

Response to: Notice of Inquiry (NOI)

DEPARTMENT OF COMMERCE Office of the Secretary
National Institute of Standards and Technology
[Docket No. 110524296-1289-02]

*Models for a Governance Structure for the National Strategy for Trusted Identities
in Cyberspace*

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Prior to participating in the NSTIC Governance Workshop in Washington D.C. in May, Several colleagues and I from the Identity Commons, the e-Citizen Foundation and others drafted a “straw man” framework for NSTIC governance that we circulated just before the workshop. The discussion that we had in preparing that draft also attached strongly influenced many of the thoughts and recommendation expressed herein.

As I stated at that workshop (and on many occasions prior and since) I believe that the NSTIC effort may be the best and last chance “to get identity on the Internet right”. As such, the mechanisms and ultimately the people chosen to govern NSTIC may be one the most critical factors in its success or failure to exploit this opportunity. It is with that spirit of support and optimism that I responded to this Notice of Inquiry (NOI).

As instructed in the NOI I have not confined my responses only to the specific issues addressed by the questions in the NOI nor have I explicitly answered all the questions. I attempted to provide as complete an exposition of my recommendations for possible governance as my time and schedule limitations for response allowed. While the opinions expressed have necessarily been influenced by my conversations with others the opinions expressed are entirely my own and are intended to reflect the opinions of any other parties.

1. Structure of the Steering Group

1.1. Given the Guiding Principles outlined in the Strategy, what should be the structure of the steering group? What structures can support the technical, policy, legal, and operational aspects of the Identity Ecosystem without stifling innovation?

The steering group envisioned in the NSTIC document (and the NOI) needs to be a relatively small group of subject matter experts (between 10-15 people) that will serve primarily as organizing and guiding body. That being said the group should have some authority through these activities to approve recommendations and establish directions for the NSTIC development and will therefore exercise some degree of “power” and choice in overall outcome of the program.

As discussed in the NOI and the NSTIC document the steering group needs to be private-sector led and be composed of members that represent a wide variety of stakeholders ranging from some of the largest business in the U.S., to small entrepreneurial start-ups, and including individual skilled in technology, legal and public policy, as well as members of particular advocacy groups and finally individual citizens. Perhaps the phrase “private sector-led” is a bit narrow in describing either the leadership or structure of the steering group. Both the explicit “leadership”

and the composition of the steering body should be “multi-sector” and “multi-faceted” and include balanced representation from: industry (the “private” sector); citizens including both individuals and advocacy groups (“the public”); academia and both private or public research institutions; professional societies and organizations in related areas including industrial, technical, legal and public policy groups; and finally federal, state and local governments (“the public sector”); In the end the most important measure of balance is that members of the group supply the required technical and leadership skills to accomplish the task and that they not represent a particular bias toward any point of view (either corporate, governmental or otherwise). As the NOI states a steering body that demonstrates such prejudice would likely erode confidence in their decisions and direction and would likely lose support from stakeholder communities. While various formulae for representation might be possible it would probably be difficult to maintain the balance of a suitable small sized steering group across the sectors and skills sets required. Therefore the most appropriate way to achieve this balance is probably to allow a suitably large number of demonstrably qualified candidates to be proposed (nominated) and ultimately selected from by large enough population of individuals from these constituent groups.

The steering group members should have both broad and detailed background in one or more of the technical, policy, and legal areas as well as a specific understanding of the requirements and sensitivity of electronic identity mechanisms. I believe that if the timeline of the strategy is realistically set then the workload of the Steering Group is likely to be fairly high (particularly at first) and the commitment required from members (to achieve the required momentum) may be demanding enough to preclude them from dealing with other full-time responsibilities. It may also be advisable to require “distance from” other responsibilities to attempt to eliminate any biases related to employment or other interests that might inappropriately influence the direction of deliberations and decisions that steering group members are called upon to make. Since this places a rather large burden on commitment it may be necessary to seek some kind of specific support for steering group participation either through professional/executive “loan or leave” programs from employers and/or direct via voluntary monetary support possibly from outside organizations such as charitable foundations that could be used to compensate steering group participation. Another possible avenue to secure valuable commitment from very skilled individuals that have required perspective, available time and also general community respect might be to seek out some “senior statesman” either from industry, academia or government that have already retired from distinguished careers and may be “inclined” to contribute their expertise and time to this effort both because of its value and also because of their personal interest. A list of possible candidate (that has not been vetted in any way is attached to this response).

This steering group should NOT generally have direct responsibility for development of standards, the drafting of operational or government policy, or legal frameworks; rather it should convene small expert working groups either directly or through liaisons with existing bodies such as standards development organizations (e.g. IETF, W3C, OpenID Foundation, Kantara, DMTF, ITU, ISO etc.), professional associations (e.g. American Bar Association), or government bodies (FICAM, Federal Trade Commission, Dept. of Homeland Security). In general individual steering group members should endeavor to participate in, or when appropriate lead, the most important of these more teams both to monitor progress and to provide guidance. These directed working group activities should be charged with appropriately narrow charters and objectives and should provide specific written recommendations (including such things as standards specifications, proposed rules or policy guidelines, or research results) back to the steering group. The material presented by these working groups and any recommendations made regarding standards, policy

or legal directions should be reviewed by the steering group both for consistency with the NSTIC guiding principles and also for general value. However in general the steering body should act as a “consensus builders”, facilitators and guidance and adopt a “reluctant attitude” toward forcing decisions.

1.2. Are there broad, multi-sector examples of governance structures that match the scale of the steering group? If so, what makes them successful or unsuccessful? What challenges do they face?

Probably one of the most applicable examples of a governance body or steering group that has similar scope and size would be the Internet Engineering Steering Group (IESG) of the Internet Engineering Task Force (IETF).

The IETF as a body has over one thousand active participants world-wide with representation from many countries and participation of technical experts from wide variety of industry sectors in both technology development and technology using companies, governments and organizations. There is no formal requirement, fee or other qualification for participation in IETF activities other than a willingness to devote time and effort, expertise in areas related to the work, and an understanding of the principles of the organization. Many members participate in regularly scheduled working meetings held both in the U.S. and abroad. Among the most important guiding principles that have permitted the IETF and associated working groups to be successful is the notion of “rough consensus”. In working group activities as well as leadership contexts reaching a “rough consensus” where most significant objections, concerns or alternatives have been at least heard through if not worked out in compromise is the cornerstone of the groups success.

There are several bodies within or related to the IETF that have “executive” or steering functions including the Internet Society (ISOC) Board of Trustees, the Internet Architecture Board (IAB) and the IESG. In a sense the IESG “regulates” the activities of the IETF community by approving charters, moving technical specifications into (or out of) a well defined standards track, and coordinating and approving the activities and decisions of related bodies such as the Internet Architecture Board (IAB), the Internet Research Task Force (IRTR) etc. The primary members of the IESG are the “area directors” that are responsible for the guidance, facilitation and charter of working groups and as such are heavily involved in particular areas of interests and are general subject matter experts in those areas. Furthermore the general policies of the IETF are designed to support a certain degree of “checks and balances” that have bodies like the Internet Society (ISOC) Board of Trustees, the Internet Architecture Board, and the IESG act as appeal paths to decisions.

This “rough consensus” approach and the general success of the IETF have caused it to be a model for at least part of the charter an operating methodology of many other technical groups including the Open Grid Forum (OGF formerly GGF), Organization for the Advancement of Structured Information Standards (OASIS) and the Distributed Management Technical Forum (DMTF).

1.3. Are there functions of the steering group listed in this Notice that should not be part of the steering group’s activities? Please explain why they are not essential components of Identity Ecosystem Governance.

As already discussed the steering group should primarily be a guiding and facilitating agency with the goal of reaching consensus among the broad and varied constituency of the NSTIC. While the steering group should initiate working groups to further define the strategy, develop technical

standards, propose policy direction and design legal and regulatory regimes, the steering group itself (other than via participation in these activities) should not attempt to make these decisions on its own.

1.5. To what extent does the steering group need to support different sectors differently?

The steering group needs to address a broad constituency of businesses, government institutions at the federal, state and local level, the technical vitality of the Internet and World Wide Web, and most importantly the needs and rights of citizens. It will have to deal successfully with the economic interests of businesses, the national and local security requirements of governments and law enforcement, and probably the skepticism of a somewhat disillusioned public. To do this successfully the steering group will need to understand the motivations of these constituent groups and find ways to achieve compromise. For corporate interests this may mean that some business models will have to be adjusted. For government it may involve restrictions on information gathering through either re-interpreted or new laws concerning “information tapping” and intelligence gathering. For the public it will require a new understanding of their own role in protecting their privacy and security online.

Presently the “open” nature of the Internet to date, the relatively under regulated state of various forms of e-commerce, and the lack of a significant technical or legal framework for Internet identity has created a situation where personal and private information has become a “commodity” of fairly high value that is already traded heavily upon by a variety of businesses both legal and otherwise. The gathering use of personal information whether obtained openly or surreptitiously is a fundamental component of the business models of many large corporate interests. The precepts of the NSTIC and the Fair Information Processing Standards (FIPS) with regard to privacy, appropriate use, data minimization, and retention are to some extent at odds with these corporate interests and guiding principles of NSTIC. Finding compromise between the legitimate interests of these businesses and the privacy and fundamental rights of citizens will require innovation in both technical and regulatory areas. Similarly the interception and analysis of electronic information in both the commercial and private sector has become an important methodology for intelligence gathering used by government and law enforcement to protect the nation and the public good. Finding appropriate ways to successfully monitor and regulate the use of personal information (especially identity) and still permit these legitimate government activities to proceed will require special attention and public discussion. Finally having the required outreach at both informational and educational levels and the sensitivity to the general public to successfully understand their needs for privacy, security and their willingness to participate in ecosystem envisioned by NSTIC will be critical. In this regard understanding the requirements for ease-of-use, convenience and cost to private citizens (whether direct or indirect) must also be considered.

1.6. How can the steering group effectively set its own policies for all Identity Ecosystem participants without risking conflict with rules set in regulated industries? To what extent can the government mitigate risks associated with this complexity?

Once a steering group is nominated and chosen (elected) it will be necessary for it to set its own rules and processes for the definition, evolution and ultimately the operation of the NSTIC ecosystem. As industries like finance, health care, education etc. are already regulated to varying degrees in areas of personal information and identity both by government federal and state levels, and also by voluntary industry associations the steering committee may need to navigate a complex and possibly conflicting set of constraints. Governments and trade associations need to be active participants in these discussions from initiation so that required

adjustments to law, regulatory regimes and industry standards can be made or recommendations for broader regulation can be proposed. Most importantly broad regulation that establishes baseline processes and protections can be very valuable as enablement for more detailed policy. Broad action in areas like financial liability, recourse of grievances and access to people's own information can be good foundations for building the need consensus on regulation to make NSTIC work.

1.8. What are the most important characteristics (e.g., standards and technical capabilities, rulemaking authority, representational structure, etc.) of the steering group?

Successful creation of the ecosystem envisioned by NSTIC will require the establishment of technical standards, industry practices, regulation, public policy and possibly legislation. Representation by persons skilled in all these areas is important. However since the primary mission of the NSTIC is establishment of an identity ecosystem for the Internet (cyberspace) and the regulation and practices of businesses, government and other organizations that operate in that electronic environment; knowledge of at least the basic technologies, operation and principles that support the Internet are requisite for all members of the steering body.

1.9. How should the government be involved in the steering group at steady state? What are the advantages and disadvantages of different levels of government involvement?

As previously stated the steering group should primarily serve as a facilitating and guiding body for the real work of developing technical standard, policies and rules, and even a legal framework for implementation of the NSTIC. This means that in addition to balanced representation from constituent groups the members of the steering committee need to have deep technical, policy understanding and a respected position in the community. The nomination and selection process described above (with publically available information on candidates) should help to insure that an appropriately skilled and diverse body is constituted both initially and overtime as participants are rotated.

2. Steering Group Initiation

As presented in the NSTIC document and NOI the creation of a steering group for development and ultimately operation of the NSTIC ecosystem must recognize the impact of any standardization, policy making, regulation or legal framework on a wide variety of businesses, organizations, governments and the general public. The requirements for broad representation on this governing body are also clear. While the electronic identity community has been fairly successful at self-organizing to date, through organizations like Identity Commons, the Kantara Initiative, the OpenID Foundation and OpenID Exchange etc. each of these organizations have their own operational biases, support structure, affiliation with particular constituencies and limitations. As far as existing government agencies or even inter-agency groups such as FICAM it is also clear that those groups have particular perspectives and restrictions and the NSTIC paper itself correctly recognizes the dangers of too much government leadership in the process of bringing NSTIC to fruition. As such it seems impractical to expect any of these existing groups to serve as either a "home for" or "basis of" governance structure for NSTIC. Therefore it is apparent that creation of a new group to support the definition and development and probably the long-term operation of the ecosystem is advisable.

Questions:

2.2. While the steering group will ultimately be private sector-led regardless of how it is established, to what extent does government leadership of the group's initial phase increase or decrease the likelihood of the Strategy's success?

The primary role of the government in the steering group (and in NSTIC development activities more generally) should be facilitation. This should be the focus of both its initial leadership in establishing the steering group as well as its key role in the ongoing operation of the group.

Leadership roles and responsibilities should not be conferred on particular sector or individual due to their affiliation with one of these "sectors" but rather should be based on the consensus of the members of the group itself and the necessarily evolving and changing requirements for experience, skills and general leadership as NSTIC progresses through further definition, development and ultimately operation.

One specific government facilitation role might take the form of providing funding and compensation for some/all members of steering group including possibly both reimbursement for expenses like travel, materials, meeting facilities etc. as well as possibly some grants or stipends for persons not supported through external means such as employer salaries, "loan" programs, grants from external foundations or individuals, or other means.

The government also should provide permanent administrative support to the steering group to cover secretarial and editorial tasks as well as logistics support for arranging meetings, recording minutes and finally handling required electronic and other communication both with members of the steering body as well as any more public outreach such as web sites, blogs, social networking etc.

The government should be represented on the steering group with at least one or two permanent members. These positions, like other steering group positions, should be nominated based on the individual qualifications and skills of the individuals and should be rotated periodically to maintain the vitality and continuity of the group, introduce "fresh" perspectives (and checks and balances) in its deliberations, and to provide appropriate limitations of power to prevent undo biases of a single individual or "influence pedaling" from outside forces from damaging the direction of NSTIC development.

2.3. How can the government be most effective in accelerating the development and ultimate success of the Identity Ecosystem?

This is a very broad question and somewhat difficult to address in general. As been stated in several places in the NSTIC document the government most directly influences the success of the strategy not by conferring authority through regulation or law, or even assigning such responsibility to the steering body, but rather through its role as an early and enthusiastic adopter of the policies, technology, architecture and regulation recommended by the developing directions of NSTIC. This is accomplished through promotion of such mechanisms by procurement and contracting decisions. Learning from past mistakes in such standardization efforts this should not, in general, take the form of absolutely mandated requirements for particular technologies but rather in "preferences" for recommended solutions that specifically site the value of such choices.

2.4. Do certain methods of establishing the steering group create greater risks to the Guiding Principles? What measures can best mitigate those risks? What role can the government play to help to ensure the Guiding Principles are upheld?

Government appointment of participants or methods that tie funding of governance activities to seats on the governance body presents the risk that large players with substantial financial

resources could subvert or circumvent the guiding principles to protect their own interest. Given the substantial requirements for commitment on the part of members of the steering committee the best method for government to avoid the pitfalls of businesses or organization “buying” influence over the development of NSTIC is to make sure that other adequate financial and support means are available, at least initially, to support the governance roles.

2.5. What types of arrangements would allow for both an initial government role and, if initially led by the government, a transition to private sector leadership in the steering group? If possible, please give examples of such arrangements and their positive and negative attributes.

As described above the government should have an active role in constituting the initial steering group both by appointing initial government representatives and also by nominating other skilled, respected and accomplished individuals that can meet the necessary commitment criteria and that provide balanced representation of affected sectors and groups. The government should act as the initial convener of the steering group and establish criteria for skills, time commitment, term of service, and conduct requirements for potential candidates. The nomination process should also solicit candidates from other sources including businesses, educational institutions, advocacy groups and the general public. Nominees should consent to their candidacy with full knowledge of the scope of commitment participation entails and should supply public letters of commitment, curriculum vitae, and statements of purpose as information on their qualifications. In this initiation process the government should act as a “certifying body” to vet the information provided by nominees where possible and also should have the privilege to publically comment on the nomination of any individual for causes relating either to the fitness or ability to serve or demonstrated opposition to the guiding principles of NSTIC. In general these government recommendations would not disqualify an individual from participating in the process but would serve as information to the “voting” population.

Ultimately choosing among the nominated individuals to fill open positions on the steering committee should be accomplished by some form of election or poll that would permit individuals and organizations relatively equal stature in an overall selection of members. Since there is no officially designated body to serve a population for this election the government should act a facilitator to permit individuals and organizations to register to participate in the polling and to regulate the relationship between individuals and organized participants (companies, trade groups, professional associations etc.) such that organized groups cannot “stuff the ballot box” through registration of their members as individuals. Registration to participate in the poll might also carry a nominal fee or other qualification (such as attendance at prior NSTIC workshops) in order to discourage frivolous participation of unformed individuals. Beyond establishing a “voting” population the government should act to conduct this poll (electronically), report its results publically, and convene and chair the steering group’s initial meetings.

The government should also establish an initial charter and basic rules of operation for the steering group that should mandate that the group itself should revise this charter within a short period of time after formation. Except for the requirements of balanced participation from multiple sectors including the size of the group, adherence to the NSTIC guiding principles, and terms of service (e.g. rotation) of members, the steering group should be free to adjust this charter as they feel is appropriate to accomplish the goals of NSTIC. The charter may also need to be amended from time to time to reflect changing needs or unforeseen situations as the process of further defining, developing and operating the Identity Ecosystem NSTIC envision proceeds.

3. Representation of Stakeholders in the Steering Group

Representation of all stakeholders is a difficult but essential task when stakeholders are as numerous and diverse as those in the Identity Ecosystem. The breadth of stakeholder representation and the voice they have in policy formulation must be fair and transparent. The steering group must be accountable to all participants in the Identity Ecosystem, including individuals. An essential task for the steering group will be to provide organizations or individuals who may not be direct participants in the Identity Ecosystem, such as privacy and civil liberties advocacy groups, with a meaningful way to have an impact on policy formulation.

Given the diverse, multi-sector set of stakeholders in the Identity Ecosystem, representation in the steering group must be carefully balanced. Should the influence skew in any direction, stakeholders may quickly lose confidence in the ability of the steering group to fairly formulate solutions to the variety of issues that surround the creation and governance of the Identity Ecosystem.

Questions:

3.1. What should the make-up of the steering group look like? What is the best way to engage organizations playing each role in the Identity Ecosystem, including individuals?

As previously recommended the steering body should be small enough to operate effectively and to insure its ability achieve “rough consensus” on decisions in a timely fashion. While no particular number of members is ideal, a group of 10-15 individuals seems about right for this purpose. As discussed variously above this is probably not a large enough number for every constituency to actually have it’s own seat on the committee given the scope, variety and skill and commitment requirements of membership, therefore it will be necessary for members to take their responsibilities broadly enough be able to effectively represent different “points of view”. To this end the government (and later the steering group itself) should establish criteria, descriptions and guidelines for participation in the steering group that the population choosing the members can use to evaluate the public information provided by each candidate. Initially the government and later the seated steering committee member should be encouraged and empowered to publicly comment on nominees to aid the voting population in making its decision. The nomination process and after initiation the sitting members of the steering group should seek out and encourage persons of exceptional skill, wisdom and commitment from industry, academia, government, advocacy groups, and especially the general public to stand for election.

3.2. How should interested entities that do not directly participate in the Identity Ecosystem receive representation in the steering group?

A primary responsibility of all members of the steering group should be public information, education and outreach. Steering group members should actively solicit information from affected groups and individuals and should participate in symposia, meetings, and conferences both as representative of the NSTIC effort and to gather information. Government financial support for such activities is likely to be required and the government itself through the NPO should expect to continue to convene public information sessions and workshop to aid in both the visibility of the NSTIC evolution and also to maintain the perspective of the members of the steering group and NPO.

3.3. What does balanced representation mean and how can it be achieved? What steps can be taken guard against disproportionate influence over policy formulation?

As previously mentioned, the variety of stakeholders, need for a fairly broad mix of skills and the level of commitment required of steering group members would probably make any numerical formula or selection method to mandate balanced membership on steering group impractical. The means of nomination and selection herein are intended to exploit the wisdom of the large population of interested and informed parties in the election of a steering group. This response also recommend that the government establish canons of behavior for members of the steering body appropriate to minimize biases or influence from outside groups and allow the steering group itself to establish means for removing members that violate those rules of ethical participation.

3.4. Should there be a fee for representatives in the steering group? Are there appropriate tiered systems for fees that will prevent “pricing out” organizations, including individuals?

Given the potential for “lobbying” or “influence peddling” by vitally interested businesses and associations any fees, donations or grants provided should not be directly tied to membership on or influence over the steering group. Operating with a large and diverse enough leadership group and with persons having exceptional skills, perspective and some degree of immunity to financial pressure from employers or others may be key to the successful acceptance of NSTIC by all affected constituents. Nominal fees for participation in meetings, or even sponsorship of activities should not in general be tied to authority, voting or policy making.

3.5. Other than fees, are there other means to maintain a governance body in the long term? If possible, please give examples of existing structures and their positive and negative attributes.

Assuming the above question relates mainly to membership fees and schedules as detailed there might be other types of fees that could be leveraged that have less influence on decision making. Once the NSTIC is more well defined and operational periodic fees associated with certification of roles such as Trust Framework Providers, Certifying Auditors, Identity and Attribute Providers and Relying Parties could be levied to support the ongoing maintenance of the NSTIC governance function. Such fees would have to be scaled appropriately to the size and financial resources of these participants to insure that size and success would not eliminate participation of smaller or newer innovative organizations. Similarly “fines” for repeated violations of regulations set forth by NSTIC could also be used for support and to encourage diligence by participating certified organizations.

3.6. Should all members have the same voting rights on all issues, or should voting rights be adjusted to favor those most impacted by a decision?

In general it would be very difficult and probably dangerous to attempt to assign voting rights or authority to any particular sector or interest by dint of some perceived impact or effect on that constituency. Any such skew would necessarily be largely a matter of “point of view” in any case. The notion of “rough consensus” and the underlying requirement for compromise that has been successfully adopted by many standards development bodies and trade associations can probably eliminate requirement for “vote counting” and weighting. That being said, an appeals mechanism that involves other groups (possibly the NSTIC NPO initially or an appeals board of past steering group members) should serve as a check on potential errors in judgment by or undue influence over steering group decisions.

3.7. How can appropriately broad representation within the steering group be ensured? To what extent and in what ways must the Federal government, as well as State, local, tribal, territorial, and foreign governments be involved at the outset?

As previously discussed government must take a fairly substantial role in initiation of the governance process for NSTIC. Government, particularly the NSTIC NPO and other associated agencies like the White House, Department of Commerce, Department of Homeland Security as well as agencies like the National Institutes of Health and FICAM that are already heavily invested in the area of identity management and should actively serve as a “search team” in the discovery of qualified individuals to be nominated for membership in the steering committee. Also, as previously mentioned, government should be granted a small number of (one or two) permanent seats on the steering committee. As with other seats these positions should come up for rotation on an appropriate schedule to insure broad representation of federal, state, and local governments. Finally, a member of the NSTIC NPO should serve as an ex-officio member of the steering body to facilitate its operation and to provide an “anchor” for administrative and logistic support of the steering group functions.

4. International

Questions:

4.1. How should the structure of the steering group address international perspectives, standards, policies, best practices, etc?

Many countries of the world are already far more restrictive or at least prescriptive of the practices of businesses, government and other organization on the Internet. Many have far reaching regulatory regimes or law regarding public privacy. The steering group should seek to understand the perspectives, regulations, laws and practices of other countries both as background to their activities to develop NSTIC but also because the Internet and web are worldwide resources and ultimately any ecosystem we develop here in the U.S. will of necessity have to interoperate with standards, polices and governments in the rest of the world.

4.2. How should the steering group coordinate with other international entities (e.g., standards and policy development organizations, trade organizations, foreign governments)?

The steering group should accept a requirement to participate as representatives in any international bodies that are engaged in similar efforts and also reach out to countries that have already established standards, enacted regulations or law, or are moving in those directions. More specifically the steering group should invite international participation in the teams it convenes either itself or through participation with other organizations. Where appropriate and possible the steering group should, in fact, favor collaboration with internationally focused standards development organizations. Possibly the steering group should also invite some ex-officio participation of international experts or government representative when making evaluations or deliberations on recommendations that would be impacted by international considerations.

4.4. How should the steering group maximize the Identity Ecosystem’s interoperability internationally?

The government should seek to insure that technical standards adopted in support of NSTIC fit within the framework of already adopted and recognized worldwide standards and practices promulgated by organizations such as the IETF, ITU, W3C etc.

List of Technical of Industry “Senior Statesmen” or “Luminaries”:

The following is short list that I and others came up with of people with well recognized careers in electronic technology from industry and academia. Most of these are no longer affiliated with employers or other institutions on a permanent basis. Their former or current affiliations are listed to best of my recollection. This list is no particular order and is no way vetted. Further I have not discussed with any of the people listed my inclusion of their name on this list, and it therefore should not be taken as anything more than a suggestion and example.

It is possible that if this response to the NOI is to be placed in the public record that this list should NOT be included.

Irving Wladawsky-Berger (formerly IBM VP)

John Patrick (formerly IBM VP)

Carl Elison (formerly Microsoft)

Frank Moss (formerly IBM, founder Tivoli Systems, MIT Media Lab)

Mitch Kapor (founder of the Electronic Frontier Foundation, founder Lotus Corp.)

Steve Wozniak (Co-Founder Apple Computer)

Dave Farber (Carnegie Mellon University)

Vinton Cerf