WHITE PAPER

NPS-BAA-14-003

PROJECT ON ADVANCED SYSTEMS AND CONCEPTS FOR COUNTERING WMD

Title of Proposal:
Track II Dialogue: US, China, Russia on Maintaining Strategic Stability

The proposal addresses a need to create a Track II process bringing together scholars from Russia, China, and the US with strong backgrounds in strategic stability, cyber-conflict, and military command and control systems (including nuclear).

Estimated cost: $225,000
Project Duration: 1 year
Offeror Institution: Emory University, Goizueta Business School

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Executive Summary
This project will support a US, China, Russia Track-II conference aimed at exploring and conceptualizing the degree to which each of our nation's commitment to "strategic security" is being shaken by emerging cyber-threats particularly against military command and control systems (including nuclear).

It emphasizes the need for interdisciplinary dialogue in this highly complex and sensitive environment, in the absence of consistent military-to-military exchanges and the dearth of discussions amongst the political leaders on the subject matter. Over the past couple weeks we have seen military to military dialog about cyber issues between the US and China breakdown. It is just as essential now to have a Track II process on this topic as it was to have the Track II Pugwash process during the Cold War.

As tensions between the United States, Russia, and China escalate, we wonder how to create safe spaces that encourages sharing insights and exploring solutions. Vienna played this role during the cold war and Switzerland during World War II. We have gotten strong signals from the PRC that they would feel more comfortable discussing "strategic stability" in Hong Kong than in other venues and that a US, China, Russia tri-log has the potential to be much more productive. We have gotten the same signals from our colleagues working on cyber-security policy in Russia.

Theoretical Framework

These three countries have arguably the most direct proximity to the cyber-nuclear nexus in military strategic planning; yet, their policy communities do not possess adequate technical understanding on cyber, producing misleading inferences based on the Cold War strategic nuclear engagement, and their cyber expert communities seem mostly active in strategy implementation, but not strategy formation. In today's complex environment, emerging cyber offensive capabilities of these and other key global players mean that potential implications and reverberations of their use are increasingly falling beyond the scope and capability of unitary decision making bodies.

Drawing on the successes of Track-II dialogues in opening up conversations as sensitive as U.S.-Soviet arms reductions or ridding the Middle East of weapons of mass destruction, the project will inject much needed multi-faceted understanding of cyber conflict in expert communities, and gradually build a network that fosters further dialogue involving strategic decision makers.

Statement of Work

Research Objective
Presently, there is dangerously little understanding of cyber conflict scope, implications and role in the broad national military strategy amongst the military and civilian decision makers. More concerning is the fact that that there is even less mutual understanding of these notions among Chinese, Russian and American counterparts. Presently, there are no open lines of communication to exchange the perceptions of emerging threats and relevant factors of domestic socio-political context: this limits the capacity to predict each other's reactions in crises – which,

in the cyber domain unfold with incredible speed – or capitalize on joint capabilities to resist or curb collectively adversarial events.

The proposed Track II dialogue on maintaining strategic stability, given the ripe conditions for cyber conflict, will provide an impetus for trilateral dialogue among scholars and experts from these countries who speak across cyber and nuclear domains. Track-II dialogue format has proven a successful vehicle for opening up discourse on sensitive military subjects, and the reach of this project across multi-disciplinary international scholar/expert communities will be gradually extended to involve elements from military and policy communities. This informal channel will also foster collective formation of normative responses to the challenges in the complex cross-domain environment.

Cooperation on Modeling Strategic Stability
We have scholars in the US, China, and Russia who would like to work together and believe that new methods of using computational supported reference models to understand and respond to risks to strategic stability are essential. Part of these computational reference models would involve the use of global social media fed agent models to explore scenarios for breakdowns and improvements in "strategic stability".

Though this proposal will not fund the actual implementation of such models, we believe that active discussion on how to model regional and global strategic stability will be highly productive in terms of understanding changing realities and developing a conceptual framework for our increasing complex planet.

We believe it is important for researchers in each country to develop their own approaches to using computational reference models for understanding their country's vulnerabilities and to keep much of this work restricted to government strategists in their own country.

There is also great value in developing a body of knowledge within the global academic community on "best practices" for every country to develop computational reference models to understand threats to both regional and global strategic stability.

Public Purpose

We believe that it is imperative that we admit that in the past couple years the US, Russia, and China the belief that each is committed to "strategic stability" and can be trusted to only take actions that do not jeopardize "strategic stability" has been thrown radically into question because of the impact of cyber-conflict including the confusion it has thrown into the reliability of each country's military and control system.

Background

There is a vast academic literature about "strategic" stability and WMD particularly nuclear weapons. However, this literature does not generally anticipate the complexity that is added when countries start to deploy active cyber weapons in the command and control infrastructures of other countries. Frankly, many "strategic study" scholars do not have the background in what

is and is not possible using cyber technologies and so are very weak in analyzing the current situation that exists between the US,, Russia, and China as well as other nuclear states.

Scope and Technical Approach

We are building a database of scholars around the world with a strong background in "strategic stability" and a real technical grasp of both the potential risks both real and imagined associated with cyber.   For this conference in Hong Kong we would like to select 4 scholars each from the US, China, and Russia and three from host Hong Kong University.

Qualifications

A major problem today is there are few scholars with strong backgrounds in strategic stability and who have a solid technical grasp of how cyber can strengthen and undermine military command and control systems.   We have identified over 30 individuals with strong backgrounds in both strategic studies and cyber-security of which we will choose 15.   The depth of the leadership team we are proposing is very strong.

- Dr. Foster has helped run the POSSE project in nuclear strategic stability and combines that with 30 years of experience building global infrastructure. In this process he has built "trusted" relationships with international relations professors who are also cyber-security experts. He already has the networks in place in Russia and China to bring together the Track II dialogue. His resume and all his books and articles is available at http://www.fosterandbrahm.com

- Dr. Benn Konsynski, one of the fathers of the application of information systems to organizations, has worked tirelessly over 40 years to improving human decision making. During the cold war, Dr. Konsynski under an NSF grant, built bridges between computer scientists in the Soviet Union and Russia. http://www.emory.edu/BUSINESS/BRK_home.html

- Dr. Holli Semetko has published widely on campaigns and influence involving measures of stability and change, and media uses and effects on public understanding in various countries. She worked closely with several highly ranked Chinese universities and the PRC government when serving as Emory's vice provost for international affairs from 2003-2013, and continues to accept invitations to speak in China about her research. http://polisci.emory.edu/home/people/semetko.html

- Terry Graham at the Hong Kong University TRPC has been researching and writing about telecommunications, cloud computer, cyber-security in China and is involved in key cyber-security initiatives with the Chinese and Hong Kong authorities. http://trpc.biz/news-events/telecommunications-infotech-forum/

- Egle Murauskaite has extensive experience coordinating track 2 efforts global for CNS in Washington, DC.

Activities
Each scholar would bring a 4 page paper that either summarized a more significant work or proposed research suggestions that would increase the global commitment to "strategic stability" and the elimination of the possibility of the use of weapons of mass destruction (WMD).

The Track II dialogue would have an evening reception the first day.   The second day would include discussions of each paper and a brainstorming session that would build on the participants proposals, but would come up with potential projects, conferences, and networks that might tangibly contribute "strategic stability". We would discuss how best to develop methodologies, methods, and computational support for understanding national, regional, and global strategic stability.

The Track II dialogue would be recorded and would be provided to the Naval Post Graduate School and to each participant on condition that it would not be released publicly.

The papers would be summarized and posted to the TRPC website in a section devoted to the conference.

There will be a final report 90 days after the Track II dialogue that will report on how it improved mutual understanding and developed consensus on ways in which academics can help support the development of "strategic stability" even as the world becomes more complex because of the impact of cyber-conflict on military command and control systems.

The report will also outline a strategy on how to grow academic expertise that can quantify and evaluate threats to strategic stability and supportive activities.

Timeline and Length of Period of Performance

Task #	Tasks and Deliverables	Duration
1	Preparing a background study scoping the level of inter-disciplinary understanding, and prevailing perceptions and interaction in discussions about regional and global strategic stability and threats from cyber conflict and nuclear weapons domains amongst experts (academic, policy, and military) in the U.S., Russia, and China – internally and internationally	Months 1-4
2	Identifying individuals and institutions to be involved in the dialogue and their potential roles in it	Month 5
3	Collective drafting of the Track II topic areas and speaker/participant arrangements; establishing what "homework"/"house gifts" each participant may bring to the conference	Months 6-7
4	Holding 3 day Track II dialogue in Hong-Kong, presentation of 4 page papers, and brainstorming about methodologies, metrics, definitions, and computational reference models	Beginning of month 8
5	Writing summary of Track II discussions; identifying priority topic areas for further dialogue	Month 8
6	Disseminating the materials for participant review and their identification of joint near-term initiatives with fellow participants. Developing a public website to promote public understanding with info on participants, papers and links to relevant work.	Month 9
7	Facilitating participants' joint initiatives, assisting with any publications	Months 10-11
8	Drafting project report	Month 11
9	Briefing the appropriate government officials and interested international organizations	Month 12

Cost Estimate

Budget	
Labor	100,000
Other direct costs: Track II Dialogue, co-organized with Hong Kong University	44,900
Travel for participants	35,100
Indirects (25%)	45,000
Total Costs	**225,000**