

**COMMENTS ON
PROJECT CANVAS**

Rob Glidden, Esq.
<http://www.robglidden.com>
On Behalf of Self

September 1, 2009

TO: BBC Trust
Project Canvas Consultation
canvasconsultation@bbc.co.uk

CONTENTS

| | |
|--|-----------|
| EXECUTIVE SUMMARY | 2 |
| DISCUSSION | 3 |
| I. TO DATE THE PROJECT CANVAS CONSULTATION HAS NOT ADEQUATELY CONSIDERED KEY IPR BEST PRACTICES | 3 |
| A. The Core Principle of “Standards-Based Open Environment” is Ill-Defined and Problematic | 5 |
| B. The Needs of and Responsibilities to the Future of the Open Internet Are Not Sufficiently Considered | 6 |
| II. THE LATEST BBC RESPONSE RAISES IPR PROCESS CONCERNS | 10 |
| A. Proposed Framework Compounds Core Problems | 10 |
| B. Preferred Partner DTG Does Not Adequately Address IPR Process | 10 |
| III. PROJECT CANVAS SHOULD ADOPT AN IPR PROCESS BASED ON FACILITATION, EX ANTE, & PREFERENCE FOR ROYALTY FREE | 11 |
| A. Facilitation | 11 |
| B. Ex Ante | 12 |
| C. Preference for Royalty-Free | 15 |
| CONCLUSION | 16 |

EXECUTIVE SUMMARY

“This is the BBC.”

Perhaps no other single phrase has broadcast more meaning to more people in the great call to communicate that has gripped our species and planet in the last two centuries and fed waves of techno-political-industrial revolutions from telegraphs to telephones, radio to TV.

In the 1981 MacTaggart Lecture, long before the World Wide Web as we know it today, and 28 years before James Murdoch reprised his father's 1989 role¹ on the Edinburgh International Television Festival stage, Peter Jay painted the high-stakes vision of today's Project Canvas:

"Quite simply we are within less than two decades technologically of a world in which there will be no technically based grounds for government interference in electronic publishing. To put it technically, 'spectrum scarcity' is going to disappear. In simple terms this means that there will be as many channels as there are viewers. At that moment all the acrimonious and difficult debate about how many channels there should be, who should control them, have access to them and what should be shown on them can disappear. But it will only disappear if we all work, indeed fight, extremely hard."²

And now the Open Internet, built on royalty-free standards, has instantiated the ensuing broadband revolution on which Project Canvas can now paint the reality of this vision.

So why shouldn't Project Canvas also be built on royalty-free standards, advancing rather than opposing the thrust of the Open Internet and World Wide Web that has enabled the Project Canvas opportunity in the first place? Is the BBC slipping unthinkingly into a common parlance of the day – seduced by the cynical allure of a semi-open “standards-based open environment” -- open enough to help me, closed enough to hurt my competitors, with vendor complicity bought by the potential competitive advantage of conveniently under-disclosed patent royalties or other control points?

This is an under-addressed question that the BBC Executive, BBC Trust and proposed joint venture have skirted so far in this consultation, and should be fully addressed before proceeding. A Free-To-View TV Internet is *both* a TV and a network stewardship.

¹ “There is a land-grab, pure and simple, going on - and in the interests of a free society it should be sternly resisted. The land grab is spear-headed by the BBC. The scale and scope of its current activities and future ambitions is chilling. Being funded by a universal hypothecated tax, the BBC feels empowered and obliged to try and offer something for everyone, even in areas well served by the market.” “The Absence of Trust”, James Murdoch's MacTaggart Lecture at the Edinburgh TV Festival 2009 http://www.newscorp.com/news/news_426.html

² Television Policy: The MacTaggart Lectures 84, Bob Franklin, Editor (2005, Edinburgh University Press)

DISCUSSION

I. TO DATE THE PROJECT CANVAS CONSULTATION HAS NOT ADEQUATELY CONSIDERED KEY IPR BEST PRACTICES

Stuart Ward, in a half-page plea, has stated the point directly:

"The Canvas standards must be based on Open standards, implementable by anyone without patent or royalty encumbrances."³

Indeed, the term “standard” is used 754 times in the 392 pages of the stakeholder responses released by the BBC Trust⁴. And the phrase "open standard[s]" is used 127 times, and over ten percent of those times with the added emphasis of “truly open standards[s]”.

One responder Avtrex, recognizes “that there are many “open” standards, and they include good standards and bad standards; the standards choice process should be open and non-discriminatory.”

So which standards *methodology* should be used? Simply put, the key is to look to the Intellectual Property Rights (IPR) process, for there lies the heart of policy and purpose of any standards endeavor.

Standards are ubiquitous⁵ and control of standards can be crucial to an industry,⁶ so the privatization of standards raises many policy concerns.⁷ Yet “everyone” is in favor of “open standards”,⁸ even though the subject of standards is complex and multifaceted⁹, the public role of

³Comment by Stuart Ward at 1. The Open Source Consortium has also raised the concern that the Canvas specification would be encumbered.

⁴BBC Trust, Canvas Non-service Assessment, Stakeholder Consultation Responses, June 2009

⁵ "The impact of standards on trade is so widespread that, on purely economic grounds, almost all sectors would justify attention; one estimate claims that up to 80% of trade (equivalent to around \$4 trillion annually) is affected by standards or associated technical regulations." Organization for Economic Cooperation and Development (“OECD”), Working Party of the Trade Committee, Regulatory Reform and International Standardization, TD/TC/WP(98)36/FINAL, ¶ 3 (1999) available at <http://www.oecd.org/dataoecd/33/19/1955309.pdf>

⁶ “If you control an industry’s standards, you control that industry lock, stock, and ledger” W. Edwards Deming, *Out of the Crisis* 302 (2000)

⁷ “A recent trend that has prompted much discussion is the increasing privatization of standardization activities under various corporations, trade associations, and consortia. This trend is far removed from the traditional, and as claimed, more “open”, democratic, and inclusive, practices of voluntary consensus committees. Because standards play a powerful role in shaping technologies and their diffusion into society, the trend raises significant public policy issues about how the public interest may be represented and served in today’s digital information age that is increasingly dependent on technical standards.” Timothy Schoechle, *Standardization and Digital Enclosure: The Privatization of Standards, Knowledge, and Policy in the Age of Global Information Technology* viii (2009).

⁸ “All actors seem to claim the high grounds of open standards and of acting in the public interest. These claims deserve critical examination and thought -- given the policy decisions that governments, standards organizations, and private parties are now being called upon to make in re-shaping and re-directing the course of national, regional, and global policies and institutions. Technical standards will continue to not only define and limit the future of technology -- but of society itself. They will determine what the technologies of the future are to be, and, in great part, who owns them, who gets to use them, and whose interest are served by them.” *Id.* At xi.

standards is under-studied,¹⁰ and there is a long historical record of government concern of episodic standards abuse¹¹. In telecommunications, standards have gone hand-in-hand with network access¹² and market liberalization.¹³

Indeed, the stakeholders have recognized, in many different ways and phrasings, that "reliance on uncritical, incomplete, inconsistent, and contradictory notions concerning the practice of standardization and its products constrains possible policy options".¹⁴ Or some might say even more bluntly that standards are political negotiations,¹⁵ hence they have been integral to broadband policies around the world¹⁶, and need to be integral to the consideration by BBC Trust and other policy and regulatory bodies of Project Canvas too.

⁹ "The purpose of this study is to establish an overall framework, that of Digital Enclosure--Enclosure in the Digital Age--a concept borrowed from legal, economic and public policy discourse for understanding important, contentious and interwoven issues in the current global standardization system. These issues include the rise of new standards-setting "consortia" and the challenge the pose to the traditional standardization process, intellectual property rights (IPRs), competition, anti-trust policy, business and commercial strategies, the Open Source movement, geopolitics, and technical innovation." Id. at 2.

¹⁰ "Despite the substantial literature on standardization, it is striking how relatively limited the writings about the public sector's role has been." DeLacey, Brian J., Herman, Kerry, Kiron, David J., Lerner, Josh and Lo, Wai-Shun, *Government Intervention in Standardization: The Case of WAPI 3* (September 2006). Available at SSRN: <http://ssrn.com/abstract=930930>

¹¹ See for example, *Standardization Across the Boundaries of the Bell System, 1920-1938*, History of Technology Volume 28 (James Sumner and Graeme J N Gooday, eds. By Whose Standards? Standardization, stability and uniformity in the history of information and electrical technologies), 2008, 37-52.

Consider also the example of RCA, originally structured in 1921 as the patent pool for radio patents. After government proceedings in 1924 (FTC and "packaged licensing") and 1930 (Department of Justice consent decree separating RCA from its owners), RCA entered into a consent decree in 1958 concerning color TV patents (for which RCA was then the key owner), described interestingly in Time magazine : "In a sweeping civil consent decree in one of the biggest Eisenhower Administration Sherman Act suits to date, RCA agreed to 1) put some 100 color TV patents into a royalty-free pool, 2) make available to all comers on a royalty-free basis at least 12,000 other existing radio-TV patents, 3) license all new patents during 'the next ten years at a "reasonable" royalty rate.'" *Boost for Color TV*, Time Magazine, November 10, 1958, <http://www.time.com/time/magazine/article/0,9171,938051,00.html>

"The 1958 consent decree [with RCA] was part of a drive by the Justice Department's Antitrust division to open the new electronics-based industries to competition by making the patents of IBM, AT&T, and RCA available to all... [The consent decree] made licenses available to domestic companies without charge... Foreign buyers would continue to pay full freight. ... RCA Labs, in order to maintain licensing income after the consent decree, began to concentrate on licensing to Europe's Philips and Japan's leading consumer electronics makers." Alfred D. Chandler Jr., *Electronic Century: The Epic Story of the Consumer Electronics and Computer Industries* (2001).

¹² "The regulator must also be concerned with the development of the incumbent network's technical standards. Traditionally, the network operator determined the standards, and during a period of monopoly, many governments did not find a need to make those standards public or allow other persons to comment on the setting of technical standards. The regulator must ensure that embedded standards are not employed as a vehicle for restricting access to the network." FCC, *Connecting the Globe: A Regulator's Guide to Building a Global Information Community* (1999) I-6, <http://www.fcc.gov/connectglobe/> (last visited June 7, 2009).

The guide was announced as part of a "a new technical assistance initiative to assist developing countries in building independent regulatory regimes that will promote competition, liberalization and privatization." http://www.fcc.gov/Bureaus/Miscellaneous/News_Releases/1999/nrmc9038.html

¹³"When a telecommunications market becomes liberalized, technical standards become integral to the development of an efficient competitive network. First, it becomes vital that technical interconnection standards become public and freely available. Second, it becomes vital that all interested persons, including competitors, customers and

A. The Core Principle of “Standards-Based Open Environment” is Ill-Defined and Problematic

The gist of the BBC Executive proposed process of a “standards-based open environment” is described in the following passage:

“The Canvas ambition is to as far as possible make use of ‘open’ or common standards, or approaches that enable widespread adoption, using the following framework:

1. A clear set of functional requirements that if suitably implemented will deliver the objectives of the Canvas proposal
2. Where possible, to identify how they can be delivered via open standards
3. Where suitable open standards are not available, to refer to existing common or ‘de facto’ standards or technology, including open source software, based on objective criteria. standards.
4. Where necessary to develop areas of specification where there is no available common approach and seek to satisfy these in agreement with the relevant standard body.”¹⁷

Consider the carefully-chosen words above: “ambition”, “as far as possible”, “where possible”, “where suitable”, “where necessary”, “seek to satisfy”, and so on. This is not a commitment to standards, it is a commitment to use a language of prevarication while wearing a standards mantle. And where is the consideration of who will own the technology, how much will it cost, and when and how will this be determined?

suppliers of telecommunications and information equipment, have an opportunity to participate in the development of technical standards and an opportunity to comment on proposed standards before they are adopted.

The importance of technical standards to the development of effective competition necessitates that these processes be removed from the hands of the incumbent operator and placed in the hands of an independent, open standards-setting entity, preferably one organized by the private sector.” FCC, *Connecting the Globe*, *supra* at I-5-6.

¹⁴ Schoechle, *supra* at 7.

¹⁵ “Standardization activities are political negotiations and not a forum for assessing which technologies excel over others.” Hajime Yamada, *International Standardization as a Strategic Tool, Standardization and patent pools: Using patent licensing to lead the market* 115 (2006) http://www.iecchallenge.org/papers/pdf_iecchallenge/yamada.pdf

¹⁶ See, as just one example, the Korean IT839 Strategy, but there are numerous other examples. Cf. “[T]he GOJ will continue to promote R&D projects and standardization projects in a unified manner. In addition, the GOJ will strategically allocate research funds to the technical fields where Japanese industry is expected to expand through the acquisition of international standards.” Intellectual Property Strategic Program 2007, May 31, 2007, Intellectual Property Strategy Headquarters, at 101 http://www.ipr.go.jp/e_materials.html

¹⁷ “Section 3: The agreement of the Canvas specification and industry engagement” at 4.

The proposed resolution appears to be an ad-hoc pick-and-choose, sometimes standardized sometimes not, informal dialog, a theme that recurs in such sections as:

“Delivering the specifications that meet the additional functional requirements needed for a full, rich Canvas offer in a March 2010 D Book 7 may therefore pose challenges to the DTG Executive. The venture partners would like to explore with DTG how such conflicts might be addressed – for example via a ‘Canvas chapter’, offered by the Canvas venture partners and potentially subject to the DTG compliance regime (though other options for ensuring compliance exist).”

Indeed, the BBC is right to be highly cautious, even deeply skeptical, about the potential and practice of certain standards initiatives to mask all sorts of agendas in the cloak of open standards terminology. This is a rampant, growing and under-addressed problem, and one that regulators, vendors, and citizens around the world are becoming increasingly aware of and concerned about. Self-protection alone is reason for concern. But the solution is not to engage in the same behavior, it is to fix and improve the standards process itself.

And the approach leads to *fait-accompli* reasoning, like the statement “Procuring a DRM solution is an important commercial decision which requires full due diligence.” Why a “DRM solution” and not an interoperable standard? Indeed, every component of the Project Canvas project has already been the subject of multiple standards and products, most if not all can and have be fully specified in royalty-free technology. What is missing is the *political resolution* to a standardized open, Internet-era worthy platform, not another debate of convenience about whose part of a network value chain is a “solution” and whose is a “standard”.

B. The Needs of and Responsibilities to the Future of the Open Internet Are Not Sufficiently Considered

Simply put, there have been two great information technology standards movements over the last two decades, on one side the royalty-free Internet and World Wide Web standards movement, and on the other the patent-based Digital TV standards movement. Each has its own ways, each claims success in reaching billions of consumers on our planet. But they are in fundamental business model conflict as to the ownership and control of their respective IPR processes. Project Canvas simply makes the unthinking assumption that the “Digital TV standards way” is right for Project Canvas.

But open standards, and particularly royalty-free standards, are the very foundation of the Open Internet as we know it¹⁸, and Internet leaders are vocal that open and royalty free standards

¹⁸ “The Internet is fundamentally based on the existence of open, non-proprietary standards” Vint Cerf, “the father of the Internet” cited in The Importance of Open Standards in Interoperability, OFE Onepage Brief No.1 (31.10.08.) Available at <http://www.openforumeurope.org/library/onepage-briefs/ofe-open-standards-onepage-2008.pdf>.

See also "It was the standardisation around HTML that allowed the web to take off. It was not only the fact that it is standard but the fact that it is open and royalty-free. If HTML had not been free, if it had been proprietary technology, then there would have been the business of actually selling HTML and the competing JTML, LTML, MTML products." Tim Berners-Lee, quoted in Standards and the Future of the Internet, Declaration 25th February 2008, at <http://www.openforumeurope.org/press-room/press-releases/standards-and-the-future-of-the-internet/>

are essential to its future¹⁹. A particularly complete consideration of the role royalty-free standards as a key enabler of the Open Internet can be found in reviewing the W3C patent policy,²⁰ the business benefits of a rising tide that W3C proposes through its policy,²¹ and the reasoning behind the W3C policy.²²

Some, inspired in large part by the history and practice of standards relating to the Open Internet²³, have gone as far as to push for redefining the terms open²⁴ and open standard as *only* including royalty-free technologies²⁵, rather than covered by a patent-based license. This movement has drawn vocal opposition from organizations favoring inclusion of “reasonable and

¹⁹ "I think it very important that as we move on to new spaces [...] we must keep the same openness we had before. We must keep an open internet platform, keep the standards for the presentation languages common and royalty-free." Tim Berners-Lee, id.

See also “The lesson from the proliferation of new applications and services on top of the Web infrastructure is that innovation will happen provided it has a platform of open technical standards, a flexible, scalable architecture, and access to these standards on royalty-free (\$0 fee patent licenses) terms. At the World Wide Web Consortium, we will only standardize technology if it can be implemented on a royalty free basis. So, all who contribute to the development of technical standards at the W3C are required to agree to provide royalty-free licenses to any patents they may hold if those patents would block compliance with the standard.” Testimony of Sir Timothy Berners-Lee CSAIL Decentralized Information Group Massachusetts Institute of Technology Before the United States House of Representatives Committee on Energy and Commerce Subcommittee on Telecommunications and the Internet Hearing on the "Digital Future of the United States: Part I -- The Future of the World Wide Web"

http://archives.energycommerce.house.gov/cmte_mtg/110-ti_hrg030107.Sir-Tim-Testimony.pdf

²⁰ "In order to promote the widest adoption of Web standards, W3C seeks to issue Recommendations that can be implemented on a Royalty-Free (RF) basis. Subject to the conditions of this policy, W3C will not approve a Recommendation if it is aware that Essential Claims exist which are not available on Royalty-Free terms." W3C Patent Policy, February 5, 2004, <http://www.w3.org/Consortium/Patent-Policy-20040205/>

²¹ "Wide deployment of new, unencumbered, standardized, capabilities in Web technology expands the market for applications which may also incorporate proprietary technology. So long as the proprietary features do not undermine interoperability, this is fine. Royalty-free standards can thus be a vehicle for companies to gain revenue from their technology investments...Royalty-Free access to patents...allows patent holders to protect intellectual property....[P]articipants benefit by working in an environment where intellectual property risks are known rather than hidden." Business Benefits of the W3C Patent Policy, <http://www.w3.org/2004/03/pp-points-20040210.html>

²² "W3C takes patent law where we find it: no position on software patents" in “Standards, Patents and the Dynamics of Innovation on the Web”, Daniel J. Weitzner, Chair, W3C Patent Policy Working Group <http://www.w3.org/2004/09/psi.pdf>

"In the last few years several patents issued by the United States Patent and Trademark Office have stalled, or at least delayed, W3C technical work." Testimony of Daniel J. Weitzner, Technology and Society Domain Leader, World Wide Web Consortium, Joint Hearings on Competition and Intellectual Property Law and Policy in the Knowledge-Based Economy: Standards and Intellectual Property: Licensing Terms, 18 April 2002, <http://www.ftc.gov/opp/intellect/020418weitzner.shtm>

²³ For a history of the World Wide Web Consortium's adoption of a royalty free policy, see Andrew L. Russell, *The W3C and its Patent Policy Controversy: A Case Study of Authority and Legitimacy in Internet Governance*, TPRC 2003 - 31st Research Conference on Communication, Information, and Internet Policy (September 19-21, 2003) (available at <http://www.arussell.org/papers/alr-tprc2003.pdf>). For a history of the IETF, including the issues of patents and IPR policy, see Tim Simcoe, *Delays and de Jure Standards: What Caused the Slowdown in Internet Standards Development?* (April 30, 2004) (available at <http://www.rotman.utoronto.ca/strategy/research/working%20papers/Simcoe%20-%20Delays.pdf>). See also [RFC3979] Bradner, S., "Intellectual Property Rights in IETF Technology", BCP 79, RFC 3979, March 2005.

²⁴ "The term "open" is usually restricted to royalty-free technologies" http://en.wikipedia.org/wiki/Open_standard

nondiscriminatory” (RAND) policies of including licensed patents in standards²⁶, and the entire topic inspires much discussion and controversy²⁷.

Disputes between “royalty free” and RAND appear to actually impact a relatively small percentage of the overall standards universe of thousands of standards,²⁸ but they are particularly important in the area of the Open Internet, broadband, and consumer electronics. Although the number of standards that are subject to potential patent licensing, at least as measured by the number that have official patent declarations, has been rising over the last decade and a half, the percentage appears to be under 7% at major standards groups (ITU-T, ISO, IEC, JTC, JISC).²⁹ Although price is rarely disclosed, it appears most of these disclosures are not intended to be used for royalty licensing.³⁰

²⁵“Many definitions exist, notably the one contained in the European Interoperability Framework (EIF) (note 1) published by the IDABC unit of the European Commission. Most important are the key principles of an Open Standard: ...

Royalty free. If a patent is present then this is irrevocably made available on a royalty free basis, and no royalty bearing licenses are required. This therefore specifically excludes RAND (Reasonable and Non Discriminatory) licensing other than RF RAND (Royalty free version). The term RAND is highly contentious since to many it is exactly the opposite of that. How do you define reasonable when addressing a global market with substantial differences in local GDP? And it does discriminate against for example the FS/OSS licensing. The key requirement for this principal is that it must freely allow all business models.”

<http://www.openforeurope.org/what-is/open-standards/open-standards/>

²⁶ See, for example Critical Issue Paper by ANSI: “The term “open standard” has been used recently to describe a standard that may be copied, used and distributed for no fee and/or whose embedded technology is irrevocably available on a royalty-free basis. This definition has created some confusion among standards developers and users generally because it is contrary to the process-based definition of open” and “openness” long held by the American National Standards Institute (ANSI) and any other recognized standards bodies who understand the term to describe a collaborative, balanced and consensus-based approval process for the promulgation of domestic or international standards. Current Attempts to Change Established Definition of “Open” Standards, Critical Issue Papers, May 2005. <http://publicaa.ansi.org/sites/apdl/Documents/Standards%20Activities/Critical%20Issues%20Papers/Open-Stds.pdf>

²⁷ For a sampling, see the range of views aired at the IPR in ICT standardisation workshop held on November 19, 2009 at http://ec.europa.eu/enterprise/ict/policy/standards/ws08ipr_en.htm and in the Consultation on EIF v2.0 <http://ec.europa.eu/idabc/en/document/7733>. See also Antitrust Enforcement and Intellectual Property Rights: Promoting Innovation and Competition, U.S. Department of Justice and the Federal Trade Commission, April 2007 <http://www.usdoj.gov/atr/public/hearings/ip/222655.pdf>

²⁸ “There's only a small number [of IEEE standards] that have a significant amount of [patents] that need a pool—we're probably talking well under a dozen,” Jason Johnson, vice president of marketing and business development at Via Licensing, quoted in Rick Merritt, IEEE joins move to patent pools: Pilot program for 2009 focuses on comms tech, EE Times, December 8, 2008, <http://www.eetimes.com/news/latest/showArticle.jhtml?articleID=212202286>. The IEEE Standards organization has an active portfolio of nearly 1,300 standards and projects under development. <http://www.ieee.org/web/standards/home/index.html> (last visited June 6, 2009).

See also “The reality is that an extremely large percentage of RAND based patent declarations to standards bodies do not result in the patent holder seeking to actually license those patents to implementers.”

<http://standardslaw.com/wordpress/?p=36#comments>”

²⁹ See Toshio Tatsuta, Standardization vs. Patents at slides 5-6, presentation dated December 16, 2008, [http://www.itu.int/ITU-D/tech/network-infrastructure/Tokyo2008/Presentations/9%20Toshio%20Tatsuta%20Standards%20&%20Patents%20\(with%20Answer\).pdf](http://www.itu.int/ITU-D/tech/network-infrastructure/Tokyo2008/Presentations/9%20Toshio%20Tatsuta%20Standards%20&%20Patents%20(with%20Answer).pdf)

³⁰ “In terms of pricing, only eight percent of the IPR disclosures gave specific terms. In almost every case, these disclosures indicated that the IPR would be freely available.” at 3 (examining 1221 disclosures to nine standards organizations from 1981 to 2004) Simcoe, Tim S., Explaining the Increase in Intellectual Property

A potential winner if disputes between the RAND and royalty free visions result in standards gridlock may be proprietary approaches that have been long-recognized as a potential derailer of the Open Internet.³¹ When standards stumble, proprietary replacements win³². Also, it is not inconceivable that certain industry groups presenting themselves as standards of broad benefit may be carefully and quietly crafted to benefit the few.

It is both ironic and telling that the RAND licensing practices that have developed through the DTV experience have done little to nothing to contribute video technologies or standards to broadband deployments, which today are essentially captured by proprietary solutions³³. Audio standards and royalties have also brought obstacles to royalty-free standards for the Open Internet.³⁴ Is this really an acceptable, necessary, or desirable outcome, or foundation for future innovation?

Why should the BBC, who has funded one of the few royalty-free video codecs with traction potential (Dirac), side against the crying need of Web browsers and choose a video codec that conveniently only works from a business model point of view for device and value-chain royalty markets? Even MPEG leaders question the wisdom of continuing with such an approach.³⁵

For an example of the challenge of standards for broadband policy and the relevance to Project Canvas, one telling example is to look to the emerging yet struggling community of open video codecs for the Web to see the collateral impact current DTV licensing practices have had.³⁶ Despite repeated efforts to create royalty free codecs for the Web, and the wide availability of royalty-free technologies at the IETF and elsewhere, and the preference for royalty-free

Disclosure(December 1, 2005). Available at SSRN: <http://ssrn.com/abstract=1396332>

³¹ See, for example: "There are many ways the Internet spiral could be derailed. Any of the underlying drivers of Internet growth could be undermined. Moving toward proprietary standards or closed networks would reduce the degree to which new services could leverage the existing infrastructure." Kevin Werbach, 29 Digital Tornado: The Internet and Telecommunications Policy 7 (FCC Office of Public Policy Working Paper, March 1997) http://www.fcc.gov/Bureaus/OPP/working_papers/oppwp29.pdf

³² For example, Leonardo Chiariglione, the convenor of the MPEG committee, stated at the MPEG 20th Year Anniversary Commemoration in Tokyo in November 2008: "[T]he MPEG-4 Visual licensing killed half of the standard ... The "use fee" licensing model facilitated the widespread use of proprietary codecs". Leonardo Chiariglione MPEG: Vision and facts behind the name (November 8, 2008) (available at http://www.itsecj.ipsj.or.jp/forum/forum2008MPEG20/03MPEG20_Leonardo.pdf

³³ To quote the World Wide Web Consortium's Jan 22, 2008 working draft for HTML 5:

"It would be helpful for interoperability if all browsers could support the same codecs. However, there are no known codecs that satisfy all the current players: we need a codec that is known to not require per-unit or per-distributor licensing, that is compatible with the open source development model, that is of sufficient quality as to be usable, and that is not an additional submarine patent risk for large companies. This is an ongoing issue and this section will be updated once more information is available." <http://www.w3.org/TR/2008/WD-html5-20080122/>

A nascent "open video" movement, including Xiph, Dirac, and OMS Video is emerging that hopes to fill this need, but with little to no support from incumbent standards organizations that have historically developed video codecs. See <http://spreadopenmedia.org/> and <http://openvideoconference.org/>.

³⁴ See for example, Douglas Heingartner, Patent Fights Are a Legacy of MP3's Tangled Origins, N.Y. Times, March 5, 2007, http://www.nytimes.com/2007/03/05/technology/05music.html?_r=1&oref=slogin

³⁵ See comments by, Leonardo Chiariglione, "Father of MPEG" in "The missed award speech, May 2008."

³⁶ For a discussion of how patent overcharging has made US digital television globally uncompetitive, see Reply comments of Rob Glidden, In the Matter of Petition For Rulemaking And Request For Declaratory Ruling Filed By The Coalition United To Terminate Financial Abuses Of The Television Transition, LLC (FCC MB Docket No. 09-23), May 27, 2009.

technologies by such organizations as the World Wide Web, many standards groups appear steadfastly opposed or disinterested in solving or even considering this need.

A similar story could be told about IPTV, Interactive TV, “over-the-top” TV, “app stores”, and other new broadband services technologies -- “semi-openness” is becoming the norm³⁷.

II. THE LATEST BBC RESPONSE RAISES IPR PROCESS CONCERNS

A. Proposed Framework Compounds Core Problems

The BBC Executive proposed framework quoted above, because it appears to attempt to take an ambivalent approach to what is and is not standardized, also seems to take a vague approach to who will own the IPR of the specification, how it will be licensed, and whether there will be any due diligence as to the inclusion of third party IPR and the impact such inclusion of such IPR might have on the industry, consumers, society, or regulatory policy.

“As stated above, the BBC’s preference is to use commonly used ‘open standards’ wherever appropriate. Should Canvas generate any intellectual property by BBC R&D or the Canvas JV this would be licensed as per standard BBC practice.”

Such a loose, not-my-problem approach to the consequences of potential IPR and royalties in DTV and other standards and specifications has been a central concern for years. It is mystifying that the BBC Executive would not have already considered this issue in much more depth, and it is hoped if it has not it will do so in earnest.

B. Preferred Partner DTG Does Not Adequately Address IPR Process

The BBC Executive response carefully and conveniently distinguishes the UK Digital Terrestrial Group (DTG) as not a standards organization but only a “standards profiler.”³⁸ Indeed, the DTG seems to have an under-specified patent policy.³⁹

³⁷ Joel West, *Expect Semi-Open Platforms to Remain the Norm for Tech*, Seeking Alpha, June 3, 2009, <http://seekingalpha.com/article/141116-expect-semi-open-platforms-to-remain-the-norm-for-tech>

³⁸ “[T]he BBC is a member of key standardisation organisations relevant to the digital content delivery landscape, including DVB, MPEG, IETF, OIPF, ETSI, ITU and as a profiler of standards, the UK’s DTG.”

³⁹The latest IPR policy material for the DTG appears to be contained in the 2008/2009 “Joining the DTG: Membership Information” brochure at http://www.dtg.org.uk/publications/books/dtg_brochure_2009.pdf

The brochure contains the Articles of Association of the Digital TV Group, to which is attached the “Agreement for all Full Members, Affiliates, World Affiliates and New Entrants”

“11. Intellectual Property Rights. Members should declare any intellectual property rights associated with any proposal for inclusion in any standard or document being drawn up by the DTG at the time of the proposal and

But the MHEG⁴⁰ interactivity specification and community that would provide the natural UK starting point for upgraded capabilities like EPG switching⁴¹, and for which the DTG and UK are known globally, makes much of its royalty free IPR status.⁴² This is no doubt a valuable and important achievement for interactive middleware, which has been plagued by patent disputes.

III. PROJECT CANVAS SHOULD ADOPT AN IPR PROCESS BASED ON FACILITATION, EX ANTE, & PREFERENCE FOR ROYALTY FREE

A. Facilitation

should confirm this in writing to the Technical Director of DTG within a reasonable period. Unless so declared, the DTG have the right to declare its own IPR on publications and standards produced by the DTG."

However, even this weak suggestion is not legally binding:

"13. This agreement shall be non-legally binding save for Annex 1 and Annex 2, which shall be legally binding with effect from date of signature of this document by a member."

Annex 1 states only:

"5. This agreement shall not operate to assign, license or otherwise grant any right, title or interest in or to any copyright, patent, design right (whether registered or otherwise), trade secret or trade mark or other intellectual property rights vested in the disclosing Party to the receiving Party without the disclosing Party's express prior written consent."

⁴⁰ MHEG is an acronym for the Multimedia and Hypermedia information coding Expert Group (MHEG). It was developed in the mid-1990s as part of the now-defunct DAVIC (Digital Audio Video Council) standardization effort to support interactivity and navigation of multimedia services on various small footprint devices.

⁴¹"MHEG-5 can be used, for example, to build an EPG application that has data efficiently delivered in the DSM-CC object carousel and presented using MHEG-5. These systems allow the user to tune to a chosen channel from the EPG and this provides the platform operator with the opportunity to provide a consistent EPG rather than rely on receiver manufacturer's implementations." How MHEG-5 Works and Applications, <http://www.impala.org/what-mheg/how-mheg-5-works-and-applications>

⁴²"MHEG-5 is a public standard with no known essential intellectual property rights nor associated license fees for broadcasters." "What is MHEG" at <http://www.impala.org/what-mheg>

See also "MHEG has also avoided the lengthy political and IPR issues that undoubtedly slowed MHP." IMPALA answers back in interactive debate, July 4, 2008, <http://www.impala.org/news/impala-answers-back-interactive-debate>

The DVB in Europe, has long taken a proactive, multi-faceted role in patent pool facilitation activities,⁴³ and in part at the encouragement of the European Commission recently looked to tighten and reinforce these activities.

B. Ex Ante

Building infrastructures on the uncertain sands of unknown ownership is problematic in the best of circumstances, and not necessary. There are multiple techniques already developed by existing royalty-free oriented standards groups and also other techniques are available such as Freedom to Operate analysis and defensive publishing⁴⁴

Moreover, patent pools have long raised policy and competitive concerns⁴⁵, and recent research shows that modern patent pools, in spite of assumptions and expectations to the contrary⁴⁶, have had significant difficulty getting a significant percentage of essential patents into

⁴³ "The DVB fosters by applying a number of tools to encourage patent holders to form patent pools promptly after standardisation. These tools include:

- a mechanism for early confirmation by a technology contributor of its willingness to participate in a pooling effort;
 - information meetings of patent holders and other interested parties while the specification is under development;
 - a process for a "light-touch" essentiality review to determine eligibility for participation in initial meetings of a pooling effort;
 - provision of DVB technical expertise in helping to define the scope of a pooling effort and in "peer review";
 - monitoring of the facilitation of the formation of a programme; and
 - a forum for exchange of views among DVB member on the terms offered by a licensing programme."
- http://www.dvb.org/membership/ipr_policy/ (last visited May 26, 2009)

⁴⁴ "One way to secure FTO is to make an invention public, a practice known as "defensive publishing." Henkel, Joachim and Pangerl, Stefanie M., Defensive Publishing - An Empirical Study (May 2008) 1. Available at SSRN: <http://ssrn.com/abstract=981444> "We find that defensive publishing is widely practiced, with more than two thirds of the firms in our sample making use of it. The share of inventions that are defensively published varies strongly between firms, reaching 30% and more in some cases." id. at 2 (exploratory survey of mostly German firms)

⁴⁵ An instructive thumbnail history of antitrust policy concerning patent pools is contained in Layne-Farrar, Anne and Lerner, Josh, To Join or Not to Join: Examining Patent Pool Participation and Rent Sharing Rules at 2 (January 7, 2008). Available at SSRN: <http://ssrn.com/abstract=945189>

"After an early phase of allowing a great deal of latitude for any combination of patents, antitrust authorities began to take a far more limited view of patent pools in 1912. Throughout the 1940s more pools were disbanded than were allowed, and in the '50s all of challenged patent pools were found anticompetitive (Gilbert, 2002). As a result, firms largely stopped attempting to form patent pools for a good many years. The trend finally reversed course in 1995, when the Department of Justice and the Federal Trade Commission issued new guidelines for intellectual property that recognized the pro-competitive aspects of patent pools. Then in 1997, a group of firms belonging to the Moving Picture Expert Group (MPEG) approached the DOJ for clearance to form a patent pool based on a subset of patents within the MPEG-2 standard for digital video."

See also See Richard J. Gilbert, Antitrust for Patent Pools: A Century of Policy Evolution, 2004 STAN. TECH. L. REV. 3, http://stlr.stanford.edu/STLR/Articles/04_STLR_3

⁴⁶ "Much of the economic analysis of patent pools has focused on their role in competition policy. As such, the largely theoretical literature has generally overlooked the fact that joining a patent pool is voluntary, often assuming that all eligible firms will join (the one exception is Aoki and Nagaoka, 2004)." Layne-Farrar *supra* at 2.

the pool in the first place.⁴⁷ Moreover, patent overcharging has been problematic for related standards in recent years, including MPEG-4⁴⁸ and MHP⁴⁹.

In truth, price matters very much in DTV system consideration and adoption, and all the more so in these challenging economic times. And with numerous developing countries in the early phases of DTV deployment, they have as a whole been much less willing to accept open-the-checkbook, set-the-price-later attitudes that may have characterized earlier adoptions, and this has contributed to a changing global DTV landscape.

So actually, the differences in DTV licensing pricing is even more pronounced than may be apparent from simply examining given royalty prices at patent pool Web sites. Discounting beyond list appears to exist, and appears to be spreading⁵⁰. Discounting has been acknowledged

⁴⁷ "[A]s many as one half to two-thirds of the eligible firms choose not to join a patent pool". Layne-Farrar *supra* at 24.

This is far less than the critical mass the DVB has found necessary to support successful patent pool formation.

"To satisfy DVB's criteria, the pool must include "at least 70 percent of all Members or their affiliated companies holding [essential] IPRs". This was intended to ensure that the patent pool had a "critical mass" of patents available for licensing, making the pool attractive as a "one-stop shop"" Eltzroth *supra* at 33.

In contrast, patent pools participants appear to have been effective in using patent prosecution techniques such as continuations, continuations-in-parts, and divisions: "The ratio of the patents which were obtained by using these practice amounts to 44% of the essential patents for MPEG2." Sadao Nagaoka, Tomoyuki Shimbo & Naotoshi Tsukada, *The structure and the evolution of essential patents for standards: Lessons from three IT Standards* (Sept. 2006), <http://www.iir.hit-u.ac.jp/iir-w3/file/WP06-08nagaoka.pdf>

⁴⁸ MPEG-4 was plagued by licensing issues, leading Leonardo Chiariglione, the convenor of the MPEG committee, to state in a presentation at the MPEG 20th Year Anniversary Commemoration in Tokyo in November 2008: "the MPEG-4 Visual licensing killed half of the standard....The "use fee" licensing model facilitated the widespread use of proprietary codecs" http://www.itscj.ipsj.or.jp/forum/forum2008MPEG20/03MPEG20_Leonardo.pdf

See also Gwendolyn Mariano, MPEG-4 rival raises antitrust specter, CNET News, April 9, 2002, http://news.cnet.com/MPEG-4-rival-raises-antitrust-specter/2100-1023_3-879392.html

⁴⁹ See Junko Yoshida, Safety of patent pool imperiled: After interactive-TV spec fiasco, DVB members ponder fate of open process, EE Times, March 12, 2007:

"The patent holders got greedy to the point that they killed MHP," said Philip Laven, technical director of the European Broadcasting Union (EBU). Many broadcasters in Europe are now saying that they will "punish" MHP patent holders by not implementing it. The exception may be Italy, where the government has mandated MHP's use and the installed base of MHP set-tops already numbers in the millions.

<http://www.eetimes.com/showArticle.jhtml;jsessionid=Nv0VZKF0XCC1WQSNLQCKHSCJUNN2JVN?articleID=197801654>

The European Broadcasting Union withdrew its recommendation on MHP, reinstating it after the Via Licensing license administrator dropped license charges on free-to-air broadcasters.

<http://tech.ebu.ch/docs/r/r106v2-08.pdf>

⁵⁰ "In order to reach an agreement, Japan offered Brazil exemption from some of the royalty payments due for the application of its technology as well as the possibility of building a new semiconductor factory. In addition the transition from the existing TV standard PAL-M to SBT-D will be financed by the Japanese JBIC and the Brazilian development bank BNDES." *Brazil decides on a Digital Terrestrial TV system*, Item added: 2nd July 2006, http://www.dvb.org/about_dvb/dvb_worldwide/brazil/ retrieved 05/21/09

in official Japanese government materials⁵¹, and in government-to-government MOUs. Discounting offers continue, and expressly acknowledge that lower DTV royalties lead to lower consumer prices⁵², and are sometimes expressed by government officials themselves⁵³

A sampling of recent activities around the world where governments have had active involvement standardization and patent licensing process, include China (AVS⁵⁴), the European Commission (MHP⁵⁵), and Brazil (Java DTV⁵⁶).

Given the above, Project Canvas should adopt an ex ante, before the fact, evaluation of the IPR costs of any specification or standard developed. In case there is objection that this

⁵¹ "Stakeholders in the Japanese private sector have expressed their intentions to support the introduction of digital TV systems by providing technical information, offering exemption from payment of royalties, etc." Biweekly Newsletter of the Ministry of Internal Affairs and Communications (MIC), Japan Vol, 17, No. 9, August, 2006 http://www.soumu.go.jp/main_sosiki/joho_tsusin/eng/Releases/NewsLetter/Vol17/Vol17_09/Vol17_9.html (last visited May 26, 2009)

⁵² See, for example the statement: "We hereby reinforce our commitment to exempt payments for industrial property rights regarding the patents of ISDB-T transmission technology for production of TV receivers in Chile. We believe this option to be the most effective contribution because it allows direct transfer of the benefit to a lower consumer price, a key requirement of the Chilean Government." Letter from Yasuo Takahashi, Chairperson, DiBEG – Digital Broadcasting Experts Group & ARIB – Association of Radio Industries and Businesses to Mr. René Cortázar, Ministro de Transporte y Telecomunicaciones República de Chile, April, 20th, 2007 http://www.subtel.cl/prontus_tvd/site/artic/20070315/asocfile/20070315175818/comments_chilean_govenment_diberg_ver4_200407.pdf (last visited May 26, 2009)

"The Digital Broadcasting Experts Group (DiBEG) was founded in ARIB (ASSOCIATION OF RADIO INDUSTRIES AND BUSINESSES) to promote ISDB-T, the Japanese Digital Terrestrial Broadcasting System, in the world. ARIB is a legal entity of Japan established under the authority of the Ministry of Internal Affairs and Communications, to define, refine and maintain technical standards related to radio technologies based on the consensus among all concerned in government, academics, broadcast and telecommunication companies and manufacturers."

⁵³ "'We could provide financial or technical support. We've done this in Brazil,' Fuseda said." Darwin G. Amojelar, Japan offers aid for shift to digital TV, Manila Times, March 20, 2009 (quoting Hideo Fuseda, Japan's Ministry of Internal Affairs and Communications director for digital broadcasting technology) <http://www.manilatimes.net/national/2009/march/20/yehey/business/20090320bus4.html> (last visited May 26, 2009)

See also "Supply of low-or super-low-interest funds by the Development Bank of Japan Support by the "Extraordinary Law for Measures to Promote the Construction of Advanced TV Broadcasting Facilities" etc....Financial support for the implementation of broadcasting stations in disadvantaged areas" Digital TV Broadcasting in Japan, Presentation by Akira OKUBO, Ministry of Internal Affairs and Communications Japan, 13th June –14th June, 2007, Bangkok, Thailand.

http://www.soumu.go.jp/main_sosiki/joho_tsusin/eng/presentation/pdf/070613_1.pdf

⁵⁴ "Development of AVS was initiated by the government of the People's Republic of China. Commercial success of the AVS standard would not only reduce China's royalty/licensing payments to foreign companies, it would presumably earn China's electronics industry recognition among the more established industries of the developed world, where China is still seen as an outlet for mass production with limited indigenous design capability....According to the state-run media, a key consideration of AVS was to reduce foreign dependence on core intellectual properties used in digital media technology". http://en.wikipedia.org/wiki/Audio_Video_Standard

⁵⁵ "The review has also addressed questions directed to DVB by the European Commission on DVB's IPR policy and the need for timely disclosure of licensing terms for essential intellectual property rights." http://www.dvb.org/news_events/news/mhp_patent_pool_experienc/index.xml (last visited May 26, 2009). See also http://www.osmosys.tv/documents/Osmosys_Open_Letter_onMHP_Licensing.pdf

⁵⁶ See Rob Glidden, Royalty-Free Java DTV Specification Released for Brazil and the World, January 12, 2009, <http://www.roblidden.com/2009/01/royalty-free-java-dtv/>

might be too open-ended or costly, consider the going rate for independent patent evaluation for inclusion in patent pools, which is below \$10,000 per patent⁵⁷, and compare such costs to the numerous litigations underway around the world on DTV and other patented standards.

C. Preference for Royalty-Free

Much has been written about RAND standards, including potential antitrust issues in Europe⁵⁸ and elsewhere. But a key value of royalty free standards is not just lower price, it is the underlying processes and policies used by royalty-free standards groups that make them and their standards overall more immune to capture, back-room dealings, and long delays in patent pool formation that have plagued many RAND standards⁵⁹.

Standards organizations themselves are of little help in defining what RAND means. Most do not define the term in any detail⁶⁰, and the confrontational prospects of trying seem likely to make organizations reluctant to make the effort⁶¹. Moreover, since patent holders are also participants in the standards process, they have an obvious interest in encouraging standards to adopt technologies covered by their own patents⁶². And universities and academic institutions,

⁵⁷ For example, in 2002, MPEG LA announced the evaluation fee per patent of \$8500 for H.264 JVT/MPEG-4 AVC Patents ("to cover costs of the patent expert's evaluation"), http://www.mpegla.com/news/n_02-09-11_jvt.html

This \$8500 fee continued in 2003. "For each patent or patent application submitted, an evaluation fee of US \$8,500.00 to cover the outside cost of the patent expert's evaluation is paid to MPEG LA. Additional fees may be required to cover additional outside costs in the event of reevaluation by patent experts." http://www.mpegla.com/news/n_03-11-17_avc.html

Via Licensing, a competing patent pool administrator company owned by Dolby, charges \$8000 per patent to evaluate for essentiality for IEEE 802.16 (http://www.vialicensing.com/patent/IEEE80216_index.cfm), Digital Radio Mondiale Audio (http://www.vialicensing.com/patent/DRM_index.cfm), MPEG-4 Audio (http://www.vialicensing.com/patent/MPEG4_index.cfm), and as of 2002 charged \$6,500 per Digital Radio Mondiale Audio patent evaluation (http://www.vialicensing.com/news/details.cfm?VIANEWS_ID=316) (sites last visited May 26, 2007).

⁵⁸ "Once an IPR holder is found to hold a dominant position its licensing practices, fall under the scope of Article 82 EC. While a wide range of behavior can fall under Article 82 EC, it seems that two particular practices are likely to be subject to particular scrutiny with respect to IPR licensing: price discrimination between licensees and the imposition of exploitative prices." Geradin, Damien, Pricing Abuses by Essential Patent Holders in a Standard-Setting Context: A View from Europe 8-9 (July 2008). Available at SSRN: <http://ssrn.com/abstract=1174922>

⁵⁹ See for example "Eleven Years is an Unreasonable Amount of Time to Establish the ATSC Patent Pool, and the Surrounding Circumstances Raise Concern" in Reply comments of Rob Glidden, In the Matter of Petition For Rulemaking And Request For Declaratory Ruling Filed By The Coalition United To Terminate Financial Abuses Of The Television Transition, LLC (FCC MB Docket No. 09-23), May 27, 2009.

⁶⁰ "It seems clear that the licensing policy documents are of very limited help in the effort to define what RAND exactly means. Most organizations that require RAND or FRAND licensing terms do not define them in any detail." Valimaki, Mikko, A Flexible Approach to RAND Licensing 3 (March 31, 2008). Available at SSRN: <http://ssrn.com/abstract=1261642>

⁶¹ "Perhaps one reason why the organizations have been reluctant to define RAND with more details is that any proposal for a more precise definition could mean unfruitful and exhausting policy battle with unpredictable outcome. Often the particular issue has been royalties." Id. at 3.

⁶² "In principle, the goal of an SSO should be to specify the "best" standard, given technological constraints and cost. But the participants in the standard-setting process are not disinterested technocrats. Many of them are patentees and the standard is likely to take a path through a thicket that includes some of their patents. The SSO participants have an obvious interest in steering the standard through their own patents." Crane, Daniel A., Patent Pools, RAND Commitments, and the Problematics of Price Discrimination (April 1, 2008). Cardozo Legal Studies

once the major participants in such organizations as the IETF, are now increasingly influenced by the “lottery effect” of patent royalties.⁶³

CONCLUSION

A principle of public accountability for public standards seems a natural starting point for Project Canvas, whether they are mandated, encouraged or subsidized, rather than a presumption of private gain at public expense⁶⁴. In our globalized world, it is more important than ever to develop a sober, modern perspective on standardized systems for communication networks. A IPR fairness regime is needed, not only to overcome the potential for protectionism⁶⁵ but to fulfill the promises of *both* Free-To-View television *and* the Open Internet.

Research Paper No. 232 at 6 Available at SSRN: <http://ssrn.com/abstract=1120071>

⁶³ "The evidence is overwhelming. University tech transfer activities continue to be predominantly patent-centric and revenue driven with a single-minded focus on licensing income and reimbursement for legal expenses. University technology transfer activities do not extend far beyond this narrow focus and entrepreneurship and commercialization activities and/or transferring innovation through other means do not figure prominently." Kesan, Jay P., *Transferring Innovation* (April 2, 2009). *Fordham Law Review*, Symposium Issue, Forthcoming; U Illinois Law & Economics Research Paper No. LE09-011; Illinois Public Law Research Paper No. 08-25 at 2207. Available at SSRN: <http://ssrn.com/abstract=1371810>

However, "[a]mong other obstacles, TTOs traditionally must overcome the difficulty of breaking even—typically, it takes between five and ten years for a TTO to break even, if it does at all." *Id.* at 2180.

⁶⁴ See for example comments by Public Knowledge, Consumers Union, Free Press, Media Access Project, and New America Foundation in the CUT FATT proceeding: “The public interest requires that the scope and cost of any mandatory standards be clear to those who would adhere to them. When patent royalties can be openly investigated and compared against known benchmarks, manufacturers and consumers can be assured that licenses, and the costs that go with them, are reasonable and nondiscriminatory. Not only does disclosure prevent cost-raising abuses, but ensuring that essential patents are known and disclosed will prevent users of the DTV standard from being drawn into disputes over patent scope and validity. The time, uncertainty, and cost involved in navigating unanticipated patent disputes would also be minimized by further transparency and disclosure.”

Cited in Rob Glidden, *Consumer Groups Request FCC Investigate DTV Patent Licensing*, May 28, 2009, <http://www.robglidden.com/2009/05/consumer-groups-request-fcc-investigate-dtv-patent-licensing/>

⁶⁵ "In an era of increasing globalization, protectionism in the form of nationally-mandated technology standards is not the answer. To persuade countries to forego such measures, however, there must be fairness in the international system for the preparation, adoption and implementation of standards." Gibson, Christopher S., *Globalization and the Technology Standards Game: Balancing Concerns of Protectionism and Intellectual Property in International Standards*. *Berkeley Technology Law Journal*, Vol. 22, p. 1401; Suffolk University Law School Legal Studies Research Paper No. 07-39, at 1-2. Available at SSRN: <http://ssrn.com/abstract=1010125>