

Open Source Software for Cadastre and Land Registration – A Viable Alternative?

XXIV FIG International Congress 2010

Sydney, 13 Apr. 2010

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a joint project by FAO and FIG-Commission 7
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White Paper: Open Source Software



- Software is strategic resource:
 - IT is not just a "commodity" that satisfies functional specifications;
 - software is **know-how** and needs conscious care and maintenance.
- What is Open Source Software?
 - source code is openly available;
 - software can be copied, disseminated and used at random;
 - software can be adapted and passed on.
- Examples:
 - in office environment: Linux, OpenOffice.org, Mozilla Firefox, etc.
 - in database management: PostgreSQL, PostGIS, MySQL, etc.
 - in GIS: GRASS, Quantum GIS, uDIG, GvSIG, OpenJUMP, ILWIS, TerraView, etc.
 - in web applications: Joomla, CartoWeb, MapBender, etc.

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White Paper: Advantages of OSS



1. long-term cost savings
 - independence from a specific producer puts software client in a better position
 - cost savings of up to 90% in first year
2. protection of investment
 - proprietary solutions create direct dependency on the producer
3. stimulation of innovation and economy
 - local producers can participate in value creation chain
 - benefits for local economy as well as local innovation potential

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White Paper: Advantages of OSS



4. security and transparency
 - due to open source code, errors and security holes can be better detected and quicker eliminated
 - distributed quality control
5. equal opportunities
 - educational institutions, public administration, financially disadvantaged regions can benefit



White Paper: Factors that constrain the spreading of OSS



- too strong dependency on existing solutions
- low publicity of OSS



White Paper: Prejudices



- There is no professional support !
 - not true, many ICT companies have long standing experience in OSS solutions.
- Open source products are not suitable for mission critical applications !
 - not true, Linux and Apache Server are in service for many years.
 - large user community is very efficient for testing.
- Legal situation is not clear !
 - not true, OSS is only published with a clear licence certified by Open Source Initiative (OSI).
- Open Source Software is free of cost !
 - not true, development, maintenance and support cost as much as for commercial products.



FLOSS-Cadastre Project by FAO (in cooperation with World Bank and FIG-Commission 7)

Reason for project: several projects in developing countries failed, mainly because of high licence costs.

Aim of project: explore the field and initiate the development for a Cadastre and Land Registration OSS platform.

Phases of project:

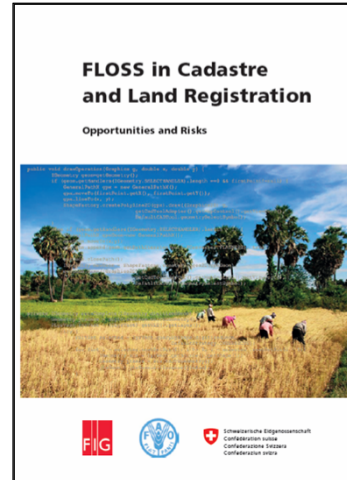
1. **Exploratory phase** → scoping paper by G. Pieper in 2007 (see presentation at FIG-WW 2008)
2. **Input from potential users** → Conference in Dunedin, NZL in May 2008
3. **Developing modules** → OSCAR (see presentation by Hay and Hall)
4. **Country case studies** → to get first experiences
5. **Getting recognition** as an official Open Source project
→ e.g. OSGeo



New Publication

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www.fao.org/nr/tenure/
www.fig.net/pub/fao/floss_cadastre.pdf

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Experiences and Perspectives with FLOSS

Strengths:

- FLOSS allows cost effective solutions with high potential of added value;
- further developments benefit all;
- no limitations in terms of scalability.

Challenges:

- more difficult and different challenges for the users, they have to master the technology (including the source code and documentation);
- users have to initiate further developments and – if a module does not exist yet – to pay for it.

Perspectives:

- consolidation (architecture, code, user interface);
- further developments according to user needs.



FLOSS vs COTS

It is crucial for both FLOSS and COTS:

- to have local support available;
- to have education and training possibilities established;
- to have a national contact person or institution in place to:
 - open the access to the international FLOSS community
 - make translations from and to English
 - establish documentation in the national language
 - organize and support trainings

Differences:

- license fees;
- flexibility and scalability;
- users have to formulate their needs and commission their realization

Commonalities:

- requirement analysis;
- system specification;
- technical and management capacity;

POTENTIAL BENEFIT for developing countries: know-how is being established locally and remains there.



Open Source Software – An FIG Perspective

FLOSS is an issue of today's life, we cannot keep our eyes closed.

But:

- FIG needs to provide an unbiased view;
- FIG is not into promoting or favouring FLOSS against other software.

FIG-Commission 7, Working Group 3 has prepared a publication for the XXIV FIG Congress.

FLOSS: A Viable Alternative ?



FLOSS in Cadastre and Land Registration

Thank you for your attention !!!

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