



OSS and ICT Standards

*Second Joint ITU-NGMN Alliance Workshop on Open
Source and Standards for 5G
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- ***EU Research programs***

FP5 – workprogramme 2001

- ***IST 2001 - IV.3.3 Free software development: towards critical mass***

FP6 IST work programme 2003-2004

- ***"The development of open standards and open source software will be encouraged when appropriate to ensure interoperability of solutions and to further innovation"***

H2020

- ***EC Open Source Software Strategy***

EC supports ICT standardisation



European

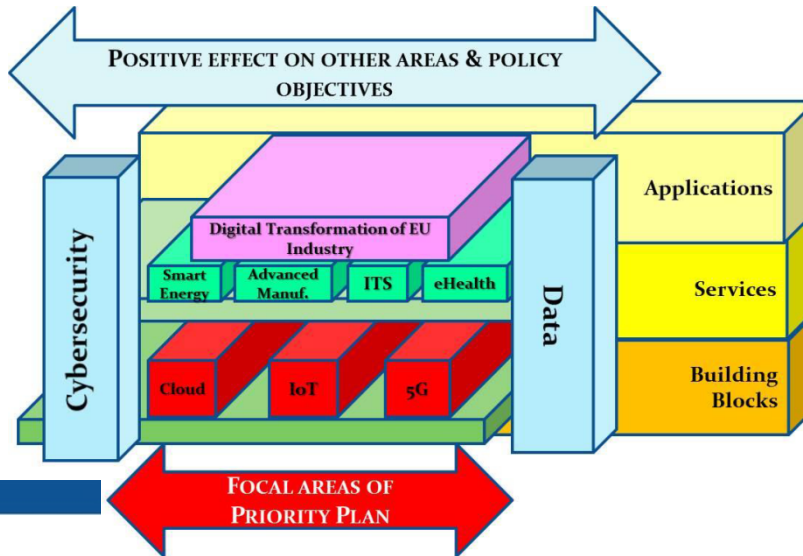


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COMMUNICATION FROM THE COMMISSION TO THE EUROPEAN PARLIAMENT, THE COUNCIL, THE EUROPEAN ECONOMIC AND SOCIAL COMMITTEE AND THE COMMITTEE OF THE REGIONS

ICT Standardisation Priorities for the Digital Single Market



Joint Initiative on Standardisation

A deeper and fairer Single Market

@ICTInnovEU #ICTstandards

ICT STANDARDS

bitly.com/ICTstandardsEU

What is an ICT standard?

Standards ensure **Interoperability** between



1

Formal standards organisations



2

Other global standards organisations

ECMA International, IEEE, IETF, OASIS, OMG, W3C, etc.

Who sets standards?



Did you know standards ...?

- are set up voluntarily
- allow interoperability of key technologies
- are produced by the industry for the market
- bring new products into the market
- are a source of new technologies

THANKS TO STANDARDS
Consumers can choose between different products, knowing they will work together.
Public Authorities can offer cross-border services to citizens.



MSP

STANDARDS

OPEN SOURCE

SIMILARITIES

- ✓ Collaborative processes
- ✓ Broad participation
- ✓ Contribution based
- ✓ Contribute to open innovation
- ✓ ...

DIFFERENCES

- ✓ **Defined Procedures, scope**
- ✓ **Maintenance**
- ✓ **IPR – FRAND (RF)**
- ✓ **Open, transparent**
- ✓ **Building blocks, interoperability**
- ✓ **May trigger innovation (at implementation level)**

- ✓ **Agile, evolving**
- ✓ **Quick cycles**
- ✓ **RF, OS licenses**
- ✓ **OS Governance**
- ✓ **Code, implementations**
- ✓ **May implement standards**

Open Source vs Standards

- *Are they mutually exclusive?*
- *Or rather complementary?*
- *Is everything black and grey?*

**Trusted interaction between both Communities
can only be a win-win situation**

Existing projects / cooperations



SDOs looking into it

- *ITU-T [w NGMN]*
- *ETSI. Workshop + Board OSS*
- *OASIS*
- *ECMA*
- *W3C*
- *CEN/CENELEC*
- *DMTF*
- *IEEE*
- *...*

Scenarios combining standards with OSS

- 0. OSS as a complement to a standard*
- 1. Ex-post OSS implementation*
- 2. Reference implementation*
- 3. Standardized implementation*
- 4. Ex-ante OSS implementation*



Objectives of CSC Phase 2 wrt OSS

- Understand the relationship between Open Source (OS) and standards and vice-versa via the identification of a number of interaction scenarios.
- Clarify how these scenarios apply to Cloud Computing.
- Collect information upon the perceived strategies and visible actions of the SSOs regarding Open Source.
- Collect information upon the perceived strategies and interactions of the Open Source projects towards standardization.
- Propose initial recommendations to foster positive interaction, to suggest areas for collaboration between both communities



Key recommendations of the report (1/2)

Collaboration

- Encourage collaboration between OSS communities and SSOs working on similar or closely related topics, e.g. NFV and OPNFV, possibly through joint events like workshops, plugtests;
- Encourage the creation of “joint projects” between the SSOs where the standards are developed and Open Source communities in order to push for close relationship, interaction, exchange and cooperation;

Roadmaps

- Make sure that collaboration between SSOs and OSS organizations address the known Cloud Computing (standards) gaps, e.g. in Service Level Agreement, Security, Privacy and Integrity;
- Encourage Open Source initiatives to standardize their specifications that are important for interoperability (e.g. APIs: Data Model, Protocol, Format).



Key recommendations of the report (2/2)

Organization

- Facilitate the implementation of Open Source solutions based on Standards (developed or under development in a SSO);
- Ensure that pre-standardization activities (e.g. those emanating from research projects) can be sustained over a longer period in order to allow for a smooth transition of results within Cloud Computing standardization.

Marketing, dissemination, promotion

- Encourage SSOs to increase the dissemination and communication efforts with to goal to increase the awareness of plans for/work on new Cloud related specifications, targeting the OSS communities in the Cloud area;
- Engage industrial users of Cloud OSS;

EC action: Making more use of open source elements by better integrating open source communities into SDOs' standard setting processes

- Report on state-of-play and key aspects to be addressed
- Extensive consultation and a workshop involving key stakeholders, OSS communities and SDOs.
- Roadmap of future activities through:
 - Extensive consultation with key stakeholders
 - OFE (Open Forum Europe) Report "Standards and Open Source: Bringing them together"
 - Study from JRC on "Interaction between Open Source and FRAND licencing in standardisation"



OFE Report: Recommendations for further collaboration between OSS communities and SDOs

OSS communities and SDOs should:

- Benefit from common actors.
- Align standard setting and OSS development processes.
- Increase the participation of OSS communities in the standardisation process.



Conclusions/Reflections

- *The alignment/convergence/co-operation of open source and standardisation can speed-up the standards development process and the take-up of ICT standards*
- *Standards can provide for interoperability for OS implementations*
- Positive interaction between OS and Standardisation Communities => Agile and flexible relation needed
- Different models are possible (including mixed ones)
- Need to identify possible issues
- Need for cooperation to tackle them
- Build on existing good practices, exchange findings
- Keep open, flexible minds



Many Thanks !

http://ec.europa.eu/growth/sectors/digital-economy/ict-standardisation_en

<https://ec.europa.eu/digital-single-market/en/standardisation>

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CSC Phase 2 main Objectives

- Collect feedback from the Cloud Computing users on the findings of CSC Phase 1;
- Provide a follow-up of the progress in Cloud Computing standards, under the form a snapshot;
- Ensure the largest possible dissemination of the results of both phases 1 and 2 are made available to the European stakeholders
- Address the issues of interoperability and conformance, with a focus on security;
- **Clarify the relationship between CC standards and the available open source implementations of Cloud Computing components and solutions.**

3 key (orthogonal) aspects for OSS

- **The licensing model:** Proprietary versus open source software. Even within OSS different licencing schemes (e.g. permissive and non-permissive) are available.
- **The development model** describing the barrier to collaboration, ranging from projects that are developed by a single person or vendor to projects that allow extensive global collaboration.
- **The business model** describing what kind of revenue model was chosen for the software. Options on this axis include training, services, integration, custom development, subscription models, “Commercial Off the Shelf” (COTS), “Software as a Service” (SaaS) and more.