

Comments on International Collaboration (Track E) Sessions
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We are all aware that the challenges faced by humanity reflect the fact that societal interactions on our planet have become increasingly complex and significantly more interconnected. Rapid changes in the financial markets on one continent have dramatic and immediate repercussions on foreign exchanges, affecting almost all currencies. An outbreak of a virus in Asia can cause quarantines in North America. This shift means it is now highly relevant to those of us living in Southern California, as I do, that there is still food insecurity in Africa. The potential for the prosperity of mankind has become clearly linked.

This is a positive change that will shift how humans address the global problems facing us. Thanks to the vision of Mr. Omi, the STS *forum* was started to provide a platform for leaders in science, business, and government to exchange and generate ideas on how we can work together collaboratively to address the problems facing us all.

A common theme through each of the International Collaboration sessions I attended is that a bottom up approach to problem solving creates the greatest dividends. This is significant for identifying the problems to be addressed by international research networks and building increased scientific and technical capacity in developing countries. Implementing functional national and international legal frameworks to protect Intellectual Property will significantly enhance the bottom up creation of new technologies in both developing and developed economies.

To achieve the innovation needed to address the problems facing the global community, there must be increased effective S&T collaboration. I stress the word effective as there are numerous examples of collaborative failures whether it is uncoordinated organizations who spend money without achieving the desired results or international research efforts that are duplicative and ineffective. Common goals, common metrics of success, and flexible, powerful collaborative forms of communication are critical to make scientific networks successful. Although information networks and technologies are significant enabling tools, in the end, it is the human to human communication that makes the difference.

Dr. Mangaliso of South Africa presented **a very compelling argument** that developing nations must establish their own needs and initial internal infrastructures before engaging with developed nations in accepting S&T aid. Such an approach will not only increase the impact of the assistance but encourage the recipients to further develop their own internal capabilities – which leads to sustainable development. A successful example of this is a project in Rwanda where local coffee growers partnered with Texas A&M University, Michigan State University, and USAID to increase the quality and production of the crop. This effort raised the price of Rwandan coffee from \$.25/lb in 2001 to about \$3/lb today.

As this example suggests, successful development efforts must be sustainable, and for these efforts to be sustainable, **THEY MUST BE PROFITABLE**. Furthermore, for

development efforts to create a long lasting impact, there must be a focus on increasing the internal science and technical capacity in developing countries. In the Millennium Village project, it was found through rigorous scientific observation, performed with in country S&T talent, that simple steps such as providing advanced seeds and fertilizer increased crop production between three and six-fold.

Addressing the issues of developing countries is not simply the right thing to do on a human level. It is a great intellectual challenge of the 21st century. How do we transition from using science and technology from being something that is a tool of wealthy nations to being a key to unraveling the problems of the poorest people? **The answer to this question not only will alleviate great suffering, but will bring new creative solutions and opportunities to developed countries.**

Since the sense of purpose was so clear in the session on “International Harmonization of Intellectual Property Rights”, I asked the session chair Mr. Allan Roach to prepare the following short statement for presentation this morning:

Mindful of the importance of technology transfer and intellectual property protection as drivers of global innovation and investment in new science and technology enterprises, it is vitally important that global action is taken to tackle the inefficiencies and inequalities in a fragmented global system. **ASKING THE G8 SUMMIT**, in addressing the key challenges facing the world’s population, to commit to:

- Building capacity and raising awareness of technology transfer and intellectual property protection mechanisms among the global research community. This is a pre-requisite for global research collaboration to flourish and to maximize the beneficial outcomes of research discoveries.
- Also to providing resources to plan and implement a reform of the global patent system which would address the inequalities and inefficiencies of the current system. This plan would be based on a rolling reform of the existing world systems in order to achieve early benefits.

One of the most powerful allegories I can think of that reflects the message of these sessions is the image of the Earth backlit by our Sun as viewed from space. High resolution images of our home planet show a very thin but bright sapphire glow surrounding it. This is our one and only atmosphere that sustains all life on our planet.

We are all bound to what happens within that sapphire ring. The sapphire ring knows no geo-political boundaries nor is it influenced by economics. We all breathe the same air and will all face the same crisis in health of ourselves and our planet if we do not maintain it. I commend the participants of these sessions for their innovative ideas and urge all of us as attendees to use the STS *forum* as the foundation for taking action to work towards the goals we all share.

Thank you