

Mid-Year Assessment, IEEE Engineering & Diplomacy Fellowship
US Department of State, Office of the Science and Technology Adviser to the Secretary
(STAS)

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The period of this assessment covers November 15, 2010 through June 15, 2011.

My primary goal in embarking on this fellowship was to perform meaningful public service and learn more about foreign policy by participating in its formation. I am happy to report that this goal has been achieved. Through my placement in the State Department's Office of the Science and Technology Adviser to the Secretary (STAS), I have had a "bird's eye view" of, and contributed to, multiple significant endeavors including:

- Representing STAS at a Senior Leaders Innovation conference with 3 dozen of our armed services most senior leaders. Held at University of North Carolina, this one week think tank stimulated discussion on how to increase flexibility, prudent risk taking, and reducing the time required to introduce new ideas and capabilities into the military and related organizations;
- Observing a visiting delegation of all Ambassadors, working with Secretary Clinton on the rollout of the State Department's strategic plan, the Quadrennial Diplomacy and Development Review;
- Volunteering on the Libya Task Force, charged with evacuating American Embassy employees and citizens at the outset of the Libyan rebellion;
- Participating as a core team member with NASA on an initiative called LAUNCH to bring 10 new energy related innovations into NASA, USAID and State alongside Nike and Intel. This has directly leveraged my expertise and experience in forming, advising, and funding new ventures, and has been an unexpected pleasure as I did not envision directly using my entrepreneurial background so directly.
- Creating a speaker's bureau of US citizen-experts on clean energy who will be invited to speak at embassies throughout the Western Hemisphere. The roster includes both academic as well as private sector experts, which is a first for the program. Prior, the speakers were all taken from academia, as that is the typical contact base for State Department employees. I am told my presence in the process is the only reason there is any representation from the private sector, which was a major goal for the second year of the program.
- Following review of all entrepreneurial and innovation endeavors across the State Department, I noticed a gap which the STAS office is now leading an effort

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- to fill. Simply put, we are creating a platform for better connecting the innovative solutions available today from US startups and small businesses with the problems that are of mutual interest to the US and its partners to solve. This will absorb the majority of my time going forward.
- Ad-hoc advisory role on a wide variety of Internet and other ICT and business issues, both from a technical perspective as well as providing insights into how other countries such as China may be viewing issues such as standards development.
 - Identifying, arranging funding for, and hosting two major events in July, one on open innovation using crowd-sourced solutions to problems of interest, the other on analysis of Twitter traffic related to the Arab uprisings.

I had several mini-goals at the outset of this endeavor, most of which have been achieved.

Goal #1: Learn more about the mechanics of policy formation and how engineering and science can be better deployed in the support of robust US foreign policy goals. I have learned an immense amount by seeing and doing from the inside of the State Department. I have much more to learn, to be sure, and am looking forward to pressing ahead with contributing to the areas that have naturally come to the surface during my first months at State.

Goal #2: Lead a meaningful initiative, perhaps to fill a gap that otherwise would go unfilled. Shortly after my arrival, I identified a gap between the immense capacity of US startups and small businesses to solve problems of mutual interest to US and its foreign partners, and the actual involvement of startups in this arena. Knowledge of these problems is held in the heads of officers at embassies and missions, and the gap to be closed is the awareness of solutions that have already been created by our technology startups here at home. Connecting those has become a focus for me, and is now occupying much of my time. We currently refer to this initiative as the “SME Gateway”, and it is early days but there is enough interest to warrant continuing to spend time refining it. We are aiming to pilot an approach in four Western Hemisphere countries: Brazil, Chile, El Salvador, and Costa Rica. This effort will likely spill over the year of the fellowship, and I am looking for guidance on how to deal with that reality.

Goal #3: Provide advice and input from an engineering perspective, when and where needed. I had NO idea when I made application to the IEEE in 2009 that nearly every speech given by the President and by Secretary Clinton in 2011 would include the words “entrepreneurship” and “innovation”. This has driven a lot of work in my direction, and has raised the interest in engineering insights across a broad swath of the State Department, particularly in the Economics family lead by Under Secretary Bob Hormats.

Goal #4: Become more familiar with the “think tanks” that provide formal and informal inputs to the policy formation process. I have had access to numerous think tank sessions, and have focused my attention and time on those that relate to the intersection of public and private sector strengths. Realizing this goal has extended

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STAS' reach by bringing back ideas from a wide range of meetings and seminars that otherwise would have gone unattended. These ideas are then communicated directly into the offices and bureaus that can use them.

Goal #5: Reactivate and extend my skills in Spanish, French, and pick up familiarity with a third. This is the only goal that has been totally unrealized. See below for areas of focus to strengthen the IEEE/DoS MOU.

Goal #6: Visit 32 libraries and museums. I have visited 12 thus far, some of them multiple times, so I consider this goal 50% achieved.

Goal #7: Determine how best to integrate my new insights into a meaningful next endeavor. This goal is also a work in progress, and is less than 30% achieved. Much work ahead between now and November to determine how best to capture this new knowledge and leverage it effectively.

Goal #8 (stretch): Raise profile of a critical resource in the engineering pipeline: I have hopes of meeting Secretary Clinton outside of the campaign trail, where we met several times. I also want to meet with Jill Biden, to discuss community colleges and how I can, as a long time foundation board member for the 8th largest US community college, do more to raise the profile of this critical resource in the pipeline for hundreds of science and engineering careers.

Goals Left Unfilled

- Attendance at internal State Department regular meetings, e.g. Deputy Secretary and Secretary level, to gain insight into the management techniques in use at senior levels in this organization as compared with startups and large technology firms.

Potential Next Steps

- Press forward with SME Gateway. This will require visits to Brazil, Chile, El Salvador and Costa Rican embassies before year-end, to better refine the nature of any tools or platforms to be made available to hasten the rate at which partnerships between US and in-country small businesses happen, to solve problems of mutual interest to the US and its partners.
- Mentor entrepreneurs for 3 months, at 2-3 embassies. This would involve holding workshops, 1:1 advising sessions, on-site visits, assistance with business plans, introduction of potential partners and investors, and perhaps liaising with in-country staff of foreign ministries.

I have thoroughly enjoyed my time in DC; in fact, I have only managed to get back to Austin once in the 7 months I have been here. Further, I have not taken more than a day off since January – there's so much going on that I don't want to miss out by being gone! It is definitely time for a vacation.

Finally, I would be leaving out the most important factor in the success of this fellowship if I did not give a big thank-you to Andy Reynolds. I cannot think of a better office, and

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better person, than to have been placed in the S&T Adviser to the Secretary's office for my fellowship. Andy's insights and understanding of how the Department of State functions, and his superb relationships throughout the building and across Washington, have been a foundation of granite on which to build my own relationships. I am very pleased to have spent my time in this fashion, and hope that my presence has been of help to Andy, in return.

Ways to Improve the Fellowship

The Fellowship has so many strengths that the following items are minor. However, there are opportunities for improvement, and the following are offered in the spirit of constant improvement:

1. The status of an IEEE fellow is that of an appointed expert, a non-employee who is also not a contractor. This provides immense flexibility in everything from how speeches and papers can be written and attributed, to the types of invitations for events that can be accepted, to the internal relationships that can develop due to the independent nature of the fellowship. These strengths are a huge benefit of the manner in which the MOU between IEEE and the State Department is structured. This structure should be maintained.

The downside of being a "little bit different" is that every IEEE fellow has to "run the gauntlet" of various HR systems rejecting legitimate requests, as if they were the first IEEE fellow to arrive at the State Department. I was turned down for a valid set of requests to attend FSI courses, repeatedly over the last seven months, and that has impeded progress on meeting a major personal goal of mine, which is to strengthen and extend my abilities in multiple foreign languages. Such facility would be very helpful as I am spending much of my time working with the Western Hemisphere, and improving my Spanish/Portuguese would be a huge asset.

Another example is that I have not received a transit benefit that I am due. As I live very close and walk most of the time, this is minor, but will amount to roughly \$800 in lost benefit during the fellowship year. Some mechanism, either more involvement from IEEE in the first weeks of a fellowship, to ensure that the paperwork is properly in place, or some other clarification that can be better understood by State's HR folks, would smooth the process so that multiple months are not spent running into unnecessary paperwork distractions. Another route would be for IEEE to pay the transit and educational benefit costs, further removing the need to try to use the State Department systems.

2. Remote, mobile access to the State Department email system would greatly increase the responsiveness of the IEEE Fellows and reduce the amount of time spent reading email while in the office, freeing up more time for the important work of building

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relationships and volunteering for even more endeavors. There is a cost attached to this, less than \$1,000/year, and providing Blackberry access at the outset of the fellowship would be a significant productivity increase for IEEE fellows.

3. The very low amount of the stipend, and the issue of health benefit reimbursement is impacting the perceived value of the IEEE brand. The health benefit reimbursement is actually enshrined in the current MOU as being something the IEEE fellow is entitled to, but I have not received it. The low level of the stipend is common knowledge among the fellowship community, and it is frankly an issue that is hard to explain. I would urge the committee to give serious thought to raising the stipend to a level that is more in line with the scientific fellowship community, which is roughly \$90,000/yr plus relocation and health reimbursement.

I am in the process of discussing various alternative ways to extend my stay at State, as the very important work of better connecting startups and small companies to the foreign policy interests of the State Department, will have direct and positive impact on US job growth if done properly. As many startups are technology-driven, it is also of distinct interest to IEEE's membership base. I will be coming to see both Erica and Chris to discuss how I might arrange to stay for an additional year.

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