

Open Source Software Workshop – Welcome!

ITEA 2 Symposium 2008
Rotterdam, 21 October 2008



Open Source Workshop – Introduction Agenda (09:00-10:30)

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ITEA 2 Symposium 2008

OSS Workshop

- Welcome!
- Participants & Background
 - Panelists & other participants in the workshop (includes you!)
 - ITEA activities: ITEA 2 Open Source Software Inventory
- On the importance of Open Source Software for Europe
 - An Overview & Motivation
- Discussion
 - Position statements by the panelists
 - Open Discussion (including participants from the floor)
- Summary & Towards an Action Plan

Open Source Workshop – Panellists

ITEA 2 Symposium 2008
Rotterdam, 21 October 2008



Open Source Workshop – Introduction Panelists from ICT clusters & Companies

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OSS Workshop

- From ICT clusters
 - Prometeo-IRISLibre-Cenatic (Spain): **Jesus Bermejo**
 - Aerospace Valley (France): **Christian Labezin**
 - Open Source Business Foundation (Germany): **Frank Sempert**
- From Companies & Projects
 - Airbus & projects: Gene-Auto + Topcased: **Marie-Line Valentin**
 - Mandriva & project: GGCC: **Arnaud Laprevote**
 - Philips & project: COSI: **Frank van der Linden**
 - Apertus: **Juan Jose Pablos**
- Moderator
 - University of Skövde (Sweden): **Björn Lundell**
- Organiser:
 - ITEA 2: **Erik Rodenbach** & **Philippe Letellier**

Open Source Workshop – Introduction

Who is the moderator?

.....

- Björn Lundell, Ph.D. is ...
 - the technical manager in the (ongoing) ITEA-project COSI
 - the project leader for “Open Source Action in Swedish Organisations”, an industrial OSS project
 - the founding chair of Open Source Sweden, an industry association established by Swedish Open Source companies (www.opensourcesweden.se)
 - (has) lead the Swedish activities and co-lead a work package in the EU FP6 CALIBRE project (2004-2006).
 - a founding member of the IFIP Working Group 2.13 on Open Source Software (www.ifipwg213.org)
 - the organiser of the Fifth International Conference of Open Source Systems (OSS 2009), which is to be held 3-6 June 2009 in Skövde, Sweden (oss2009.his.se). Submissions welcome!



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ITEA 2 Open Source Software Inventory

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ITEA OSS Inventory

Highlights

- January, 2004: ITEA Report on Open Source Software
- Many ITEA/ITEA 2 projects contribute(d) to Open Source
- Some remarkable projects (non exhaustive list):
 - Call 1 (1999): PEPITA
 - Call 5 (2002): OSMOSE
 - Call 7 (2004): COSI & OSIRIS
 - Call 8 (2005): GGCC & GENE-AUTO
 - Call 2 (2007): OSAMI-COMMONS
- New Open Source project proposal:
 - Call 3 (2008): OPEES

ITEA OSS Inventory

Project Contributions

- PEPITA
 - Created a four-level generic platform with secure connections for (mobile) phones, smartcards and computers via a common architecture, including an API for virtual services and an Enterprise Java Beans (EJB) platform for application services.
 - Platform is distributed on ObjectWeb website as Open Source under the name JOnAS.
- OSMOSE
 - Created a hierarchical and modular software component model, with architectural frameworks and patterns for the construction of open, distributed, component-based middleware
 - Results are available publicly on the ObjectWeb website

ITEA OSS Inventory

Project Contributions

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- COSI
 - Heterogeneous distributed development
 - The COSI project investigates the consequences for software engineering of moving to heterogeneous development, integrating for a large part commodity software purchased as COTS or included as Open Source Software.
- OSIRIS
 - Open Source infrastructure for run-time integration of services
 - The project developed a cross-domain open source platform that will offer support and life-cycle management for service provision, aggregation, delivery and dynamical contextual adaptation

ITEA OSS Inventory

Project Contributions

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- GGCC
 - Open Source Compiler solution
 - The GGCC (global GNU compiler collection) project aims to extend the free GNU operating system compiler collection to support the new needs of the European software industry by globally processing several compilation units and using static analysis techniques.
- GENE-AUTO
 - ‘Ready-to-quality’ automatic code generation from ‘simulink-type’ models
 - This project will develop an open source software code generator for companies involved with real-time constrained embedded systems.

ITEA OSS Inventory

Project Contributions

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- OSAMI-COMMONS
 - Open Source Ambient Intelligence Commons
 - OSAMI-Commons targets open source common foundations for a dynamic service-oriented platform which is able to personalise itself in large diversity of co-operating Software Intensive Systems (SISs).
- OPEES
 - Open Platform for the Engineering of Embedded Systems
 - Proposal in the current Call 3



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On the Importance of OSS for Europe

Björn Lundell, University of Skövde, Sweden (bjorn.lundell@his.se)

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Open Source is important

... **and its importance is expected to increase**

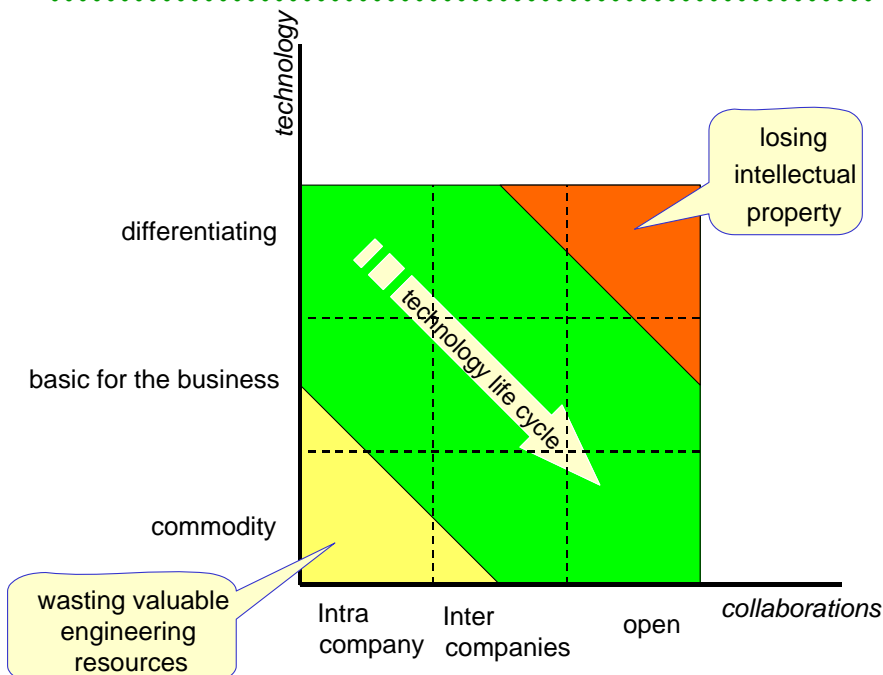
- >30% of the Norwegian software industry has “more than 40% of their income from OSS related services or software.”
Hauge et al., In The 4th Int. Conf. on OSS (OSS 2008)
- The OSS **turnover** in Europe increases **50% per year**
 - From 2,200 M€ in 2007 and should reach 12,700 M€ in 2011
Pierre Audoin Consultants
- By 2010: Open Source-related
 - services could comprise 32% share of all IT services
 - share of the economy could reach **4%** of European **GDP**
FLOSS Impact
- By 2012, **80 percent** of all commercial software will include Open Source technology

Gartner

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Commodification of software

Knowing **what** to make open and **when**



An
Open Standard
is a necessary
but not sufficient
pre-requisite
for an
Open Collaboration

Open Standards are important The European Commission states ...

- “**Standards** are clearly more **important** than ever.”
- “[The Commission] must not rely on one vendor, it **must not accept closed standards**, and it must refuse to become locked into a particular technology”
- “[The Commission] has committed that for all future IT development and procurement procedures, **the Commission shall promote** the use of **products that support open**, well-documented, **standards**. Interoperability is a critical issue for the Commission, and usage of well-established open standards is a key factor to achieve and endorse it.”

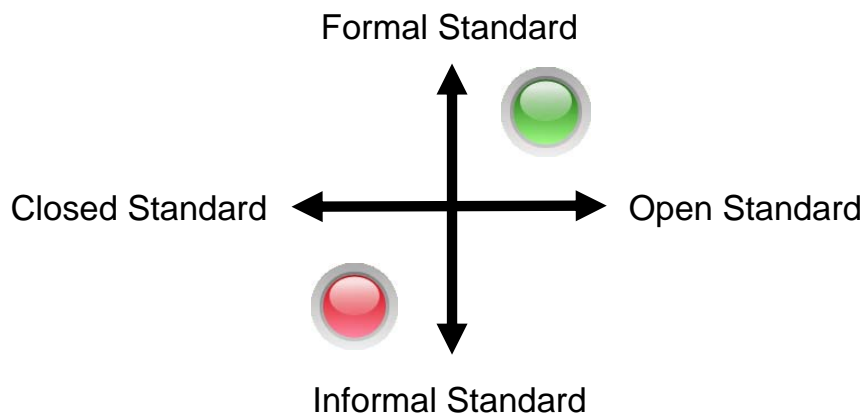
*Neelie Kroes, European Commissioner for Competition Policy,
Brussels, 10th June 2008*

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OSS facilitates Open Standards ... but software can still be non-OSS!

“If [an Open Standard] doesn’t have an open-source **reference implementation**, the term ‘standard’ is an abuse of the language.”

Eric Raymond



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Open (or closed) Standards ... for different products ...

.....



A Definition (Lundell, 2008) of Open Standard An Open Standard ...

.....

- is developed and maintained in an **open process**
 - **Open reference implementations** make the **interpretation** of the standard **more precise**
- is specified in all its detail in an **open specification**
 - **Available** for everyone **free of charge**
 - Makes **implementation** (and competition) **possible**
- may be **freely used** (for all time) without any restrictions
 - Possible **patents** must be **licensed royalty-free**
- needs open reference implementations in order to:
 - minimize the risk of unwanted lock-in effects
 - make it more difficult for individual companies to (consciously or unconsciously) deviate from an open standard

Development and Adoption must address ... several different lock-in scenarios ...

- Vendor lock-in
- Standard lock-in
- Tool lock-in
- Model lock-in
- Transform lock-in
- System lock-in
- Educational lock-in

*Keep control of the key
so that you can unlock*



Role of OSS in Education? ... and how to avoid educational lock-in?

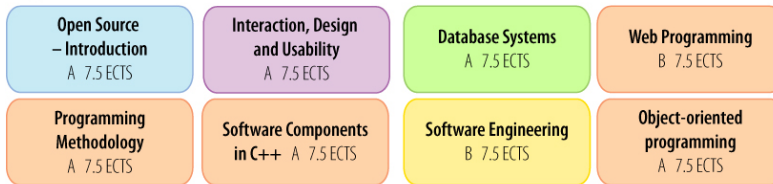
- Many Universities use and cover various aspects of OSS
- OSS as a 'tool' and/or 'discipline'?
- Different focus and emphasis
 - 'Classical' OSS in Computer Science and/or Software Engineering study programmes
 - How to handle the multi-faceted and cross-disciplinary nature of Open Source?
 - 'Core' OSS or broader (e.g. Open Innovation, Open Standards, Open Content, ...)?
- Different levels (Ph.D., M.Sc., B.Sc., pre-University levels ...)?
 - Specialised study programmes in some Universities

Open Source Education

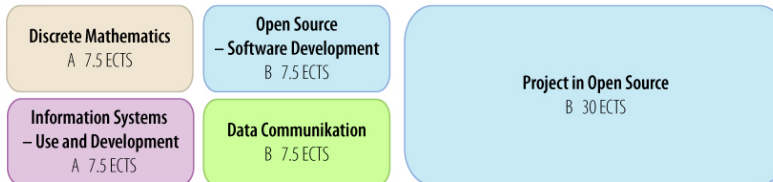
Example of an OSS study programme

Open Source – Systems Developer 180 ECTS

Year 1



Year 2



Year 3



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Open Source @
University of Skövde,
Sweden

www.his.se/opensource

3 year B.Sc. programme
opensource@his.se



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Open Source Workshop – Position Statements & Open Discussion

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European leadership in Software-intensive Systems and Services. The Future of Embedded and Distributed Software.


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Open Source Workshop

Position statements by the Panellists

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- ... from ICT clusters
 - Prometeo-IRISLibre-Cenatic (Spain): **Jesus Bermejo**
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Open Discussion, with participation from ...

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- ICT clusters
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 - Apertus: **Juan Jose Pablos**
- The floor & the moderator (*who will pose some Open Questions*)
 - All participants in the room, i.e. **You!**
 - University of Skövde (Sweden): **Björn Lundell**

Open Questions

... for the panellists & the floor ...

.....

- What is the (single) most significant **opportunity** for use of Open Source in European Industry?
- What is the (single) most significant **threat** against use of Open Source in European industry? ... and what can be done to overcome this?
- What is **hindering** OSS from really taking off in Europe? ... and what **decision** could EU governments take in order to better the support European software industry?

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Summary & Towards an Action Plan

Philippe Letellier, ITEA 2

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Thank you **for your attention**



European leadership in Software-intensive Systems and Services. The Future of Embedded and Distributed Software.

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