

QUALOSS

QUALity of Open Source Software



FOSDEM Brussels, Feb. 24th 2007

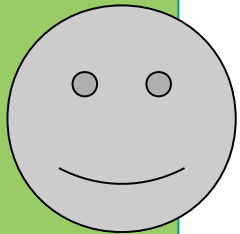
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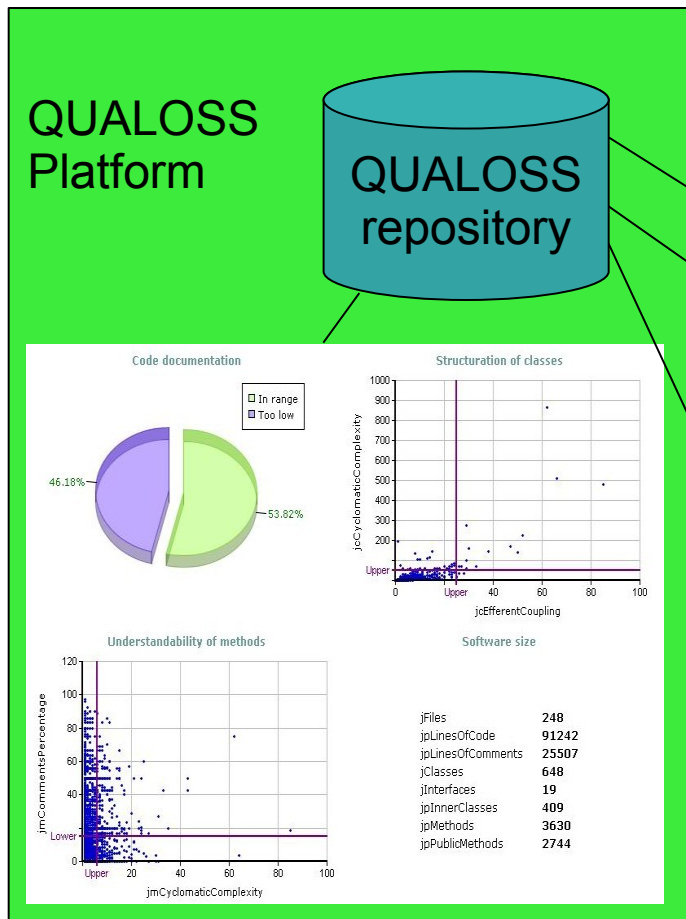
QUALLOSS: What?

QUALLOSS = method to assess evolvability and robustness of Free *libre* Open-Source Software

Integrator:
Now I know
what FLOSS
tool best fits my
quality needs



FLOSS comm:
Now I know
how integrators
gage quality



FLOSS repositories

FLOSS project repositories

Filtered FLOSS data

- FLOSSMETRICS
- FlossMole
- SQO-OSS

Other related repositories

- Com. Vul. DB
- Amazon
- Interviews

QUALOSS:

How?

- Use the Goal-Question-Metric paradigm
- Empirically apply QUALOSS quality models on 50 F/OSS projects
quality models: quality characteristics X metrics
- Measurements may be automated, partially-automated, or fully manual



QUALOSS and FLOSS: Help goes both ways

- QUALOSS helps by
 - Identifying F/OSS data important to Integrators of F/OSS
 - Explaining why F/OSS data are important in relation to quality characteristics
- F/OSS community can help by
 - Providing Data
 - Validating Data
 - Giving Feedback on Quality Models
- Impact: Help F/OSS projects out last proprietary solutions and continue increasing in popularity

QUALOSS Plan

- QUALOSS is iterative
 - Year 1
 - o Build a functional prototype of QUALOSS platform and measurement and interpretation manual
 - o Preliminary results for FOSDEM 2008
 - Year 2 and 2 1/2
 - o Incrementally build the QUALOSS platform and manual in 3 iterations based on lessons learned from prototype
- Interested F/OSS community could help
 - Comment on the prototype quality models (End 2007)
 - Validate data of 50 selected F/OSS projects (Sp 2008)

Past 6 Months

- Past 6 Months
 - Usage Scenarios on 2 dimensions:
 - o Platform vs. End Application
 - o Embedded, Ext. Server, Int. Server, Desktop, Devel.
 - Identified quality characteristics from
 - o Interviews of Integrators of F/OSS
 - o Existing Models and Standards
 - Boehm, McCall, NASA
 - ISO 9126
 - o F/OSS assessments Models
 - QSOS, OpenBRR, OSMM
 - o Scientific Literature
 - Software Evolution, Systems Dynamics

Next 6 Months

- Next 2 months
 - Identify Mapping between quality characteristics and metrics/indicators
- Next 6-7 Months
 - Architecture of Prototype
 - Select 5 F/OSS projects
 - Import data from 5 projects in prototype QUALOSS platform
 - Apply prototype quality models on 5 F/OSS projects
 - Validate usefulness of results

Practical Info

Who	Status	Country
CETIC	Research center	Belgium
Namur Univ.	University	Belgium
Madrid Univ.	University	Spain
Fraunhofer IESE	Research center	Germany
ZEA Partners	Industry	Belgium
MERIT	University	The Netherlands
AdaCore	Industry	France
PEPITe	Industry	Belgium

How Long: 2 ½ Years Sept 2006 – Feb 2009

Budget: Cost: ±3M € E.C. Funding: ±2M €

Questions





Qualoss

