

## ***The Dating Game, Survivor, and other War Games: Interesting, Enjoyable and Effective Methods for Conducting Collaborative Research***

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### **Abstract**

*This paper discusses the collaborative research methodologies and techniques developed by the Naval War College's Decision Strategies Department (DSD), and how these methods and techniques have allowed the DSD to meet the diverse research requirements of senior naval and government decision makers. The Decision Strategies Department's "experts at talking to experts" collaborative research process is discussed, as are some of the techniques the department employs to make this research approach interesting and enjoyable for their "decision event" participants, as well as effective at generating the research data necessary to address the decision maker or research sponsor's questions. The paper describes how this research approach evolved, why it is different from traditional research or war gaming, and the type of research requirements that caused this approach to be developed. The paper discusses the lessons learned from using this research process, and some of the ways that the department disseminates the results of its work. Also discussed are two DSD research projects that illustrate different approaches to this type of collaborative research, and that contain examples of techniques that can even make this type of collaborative research fun!*

### **We don't do research the "old fashioned way"**

In the Decision Strategies Department (DSD) at the Naval War College we don't do research the old fashioned way. From our point of view, traditional research involves various combinations of literature reviews (both the library and the Internet variety), and possibly some interviews, or a survey, or an experiment, or a conference, the results of which are analyzed to inform the research. The normal application of Group Support Systems (GSS), that include groupware such as GroupSystems,<sup>2</sup> is to help an existing group or organization reach a specific deci-

sion, or work through a series of issues usually defined by the group itself. In the Decision Strategies Department, we employ some of the aspects of traditional research, and we use GSS, but we have also developed what we feel are unique methods of conducting collaborative research. In short, we assemble a diverse group of experts and develop a "Decision Event" agenda designed to elicit from these experts the data needed to address the questions and issues that the research sponsor has requested we investigate. Often our approach contains some aspects of war gaming in that we employ scenarios, scene-setting techniques, and role playing. Sometimes our role playing is like a skit where participants are asked to "respond from the perspective of a small middle-eastern country" for a 10 minute data collecting exercise, and then to respond from an entirely different perspective a few minutes later. In other events our role playing is more "movie like" as we ask participants to "assume the role of a North Korean diplomat" for a whole day and a half event. DSD uses GroupSystems groupware as our principal data-gathering tool, but we use a variety of techniques to make our decision events interesting, enjoyable, and effective. This paper will discuss how we do this.

Imagine the following situation. You have been invited to participate in a daylong conference examining the future of foreign direct investment in Asia in the year 2010. The venue sounds interesting—a plush conference center overlooking the Rocky Mountains. The views during the breaks should be stupendous, but the thought of spending 8 hours discussing foreign direct investment with a bunch of Wall Street financiers has you wondering if the view will be enough to overcome what sounds like a stupefying day.

Now imagine that the day is over and you find that you learned something, you feel your contributions were meaningful, and yes, to your surprise, you enjoyed yourself. All in all this was a day well spent.

Researchers who rely on personal interviews or direct input for collecting data face the same two problems every time they begin a new project—how to get participants and how to keep them interested. If their decision matrix requires them to determine more than “which cola do you like better?” then the challenge of keeping participants energized and engaged increases. If the event involves senior subject matter experts, then convincing them to spend time on your project rather than investing it in a myriad of competing priorities is a real challenge. If you do everything right, the payoff comes at the end of the day when participants say they not only learned something, and felt they made a positive contribution to your research, but also enjoyed the experience.

We learned that how we ask questions and frame issues are big factors in whether the collaborative research experience is a positive one for participants, and we believe we have fostered several unique approaches for conducting collaborative research. Those approaches, and how we use them to prepare participants to use a particular GroupSystems tool, are what we believe makes our collaborative research unusual and fun.

During a recent lunchtime event for a group of 40 admirals and senior executive service government civilians, DSD researchers were asked to conduct a short, focused brainstorming session on transforming the U.S. Navy. A traditional approach might have involved asking the admirals to brainstorm undirected, and then pare down the ideas to a smaller subset through discussion, or a series of votes or priority rankings—a time consuming and, often, disappointing venture. Realizing that we only had the admirals for a little over an hour, Dr. Thomas Barnett and the DSD team led the participants through a stimulating discussion using a very different process. After setting the stage, the admirals “played” a version of the reality-based television show *Survivor*. The “contestants” were traditional naval warfare areas (e.g., long range strike, littoral warfare, etc.), and they were “voted off the island” using a series of “challenges” (which defined the decision criteria). Participants (voters) decided for themselves which warfare area was least important to a future transformed Navy. Following each vote, Dr. Barnett led a verbal discussion that encouraged the admirals to discuss the key attributes of each warfare area and why they thought it was or was not important to the future success of the Navy. At the end of the hour, the admirals had a new appreciation for their biases and the effect they could have on a transformed U.S. Navy. They also had an idea of what warfare attributes (collectively and by what margin) others believed were essential for the future of the Navy. Although a subject as complex as Navy transformation requires months of work, this technique allowed us to quickly broach the subject and get input from committed experts while the participants were assembled in Newport for another purpose. Besides fostering an interesting discussion that quickly centered on difficult trade-offs that

must be made when an organization such as the U.S. Navy transforms, the participants enjoyed themselves and did not regret using their lunch hour to tackle a difficult issue.

## How this research approach came about

The Decision Strategies Department (DSD) is a relatively new department at the Naval War College. Formed in 1995 to operate the first of a proposed network of naval decision support centers (DSC) for senior naval leadership, the DSD still performs that function, but its mission has evolved over the years. The department is small—consisting of a chairman and deputy chairman, three senior researchers, a technical systems manager, and a secretary. Occasionally two support contractors augment the department, one in the research area and the other in the technical support area. Even though the staff is small, it consists of people from diverse backgrounds that have a broad base of expertise.

From the beginning, the staff was dedicated to directly supporting decision makers through the use of decision support software in a collaborative, multi-media GSS environment like our two-year-old facility pictured in Figure 1.



Figure 1: Decision Support Center, Naval War College

We still support decision makers in our GSS setting as they grapple with specific, well-defined issues. In these cases, they define the agenda and invite the participants, and we facilitate the event using verbal and computer based techniques. Over the years, however, the department has found itself doing more and more broadly based, less clearly defined research. As our name suggests, our department is the one people turn to when the issues are so complex the requestors are not even sure what questions to ask. Our approach to conducting this latter type of research has evolved into various methods that take advantage of particular staff expertise, as well as our GSS skills, to conduct research in a collaborative venue. We like to think of ourselves as “experts at talking to ex-

perts.” DSD’s research methodology stems in large part from the type of tasking we receive, as well as the goals of the decision maker asking for the research.

Often we are asked by senior officials to answer a question or explore an issue that:

- Relates to current events and requires a rapid response
- Requires working with participants from a diverse array of disciplines, areas of operational experience, and organizational cultures
- Is a current problem that needs a long-term solution or strategic plan developed quickly
- The decision maker and his/her staff are too busy with their “in-box” to address
- The leader desires a different or fresh point of view
- He/she desires to develop widespread “buy-in” for the ultimate decision.
- Provides for ongoing updates to the research sponsor/decision maker as information becomes known, as well as the opportunity for him/her to make changes in the questions or issues being addressed as the situation changes.
- Requires broad, forward-thinking research that frames future security issues in a new light.

The Decision Strategies Department has conducted this type of research for a number of senior military and government officials who obviously bring their own perspective to the research and decision making process. We believe our success in meeting the tasking imposed by these leaders reflects positively on our collaborative research approach, and the process techniques we have developed. Recent DSD research sponsors include:

- The Secretary of the Navy
- The Chief of Naval Operations (four star admiral)
- The Commander in Chief Pacific (four star admiral)
- The President of the Naval War College (three star admiral)
- The admiral in charge of naval aviation construction programs (two star admiral)
- The Commander of the Navy Warfare Development Command (two star admiral)
- The admiral in charge of all naval research (two star admiral)
- The United Nations Secretariat
- The Office of the Secretary of the Navy

### **Meet face-to-face to understand what you are being asked to research**

When tasking is received from a research sponsor we have learned that one of the most critical steps is to have the DSD project director meet with the decision maker/research sponsor personally. Depending on the seniority of the sponsor, we often meet several times with

a member of the sponsor’s staff to get a feel for what the issues/questions are that we will be researching. Sometimes we will develop a “straw man” agenda for addressing the issues and answering the questions the sponsor has raised. The DSD project director will then discuss this notional agenda during the meeting with the sponsor. Without a face-to-face meeting with the person who is asking the questions, and who will be receiving the output of your research, the probability is high that he or she will be less than fully satisfied with the research results. Establishing a connection with the decision maker early on also facilitates future modifications in the direction of the research, as well as ensuring that the decision maker gets the information he or she needs when they need it.

### **Learn background, design event, sign-up experts, show time**

Once the project director has met with the sponsor and is confident about what is being requested, DSD’s research approach generally begins with background research to get facilitators up to speed and to illuminate the issue. An overall study design is established (see specific examples below). The participants are identified and invited to the event(s). This information is then used as the backdrop for a collaborative event during which a variety of group facilitation techniques and decision support groupware tools are used. In contrast to most group facilitation and GroupSystems (groupware) decision support applications—where the group composition, and the meeting agenda are largely defined by the customer - for our more broadly defined collaborative research, often it is the DSD project director who defines both the make-up of the group of experts, and the specific agenda the group will follow during a particular decision event. Finally, data collected at the event(s) are analyzed and the research sponsor/decision maker is informed of the results.

The most important decisions made during this process involve the development of relevant questions, the selection of appropriate techniques in order to elicit the desired data, and the identification of the right mix of participants. The success of our collaborative research approach hinges not only on the quality of the participants, and the level of their expert knowledge, but also on the diversity of the background, and the differing perspectives, of the participants. Just assembling a group of senior military officers to address, for example, alternative Korean futures, is unlikely to yield many new or fresh perspectives, and unlikely to educate and illuminate the participants by exposing them to new or opposing points of view. However, if the decision event participants also include a representative of an international religious relief organization who had experience living and working in North Korea, and a social scientist or two, the opportunities for real

inquiry and for generating new ideas are greatly increased.

As mentioned above, the process is completed by careful analysis of data gathered during the decision event. Some projects may repeat the research-decision event-analysis cycle several times, using subsequent events (refined by previous events) to explore different aspects of the research agenda. Ideally, the results of the research are presented in a culminating decision event during which the policymaker, and his or her staff, are exposed to the same issues, in the same context, as previous event participants. This helps provide the decision maker/research sponsor with the context for the answers and/or issues being presented. When possible, key participants from previous events are present to provide continuity as well as answer specific questions raised by the research sponsor. Figure 2 illustrates some of the steps taken when designing a decision event.



Figure 2: DSD Decision Event Design

## Get the “word” out

The Decision Strategies Department places a high priority on getting the results of our research out, not just to the decision maker who requested the research, but also to anyone who can benefit from it. When possible, this is initially accomplished by the decision maker event/briefing discussed above. We also publish our work on our website and conduct numerous PowerPoint and “interactive” briefings. During the interactive briefings, we replicate key aspects of the original decision event (including replicating the GroupSystems votes, list building exercises, etc.) so that the people attending the briefing get a feel, not only for the results of our research, but also for how it was conducted. These interactive briefings afford the project director the opportunity to gather further data, as well as to validate some of the findings from the principal research event held with the subject matter experts.

The results of our Y2K International Security Dimension Project were presented dozens of times to audiences from the President’s Y2K czar John Koskinen, to Deputy Secretary of Defense John Hamre, to a variety of industry associations (banking, credit cards, electricity). Insights gained from our South Asia (Nuclear Weapons) Proliferation Project were briefed to the country teams at the American Embassies in India and Pakistan as well as to the Commander-in-Chief of U.S. Military Forces in the Pacific. We also take advantage of the opportunity to brief the dozens of dignitaries that visit the Naval War College each year on what we do and on the results of our recent projects. We provide them with hard copy reports and our web-site address if they show interest in learning more details about a particular project. Additionally, we brief journalists and other media people, as well as write for the print media when the opportunity for publication is present.

Researchers do not like to have their work sit on a bookshelf, and we do our best to avoid that by having a research sponsor (if possible) who has asked that a particular subject be studied. This situation is ideal as it provides a decision maker who is looking forward to hearing what you have to say. Even in those few cases where the research is self-initiated, we make sure it is relevant and timely, and then we disseminate the results of our research as described above.

## South Asia Proliferation Project (SAPP)

The first example of a Decision Strategies Department collaborative research strategy is the South Asia Proliferation Project (SAPP). The following excerpt is from a recent article in the *Naval War College Review*<sup>3</sup> by the director of the SAPP, Ambassador Paul D. Taylor. Ambassador Taylor employed several techniques in conducting his research, including developing a scenario (which he elaborated over the course of the project) to place his expert event participants in a specific context before asking them to respond to his tasking via GroupSystems and in verbal discussion. During the various decision events that comprised this project, Ambassador Taylor often reviewed the GroupSystems data as it was being generated anonymously by the participants in response to a specific tasking, and then picked out interesting, contradictory, provocative, or salient comments for verbal discussion. In events such as this it usual for the GroupSystems work to consume from 10 to 40 percent of the time, with the majority of the participant's time being spent in verbal discussion of pertinent issues and ideas.

## “Thinking about the unthinkable”

Shortly after the nuclear tests in India and Pakistan in May 1998, the Decision Strategies Department undertook

a series of simulations and “decision events” designed to examine the consequences of these developments. The project started from the premise that the tests had increased the possibility of weaponization, deployment, and use of nuclear weapons in South Asia. In the tradition of games that the Navy has conducted at the Naval War College in Newport for more than a hundred years, the college gathered experts from the U.S. government, academia, foreign governments, business, private voluntary and nongovernmental organizations, and military commands to react to a prepared scenario set in the year 2003. Asking people from diverse backgrounds and organizations to interact with one another as they grappled with the issues posed by a hypothetical scenario was intended to produce insights that might have eluded an individual researcher or a group working within a single discipline. In addition to playing roles in simulations, participants were invited to develop their views in seminars employing a combination of anonymous commentary [using GroupSystems installed on a LAN of laptop computers] and conventional discussions. The scenario depicted conflict in South Asia escalating from civic unrest and terrorism to an exchange of tactical nuclear weapons; the events ranged in length from four hours to six working days.

### Major issues

In the interest of learning how the players representing the U.S. government, other governments, and other actors would respond to the hypothetical events, researchers acting as game controllers presented, in various simulation settings, successive segments of the event scenarios and then gave players free rein to react as they believed their “character” would in a real situation. In seminars, the questions posed were deliberately broad and open-ended, such as, “How do you think your organization or other organizations would respond to the events you have just heard described?” [Enter your responses in the GroupSystems Categorizer] In this manner, the organizers tried to avoid constraining responses, as well as to encourage maximum interactions among participants.

### The game scenario

In the tradition of military gaming, a difficult scenario—the overall “scripted” background and the situational framework within which role playing and discussion of important issues were to proceed during the successive events—was elaborated. Developed in consultation [during a scenario building decision event] with experts on South Asia from the U.S. government and academia, the scenario was intended to stimulate planners to address tough challenges. The designers stressed to participants in all the events that the scenario was to be considered as only one possible future and that it was not

intended in any sense as a prediction of the most likely evolution of events. The scenario was essentially the same in each event, but it became more elaborate as the series evolved—especially after an event known as the International Game, when the actions of foreign players moved the narrative farther than had been envisioned.

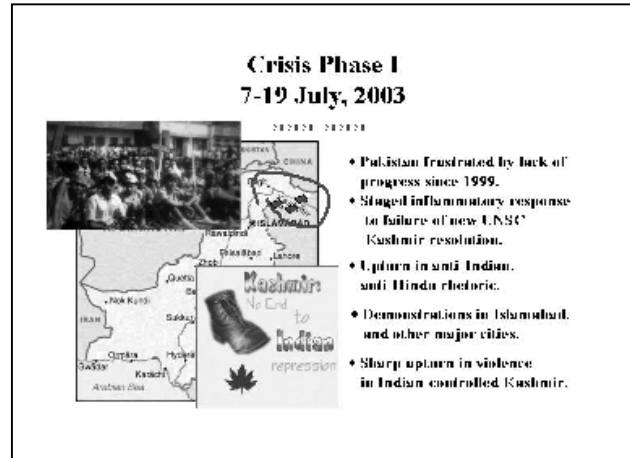


Figure 3: Sample Scenario Slide

### International perspectives

In January 1999, researchers organized a two-day international simulation to gauge reactions to these hypothetical events and the capacity of the international community to prevent, manage, and resolve such a conflict. The simulation brought together a multinational cross section of diplomats, academics, analysts, and military personnel. The countries represented were Australia, Canada, China, Finland, France, India, Iran, Japan, Pakistan, Peru, the Philippines, Russia, Singapore, the United Kingdom, and the United States.

Many of the diplomats present had reached the rank of ambassador in their countries’ diplomatic services; one had served as foreign minister. In the game, they were given roles as their countries’ principal representatives in the UN Security Council; in fact, they had also to replicate their governments’ entire decision-making authority. The diplomats worked without the benefit of instructions from home, and—with the exception of India and Pakistan—their actions in the simulation were “free play,” based on their individual best judgment of what their respective governments would do in response to the hypothetical situation as it unfolded. The scenario prescribed most of the military actions of India and Pakistan; however, even those nations’ representatives, who were experienced diplomats and scholars, devised their own diplomatic activities.

The International Game was unusual in having countries represented by their own nationals. This arrangement brought a greater degree of reality to the responses of foreign countries than is usual in U.S. government-

sponsored simulations, which are generally played exclusively by American experts.

It should be noted that the international participants readily adapted to the use of the groupware, indicating that language and cultural barriers were not a factor, at least for this group. A real world by-product of these decision events is that often a number of participants from different organizations, who had not previously known each other, establish contact and began a dialog that they vow to maintain after completion of the event.

DSD researchers prepared written reports on various events in the SAPP series and personally briefed key decision makers. Just prior to President Clinton's trip to India and Pakistan in March 2000, *The Washington Post* published an op-ed piece by Ambassador Taylor on the principal insights the project evoked.

### Newrulesets.project

In this second example of a Decision Strategies Department collaborative research strategy, *NewRule-Sets.Project* director Dr. Thomas Barnett employs quite a different set of techniques to facilitate his series of economic security decision events. After assembling the right people for the particular research questions being explored, Dr. Barnett employs innovative ways to "ask" the participants for their input. The following is an excerpt from Dr. Barnett's revised *Asian Energy Futures Decision Event Report*.<sup>4</sup>

We designed the *Asian Energy Futures* decision event with these major goals in mind:

- Generate "new maps" of global energy market relationships based on a clearer understanding of the developmental challenges faced by major Asian economies over the coming decade
- Delineate the key scenario variables and dynamics likely to emerge as Asia's energy needs balloon in the coming years, focusing on possible regional flashpoints
- Construct comprehensive downstream scenarios capturing both the regional and global adjustments to Asia's energy expansion.

The event involved two dozen participants drawn equally from the financial community, the political-military community, and the regional expert community.

The point of the effort was not to amass the most impressive collection of energy and Asian experts, but to bring together a diverse array of experts, decision makers, and opinion leaders from both the public and private sectors, and let the synergy of their intellectual interactions serve as the fundamental analytic output. In short, this event's calling card was a "clash of paradigms," and not a rigorous forecasting effort. The event unfolded over four major sessions. Each session involved both facilitated discussion by the group as a whole and individual partici-

pation in collective brainstorming tasks, in which we employed a decision software system known as GroupSystems. Using GroupSystems, each participant entered ideas *anonymously* via a dedicated laptop, while simultaneously commenting on each other's inputted ideas asynchronously via a portable Local Area Network, or LAN. In effect, then, we interspersed facilitated discussion with a LAN equivalent of a "chat room" where we explored numerous specific ideas in greater detail.

The Asian Energy Futures event basically explored, over four substantive sessions, a rough "influence net" model that we've constructed regarding the key dynamics of Asia's energy future and its impact on the global economy and security environment:

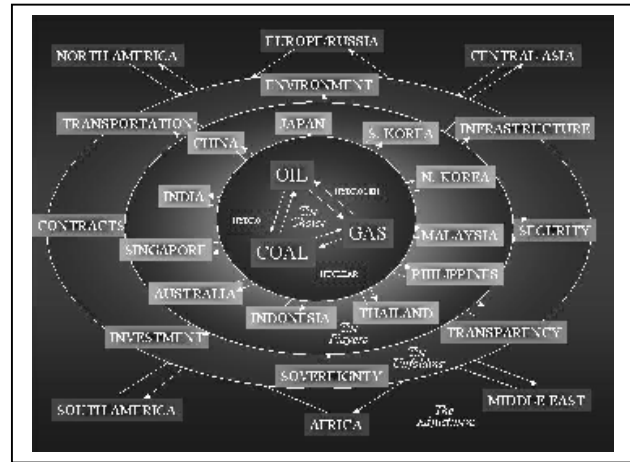


Figure 4: Asian Energy Futures "Influence Diagram"

- Concerning "The Choice," [from the above slide] we conducted one session called "You Make the Call!" Participants were shown the current energy profile of the country(ies) in question (expressed as percentage breakdown by major category—namely, oil, natural gas, coal, and renewable), as well as the expected total energy requirement for 2020, and were asked to propose a new percentage breakdown for the 2020 timeframe. We did separate mini-sessions on Japan, India, China, the rest of Asia, and Asia as a whole.
- Concerning "The Players," we conducted a session called "The List" (based on the cable network VH-1's show of the same name). Participants were asked to nominate countries and/or non-state actors for the following "best awards": Best New Villain, Best New Ingénue, Best New Odd Couple, Best New Long-Distance Romance, Most Likely to Get Hitched, and Most Likely to Get Dumped (these categories [were] explained in detail in later slides).
- Concerning "The Unfolding," we conducted a session called "Scenario Flashpoints," where par-

ticipants wrote advisory emails to the leaders of countries involved in three crisis scenarios: oil blockade/sanction vignette, gas pipeline disruption vignette, and coal emissions/air pollution vignette.

- Concerning “The Adjustment,” we conducted a session called “Headlines from the Future,” where participants named four long-term outcome scenarios for Asian energy developments, brainstormed likely headlines found along each pathway, and decided which Asian states are most likely to end up in each scenario.

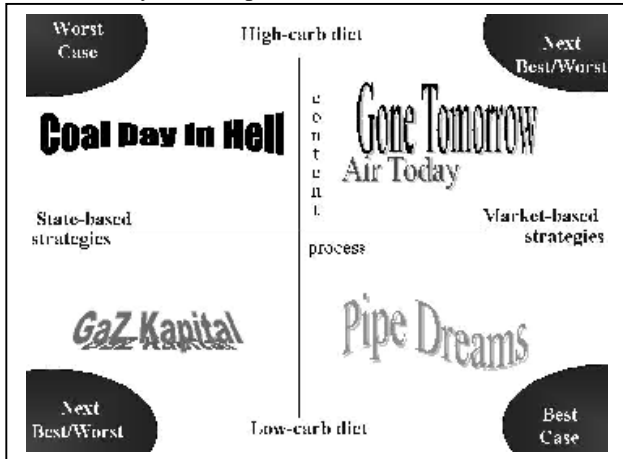


Figure 5: Asian Energy Futures “Headlines from the Future”

The second in the *NewRuleSets.Project* series was the Foreign Direct Investment decision event. The following is an excerpt from Dr. Barnett’s on-line event report.<sup>5</sup>

The Foreign Direct Investment event basically explored, over five substantive sessions, a rough “influence net” model that we constructed to describe the key dynamics of Developing Asia’s ability to attract outside investment and that flow’s long-term impact on the global economy and security environment:

- Concerning “The Blend,” we conducted two sessions. In the first session called “Where Asia Gets the Money,” participants were asked to determine the likely global pool of FDI stock for the year 2010 and then, through a series of “drill down” votes, determine how much of the total global pool would likely end up in Developing Asia. In the second session called “Energy Case Study,” we reviewed the findings from the *Asian Energy Futures* event and asked participants to brainstorm reasons why state governments in Developing Asia should play a lesser or larger role in developing the energy sector.
- Concerning “The Players,” we conducted one session called “Build Your Own Free Trade Zone.” This voting process was based on the same logic of “connectivity” that fuels the popular movie

trivia game known as Six Degrees of Kevin Bacon, or The Kevin Bacon Game. In this effort, we asked participants to build three separate free trade zones, and then, by comparing the three groups, drew some conclusions about which Developing Asian states offer the greatest financial connectivity to the region as a whole.

- Concerning “The Unfolding,” we conducted two sessions. In the first session called “Pick Your Dream Investment Partner,” we had participants brainstorm ideas about what makes Developing Asia more or less attractive as a target for FDI, as well as what makes the U.S., the European Union and Japan more or less attractive as Developing Asia’s sources of FDI. This session was based on the 1960s American television game show called The Dating Game (Figure 6). In the second session called “Scenario Flashpoint,” we examined how a future collapse of the North Korean regime would impact the region’s overall FDI climate, with our participants writing advisory emails to various involved political leaders.



Figure 6: The Foreign Direct Investment Dating Game

Concerning “The Adjustment,” we conducted one session called “Rule Set Scenarios.” In this voting process we asked the participants to name and populate—using “Headlines from the Future”—a quartet of long-term FDI climate scenarios for Developing Asia.

The third event of the *NewRuleSets.Project* was the *Asian Environmental Solutions Event*. This event explored the impact that environmental issues might have on future Asian economic security. During this event the project director, Tom Barnett, forced event participants to make “impossible” choices by deciding which environmental crisis they would choose to ignore first. To guide the participants in making these choices, Dr. Barnett hosted a game based on the reality television show *Survivor*. For this game, the “contestants” were the various environmental crises (e.g., global climate change, short-

ages of fresh water, loss of tropical forests/extinction of species, etc.) and the “tribal council” voted off each “environmental crisis” based on which crisis was least important to future Asian economic security (Figure 7). As this series of votes progressed it became increasingly difficult for event participants to decide which of the equally catastrophic possibilities to ignore. During the discussion “challenges” (these provided discussion guidelines) between each vote, participants voiced their concerns and made the case to other “tribal council members” why their particular “pet environmental concern” should not be ignored. The result of this exercise was a well-informed list of environmental priorities that this group of experts felt the global community should deal with (and which should be dealt with first), as they would eventually affect developing Asia’s economic security.

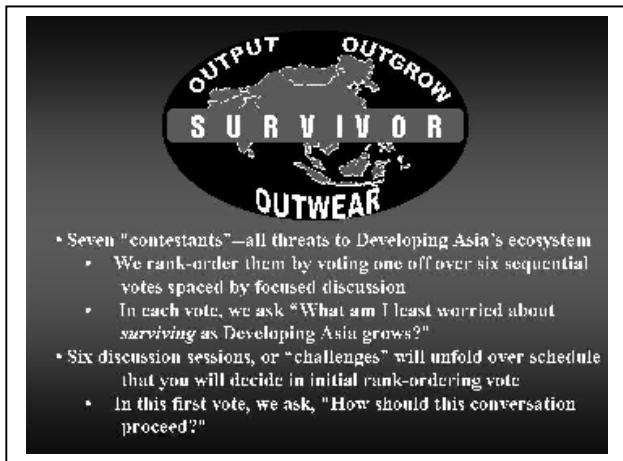


Figure 7: Environmental Survivor

Later in the *Asian Environmental Solutions Event*, participants were asked how they would spend a limited amount of funds to address three specific environmental concerns. To make considering this allocation of funds more interesting Tom Barnett asked the questions using a version of the game show *Jeopardy*. He explained the process using the following two slides (Figures 8 and 9):

All of these participant brainstorming and voting sessions were captured by the GroupSystems software program for our subsequent analysis, along with our notes of the accompanying discussions. Collectively, this material forms the basis for the analysis we present in the *NewRuleSets.Project* reports.

**In a nut shell**

- The Decision Strategies Department has found that very effective research can be conducted for a variety of decision makers using the collaborative approach we have developed. “Talking to Ex-

perts” in a manner that makes the time they devote to assisting in your research interesting, not only makes your research more effective, but also makes the whole collaborative research event enjoyable for all concerned. Events that are enjoyable, are richer in their content and more palatable to the type of senior/recognized experts you seek to have participate in your research

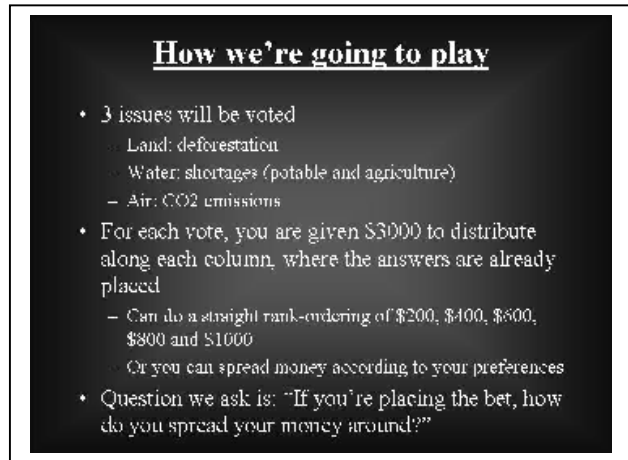


Figure 8: How to Play Environmental Jeopardy

- Attracting diverse event attendees yields a wide variety of ideas and approaches that will help broaden your research efforts.
- GroupSystems collaboration complements discussions and briefings and suits our data gathering aims, but consumes a minority of the time the participants spend in a decision event.

TIME TO ACT	SCOPE OF PROBLEM	POLITICAL MECHANISM	ECONOMIC APPROACH	SECURITY ISSUE
Never	Site	Aid/subsidy	Finance	Transparency
If and when...	Deforestation	Regulations	Trade	Rules
Soon	Water shortages	Regulations	Cap & trade	Technology transfer
Now	CO2 emissions	Trade	Cap & trade	Free movement
Yesterday!	Global	Sanctions	Public/private ventures	Stability

Figure 9: Environmental Jeopardy

- Contrary to popular belief, with work and some innovative techniques, it is possible to conduct effective collaborative research and have fun at the same time.



## Notes

1. With Inputs from Dr. Tom Barnett, Professor Bradd Hayes, Mr. Gregg Hoffman, Professor Hank Kamradt, Dr. Lawrence Modisett, and Ambassador Paul Taylor
2. GroupSystems is collaborative groupware from GroupSystems.com
3. Naval War College Review, Summer 2001, Vol. LIV, No. 3 (excerpt in this article contains minor edits from the NWC Review galley proof). Ambassador Taylor works with the Naval War College's Decision Strategies Department, where he has directed studies on South Asia proliferation and Korean futures.
4. Asian Energy Futures Decision Event Report I (DSD Report 00-6 revised) published April 2001.
5. The On-line Report can be found at:  
<http://www.nwc.navy.mil/newrulesets/FDIreport.htm>