IP tracking methodology at INRIA

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OpenSource World Forum 2009
Paris, October 2  2009

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Knowledge and technology transfer at INRIA

- Knowledge provider: Scientific Papers and Technical Reports

- Prototype Technology Provider
  
  - Some direct Licensing (proprietary and open source)
  - Toward big company, SME and spinoff,
  - A FSF’s projects contributor i.e.
    - Optimization of GCC
    - MPFR (multiple-precision floating-point computations with correct rounding), now in GCC.
Introduction 2/2
Software assets management at INRIA

Today: \( \approx 1600 \) Projects on gforge@INRIA (open source and non open source)

Participation to 400 Open Source projects having open repository

Reuse of pre-existing components (open source or not)

\( \approx 300 \, 000 \) software development projects release their source code
Key Legal Issues and responsible open source development
Assuming good practices (1/2)

We assume “development in good faith”
when it comes to use pre-existing components
Key Legal Issues and responsible open source development
Assuming good practices (2/2)

Strong need for Tracking technologies and intellectual assets management tools
Legal Situation 1/3

Identify Rights and Obligations

- Identify all authors (?=contributors)
- Identify copyright owners (? employee)
- Identify all components, kind of dependencies
  (! wording “combined”, “link”, “derived”)
- Contractual issues (Consortium agreement)
- Applicable law (moral and patrimonial rights)
- Related content repository
- …

NEED FOR A “HIGH LEVEL” FORMALISATION
## Legal Situation 2/3

1. Position in the chain of rights:
   - ☐ initial software
   - ☐ derived software
   - ☐ heterogeneous software

<table>
<thead>
<tr>
<th>High level description domain name</th>
<th>Domain licensing scheme</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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</table>

For each component

<table>
<thead>
<tr>
<th>name</th>
<th>Version #</th>
<th>location</th>
<th>nature</th>
<th>licence</th>
<th>Integrity (Licence)</th>
<th>Composition rule (nature of the link)</th>
<th>Compatibility</th>
<th>Packaging constraint</th>
<th>comments</th>
</tr>
</thead>
<tbody>
<tr>
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</table>

2. Owner of intellectual Property Rights

**Moral rights**

<table>
<thead>
<tr>
<th>Author name</th>
<th>Affiliation (Employer, …)</th>
<th>Affiliation link (work contract,….)</th>
<th>Contribution nature</th>
<th>comments</th>
</tr>
</thead>
<tbody>
<tr>
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<td>spec.</td>
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<td>code</td>
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<td></td>
<td>doc</td>
<td></td>
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</tbody>
</table>

**Patrimonial rights**

<table>
<thead>
<tr>
<th>Organisation</th>
<th>Licensing Contact name</th>
<th>comments</th>
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3. Legal conditions of exploitation

<table>
<thead>
<tr>
<th>Restricting agreements</th>
<th>Restricting Laws</th>
<th>Restricting Licenses</th>
<th>Other binding rule or legal provision</th>
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<tbody>
<tr>
<td></td>
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4. Other enforceable IPR against software

<table>
<thead>
<tr>
<th>Patent</th>
<th>Trademark</th>
<th>Copyright</th>
<th>Database EC law</th>
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</table>
Legal Situation 3/3
Need for a standardized implementation

- **Toward a standardization process**
  - Definition of normalised OSS licence denominations
  - High level description formalization / Composition rules

- **Apply to** a large set of source code from **different development communities**

- With a focus on **licence compatibility** issue (QualiPso A1 WP 1.3)
QualiPSo IP Tracking methodology (A1 WP1.4.1)

A definition

We proposed a generic IPT methodology within Qualipso EC funded research project and implemented it for our own organisation.

■ The aim is to set up an appropriate legal governance and process

● to determine and follow the legal situation of a CBCD software during its development process, in order

● to make sure that this legal status is compliant with the development and exploitation intends of the CBCD software editor.
1. High level Description of the software
   (Description of the software Architecture, functionalities, modules or components)

2. Definition of the scope of the Audit
   (Main objectives)

3. Determination of the Legal Situation

4. Problem Identification and Risk Evaluation

5. Solve Blocking/Critical Problem

6. Insurance, Dissemination and IP tracking
QualiPSo IP Tracking methodology (A1 WP1.4.1)
An implementation at INRIA

- This IPT policy is actually in test phase at INRIA and based on:
  
  - A training program for developers and support staff to foster their awareness of IP tracking issues for CBCD software
  
  - A multi-skilled team composed of technical staff, legal persons and technology transfer officers in charge of the legal governance of the software development
  
  - An IP tracking methodology using software tools (i.e. FOSSology license checker)
QualiPSo IP Tracking methodology (Phase 3)

Questionnaire assisted phase

(*) provenant d’un tiers ou d’un autre développement INRIA
QualiPSo IP Tracking methodology (Phase 3)

*Increase trust using tool based methodology*

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**Ask People (Questionnaire)**

- First Legal Situation (Perceived LS)
  - **FREE**, Can be done at large scale
  - Assume good practices

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QualiPSo IP Tracking methodology (Phase 3)

Increase trust using tool based methodology

**Automatic source code analysis (Fossology)**
> Second Legal Situation (Determined LS)
**FREE**, Can be done at large scale
Assumes good practices

**Ask People (Questionnaire)**
> First Legal Situation (Perceived LS)
**FREE**, Can be done at large scale
Assume good practices
QualiPSo IP Tracking methodology (Phase 3)
Increase trust using tool based methodology

Automatic source code comparison
based on corpus (Palamida, Blackduck, ..)
> Third Legal Situation (third part LS)
$$$$, more expensive, legal due diligence
Needed if you assume bad practices

Automatic source code analysis (Fossology)
> Second Legal Situation (Determined LS)
FREE, Can be done at large scale
Assumes good practices

Ask People (Questionnaire)
> First Legal Situation (Perceived LS)
FREE, Can be done at large scale
Assume good practices
Conclusion

**Intellectual Property Tracking Methodology** for components based and collaboratively developed software is proposed **within Qualipso EC Project** and **under testing at INRIA**.

Comply with **governance** or coordination level in charge of IP tracking issues (INRIA, EU, Others ?)

Involve **multi-skilled team** (dev team, lawyers, management, ..)

A tool based **process** using FOSSology as license checker **tool**, **covering XX % of our needs** (Others ?)

A better defined and **enhanced “Legal” quality software** toward standardization
References

- Open (Research) issue toward a legal framework for OSS, FOSDEM 2008
  ROUSSEAU
- Guide de diagnostic du logiciel (INRIA Internal document, DTI/SPIV 2006) GRATEAU and FONTAINE
- Toward an open-source technology transfer model DALLE and ROUSSEAU,
  Proceeding of the 4th Workshop on Open Source Software Engineering
- IP Tracking: A methodology for Component Based and Collaboratively Developed software M. FITZGIBBON, L. GRATEAU, G. ROUSSEAU Qualipso EC funded
  Project, Deliverable D1.4.1, Diffusion Status : Public January 26th, 2009

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