Before the
NATIONAL INSTITUTE OF STANDARDS AND TECHNOLOGY,
U.S. DEPARTMENT OF COMMERCE

Effectiveness of Federal Agency Participation in Standardization in Select Technology Sectors for National Science and Technology Council's Sub-Committee on Standardization	))))))	Docket No. 0909100442–0563–02

COMMENTS OF THE TELECOMMUNICATIONS INDUSTRY ASSOCIATION

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I. INTRODUCTION

TIA represents a large number of information and communications technology (ICT) companies and organizations in standards, government affairs, market intelligence and product-oriented environmental compliance. A major function of TIA is the writing and maintenance of voluntary industry standards and specifications, as well as the formulation of technical positions for presentation on behalf of the United States in certain international standards fora. TIA is accredited by ANSI to develop voluntary industry standards for a wide variety of telecommunications products and sponsors more than 70 standards formulating committees. These committees are made up of over 1,000 volunteer participants, including representatives from manufacturers of telecommunications equipment, service providers and end-users, including the government.

The member companies and other stakeholders participating in the efforts of these committees and sub-groups have produced more than 3,000 standards and technical papers that

are used by companies and governments to produce interoperable products around the world. TIA also has a Standards and Intellectual Property Policy Committee (SIPC) that is focused on, among others, policy issues related to the ICT standardization system on a global basis.

TIA is and has been a standards development organization (SDO) since its inception in 1988, and is one of the largest SDOs accredited by ANSI. TIA's standards development and environmental activities have both a national and global reach and impact. TIA is one of the founding partners and also serves as Secretariat for 3GPP2 (a consortium of five SDOs in the U.S., Japan, Korea, and China with more than 65 member companies) which is engaged in drafting future-oriented wireless communications standards.[1] TIA also is active in the formulation of United States positions on technical and policy issues, administering four International Secretariats and 16 U.S. Technical Advisory Groups (TAGs) to international technical standards committees at the International Electrotechnical Commission (IEC), and is the International Secretariat and US TAG Administrator for the International Organization for Standardization (ISO) Technical Committee (TC) 204 on Intelligent Transportation Systems.

TIA's standards committees create consensus-based voluntary standards for numerous facets of the ICT industry, for use by both private sector interests and government, which fall within the purview of the Request for Information.[2] Among other things, TIA's standards

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[1] *See* 3GPP2, About 3GPP2, *available at* http://www.3gpp2.org/Public_html/Misc/AboutHome.cfm (last visited January 4, 2011).

[2] TIA publishes an annual report that includes the latest actions taken by each respective TIA engineering committee toward the development of standards for the advancement of global communications. *See* TIA, *Standards & Technology Annual Report* (September 2010), *available at* http://tiaonline.org/standards/about/documents/StarReport_09-10.pdf.

committees develop protocols and interface standards relating to Smart Grid,[3] health care ICT,[4] and emergency communications infrastructure[5] through its development of standards for such areas as fiber optics, public and private interworking, telecommunications cable infrastructure, wireless and mobile communications, multimedia and VoIP access, as well as vehicular telematics.

II. REASONS FOR PARTICIPATION IN THE STANDARDS-SETTING PROCESS AND THE BENEFITS OF STANDARDIZATION

A. THE BENEFITS OF STANDARDIZATION GENERALLY

Standards are a powerful tool for organizations of all sizes, private and governmental, and support innovation as well as increased productivity.

Our association members and others come to TIA to develop standards that:

- **Promote efficiency and interoperability.**
    - Enhance industry collaboration to solve market-driven demands and customer needs.

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[3] TIA's TR-50 (Smart Device Communications) is responsible for the development and maintenance of access agnostic interface standards for the monitoring and bi-directional communication of events and information between smart devices and other devices, applications or networks. *See* http://tr50.tiaonline.org.

[4] TIA's TR-49 (Healthcare ICT) is responsible for development and maintenance of standards for the healthcare ICT applications which involve medical devices, network infrastructure, applications, and operations support. *See* http://tr49.tiaonline.org.

[5] Engineering Committee TR-8 formulates and maintains standards for private radio communications systems and equipment for both voice and data applications. TR-8 addresses all technical matters for systems and services, including definitions, interoperability, compatibility, and compliance requirements. The types of systems addressed by these standards include business and industrial dispatch applications, as well as public safety (such as police, ambulance and fire fighting) applications. *See* http://tr8.tiaonline.org.

- **Enable access to new technologies and markets.**

    - Help diffuse innovative solutions across the industry while maintaining respect for intellectual property rights and supporting incentives for companies to further invest in related R&D.[6]

    - Create opportunities for further competition among differentiated implementations and products, which provides stimulus for more innovation and choice for customers and users.

In no sector more than ICT must standards constantly be updated to remain relevant. To remain pertinent and useful, and to take into account the latest technical solutions to aide in moving the industry forward, TIA standards are continuously developed and reviewed. These standards frequently compete with other standards in an extremely vibrant international environment, facilitating market-driven growth, industry competitiveness and choice.[7]

In some cases, however, products implementing a standard may not automatically solve a technology challenge. Adherence to a standard may not ensure that competing products will actually interoperate. Further industry collaboration often may be necessary (such as conformance and interoperability testing) in order to accomplish specific objectives.

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[6] TIA, *Intellectual Property Rights Standing Committee Paper on Open Standards* (Jun. 20, 2008), *available at* http://www.tiaonline.org/standards/about/documents/TIA-IPR_20080620-003_TIA_OPEN_STANDARDS.pdf.

[7] For example, the choice with respect to US wireless technology between the CDMA-train standards developed by TIA and 3GPP2, and the GSM-train standards developed by ETSI and 3GPP (including ATIS, the US-based 3GPP-sponsoring organization).

For governmental entities, the ability to partake in voluntary consensus standard development has many benefits and is consistent with goals of the U.S. Government as reflected in the National Technology Transfer and Advancement Act and OMB Circular A-119.[8] TIA believes that the OMB Circular has been very effective, and supports its recognition of the value of "voluntary consensus standards". This term is defined broadly to include standards from ANSI-accredited SDOs and also a wide range of consortia, further evidencing the U.S. Government's recognition of the value of having competition and diversity among standards-setting organizations.

Furthermore, because standardization is a form of economic self-regulation, it can relieve the government of the responsibility for developing detailed technical specifications while ensuring that voluntary consensus standards serve the public interest, saving resources that can be used to serve the public interest in other ways. Standards may be used to define an acceptable level of performance, and through participation in the process, a governmental entity can work to ensure that an adequate level of service is offered to the public in a particular area. In some limited instances, the government has made standards legally binding to assure a minimum level

[8] TIA understands that NIST has a coordinating function with the U.S. Government under the National Technology Transfer and Advancement Act of 1995 (Public Law 104-113), which is further implemented through OMB Circular A-119. *See* OMB Circular A-119 Revised, Federal Participation in the Development and Use of Voluntary Consensus Standards and in Conformity Assessment Activities (rev. Feb. 10, 1998) (OMB Circular A-119) *available at* http://www.whitehouse.gov/omb/rewrite/circulars/a119/a119.html.

of public safety through safe harbors.[9] In addition, standards may also be used by government entities as valuable sources of scientific and technical information, allowing for agencies to use standards as a resource for advanced technical information without first-hand independent knowledge of research in the area.

B. THE BENEFITS OF TIA'S STANDARDS DEVELOPMENT PROCESS

Standards projects and technical documents at TIA are formulated according to the guidelines established in the association's Engineering Manual.[10] Any potential project is initiated by a technical contribution to one of the engineering committees or subcommittees from an individual requesting the creation of a new standard or technical document in a particular area of technology.

If there is support for this contribution, and a number of people are willing to work on the project, a Project Initiation Notice (PIN) form is completed and submitted for approval to TIA.

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[9] Section 107(a)(2) of CALEA contains a safe harbor provision, stating that "[a] telecommunications carrier shall be found to be in compliance with the assistance capability requirements under section 103, and a manufacturer of telecommunications transmission or switching equipment or a provider of telecommunications support services shall be found to be in compliance with section 106 if the carrier, manufacturer, or support service provider is in compliance with publicly available technical requirements or standards adopted by an industry association or standard-setting organization, or by the Commission under subsection (b), to meet the requirements of section 103." 47 U.S.C. § 1006(a)(2). Subcommittee TR-45.2 of TIA, along with Committee T1 of the Alliance for Telecommunications Industry Solutions, developed interim standard J-STD-025 to serve as a "safe harbor" for wireline, cellular, and broadband PCS carriers and manufacturers under section 107(a) of CALEA. The standard defines services and features required by wireline, cellular, and broadband PCS carriers to support lawfully authorized electronic surveillance, and specifies interfaces necessary to deliver intercepted communications and call-identifying information to a law enforcement agency. *See* TIA, Communications Assistance for Law Enforcement Act (CALEA), *available at* http://www.tiaonline.org/standards/technology/calea/ (last visited February 22, 2011).

[10] TIA, *TIA Engineering Manual* (Oct. 2009) *available at* http://www.tiaonline.org/standards/procedures/manuals/engineering.cfm.

After the project is approved for initiation, the engineering committees and their subcommittees work to further develop the technical parameters of the project. When the proposed standard or technical document is near completion, the formulating engineering committee circulates the draft of the document on a ballot called a "Committee Ballot." The purpose of this ballot is to identify any unresolved issues and to establish consensus within the formulating group. Every effort is made to resolve comments received. During this phase of the standards-making process, the draft of the document is not released to the general public.

If the document is intended to be an American National Standard, the proposed draft must be circulated as an industry-wide ballot, also known as an "Industry Ballot." During the balloting period, any interested party may comment. Every attempt is made to resolve comments received at this phase of the balloting, and when necessary, commenters are apprised of the appeals process. During this phase of balloting, a copy of the draft standard may be acquired by non-participants. After the final draft of the document has obtained industry consensus, the document is forwarded with all its balloting information to a review group at TIA called the Telecommunications Standards Subcommittee (TSSC). If the document is intended to be an American National Standard, the same information is forwarded to the ANSI Board of Standards Review (BSR) with request for approval.

The balloting information is then reviewed by TSSC, and supporting documents are checked to see if TIA due process and other requirements have been met. After this review and upon approval of the BSR, the document is approved for publication as a TIA Standard.

A standard which is an American National Standard must be reviewed every five years to ensure it remains current. During this five-year period, a standard may be reaffirmed, modified or rescinded.

Through TIA's voluntary and consensus-based standards development process described above, the following attributes are exemplified:

- Openness, which is defined as the availability of memberships and participation in the standards development process to all interested industry participants.
- Balancing the interests of a diverse community of participants in the standards development process.
- Due process.
- An appeals process.
- Consensus-based decision making, which is defined as general agreement, but not necessarily unanimity, and includes a process for attempting to resolve objections by interested parties, as long as all comments have been fairly considered, each objector is advised of the disposition of his or her objection(s) and the reasons why, and the consensus body members are given an opportunity to change their votes after reviewing the comments.

TIA's association members and others come to TIA to develop standards that promote efficiency and interoperability, enhancing industry collaboration to solve market-driven demands and customer needs. This enables access to new technologies and markets, helps diffuse innovative solutions across the industry while maintaining respect for intellectual property rights and supporting incentives for companies to further invest in related R&D. TIA's process also

creates opportunities for further competition among differentiated implementations and products, which provides stimulus for more innovation and choice for customers and users.

Federal agencies, as well as companies of all sizes, participate in TIA's standards process.[11] The standardization system plays a major role in the ongoing competitiveness and innovation of the ICT industry, directly affecting Federal agencies. The current process has fostered a dynamic and responsive standards environment that has aided the ICT industry in growing domestically and internationally. Federal participation ensures that agencies' interests are protected, along with the above-noted benefits of a voluntary, consensus-based standardization process.

In order to stay relevant and effective, and to accommodate new, innovative technical solutions that can help our members and others move the industry forward, TIA standards continuously evolve and often compete with other standards in a very dynamic global ecosystem. This enables market-driven growth, industry competitiveness and choice. In this way, TIA's engineering committees continuously formulate "strategic plan[s] that identify standards needs and define the standard development cycle."[12]

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[11] For example, Federal participation occurs on such TIA engineering committees as TR-8 (Mobile and Personal Private Radio Standards), and TR-45 (Mobile and Personal Communications Systems Standards).

[12] Effectiveness of Federal Agency Participation in Standardization in Select Technology Sectors for National Science and Technology Council's Sub-Committee on Standardization, 75 Fed. Reg. 76398 (Dec. 8, 2010) (NSTC RFI).

III. TIA'S PERSPECTIVE ON THE GOVERNMENT'S APPROACH TO STANDARDIZATION ACTIVITIES

TIA supports government efforts so that public authorities can more easily acquire ICT services, applications and products that meet their specific requirements. TIA encourages the participation of Federal agencies in its technical standards-setting process, and greatly appreciates the value of the public-private sector partnership that exists in the U.S. with regards to standards.

As a practical matter, TIA does not believe it is possible to have a single coordinating point in the U.S. Government for all technical standards areas, and indeed this could have the unintended consequence of slowing down standardization and technological innovation. The technical needs of different sectors of the economy vary. The solutions appropriate and applicable to Internet Service Providers may not be the same as those needed by the banking or energy industries. It is difficult to see how one group of experts can be aware of, and sensitive to, the needs of an entire economy.

TIA, however, greatly appreciates the value of the public-private sector partnership that exists in the U.S. with regards to standards. In its role as a partner, the U.S. Government may want to create a better mechanism to coordinate U.S. Government input into the standards system – whether in terms of articulating its collective needs or helping it to address specific technology areas where it has a vested interest in standards-related outcomes.

TIA also believes that the U.S. Government serves an important role in terms of advocating the "multiple path" approach to developing international standards, raising concerns when there may be trade-related or other standards issues that arise among different nations and

as a stakeholder in the standards development process in technology areas where it has a specific interest.

TIA understands that NIST has a coordinating function with the U.S. Government `under the National Technology Transfer and Advancement Act of 1995 (Public Law 104-113), which is further implemented through OMB Circular A-119.[13] TIA believes that the OMB Circular wisely recognized the importance of "voluntary consensus standards." This term is defined broadly to include standards from a wide range of SDOs (including ANSI-accredited SDOs) and consortia, further evidencing the U.S. Government's recognition of the value of having competition and diversity among standards-setting organizations.

IV. ISSUES TIA CONSIDERS IN THE STANDARDS SETTING PROCESS

A. TIA URGES RECOGNITION OF THE VALUE OF STANDARDS DIVERSITY

As an ANSI-accredited SDO, TIA complies with the ANSI *Essential Requirements*, which detail the process a SDO must undertake to ensure a good faith effort is made to ensure that duplicative or wasteful standard development processes do not occur.[14] TIA supports and adheres to the approach outlined in the ANSI *Essential Requirements* to address conflict and duplication issues and has found it to be effective. In the course of its good faith efforts, TIA consults with international standard development organizations and clearinghouses, as well as

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[13] OMB Circular A-119.

[14] ANSI, *ANSI Essential Requirements: Due process requirements for American National Standards* (Jan. 2010), *available at* www.ansi.org/essentialrequirements.

individually with other SDOs. The ANSI approach, while requiring SDOs to share information and consult each other (with input from their stakeholders), adds value while not unduly burdening SDOs or disrupting the dynamic ICT standardization ecosystem.

While TIA supports efforts to avoid duplication and conflict in the standard development arena, it should be recognized that U.S. industry competitiveness depends on standardization, particularly in sectors such as ICT that are dynamic and technology-driven. The U.S. Patent & Trademark Office noted that the U.S. is a market-driven, highly diversified society, and its standards system encompasses and reflects this framework, which extends to adoption of standards.[15] TIA agrees, and specifically notes that both the U.S. and international ICT standards systems have experienced tremendous growth, development and diversity.

The success of the standards produced by an ICT SDO should not be based upon processes or procedures, but rather should primarily be a result of a number of market-based ICT factors (such as responsiveness to different customer needs, effectiveness of the standard and associated technologies, etc.) that impact ultimate acceptance by industry. For example, giving one standard some level of priority over another in the same technology area based on reasons such as which one was finalized first will adversely impact the flexibility, competition, and choice that fuel the ICT industry and help bring new innovative solutions to the marketplace. The European Union's Directorate General of Competition has likewise noted that when a single technology has been mandated, it may create barriers to entry and stem innovation in the

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[15] *See* World Intellectual Property Organization (WIPO) Standing Committee on the Law of Patents, *Statement of the United States Patent & Trademark Office* (March 25, 2009), *available at* http://publicaa.ansi.org/sites/apdl/Documents/Standards%20Activities/Critical%20Issues/Open%20Standards/USPTO-WIPO-Statement.pdf

standards process, and additionally articulates the danger of this effect.[16] With this ideal in mind, TIA urges the U.S. government to be wary of creating regulations that will likely have a negative impact on the dynamic ICT standards ecosystem by discouraging multiple standards in the same technology area.

Within the ICT sector multiple standards are often needed within the same technology area in order to provide choice, address different user requirements, or respond to marketplace needs (such as home networks, cellular standards, database access models, document formats, Web programming models, and digital image and media formats). Regulatory burdens would have a particularly inflated effect on ICT standardization due to the fast-paced nature of this sector's development. TIA submits that it is the ICT market – not regulations – that should primarily determine which standard or standards are adopted and used in the industry. The current procedures, internal to ANSI as defined by the ANSI *Essential Requirements*, to reduce unnecessary conflict and duplication have worked and are sufficient to encourage to coordination among ICT standards bodies when appropriate.

[16] European Commission, *Communication From the Commission, Guidelines on the applicability of Article 101 of the Treaty on the Functioning of the European Union to horizontal co-operation agreements* (2010), *available at* http://ec.europa.eu/competition/antitrust/legislation/horizontal_guidelines_en.pdf.

B. TIA SUPPORTS REASONABLE AND NON-DISCRIMINATORY INTELLECTUAL PROPERTY RIGHTS POLICIES

As described above, market-driven open standards can help promote competition and innovation, and such standards are developed or ratified through a voluntary, open and consensus-based process**.** This process typically includes an IPR policy pursuant to which patent holders make commitments to offer licenses to essential patented technology on reasonable and non-discriminatory (RAND) terms and conditions, with or without compensation.[17]

This type of IPR policy addresses implementers' need to access and use patented technology included in the standard, while patent holders need to preserve their rights in a way that encourages them to innovate and to contribute their innovative solutions to the standardization effort. RAND patent policies seek to provide this balance by helping to make that patented technology available to all on RAND terms and conditions. RAND commitments can prevent IPR holders from making the implementation of a standard difficult by refusing to license or by requesting unfair or unreasonable fees after the industry has been locked into the standard or by charging discriminatory royalty fees.

Like many others, TIA encourages the early disclosure of essential patents, but does not mandate disclosure and does not require the making of a search for patents. To further such encouragement, TIA takes a three-part approach:

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[17] This is consistent with OMB Circular A-119, which states that voluntary, consensus standards "include provisions requiring that owners of relevant intellectual property have agreed to make that intellectual property available on a non-discriminatory, royalty-free or reasonable royalty basis to all interested parties." OMB Circular A-119.

i. The chairs of formulating groups are required to insure that everyone in attendance is aware of TIA's intellectual property rights policy and where it can be found.

ii. The second part of the approach is a notification on each ballot for a proposed standard encouraging the identification of essential patents or published patent applications.

iii. Finally, the Manual provides for an optional, voluntary disclosure statement on a submission cover sheet. For this purpose, TIA provides a suggested submission form, some provisions of which are mandatory when this form is used.

When a party is prepared to submit a patent holder's statement to TIA, it is required to use the form appended to the TIA Engineering Manual as Annex H. Patent holder statements are archived on the TIA Website, which contains the following cautionary note:

> "TIA's IPR patent holder statements contain patent holder statements or copyright holder statements which have been provided to TIA and claim IPR or pending patent applications as being essential, or potentially essential, to the implementation of TIA standards. Unless otherwise specified, all patent holder or copyright holder statements contained herein have been provided to TIA, with an undertaking from the owner to grant licenses according to the terms and conditions of TIA's Engineering Manual which contains TIA's patent policy. TIA makes no representations or warranties, and disclaims any and all responsibility, with respect to the accuracy, correctness, completeness or scope of such statements, or any claims of IPR contained or identified therein."

The use of the Patent Holder Statement as contained in the Manual is mandatory. Among the statements' central provisions are the following:

> "On behalf of the above Patent Holder, and being authorized by the Patent Holder to make such statements, the following is indicated: With respect to any Essential Patent(s) necessary for the practice of any or all Normative portions of the above Reference Document as it exists on the date of submittal of this form, should such Reference Document be approved as a Standard."
>
> The undersigned Patent Holder states one of the following:
>
> a) "A license under any Essential Patent(s), the license rights to which are held by the undersigned Patent Holder, will be made available to all applicants under terms and conditions that are reasonable and non-discriminatory, without monetary compensation, and only to the extent necessary for the practice of any or all of the Normative portions of the above Reference Document for the field of use of practice of the Standard; OR
> b) A license under any Essential Patent(s), the license rights to which are held by the undersigned Patent Holder, will be made available to all applicants under terms and conditions that are reasonable and non-discriminatory, which may include monetary compensation, and only to the extent necessary for the practice of any or all of the Normative portions of the above Reference Document for the field of use of practice of the Standard."

Either Paragraph (a) or (b), whichever is selected above, may be modified below by marking one or both of the following:

i. "The commitment to license above selected will be made available only on a reciprocal basis. The term "reciprocal" means that the licensee is willing to license the licensor in compliance with either Paragraph (2a) or (2b) above as respects the practice of the above Reference Document.

ii. The undersigned Patent Holder hereby limits its commitment to license under either Paragraph (2a) or (2b) above to the Essential Patent(s) identified by issuance and filing dates and numbers on Exhibit "A" attached hereto, and represents that Exhibit "A" contains all the undersigned's known licensable Essential Patent(s) rights, as of the date stated below, only to the extent necessary for the practice of any or all of the Normative portions of the above Reference Document. The undersigned Patent Holder undertakes to advise TIA of any licensable Essential Patent(s) rights of the undersigned which become known to the undersigned after this date and to notify TIA whether a license will be made available with respect thereto in accordance with the TIA IPR Policy. Nothing in this statement requires the undersigned Patent Holder to make a patent search."

The statements contained in Paragraphs (2a) or (2b), if marked, along with any modifications selected above are irrevocable and binding upon the Patent Holder. In the event the rights of the Patent Holder in and to the Essential Patent(s) subject to such commitments are assigned or transferred, the Patent Holder must notify the assignee or transferee of the existence of such commitments.

C. TIA SUPPORTS THE DEVELOPMENT OF OPEN STANDARDS

Many globally recognized standards bodies like TIA, the International Organization for Standardization (ISO), the International Electrotechnical Commission (IEC), the International Telecommunication Union (ITU), the European Telecommunications Standards Institute (ETSI), the Institute of Electrical and Electronics Engineers (IEEE), etc. produce "Open Standards" that address many important ICT challenges in the marketplace while preserving incentives for further innovation and improvements over time.

This widely accepted definition of an "Open Standard" is reflected in the following:

- Global Standards Collaboration (GSC) – Reaffirmed resolution GSC-15/24;[18]
- ITU-T;[19] and
- ANSI.[20]

[18] ITU, *RESOLUTION GSC-15/24: (IPRWG) Open Standards (reaffirmed)*, (Sept. 2, 2010), *available at* http://www.itu.int/dms_pub/itu-t/oth/21/06/T210600000C0020MSWE.doc.

[19] ITU, TSB Director's Ad Hoc Group: Definition of "Open Standards", *available at* http://www.itu.int/en/ITU-T/ipr/Pages/open.aspx (last visited February 22, 2011).

[20] ANSI, *Current Attempts to Change Established Definition of "Open" Standards* (May 2005), available at http://publicaa.ansi.org/sites/apdl/Documents/Standards%20Activities/Critical%20Issues/Open%20Standards/CIP-OpenStandards.pdf.

For example, TIA supports the GSC Resolution that outlines the following elements of an "Open Standard":

- The standard is developed and/or approved, and maintained by a collaborative consensus-based process;
- Such process is transparent;
- Materially affected and interested parties are not excluded from such process;
- The standard is subject to RAND IPR policies which do not mandate, but may permit, at the option of the IPR holder, licensing essential intellectual property without compensation; and
- The standard is published and made available to the general public under reasonable terms (including for reasonable fee or for free).

Recently, there have been attempts to re-define "Open Standards" that may disrupt this process and its related balance of interests. The concept of "open" has been equated with patented technology that is "free" (without payment) or "free to use freely" (without payment and without any restrictions). These proposed re-definitions are being used to advocate policy changes that would undermine the rights of those who have invested in the development of the standardized technology.

While the notion of patents being "free to use freely" is superficially attractive, like most "free" things, it comes at a cost. Technological capabilities and innovations most often result from substantial investments in R&D. Such investments typically drive the growth of the investor's patent portfolio. If patent holders in standards-setting activities are expected to give

away or waive their patent rights, there are likely to be significant adverse results including:

- Technology leaders will reduce or cease participation in (or technical contributions to) voluntary standards-related activities; or
- Individuals and organizations will not invest (or will invest less) in the development of innovative and next-generation technology in the technical areas subject to standardization, thereby creating innovation "dead zones" in those areas.

These types of adverse results would cause (a) the standardization system; (b) its open, voluntary and consensus-based process; and (c) ultimately the resulting Open Standards, to be less effective or successful than they are today. Moreover, TIA believes that these results would have a negative impact on global respect for intellectual property that helps stimulate innovation and develops local economies around the world.

D. TIA SUPPORTS THE VOLUNTARY *EX ANTE* DISCLOSURE OF LICENSING TERMS

TIA believes that mandating the *ex ante* disclosure of specific licensing terms within such standards bodies would have a chilling effect on participation, contributions and the resulting standards. Moreover, standards bodies and their constituents are in the best position to craft their IPR policies to address their particular circumstances. While TIA does not require *ex ante* disclosure of licensing terms, TIA does not object if a TIA participant wishes to voluntarily disclose its terms. Moreover, licensing negotiations are between the licensee and licensor and are to be conducted outside of the TIA standardization process. TIA also notes that *ex ante*

disclosure of one set of terms and conditions fails to recognize the diversity in standards, licensing arrangements, and business interactions. RAND based policies, however, recognize this diversity.

RAND is the most common model used across SDOs makes it easier for collaboration on standards or the referencing of each other's standards. As a result of its RAND policy, TIA has only experienced a single related appeal in the history of its existence. For this reason, TIA believes that changes to the current RAND framework, regardless of how well intentioned, could easily disrupt the flexibility and balance that has been achieved among the various stakeholders. Such imbalance could in turn result in unforeseen and unintended negative consequences.

V. THE IMPORTANCE OF ENSURING ADEQUACY OF RESOURCES

TIA agrees that "the availability and commitment of financial resources, personnel, and industry expertise may impact the success of standards development."[21] While priorities and associated funding availability may shift and change, this is an experience of all entities that participate in standards development, whether public or private, large or small. The members of TIA understand the value of participation in standards development – particularly in an industry as dynamic as the ICT industry – and work to dedicate financial and personnel resources towards these efforts.

Likewise, it is important that Federal agencies appreciate the importance of involvement in standard development, and the resulting benefits of participation as described above. TIA

[21] NSTC RFI at 76398.

recommends that Federal agencies work towards ensuring that recurring, dedicated budget allocations are attained for participation in standards development. Accordingly, TIA urges Federal government agencies to make all possible efforts to ensure continuous participation in standards development efforts.

VI. TIA'S EVOLUTION THROUGH PROCESS REVIEW AND IMPROVEMENT METRICS

While the international standards system was developed 50 years ago, it has not remained static, and TIA has evolved with it. Indeed, the U.S. and international information and telecommunications standards systems have experienced tremendous growth and development. This system has become very dynamic and diverse in order to address more and more complicated and increasingly global needs. For example, it has had to take into consideration the global development of the Internet and the need for mobile telephones that must operate in many different countries. These changes and developments have been led and driven by competing member companies to meet their business and technical needs in changing business environments.

As reflected in the United States Standards Strategy and the positions articulated by the Office of the U.S. Trade Representative at the World Trade Organization, the U.S. broadly supports the "multiple path" approach to the development of international standards. While some countries express the view that only ISO, IEC, and the ITU can produce "international standards" because they largely adhere to a national member body framework, the U.S. strongly advocates that any standard that is developed through an open, transparent process and is widely implemented on a global basis can be considered to be an international standard. While TIA is accredited by ANSI (and must undergo regular audits to remain accredited) as a developer of

American National Standards, many of TIA's standards are internationally accepted and used; TIA submits that this widespread adoption is the most important indicator of success as a performance metric.

To evaluate the effectiveness of a standard, the market shares of the goods or services based on the standard should be considered. While market share may not be apparent until after the early stages of the release of the standard, in some cases the relevant market shares of the companies having participated in developing the standard could be used as a proxy for estimating the likely market share of the standard.

While many of TIA's standards are internationally accepted and used, there are a number of different standards bodies, from the most formal to the least formal, that also produce successful standards. The success of the standards they produce, however, is not based upon a denned process or procedure but rather is a result of a number of factors (such as responsiveness to customer need) that impact ultimate acceptance by the broader industry. This competition and diversity among standards bodies has resulted in a dynamic ecosystem that is very valuable to the similarly dynamic ICT industry sector. Through this dynamic system many ICT standards that have been widely used around the world reflect U.S.-based technology solutions and in turn have supported U.S. competitiveness in the global marketplace. TIA is proud to be a successful SDO in this ever-changing environment.

VII. CONCLUSION

TIA appreciates consideration of the above policies, commends the Department of Commerce for recognizing the vital role that standardization activities play in innovation, and values the opportunity to provide input in response to the Request for Information.

Respectfully submitted,

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