Desirable Qualities of a Repaired and Reformed European Educational Technology Pre-standardisation and Interoperability Incubation Forum - a view

Written by Adam Cooper with contributions from colleagues, Cetis, UK, 2014-02-20, v0.4
This is a discussion document and does not necessarily reflect the views of all Cetis staff.

Background

The word "standard", referring particularly to the encoding and exchange of data between ICT systems, is frequently used without precision. The formal public standards bodies such as the ISO (International Standardisation Organisation), CEN (European Centre for Standardisation), and BSI (British Standards Institute) have their definitions. Other organisations such as IMS Global Learning Consortium or Ministries of Education also refer to "standards". On occasions, academics and researchers publish papers that propose something as a standard. The purpose of this section is not to assert which of these groups or individuals is correct in their terminology but to claim that there is an important process that should feed into the development of good standards (that are used in practice) and to add that this process is currently in need of repair and reformation. They key idea behind this is that good standards to support educational technology are not created on a blank sheet of paper by an elite but emerge from practice, collaborative design, experimentation, selective appropriation of web standards, … etc. Good standards documents are underpinned by a thoughtful analysis of these aspects such that what emerges is useful, usable, and used. The phrase "pre-standardisation and interoperability incubation forum" is an attempt to capture the character of such a process. Indeed, some industry partners may prefer to see a collaboration to incubate interoperability as the real thing, with the formal standardization politics as an optional, and sometimes problematic, add-on. It is our belief that all except the suppliers with a dominant market share stand to benefit from better interoperability - i.e. common means to share common data - and that there is a great deal of latent value that could be unlocked by better pre-standardisation activity and interoperability incubation.

This document addresses the question of repair and reformation in the light of some recent changes to the pre-standardisation landscape that has been described in Cetis staff blogs[1]. The gist of these descriptions is that what we thought was a usefully-open access pre-standardisation forum is no more. This does not mean that "repair and reformation" means we should re-create what has been lost, rather that the loss has tipped the balance down on the side of taking action. What emerges may, quite rationally, be rather different in form to what went before.

Ideals and Pragmatism - an important caveat

The greater part of this document describes a future state that is some distance from our current state of affairs. It is a best-guess at an idealised situation and it is important that readers do not understand us to be saying "we should set this up". The many reasons for this come down to pretty-much the same point: viable collaborative ventures generally emerge in a developmental, rather than inaugural, process. They emerge both in what they do and how they do it.

Hence, although we may seek to act on several of the "desirable qualities" that are outlined below, this would be piecemeal, opportunistic, and subject to evolution according to the accumulation of wisdom and a desire to maximise collective value through accommodating the needs and motivations of multiple stakeholders as they become involved.

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[1] Simon Grant http://blogs.cetis.ac.uk/asimong/2013/10/29/ed-tech-standards-europe/,
 Lorna Campbell http://lornamcampbell.wordpress.com/2013/10/07/cen-learning-technologies-workshop-online-consultation-meeting/

Desirable Qualities

This section summarises some desirable qualities of a European pre-standardisation and interoperability incubation forum. It covers a range of stages from earliest collaborative prototyping through to interoperability specifications that are mature enough to move forward to a public or industry standardisation organisation. The points are not equally applicable to all stages and it should not be assumed that a particular idea - an experiment, proposal, initiative, demonstration, etc - would progress through all stages.

	Desirable Quality	Rationale for Desirability	Comparison to WS-LT[2] as it was, an evaluation of WS-LT...	Thoughts on Form/Function or Candidate Model
	Visibility and Appeal			
1	Be credible, desirable and respected.	This may be implicit in our thinking but may require explicit attention. A new forum must attract participation in practice as well as attracting passive (lurker, consumer etc) interest.		Involve people and organisations that are already respected, followed, noticed etc. Do this from the outset
2	Be attractive to public and private sector stakeholders. Esp to SMEs, start-ups, OSS folk.	Systemic adoption of standards and greater interoperability generally requires action from both public and private sector stakeholders. SMEs and start-ups are important drivers of innovation.	A weakness of WS-LT that I believe most participants recognise. Early reliance on EC funded work set a tone that was partially broken by engagement of RS3G[3] and a move to self-funded work but as "learner mobility" moved off the agenda, this waned.	We should get a good representation from public and private sector actors from the outset. Otherwise it is likely to grow mostly one way and not remain of wide appeal.
3	Provide credible near-to-mid term business benefits sufficient to outweigh input requirements.	Many stakeholders need an incentive to participate beyond altruism or a public sector role devoted to (possibly theoretical) whole-system benefits.	Not specifically attended to. The self-formed group RS3G can be seen as a counterpart to WSLT with this focus.	IMS GLC has been successful in this respect, to judge by its income. We can learn from that but also think about focussing on (in)formally verified demonstrations of working interoperability as a business asset. This would not be partisan to any standards body and with more elasticity than "conformance".
4	Clear about sector coverage (school, vocational, university, training)	Clarity is more likely to bring appropriate people to appropriate tables.	The majority of WS-LT work has been oriented primarily to HE, though not exclusively.	It may be better to be narrow, at least initially.
5	We need to make it easy for people to find out what is going on (discover its relevance to them) and to become progressively involved.	Reliance on face-to-face interactions as the primary means of participation is an issue. Cost is an issue for us all and time+money cost is a barrier to entry. F2F also makes for slow progress.	This is something the way of working required by CEN makes hard.	Native digital working.
	Scope of activity			
6	Activities include initial prototyping, codebash/plugfest	Pre-standardisation needs to show agility, with new ideas easy to try out, throw-out or develop. Both technical and	Clearly an expanded set of activities. Activity under the aegis of RS3G could	Emphasise pragmatic process to foster interoperability rather than the "development of

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[2] The CEN Workshop - Learning Technologies. See the Cetis blogs referred to above.
[3] http://www.rs3g.org

	testing.	user-relevant issues. Not everyone who wants to participate in increased interoperability in practice wants to develop specs.	be seen as filling in for where the WS-LT did not do this but a successor should.	standards" as our mission.
7	Activities include specification drafting,	Documentation is essential for practical interoperability. It allows independent implementation to happen and avoids the risk that one implementation becomes the de-facto standard (to the relative disadvantage of all others). Documentation as a process improves quality.	This is mostly where WS-LT operated.	Although views differ on what constitutes a well written specification, there are ample examples from the past to criticise and applaud.
	Process - participation (general)			
8	Participation requires sign-up to the ground rules, including IP, codes of conduct etc	Participants need to feel safe, not exposed to exploitation or reputational damage. IP is dealt with under items #18, #19.	WSLT had this kind of arrangement.	
9	Open participation – only the necessary checks and balances to avoid systematic abuse, misuse or intentional disruption	Participation by the widest range of interested parties is more likely to lead to viable specifications.	It worked.	
	Process - incubation			
10	Semi-open prototyping	For some prototyping/incubation activity participation would be inhibited if there were to be full transparency. It would be better in these cases for the existence of the work to be discoverable in public but for full access to be subject to #8, above.	Not part of WSLT. Cetis codebashes did use measures akin to Chatham House Rules to protect reputation..	
11	Visibility of achievement	A showcase of achievement will motivate participation.		
	Process - specification work			
12	Open specification development – total visibility of work in progress	Since quality and relevance derive from the involvement of interested parties, we should maximise the chance that they can discover drafts, and become interested and motivated to contribute or express support. There is also benefit in more agile development rather than infrequent major revisions (sometimes posted few days before a f2f).	InLOC approach is a good example of open working (and the difficulty in recruiting feedback from people not already engaged)	
13	Transparent spec development process (this is not just open, but contributions are traceable) and decision-making.	This is necessary for trust and verification of quality.	Although workshop meetings are minuted and the use of a wiki for InLOC clearly relate to this requirement, the CEN process and document management system are incomplete and not user-friendly. Scope for doing it better.	
14	Clear and simple lifecycle for specification work.	This is both: a) to help us be purposeful as a community by being forced to collectively prioritise; b) to more clearly communicate to the wider community of stakeholders and potential contributors where they should give their attention. The lifecycle should enshrine the idea that it is OK to	Yes, although this was sometimes compromised by the submission of proposals to the EC for funding. The use of a formal "business plan" was probably unhelpful over-all.	See the section "Candidates and Models", although a less rigorous approach would be appropriate than exists in some of these examples.

		abandon work; it is better to fail early when failure is coming.		
15	Flexible model of consensus with minimal criteria.	It may be better to not pursue high levels of consensus if this would alienate or discourage participation. Increasing levels of consensus occurs requires increasing levels of effort and time. Pre-standardisation work is inevitably tied up with anticipating technical, business, or social change. Views differ about factors that cannot be known in advance.	Although the "agreement" necessary for a CWA sort-of provides this, it is not ideal to rely solely on face-to-face meetings.	This is a tricky issue but worthy of attention because views differ on the consensus vs effort/time-line trade-off. A flexible model saves us from deciding upon, and enforcing, criteria for high levels of consensus when this is impractical. A flexible model could focus on expressing "how far we got" while also capturing points of dissent and known unknowns.
16	Clearly record identity of those who explicitly approve the specification in development.	Gives a way for people to judge the significance (relevance, credibility, scope) of a specification. This point is the counter-part of the previous point; compromise over consensus should be transparent.	Contributors to CWAs are shown. Agreement is WS-LT as a whole.	
	Outputs			
17	Open access – written products available for re-use including derivation.	Since re-work is inevitably necessary for pre-standardisation products, we should minimise obstacles to this. Open access is also necessary to allow potential adopters to discover stuff; given the status of pre-standardisation activity there will NOT be drivers to pay for standards (e.g. procurement requirements, prior market adoption)	Access and use without derivation.	need a process where appropriate IPR provision is clear from the outset
18	Existing legal framework for IPR, especially the regulation of contributions	The status with respect to patents, copyright, etc needs to be clear otherwise there will be a barrier to adoption or further development. Using an existing framework is necessary because we lack the resource to develop our own AND because proliferation of IPR terms and conditions (T&Cs) adds cost and impedes adoption because each T&C must be checked by legal people in each adopting organisation..	It existed, even if we didn't like all details.	
19	Non-transfer of copyright	Author retention of copyright means we would not need a suitable legal entity to hold it. The transfer of copyright from the creators, even if certain Creative Commons Licence have been applied, may compromise their ability to further exploit the work. Since re-work is inevitably necessary for pre-standardisation products, we should minimise obstacles to this.	A bone of contention for some WS-LT participants with CEN policy.	The necessity of addressing this point is determined by whether an existing entity is used and its IP policies adopted.
20	A managed and curated space	There should be sufficient focus and flow of activity to sustain and engage interest and participation. Communications that are ill-focussed (or off-topic), too many sub-spaces for the activity, proliferation of soap-boxes, etc are likely to cause dis-engagement or non-engagement.		A process for acceptance, custodianship and retirement of outputs.
21	Resources published with	You can't use it if it has vanished. Adopters need assurance	Although CWAs do have homes (and	A "master record" of products hosted by a body

	persistent, resolvable, locators. Human readable documents and machine-readable versions of specifications, schema, vocabularies etc.	that these resources will be accessible to people they will never meet at an indeterminate time in the future.	not hidden within a CMS), the rest was a problem.	that is unlikely to be disbanded, is committed to persistence (including URL) and to the transfer of resources to another such body in the event of its disbandment. Consider use of PURLs.
	Other			
22	European in scope	Other fora do not give priority to the European "marketplace" and educational culture.	Yes, but workshop participation is not strictly limited to Europeans	It should not discourage non-Europeans with expertise to contribute or an interest in supplying the European market.
23	Routes into a range of standards-related fora: formal and informal, public and industry. (e.g. CEN WS or TC, IMS, IEEE, W3C, national standards body, government ministry)	Pre-standardisation work should either be abandoned or move to a forum that best fits the stakeholders, level of demand or urgency, market segment, etc. We cannot assume a single route (if any) is best.	WS-LT had liaisons but was quite isolated in practice.	Promote active two-way relationships. Find ways to co-locate and co-organise meetings and public events. Avoid IPR that would make it difficult for another body to take specifications into their process..
24	Not reliant on project funding for continuation	This is to help us to achieve a long life and not to be always worrying about a "fiscal cliff". Project funding also introduces the risk that work is pushed forward to meet commitments to a funder when it would best be abandoned or greatly revised.	CEN has been a stable home, even though we now feel alienated.	Look for a home that provides the basic infrastructure and within which stakeholders can come and go.
25	Friendly for self-funded work	Although we will still expect public-funded projects to be part of the mix, waiting for funding has delayed work, and contractual obligations make it hard to abandon a flawed idea.	It used to be.	
26	Not reliant on large subscription income	We would be more free to do the right things if not preoccupied with securing subscriptions. Subscription models may also either privilege the views of the agent who seeks subscriptions or of the biggest contributors. We will be more likely to get useful change if influence derives from action and merit. On the other hand, an element of subscription could bring a positive sense of buy-in and require a modest level of commitment.	WS-LT has never had a subscription; on the other hand WS-ICT works well with one.	If an umbrella organistion is used such that infrastructural overheads are not incurred, we might wish to avoid subscription. Otherwise it may be a necessity. Further discussion is needed to explore whether there is useful psychological benefit to having subscription and the extent to which subscription and power-politics can be de-coupled.

Candidates and Models

This section considers both possible "homes" and governance/process models that could be adopted. This might mean an existing entity to work directly in, an existing bodies that would be an umbrella organisation for a new initiative to be created under, template governance structures etc. This section is particularly concerned with the specification-writing aspects of a pre-standardisation and interoperability incubation forum, but a number of issues cross over into the joint-prototyping activities. This must be felt to be "safe" and avoid concerns about reputation or loss of commercial advantage.

Most Relevant to Specification Development Work

W3C Community Groups[4] are open access, with good open "intellectual property" rules, and they are **not** limited to W3C standards-track. W3C would be an umbrella organisation and provide the infrastructure.

The Open Web Foundation[5] has a good standard contributor licence.

The Wikipedia model process and their concept of consensus[6] may contain useful ideas to borrow.

The structures and processes employed by IMS GLC, IEEE LTSC, etc are certainly not appropriate *en bloc* - IMS's is a successful but different kind of organisation to the one envisaged here - but we may wish to adopt or adapt operational ideas.

Mostly Relevant to Incubation/Prototyping Work
The Cetis Codebash[7], and other similar practical developer-oriented kinds of events, provide some background. The ADL eXperience API Design Groups[8] are a more recent innovation which, although they also work on an existing specification, illustrate a potentially interesting model of collaborative incubation.

The Apache Software Foundation[9] is a relevant source for a working model of prototyping/incubation, as is Apereo Foundation[10]. Both are concerned with Open Source Software, and apereo particularly for Higher Education, but this does not mean that the operational models are tightly bound to OSS or to HE.

Other Reference-points

Many of the principles advanced by Open Stand[11] can be mapped to the desirable qualities outlined above, although they cover other issues too.

The materials produced for and after the Jisc/Cetis-organised "Future of Interoperability Standards" workshop on system and process are relevant[12].

The Open Knowledge Foundation[13] has a working model of distributed grass-roots action.

Rights

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[4] http://www.w3.org/community/groups/
[5] http://www.openwebfoundation.org/
[6] http://en.wikipedia.org/wiki/Wikipedia:Consensus
[7] http://publications.cetis.ac.uk/2013/871
[8] http://www.adlnet.gov/tla/experience-api/design-group/
[9] http://www.apache.org/foundation/
[10] http://www.apereo.org/content/incubation
[11] http://open-stand.org/principles/
[12] http://publications.cetis.ac.uk/2010/283 and http://publications.cetis.ac.uk/2010/72
[13] http://okfn.org/