Strengthening the Role of Europe in the Standardisation of the Future Internet

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I. INTRODUCTION

The Future Internet (FI) will be shaped by its underlying standards. Those who lead the standardisation initiatives today are thus likely to also be in the driving seat when it comes to the actual technology development, and the implementation of the Future Internet.

Many private standards consortia have established themselves as credible sources of important ICT standards. Moreover, some Asian countries, most notably China, are becoming increasingly active and important in ICT standards setting. As a result, the European Standardisation Organisations (ESOs) face the risk of being marginalised.

On the other hand, ESOs are leading the way in some ICT sectors, most notably in mobile communication. This suggests that a re-thinking of the European standardisation approach is overdue; better ways to exploit the European strengths and to overcome her weaknesses need to be identified. The paper discusses these issues and makes some suggestions how Europe could keep playing an important role in the international ICT standardisation arena.

II. KNOW THY COMPETITORS

The US and the EU continue to be the powerhouses in ICT standardisation. This may soon change, though, with the increasing influence of Asian countries, most notably China. This paper will briefly discuss the differences of these three national/regional standardisation systems in the ICT sector.

There are over 250 ANSI-accredited national SDOs in the US, three European Standards Organisations plus 30 National Bodies, and basically one central entity in China – the Standardization Administration of China (SAC).

These numbers are perhaps best suited to highlight the different approaches. The US system is highly decentralised and comprises organisations each typically serving one specific industry sector. The US administration does not intervene in the process, nor does it mandate any standards. In such a distributed environment, with largely autonomous actors, maintenance of a coherent set of standards, with no conflicting specifications, is next to impossible. Accordingly, the United States Standards Strategy only requires that *"The process encourages coherence to avoid overlapping and conflicting standards"* [ANSI, 2005].

The individual US-SDOs are accredited by ANSI, which also co-ordinates their activities. ANSI is also the only US representative to international bodies (such as ISO and IEC).

The European approach is much more centralised. Also, the European Commission (EC) does have an influence over the ESOs. This may primarily be attributed to the fact that a significant percentage of the ESOs' funding comes from the EC. But even beyond that the EC influences standardisation *"The Commission takes a role both in initiating and facilitating the development of standards ...."* [EC, 2008].

Well established rules for the co-operation between the individual ESOs and between ESOs and national bodies make sure that neither are European standards in conflict with each other, nor national standards with European ones.

China has established a very centralised standardisation system. The ultimate power in standardisation rests with the State Council that supervises SAC, which is a government agency *"... in charge of the unified administration of standardization throughout the country ..."* [PRC, 1989].

Today, China is taking an increasingly active role in international standardisation. This holds for participation in existing processes (e.g. China's contributions to the ITU increased six-fold between 2006 and 2010), as well as for the capability to initiate own standardisation processes and promote alternative technical developments (TD-SCDMA is a case in point).

The European approach to standards-related innovation has been promoted as an alternative to the 'US way' in terms of organisation and policy. China may well become an additional hub (and perhaps a third model) of standards-related innovation. Due to the sheer size of China's domestic market, this would likely have a global impact [EU-China, 2010]. Europe must recognise this as both a challenge and an opportunity, and work with China to further her policy aims.

III. A BRIEF SWOT ANALYSIS

In addition to the above, a set of criteria may be used as the basis for a brief SWOT analysis of the European Standardisation System (ESS). Criteria deployed include [Jakobs, 2009]: standards emergence; types of standards; stakeholder representation; integration of standards consortia; links between public R&D funding and standardisation; and regional coverage

A. Strengths

- Close and long-standing co-operation with international counterparts (CEN, CENELEC).
- A comparably simple standards landscape (providing contradiction-free standards).
- Well-established, consistent system with close links to European policy makers.
- Well respected internationally (due to the development of several hugely important standards; primarily ETSI).
- Pioneers in innovative approaches (i.e., Partnership Projects, such as 3GPP; ETSI).
- Flexible approach to standardisation (primarily ETSI).
- Representation of at least part of the 'Third Estate' in standards setting (notably SMEs and consumers).

B. Weaknesses

- (Financially) dependent on policy makers.
- Slow-moving process, not 100% suitable for fast-moving technologies (CEN, CENELEC).
- Sub-optimal type of representation (through national delegations; CEN, CENELEC).
- 'New Deliverables' lack necessary level of consensus.
- Policy largely ignore standards consortia.
- Limited links between R&D and standardisation.
- Overly European focus (CEN, CENELEC).

C. Opportunities

- Good links to international bodies can be used to strengthen the EU position in the global arena.
- High reputation can attract both European and international know-how, contributions, and members.
- Flexibility will be helpful when newly emerging topics will have to be addressed.
- Wide participation increases democratic legitimacy.

D. Threats

- Financial dependency may reduced global importance.
- Slow processes, EU focus, and national representation may lead to international marginalisation.
- Limited level of consensus may render 'New Deliverables' irrelevant.
- Continuing to ignore consortia may leave Europe stranded with possibly irrelevant European standards.
- Poor links between R&D and standards setting may make it difficult for ESOs to exploit state-of-the-art technical knowledge, render European standards inadequate, and hinder ESOs from addressing crucial future topics.

IV. WHAT 'S GOING ON NOW?

Probably aware of the above, the Commission has realised that "*It is indeed imperative to modernise the EU ICT standardisation policy and to fully exploit the potential of standard setting*". To this end, the White Paper 'Modernising ICT Standardisation in the EU – The Way Forward' [EC, 2009] has been published. It makes a number of 'suggestions' on how to move forward. The most important – and controversial – ones deal with the

- Mandatory ex-ante declaration of maximum royalties.
- Integration of fora and consortia in ICT standardisation. Here, the Commission made two almost mutually exclusive proposals. One foresees the referencing of specific consortium standards (subject to a positive evaluation of the standard and the consortium processes). The other one would require the ESOs to approve standards submitted by consortia.
  There are good reasons to reject both suggestions. Direct referencing carries the risk of jeopardising the coherent and contradiction-free European standards system. Also, it will be hard to convince international consortia to take into account specific European requirements. Moreover, one might wonder if many consortia are actually interested to have their standards referenced by EU policy documents.
  Asking the ESOs to approve standards developed by consortia would significantly increase their workload. Moreover, consortia are global, and so is the coverage of their standards. That is, regional standards bodies would be the wrong partners almost by definition in the first place, unless specific 'European' version of consortium standards were to be developed (which is highly unlikely).

The latest document, a Communication from the Commission entitled 'A strategic vision for European standards' [EC, 2011] was published in June 2011. This document doesn't make mention anymore of any mandatory ex-ante declaration of maximum royalties (which is a good thing; it means that the voluntary such declaration will remain the norm). Rather, those parts that relate to ICT standardisation largely focus on the use of consortium standards for public procurement. These standards and the underlying processes will need to meet the quality criteria defined by the World Trade Organisation [WTO, 2000]. In addition to the use of consortium standards in public procurement, the Commission state that they will increasingly use selected ICT standards in support of European policies, given they comply with the same set of WTO quality criteria. Somewhat disappointingly, the document stays clear of any answer to the question how exactly these standards will be integrated into the European standards system. A fast-track procedure is mentioned in passing; this is at least a step forward from the White Paper that completely failed to make any sensible suggestions in this context; see above.

V. WHAT SHOULD BE DONE

Eventually, a modified version of the suggestions laid out in the Communication will need to be implemented efficiently and effectively. Specifically, the question how to incorporate consortium standards into the European standards system will need to be addressed, most likely by the ESOs.

References are available upon request.