National Academies Project on Intellectual Property Management in Standard-Setting Processes: An International Comparison PGA-STEP-10-05

Cooperation between Patent Offices and Standards Developing Organizations

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1. Introduction

The area of standardization is a rapidly changing and complex environment characterized by complementary technologies, short life cycles, high intellectual property value, market deregulation, fierce competition and litigation. Information and Communication Technology ("ICT") standards are perceived as the foundation of interoperability and the success of new products as they prevent market fragmentation. Recently the European Patent office increased its communication and cooperation with several global standards developing organization to help bridge the separate but related worlds of standards development and patent protection.

An interplay between patents and standards begins at the moment when intellectual property rights are embedded in technology included in a standard. Standards development activities in the ICT sectors usually involve the review of many technology contributions or the generation of new technical approaches. This large amount of innovation, often in emerging growth areas

[1] President, GTW Associates

[2] for more information about this project see http://www8.nationalacademies.org/cp/projectview.aspx?key=49398

where companies invest heavily in research and development, may be covered by patents which are needed to implement a standard.

While patent and standards serve common objectives by encouraging innovation and supporting diffusion of technology, there is also tension in their interrelation. The tension can affect the patent system and the standards system: on the one hand, the enhanced value placed on intangible assets and defensive patenting when a patented technology is incorporated in a standard can produce distortions in the standardization system, and, on the other hand, incremental technology and competing business models prompted by standards increase patent activity, application pendency times, and legal uncertainty on the patent side.

The purpose of this paper is to share research on existing cooperation models between patent offices and standards developing organizations. The European Patent Office has Memoranda of Understanding with the European Telecommunications Standards Institute (ETSI); the International Telecommunications Union (ITU); and the IEEE-Standards Association. Interviews were conducted with US Patent office officials to better understand how the US patent process uses standards information and how the EPO model of cooperation with standards organizations might benefit US processes. Interviews were also conducted with standards policy contacts in Japan and China to establish global context and with representatives of standards organizations with extensive existing databases of standards information that might support expanded cooperation between PTOs and SDOs.

The author gratefully acknowledges the contributions of many interviewees and reviewers of drafts of the paper[3]. However the views and facts presented in this paper are the responsibility of the author and not the contributors and reviewers. In particular the views and formulation have not been endorsed by the contributors or their organizations nor the National Academies. Any errors or misunderstandings in the paper are the responsibility of the author.

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[3] Substantive contributors and reviewers of this research included Elaine Wu and Minna Moezie and staff of the Science and Technology Information Center of the US Patent and Trademark Office; Ms. Yi Yi Wang, Subinsitute of Standardization Theory and Education, China National Institute of Standardization; Ms. Shiho Nagano, Ministry of Economy, Trade and Industry, Japan; Mr. Henry Wixon and staff of the National Institute of Standards and Technology; Mr. Vishant Shah, Senior Consultant // Smart Grid Engineering, EnerNex; Ron D. Katznelson, Ph.D. President, Bi-Level Technologies, member of the IEEE-USA Intellectual Property committee; Mr. Rudi Bekkars and Mr. Marc Sandy Block, members of the National Academies advisory committee.

2. Activities of the European Patent Office in the field of ICT Standards

2.1 Background

The European patent office relies on information gained from standards documents and standards activities in their review of patent applications.

Key to use of such material by the EPO patent examiners is that is meet the definition of prior art which includes the notion of public availability. A number of legal cases decided by the EPO Appeals Board guide such EPO use.

In EPO appeals Case T 202/97 an opponent cited as relevant state of the art the provisional agenda together with the preliminary documents and the minutes of the meeting of the standard developing working group ISO/TC22/SC3/WG9 together with a list of participants. The Board came to the conclusion that a proposal sent to the members of an SDO working group in preparation of their meeting does usually not underlie an obligation to maintain confidentiality and is therefore to be considered as being available to the public. The Board argued that even when a restricted group was invited to a meeting, the proposal sent together with the draft agenda was available to the public when no obligation to maintain confidentiality existed for the members of the group..

According to Public Guidelines criteria: (see GL C-IV, 6.1, based on case T300/86) a written description, i.e. a document, should be regarded as made available to the public if, at the relevant date: it was possible for members of the public to gain knowledge of the content of the document; and there was no bar of confidentiality restricting the use or dissemination of such knowledge.

Further EPO Technical Board of Appeal decision T0050/02 states:

"A document is made available to the public […] if all interested parties have an opportunity of gaining knowledge of the content of the document for their own purposes, even if they do not have a right to disseminate it to third parties, provided these third parties would be able to obtain knowledge of the content of the document by purchasing it for themselves."

In a November 2011 presentation *European Patenting alongside Innovation and Standardisation*[4] Leo Giannotti of the EPO elaborates conditions for use of standards and standards documentation in EPO deliborations:

[4] 11/15/2010 at the Future Internet Conference Week Ghent at http://www.slideshare.net/Standardization2010/leo-giannotti-epo and http://standardization-ghent.fi-week.eu/files/2010/12/1100-3-leo_giannotti.pdf

… When a standard preparatory document is cited against an application during search or examination, the same facts are thus to be established as for any other piece of evidence. – (cf. Guidelines C-IV, 6.1).

… further development of a standard should be treated like any other written or oral disclosures, i.e. they must have been made available to the public prior to the filing/priority date without any bar of confidentiality in order for them to qualify as state of the art.

… The same general principles establishing the public availability of a document belonging to the state of the art according to Article 54 EPC are applied BOTH by the examining AND opposition divisions[5]

… Regarding the citations of standards documents or preparatory documents in the search report, the EPO follows the principle laid down in Rule 61 EPC that the European search report shall mention those documents, available to the EPO at the time drawing up the report, which may be taken into consideration in deciding whether the invention to which the European Patent application relates is new and involves an inventive step[6]*.*

... SDO Dissemination Policies do matter The existence of an explicit confidentiality obligation must be determined case-by-case on the basis of the documents allegedly setting forth this obligation (cf. T273/02 and T738/04). This may be general guidelines, directives or principles of the respective SDO, licensing terms or a Memorandum-of-Understanding resulting from the interaction between the SDO's and their members. In case of a general confidentiality clause, i.e. one that is not indicated on or in the relevant preparatory document itself, it must be established that the general confidentiality obligation actually extended to the document in question until the relevant point in time.

... When individual participants in the preparatory work are not bound by an obligation to maintain confidentiality, then even the standard preparatory documents that are only communicated to a limited circle of people form part of the state of the art, as long as the document was distributed prior to the filing/priority date. If an obligation of confidentiality exists with respect to a particular preparatory document, this obligation must not have been breached through dissemination of the document or of the knowledge contained therein[7]

[5] for general principles, see Guidelines for Examination in the EPO, D-V, 3.1.

[6] Guidelines for Examination in the EPO C-IV, 6.1 and Guidelines for Examination in the EPO B-III, 1.1 and 2.1

[7] see Guidelines for Examination in the EPO D-V, 3.1.3.2)

As later addressed in this paper the extent to which these European criteria about the use of standards and standards information apply to the use of standards and standards information as "prior art" in deliberations at the US Patent and Trademark office is a key unknown factor to the utility of such standards information.

2.2 EPO Memoranda of understanding with ETSI, IEEE and ITU

In a presentation *Patents as a regulatory tool What patent offices can do to promote innovation*[8] at the conference 'Intellectual Property and Competition Policy' In Geneva, 21 June 2012, Nicolas Thumm Chief economist at the EPO recounted the timeline of EPO's increased cooperation with the standards community.

In 2003 EPO became an ETSI member.

In 2007 EPO became an observer at the Global Standards Collaboration

In 2009 EPO concluded MoUs with ETSI and IEEE

In 2012 EPO concluded a High level technical agreement with the International Telecommunication Union (ITU)

These agreements provide access to standardization documents for prior art search

The three bilateral agreements follow a similar structure and embrace the same principles:

i) exchange of information and documentation of mutual interest in the field of standards for the benefit of prior art search;
ii) collaboration on documentation format definition and dissemination policies and align them with the EPO prior art search needs;
iii) contribution to education and promotion activities in the field of standards;
iv) self-funding.

2.3 The Standards developing organizations (SDOs)

2.3.1 ETSI[9]

[8] http://www.unece.org/fileadmin/DAM/ceci/ppt_presentations/2012/TOS_IP6/Thumm.pdf

[9] http://www.etsi.org/WebSite/AboutETSI/AboutEtsi.aspx

The European Telecommunications Standards Institute (ETSI) produces globally-applicable standards for Information and Communications Technologies (ICT), including fixed, mobile, radio, converged, broadcast and internet technologies.

ETSI is recognized by the European Union as a European Standards Organization. The high quality of our work and our open approach to standardization has helped us evolve into a European roots - global branches operation with a solid reputation for technical excellence.

ETSI is a not-for-profit organization with 700 ETSI member organizations drawn from 62 countries across 5 continents world-wide.

EPO's MOU with ETSI was signed November 25, 2009.

Under the terms of the MoU, the two organizations will increase their co-operation in matters of standards and intellectual property. Specifically, they agree to share knowledge, information and documentation on technology and standards, to collaborate on education related to standards and IP issues, and to co-operate to interlink ETSI's enhanced intellectual property rights database system with the EPO's publicly accessible patent databases

The Memorandum is a further milestone in the long-lasting and fruitful relationship between ETSI and the EPO which started when the EPO became a member of ETSI in 2003. Among a variety of collaborative actions, ETSI has provided EPO examiners access to its documents in order to facilitate their work and improve the identification of "prior art".

"I see this agreement with the EPO as a strengthening of our already very good co-operation by establishing, in addition to the EPO's current membership of ETSI, a wide-ranging and flexible mechanism for guiding and protecting our members' intellectual property interests," says Walter Weigel[10], ETSI Director-General. *"Standards and IPR are inseparable companions that are vital to today's innovators and exploiters of new technologies."*

Noteworthy rationale for the public nature of ETSI standards discussions and thus their use by EPO as prior art is ETSI Rules of Procedure, 30 November 2011 - Annex 6: ETSI Intellectual Property Rights Policy page 38 & 39[11]

> *10 Confidentiality*
>
> *The proceedings of a COMMITTEE shall be regarded as non-confidential except as expressly provided below and all information submitted to a COMMITTEE shall be treated as if non-confidential and shall be available for public inspection unless:*
>
> *the information is in written or other tangible form; and*

[10] http://www.prlog.org/10427293-etsi-and-european-patent-office-announce-new-collaboration.html

[11] http://www.etsi.org/WebSite/document/Legal/ETSI%20IPR%20Policy%20November%202011.pdf

the information is identified in writing, when submitted, as confidential; and
the information is first submitted to, and accepted by, the chairman of the COMMITTEE as confidential.

CONFIDENTIAL INFORMATION incorporated in a STANDARD or TECHNICAL SPECIFICATION shall be regarded as non-confidential by ETSI and its MEMBERS, from the date on which the STANDARD or TECHNICAL SPECIFICATION is published.

2.3.2 The International Telecommunications Union ITU[12]

The ITU (International Telecommunication Union) is the United Nations specialized agency for information and communication technologies – ICTs. ITU has a membership of 193 countries and 700 private-sector entities and academic institutions. ITU is headquartered in Geneva, Switzerland, and has twelve regional and area offices around the world.

ITU and the EPO (European Patent Office) signed in May 2011 an agreement[13] in recognition of the need for standards makers to share information to help improve the quality of patents.

"ITU has long championed an intellectual property policy that takes into account the needs of patent holders as well as a requirement to meet the needs of end users in the most efficient manner," ITU Secretary General Hamadoun Touré said, *"This agreement will provide the necessary framework to better respond to the challenges created by the interplay between patents and standards and will increase the transparency of patent information declared to ITU."*

Mr Benoît Battistelli, of the European Patent Office, said, *"This agreement is in recognition of the importance for standard-setting organizations to cooperate with patent and trademark offices with a view to improving transparency at the interplay of both systems and facilitating the work of patent examiners in their examination processes."*

The agreement allows ITU to link its Patent Database to the EPO Database containing patent documentation relevant to ITU's standardization activities. The organization of joint workshops on the interplay between Intellectual Property Rights (IPR) and standards is also foreseen.

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[12] http://www.itu.int/en/about/Pages/default.aspx

[13] http://www.itu.int/net/itunews/issues/2011/05/42.aspx

2.3.3 The Institute of Electrical and Electronic Engineers Standards Association (IEEE-SA) [14]

The IEEE-SA is a leading consensus building organization that nurtures, develops and advances global technologies. IEEE standards drive the functionality, capabilities and interoperability of a wide range of products and services

The EPO concluded a Memorandum of Understanding[15] with the Institute of Electrical and Electronic Engineers, Inc Standards Association (IEEE-SA) July 2009.

The two organizations agreed to share knowledge, information and documentation on technology and standards, and to collaborate on education related to standards and IP issues. The IEEE will also facilitate the involvement of EPO representatives in relevant IEEE-SA working groups and investigate whether the Office can participate in beta testing of its document management system.

"Clearly defined interfaces and information exchange must be established between formal standards setting organizations and patent offices in order to increase transparency in this critical field, where two types of regulatory systems are interfering" said Wim Van der Eijk[16], Vice President of the EPO at the time of signing. *'This is the first agreement of its kind, but it is part of a wider strategy.'*

3. Other policy responses at the interface between patents and standards

3.1. European Commission

EPO has also extended its cooperation to regulators in particular the European Commission (DG Enterprise). The Commission demonstrates significant interest in the interplay between ICT standards and intellectual property. EPO and the European Commission have co-organized three recent conferences on IP and ICT standards.

The summary report of the first such event *"Tensions between IPR and standardization - reasons and remedies"* (November 2010)[17] includes the remarks of Nikolaus Thumm, Chief Economist at the

[14] http://www.standards.ieee.org

[15] http://www.ag-ip-news.com/news.aspx?id=25952&lang=en

[16] ibid

[17] http://ec.europa.eu/enterprise/sectors/ict/files/n_169__summary_ipr_conference_november_2011_en.pdf

EPO, in his keynote address about cooperation between the EPO and the European standardisation organizations.

Thumm focused on the inherent tension between standardisation and patents. Whereas patents represent a temporary protection of the intellectual ownership and include an exclusive right to exploit the benefits derived from the new knowledge, standards can be seen as an important instrument for the diffusion of new technology. They make information about new technologies available to everyone for a small fee and can be seen as a public good. Both patents and standards serve to codify technical information but their roles are different.

On November 24 2011 the European Commission and the European Patent office jointly organized a second conference event "ICT standards and patents: The public authority and international Perspective: how to increase transparency. One panel addressed specifically:

How is cooperation between standardization and patent authorities improving transparency around patented technologies included in ICT standards

The panel included presentations from the patent office perspective (Michael Goudelis, Director Telcoms EPO and from the SDO perspective represented by ETSI, ITU and IEEE. The summary[18] of this panel portrays the perceived and actual benefits of the EPO cooperation with these SDOS.

> *In particular it is possible to maintain and even improve the quality of patent examination in ICT-standards-related sectors, thereby also improving the legal certainty of granted patents. Of primary importance in this context is the availability of all non-confidential technical information from within the standardization process for patent examination purposes. … a second benefit is the supply of information from patent offices to SDOs regarding the completeness and update of patent declarations supplied by participants in the standardization process. A first step is done with the linking of ETSI's declaration DB with EPO's public register. There are also other incipient activities in the fields of joint education activities (eg towards engineering universities), joint publications and development of public information systems.*

The most recent conference *Information and communication technologies Transparency and Predictability of Licensing in ICT through Patent Pools?*[19] in April 2012 drew attention to the role of patent pools. The purpose was to evaluate whether and how patent pools can contribute to increased transparency and predictability in IPR treatments.

3.2. US Patent and Trademark Office (USPTO)

[18] http://ec.europa.eu/enterprise/sectors/ict/files/ict-policies/ex_ante_summary_report_en.pdf

[19] http://ec.europa.eu/enterprise/sectors/ict/standards/extended/patent_pools_event_en.htm

3.2.1 Background and procedure

Granting of patents is one of the powers of Congress established in the Constitution of the United States. The Patent Copyright Clause, United States Constitution, Article 1, Section 8 states:

The Congress shall have power ... To promote the Progress of Science and useful Arts, by securing for limited Times to Authors and Inventors the exclusive Right to their respective Writings and Discoveries.[20]

In turn the US Patent and Trademark office has defined a procedure for inventors to apply for a patent. (See Process for Obtaining a Utility Patent[21])

At step 9[22] of this process a patent application arrives at the USPTO and USPTO examiners begin to evaluate whether or not a patent should be granted based on the information in the application and their independent research to identify (among other criteria) the existence of "prior art" which could indicate the invention claimed had been described previously elsewhere. Standards, publicly available draft standards, and publicly available discussions during standards setting can be a rich source of information about "prior art."

At this point the public availability of information about a standard or standards activity relevant to the patent becomes a factor a PTO examiner sometimes encounters in the PTO review.

3.2.2 Use of standards information by patent examiners and role of the Scientific and Technical Information Center (STIC)

The Scientific and Technical Information Center (STIC) is a library facility operated by the PTO at its Alexandria office. The STIC maintains satellite information centers in each examination Technology Center (TC) of the PTO. According to staff at the STIC[23], patent examiners will frequently request assistance collecting text of standards the examiners believe may be relevant to patentability of inventions described in an application. For example a standard may be mentioned as a reference in an application; or a part of a standard may be included in an application and the examiner wishes to review further disclosure in the standard or draft

[20] http://law.justia.com/constitution/us/article-1/40-copyrights-and-patents.html

[21] http://www.uspto.gov/patents/process/index.jsp

[22] http://www.uspto.gov/patents/process/ppo_utility_step9.jsp

[23] conference call with US PTO STIC officials July 1, 2012

standard document; or the examiner may find mention of a relevant standard or standards activity in his review and wish to see the text of the standard or draft standard or other public information about the standard.

Time is of the essence for STIC providing responding to requests for information. Pressures upon patent examiners to issue timely decisions on patent applications are great. According to USPTO Director Kappos testimony at a May 16, 2012 House Judiciary Committee Hearing on: Implementation of the Leahy-Smith America Invents Act[24]:

> *Mr. Chairman, while we are pleased with the progress we are making in the AIA implementation process, we are also proud of our ongoing, concurrent efforts to improve the patent examination process and more quickly move important innovations to the marketplace. For example, our backlog of utility patent applications has been reduced to 640,491, the lowest level in several years despite significant increases in filings last year and this year. Our total pendency is 33.9 months and our forward looking first action pendency down to 16.2 months[25].*

PTO's STIC provides access for examiners to standards documents through various channels. For example STIC provides links to electronic versions of some standards via the STIC Non patent literature (NPL) Website[26]. The STIC provides examiners access to such Non-Patent Literature (NPL) through multiple electronic tools purchased from various publishers. These tools are available to examiners, organized by Technology Centers (TCs), on the NPL web page, which is located on the Patent Examiner's Toolkit[27]. Patent examiners are not required to search every listed resource in the examination of an application. The examiner will determine the most appropriate resources for that application by relying upon their professional judgment and assessment of disclosed and claimed subject matter in the application under consideration.

STIC also maintains hard copies of some standards in the various STIC Electronic Information Centers (EICs) . However these standards may not be available electronically. STIC subscribes to publicly available IEEE standards, which examiners can search and download. Further as

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[24] http://judiciary.house.gov/hearings/Hearings%202012/hear_05162012.html

[25] http://judiciary.house.gov/hearings/Hearings%202012/Kappos%2005162012.pdf

[26] http://www.uspto.gov/patents/resources/electronicNPL.jsp

[27] not publicly available

documented in a list prepared in 2011[28] STIC has had need for standards available from at least 26 standards related organizations .

"PubEast" and "PubWest" (see also section 3.2.4 USPTO Databases below) are User Interfaces patent examiners use to search patent publications (both granted patents and PreGrant Publications). The USPTO search systems use several formats, including RedBook, Yellowbook, ASCII, and TIFF image format to load and store the search data[29].

After the outcome of the patent search and examination and a decision on an application, the patent applicant or other third party can request a re-examination and can have the PTO reconsider the application in light of any new prior art raising potentially substantial new questions of patentability. In this context, the patent applicant can amend claims to make the claims narrower in light of the prior art. If the patent applicant is not satisfied with the results of the re-examination, it can appeal to the USPTO Board of Patent Appeals. The patent applicant can appeal the determination of the Board to the Court of Appeals for the Federal Circuit.[30]

3.2.3 Implications of The America Invents Act

The America Invents Act (AIA)[31] was passed by the House of Representatives June 23, 2011; the US Senate September 8, 2011; and was signed into law by the US President September 16, 2011.

According to a summary[32] of the law by the Congressional Research Service:

> *America Invents Act - Amends federal patent law to define the "effective filing date" of a claimed invention as the actual filing date of the patent or the application for patent containing a claim to the invention (thus replacing the current first-to-invent system), except as specified. Requires the effective filing date for a claimed invention in an application for reissue or reissued patent to be determined by deeming the claim to the invention to have been contained in the patent for which reissue was sought.*

[28] USPTO draft document "standards" 2/2/2011

[29] Email communication from USPTO staff to GTW 6/20/2012

[30] ibid

[31] http://www.gpo.gov/fdsys/pkg/BILLS-112s23es/pdf/BILLS-112s23es.pdf

[32] http://thomas.loc.gov/cgi-bin/bdquery/z?d112:SN00023:@@@D&summ2=m&

Establishes a one-year grace period (a prior art exception) for inventors to file an application after certain disclosures of the claimed invention by the inventor or another who obtained the subject matter from the inventor. Revises provisions concerning novelty and nonobvious subject matter (commonly referred to as conditions for patentability).

Thus AIA creates the strategic change to the US patent application system from one of an evaluation based on "first to invent" entitlement to a patent to a system of priority based on a "first to file" entitlement to a patent. Effective March 16, 2013 the America Invents Act (AIA) (18 months from enactment), will change the definition of prior art set forth in Section 102:

> *''§ 102. Conditions for patentability; novelty*
>
> *''(a) NOVELTY; PRIOR ART.—A person shall be entitled to a patent unless—*
> *''(1) the claimed invention was patented, described in a printed publication, or in public use, on sale, or otherwise available to the public before the effective filing date of the claimed invention; or*
> *''(2) the claimed invention was described in a patent issued under section 151, or in an application for patent published or deemed published under section 122(b), in which the patent or application, as the case may be, names another inventor and was effectively filed before the effective filing date of the claimed invention*[33]

USPTO staff elaborate:

> *New Section 102 defines prior art as subject matter described in a patent or a printed publication or generally otherwise available to the public. Notably, new Section 102 removes geographic limitations circumscribing the prior art defined in current Section 102, particularly as regards prior uses and sales. It should also be pointed out that new Section 102 expands the universe of prior art created by conflicting patent applications by making earlier filed applications by another inventor prior art as of their earliest effective filing date (including any claims of foreign priority), rather than their earliest US filing date, as is the case under current Section 102(e). New Section 102 further eliminates the English language restriction in current Section 102(e) as regards the effective prior art date of a conflicting international application filed under the Patent Cooperation Treaty so that PCT applications are prior art as of their earliest effective filing date without regard to the language of publication of the international application.*
>
> *Section 102(b) provides for an expanded grace period that provides an incentive for early disclosure (i.e., 1 year or less before the effective filing date) by insulating inventors and others who disclose their inventions against third party disclosures, if the inventor's disclosure precedes that of a third party. Accordingly, any disclosure by or derived from*

[33] http://www.gpo.gov/fdsys/pkg/BILLS-112s23es/pdf/BILLS-112s23es.pdf

the inventor, made in any form, anywhere in the world within the 12 month window would be considered non-prejudicial.

As is true with all U.S. laws, these provisions will be subject to judicial interpretation.[34]

Confidential or non public information may not qualify as "prior art". Key words relevant to the use of standards or standards activity by patent examiners in their review of patent applications in the excerpt of new *§ 102.* above are:

A person shall be entitled to a patent unless — (1) the claimed invention was patented, described in a printed publication, or in public use, on sale, or otherwise available to the public before the effective filing date of the claimed invention

Thus what constitutes *"confidential or non public information"* in the context of standards and standards setting has a strategic impact on the utility of such information in the patent examination process.

USPTO illustrates in the table following[35] how some of the America Invents Act provisions will change the USPTO review of patent applications:

Aspect of Law	*First-to-invent*	*First-inventor-to-file*
Public use or sale as prior art	*Geographic limitation to United States only*	*No geographic Limitation —may occur anywhere in the world*
Patents and patent application publications as prior art to another	*As of effective filing date: -actual filing date; or -filing date of the earliest U.S application for which a benefit claim is sought*	*As of effective filing date: -actual filing date; or -filing date of the earliest application for which a benefit claim or right of priority is sought, regardless if filed in U.S or a foreign country.*

[34] Email communication from USPTO staff to GTW 6/20/2012

[35] July 2012 slide 2 USPTO presentation on America Invents Act http://www.bustpatents.com/US-PTO-AIA-slides.pdf

With regard to submissions of related documentation (such as standards) by third parties the USPTO shares the AIA has the following impacts effective September 13, 2012 [36] The AIA:

> *Allows third parties to submit printed publications of potential relevance to examination if certain conditions are met, e.g.:*
>
> *– must be made in writing;*
> *– must provide a concise description of the asserted relevance of the submitted document;*
> *– must include a statement by the person making the submission affirming that the submission is compliant with statutory and regulatory requirements;*
>
> *and*
>
> *– third party:*
> *• can be anonymous; and*
> *• not required to serve submission on applicant*

In summary standards or standards activity prior art information that a patent examiner might use in evaluating whether a patent application meets the criteria of "first to invent" must be *"subject matter described in a patent or a printed publication or generally otherwise available to the public."*

3.2.4 USPTO Databases

The public has access through the Public Search room[37] to the same PubEast and PubWest databases as do patent examiners. State of the art computer workstations provide automated searching of patents issued from 1790 to the current week of issue using the patent examiner systems Web-based Examiner Search Tool, (WEST) and Examiner Automated Search Tool (EAST), the USPTO web site, and related applications.

Full document text may be searched on U.S. patents issued since 1971 and OCR text from 1920 to 1970. U. S. patent images from 1790 to the present may be retrieved for viewing or printing. Some foreign patent documents may be searched using EAST and WEST. Official Gazettes, Annual Indexes (of Inventors), the Manual of Classification and its subject matter index, and other search aids are available in various formats.

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[36] July 2012 US PTO slide 5 on America Invents Act http://www.bustpatents.com/US-PTO-AIA-slides.pdf

[37] http://www.uspto.gov/products/library/search/

However the public does not have access to the STIC Non patent literature (NPL) Website.

Additionally the USPTO.gov web site has a search interface called PatFT[38] (Patents Full text) and AppFT[39] (PreGrant Applications Full Text). These web-based interfaces search the same databases as PubEast and PubWest but trade ease of access for a more limited feature set.

The "public pair[40]" database at USPTO contains extensive information about patents including references to standards and standards activity. For example patent 8205143 in this database mentions relationships to 3gpp standards. The information disclosure statement by the patent applicant dated 12/05/2012 refers numerous times to 3GPP documents and meeting reports. Interesting that the patent reviewer states:

The references listed in the disclosure statement IDS submitted on 12/05/2011 have been considered except the reference 3GPP –TSG RAM WG1 50R1 073741 was not considered as a date for this reference was not provided

In this instance further information about 3GPP –TSG RAM WG1 50R1 073741 might have been relevant to the patent examination if available to the patent examiner.

The "assignments database[41] contains voluntarily provided information about assignments and transfers of patents. While use of the assignments database service through submission of information is voluntary, such submissions do convey some legal protection that would not otherwise apply.

3.2.5 USPTO view of its relationships with standards developing organizations (SDOs) and the European Patent Organization

The USPTO contributed the point of view to this paper that SDO's should be incentivized to share information with USPTO to avoid having patents granted improperly. USPTO states :

[38] http://www.uspto.gov/patents/process/search/index.jsp

[39] http://patft.uspto.gov/netahtml/PTO/search-bool.html

[40] http://portal.uspto.gov/external/portal/pair/

[41] http://www.uspto.gov/ebc/help_assignments_p.htm

having the best and most up to date prior art would help us improve patent quality, and avoid granting patents improperly ... As long as there is full transparency, we don't see concerns with this type of cooperation. [42].

USPTO staff believe aspects of the existing EPO-SDO Memoranda of Understandings might serve as a model in the process.[43]

Staff of STIC referred[44] to often considerable cost in obtaining copies of standards for patent examiners. Noteworthy in this regard is a ANSI-brokered service[45] for participants in the Smart Grid Interoperability panel (SGIP) to provide for temporary access to standards relevant to SGIP. Standards portal access is available only to registered SGIP member representatives and there are a limited number of "floating licenses" for access. Cost savings to USPTO through reductions in the purchase price of standards documents might accrue through some relationship via an MOU between the USPTO and standards organizations.

The USPTO has engaged in regular policy dialogs with the European Patent Organization (EPO) however as far as known to USPTO staff[46] there is no cooperation (such as EPO sharing with the USPTO information it may collect deriving from its MOUS with SDOs) with EPO in the field of standards. USPTO staff noted[47] that there may be limitations upon EPO sharing information imposed by its MOUs and that any standards related information that might originate from EPO would need to meet the aforementioned criteria applicable to "Prior Art" USPTO staff were not familiar with the extent to which information collected under the EPO's MOUs might fail criteria that prior art under the new *§ 102.* must be:

"subject matter described in a patent or a printed publication or generally otherwise available to the public."

In this regard, EPO examiners cite in their search reports and take into account as prior art (according to EU patent procedure definitions) documentation derived from the databases of

[42] Email communication from USPTO staff to GTW 6/20/2012

[43] ibid

[44] conference call with US PTO STIC officials July 1, 2012

[45] https://collaborate.nist.gov/twiki-sggrid/bin/view/SmartGrid/SGIPMemberAccessToANSIPortal

[46] Email communication from USPTO staff to GTW 6/20/2012

[47] conference call with US PTO STIC officials July 1, 2012

SDO partners, ETSI/ITU/IEEE as well in some instances records of meeting discussions. EPO considers these documents non-confidential; except only as an exception to the rule, i.e., only if the SDOs declare them as such. That such standards documents are not accessible to the general public due to subscription requirements does not preclude their public character according to a case decided 2/9/1999[48] by the EPO court of appeals:

> *With an agenda to members of an international standards committee working group to prepare a proposal consigned standardization norms session is normally subject to non-confidential and is therefore available to the public (English translation of German original text[49])*

3.2.6 USPTO Relations with the American National Standards Institute (ANSI)

Staff of USPTO have from time to time attended meetings of the American National Standards Institute[50] (ANSI) IPR Policy committee[51] to share information about relevant US PTO activity. For example USPTO staff shared with the ANSI IPR PC the US government (through the USPTO) comment[52] on the positive characteristics of the US standards system at the March meeting 2009[53] of the WIPO Standing committee on the law of patents (SCP):

> *The United States doesn't encourage government intervention. The issues have long been discussed and are rejected because they hinder innovation, standards development, U.S. industries' competitive advantage and attendant benefits to consumers.*

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[48] http://www.epo.org/law-practice/case-law-appeals/recent/t970202du1.html

[49] http://translate.google.com/translate?sl=de&tl=en&js=n&prev=_t&hl=en&ie=UTF-8&layout=2&eotf=1&u=http%3A%2F%2Fwww.epo.org%2Flaw-practice%2Fcase-law-appeals%2Frecent%2Ft970202du1.html

[50] www.ansi.org

[51] http://www.ansi.org/about_ansi/structure_management/policy_commit_councils/intel_rights.aspx?menuid=1

[52] http://www.gtwassociates.com/alerts/PTOtoWIPO.pdf

[53] further information about the standards policy discussions at the WIPO SCP meeting are at http://www.gtwassociates.com/alerts/WIPOSCP.html

The United States remains a strong supporter of our policies that allow U.S. standards developers to participate in international standards development activities without jeopardizing their patents, copyrights and trademarks.

• Today, more than 16,455 standards are approved as International Standards (with about 1800 more in the pipeline) and 11,500 of these as American National Standards. Thousands more are adopted by industry associations, consortia, and other Standard Setting Organizations on a global basis.

• Yet the number of disputes that result in litigation per year is typically in single digits, and the vast majority of these cases involve specific fact patterns. In other words, there is NOT a crisis, as claimed by some, in standard setting.

The WIPO Secretariat had prepared a document" "Standards and Patents[54]" for discussion at the meeting[55].

USPTO staff voiced sensitivity[56] about potential conflicts of interest and the priority for USPTO to eliminate any bias or even appearance of bias that may accompany USPTO membership in a standards developing organization.

However many government agencies currently are "government members" of ANSI and participate in the ANSI Government Member Forum[57]. Each government agency member of ANSI automatically becomes a member of the Forum and is entitled to receive documents and send representatives to meetings. Membership in ANSI would also provide opportunity to participate in the relevant work of the ANSI IPR Policy Committee.[58]

3.2.7 Concerns about Patent Office participation in SDOs.

[54] http://www.wipo.int/edocs/mdocs/scp/en/scp_13/scp_13_2.doc

[55] http://www.gtwassociates.com/alerts/WIPOSCP.html for further discussion of the WIPO meeting

[56] meeting with USPTO June 28, 2012

[57] http://www.ansi.org/membership/membership_forum/governm_member_forum/intro.aspx?menuid=2

[58] http://www.ansi.org/about_ansi/structure_management/policy_commit_councils/intel_rights.aspx?menuid=1

The conflict of interest sensitivity expressed by USPTO derive from the priority for USPTO to render independent and unbiased decisions. According to a comment on this draft during review by experts in the US patent application process:

> *There is no basis for agencies whose administrative role is to adjudicate on patentability based on publicly available prior art information, to be privy to non-public draft standards or discussion papers of SDOs before a standard is adopted and published. Patent offices should only have access to publicly available documents. In fact, patent offices are legally prohibited from using material that is unavailable to the public in examining patent applications. The mere appearance of patent examiners having access to unpublished standard documents undermines the confidence of patent applicants that the standard-based material used by examiners to reject pending claims is in fact publicly available and that the rejection is proper*[59].

USPTO concerns about costs for access to publicly available standard documents could an appropriate focus cooperation between patent offices and SDOs. SDOs and patent offices might cooperate in this area by SDOs adopting a discount category to PTOs equivalent to that provided to SDO members.

3.3 The situation in Japan

An expert sub-working group on standardization and intellectual property management within the Japan Ministry of Trade and Industry (METI) recently examined issues of the use of standards documentation by the Japan Patent Office (JPO) during JPO deliberations.

According to a report issued by the group March 2012 entitled "*The problems on the intersection between IP and standards*[60]*"* the group was:

> *where experts and learned people, who are engaged in standardization and intellectual property, in industrial and legal circles discussed problems of intellectual property management in cooperation with standardizations strategy through the results of researching and hearing on the recent trends.*

3.3.1 Activities of the European Patent Office. The group reviewed and described activities of the European Patent Office (EPO) to use standard proposal documents during

[59] 7/30/2012 Comment to GTW on DRAFT text from *Ron D. Katznelson, Ph.D. President , Bi-Level Technologies*

[60] The problems on the Intersection of IP and standards, Japan METI March 2012

examination of patent applications. In addition to the possible benefits of learning from the EPO experience, the study group noted the value of promoting consistency between the scope of information referenced as "prior art" during patent examinations in Europe and Japan[61]. Staff to the study group informally observed that the existing EPO MOUs with SDOs could serve as guides to possible JPO MOUs with SDOs subject to budgetary constraints of JPO[62]. The EPO MOUs provide for EPO membership in the SDOs including membership fees to SDOs. Staff to the study group observed that a first step in cooperation between the JPO and EPO with regard to use of standards information during patent examinations could be sharing of information and experience with each other. A first such information sharing meeting occurred in Tokyo June 23, 2012 between the JPO and EPO.

3.3.1 Use of standards information as official documents for examination by the Japan patent office (JPO)

The majority of members of the expert subgroup (while not unanimous) believed that the JPO should use standardization drafts during patent examinations. The speed of technological innovation is extremely rapid in technology areas subject to standardization and non-patented arts described on the internet are often now referenced as prior arts in Japan. Defining the line between public information which may be used during patent reviews in Japan and non public confidential information (such as may be some aspects of standards discussions) which may not be used, is a significant policy question as yet not resolved by the Japan Patent Office. METI staff to the subgroup noted that at present the JPO does not have a landscape nor policy in the field of patents and standardization or any significant cooperative activity on going with SDOs[63]

The group observed that current Japanese examination standards allow for the use information on the Internet as prior art.[64]

> *"As Information on the Internet can be accessed by any person and has a dissemination power similar to the information included in a distributed publication, it is usually regarded as information available to the public. Even in the case that a password is required to access the web page, or the access charge is required, if such information is on the Internet and anyone can know the existence of such information and the place*

[61] ibid

[62] ibid

[63] ibid

[64] Patent examination standards "Chapter 5: Handling of Information on the Internet as Prior Art," page 3

where such information is available and any person can access such information, we can say that such information is available to the public."

Staff to the group observed that use of standards information by the JPO during their examinations would necessarily depend on finding that such information meets the definition of "public" in JPO Patent examination standards[65]

The study group noted the potential relevance in Japan of the EPO appeal decision that standards documents should be recognized as public documents, even if the disclosure of the documents is limited only to particular people, if there are no other agreements with respect to confidentiality of the information. [66]

The working group further elaborated pros and cons for the JPO use of standardization drafts:

Pros and Cons for the Japan Patent Office use of standardization drafts	
Pros	Cons
Avoid usurpation of valid patent application by a third party companies perhaps in a developing country through identification of the rightful inventor described in standardization drafts	A third party cannot grasp clearly the scope of technology established as public official documents.
Promote the granting of valid patents thereby helping companies acquire patent right enabling them to protect their intellectual property and follow on earnings.	patent applications may be refused based on technology described in standardization drafts for which the patent applicant may not itself have access
reduce the burden for parties to appeal granting of usurped patent application through the availability of standards drafts.	

3.3.2 Benefits to standards organizations

[65] Email to GTW 5/18/2012 from METI (Ministry of Economy, Trade and Industry) Technical Regulations, Standards and conformity Assesment Policy Division

[66] Board of Appeal decision T 202/97, unpublished, http://www.epo.org/law-practice/case-law-appeals/recent/t970202du1.html

The study group observed potential benefits to standards organizations through cooperation with patent offices. For example the group noted that the intellectual property working group established under the secretariat of ITU-T TSB[67] has cooperated with the EU to seek how to collaborate with patent offices of each country. The ITU group concluded that if a patent office wants to use standard proposal documents for which access is limited to the ITU members for its patent examination, such patent office should join ITU and a memorandum of understanding should be executed between ITU and such patent office[68].

3.3.3 Recommendation that participants in standardization activities should file a patent application before submitting a standard proposal

The group recommended that participants in standardization activities should take steps to prevent misappropriation of their inventions by making application for patent protection before submitting standardization drafts during any standardization process. During deliberations of the group, it was found that an invention by a Japanese business had been usurped in a patent application by a third party in a developing country based on that third party having access to information about the invention disclosed during a standards process.

Benefits and disadvantages of making patent applications before submitting standards proposals within a standards development process	
Benefits	Disadvantages
A misappropriated patent application by an emerging country based on the art described in a standard proposal document may be more easily thus avoiding unfair acquisition of intellectual property	A third party cannot clearly know the scope of arts that are recognized as a publicly known reference.
if the authentic inventor of intellectual property properly obtains a patent, intellectual property and corporate interests can be protected appropriately.	An unexpected situation may occur that art described in a standard document might be used in a patent review while the applicant cannot access this same information.
When protesting against the patent enforcement by a misappropriate application, the burden placed on the	

[67] ITU IPR Working Group GSC-15, http://www.itu.int/en/ITU-T/gsc/15/Pages/gsc15-iprwg.aspx

[68] According to an interview by staff of the METI working group with EPO examiners.

enforcee is smaller who needs to prove that the patent was acquired through a misappropriate application	

3.3.4 Current databases and information resources used by JPO[69]

At present JPO examiners may access an internal non public JPO database that includes information about patents; non-patent information (but not standards documents) and chemical formulas. Every officer in JPO can access this database however only information subsequent to 18 months after a patent application is made is available at a public version of the database. If a patent is transferred transferees are to inform JPO of that fact. The current internal JPO database allows for checking the current fundamental state of a patent application (before examination, during examination, or granted for patent or not, transferred state)

3.4 CNIS

In China, the Standardization Administration of the People's Republic of China (SAC) is the authorized body by the State Council to exercise administrative responsibilities of standardization works. SAC has not signed any agreements or MOUs with the State Intellectual Property Office of the People's Republic of China (SIPO), with respect to standardization and patents. SIPO and SAC do however have information exchanges and communications with each other on the development of policy on the inclusion of patents in standards.

This policy was underlined in the Outline of National Intellectual Property Strategy[70] issued by the State Council on June 5, 2008. The Promotion plan for the Implementation of the Intellectual Property strategy elaborates in paragraph 18:

> *18) Draft the policy related to IP disposition in technical standards, the patent assessment and implementation, increase the proportion of China's IP in major international technical standards. (MIIT, MOST, AQSIQ)*[71]

[69] Email to GTW 5/18/2012 from METI (Ministry of Economy, Trade and Industry) Technical Regulations, Standards and conformity Assesment Policy Division

[70] http://english.gov.cn/2008-06/21/content_1023471.htm

[71] http://english.sipo.gov.cn/laws/developing/201204/t20120410_667158.html

Apart from the exchanges and communications on the above policy, cooperation in more practical levels, e.g. linking of the SIPO database to the databases and documentation of SAC and so on, has not occurred.[72]

3.5 Other institutions

3.5.1 The American National Standards Institute (ANSI)

3.5.1.1 What is the American National Standards Institute[73]?

The Institute is a private sector organization that oversees the creation, promulgation and use of thousands of norms and guidelines. ANSI does not create "American National standards" rather accredits voluntary standards organizations who choose to follow Essential requirements established by ANSI for the creation of standards. ANSI is also actively engaged in accrediting programs that assess conformance to standards. ANSI's stated mission is:

> *To enhance both the global competitiveness of U.S. business and the U.S. quality of life by promoting and facilitating voluntary consensus standards and conformity assessment systems, and safeguarding their integrity[74].*

Some of the Institute's key functions include:

> *Coordinating the self-regulating, due process consensus based U.S. voluntary standards system;*
>
> *Administering the development of standards and approving them as American National Standards;*
>
> *Providing the means for the U.S. to influence development of international and regional standards;*

[72] Email communication 6/5/2012 to GTW from Ms. Yi Yi Wang Subinsitute of Standardization Theory and Education, China National Institute of Standardization

[73] www.ansi.org

[74] http://www.ansi.org/about_ansi/overview/overview.aspx?menuid=1

Promoting awareness of the growing strategic significance of standards technology to U.S. global competitiveness.[75]

ANSI is the official U.S. representative to the International Organization for Standardization (ISO) and, via the U.S. National Committee, the International Electrotechnical Commission (IEC). ANSI is also a member of the International Accreditation Forum (IAF).

ANSI's membership comprises Government agencies, Organizations, Companies, Academic and International bodies, and individuals, ANSI has four Member Forums[76] that provide members the opportunity to engage one another and to raise matters to higher levels of attention. These are the forums for Companies, Government, Consumer Interest, and Organizational interests.

3.5.1.2 ANSI's Intellectual property rights activities

ANSI plays an important role in shaping the policies and strategies of the United States voluntary consensus standardization system, including those policies and strategies related to intellectual property law.

ANSI administers a policy committee that formulates ANSI positions on intellectual property issues in domestic, regional and international policy areas. The ANSI Intellectual Property Rights Policy Committee[77] (the "ANSI IPRPC") is responsible "for broad-based policy and position decisions regarding national, regional and international intellectual property matters, including the global trade aspects of such matters."

According to ANSI:

The IPRPC is responsible for developing Institute positions on issues relating to the incorporation of essential patents or other proprietary intellectual property in national, regional or international standards and for developing Institute positions relating to exploitation rights to the copyright in standards and the recognition of copyright protection for standards by courts, legislation, regulatory bodies and the industry.

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[75] http://publicaa.ansi.org/sites/apdl/Documents/Standards%20Activities/American%20National%20Standards/Procedures,%20Guides,%20and%20Forms/Guidelines%20for%20Implementation%20of%20ANSI%20Patent%20Policy%202011.pdf

[76] http://www.ansi.org/membership/membership_forum/overview.aspx?menuid=2

[77] http://www.ansi.org/about_ansi/structure_management/policy_commit_councils/intel_rights.aspx?menuid=1

Additionally, the IPRPC is responsible for drafting the "Patent Policy" for incorporation into the ANSI Essential Requirements and for formulating the Guidelines that help explain and illustrate the important and often complex policy considerations relating to these documents[78].

The ANSI Patent Policy is set forth in Section 3.1 of ANSI's *"Essential Requirements: Due process requirements for American National Standards*[79]*"* as approved by the ANSI Board of Directors (the "ANSI Essential Requirements").

3.1 ANSI patent policy - Inclusion of Patents in American National Standards[80]
There is no objection in principle to drafting an American National Standard (ANS) in terms that include the use of an essential patent claim (one whose use would be required for compliance with that standard) if it is considered that technical reasons justify this approach. *If an ANSI-Accredited Standards Developer (ASD) receives a notice that a proposed ANS or an approved ANS may require the use of such a patent claim, the procedures in this clause shall be followed.*
3.1.1 Statement from patent holder
The ASD shall receive from the patent holder or a party authorized to make assurances on its behalf, in written or electronic form, either: *a) assurance in the form of a general disclaimer to the effect that such party does not hold and does not currently intend holding any essential patent claim(s); or* *b) assurance that a license to such essential patent claim(s) will be made available to applicants desiring to utilize the license for the purpose of implementing the standard either:* *i) under reasonable terms and conditions that are demonstrably free of any unfair discrimination; or* *ii) without compensation and under reasonable terms and conditions that are demonstrably free of any unfair discrimination.*
3.1.2 Record of statement

[78] Ibid

[79] http://publicaa.ansi.org/sites/apdl/Documents/Standards%20Activities/American%20National%20Standards/Procedures,%20Guides,%20and%20Forms/2012%20ANSI%20Essential%20Requirements%20and%20other%20Updated%20Procedures/2012_ANSI_Essential_Requirements_revision_displayed.pdf

[80] http://publicaa.ansi.org/sites/apdl/Reference%20Documents%20Regarding%20ANSI%20Patent%20Policy/ANSI%20Patent%20Policy%20-%20Revised%202008.pdf

A record of the patent holder's statement shall be retained in the files of both the ASD and ANSI.

ANSI maintains a public list[81] of reference documents regarding the ANSI patent policy. ANSI *Guidelines for Implementation of the ANSI Patent Policy*[82] issued in 2011 also contains much helpful advice.

3.5.1.3 ANSI's Views on Issues Relating to the Inclusion of Proprietary Intellectual Property in Standards

ANSI states in its summary contribution *ANSI Activities Related to IPR and Standards*[83] to the Global Standards Collaboration 16

> *The intentional abuse of a standards-setting process by a participant in order to gain an unfair competitive advantage ought not be condoned. Many of the due process-based procedural requirements reflected in the ANSI procedural requirements for the development of American National Standards provide certain safeguards in the process in order to minimize the risk of unacceptable and anticompetitive conduct surreptitiously taking hold.*
>
> *With respect to the inclusion of patented technology in standards, there are incentives built into the system that cause it to be effective in discouraging duplicitous conduct by participants. The risks are that (1) the approval of the standard is subject to withdrawal, often rendering the company's innovation relatively useless, (2) competitors can and usually do avail themselves of their legal rights in court if they believe they are being unfairly disadvantaged, and various legal claims, such as equitable estoppel, laches,*

[81] http://publicaa.ansi.org/sites/apdl/Reference%20Documents%20Regarding%20ANSI%20Patent%20Policy/Forms/AllItems.aspx

[82] http://publicaa.ansi.org/sites/apdl/Documents/Standards%20Activities/American%20National%20Standards/Procedures,%20Guides,%20and%20Forms/Guidelines%20for%20Implementation%20of%20ANSI%20Patent%20Policy%202011.pdf

[83] ANSI Activities Related to IPR and Standards GSC16-IPR-06a1 November 2 2011 http://www.gsc16.ca/english/documents/iprworkinggroup/GSC16-IPR-06a1.doc

patent misuse, fraud, and unfair competition may be available to prevent a patent holder from enforcing a patent covering an industry standard due to the patent holder's improper conduct in a standards-setting context, and (3) in the case of deliberate misconduct, the FTC or DOJ can intervene. In addition, a company engaging in such conduct likely would lose some of its stature in the standards development community.

The ANSI Patent Policy has proven over time to be an effective means of addressing the incorporation of patented technology into standards. And, as noted, the ANSI IPRPC continues to monitor the effectiveness of that policy and its responsiveness to current needs. ANSI is not aware of any abuse of the process relating to patents that has occurred in connection with any American National Standard.

ANSI believes that each standards-setting organization should establish its own patent policy based on its objectives, the nature of the standard being developed, and the consent of its participants, and should avoid any requirements that arguably would require unnecessary patent searches. ANSI's Patent Policy provides a proven, solid foundation for other organizations to consider using with whatever modifications they and their participants decide will be beneficial to their activities and ANSI-accredited SDOs are required to have Patent Policies that are consistent with the ANSI Patent Policy in their development of American National Standards ("ANS"). This aspect of compliance with ANSI Essential Requirements is reviewed during audits, approval of ANSs, and upon any complaint or appeal of non-conformance with ANSI policies in the development of an ANS.

3.5.1.4 Relevant ANSI databases

ANSI maintains two relevant databases bearing on cooperation between SDOs and PTOs: The IPR Database and the National Standards System Network.

3.5.1.4.1 ANSI's IPR database

ANSI's IPR database[84] contains patent holder statements that have been provided to ANSI and claim IPR or pending patent applications as being essential or potentially essential to the implementation of an American National Standard. As of July 2012 there are 790 entries with the first date May 31, 1971. Some Standards Developer Organizations have supplied ANSI with

[84] http://publicaa.ansi.org/sites/apdl/Patent%20Letters/Forms/AllItems.aspx

URLs[85] to their own online Patent Databases. When this is the case, there is a separate record within the Patent Database in PDF format that will link externally to the respective developer's database.

Searches of the data are possible by patent number; standard number; key words; date. A more extensive search can be done in the "Advanced" portion of the Patent Database by using the following properties: Keywords; Date of Letter (date Patent Letter was signed and submitted); Patent Number; Relevant Standards; Author; Description; Categories

The database relates only to those patent holder statements actually received by ANSI. ANSI makes no representations or warranties and disclaims any and all responsibility, with respect to the accuracy, correctness, completeness or scope of (a) such statements, or any claims of IPR contained or identified therein and (b) the database

A user guide[86] for the patent database and a help page[87] provide instructions and examples of the searches that may be conducted and the information to be found.

3.5.1.4.2 The National Standards System Network

The National Standards System Network[88] is a search engine that provides users with standards-related information from a wide range of developers, including organizations accredited by the American National Standards Institute (ANSI), other U.S. private sector standards bodies, government agencies and international organizations. It contains information on published and in-development standards with over 330,000 records from 325 standards development organizations.

[85] If user clicks on the URL from the PDF, they may be navigated away from the Patent Database onto the SDO's website. It is recommended that the user copies the entire URL and paste it into a new browser window.

[86] http://publicaa.ansi.org/sites/apdl/Patent%20Letters/Forms/DispForm.aspx?ID=661&RootFolder=%2fsites%2fapdl%2fPatent%20Letters%2fANSI%20Patent%20Letter%20Database%20%2d%20Please%20Read&Source=http%3a%2f%2fpublicaa%2eansi%2eorg%2fsites%2fapdl%2fPatent%20Letters%2fANSI%20Patent%20Letter%20Database%20%2d%20Please%20Read

[87] http://publicaa.ansi.org/sites/apdl/Patent%20Letters/ANSI%20Patent%20Letter%20Database%20-%20Please%20Read/PL5000.doc

[88] http://www.nssn.org/

A simple search[89] may be completed for the title; abstract or keyword in a document.

More advanced Searches[90] may be conducted using filters:

- American National Standards
- US Standards
- ISO/IEC/ITU Approved Standards
- Non-US National and Regional Standards
- US DoD Approved Standards
- ANS Under Development
- ISO/IEC Development Project
- US DoD Development Projects
- CFR (Code of Federal Regulations) References

During an ANSI meeting *Standards Wars: Myth or Reality? May 11, 2011* ANSI staff described plans[91] for revising the NSSN to improve its responsiveness and completeness. According to an ANSI spokesperson in the report of that meeting:

> *In the long term, the goal of the enhanced NSSN is to facilitate discovery of and potential for coordination of related standards development projects across a broader range of organizations, processes, and data sets and as early in the development cycle as possible. This will increase the possibility of productive di scussions and perhaps the formation of collaborative relationships, as well as foster broader participation in standards development. In addition, it will improve ANS data retrieval and presentation, making better search and filtering capability within this context possible.*
>
> *A more robust, advanced search with a new dynamic filtering of the results is also planned. ANSI hopes to include non ANS development data which will*

[89] Ibid

[90] http://www.nssn.org/search/AdvancedSearch.aspx

[91] http://publicaa.ansi.org/sites/apdl/Documents/Meetings%20and%20Events/Standards_Wars/StandardsWars_Hager.pdf

include a broader set of standards development organizations, including consortia. It will also include development data mapping in order to maximize the alignment of conceptually similar stages of development to allow for easier comparison.[92]

During a database Design Verification workshop[93] March 21, 2012, ANSI staff also elaborated the goals of the revised NSSN:

The enhanced NSSN will improve the retrieval of American National Standards (ANS) development data, by leveraging the new system's advanced search and filtering capabilities. But another primary goal of the enhanced platform is to integrate the development data from non-ANS processes.

The final report[94] from the workshop notes:

… the intent of this phase is to facilitate discovery of related standards development projects and to make potential coordination between standards developers easier

… Another goal is to make the NSSN database and interface as extensible as possible to accommodate a range of data elements describing different development processes. The goal is to present conceptually similar stages of development to allow for easier comparison. For example, NSSN might display similar development stages/codes project initiation dates approval dates

3.5.2 National Institute of Standards and Technology (NIST)

The National Institute of Standards and Technolgy[95] plays a key role coordinating and supporting the work of US government agencies in standards setting and conformity

92 http://publicaa.ansi.org/sites/apdl/Documents/Meetings%20and%20Events/Standards_Wars/SW%20Workshop%20Report.pdf

93 http://publicaa.ansi.org/sites/apdl/Documents/Meetings%20and%20Events/Database%20Design%20Verification%20Workshop/NIST%20Database%20Workshop%20agenda.pdf

94 http://publicaa.ansi.org/sites/apdl/Documents/News%20and%20Publications/Links%20Within%20Stories/Database%20Verification%20Workshop%20Report.pdf

95 www.nist.gov

assessment. Additionally NIST plays a central role within the US government supporting and implementing US national standards policies and strategies and supporting the voluntary consensus standards community.

The *National Technology Transfer and Advancement Act of 1995*[96] ("NTTAA"), Public Law 104-113. directs all federal government agencies to use for regulatory, procurement, and other agency activities, wherever feasible, and where not in conflict with agency mission and statutes, standards and conformity assessment solutions developed or adopted by voluntary consensus standards bodies in lieu of developing government-unique standards or regulations.

The Office of Management and Budget ("OMB") – through its OMB Circular A-119[97] – confirms that close interaction and cooperation between the public and private sectors is critical to developing and using standards that serve national needs and support innovation and competitiveness. OMB Circular A-119, provides Federal agencies guidance on use of voluntary consensus stnadards also encourages government agencies to participate in standards development processes, where such involvement is in keeping with an agency's mission and budget priorities.

In 2010, a Subcommittee on Standards (SOS) under the U.S. National Science and Technology Council ("NSTC") Committee on Technology was established. The purpose of this Subcommittee is to improve coordination and information sharing among U.S. federal government agencies' senior leaders about standards engagement, and to help the U.S. government better address challenges associated with standardization in emerging, multi-disciplinary technologies that are national priorities. NIST's Director Pat Gallagher[98] has served as co-chair of the SOS committee since its inception.

This subcommittee issued a paper October 11, 2011 *Federal Engagement in Standards Activities to Address National Priorities Background and Proposed Policy Recommendations.*[99] The report identified attributes of standards setting organizations processes including clear IPR policies that agencies need to consider.

This was followed January 17, 2012 by a Whitehouse memo jointly issued by the 1) Office of Information and Regulatory Affairs / Office of Management and Budget (OMB/OIRA); 2) the Office of Science and Technology Policy (OSTP); and the 3) Office of the U.S. Trade Representative (USTR). The 4 page memorandum *"Principles for Federal Engagement in*

[96] http://gsi.nist.gov/global/index.cfm/L1-5/L2-44/A-348

[97] http://standards.gov/a119.cfm

[98] http://www.nist.gov/director/bios/gallagher.cfm

[99] http://standards.gov/upload/Federal_Engagement_in_Standards_Activities_October12_final.pdf

Standards Activities to Address National Priorities[100]" intended for the heads of Executive Departments and Agencies reaffirms the U.S. approach to standardization, lays out federal government objectives for standards engagement, and outlines agency responsibilities in instances where agencies assume a convening role to find standards solutions for technologies/issues identified as national priorities. The memo also provides guidance for agencies as they engage with the private sector on standards issues of interest to agencies.

These four current US documents underpin and describe how the US Patent and Trademark Office may cooperate and collaborate with voluntary standards activities in the United States.

The Incorporated by Reference (SIBR) Database[101] maintained by NIST is related to NIST responsibilities under the NTTAA. This database includes *9486*[102] records of Standards Incorporated by Reference (SIBR) in the Code of Federal Regulations (CFR)**.** The database contains information on voluntary consensus standards, government unique standards, private industry standards, and international standards referenced in the Code of Federal Regulations (CFR). The database identifies the standards developer; document number; document title; edition; reference location and code of federal regulation reference

3.5.3 Smart Grid Interoperability Panel

The Smart Grid Interoperability panel (SGIP) produces and maintains a "Catalog of Standards[103]" identifying standards, guides, and other specifications recognized by the SGIP membership through a voting process as relevant to the smart grid. Inclusion in the catalog list[104] and links to information about the standards implies no endorsement beyond that of relevancy.

The SGIP Catalog of Standards (COS) document describes:

Criteria that standards, practices, and guides must meet for inclusion in the Catalog,

Artifacts that must be documented to characterize an entry and initiate the process,

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[100] http://www.whitehouse.gov/sites/default/files/omb/memoranda/2012/m-12-08.pdf

[101] http://standards.gov/sibr/query/index.cfm

[102] refererenced August 10, 2012

[103] http://collaborate.nist.gov/twiki-sggrid/bin/view/SmartGrid/SGIPCatalogOfStandards

[104] http://collaborate.nist.gov/twiki-sggrid/bin/view/SmartGrid/SGIPCoSStandardsInformationLibrary

Structure of the Catalog to facilitate searching and understanding the applications and architectural levels targeted in the design of each entry, and

Procedures to approve the addition of an entry to the Catalog, maintain and update Catalog entries, and deprecate and/or remove an entry from the Catalog.

With respect to intellectual property rights the document states the following information will be collected:

7		**IPR Regime for the proposed standard**
7a	**Information regarding the Sponsoring Organization's IPR Policy documents applicable to the Standard, as provided by the Sponsoring Organization**	**[SSO inserts here]**
7b	**The Sponsoring Organization's Information, if any, regarding IPR-related Disclosures and Licensing applicable to the Standard (to the extent this information is publicly available), as provided by the Sponsoring Organization:**	**[SSO inserts here]**

SGIP has prepared a template[105] SGIP Catalog of Standards Development Process Statement (DPS): SSO XXXXX elaborating the information SGIP expects to collect for each of the standards that appear in the catalog of standards or that are candidates for inclusion. The DPS template is completed by a Sponsoring Organization. Each DPS is maintained in the SSO Information Library for candidate or listed standards on the SGIP Catalog of Standards. With respect to IP this information comprises:

Intellectual Property Rights (IPR)

1. Applicable IPR-related policies Provide information regarding all applicable IPR-related policies that were in effect with regard to standards produced by this SSO including policies relating to patents, copyrights, confidential information, marks and logos and any other proprietary rights. Also include policies, bylaws, process documents, lists of defined terms

[105] http://collaborate.nist.gov/twiki-sggrid/pub/SmartGrid/SGIPCatalogOfStandards/SGIP_CoS_DevelopmentProcessStatement.doc

and guidance documents published by the SSO. Insert hyperlink here or otherwise provide SGIP with such documentation in electronic form

2. IPR Disclosures and Declarations Provide the SSO's information with regard to standards produced by this SSO regarding IPR-related disclosures, licensing assurances and licensing (to the extent this information is publicly available). Insert hyperlink here or describe the procedure for requesting this information or otherwise provide SGIP with such documentation in electronic form.

Elaboration of the information above for standards that appear or are candidates to appear in the catalog is also found in the *SGIP Catalog of Standards "Standards Information Form" (SIF)*[106] This document states the information below will be collected:

The SSO's IPR Policy documents (including policies, bylaws, process documents, lists of defined terms and guidance documents published by the SSO) applicable to the Standard, as provided by the SSO

The SSO's Information, if any, regarding IPR-related Disclosures and Licensing applicable to the Standard (to the extent this information is publicly available), as provided by the SSO. Insert hyperlink here or otherwise provide the SGIP with such documentation in electronic form.

With regard to the Standard, did any entity notify the SSO in writing that it holds a Necessary Patent and it is not willing to provide licenses in accordance with the SSO's IPR Policy? If yes, please insert hyperlink here or otherwise provide the SGIP with such documentation in electronic form.

The *SGIP CATALOG OF STANDARDS SSO INFORMATION LIBRARY*[107] contains Development Process Statements (DPS) for Standards Setting Organizations (SSOs) with candidate or listed standards in the SGIP Catalog of Standards. DPSs[108] listed describe the development process and IPR policies with respect to the standards they develop.

[106] https://collaborate.nist.gov/twiki-sggrid/pub/SmartGrid/SGIPCatalogOfStandards/SGIPCatalogOfStandards_StandardsInformationForm.xls

[107] http://collaborate.nist.gov/twiki-sggrid/bin/view/SmartGrid/SGIPCoSSSOInformationLibrary

[108] as of 8/17/2012 the library contained 10 SDO DPSs.

The SGIP Catalog of Standards Information Library also contains links[109] to further information such as the "SIF" forms for each of the standards in the catalog of standards

4. Concluding remarks

Facts and considerations distilled from the above analysis:

- Access to accurate and timely prior art information is critical to the global systems of patent granting. The EPO has found standards and standards related information to be of substantive practical value in its decision making.

- The Memoranda of Understandings between the EPO and three key SDOs (IEEE-SA, ITU and ETSI) are based on common criteria:

  i) exchange of information and documentation of mutual interest in the field of standards for the benefit of prior art search;
  ii) collaboration on documentation format definition and dissemination policies and align them with the EPO prior art search needs;
  iii) contribution to education and promotion activities in the field of standards;
  iv) self-funding.

  The MOUs have proved valuable to the EPO and have generated benefits in the SDO communities in improved accuracy and timeliness of information in standards and patent databases.

- The USPTO contributed the point of view to this paper that SDO's should be incentivized to share information with USPTO to avoid having patents granted improperly and that aspects of the existing EPO-SDO Memoranda of Understandings might serve as a model in the process.

- What constitutes *"confidential or non public information*" in the context of standards and standards setting has a strategic impact on the utility of such information in the patent examination process in the United States. Confidential or non public information does not qualify as "prior art". The extent to which European criteria and legal precedents about the use of standards and standards information in European patent deliberations may equally apply to the use of standards and standards information as "prior art" in deliberations at the US Patent and Trademark office is a key unknown factor to the utility of such standards information in the U.S.

[109] http://collaborate.nist.gov/twiki-sggrid/bin/view/SmartGrid/SGIPCoSStandardsInformationLibrary