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*NIST Technology Transfer improvements, for ROI and coordination*

*NIST is interested in receiving responses to the following questions from the stakeholder community:*

*1)      What are the core Federal technology transfer principles and practices that should be protected, and those which should be adapted or changed?*

a)     For a capitalistic democracy as we are, government owned and operated research cannot be operated solely by the government without raising taxes. If taxes were to be augmented to fund more of the government labs and commercialization the incentive for excellence, acceleration and high productivity in each department is reduced. It is human nature to want to improve unless the rewards (salaries, perks, days off, etc.) are considered adequate for a day at work without any drive or personal development. Only in the private sector do we consistently find enough of the entrepreneurial spirit and the ambition for discovery that drives the inventor, the researcher, the craftsman, the business man and the supportive family at home to work overtime without pay, holidays or health insurance.

At the Government science center or state university there may be incentive to get published, to earn the “pat on the head” as stated in the resume or to score a promotion, but if that job is lost where does the employee take his or her espousal to the project or commitment to the cause? The invention becomes the dangling artwork for the next artist to continue, an unfinished symphony.

The idea of consolidating the national labs is wise if it can be at least with a transfer of budget into the private sector. This has proven risky in the past because a return of improperly spent money is hard to recover. There are very capable and talented scientists and engineers who can be inspired by a project if their heart is in it – if it is more than a job. Is it practical to give these individuals an assignment to work in a partnership or joint venture team with worthy entrepreneurs and inventors who present a project to the national lab? I am thinking of the court system that assigns a defense attorney to a defendant who cannot afford his own counsel. The court ordered counselor or defending attorney learns the case of the defendant - learns the defendant! That project is not finished, that is, that attorney has not completed his commitment to the case and to the defendant until a verdict (a product, a proof of concept) has been won (commercialized).

The budget in this case is under the control of the government, under the joint stewardship of the entrepreneur/inventor and the assigned government scientist. Additional funding can be requisitioned as the case may require with the direction of the parties without total bias or conflict of interest. Would not the assigned scientist become mentally motivated as a team member with the inventor; would he or she not be driven to work harder than the “9 to 5” regime prescribes? Unlike grant money, allocated all initially or by milestone or project deadlines, the funding would be adjustable, as for any other business endeavor, with economizing, pivoting or strategically advancing as required with the oversight of the assigned scientist(s) knowing intimately the circumstances and wisdom in the decisions. ROI is hereby more likely. Could there be a corresponding share in the royalties? Why not?

*(2) What are the issues that pose systemic challenges to the effective transfer of technology, knowledge, and capabilities resulting from Federal R&D? Please consider those identified in the RFI as well as others that may have inhibited collaborations with Federal laboratories, access to other federally funded R&D, or commercialization of technologies resulting from Federal R&D.*

a)     In the RFI explanation there is acknowledgement that there is poor communication between agencies. I have been to road tours where there is a limit to the number of agencies that can participate is such a grueling schedule. Invariably there are those private groups who show up with high hopes of communicating their ideas, needs or concerns to the right person in the right agency.  In my case, the people I could talk to were not the appropriate person, but they were very personable and polite in referring me to another agency not represented at the road tour. Aside from pleasant twenty or so minute conversation and the new scenery enjoyed by the agent and myself on our long journeys to the  scheduled rendezvous, the time spent  was mostly a waste for both of us. Why not schedule an online chat during a certain hour, day or week when the private sector chief investigator/applicant can set up a time to discuss and show the details of the project in mind. In a prior scheduling email the applicant can present the “elevator pitch” to assure that the agent sought is the appropriate person. Travel time is thereby minimized, referrals are quicker (possibly by forwarded email through the agent and re-scheduled by the receiving agent ). This procedure can be facilitated by scientists who are not on the top pay scale or who wish to take a break from some other routine.

b)     I have been put off several times by a general solicitation by a government agency which is attractive to me because my technology fits the solicitation according to the way it is written only to be excluded by the subtopics that narrow the method or means whereby the objective is expected to be accomplished. It is as if the grant writer has predetermined the exact location of the state of the art and the only door through which it can be approached. It hits me worse than a “bait and switch” scheme. Sometimes there is an “other” category in the subtopics, but a phone call to discuss the parameters of that category reconfirms the narrowness of the subtopics. I could conceive of a grant writer who does not understand other fields of study outside of her own specialty.

Of course, there are many ideas presented that are not legitimate or which have been submitted numerous times before without merit and the next comer with anything remotely similar must also be thrown into the same heap. More openness to phone calls would allow effective sorting of such nuisance calls if the grant writer has the opportunity to ask screening questions and to listen to the inventor’s rebuttal – money and time saved even though the scientist for the government must condescend to the caller’s level.

*(3) What is the proposed solution for each issue that poses a systemic challenge to the effective transfer of technology, knowledge, and capabilities resulting from Federal R&D? Please consider the approaches identified in the RFI.*

a.      In addition to the suggestions above, I think that a blend of STTR and SBIR granting procedures would be positive for the government and the schools. Restricting some grant programs to universities and colleges only discourages collaborations between students and private parties (an extension of the intern or apprentice programs) and denies access to funding possibilities for some projects that do not have any origination among faculty. Are we assuming that faculty members are the only source of credible talent to come before the scientific comunity  or that they are the only ones who can effectively and beneficially oversee the student? Is there a reason why student involvement cannot be accredited to his or her course of study? A broader program for three way correlation can be very profitable for all parties.

I found myself in the middle of a protocol conflict between two leading universities in two of the world’s largest democratic economies (one of which was the US). The proposal was for each university to contribute their scope of proficiency, the private company in one country to put forth the intellectual property, the private company in the other country to participate in the manufacturing and the two nations to participate in the funding. The students on both continentsn would be the beneficiaries of the expertise of all parties and the private companies would be boosted by the endorsement of the whole cooperation. The commercialization would be the product of final engineering and manufacturing of products that would be exportable between both companies and globally. The problem was the lack of humility of the academic and governmental parties: Who signs first and who hosts the signing? Subsequent official positions were subject to national elections and the arrangements fell through the proverbial cracks in the system.

To avoid this kind of shame and denial of ROI, the procedure must be speedy – not with recklessness, but with better communication and training of middle management from upper management in the government to enable local people to understand the big picture and how to take courageous actions affecting parties far outside of their jurisdiction.

*(4) What are other ways to significantly improve the transfer of technology, knowledge, and capabilities resulting from Federal R&D to benefit U.S. innovation and the economy? What changes would these proposed improvements require to Federal technology transfer practices, policies, regulations, and legislation?*

a.      Respectfully eliminate acronyms and common jargon that may lead to misunderstandings or frustration in communications unless they are to be defined initially.

b.      Stop using the term “technology” or “high tech” as exclusively digital or computer related technology as if the mechanical, chemical, biological, physical, astronomical and other fields do not have technology.

c.       Don’t give in to trendy scientific frontiers only to write off things that have vast horizons of significant innovation such as paper, media of communication which will never need an energized device, the internal combustion reciprocating piston engine or fossil fuels of which most of their energy has not been tapped.

d.      Step up the efforts to protect US Intellectual Property beyond our borders so that no inventor need fear originating here for sale there.

e.      Give precedence to innovation that will readily improve poverty here and abroad. That is what America has been known for. Our standards of generosity, fairness, and prosperity should continue from the inventor to the world as it always has. If they can’t come to our shores to feel a part in this, let us export it to them without guile or pity.

Respectfully yours,

Paul

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   President



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