on the acquired technology

Technology Map illustrates the position of the products, **inventions** or patents, and puts these **in the context of existing patents**



Analyze 12m+ patents in seconds



# **Demo of IP Audits – Teqmine**

**What insights can you learn from such pre-acquisition compliance diligence?**

1. Modularity of software components.
2. Integration of various components or modules.
3. Transparent APIs.
4. Documentation.
5. Source code organization including the separation of open source and proprietary components.

#### Observations:

- Good programming practices are also legal best practices.
- High correlation between good compliance practices and good engineering practices.

**1.** Receive insights on policies and processes setup to handle open source compliance at target company.

Including adequate mechanisms to satisfy open source license obligations.

**2.** Learn about open source development practices that may conflict with the acquiring company's open source policies:

To what extent, and a way to compare the target company's record of fulfilling of open source license obligations for current commercial offerings.

**3.** Discover proprietary software assets are at risk due to misuse of open source software with strong copyleft license.

**4.** Understand the compliance risk portfolio of the target company:

The open source licenses the target uses and if it is aligned with the comfort zone of the acquiring company.

- 1.** A better understanding of whether the bulk of the target's valuation is a result of the integration of open source or in proprietary added value.
- 2.** A confirmation whether the target company has identified all open source software contained in distributed products and services and whether or not they've satisfied all obligations resulting from mixing the open source code with code under a proprietary or alternative open source license.



# **Preparing for an audit**

Process and policy

Staff

Training

Tooling

Measure up your compliance efforts

Type	Avoidance
Unplanned inclusion of copyleft FOSS into proprietary or 3 <sup>rd</sup> party code (or vice versa).	Training. Regularly scheduled scans.
Unplanned linking of FOSS into proprietary source code (or vice versa).	Training. Dependency tracking tool.
Failure to provide accompanying source code.	Checklist. Post shipping to-do.
Providing the incorrect version of accompanying source code.	Update process to ensure that the accompanying source code for the binary version is being published.
Failure to provide accompanying source code for FOSS component modifications.	Update process to ensure that source code for modifications are published.
Failure to mark FOSS source code modifications.	Training. Verification before posting source code.
Failure by developers to seek approval to use FOSS.	Conduct periodic full scan to detect undeclared FOSS. Training. Accountability (including compliance in performance metrics).
Failure to audit the source code.	Provide proper staffing. Enforce periodic audits.
Failure to resolve the audit findings.	Time limit before escalation kicks off automatically.
Failure to seek review of FOSS in a timely manner.	Training.

Choose the right audit model and right auditor for your needs

Know what you care about

Ask the right questions

Identify items to be resolved before executing the transaction

Create a compliance improvement plan for post-acquisition

# Recommendations

Identify the origin and license of all internal and external software.

Track open source software within the development process (components and snippets).

Perform source code reviews for all code entering your build system or repos.

Fulfill license obligations when a product ships or when software is updated.

Offer open source compliance training to employees.

Decide with the target company on the appropriate audit method to use, and which 3rd party to engage for the audit

- o Audit method, inputs and outputs
- o Primary contact
- o Timeline and logistics especially if it involves an on-site visit
- o Confidentiality parameters
- o Code vulnerabilities and version control (which method is your provider using)

# Summary



Open source compliance is an ongoing process, not a destination.

Ensuring compliance is a practice that must be maintained regardless of any potential corporate transaction.

Maintaining good open source compliance practices enables companies to be prepared for any scenario where software changes hands, from a possible acquisition, a sale, or product or service release.

New paper coming soon.

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