

# The New European Standardisation Strategy – Will It be Adequate for the Future Internet?

Kai Jakobs

Comsys

RWTH Aachen University

Aachen, Germany

[Kai.jakobs@cs.rwth-aachen.de](mailto:Kai.jakobs@cs.rwth-aachen.de)

## I. INTRODUCTION

Like other communication systems, the Future Internet (FI) will be based on a plethora of standards. Those who lead the standardisation initiatives today are thus likely to also lead the actual technology development and the implementation of the FI.

For decades the EU's standardisation policy has focussed on the European Standardisation Organisations (ESOs; CEN, CENELEC, ETSI) and their international counterparts (WSC; ISO, IEC, ITU, respectively). Specifically, private standards consortia were largely ignored. This has changed only recently, when a study commissioned by the European Commission (EC) made a number of suggestions on how to adapt the European ICT standardisation policy to better cope with reality [EC, 2007].

This study was eventually followed by a White Paper [EC, 2009] and an associated public consultation. The outcome of these activities was the so-called 'standards package' [EC, 2011a-d]. Among others, it includes a Communication from the Commission entitled 'A strategic vision for European standards' [EC, 2011a]. This paper looks at the most important measures proposed in this Communication with respect to their suitability to enable the EU (and the ESOs) to play an adequate role in the development of standards for the FI.

## II. A STRATEGIC VISION FOR EUROPEAN STANDARDS – DISCUSSING SOME OF ITS ELEMENTS

The first remarkable thing about this Communication is the fact that the Commission has abandoned the original idea of a dedicated ICT standardisation policy; it covers all areas of standardisation. However, several of the ICT-specific suggestions made in the White Paper have been included.

Going for an overall standardisation policy might have been a bit of an double-edged sword. On the one hand, a European Standardisation System (ESS) better adapted to today's realities and market needs, together with a uniform, overarching standardisation strategy would be a good thing for Europe. Plus, ICT systems and artefacts extend into so many other sectors that a distinction would be artificial in several respects anyway. On the other hand, and adopting a more pragmatic stance, a new standardisation strategy is urgently required in the ICT sector. To wait for an overarching strategy to be implemented might imply the risk that the ESOs, and

thus Europe, will be marginalised in some ICT domains, including the FI. Arguably, the ICT sector is the one in most urgent need of modernisation of the ESS and its adaptation to the environment within which it is supposed to function.

Another interesting aspect is that apparently the EC would like to tighten their grip on the ESOs. For example, funding shall be "*conditional on [the ESO's] fulfilment of performance criteria and their meeting [of] defined objectives*". The EC has long regarded standardisation as a policy tool and as a light form of regulation (see e.g. [Bilalis & Herbert, 2003], [Vardakas, 2003]). It remains to be seen which 'objectives' will be defined and by whom; very little (if anything) is concretely mentioned here. In any case, whether or not a stronger political influence on standardisation is a good thing is at least questionable.

One likely such objective is that "*the ESOs should reduce the average time to develop European standards or European standardisation deliverables requested by the Commission by 50% by 2020*". The claim that the 'official' standardisation process is too slow and generally inadequate for the ICT domain is not new, and neither is the call for faster standardisation (see e.g. [Besen, 1995], [Cargill, 1995]). On the other hand, Sherif [2003] argues that one needs to look at the type of standard to be specified. He develops a framework that allows to analyse the adequate speed of standardisation on a case-by-case basis. Specifically, he shows that 'faster' does not necessarily equal 'better'. Likewise, Jakobs [2002] argues that speed is no longer the overriding issue and that it is more important that a standard is useful for as many stakeholders as possible, and will continue to be so for a long time. This is further corroborated by Gerst et al. [2009] who show that in the age of e-commerce all technologies – and thus standards – including those for infrastructure technologies, have an impact on companies' businesses and should thus not be a rush job.

The Communication also puts quite some emphasis on the adequate representation of stakeholder groups, something that had only been touched upon in the White Paper (this 'adequate representation' may well be another 'objective'). This is a commendable stance. However, it is not quite clear whether or not this is really a wise criterion, to be applied without qualification. Typically, the stakeholder groups under-represented in standards setting include SMEs, consumers, NGOs (which don't really play a role in the ICT sector), and

users – whoever exactly they are. These days, it is sometimes next to impossible to make a clear cut between e.g. users and manufacturers. Oracle, for example, is a major vendor as well as a large user of ICT systems. Moreover, Jakobs [2000] challenges some of the issues associated with the participation of users in ICT standardisation. He argues that users do not normally have meaningful requirements prior to system implementation and use, which means that many (most) of their requirements will emerge too late. Moreover, these requirements will definitely vary between user companies, depending on e.g. their sector of activity, their ICT sophistication, and numerous other aspects. It thus appears doubtful that increased user involvement will lead to better standards. The situation with respect to consumers is even worse (see e.g. [Fabisch, 2003], [Hauert & Graz, 2011]). Another aspect to be considered here is the apparent contradiction between the demanded increased speed of standardisation and the call for the inclusion of a wider range of stakeholder groups. The latter will increase the size and the diversity of the respective standards working groups, and will thus almost certainly prolong the standardisation process.

The Communication also states that “*The ESOs are expected to continuously improve processes for bringing ICT standards developed by other standards development organisations into the European standardisation system*”. However, it stays clear of any answer to the question how exactly these standards will be integrated into the ESS. A fast-track procedure is mentioned in passing, as is an ‘alternative production line’. There are, however, no suggestions on how these should look like and how they should be implemented. The EU might want to look to the international bodies here. ISO has a ‘fast track’ procedure in place. This process allows ISO members with voting rights and Class-A-Liaison organisations to submit third-party specifications for the penultimate level of the standards. ISO also provides for the submission of ‘Publicly Available Specifications’ (PAS) by eligible entities. A PAS is document that represents consensus of an external organisation or of the members of an individual working group (that is, it does not meet the requirements for an ISO standard). The ‘Approved Referenced Specifications Originator Organization’ (ARO) mechanism allows ISO to reference third-party documents (not originating from ISO, IEC, or ITU). However, it should be noted that the PAS-process is not extensively used; as for the ARO process, currently eight organisations have been registered (including, e.g., the W3C, OASIS, and the IETF). ITU-T has an analogous mechanism in place, the ‘A.5 Qualified Organizations’; ECMA, IETF, and IEEE are among them. A third mechanism is ISO’s ‘Partner Standards Development Organization’ (PSDO) co-operation agreement. Under this agreement, either a PSDO’s specifications may be fast-tracked to FDIS level, or a standard may be developed jointly by ISO and a PSDO. Thus far, IEEE and ASTM are the only PSDOs. However, the current ISO Strategy explicitly states the goal to strengthen co-operation with industry consortia.

In addition, CEN/CENELEC’s Unique Acceptance Procedure (UAP) provides a suitable mechanism to “*achieve*

*rapid approval of an EN, if it is reasonable to suppose that the document is acceptable at European level*”. Thus far, this procedure has almost exclusively been used to transpose international standards into European ones. However, it may be applied to any type of document, whatever its origin. The scheduled time frame for such a transposition under the UAP is five months.

### III. HOW TO PROCEED – SOME VERY BRIEF THOUGHTS

The applications of the Future Internet and its underlying technologies will cover an extremely wide field. Accordingly, in addition to the ‘formal’ bodies a multitude of consortia will be active in the standardisation of these applications, services, and technologies. This poses several issues with respect to speed, co-operation, preservation of European interests, and global interoperability.

Co-operation between standards bodies working on similar problems will be a sine-qua-non. This holds especially for the co-operation between SDOs and consortia, as well as between different consortia. The latter is outside the scope of the EU and the proposed new EU strategy caters for several aspects of the former. However, several issues still need to be addressed.

Specifically, how consortium standards can be incorporated into the European standards system without violating one of its crucial characteristics – being contradiction-free – remains unclear. Here, a simple but meaningful option would be to leave this to the W3C. After all, virtually all (major) consortia work at the global level, and thus the global SDOs are their ‘natural’ partners. Once accepted as ISO/IEC standards consortium specifications could then be incorporated into the European system. Moreover, it is highly unlikely that organisations like e.g. OASIS or the W3C will develop specific European (versions of their) standards or incorporate decidedly European requirements.

These days, standards for the FI are developed by all ESOs. This makes co-ordination and co-operation unnecessarily complex. A ‘European JTC1’ for the ICT sector that co-ordinates the European activities and serves as partner for ISO/IEC JTC1 and other relevant bodies might well help simplify the situation.

The status of the ESOs’ respective ‘lightweight deliverables’ (CEN/CENELEC’s ‘Workshop Agreements’ and ETSI’s ‘Industry Specifications’) should be reconsidered. While offering a lower level of consensus than European Standards it might in some cases still be helpful to reference e.g. a CWA (in policies or public procurement) than to have nothing to reference at all. At the same time, a well-defined transposition path from lightweight specifications to European standards needs to be implemented; currently there is none. Today, developers of such a specification need to start from scratch if they want to turn them into a full-blown standard; a very time-consuming exercise.

Despite the above, I feel that the Commission has done a reasonably good job so far. It remains to be seen, however, if and how the remaining open issues will be resolved.

References are available upon request.