



Attorneys at Law

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## THE GREAT *EX ANTE* DEBATE

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The current hot topic at the IEEE, ETSI, and a number of other SSOs is whether to permit disclosure of specific licensing terms – including cost – before final adoption of a standard, with many opposed as well as in favor of such a change. In fact, the Chairman of the U.S. Federal Trade Commission has encouraged prudent adoption of just such *ex ante* disclosures. It's time for SSOs to "just say yes" to *ex ante*, and to dedicate resources to perfecting this new and useful technique.

**Feature Article:**      **Ex Ante Disclosure: Risks, Reward, Process and Alternatives**      **5**

*Ex ante* disclosure of licensing terms is not a monolithic concept. In fact, *ex ante* benefits can be accomplished in a variety of different ways, some already in existence, some currently under discussion, and others that have not yet been actively considered at all. In order to gain the maximum benefits of incorporating *ex ante* disclosure into an SSOs process, the full range of options should be understood, and then adapted to fit the unique membership, goals, and risk tolerances of the organization in question.

**Standards Blog:**      **Microsoft, Adobe and What's Wrong With "Rand"**      **18**

Early this month, the IT world was scratching its collective head over the breakdown of PDF licensing negotiations between Microsoft and Adobe. At issue was why Adobe allowed OpenOffice.org and Apple to bundle native support for saving documents in PDF format for free, but told Microsoft it would have to charge its customers more for Office 12 if it included the same capability. The dispute helps illustrate What's Wrong with RAND.

**Consider This:**      **Evolution, Standards, and Open Source**      **21**

Has evolution programmed us to be born as Republicans and Democrats? If so, we are the product of the earliest, if arguably (in this regard) not the most appealing, open source project.

**News Shorts:**      Available at site only – [www.consortiuminfo.org/bulletins/june06.php#news](http://www.consortiuminfo.org/bulletins/june06.php#news)

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## EDITOR'S NOTE

### HUMAN NATURE AND STANDARD SETTING

There are two themes to this issue of the CSB. The overt one is the early ("*ex ante*") disclosure of licensing terms, a new concept that many would like to incorporate into the standard setting processes of standard setting organizations (SSOs), and that others object to on commercial grounds or out of concern over potential legal risks.

The more subtle theme acknowledges the fact that when something new and unknown is being considered, those with opinions split into two camps: one comprising those that focus on the potential benefits, and another that fixate on all conceivable risks. The result is that achieving consensus can at times become unusually challenging, since each side is looking at the same prospect (as it were) through the opposite end of the telescope.

I introduce both of these themes in this month's **Editorial**, which focuses on the invitation by the Chairman of the Federal Trade Commission to SSOs to embrace – with care – *ex ante* disclosure rather than to dismiss it out of hand. This invitation appeals to the innovators, who see the benefits that can be gained from greater certainty of outcome in standard setting, and are willing to accept some degree of risk in order to secure this reward. But the same process that appeals to the innovators is threatening to those that react to the unknown by retreating to the security of established boundaries, accepting less satisfactory, but ostensibly safer outcomes.

The **Feature Article** for June provides an in-depth examination of what *ex ante* disclosure is all about, what the range of possibilities of implementation are, and how such practices fit within the existing menu of mechanisms that are available to achieve the same goals. By taking this approach, I hope to make *ex ante* disclosure seem less threatening and monolithic, as well as to suggest when it, or another alternative, could be most useful for a given SSO.

The **Standards Blog** selection this month provides an example of how deficient traditional RAND ("reasonable and non-discriminatory") licensing commitments can be, using the breakdown of licensing negotiations between Adobe and Microsoft, as a current example. When negotiations were abandoned, Microsoft was left without the right to include a "save to PDF" function in its upcoming Office 12 release of its popular Office suite, despite the fact that Adobe has made elements of the PDF specification available to ISO/IEC under a RAND licensing obligation. In this context, the appeal of *ex ante* licensing, in contrast to the vagueness of difficult to enforce RAND obligations, becomes clearer.

My **Consider This...** essay this month returns to the theme of human nature, and focuses on how our behavior has evolved over the millennia to engender two very different political philosophies (conservative and liberal), examines why this makes sense under evolutionary theory, and suggests that this process provides an excellent example of what could reasonably be considered to be the first open source project in human history.

As usual, the issue ends with ***The Rest of the News***, being a selection of what I thought were the most interesting and important stories of the last month.

Finally, and as always, I hope you enjoy this issue.

Andrew Updegrove  
Editor and Publisher  
2005 ANSI President's  
Award for Journalism

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## EDITORIAL

### IT'S TIME TO GET ON THE EX ANTE BUS

Andrew Updegrove

It seems intrinsic to human nature that innovation is inevitably followed by ossification. Each new idea is more likely to be challenged than welcomed, but once it becomes incorporated into accepted wisdom, it becomes the new normative referent – what has become fashionable today to call a "paradigm."

Both of the personality types that set up this paradox make sense in their own ways – the innovator takes greater risks and, when successful, reaps greater rewards, while the average Joe plays it safe, settles for less, and supports the status quo that has been proven to work in the past, at least well enough.

Why ossification, though? Perhaps because there are more technicians than innovators in the world, and because the former values security. But whatever the reason, when new ideas come along, there is a tendency to attack the risk of change simply because it is change, simply because with change comes uncertainty. Better to shoot something down and take no chances than to put something on the line in the hopes of gaining the benefit of those changes that prove to be beneficial.

For better or worse, lawyers are particularly well equipped, as well as apt, to defend the status quo when innovative suggestions are made in many contexts, one of which is the further evolution of intellectual property rights policies in standard setting organizations (SSOs)). After all, the stakes are high (e.g., gaining the maximum return on valuable patent rights, and the risk of running afoul of strict antitrust laws that provide for severe penalties), and the law is complex. It is very easy to paint things in black and white, and to offer dire predictions based upon extreme cases rather than to dissect a situation or proposal, isolate the problematic elements, develop a prudent strategy to address each issue, and allow the innovation to be tested in the marketplace and succeed or fail.

Currently, there is a debate in progress in a number of SSOs that provides an excellent example of this dichotomy in action. The subject of debate is so-called "*ex ante*" disclosure (and even negotiation) of licensing terms, meaning that those that hold patent claims that would be infringed by the implementation of a new standard could not only, prior to adoption, announce (as they do today in many SSOs) the existence of such claims and their willingness to make them available on reasonable and non-discriminatory (RAND), but would also be permitted (or required) to reveal the specific economic and other terms upon which they would make those claims available to implementers.

The value of such disclosures is clear, since there would be greater predictability of result in standards creation, with fewer laboriously created standards later becoming handicapped by excessive royalties or

other fees or non-economic terms that inhibit broad adoption. Of course, *ex ante* disclosure would not be a total panacea, since it would have no impact on non-members of the SSO creating the standard, but there have been many examples of valuable standards that have been excessively encumbered by the demands of those that have participated in the development process itself.

How risky would such a procedure be under the antitrust laws? In fact, full negotiation of pricing terms among direct competitors would be dicey indeed. While not out of the question, it would require care and additional infrastructure. But less radical proposals – such as mandatory disclosure of licensing terms, and in particular simply enabling voluntary disclosure – can readily be addressed with reasonable and non-burdensome process controls, even when pricing terms are included.

In fact, *ex ante* disclosure is no more problematic than many other practices that are already accepted as part of the current standard setting paradigm, such as the formation of patent pools (where price negotiations already occur) and the adoption of intellectual property rights policies that forbid royalties entirely. Each has its own antitrust risks, and in each case, these risks have been analyzed and addressed to the satisfaction of those involved. Nonetheless, both practices were seen as threatening (commercially as well as legally) when first proposed.

Significantly, the antitrust regulators in the United States – the Department of Justice and the Federal Trade Commission – have gone out of their way to encourage innovation in this regard. Most notably, FTC Chairman Deborah Platt Majoras issued a policy statement last December that was dedicated to reassuring industry with respect to the viability of *ex ante* disclosure under the antitrust laws. Quite properly, that statement did not suggest that the enforcement agencies would turn a blind eye to improper behavior. But it did send a clear signal that the agencies recognize the procompetitive effects that *ex ante* disclosure could have, and offered assurance that experiments in this area would be assessed by regulators using the "rule of reason" test, which balances such procompetitive results with any related anticompetitive impact.

It should also not fail to be noted that the Chairman's statement was made in response to the requests of major corporate participants in standard setting. This prompt and productive action represents a commendable example of government acting in support of industry to facilitate the competitiveness and efficiency of American production.

It would be a regrettable example of ossification if American SSOs did not embrace the opportunity that has been offered to them. The advancement of technology is all about innovation, and lawyers must be as willing to innovate as their clients. Otherwise, they are working against, rather than in support of, the best interests of those that they serve. Happily, many, if not all, of those engaged in the current debate are already of, or are moving towards, this opinion as well.

It's time for the rest of those involved, whether they are business people or attorneys, to get on the *ex ante* bus. Together, they can work towards crafting the type of prudent and non-burdensome policies that can assure that the specifications that are released in the future will be not only technically useful, but commercially viable as well.

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## FEATURE ARTICLE

# EX ANTE DISCLOSURE: RISKS, REWARDS, PROCESS AND ALTERNATIVES

Andrew Updegrove

**Abstract:** *Ex ante disclosure of licensing terms, including cost, is being actively discussed today in a variety of standard setting organizations (SSOs), with strong opinions on both sides of the issue being offered in what at times has been a heated debate. In this article, I attempt to place this controversy in context by describing ex ante alternatives, the antitrust issues involved, and the alternative mechanisms that can, more appropriate, be employed instead to achieve similar results. I also suggest that ex ante disclosure presents no greater an antitrust challenge than has often been successfully addressed in the past in the course of implementing other changes to SSO intellectual property rights policies and procedures. I conclude by proposing that the standard setting community should embrace, perfect, and when appropriate, add prudently designed process steps to enable ex ante disclosure of relevant patent claims in order to increase the likelihood of issuing commercially viable.*

It would be a strange result if antitrust policy is being used to prevent price competition.

*U.S. Assistant Attorney General Hewitt Pate*<sup>1</sup>

**Introduction:** On June 27 and 28 of 2005, representatives of five of the largest technology companies in the world met with senior members of the U.S. Department of Justice and the Federal Trade Commission. Those five companies were Apple, Cisco, Hewlett-Packard, IBM and Sun Microsystems, and their common objective in seeking an audience with the top antitrust regulators in the country was to encourage the federal authorities to offer public support for so-called *ex ante* disclosures of patent licensing terms in accredited and unaccredited standard setting organizations (SSOs).

"Ex ante" is the Latin phrase that antitrust lawyers and economists use to describe discussions of licensing terms that occur "beforehand" in the standard setting process, as compared to *ex post*, or "afterwards." The point in time to which both relate is the formal adoption of a standard, and the significance of such timing is that disclosures made prior to adoption can be taken into account in creating a standard, while those that follow cannot.

While the owner of a patent claim that would necessarily be infringed by implementing a standard (a "Necessary Claim") has long been encouraged or required in many SSOs to disclose *ex ante* whether it would commit to license the Necessary Claim on "reasonable and non-discriminatory" (RAND) terms, it has almost never been required to disclose the specifics (e.g., the royalty rate) of such a license. Those discussions today only occur outside the SSO (usually *ex post*) on a one-on-one, confidential basis between the owner of the Necessary Claim and the would-be implementer. In some SSOs, *ex ante* disclosures of licensing terms within the standard setting process are specifically prohibited.

The primary reason for avoiding all but the most general *ex ante* disclosures has been trepidation over the possibility of violating the antitrust laws - or even being unsuccessfully charged with such a violation, given the high cost of defending such a charge.<sup>2</sup> Moreover, the available penalties for antitrust infractions include not only treble damages and payment of the opposition's attorney fees, but criminal penalties for

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<sup>1</sup> Pate, R. Hewitt, *Competition and Intellectual Property in the U.S.: Licensing Freedom and the Limits of Antitrust*. 2005 EU Competition Workshop (June 3, 2005), p. 10, at

<<http://www.usdoj.gov/atr/public/speeches/209359.pdf>>, accessed June 27, 2006.

<sup>2</sup> High sensitivity to antitrust liability relating to intellectual property rights licensing is in some respects a hangover from the 1970s, during which the Department of Justice Antitrust Division took a severe view of some licensing practices (and particularly, what came to be referred to as the "Nine No-Nos") that are today regarded as procompetitive. See Pate, *supra*, pp. 1-2.



individuals as well. Given that such discussions in SSOs by their nature are among competitors, sometimes comprising the great majority of the "market power" in a given situation under the antitrust laws, the legal counsel of those involved have been understandably leery of permitting their companies to risk crossing over a line which is at best blurred.

At the same time, there are also costs to avoiding such discussions, most obviously when a member that has promised a RAND license does not make the size of its required royalty known until well after the marketplace has become "locked in" to that standard through wide adoption – and then demands what implementers believe to be an exorbitant fee, resulting in the marketplace being "held up," in the parlance of economists and antitrust experts.

A hold up situation can be still worse, when multiple patent owners each assess royalties or other fees. In such a case, the result can be the total (or near total) failure of the standard setting process, as in the case of the 3GPP telecommunications standard. That unhappy specification, by multiple accounts, is encumbered by royalty obligations that exceed 100% of the nominal price of the products it enables.<sup>3</sup> In the face of such stark realities, those impacted understandably go in search of a solution, especially in those industry sectors where participants believe that the frequency of hold ups is increasing.<sup>4</sup>

The solution that the five companies that met with the antitrust authorities in the summer of 2005 proposed was that a greater degree of tolerance should be shown for, at minimum, the disclosure by owners of Necessary Claims of the economic and other licensing terms that they would require from implementers. Absent such knowledge, they contended, those that set standards are incapable of creating the most "economically efficient" standards: i.e., the specifications that provide the best balance between technical excellence and total cost of implementation. This would especially be so when multiple technical avenues (each with different Necessary Claims that are offered at different costs, and are owned by different SSO members) are available to achieve the same desired result, and when deciding whether to make a given feature mandatory or optional in a compliant implementation.

The topic of the June meetings between the technology companies and the regulators was not random. Rather, discussions (sometimes heated) over whether or not to permit *ex ante* discussions were already under way in multiple venues, including the Patent Policy Working Group of the American National Standards Institute (ANSI), the Patent Committee of the Institute of Electrical and Electronics Engineers Standards Association (IEEE-SA) and the European Telecommunication Standards Institute (ETSI).<sup>5</sup>

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<sup>3</sup> Lindsay, Michael A., *Report on Meetings with Justice Department and Federal Trade Commission* (Memorandum to IEEE and All Parties interested in Potential IEEE Patent Policy Issues), Dorsey & Whitney LLP (November 16, 2005), p. 2, at < [standards.ieee.org/board/pat/1205patagen\\_5-5.pdf](http://standards.ieee.org/board/pat/1205patagen_5-5.pdf)>, accessed June 26, 2006.

<sup>4</sup> In the case of 3GPP, multiple companies each filed complaints with the European Commission against Qualcomm, the owner of some of the patents in question, alleging anticompetitive conduct. As of this writing, the European Telecommunication Standards Institute (ETSI) is considering imposing either an *ex ante* disclosure requirement, or a royalty cap, when it approves the next generation of a 3GPP-based radio standard, to be called Long Term Evolution, or LTE. Mobile operators, a powerful group within ETSI, are particularly exercised, and initially urged ETSI to impose a cap of 5% on patent royalties for WCDMA equipment. Absent such a cap, the mobile industry could spend US \$80-100 billion in royalties between now and 2017, by one estimate. See: *ETSI acts on unfair, unreasonable and discriminatory IPRs*, Informa Telecoms and Media (March 1, 2005), at < <http://www.informatm.com/itmgcontent/icom/s/press-releases/20017339276.html;jsessionid=8677D344F6C61C8D1D377B5788EBAF0E>>, accessed June 27, 2006.

<sup>5</sup> According to the Lindsay memorandum, *supra*, the five companies had requested the meeting with the antitrust regulators in part because one proposal before the ANSI Patent Policy Working Group would, if incorporated into ANSI rules, prohibit *ex ante* disclosures. See Lindsay, p. 2. Another motivation was to reengage with the antitrust regulators following the public, joint hearings that the DOJ and the FTC had held in 2002, at which representatives of a number of the five companies had testified. The FTC later issued a report based on those hearings, but the DOJ report has yet to be released; the DOJ continues to promise that it will be issued. [Private communication with meeting participant.] The FTC report and related press releases and other material may be found at: < <http://www.ftc.gov/opp/intellect/>>, accessed June 29, 2006.

The result of that meeting and other input from the marketplace was a speech by FTC Chairman Deborah Platt Majoras, delivered on September 23, 2005 via pre-recorded video to a conference held at Stanford University.<sup>6</sup> In that speech, Chairman Majoras sought to reassure the marketplace that, while no blank check would be written for competitors to negotiate licensing terms, the antitrust authorities did recognize the potential value of *ex ante* disclosures and discussions, and would employ the "rule of reason" if called upon to assess such conduct. Under that rule, regulators balance the pro-competitive benefits that can be anticipated from the behavior in question with any anticompetitive impact that could also result. Broadly speaking, if the former outweighs the latter, then the practices in question are held not to violate applicable law.<sup>7</sup>

With that encouragement, the debate over *ex ante* disclosures broadened and deepened, but did not become any less difficult. In fact, the debate has become more heated, since a breakthrough on *ex ante* disclosures now seems within the realm of possibility.<sup>8</sup> Many lengthy email debates have been waged in consequence on list-serves hosted by the American Bar Association Section of Science and Technology, ANSI, IEEE and elsewhere. These debates have sometimes assumed an all or nothing, black or white dynamic, making agreement on any actual plan of action extremely difficult to reach.<sup>9</sup>

As of this date, the discussions in several venues have matured to a point where it is useful to anticipate what the first changes to SSO intellectual property rights (IPR) policies to accommodate *ex ante* disclosures are likely to be. While these changes are apt to be modest rather than radical, they nonetheless provide a public proving ground that will demonstrate – or disprove – the value of *ex ante* disclosure, thus providing a model for other SSOs to evaluate in considering whether or not to modify their own IPR policies and rules of procedure.

At the same time, it is important to note that permitting *ex ante* discussions is only one tool that can be used to approach, or indeed to surpass, the same goal of achieving satisfactory results. In this sense, the *ex ante* debate is to some degree of greater significance to accredited standards development organizations (SDOs) rather than consortia, since the latter have engaged in a greater degree of experimentation in licensing and disclosure requirements than most of the former, and the members of consortia have often been willing to accept a more stringent set of requirements as regards Necessary Claims than has traditionally prevailed in SDOs.<sup>10</sup>

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<sup>6</sup> Majoras, Deborah Platt, *Recognizing The Procompetitive Potential of Royalty Discussions in Standard Setting*. Policy statement delivered at Standardization and the Law: Developing the Golden Mean for Global Trade, Stanford University (September 23, 2005), at: <[www.ftc.gov/speeches/majoras/050923stanford.pdf](http://www.ftc.gov/speeches/majoras/050923stanford.pdf)>, accessed June 27, 2006

<sup>7</sup> Or, as has been more turgidly stated by the regulators, the Rule of Reason assesses whether "the relevant agreement likely harms competition by increasing the ability or incentive profitably to raise price above or reduce output, quality, service, or innovation below what likely would prevail in the absence of the relevant agreement." U.S. Department of Justice & Federal Trade Commission, *Antitrust Guidelines for Collaborations among Competitors* (April 2000), 4 Trade Reg. Rep. (CCH) P.13,161, at 20.852, at <[www.ftc.gov/os/2000/04/ftcdojguidelines.pdf](http://www.ftc.gov/os/2000/04/ftcdojguidelines.pdf)>

<sup>8</sup> Some *ex ante* critics, perhaps most notably Richard S. Taffet, of Bingham McCutchen LLP, have advised extreme caution nonetheless regarding *ex ante* disclosures. See, for example, multiple entries by Taffet in this email thread hosted by the IEEE: <<http://grouper.ieee.org/groups/pp-dialog/email/msg00125.html>>, accessed Jun 28, 2006. Others, such as Michael Lindsay, counsel to the IEEE and the author of the June 2005 memorandum summarizing the meetings with the DOJ and the FTC, take a braver approach, as exemplified by this quote from the same IEEE email thread: "[W]e can't very well ignore the real risks of today based on the fear that we *might* see the return of the 'Nine No-Nos' (or, heaven forbid, disco, leisure suits, and other artifacts of the 1970s)." (March 22, 2006)

<sup>9</sup> The IEEE thread cited in the previous footnote, though it provides a more decorous example of exchanges in the ongoing debate, nonetheless includes single emails that are 1,600 words or more in length. Some other threads on the same topic have come closer to recalling the Dan Ackroyd/Jane Curtin "Point-Counterpoint" skits of the early years of Saturday Night Live.

<sup>10</sup> For many years, SDOs have endorsed the concept that the availability of patent protection spurs innovation, and have therefore sought to achieve a balance in IPR policies between honoring the rights of patent holders and seeking the development of standards that are not unduly encumbered by patent-related restrictions and costs. ANSI states this principle as follows: "There is no objection in principle to

As a result of this experimentation, there exists a variety of alternative mechanisms that SDOs and other SSOs can consider in addition to *ex ante* disclosures in order to achieve not only greater predictability of outcome, but also lower final cost to implementers, and therefore end-users and other consumers. The *ex ante* disclosure mechanism should therefore be seen as an important addition to the standard setting toolkit, but not as the only tool available to achieve the same ends, nor as the final and ultimate refinement of the SSO process.

In this article, I will review the context within which the *ex ante* debate is occurring, the range of *ex ante* techniques that can be considered, and the first IPR policy modifications that are likely to see the light of day.<sup>11</sup> I will also review the currently available alternative mechanisms (as well as some variations that I will propose) that SSOs may wish to consider that represent less radical (and in some cases more dramatic) changes to their IPR policies and procedures that may provide meaningful relief while incurring limited risk and not unduly burdening the standard setting process.

## I. The current system

**The problem with RAND:** The most frequent, and perhaps most imperfect, example of *ex ante* disclosure in use today is the commitment to license Necessary Claims on "reasonable and non-discriminatory terms."<sup>12</sup> While simple in concept, this phrase has many shortcomings in practice. Most significantly, the words "reasonable" and "non-discriminatory" have no precise meaning, in part because some that participate in the development of SSO policies have resisted defining these terms more precisely.<sup>13</sup> The concept of a "reasonable" royalty or other fee is particularly problematic. Is a royalty "reasonable" if it is based upon the monopoly value that inclusion in a standard can convey, or should the reasonableness of the royalty be based upon its value on a non-inclusion basis? Similarly, where multiple Necessary Claims, owned by multiple owners, are infringed by a single standard, is the royalty demanded by an individual owner of a Necessary Claim "reasonable" only if the total of all royalties relating to the standard does not exceed what the market will bear?

A further difficulty is that the terms of the actual licenses entered into between the owner of a Necessary Claim(s) and any individual implementer are likely to be confidential, especially if a royalty is involved.<sup>14</sup> How then is one implementer to know whether it has in fact been granted "non-discriminatory" terms? And even if the terms agreed upon in all cases were to be known, would both the licensor and the licensee agree on whether the facts were comparable in two different licenses, after all volume, underlying cross-license, non-economic license terms, and other variables had been taken into

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drafting a proposed American National Standard in terms that include the use of a patented item, if it is considered that technical reasons justify this approach." ANSI Essential Requirements: Due process requirements for American National Standards, Section 3.1, January 2005 Edition, at <http://www.itl.nist.gov/biometrics/Requirements0405.doc>, accessed June 30, 2006.

<sup>11</sup> Current discussions regarding *ex ante* disclosure within IEEE, and to a lesser extent ETSI, will be the examples most frequently used in the discussion that follows. Where statements of fact or summaries of the direction of discussions are included without attribution to a public source, they are based upon private conversations between the author and individuals that are closely involved in the process in question.

<sup>12</sup> Variations on the acronym include FRAND (with the "F" standing for "fair"), which is more frequently used in Europe than in the United States. Section 3.1(b) of the ANSI Essential Requirements, *infra*, includes the following slightly expanded formulation that is therefore picked up in the IPR policies of many ANSI accredited standards development organizations: "A license will be made available to applicants under reasonable terms that are demonstrably free of any unfair discrimination." It is not clear that a court would find any meaningful difference between the various ways of expressing the same concept that are in current use.

<sup>13</sup> Personal experience of the author in moderating the creation of c. 30 IPR policies for consortia. Inclusion of even the most basic definitions of these terms has consistently been objected to by a sufficient number of participants in each drafting committee to thwart such an inclusion.

<sup>14</sup> The most frequent exception to this generality is a non-economic license requirement by a Necessary Claim owner that simply wishes to include disclaimers or limitations on use. Such licenses are typically short "clickwrap" licenses that are posted on public Webpages and are made available to all on a uniform basis.



account?<sup>15</sup> Moreover, antitrust regulators in the United States are loath to become involved in disputes over whether or not a given royalty is too high. As one regulator cautioned:

Bringing a complaint to the Antitrust Division about "excessive" royalties, without more, is a losing strategy. Antitrust enforcers are not in the business of price control. We protect a competitive process, not a particular result, and particularly not a specific price. In fact, if a monopoly is lawfully obtained, whether derived from IP rights or otherwise, we do not even object to setting a monopoly price. A high patent royalty rate, after all, might just reflect that the Patent Act is functioning correctly and the market is rewarding an inventor for a pioneering invention. When a complainant begins a presentation by telling the Antitrust Division that a royalty rate is "excessive," the staff responds that the complainant is putting the cart before the horse. A complaining party must first identify some anticompetitive conduct beyond a mere unilateral refusal to license and beyond the mere attempt to charge, where a lawful monopoly exists, a monopoly price.<sup>16</sup>

Why then do some SSO members not simply define the RAND obligation more exactly? There are several reasons why this does not appear to offer a palatable alternative to *ex ante* disclosure. The first is that while vendors do not wish to be charged extortionate fees when they are licensees, neither do they wish to have their freedom of action systemically limited when they are on the opposite side of the licensing equation as patent owners. Further, opening up the RAND Pandora's box would lead to discussion of such difficult questions as what to do about existing cross licenses? Frequently, there are underlying licensing agreements already in existence between the largest vendors. When a new standard is approved that involves the Necessary Claims of some subset of such a group, there may be few, if any, royalties that actually change hands among the group.

In such a situation, what should "non-discriminatory" mean? That smaller companies that lack an existing cross license agreement with the owner of Necessary Claims should receive a royalty-free license as well? Currently, that is not the case, and many large companies would doubtless prefer to maintain that state of affairs, as it provides at minimum an advantage over, and at times perhaps an effective barrier to entry by, smaller companies that might otherwise build competitive implementations of the same standard.

Because even the largest companies in the information and communications technology sectors are today feeling the pain of a spate of what are perceived to be excessive royalty demands by the owners of Necessary Claims under important standards, these companies are seeking an alternative solution to refining the RAND definition in order to relieve their stress. And that solution is *ex ante* disclosure.<sup>17</sup>

## II. The Ex Ante Alternative

**Why *ex ante*?** While the potential value of *ex ante* disclosures is accepted by most (if not all), there are costs as well as benefits to be considered in adopting an IPR policy that permits, or requires, such revelations. Further, due to antitrust concerns, the optimal timing, degree, and process of disclosure is a matter of debate, with some advocating for conservatism and others for aggressiveness. Thoroughly understanding these costs and benefits is essential, given that standards development is a consensus-based process, and the value proposition supporting any type of *ex ante* disclosure must therefore be

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<sup>15</sup> For a more detailed discussion of the "apples to oranges" challenge of RAND enforcement, see: Updegrave, Andrew, "Microsoft, Adobe and What's Wrong With RAND." ConsortiumInfo.org, Consortium Standards Bulletin, Vol. V, No. 6 (June 2006), at <<http://www.consortiuminfo.org/bulletins/jun06.php#blog>

<sup>16</sup> Pate, *supra*, at 8.

<sup>17</sup> Whether this represents a trend or only a statistical aberration is not clear to me, and I am unaware of any empirical effort to quantify the situation. In either event, there is a perception among some large ITC companies that are active and influential participants in SSOs that the problem has risen to the point where action is required. The situation has also been exacerbated by the rise of patent "trolls" that have not made RAND commitments. While these patent owners are outside the system, the addition of such additional royalty demands on top of those required by those that have made RAND commitments adds additional pressure to an already difficult situation.

clear to at least a significant majority of the decision makers of any given SSO before the necessary process changes can be approved without loss of dissenting members.

**Benefits: the arguments in favor:** Proponents of *ex ante* disclosure cite the following motivations (some of which have already been mentioned above) for advocating such disclosures:

- **Chaos:** The current disclosure system represents a disorderly bazaar, rather than an orderly marketplace. If an economically efficient result occurs, it is only by accident. As a result, the likelihood of efficiency is very low.
- **Variations in experience:** Different industries have widely divergent practices, to the disadvantage of those that are not versed in the ways of that industry. For example, in some standard settings, there are active contemporaneous one-on-one negotiations among patent owners and would-be implementers "in the halls," resulting in advantages for those that are skilled in horse-trading
- **Certainty:** In some SSOs, it is common to make blanket statements that reserve the right to assert a patent and require a royalty, without requiring the respondent to disclose the Necessary Claims themselves. As a result, would-be implementers not only cannot evaluate whether a royalty may need to be paid (does the respondent actually have a Necessary Claim at all?), but whether it agrees that the claim in question is in fact an enforceable Necessary Claim.
- **Avoidance of total failure:** Developing a high quality, useful standard is a lengthy and time-consuming process. If one or more patent owners later set unduly high royalty rates or impose other burdensome licensing terms, even the best standard, from a technical perspective, may totally fail. In such a case, not only the investment in the standard itself, but the much higher opportunity cost to vendors, service providers and end-users alike of the failure to effectively fill a standards gap may be very high indeed.
- **Slow adoption:** Every standard must survive a critical period during which the market decides whether or not to adopt it, with many implementers adopting a "wait and see" attitude. Where licensing terms are known in advance, early adopters can enter the market more quickly, without the need to engage in licensing negotiations where each side may be testing the other, and all would-be implementers can make more intelligent assumptions about whether adopting the standard will prove to be a good bet or not.
- **Avoidance of RAND non-discrimination risk:** Where licensing terms are out in the open, each participant has a much higher level of assurance that it is getting fair terms relative to other similarly-situated industry players, and that it is getting the vendor's "best price" as well – somewhat akin to buying from a "no haggling" car dealer.
- **Avoidance of RAND ambiguity:** As has previously been discussed in detail, the definition of "RAND" is not only vague at the outset, but has yet to be thoroughly developed in case law. *Ex ante* disclosure avoids the need to define "reasonableness" at all, since the participants can simply decide whether the terms that are offered are appealing or not – a much more accurate, market based means of defining reasonableness under precisely relevant circumstances. Even before Chairman Majoras made her policy announcement (and indeed several weeks before the five company meeting), Assistant Attorney General of the Antitrust Division of the Department of Justice delivered a speech recognizing the value of *ex ante* disclosures in avoiding the RAND quagmire:

A difficulty of RAND...is that the parties tend to disagree later about what level of royalty rate is "reasonable." It would be useful to clarify the legal status of *ex ante* negotiations over price. Some standards development organizations have reported to the Department of Justice that they currently avoid any discussion of actual royalty rates, due in part to fear of antitrust liability. [footnote omitted] It

would be a strange result if antitrust policy is being used to prevent price competition.<sup>18</sup>

**Costs: the arguments against:** Real concerns have also been expressed over permitting *ex ante* disclosures, although the degree to which each need in fact be a concern is highly dependent on the details of the process employed to permit such disclosures:

- **Antitrust risk:** First and foremost in the minds of lawyers is the risk of inadvertent violation of the antitrust laws, but following close behind is concern over the costs of defending against any suit or government investigation, whether or not actual liability is finally assessed. SSOs are characteristically (although not always) organizations with few resources and modest budgets, and are ill-equipped to defend themselves against the type of lengthy and expensive litigation that is typical of antitrust suits.<sup>19</sup> In the minds of some, any increase in the threat of catastrophic litigation costs, no matter how small, is sufficient to outweigh any benefits to be derived from *ex ante* disclosure.<sup>20</sup>
- **Management:** Enabling *ex ante* disclosures (and, to a far greater extent, negotiations) would require additional supporting infrastructure. At minimum, times for such disclosures would need to be specified, the disclosures would need to be posted, and those that relate to claims that are relevant to finally adopted standards would need to be publicly displayed for the life of the standard. More importantly, the staff that manages the process would need to be well coached on antitrust concerns in order to be sure that no missteps occurred in the process that might lead to liability. If more than disclosures were permitted (e.g., actual negotiations), the situation would need to be very tightly controlled and supervised, as the antitrust risks would be far higher.
- **Cost of participation:** Some fear that it would become necessary to deploy legions of lawyers (a sobering, if not downright terrifying, prospect) as well as engineers to standard setting meetings, vastly driving up the cost of participation in the standards creation process.
- **Delay:** While mere disclosure of licensing terms would not by definition draw out the standard setting process, those involved might request longer periods of time for certain process steps (e.g., to consider alternative submissions, to formulate licensing terms before any deadline for making disclosures, or for adoption voting) in order to decide what to disclose, and/or how to take

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<sup>18</sup> Pate, *supra*, p. 9.

<sup>19</sup> The total cost to the two SSOs and their members in one recent antitrust case relating to royalties payable in relation to an adopted standard has been estimated to exceed \$10 million – even though the defendants prevailed. See the discussion of Sony Electronics, Inc. v. Soundview Techs, Inc., 157 F. Supp 2d 180 (D. Conn. 2001) in Kelly, John J. and Daniel I. Prywes, *A Safety Zone for the Ex Ante Communication of Licensing Terms at Standard Setting Organizations*, antitrustsource.com (March 2006) at <[www.abanet.org/antitrust/at-source/06/03/Mar06-Prywes3=22f.pdf](http://www.abanet.org/antitrust/at-source/06/03/Mar06-Prywes3=22f.pdf)>, access June 29, 2006.

<sup>20</sup> There is a degree of conflict of interest on the part of some SSOs with full-time staff in this regard. Large and successful SSOs, like any other for-profit or non-profit entity, are led by full-time managers that are loath to jeopardize the economic viability of their organizations. Consequently, while an SSO's members may be willing to accept a degree of risk associated with *ex ante* disclosure, since they hope to reap the direct and substantial benefits of wider adoption of the standards they help create, there is no comparable and direct benefit to SSO management to assume the same risk, since they are not as likely to be judged (or compensated) on that criterion, as compared to other milestones and performance measures. This conflict of interest may explain why the most recent amendment to the National Cooperative Research and Production Act of 1993 (NCRPA) provided a degree of explicit antitrust protection to SDOs - while expressly disclaiming any protection at all for SDO members. Not surprisingly, the amendment was introduced at the urging of several SDOs, who thought that including protection for their members would lessen the likelihood of obtaining greater protection for their own assets – something that is only of concern to SDOs with sufficient assets to represent a "deep pocket" litigation target, in comparison to consortia, which commonly have insignificant assets at best, making them unattractive targets for plaintiffs. See, Updegrave, Andrew, *What Does 1086 Mean to Consortia?* ConsortiumInfo.org, Consortium Standards Bulletin, Vol. III, No. 6 (June 2004), at <<http://www.consortiuminfo.org/bulletins/jun04.php#update>>, accessed June 27, 2006.

advantage of the new information. If actual negotiations leading to amendment of offered terms were to be permitted, a much longer delay might be required.

- **Effect:** Not every standard setting participant would welcome even the "social pressure" of a voluntary disclosure policy, since the hoped-for result of such a policy would be to provide incentives to owners of potential Necessary Claims to not only lay their cards on the table, but perhaps to engage in a reverse auction as well.

While recognizing the validity of these concerns, it is worth noting that many of the issues associated with *ex ante* disclosures already exist – they simply arise at other points and outside the process that begins with the chartering of a working group, and ends with the wide deployment of a standard. In short, in order to decide on a net basis whether *ex ante* disclosure provides a net benefit or a net cost in comparison to the current regime as to a single standard, the entire standards creation and deployment cycle must be taken into consideration, including the costs, delays and negative effects in the current system that would be reduced or eliminated by the introduction of *ex ante* disclosures. When conversion to *ex ante* disclosure is considered on a systemic basis, the development and opportunity costs of those standards that failed due to hold-ups should be factored into the calculations as well.

**Ex ante variations:** There are a variety of ways that one could imagine introducing an *ex ante* element into the standard setting process. The following examples are presented in ascending order of complexity and risk, but not in sufficient detail to more than suggest the types of process elements and antitrust risks that would need to be considered before any of them were actually to be put into place.

**Removing prohibitions on voluntary disclosure:** The simplest alternative is simply to remove any prohibitions in an IPR policy that would prohibit one member from informing other participants in the standard setting process about its specific licensing intentions. Since any such act would be voluntary, neither the SSO nor any of its members would be forced to disclose, nor, assuming the absence of additional facts, would there be any collusion between members to establish either a ceiling or a floor on what a member could demand. Only some SSOs currently have such a prohibition, but one of them is the IEEE. As a result, simply eliminating this constraint is one approach that IEEE is currently considering. However, without providing any additional process steps, voluntary disclosures might not be made at the most useful times, and other participants might react to such disclosures with a degree of conservatism that would diminish the value of the disclosures made.

**Permitting and enabling voluntary disclosure:** If an SSO hopes that voluntary disclosures will become a regular and useful adjunct to its standard setting process, such disclosures should be channeled in a way that is most likely to result in the benefits desired. For example, the time when such disclosures are permitted to be made could be restricted to a period during the standard setting process that is far enough along that the likelihood of infringement could be well assessed by both the owners of would-be Necessary Claim as well as by the other members of the standards working group, and yet early enough that a decision could be made to design around any prohibitively priced Necessary Claims. In those processes that commonly begin with the offer of multiple proposals, each of which could form the basis for the resulting standard, disclosures could be required at the time of submission.

In order to be maximally useful, any SSO that did not already require the disclosure of Necessary Claims would wish to introduce that requirement as well, even if *ex ante* disclosure of licensing terms was not mandatory. Absent such a rule, the goal of predictability and the opportunity to make economically efficient choices between technical value and costs would be defeated, and the prospect would remain that a working group member could later assert a Necessary Claim and require payments that would have been avoided had they been disclosed in timely fashion.

For the same reason, it would be highly desirable to have strong assurances that all participants in a standards development working group had, in fact, disclosed all Necessary Claims. Unfortunately, SSO members have not historically been willing to provide this level of certainty. For example, patent disclosures and assertions are most often made in SSOs under a fairly lax "to the knowledge of the individual participant" basis. Tightening this requirement, while still not requiring formal patent searches or imposing penalties for inadvertent failures to disclose, would increase the predictability of the final

result. In fact, the IEEE is currently in the process of finalizing revisions to its standard patent disclosure form (which it calls a "Letter of Assurance for Essential Patent Claims) to accomplish just this result.<sup>21</sup>

Absent a desire to be more selective, disclosure of Necessary Claims could still be done within the context of the traditional three basic choices (RAND or non-assertion without charge; RAND with right to charge royalties reserved; or no assurance of RAND licensing at all). By combining a strong Necessary Claim disclosure obligation with the ability to make *ex ante* disclosure of specific licensing terms, there would be a degree of "social pressure" for all owners of Necessary Claims to announce terms if they had a strong desire that their patent claims be included rather than excluded in the final specification. Those owners of Necessary Claims that were not highly motivated to have their IPR included could either disclose high royalty requirements, not disclose terms, or decline to license their Necessary Claims at all. In each of these cases, other working group members would be on notice that inclusion of these claims would be, as appropriate, too expensive, too risky, or not possible at all.

Such a system could provide lower costs of implementation, as well as greater certainty in SSOs where there are perceived indirect benefits to owners from inclusion of their Necessary Claims, since a combination of strong disclosure obligations and *ex ante* disclosure could be expected to lead to a competitive sealed bid environment. This would be particularly true if all disclosures were required to be made on a simultaneous basis, providing an incentive for an owner of Necessary Claims to put its lowest, best offer forward. At the same time, no specific disclosure, or indeed any disclosure at all, would be required, easing, although not eliminating, antitrust concerns.

Necessarily, if price and other terms are introduced at a time that collective action can be taken to select among alternatives, or to change the design of a draft specification to avoid infringement (and therefore payment), care would need to be taken in designing the process in such a way as to forbid inappropriate discussion, bargaining or other behavior that could be problematic under the antitrust laws. The simplest and safest approach would be to prohibit any discussion among working group participants regarding the specific licensing terms disclosed, but permit the knowledge of those terms to inform the voting decisions of individual members.

**Permitting and enabling disclosure and rebidding:** While a "sealed bid" system would provide real advantages over a merely RAND process, providing Necessary Claim owners with the opportunity to rebid would permit a "reverse auction" dynamic to arise, leading in some cases to yet lower implementation costs and/or less restrictive licensing terms without appreciably increasing antitrust risks. The best way to minimize antitrust risks would be prohibit all discussions relating to terms among those disclosing Necessary Claims, as well as between other members and those making disclosures, until the bidding process was complete, following which voting would immediately commence.

**Permitting and enabling disclosure, rebidding and discussion:** While permitting *ex ante* disclosure and rebidding would provide real advantages, it would be unfortunate if this was to be at the cost of permitting working groups to discuss whether specific Necessary Claims could be designed around entirely. As a result, an optimized process would specify what topics were fair game to discuss, and what topics were off limits, with (at minimum) the refinement of designs to avoid Necessary Claims being on the list of permitted discussion topics. Working groups could also be allowed to formulate alternative proposals (each with a different mix of Necessary Claims) for member voting, leaving each member to individually decide which alternative provided the best balance between cost and technical result.

**Permitting and enabling disclosure, rebidding, discussion and negotiation:** Adding the ability for working group members, or for a single representative of a working group or SSO, to actually negotiate licensing terms would be a much more delicate process to police, since the potential exists for a group of members to inappropriately pressure an individual member, opening the way to conspiracy and other charges. In addition, antitrust regulators in some countries might view such a process unfavorably regardless of any safeguards that were put into place.

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<sup>21</sup> A recent version of the IEEE form, showing cumulative changes preliminarily agreed upon in connection with the *ex ante* discussions, may be found at [http://standards.ieee.org/board/pat/606patagen\\_loa-redline.pdf](http://standards.ieee.org/board/pat/606patagen_loa-redline.pdf), accessed on June 28, 2006. Note the much stricter knowledge language contained in Section D.2.



**Requiring disclosure:** Requiring, rather than permitting, the *ex ante* disclosure of terms by all holders of potential Necessary Claims could be added as an additional term in most of the scenarios discussed above. Doing so would, of course, increase the completeness of the economic IPR landscape for a given standard under development, but would present its own antitrust issues, as well as perhaps leading to some patent owners deciding not to join the SSO with that policy at all, or not to join in as many working groups, if only direct participants would become subject to this requirement.

**Next Steps:** It seems unlikely that the first SSOs to adopt policies with additional *ex ante* features will choose to implement adventurous alternatives discussed above rather than opting to pursue a more limited and conservative approach. In any such situation that does not involve actual discussion, it should be possible to design a process that would not require immediate supervision by lawyers. Even where discussion would be involved, there is no reason to assume that individual members would need to arrive at meetings with lawyers in tow.

Similarly, in each of the scenarios described that do not allow actual negotiation, all member-related legal and economic decisions could be made at the facilities of individual members by appropriate business and legal personnel, and submitted in writing as part of a clear and controlled process.<sup>22</sup>

No matter what process an SSO might decide to adopt, the chairs of technical committees and others in charge of the process would need to be carefully instructed regarding which types of behavior would be permissible and which would not, and any existing antitrust policy (typically general rather than specific) would merit revision to provide more helpful and detailed guidance. Of course, technical chairs should in all cases be well coached on basic antitrust rules, since there are many other situations that are apt to arise that can present equivalent, or greater antitrust risk.

### III. Ex Ante Alternatives

As earlier noted, *ex ante* disclosure represents only one among a number of procedures that may be employed to better flesh out the IPR landscape underlying a given standards development effort. Each of these alternate procedures has its own advantages (and shortcomings) that may lead it to be a superior technique to use instead of, or a useful tool to use in addition to, *ex ante* disclosure. Accordingly, every SSO should consider the entire range of options available to it when considering any change of its process to incorporate *ex ante* disclosure.

Current disclosure practices in fact vary widely, ranging from IPR policies that forbid disclosure of licensing terms to policies that mandate royalty free licensing, or indeed impose blanket prohibitions on asserting patents at all. Consequently, the concept of *ex ante* disclosure does not represent the bleeding edge of IPR policy evolution, but rather a refinement of practice that may overlay an intermediate section of the spectrum of current SSO IPR policy practice. These disclosure practices (in addition to the widely-used, and already discussed, RAND disclosure regime) and the terms that may attach to them *ex post* include the following:

**The patent pool:** Nominally the formation of a patent pool should provide relief to the problem of excess royalties, while simultaneously alleviating the burden to implementers of engaging in multiple license negotiations. In brief, a patent pool imposes a voluntary license cap on all patent owners that choose to participate, and includes a mutually agreeable formula for allocating royalties received among the patent owners, based upon such data as importance of individual patent claims to the standard, remaining life of the patents in which they appear, and similarly relevant criteria. However, patent pools are difficult to form, can be ineffective unless all owners of Necessary Claims participate, and have their own antitrust sensitivities, among other challenges. As a result, their usage has not been widespread.

Nevertheless, the patent pool is interesting in the current context, since the formation of such a pool is an exercise not only in complete *ex ante* disclosure (or *ex post*, if the standard in question has already been

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<sup>22</sup> This conclusory statement is not by any means intended to suggest that such a task would be simple. For an illustration of the diversity and complexity of factors that could be taken into account in an effort to design a relatively safe *ex ante* process, see the ten-point proposal for an antitrust "safe harbor" recently proposed by Kelly and Prywes, *supra*, at pp.7 – 11.

approved), but in *ex ante* negotiation as well, since all patents are disclosed, each is frequently evaluated by a neutral third party, and all owners then decide whether they will join the patent pool on terms offered or not.

Patent pools are also instructive in the context of other *ex ante* mechanisms, because they provide something of a model for SSO-imposed license fee caps, a concept that has been reported to be currently under discussion within ETSI. Patent pools formed in the United States typically obtain a business review or advisory opinion from the antitrust regulators, and there is therefore a degree of public record on how such mechanisms are viewed under applicable law that can be consulted to advantage by not only those that might wish to form their own pool, but by SSOs that are considering adoption of *ex ante* policies and procedures as well.

**The Royalty Free Commitment:** Some consortia and forums adopt policies that moot the *ex ante* issue entirely by simply providing that participants agree not to assert royalties at all. This goal is typically difficult to obtain, however, because the perceived value of participation to each member must outweigh the opportunity of leveraging its patent portfolio against the resulting standard. For companies with very large patent portfolios, the tradeoff is more difficult to assess absent an expensive and time-consuming review of its patent portfolio, and the danger remains that the SSO may in the future enter technical territory that was not initially anticipated.<sup>23</sup>

As a result, royalty free commitments are most typical in situations where the membership is small, and is made up of highly-committed participants with a well defined goal and (often, but not always) more limited scope of work. Many of these arrangements are created on an unincorporated "promoter-adopter" model that is closer to a cross license agreement than a by-laws and IPR policy regulated, incorporated SSO.<sup>24</sup> Where such a rule is adopted by an SSO, it is typically the result of a conviction that the imposition of royalties (and sometimes the inclusion of other types of licensing terms) would effectively thwart the goals of the SSO.<sup>25</sup>

Because there is no freedom to charge a royalty in an SSO that has adopted a royalty free policy, *ex ante* disclosure of specific patent claims is largely unnecessary, although some organizations include a provision that allows a member to either place a patent claim off limits early in the process, or the opportunity to resign as a member to avoid capture of its patent claims by the royalty free obligation.

An increasingly popular variation in practice is the use of the "non-assertion covenant" in place of a commitment to license without a royalty. This mechanism is elegant in its simplicity: the owner of potential patent claims simply states that it will not assert the patent claims (if any) that it may own against any compliant implementation of the standard in question. The SSO member therefore need neither search for nor identify any Necessary Claims, and the implementer may have no license agreement to negotiate and accept with the Necessary Claim owners at all.<sup>26</sup>

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<sup>23</sup> SSOs with royalty free IPR policies as a result usually allow a member to resign if there is a change in scope. Companies that are members of hundreds of SSOs take only modest comfort from this term, however, as the employees that attend the SSO in question may not always appreciate or communicate the change in scope to those for whom it might represent a cause for alarm.

<sup>24</sup> In the promoter-adopter model (which is especially common in the semiconductor industry), the founders enter into a contractual arrangement as the "promoters," and participate by invitation only. Each promoter may then license "adopters," resulting in a hub and spoke type of licensing environment.

<sup>25</sup> The most prominent example to date of an organization with a large and varied membership that was able to reach consensus on such a rule is the World Wide Web Consortium (W3C). Adoption of the amended Patent Policy of the W3C, which virtually precludes the adoption of a standard that would require the payment of a royalty to a member, required a marathon, three year negotiation. The fact that this result was achieved in an SSO with as broad a scope of work as the W3C is a tribute to its importance, and to the strength of its leadership.

<sup>26</sup> Reliance on non-assertion covenants (also commonly referred to as a "covenant not to assert") carries a degree of legal ambiguity, since there is no actual contract between the patent owner and the implementer. If the covenant was ever violated, the implementer would presumably assert the doctrines of estoppel and reliance, which broadly stated hold that the maker of a promise that expects others to rely

The royalty free commitment is a superior and more complete alternative to *ex ante* disclosure for a variety of reasons. Notably, there is no recurring need to disclose license terms, to make adoption decisions based in part on price considerations, or any need (or temptation) to engage in price-related negotiations, all of which substantially obviates (absent additional facts) much of the antitrust risk that worries those considering *ex ante* disclosure. Instead, there is a single, voluntary, up-front decision by each participant whether or not to agree to a unitary set of licensing terms.

Unfortunately, this mechanism is not suitable for situations in which the participation of a broad array of stakeholders is required, and the value of the standards to be developed has low importance to some of those stakeholders. Were the same commitment to be required of all, some categories of participants whose input or support is crucial would simply not join. The result is often that a more lenient, RAND-oriented IPR policy is adopted instead.

**The open source project:** The greatly accelerating popularity of open source software has brought added urgency not only to royalty-free licensing commitments, but also to agreeing to forego a variety of other otherwise acceptable licensing terms. While originally a commitment to such terms arose only as a result of participating in such a project, the proliferation of open source software has put pressure on software-developing SSOs as well to adopt IPR policies that permit implementation of their standards in open source software. Once again, adoption of such a policy can remove the need for *ex ante* disclosure of licensing terms entirely, because if a commitment to provide a license on open source (GPL or other) terms makes patent claims largely irrelevant.

**Permitted or required implementer license terms:** There are a number of specific terms that are commonly explicitly permitted by IPR policies as being consistent with a RAND licensing obligation, and those with Necessary Claims could be required or permitted, as part of an IPR policy, to include such terms in their license agreements. These terms include:

- **Defensive suspension:** Under this term, an implementer that sues another implementer for infringement of its own Necessary Claim(s) may have its implementation license revoked, thus providing a negative incentive to sue, and, if the licensee has sued the owner of another Necessary Claim(s), leveling the playing field between the parties in the infringement litigation.
- **Reciprocity:** While less often used than defensive suspension, some SSOs permit the owner of a Necessary Claim to require a license back of any Necessary Claims of an implementer. Sometimes this license extends to all other implementers (member and non-member alike), resulting in an expanding IPR safety zone of common benefit.
- **Detailed assertion forms:** Many consortia require their members (or at least those involved in a specific development working group) to use, uniform, detailed response forms to disclose their licensing commitments prior to the adoption of a standard. These forms not only require that the member state whether it will or will not license on RAND terms, but whether or not it will require payment of a royalty. They also typically require identification of the specific claims that the member believes are Necessary Claims (and even, in a more general way, any claims under non-public patent applications), and the section of the draft standard to which each Necessary Claim relates. As a result, other members can evaluate whether they agree with the infringement assertion, and if so, assess the feasibility of designing around the infringement. Thus, while the exact amount of any royalty is not disclosed, a member is permitted to disclose that no royalty will be required at all, providing a clear preference for including those Necessary Claims over those of another member that has reserved the right to charge for its patent claims.

**Other prospective options:** In addition to those alternatives that have already been implemented, there are others that could be imagined that could be deployed in order to increase certainty and lower implementation costs.

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on that promise cannot thereafter go back on its undertaking to the detriment of another that relied on the promise.

**Overall royalty caps:** One mechanism that is currently under discussion (in addition to *ex ante* alternatives) is the imposition of a cap on the total royalties that a standard could bear, as determined by the SSO in which a standard is developed. In effect, this would represent the merging of the concept of a patent pool with the development process itself, with the total royalty being set in advance, rather than as a result of an agreement reached outside of an SSO during, or after, the standards development process is complete.

Nominally, such a procedure would solve all of the same problems that *ex ante* disclosure and negotiations could achieve, and with greater up-front certainty. If the mechanics of a patent pool were also to be implemented (whether within or outside the SSO), implementers would also benefit from needing to enter into a single license covering all Necessary Claims, rather than negotiating and entering into multiple, unique licenses with each Necessary Claim owner. Finally, non-discriminatory licensing would be far easier to ensure.

Conceivably, such a plan would also increase the likelihood that more owners of Necessary Claims would enter the patent pool, since only by participation could a patent owner influence the inclusion of its patent in the resulting standard.

There are, inevitably, disadvantages to such an approach as well. First, the owners of likely Necessary Claims would need to not only be members (or independently agree to the same conditions), but would also need to conclude that they would in fact be better off being bound by the royalty cap obligation than staying outside the process, in order to retain the right to levy a higher tax on implementation. Further, managing a patent pool-like situation requires a far greater degree of attention to antitrust risks than would providing for a simple voluntary *ex ante* disclosure option, in addition to ongoing administrative tasks (although these can be outsourced). As a result, the degree of infrastructure, management, legal attention and other requirements occasioned by adopting a royalty cap process may mean that few SSOs will have the appetite to be innovators in this regard.

In fact, a proposal for some type of royalty cap mechanism was proposed last year by a group of mobile operator members in ETSI, in reaction to their perception that royalty demands had gotten out of hand. However, as of this writing it appears that discussion within ETSI is focusing now on the possible adoption of rules that would permit *ex ante* disclosure rather than the imposition of royalty caps.<sup>27</sup>

Nevertheless, such a concept does have merit, and in some respects would involve less risk than would novel *ex ante* mechanisms, given the fact that antitrust regulators have issued advisory opinions in the past on the structure and operations of patent pools, providing a useful reservoir of guidance upon which SSOs could draw in designing their own procedures.

**Defining reasonability:** Another alternative would be for an SSO to define what "reasonable" means in the context of a patent royalty. While not offering the security of a total royalty cap for all Necessary Claims on a single standard, members could agree on a standard formula to value Necessary Claims that would then operate automatically, thus ensuring a maximum economic burden per claim without the requirement of discussion. Such a formula could also take into account the total number of claims asserted, automatically decreasing the maximum allowed per claim as the number of claims increased. As there would be no requirement that any patent owner would be required to become a member, or if a member, to actually participate in a given working group, antitrust concerns would be reduced, although (once again) not eliminated.

**Establishing terms:** An SSO could also further define the non-economic terms that an implementer license could include, or even mandate the exact language of a set of terms that such a license would be required to use if the Necessary Claims owner wished to include those types of terms generically.

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<sup>27</sup> Private conversations with representatives of ETSI participants. ETSI shares far less information at its Website than does IEEE, which posts a great deal of data relating to ongoing discussions involving possible changes to its IPR policies. See, for example, the PatCom page of the IEEE Standards Association Standards Board Patent Committee, at <<http://grouper.ieee.org/groups/pp-dialog/>>, accessed June 29, 2006

**Conclusions:** The current debate over *ex ante* alternatives has suffered to a degree from being addressed in a vacuum, without regard (on the one hand) to all of the existing issues outside of the standard setting process itself that it could help resolve, or (on the other hand) to the other methods that could also be considered to achieve similar ends. Similarly, proponents of *ex ante* process additions have not always appreciated some of the complexity and risk that could be involved with *ex ante* disclosure and/or negotiations, while the opponents have painted an unduly dire picture of the risks of even simple disclosure proposals, and ignored the fact that more challenging programs, such as patent pools, already exist and operate without frequent calamitous antitrust consequences.

It is to be hoped that one or more SSOs will in fact implement an *ex ante* disclosure program in the near future, and obtain a business review letter or advisory opinion from the antitrust regulators to provide a degree of comfort, not only for their members, but for the standard setting community at large. Once SSOs and their members gain experience with designing and operating such programs, confidence will grow, and the benefits of this logical and innovative concept, conjoined with other existing and new techniques, will presumably spread.

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## FROM THE STANDARDS BLOG

# MICROSOFT, ADOBE AND WHAT'S WRONG WITH "RAND"

Andrew Updegrove

Wednesday, June 07 2006 @ 09:10 AM EDT



For a week now, the IT world has been scratching its collective head over the breakdown of PDF licensing negotiations between Microsoft and Adobe. At issue is why Adobe has allowed OpenOffice.org and Apple to bundle native support for saving documents in PDF format without any economic hooks, but apparently is requiring Microsoft to charge its customers more for Vista if this new release includes the same capabilities - even though the basic functions of PDF are included in an ISO-adopted standard that should be available to all on the same terms.

There are, I think, two logical explanations. One is relatively straightforward, while the other represents a convoluted and little-discussed weakness in the traditional way of creating standards. In this entry, I'll describe both possible explanations, but I'm betting that the convoluted alternative will prove to be the explanation for what is happening here.

Let's knock off the easy explanation first, which relates to exactly what it is that Microsoft would like to license from Adobe. At one end of the spectrum, Microsoft may only be interested in licensing those Adobe patent claims that would be infringed if Microsoft were to write software to implement the PDF specifications that have been [adopted as standards](#) by ISO/IEC. Next up the value chain would be wanting to license the actual code that Adobe itself uses in Acrobat to save documents in the PDF format (not too likely a scenario, given that Microsoft has written a few lines of code itself over the years). And finally there would be a Microsoft request to license the rights to include additional features in Vista that are included in Acrobat, but which are not described in the ISO/IEC standard. Such "[proprietary extensions](#)," as I discussed in my last blog entry, can be quite desirable - as Microsoft is well aware.

In the first case, Adobe would have an obligation to license the patent claims to Microsoft on RAND terms (on which more below). But in the latter two cases, Adobe would be fully justified in imposing whatever unique requirements it wished on the extra code and/or patents, as the case may be, since it is not bound



by the specific undertakings it entered into with [AIIM](#) (the actual standards body that described and adopted the PDF elements that it then submitted to ISO/IEC) with respect to actual code or any additional functionalities.

So the first possibility is simply that Microsoft wants more than Adobe is required to give it under its standards-related undertakings.

This possibility underlines the difference between a *de facto* standard and a *de jure* standard. Broadly stated, a *de facto* standard describes something that the market has overwhelmingly decided that it wants to use in order to achieve the same result as an official standard (such as the interoperability that exists among users of Windows and applications that run on Windows). Such a *de facto* standard can deliver a degree of interoperability that is far superior to that achieved by *de jure* standards, but at a cost: with a *de facto* standard, everything is controlled by a single vendor (or group of vendors).

In the case of PDF, there is, in effect, a *de jure* standard (ISO PDF) nested within a *de facto* standard, the latter being the Adobe Acrobat product with its added features. Another example of the same situation would be Microsoft Office, in comparison to Open XML if it is approved by Ecma and ISO/IEC. Anyone would be free to implement Open XML (just as anyone can implement ISO PDF, whether Adobe likes it or not), but they would not be free to simply reverse engineer and sell Office (or Acrobat) in its entirety.

Now let's look at the second possibility, which is that Microsoft and Adobe are arguing about exactly what terms Adobe is obligated to offer to Microsoft, in these specific circumstances, under a typical "RAND" licensing obligation.

RAND stands for "**R**easonable **A**nd **N**on-Discriminatory" (in Europe, an "F," for "Fair," is often added, without really changing the meaning). When a participant in a standards process agrees to RAND licensing, that obligation relates to any patent claims it owns that would be infringed by an implementation of the standard in question. The obligation itself has three principle elements: to provide a license to these patent claims to everyone that requests a license, to provide that license on reasonable terms, and to ensure that the terms one implementer are the same as those that are offered to every other implementer under substantially the same circumstances.

Sort of.

The reason for the "sort of" is that while "reasonable and non-discriminatory" sounds all very fine and clear, exactly what that phrase means is in fact never strictly spelled out, and would be difficult to impossible to define with precision in any event. What, for example, is "reasonable?" Would a reasonable royalty under a standard be lower, because of the volume that will result from wide adoption of the standard, allowing a handsome profit even if the per-product rate was low, or higher, because of the value that standardization provides to the licensee on top of the normal value of a patent license? And would it be reasonable for a patent owner to require an implementer to provide a license back to the licensor to any of the implementer's own patent claims that would be infringed by an implementation of the standard? Historically, the answer to this last question has been "yes" - but that was before open source licensing began to proliferate. If the standard was relevant to open source software, then the answer from the open source community would be a resounding "no!"

The meaning of "non-discriminatory" is even more difficult to nail down, for the same reason that a "most favored nation" clause in a legal contract is hard to define (and therefore enforce). Under a most favored nations clause, a vendor (for example) agrees that if it ever gives another customer a better deal under "substantially similar circumstances," the contract will automatically readjust to give the same deal to the "most favored" customer.

But what does that really mean? For example, could someone under a RAND obligation (or a most favored nation clause) charge a lower royalty per unit from someone that orders 100,000 units than one that orders 1,000 (pretty clearly yes, in the most favored nation clause example)? How about 90,000 units? What if they both order 100,000 units, but one is an OEM and the other isn't? Or if they are both the same, but one agrees to include mention of the vendor's product in a national marketing campaign?

And how about if there is an underlying patent cross license between the vendor (or RAND patent owner) and one party, and not the other? Could the patent owner under the RAND obligation charge the person ordering only 1,000 units no royalty at all? In short, are any of these factual settings really "substantially similar?" Or are they sufficiently "dissimilar" to justify offering different terms in each case? And if so, is there any limit on how different they can be?

If in fact Microsoft is only interested in the ISO/IEC elements of the PDF product, then this is what I assume Adobe is relying on to justify its refusal to provide a free license. After all, in the real world of bundled functionalities there can be as many apples to oranges comparisons as apples to apples. Perhaps there's an existing agreement between Microsoft and Adobe that Microsoft wants to modify at the same time, and Adobe is tying that negotiation to the PDF negotiation, attempting to take it outside its RAND obligation. Or perhaps Adobe is saying that the Vista situation is different than the OpenOffice.org arrangement in some as-yet undisclosed way. Or perhaps Adobe is saying that asking Microsoft to charge more is "reasonable" - after all, it doesn't appear that Adobe is asking that Microsoft pay anything, just that Microsoft make a bigger profit (what could be unreasonable about that?)

The reason that this type of ambiguity represents a weakness in the standards system is that there's no easy way to resolve a dispute if an implementer believes (or suspects) that it is being treated unreasonably or discriminatorily. Standard setting organizations don't have the budget or resources to act as arbitrators to settle disputes, and therefore refuse to do so. And the implementer never knows what kind of a deal another implementer got in any event, because the vendor has no obligation to disclose those terms or report back to the standards organization on whether or not it is meeting its RAND obligations.

This sort of dispute would easily explain two things: how Microsoft and Adobe could have negotiated for four months over something that should have been automatic, and how Adobe could have felt safe digging in even though it is under a RAND obligation.

Is this in fact what is going on? We may never find out, since it appears that Adobe is not in fact planning to file a complaint with the European Commission after all. Late yesterday, according to [ConnectIT.news](#), Adobe made its first statement on this topic:

"As a matter of policy we do not comment on discussions with customers, partners or competitors," stated Adobe officially in an email via its public relations company.

"However, in response to allegations made by Microsoft to the press, Adobe has made no determination to take legal action against Microsoft. Further, with regard to any discussions we have had with Microsoft about Office and Vista, our sole motivation is to maintain a fair, competitive landscape in the software industry," Adobe added.

Interestingly, I haven't been able to confirm this Adobe statement anywhere else on the Web. But if this report is accurate, it fits the second alternative scenario perfectly.

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## CONSIDER THIS

‡ ‡ ‡ June 29, 2006

### #40 Evolution, Standards, and Open Source

As long-time Consortium Standards Bulletin readers will be aware, the *Consider This* essay is the part of the CSB where I allow myself to range as freely as I wish across the standards landscape (very broadly construed), utilizing the concept of the standard as a vehicle to go where I will rather than chafing under it as a constraint.

As a result, while many *Consider This* essays have in fact addressed traditional standards topics, others have ranged as far afield as the flatness of Kansas, using pancakes as the "standard" of flatness ([Standards, Similes, Pancakes and Kansas](#)), Internet conspiracy theorists and RFID chips ([Dan Mullen, Andrew Jackson, and the Dark Side of the Internet](#)), nationalism and food standards ([Soy Sauce, Kimche and the Golden Rule](#)), and, more recently, the thickening of Americans and resulting need to update the dimensions of the "standard American" as used by engineers ([Body Type Standards, Crash Test Dummies, and Sleeping with Big Agnes](#)).

As a result, I feel on fairly safe historical grounds in offering the following proposition this month, as we approach the November elections:

Evolution has seen fit to develop in the human species two standardized, instinctive, and largely opposite attitudes towards dealing with society. In America, we call the political parties that exemplify these attitudes as the Republicans and Democrat, but you could find clear analogues just about anywhere around the globe. Whether or not someone here or in Argentina chooses to formally affiliate with either of these parties (however named), she is likely to resonate much more decisively with the tenets of one of these ideologies or the other.

I would go further and suggest that from the process point of view, the evolution of these two standardized ways of balancing priorities of self and society represents the longest running open source project in human history.

Let's cover the easier of the two contentions first. Are political affiliations – or, more properly, those values that we lump together as representing either the "liberal" or "conservative" viewpoint - the result of nature or nurture? If not nature, then how does one explain the fact that two equally intelligent people, often raised in the same household, can hold such diametrically opposed and comparably deep-seated convictions, each firmly convinced that they are possessed of revealed truth?

I would submit (in all seriousness) that it is highly likely that it is genetic predisposition and not life experience that has led to both the instinctive depth of feeling as well as to the dichotomy. In support of that conclusion I would offer that there are so many different aspects of human and animal behavior that are clearly hardwired (from the flight response, to the urge to protect one's children at the expense of one's own welfare, to the building of distinctive nest shapes by different species of birds), that there is little reason to assume that conservatism and liberalism should stem from any other source.

In fact, I would go further and observe that the stereotypical outlooks of conservatives (take care of yourself; resist impositions on personal freedoms and high taxes) and liberals (take care of everyone; accept impositions on personal freedom and higher taxes in exchange for promoting the welfare of society) are each perfectly viable survival strategies, and hence are unlikely to have become so pervasive and durable in the absence of a clear relation to survival.

But if this were true, why would taking care of others (what environmental theorists refer to as "altruism") represent a survival skill?

This quandary has been a matter of debate for evolutionary theorists since the days of Darwin. That great thinker himself realized that altruism, if it could not be shown to provide a survival advantage, might represent a fatal flaw to his theory. Early theories focused on the "survival of the species," but it was

soon realized that the individual would have no motivation to perpetuate the genes of another individual, simply because it was a member of the same species. Why then make any sacrifice for another?

The most detailed and persuasive arguments supporting altruism as a survival strategy were not conceived until almost 100 years after Darwin's concepts were first published. Although he was not the theorist who developed them, [Richard Dawkins](#), a brilliant Oxford don with a flair for making complex scientific theories accessible to the layman, brought them to the attention of a far broader audience. In his seminal work of 1976 titled [The Selfish Gene](#), he explicated the concept that all life forms exist for the sole purpose of transporting their genes down through time, making you and I akin to pitifully self-centered chauffeurs that have forgotten about the passengers in the back seat.

Although the selfish gene theory, when stated so bluntly, sounds both absurd as well as disquieting, it is downright spooky how accurately it predicts all aspects of human behavior – including altruism, particularly as regards the protection of close relations in addition to immediate family members.

Returning to conservatism and liberalism, then, how can these two very different outlooks each be explained in evolutionary terms, and in particular, how do we explain an urge to take care of someone outside of our family (i.e., our immediate gene pool) if it might imperil the perpetuation of our own genes?

Dealing with conservatism first, it is easy to understand that taking care of one's family is the next best thing to taking care of oneself, since many of an individual's genes are carried by that individual's parents, siblings and children. But how then to explain a liberal's desire to provide for the welfare of those that are unrelated, especially to the immediate detriment of himself and his family?

In fact, it is only slightly less intuitive to reflect that there would be many situations over the course of evolution in which personal and family survival would be dependent on the survival of the tribe, band or clan of which an individual is a part. Why? Because the band would share food, care for the sick when they could not fend for themselves, and provide for joint defense. Hence, the survival of the individual – and the perpetuation of his genes – is in significant measure dependent on the survival of the individual's band or tribe.

But assuming that this is a sound conclusion, why would nature preserve two strategies in the long term instead of just one?

The evolutionary theorist would respond that a single strategy would only make sense under constant conditions. Because there is little in the natural world that is constant, either in the near term (plenty and famine, flood and drought) or in the long term (global climatic shifts), a species with only a single, highly refined survival strategy is vulnerable to be exterminated when conditions change such that its single strategy no longer works.

As an example of conditions that could select to conservatism or liberalism, one could observe that in times of famine, watching out for one's own could be the best strategy, while in times of drought, only the collective might of a band might secure rights at a water hole, and later in evolution, survival during time of tribal war would be dependent on being part of an internally loyal and strong defensive force.

Similarly, for hunter-gatherers, members of a tribe enduring a time of want in one area might only survive if they have maintained cordial relations with adjacent bands, each of which is entitled to rely on the other in times of need. While one strategy may be superior for a while, with the result that one type of behavior begins to manifest itself more frequently in the gene pool, eventually conditions change, or the five hundred year storm or drought strikes. In that case, but for the remaining reservoir of genes favoring the opposing behavior, it might go badly indeed for the survival of the species, even though many individuals would still perish. Given the vicissitudes of environment and human aggression, both behaviors in fact may remain about equally viable, and necessary for species perpetuation, across any given period of time.

As a result (except at cocktail parties), society generally benefits from the existence of two different attitudes for relating to society rather than just one, albeit at the expense of a certain amount of stomach lining. Sometimes, it would seem, two standards really are better than one. Of course, evolutionary trends can also lead to extremes over a sufficient period of time. They can even lead to the evolution of new parasitic species, such as lobbyists, talk radio hosts, and authors of political rant books.

Having made, I hope, my first point, let me turn to my second contention. If indeed we have evolved two biological standards of political outlook, is this result in fact the product of a biological open source project?

I think so, at least to the same degree that selfish gene theory has actually turned us into delusionally unaware chauffeurs. Let's compare what makes an open source project what it is with how the human race (or any other species) evolves in the wild, and see if you agree, using a simple table to make the point.

#### Characteristics of an Open Source Project Compared to Evolution

Open Source Project	Human Evolution
Anyone may participate	Assuming you're fertile, you're eligible
Participation is voluntary	So, there's always the priesthood
Operates as a meritocracy	Competition for mates
Forking is just fine	White ones, black ones, yellow ones and brown ones...
Anyone may create a derivative work	New species split off over time
No fixed versions; ongoing development	Evolution may be slow, but its ongoing
Goals can change on a daily basis	Evolution reacts to whatever conditions are current, regardless of what they are
No restrictive licensing terms	Teenage rebellion; cross-cultural and interracial marriage
Ongoing development and use is based on relevance to end-user needs and appeal to participants	Sexual appeal is necessary for procreation; maladaptations do not survive to reproduce

So, as you can see, if conservatives and liberals can be fairly seen as naturally evolved standards (or, better yet, as living, breathing reference implementations of these standards), then the process by which they have been created – and by means of which they continue to evolve – seems to be very like an open source project indeed.

Of course, the analogy can be taken too far, just as Dawkins' characterization of genes, taken to extremes, becomes anthropomorphic. Still, it is interesting to note just how far it can be taken, because apparently the same sensible rules that make natural selection a successful process also work in a consciously collaborative development environment.

All of which demonstrates yet another example of fractalism in nature, as something as seemingly modern, synthetic and intellectualized as standards and open source development seem, after all, to be but unconsciously derivative human replications of timeless evolutionary processes.

I find that rather comforting, as it suggests that both standards and open source are built upon very rugged and time-tested principles indeed.

Isn't it wonderful how art imitates nature?

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