



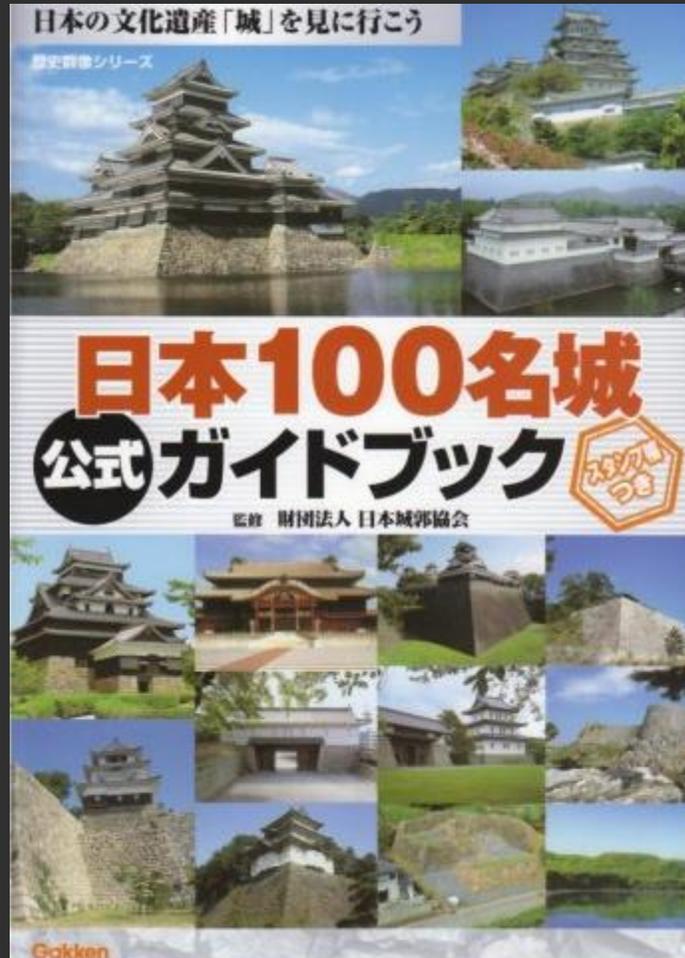
---

# From Protex to Fossology

Han Jiho, Tech. Strategy Team, NCSOFT

2019. 12. 19

1  
Intro



May 2012 ~ September 2018

**97 鹿兒島城**  
鹿兒島県鹿兒島市城山町7-2  
登城日 2018年 4月 17日  
鹿兒島県歴史資料センター-黎明館内総合案内

**98 今帰仁城**  
沖縄県国頭郡今帰仁村今治4-8-74  
登城日 2015年 10月 20日  
今帰仁グスク交流センター-休憩所

**99 中城城**  
沖縄県中城郡中城村字白1-2-58  
登城日 2015年 10月 24日  
店管理事務所の窓口

**100 首里城**  
沖縄県那覇市首里首里町3  
登城日 2015年 10月 18日  
首里社殿、系図館、用物庫、北殿

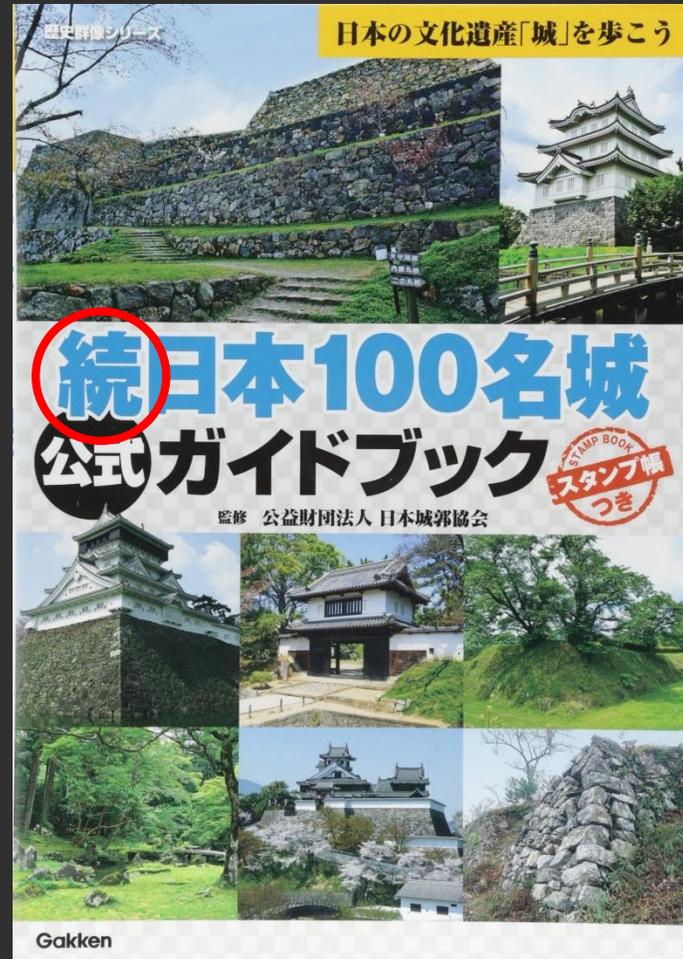
●登城者 HAN JI HO 韓志豪  
●登城開始日 2012年 5月 27日  
●登城完了日 2018年 9月 30日  
●所要年月日 年 月 日

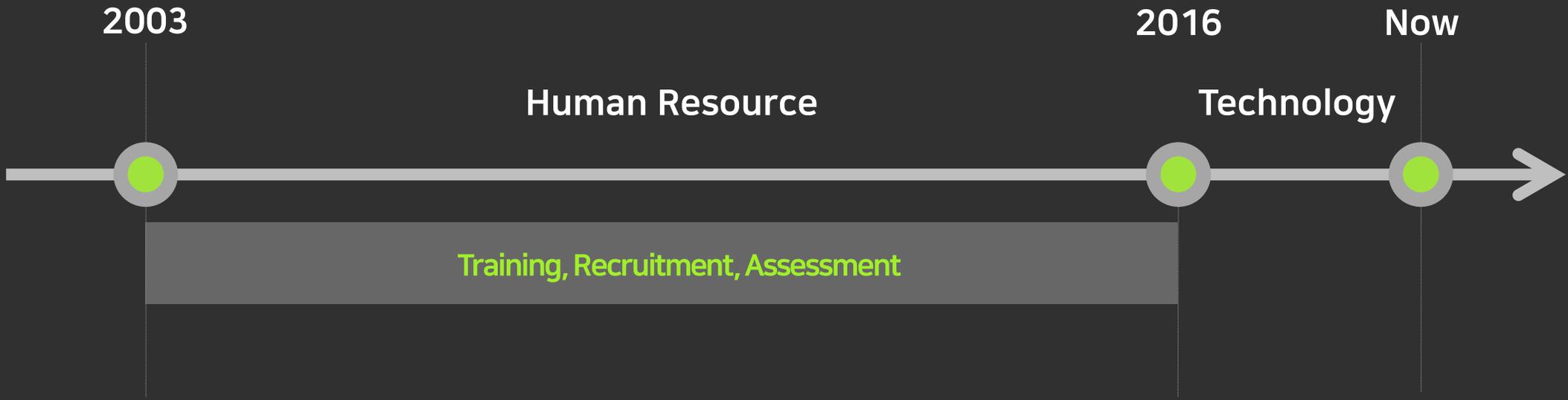
財団法人 日本城郭協会  
日本100名城公式ガイドブック  
「日本100名城」スタンプ帳

GAKKEN  
1102011015

●日本城郭協会認定印●

April 2019 ~





August 2019

Protex



Fossology

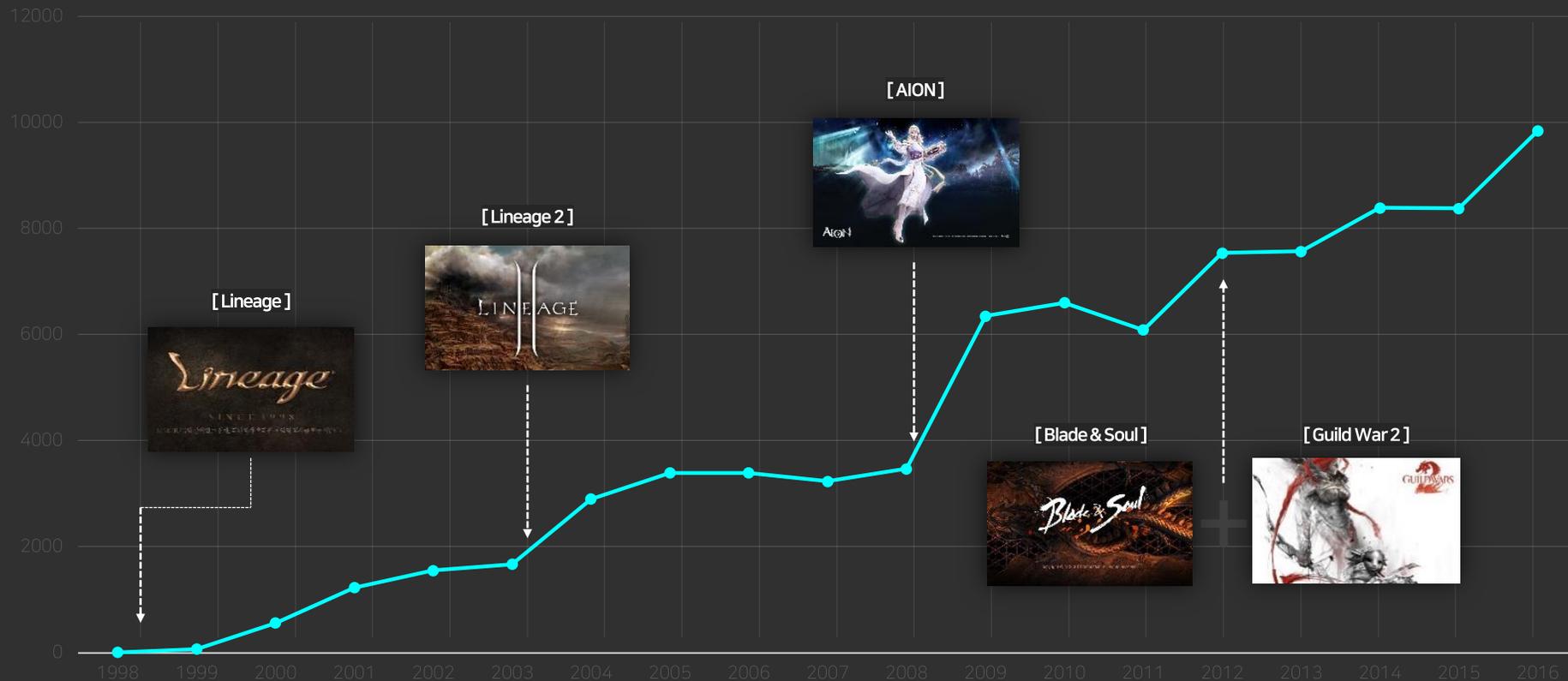
**This is my first presentation in Japanese.**

**Thank you for your consideration in advance.**

2

## Introduction of NCSOFT Corporation

Our company was founded in 1997 and is operating a global game business based on MMORPG such as [Lineage].



In the mobile field, we have successfully settled in the mobile game market based on 4 games.

We launched [Lineage M] in 2017 and achieved \$840 millions in sales in just 6 months.

Highest Ranking  
No 1 in sales



Lineage Red Knights  
December 2016

Highest Ranking  
No 3 in sales



Final Blade  
February 2017

Highest Ranking  
No 5 in sales



Professional baseball H2  
March 2017

Highest Ranking  
No 1 in sales in Korea

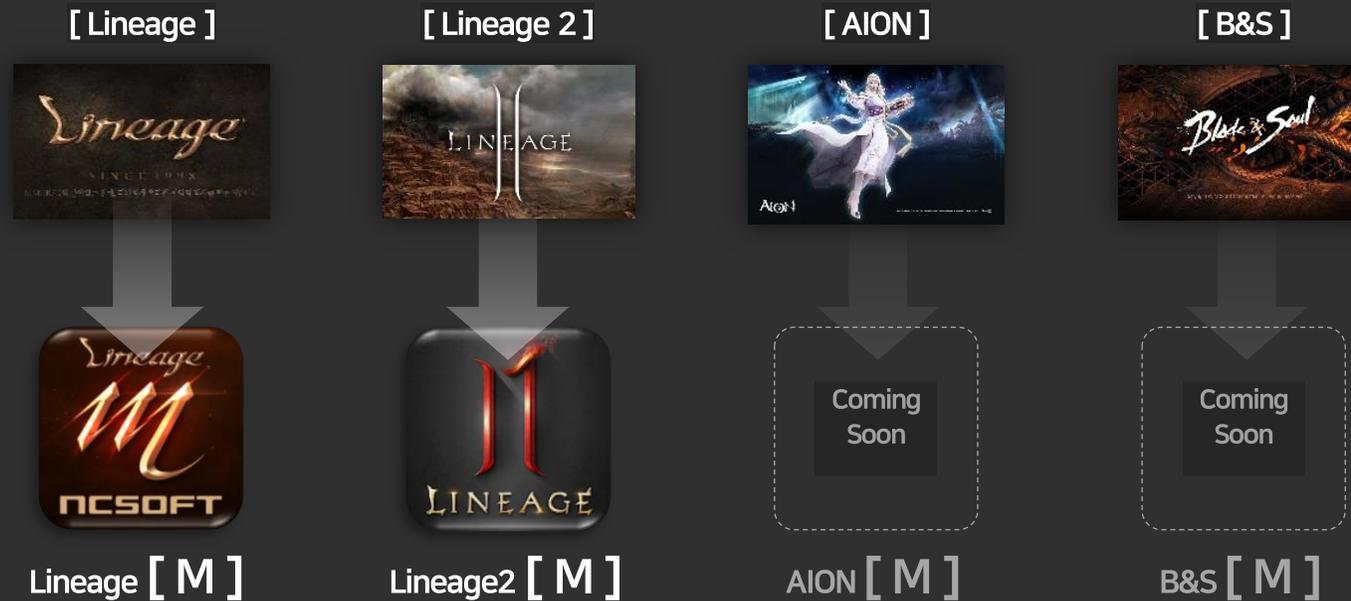


Lineage M  
June 2017

Cumulative sales of Lineage M  
for 6 months after launching

About \$840 million

Now we're developing mobile games using PC game IP.



Mobile games of MMO genre utilizing popular games such as AION, Blade & Soul which are already available online

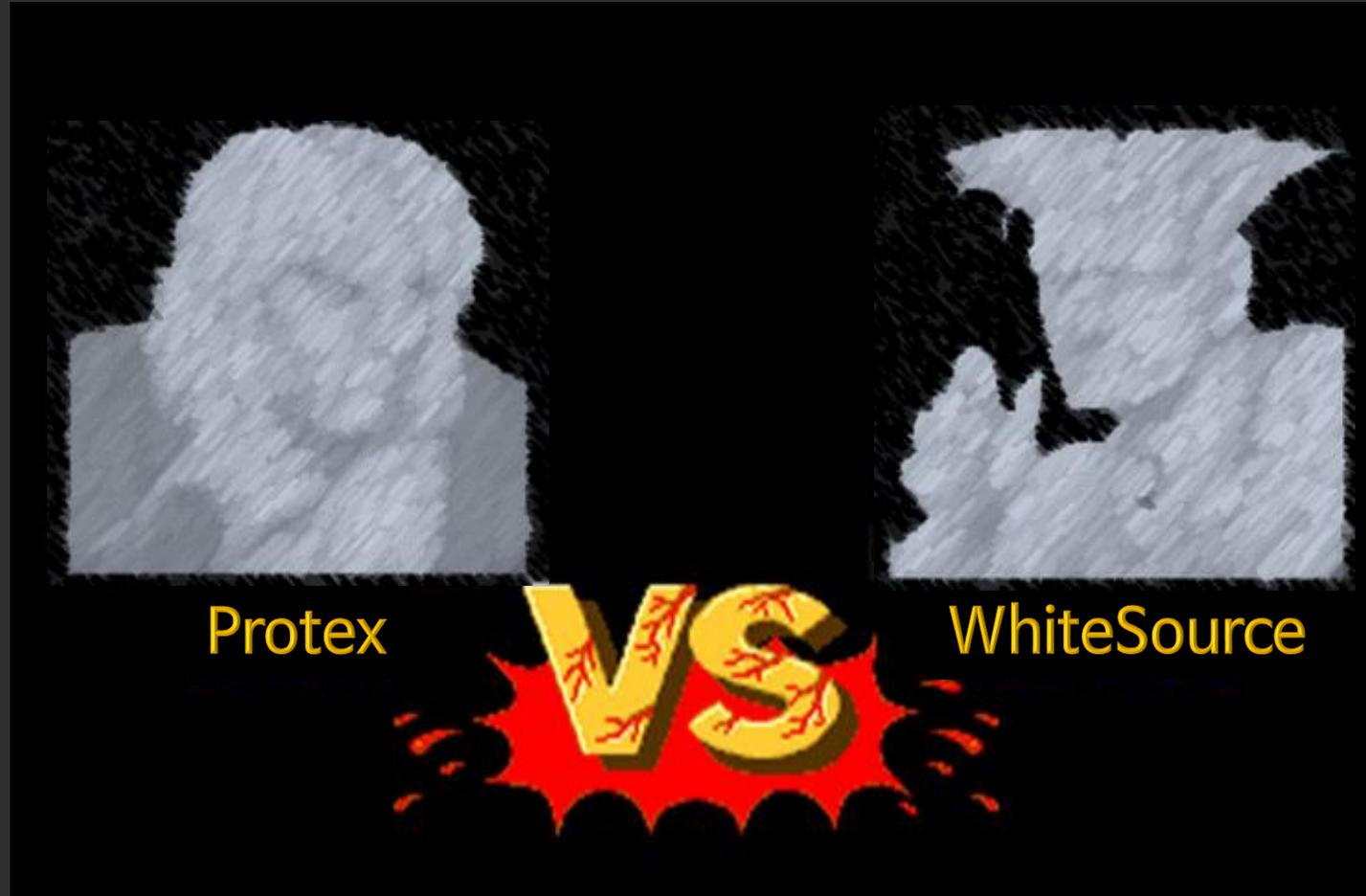
3  
Protex



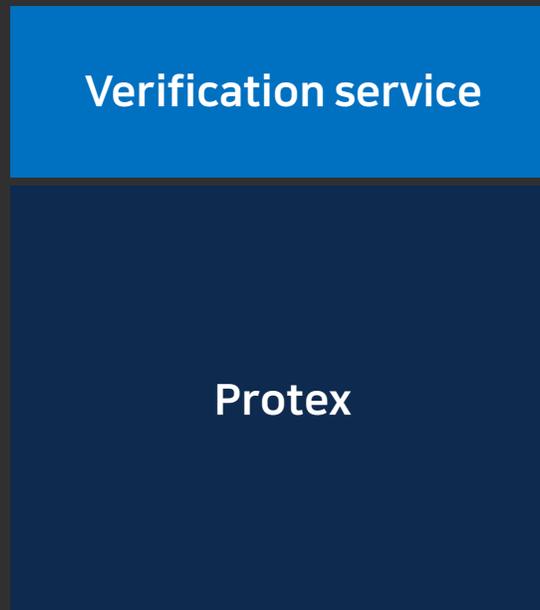
We started working on open source software compliance in 2017.



We conducted benchmarking tests of Protex and White Source.



At the time of adoption, we did not have any open source compliance know-how,  
so we contracted verification service separately.



# Protex is a code-match method that directly compares [source code] with [open source code] in open source DB.

The screenshot displays the Protex web interface. At the top, there are navigation tabs: Bill of Materials, Code Matches (selected), Searches, Dependencies, Rapid ID, Teach IDs, and History. The file path is /AION\_HQ/CLIENT/GameClient/Game/jsoncpp/include/json/autolink.h. A search bar is present with 'Go' and 'Clear' buttons. Below the search bar, there are 3 components listed. The first component is highlighted in yellow and is the match:

ID	Approved	Rapid ID	Component Type	Component Name	KB Rank	Version	License	Release Dates	Usage	Status	%	Matched File
			KB	jsoncpp	9	Unspecified	MIT License (and others)		File	Identified	100	jsoncpp-src-0.5.0.tar.gz/jsoncpp-src-0.5.0/include/json/autolink.h
			KB	rapidjson	9	Unspecified	MIT License		File	Rejected	100	rapidjson-0.1.zip/rapidjson/thirdparty/jsoncpp/include/json/autolink.h
			KB	Chromium Source	9	Unspecified	BSD 3-clause "New" or "..."		File	Rejected	100	chromium.r100615.tgz/home/chrome-svn/tarball/chromium/src/native_client/src/third_party_mod/jsoncpp/include/json/autolink.h

Below the table, there are two side-by-side code comparison windows. The left window is titled 'Your File: autolink.h' and the right window is titled 'Matched File: autolink.h'. Both windows show the same C++ preprocessor code, with the left window's code highlighted in green and the right window's code highlighted in yellow. The code is as follows:

```
1. #ifndef JSON_AUTOLINK_H_INCLUDED
2. # define JSON_AUTOLINK_H_INCLUDED
3.
4. # include "config.h"
5.
6. # ifdef JSON_IN_CPPTL
7. # include <cpptl/cpptl_autolink.h>
8. # endif
9.
10. # if !defined(JSON_NO_AUTOLINK) && !defined(JSON_DLL_BUILD) && !defined(JSON_IN_CPPTL)
11. # define CPPTL_AUTOLINK_NAME "json"
12. # undef CPPTL_AUTOLINK_DLL
13. # ifdef JSON_DLL
14. # define CPPTL_AUTOLINK_DLL
15. # endif
16. # include "autolink.h"
17. # endif
18.
19. #endif // JSON_AUTOLINK_H_INCLUDED
```

Blue text annotations are present: 'our source code' is written over the left window, and 'open source code in DB' is written over the right window.

After a year of use, Protex did not detect all of open source software.

BlackDuck  Synopsys



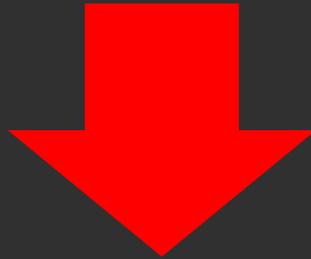
After the termination of the Protex contract, when we're at the crossroads whether to renew our contract or find a new mercenary,



### Yuki Yanagita (Protex)

- General functions are excellent, but..
- One-third was not detected.
- There was not enough reference in the game industry.
- I don't know what's going to happen with the changing of parent company...

**We have changed the business direction.**



**Let's lower the technology dependency on commercial tool.  
(Let's lower the vendor technology dependency)**



**Let's strengthen our capabilities for open source software verification.**

So, we decided to find and raise a potential player.



I was able to have the courage myself because I had great colleagues together.



@K-Hama updated at 2019-09-26



## OSS管理ツール SW360 - オープンソース をオープンソースで管理しよう ( 1 . インストール編 )

Let's manage open source using open source.

This article is written in Japanese and I am writing English version now. If you have any questions in English, please send me an email. [kouki1.hama@toshiba.co.jp](mailto:kouki1.hama@toshiba.co.jp)

## [SW360] NCSOFT의 한 です



한지호 (HAN JI HO)(yulica37)  
받는 사람 kouki1.hama@toshiba.co.jp

← 회신   ← 전제 회신   → 전달   ...

2019-08-20 (화) 오후 1:40

浜さん、こんにちは。

私は韓国のNCSOFT(<http://kr.ncsoft.com/korean/>)で、オープンソースの業務を担当しているハンジホと申します。

東京にも日本支社があります。( <https://www.ncjapan.co.jp/> )

OpenChain Korea WGメンバーとしても活動しています。よろしくお願いたします。(私は日本語の勉強しているですけど、まだ下手ですから翻訳の助けを受けています。ミスを許してください)

私の会社では、オープンソースの管理のためにFossology、SW360、Clearly definedの導入を検討しています。

私はまだ概念が十分に理解されなくて、いろいろな資料を探して見て、浜さんが発表したpdf資料を見ました。

その資料で私は必要な多い情報を発見することができました。

本格的に開始する前に浜さんに先に感謝したいと思います。

これからオープンソースの業務について気になることがあればメールでお問い合わせを差し上げてもいいですか？

よろしくお願いたします。

ハン

## RE: [SW360] NCSOFT의 한 です



kouki1.hama@toshiba.co.jp  
받는 사람 한지호 (HAN JI HO)(yulica37)  
참조 p-toss@swc.toshiba.co.jp  
보존 정책 NCSOFT\_메일보존정책 (4개월)

← 회신   ←

만료 날짜 2019-12-18

📌 2019-08-20 오후 5:19에 이 메시지에 회신했습니다.

Peter Han さん

TOSHIBA 浜です。

私の資料を読んでいただき、本当にありがとうございました。

私の会社では Fossology と SW360 の利用を行っています。

また、Open Chain Japanのメンバーと一緒に SW360をうまく使う方法を話し合っています。

オープンソースの業務、SW360、Fossology について、いつでもメールで質問してください。

一緒にオープンソースの世界を、よくしていきましょう。

Kouki Hama / 濱 功樹  
Open Source Technology Department  
Corporate Software Engineering & Technology Center  
Research & Development Division

4  
Fossology

## Code Scanning - Protex

Your File: autolink.h

```
1. #ifndef JSON_AUTOLINK_H_INCLUDED
2. # define JSON_AUTOLINK_H_INCLUDED
3.
4. # include "config.h"
5.
6. # ifdef JSON_IN_CPPTL
7. # include <cpptl/cpptl_autolink.h>
8. # endif
9.
10. # if !defined(JSON_NO_AUTOLINK) && !defined(JSON_DLL_BUILD) && !defined(
11. # define CPPTL_AUTOLINK_NAME "json"
12. # undef CPPTL_AUTOLINK_DLL
13. # ifdef JSON_DLL
14. # define CPPTL_AUTOLINK_DLL
15. # endif
16. # include "autolink.h"
17. # endif
18.
19. #endif // JSON_AUTOLINK_H_INCLUDED
```

## String Search - Fossology

Close Cleared: 0/89

Hide Legend

**Copyright (c)** 2010 Charlie Robbins

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THE SOFTWARE IS PROVIDED "**AS IS**", WITHOUT **WARRANTY** OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE **WARRANTIES** OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT. IN NO EVENT SHALL THE AUTHORS OR **COPYRIGHT** HOLDERS BE LIABLE FOR ANY CLAIM, **DAMAGES** OR OTHER **LIABILITY**, WHETHER IN AN ACTION OF CONTRACT, TORT OR OTHERWISE, ARISING FROM, OUT OF OR IN CONNECTION WITH THE SOFTWARE OR THE USE OR OTHER DEALINGS IN THE SOFTWARE.

## Code Scanning - Protex

Open source name

Copyright

License

Repository

## String Search - Fossology

Open source name

Copyright

License

Repository

# Get Started With FOSSology

## As a User

As a user you need to install the software and learn about the functionality. End users should refer to the [FOSSology Wiki](#) for more information.

There are three main ways to install FOSSology:

### Using Docker

If docker is installed,  
[FOSSology is on docker hub](#).  
Also check the [Readme of the project](#) for more details.

### Using Vagrant and VirtualBox

Just checkout or download the project and execute a classic *vagrant up*.

### Install from source

The installation from source is straight forward as described on our [GitHub developer pages](#).

### File

1: Exclude this file type.  
Exclude files with license: Apache-2.0.  
**Folder: Software Repository/  
Purple\_Agent/TextSwitcher/Application/src/main/AndroidManifest.xml**

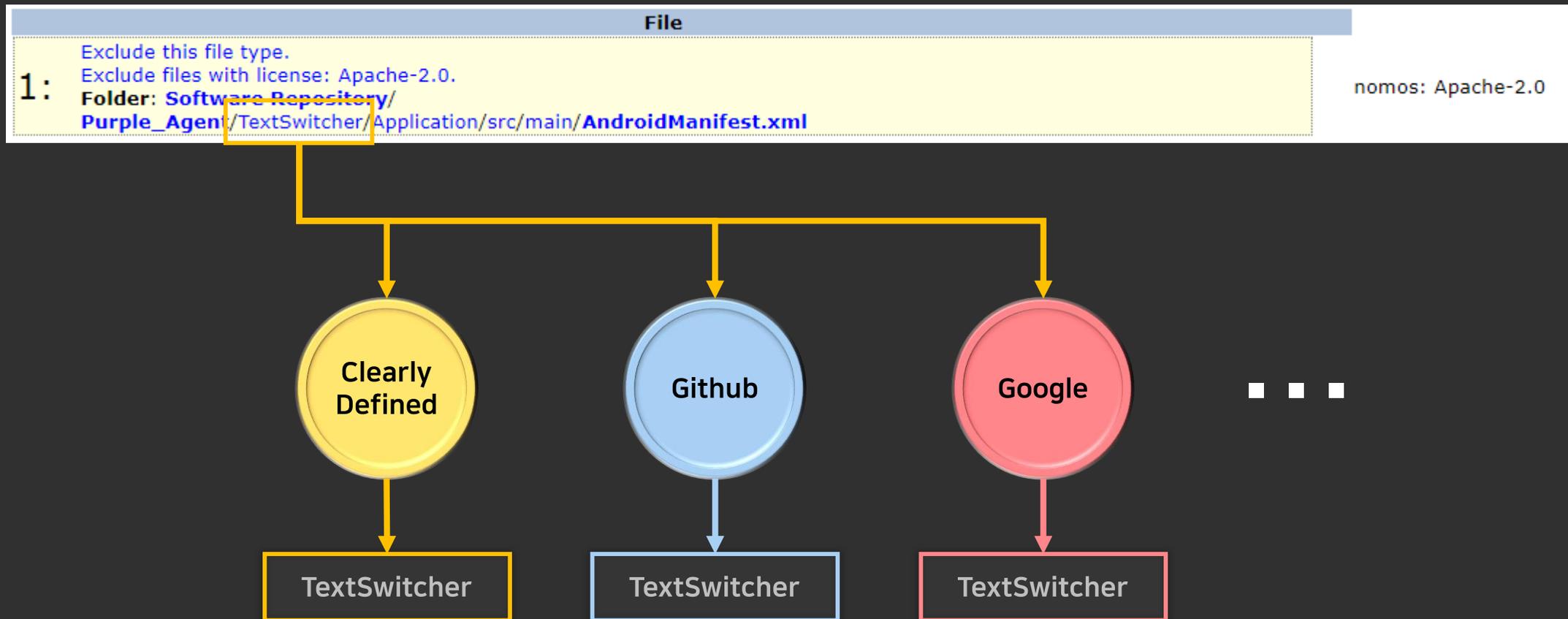
nomos: Apache-2.0

5

Find out open source name

# Hypothesis

We can obtain the name of an open source by querying sites like Google with the folder name we could get from Fossology.



## TextSwitcher

```
curl -X GET "https://api.clearlydefined.io/definitions?pattern=textswitcher" -H "accept: */* "
```

```
<spdx:hasFile>
  <spdx:File rdf:about="http://ffe2d233fb96/repo/SPDX2_Purple_Agent_1572587099-spx.rdf#SPDXRef-item164843">
    <spdx:fileName>TextSwitcher/Application/src/main/res/values-sw600dp/template-styles.xml</spdx:fileName>
    <spdx:checksum>
      <spdx:Checksum>
        <spdx:algorithm rdf:resource="http://spdx.org/rdf/terms#checksumAlgorithm_sha1" />
        <spdx:checksumValue>a984d6bab33ed715fe26b51f1a343476a986172e</spdx:checksumValue>
      </spdx:Checksum>
    </spdx:checksum>
    <spdx:checksum>
      <spdx:Checksum>
        <spdx:algorithm rdf:resource="http://spdx.org/rdf/terms#checksumAlgorithm_md5" />
        <spdx:checksumValue>adf9eec2e54cbe40877469511472b113</spdx:checksumValue>
      </spdx:Checksum>
    </spdx:checksum>
    <spdx:licenseConcluded rdf:resource="http://spdx.org/rdf/terms#noassertion" />
    <spdx:licenseInfoInFile rdf:resource="http://spdx.org/licenses/Apache-2.0" />
    <spdx:copyrightText><![CDATA[
      Copyright 2013 The Android Open Source Project
    ]]></spdx:copyrightText>
  </spdx:File>
</spdx:hasFile>
```

## TextSwitcher

[ ]

# TextSwitcher

```
curl -X GET w 'https://api.github.com/search/repositories?q=textswitcher'
```

```
1  {
2  "total_count": 68,
3  "incomplete_results": false,
4  "items": [
5  {
6  "id": 23589549,
7  "node_id": "MDEwO1JlcG9zaXRvcnkyMzU4OTU0OQ==",
8  "name": "android-TextSwitcher",
9  "full_name": "googlearchive/android-TextSwitcher",
10 "private": false,
11 "owner": {
12 "login": "googlearchive",
13 "id": 12502296,
14 "node_id": "MDEyOk9yZ2FuaXphdG1vb2JyNTAyMjk2",
15 "avatar_url": "https://avatars2.githubusercontent.com/u/12502296?v=4",
16 "gravatar_id": "",
17 "url": "https://api.github.com/users/googlearchive",
18 "html_url": "https://github.com/googlearchive",
19 "followers_url": "https://api.github.com/users/googlearchive/followers",
20 "following_url": "https://api.github.com/users/googlearchive/following{/other_user}",
21 "gists_url": "https://api.github.com/users/googlearchive/gists{/gist_id}",
22 "starred_url": "https://api.github.com/users/googlearchive/starred{/owner}/{/repo}",
```

## freetype

```
curl -X GET "https://api.clearlydefined.io/definitions?pattern=freetype" -H "accept: */* "
```

```
<spdx:hasFile>
  <spdx:File rdf:about="http://ffe2d233fb96/repo/SPDX2_live-studio.zip_1572588894-spx.rdf#SPDXRef-item138196">
    <spdx:fileName>live-studio/obs-studio-dependencies2017/win64/include/freetype/freetype.h</spdx:fileName>
    <spdx:checksum>
      <spdx:Checksum>
        <spdx:algorithm rdf:resource="http://spdx.org/rdf/terms#checksumAlgorithm_sha1" />
        <spdx:checksumValue>5c2b701d878e7c660e7a9fec74d1806cc14e21a1</spdx:checksumValue>
      </spdx:Checksum>
    </spdx:checksum>
    <spdx:checksum>
      <spdx:Checksum>
        <spdx:algorithm rdf:resource="http://spdx.org/rdf/terms#checksumAlgorithm_md5" />
        <spdx:checksumValue>211ed013af6533c1123a2280d26ced44</spdx:checksumValue>
      </spdx:Checksum>
    </spdx:checksum>
    <spdx:licenseConcluded rdf:resource="http://spdx.org/rdf/terms#noassertion" />
    <spdx:licenseInfoInFile rdf:resource="http://spdx.org/licenses/FTL" />
    <spdx:copyrightText><![CDATA[
      Copyright 1996-2018 by */ David Turner, Robert Wilhelm, and Werner Lemberg. */
    ]]></spdx:copyrightText>
  </spdx:File>
</spdx:hasFile>
```

# freetype

```
1
2 "crate/cratesio/-/freetype/0.4.1",
3 "gem/rubygems/-/freetype/0.0.6",
4 "gem/rubygems/-/freetype/0.0.1",
5 "nuget/nuget/-/freetype/2.6.1.1",
6 "nuget/nuget/-/freetype/2.7.0.1",
7 "gem/rubygems/-/freetype/0.0.2",
8 "nuget/nuget/-/freetype/2.8.0.1",
9 "debsrc/debian/-/freetype/2.10.1-1",
10 "git/github/ksss/freetype/2f838e98197f786e70965aeceb814b7c8e8361c1",
11 "debsrc/debian/-/freetype/2.10.1-2",
12 "pypi/pypi/-/freetype-py/0.3.2",
13 "pypi/pypi/-/freetype-py/0.4.2",
14 "pypi/pypi/-/freetype-py/0.5.1",
15 "gem/rubygems/-/freetype/0.0.5",
16 "nuget/nuget/-/freetype/2.6.2.1",
17 "pypi/pypi/-/Freetype/Milestone1",
18 "git/github/freetype/docwriter/5ad2fb11d94f0c7e31497225c9bcfdde8a9ad325",
19 "git/github/freetype/docwriter/f059786d42a63209b45f93649b81f9b6bf072d04",
20 "git/github/ksss/freetype/791ced1c3e41c2cafc099780f435eafb2c81ecef",
21 "pypi/pypi/-/freetype-py/0.4.1",
22 "pypi/pypi/-/freetype-py/0.4",
23 "pypi/pypi/-/freetype-py/1.0.1",
24 "pypi/pypi/-/freetype-py/1.0.2",
```

```
curl -X POST W
https://api.clearlydefined.io/definitions W
-H 'Accept: */*' W
-H 'Content-Type: application/json' W
-H 'Host: api.clearlydefined.io' W
-d '[
  "git/github/ksss/freetype/2f838e98197f786
e70965aeceb814b7c8e8361c1"
]'
```

# freetype

```
1
2 "git/github/ksss/freetype/2f838e98197f786e70965aeceb814b7c8e8361c1": {
3   "licensed": {
4     "declared": "MIT",
5     "toolScore": {
6       "total": 47,
7       "declared": 30,
8       "discovered": 2,
9       "consistency": 0,
10      "spdx": 15,
11      "texts": 0
12    },
13    "facets": {
14      "core": {
15        "attribution": {
16          "unknown": 19,
17          "parties": [
18            "Copyright (c) 2015",
19            "Copyright (c) 2013-2015",
20            "at http://scripts.sil.org/OFL Copyright (c) 2013-2015"
21          ]
22        }
23      }
24    }
25  }
26 }
```

# freetype

FreeType binding by ffi

47 commits   1 branch   6 releases   1 contributor   MIT

Branch: master   New pull request   Find file   Clone or download

 ksss Set default value expressly   Latest commit 8e48fb6 on 11 Apr 2016

bin	first commit ;)	4 years ago
data	first commit ;)	4 years ago
lib	Set default value expressly	4 years ago
.gitignore	first commit ;)	4 years ago
.travis.yml	Update travis.yml	4 years ago
CODE_OF_CONDUCT.md	first commit ;)	4 years ago
Gemfile	first commit ;)	4 years ago
LICENSE.txt	first commit ;)	4 years ago
README.md	Update Doc	4 years ago
Rakefile	first commit ;)	4 years ago
freetype.gemspec	first commit ;)	4 years ago

README.md

## FreeType

build passing

## File

- 1: Exclude this file type.  
Exclude files with license: BSD-3-Clause.  
**Folder: Software Repository/  
livestudio/obs-studio/plugins/win-ivcam/seg\_library/Dependencies.h**

**obs-studio** **plugins** **win-ivcam** **seg\_library**
- 2: Exclude this file type.  
Exclude files with license: Apache-2.0, BSD-3-Clause, GPL-2.0, LGPL-2.1, MIT, MPL-2.0, Unlicense.  
**Folder: Software Repository/  
livestudio/obs-studio/plugins/obs-outputs/ftl-sdk/libcurl/docs/LICENSE-MIXING.md**

**obs-studio** **plugins** **obs-outputs** **ftl-sdk** **libcurl** **docs**
- 3: Exclude this file type.  
Exclude files with license: BSD-3-Clause.  
**Folder: Software Repository/  
livestudio/obs-studio-dependencies2017/win32/swig/LICENSE-UNIVERSITIES**

**obs-studio-dependencies2017** **win32** **swig**
- 4: Exclude this file type.  
Exclude files with license: BSD-3-Clause.  
**Folder: Software Repository/  
livestudio/obs-studio-dependencies2017/win64/swig/LICENSE-UNIVERSITIES**

**obs-studio-dependencies2017** **win64** **swig**
- 5: Exclude this file type.  
Exclude files with license: BSD-3-Clause.  
**Folder: Software Repository/  
livestudio/obs-studio/plugins/mac-syphon/syphon-framework/License.txt**

**obs-studio** **plugins** **mac-syphon** **syphon-framework**
- 6: Exclude this file type.  
Exclude files with license: BSD-3-Clause, Dual-license, GPL-2.0.  
**Folder: Software Repository/  
livestudio/obs-studio/plugins/obs-qsv11/QSV\_Encoder.cpp**

**obs-studio** **plugins** **obs-qsv11**

```
osn_demo — bahamoth@bahamoth-imac — ..ects/osn_demo — -zsh — 102x50
bahamoth@bahamoth-imac > ~/projects/osn_demo
node generate_fossology_token_demo.js
fossology token: eyJ0eXAiOiJKV1QiLCJhbGciOiJIUzI1NiJ9.eyJpc3MiOiJmb3Nzb2xvZ3kiLCJhdWQiOiJmb3Nzb2xvZ3kiLCJleHAiOjE1NzU4NDk1OTksIm5iZiI6MTU3NDg5OTIwMCwianRpIjoiTmk0eiIsInNjb3BlIjoia3JpdGUifQ.D_4e0dURT9cpYrjXnxcYNr-bN3pg6p9Gy1zhjEtTPNU

bahamoth@bahamoth-imac > ~/projects/osn_demo
```

**Generate Fossology API Token.**

```
osn_demo — bahamoth@bahamoth-imac — ..ects/osn_demo — -zsh — 102x50
bahamoth@bahamoth-imac > ~/projects/osn_demo
node generate_fossology_token_demo.js
fossology token: eyJ0eXAiOiJKV1QiLCJhbGciOiJIUzI1NiJ9.eyJpc3MiOiJmb3Nzb2xvZ3kiLCJhdWQiOiJmb3Nzb2xvZ3kiLCJleHAiOiJlNzU4NDk1OTksIm5iZiI6MTU3NDg5OTIwMCwianRpIjoiaTmk0eiIsInNjb3BlIjoiaid3JpdGUifQ.D_4e0dURT9cpYrjXnxcYNr-bN3pg6p9Gy1zhjEtTPNU

bahamoth@bahamoth-imac > ~/projects/osn_demo
node generate_fossology_report_demo.js
{ code: 201,
  message: 'fossology/repo/api/v1/report/73',
  type: 'INFO' }
report is not ready. sleep 5000ms
file saved!
bahamoth@bahamoth-imac > ~/projects/osn_demo
█
```

**Receive the results validated by Fossology in SPDX format.**

```
osn_demo — bahamoth@bahamoth-imac — ..ects/osn_demo — -zsh — 102x50
file saved:
bahamoth@bahamoth-imac ~ /projects/osn_demo
node anaysis_fossology_report.js
packageName: Purple_Agent
num of files: 4561

...verifying fossology result using github API

=====
license: http://spdx.org/licenses/OpenSSL
full path: boost_websocket/external/openssl/include/openssl/rsaerr.h
file name: rsaerr.h
path: openssl
```

問い合わせの順序 / the order of query

**Query if a library with the same name exists on the github using the folder name where the license was detected.**

```
=====
license: http://spdx.org/licenses/OpenSSL
full path: boost_websocket/external/openssl/include/openssl/rsaerr.h
file name: rsaerr.h
```

```
path: openssl
search result count: 5542
first matched candidate: openssl/openssl
library matches github query results!
library name: openssl/openssl
github file path: include/openssl/rsaerr.h
```

```
path: include
```

**library matches github query results! =**

**The same library name exists as the folder name(openssl),  
and there is a file with the same name(rsaerr.h) in that repository.**

```
full path: boost_websocket/external/openssl/include/openssl/rsaerr.h  
file name: rsaerr.h
```

```
path: openssl  
search result count: 5542  
first matched candidate: openssl/openssl  
library matches github query results!  
library name: openssl/openssl  
github file path: include/openssl/rsaerr.h
```

```
path: include  
known library: none
```

```
path: openssl  
known library: openssl/openssl
```

**If you repeatedly ask the same folder name that was confirmed as an opensource,  
it is marked as known library.**

```
first matched candidate: openssl/openssl  
library matches github query results!  
library name: openssl/openssl  
github file path: include/openssl/rsaerr.h
```

```
path: include  
known library: none
```

```
path: openssl  
known library: openssl/openssl
```

```
path: external  
known library: none
```

```
path: boost_websocket
```

**Keep asking github for folder names one by one.**

```
path: external  
known library: none
```

```
path: boost_websocket  
search result count: 33  
first matched candidate: boostorg/beast  
none of github query results.
```

```
=====
```

```
=====
```

```
license: http://spdx.org/licenses/Apache-2.0
```

```
full path: TextSwitcher/Application/src/main/res/values-sw600dp/template-styles.xml
```

```
file name: template-styles.xml
```

問い合わせの順序 / the order of query

**Query if a library with the same name exists on the github  
using the folder name where the license was detected.**

```
path: Application
search result count: 982297
first matched candidate: timeoff-management/application
none of github query results.
```

```
path: TextSwitcher
search result count: 69
first matched candidate: googlearchive/android-TextSwitcher
library matches github query results!
library name: googlearchive/android-TextSwitcher
github file path: Application/src/main/res/values-sw600dp/template-styles.xml
```

**library matches github query results! =**

**The same library name exists as the folder name(android-TextSwitcher), and there is a file with the same name(template-styles.xml) in that repository.**

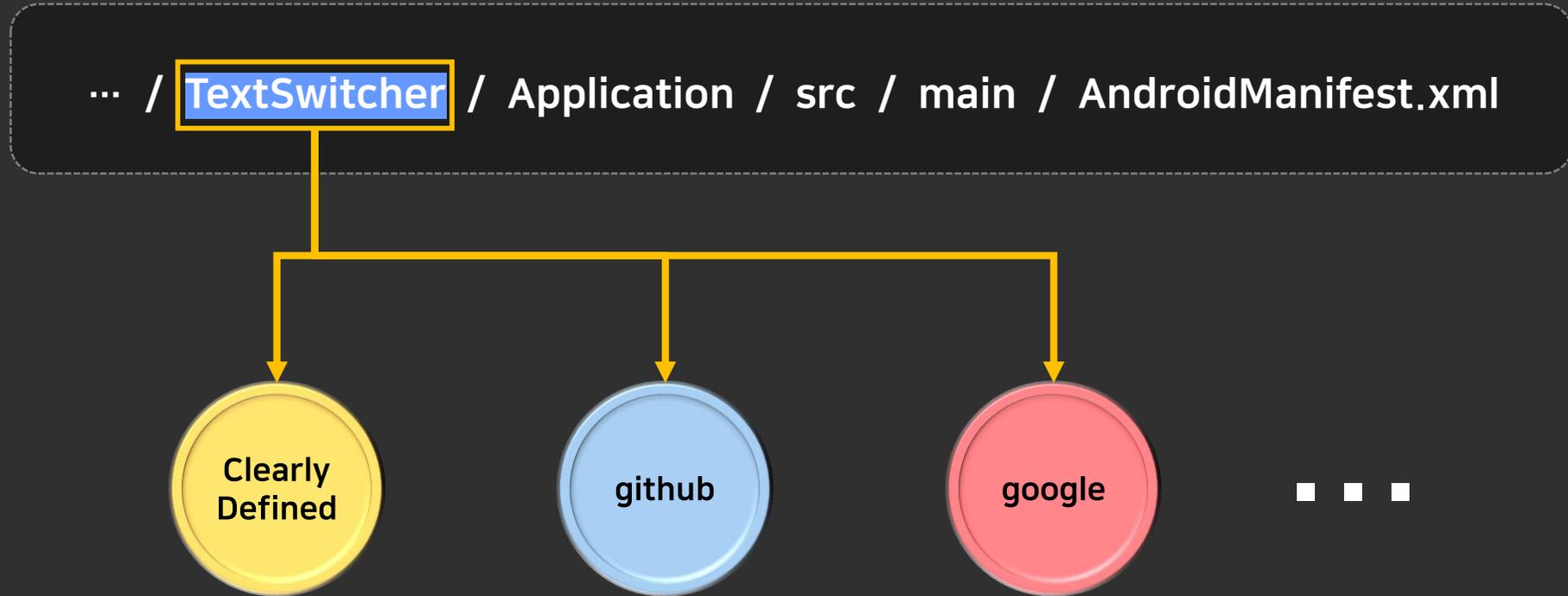
6  
Conclusion

1. Fossology looks for folder names that are likely an open source.  
There is a lot of potentialities.



[빙산](https://pngtree.com/so/빙산) png from pngtree.com

2. You can check whether the folder name is open source or not by querying an external site.



3. Automation is required to increase work efficiency.

It is most important to develop **the logic to derive which folder name to select as the query keyword.**

nccr / breakpad / ~~src~~ / ~~common~~ / ~~include~~ / autotools

I think this is the beginning of our journey with Fossology.

**We have no choice but to go this way.**

Have no choice but to.

Decided to  
burn our bridges.

Thank you for your attention.

Jiho Han (yulica37@ncsoft.com)

From Protex to Fossology

# The End of Document