To my best recollection the terms, “validation standard” and “anticipatory standard” were first introduced to me within the VSO at the height of the Futurebus policy. The conclusions drawn cannot be attributed to anyone in particular and seem to be generally unknown to the general standards community.

Validation Standards

The term “validation standard” describes the process when standards are offered to the public on more or less a take it or leave it basic. Sometimes this is done by a few manufacturers who privately get together and agree to form a SIG or a trade association. Examples of this would be the PCI SIG, PICMG 2.0 and historic groups such as the Multibus Manufacturer's Association. It is only recently that there has been much regulation of this sort of activity other than basic laws restricting collusion or other actions that are view as a restraint of trade.

Some standards are either brought directly or subsequent to the formation of a trade association to an accredited standards organizations in a form that is substantially complete. Examples of this would be IEEE 1014 the original VMEbus, IEEE 996 PC-AT, VITA 4 Industry Packs (Green Spring), and VITA 22 Cellbus.

Anticipatory Standards

Anticipatory Standards on the other hand originate as a group activity. This more typically happens in a formal standards body such as IEC, ANSI or their designated standards bodies such as NEMA, IEEE or the VSO. However, some trade associations develop sufficient bureaucracy to support this sort of activity. An example would be the current crop of PICMG activities.

Validation versus Anticipatory

Validation standards have an obvious advantage. The process of standardization is usually swift, the documents are focused as a result their nearly single parent birth, and because they usually represent equipment already offered on the market the originators have a good justification for resisting modification.

Anticipatory standards have had, in my opinion at least, some impressive failures. The basic problem is that when people come together, even if there is one central company providing the bulk of the work, each participant wants to see their particular interest served.

A couple examples that I view as more or less spectacular failures would be Futurebus, Infiniband (the equipment standard part of the implementation) and recently, on a much smaller scale, VITA 34. I think that the reasons that I included each of these three are diverse enough to warrant some conversation.

The result can be architectures that are so comprehensive that for any single activity, there are a host of features that must be provided for at least in software infrastructure but which are not used.

The other side to flexible and comprehensive architectures is that with so many possibilities, the vendors who would like to support such an effort usually can't support them all and yet, can't predict

which one to support so product offerings lag and semiconductor interface development may be handicapped.

IRONY (new observation)

To me, it seems somewhat ironic that the comprehensive standard that is specifically architected to serve a wide range of applications may be too expensive for any one of the applications by virtue of the additional features required.

To add to this irony, the targeted focused and seemingly limited solution sometimes gets used widely because although it is not so capable, it ends up being so cheap that it is worth making it work.

WHY DO EITHER

Validation standards are important because additional suppliers are protected from unilateral specification changes. Companies may not have gotten to provide input during the development, but once the standard is part of an accredited process, any changes must go through a peer review process, which if nothing else keeps slows down the rate of change which can be an advantage as well as a disadvantage.

Anticipatory standards have an unsung (at least as far as I am aware) role in facilitating convergence among competitors. The market does this by itself, but if competitors can work together, as a group, they are less likely to "miss the boat." Of course there is no protection from revolutionary change, and these group activities can possibly lull a group into dismissing the real threat that major technology shifts allow.

Anticipatory standards allow vendors to talk about techniques and skills that when done for a single customer, are usually proprietary to that customer. It also becomes a "defined" demonstration platform for technology, technique and marketing that has value because it creates a context that allows the market to more quickly understand what is being demonstrated.

PREAMBLE

I believe that you may be right that no other organization has such an aggressive policy regarding patent declaration and this must be because the PICMG policy is one the most recent codification of such patent practices for standards development organizations like ours. These are some further thoughts of mine in response to recent comments on the uTCA reflector)

However, PICMG's patent policy does have clear precedent. Calling for early disclosure of IP was already part of the IEEE process several years ago which itself grew out of earlier IEC and ANSI IP policies that developed in parallel with the legal wrangling between companies and associations as epitomized by disputes such as the RAMbus case (tried in the federal court of appeals in Richmond, Virginia, by the way).

At the end of this email, I excerpted a section of a 2002 IEEE policy as an example.

Anyway, after a bit of probably tiresome commentary, will make a suggestion that I first heard made by Danny Cohen a few years ago within the VITA Standards Organization. I think that most of you

know that the VSO is an ANSI accredited standards producing body. Mr. Cohen's suggestion led to the use of wireless networking in all VSO meetings, to help document the process. I've tried to explain the relevance for this practice below.

OBSERVATION:

First of all, I don't think that any policy will ever be able to eliminate potential conflicts between the group standards development process and the development of competitive IP by the employers of participating individuals.

It seems to me that there will always remain very real conflicts that must simply (or not so simply) balance against each other. Our challenge is to protect the process so that the advantage does not become one sided in favor of either the participants or the development of standards. If we don't continue to find this balance, standards development and participation will likely suffer. As others have stated them this conflict is as follows:

1. Standards development organizations cannot force participants to reveal proprietary ideas and internal intellectual property before the point at which they can also make a patent disclosure.

2. The standards development process itself, can stimulate participants to develop new products and ideas which will be refined during subsequent meetings prior to a patent declaration which is the first point at which an inventor can establish protection.

The issue, therefore that seems intractable, is that so long as an individual is working on an "invention" and yet not at the point of making a declaration, his active participation in group discussions will inevitably influence the group.

Therefore, when the individual, finally makes a patent declaration and then responds to the IP call, it seems natural to me that others will feel that they have been taken advantage of or worse that their own participation has ultimately contributed to a competitor's advantage over their own employer.

FURTHER OBSERVATIONS:

This is just seems to be the world we live in and it seems to me > > that this conflict is a natural result of a vibrant commercial and intellectual environment. However, I feel that is one aspect of this process that is within our control and might be improved.

One way to protect everyone's contribution and also make our process more transparent is to ensure that the discussion of new ideas at our meetings is always documented. This makes it less likely that one individual could claim an independent invention that may have been articulated by others or was a logical and obvious extension of such a group discussion (I don't mean to suggest that this situation occurred at all with respect to Chuck's IP statements - this sort of fear may be part of what makes this such an emotional subject).

In addition, it is particularly hard to capture other aspects of the group process as it occurs. For instance, careful corrections to minutes take place when people’s awareness is heightened. However, in "duller" times, recorded minutes often suffer from group neglect. Also it became obvious to all of

us that we need to letter capture the exact wording of important motions which otherwise seem to morph which takes time to unravel and makes the process frustrating and contentious at times.

SUGGESTION:

One way to tighten our process would be to better capture motions, and statements that occur during the meetings by use of wireless participation during the meeting. Some other groups, I am told, will not act on motions to vote that are not submitted in writing during the meeting. Today, with no easy method of capturing this, other than a secretary, it is often hard to recall, later - even an hour later, exactly what was so moved.

I also feel that having this process in place would make good notes seem all the more worthwhile as minutes could be reviewed as they are taken and corrected when they are fresh in the minds of participants.

As a side note, there is the issue of anticipatory standards versus validation standards. I feel that an organization must pursue some of each to remain vital. - If you are unfamiliar with those terms, which I credit to Ray Alderman from many years ago, let me know.

IEEE POLICY EXAMPLE:

IEEE 802 Rules

Slide #1 Approved by IEEE-SA Standards Board - December 2002

Show slides #1 and #2 of this presentation (the following two slides)

. Advise the WG membership that: [slide one]

- The IEEE's Patent Policy is consistent with the ANSI patent policy and is described in Clause 6 of the IEEE SA Standards Board Bylaws;

- Early disclosure of patents which may be essential for the use of standards under development is encouraged; - Disclosures made of such patents may not be exhaustive of all patents that may be essential for the use of standards under development, and that neither the IEEE, the WG nor the WG Chairman ensure the accuracy or completeness of any disclosure or whether any disclosure is of a patent that in fact may be essential for the use of standards under development.

. Instruct the WG Secretary to record in the minutes of the relevant
WG meeting:

-that the foregoing advice was provided and the two slides were shown;

-that an opportunity was provided for WG members to identify or disclose patents that the WG member believes may be essential for the use of that standard;

-any responses that were given, specifically the patents and patent applications which were identified (if any) and by whom.

6. Patents [slide two]

IEEE standards may include the known use of patent(s), including patent applications, provided the IEEE receives assurance from the patent holder or applicant with respect to patents essential for compliance with both mandatory and optional portions of the standard. This assurance shall be provided without coercion and prior to approval of the standard (or reaffirmation when a patent becomes known after initial approval of the standard). This assurance shall be a letter that is in the form of either

a) A general disclaimer to the effect that the patentee will not enforce any of its present or future patent(s) whose use would be required to implement the proposed IEEE standard against any person or entity using the patent(s) to comply with the standard or

b) A statement that a license will be made available without compensation or under reasonable rates, with reasonable terms and conditions that are demonstrably free of any unfair discrimination This assurance shall apply, at a minimum, from the date of the standard's approval to the date of the standard's withdrawal and is irrevocable during that period.

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IEEE-SA Standards Board Bylaws on Patents in Standards IEEE-SA
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IEEE-SA Standards Board - December 2002