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The Chinese Conundrum:

**An International Space Policy Game
involving a Chinese mission
for a permanent Lunar base**

An Interactive Qualifying Project Report

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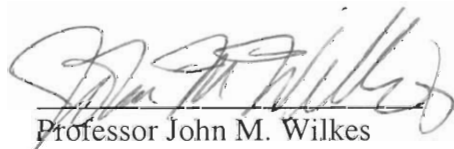
by

Shaughn H. Bryant
and


Sean M. Cooper

Date: May 3, 1999

APPROVED BY:


Professor John M. Wilkes
Major Advisor
Worcester Polytechnic Institute

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Abstract

The International Space Policy Game “*The Chinese Conundrum*” is a live-action role-playing game for 20-30 players who are asked to participate in a UN conference to address the implications of the establishment of a permanent Chinese lunar base. The conference participants are the U.S.(inc. NASA), the European Space Agency(ESA), Japan(inc. NASDA), Russia(RKA), and China(CSA). Each entity was represented by 4-6 delegates whose goals were to protect their nations’ interests and advance their own personal agendas in a competitive sociopolitical atmosphere. Surprisingly, in the pilot run, Russia aided China in achieving their goals on schedule by furnishing replacement launch facilities to them. The other agencies established a cooperative effort to found an international moon-base as an avenue to Mars. Participants gained greater understanding of technical capabilities and organizational structure of several space programs and the sociopolitical interactions of those bodies. This sort of game has high potential for teaching about, and motivating future study of, science and technology in the context of a social studies oriented game, and thus is a promising vehicle for integrated education and multidisciplinary studies.

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Executive Summary

The International Space Policy Game “The Chinese Conundrum” is a live-action role-playing game (LRPG) for 20-30 players who are asked to take on the roles of characters who participate in a UN conference to address the implications of the establishment of a permanent Chinese lunar base. The conference participants are the U.S. (inc. NASA), the European Space Agency (ESA), Japan (inc. NASDA), Russia (RKA), and China (CSA). Each entity was represented by 4-6 delegates whose goals were to protect their nations’ interests and advance their own personal agendas in a competitive sociopolitical atmosphere.

The goals of this project included:

1. Teaching the players something about space science/technology.
2. Showing the potentially competitive policy making atmosphere that is typically present at times which result in the expansion of said space science/technology.
3. Motivate further study into space science/technology by the players.
4. Make a case that this game is suitable for transfer into a high school level science and technology program in support of the Massachusetts science/technology curriculum framework.

This run of the project was primarily intended as a pilot study to assess the feasibility of a more competitive game atmosphere than that of the existing Aegis game, and provide test data for this newly designed game.

Several of the players enjoyed themselves so much that they suggested that we run this game at an SF gaming convention, and many commented that they were surprised by how much they learned overnight within the gaming venue. Clearly, this Space Policy Game :”*The Chinese Conundrum*” shows great promise and in its pilot run can be considered to be a success.

Overview

What is a LRP?

A live-action role playing game (LRPG) is a structured scenario in which people take on the roles of pre-defined “player characters”. Each character has a personality, goals, and additional information. The information comes in two forms: in-character information, and out-of-character information. In-character information is what is known by the character and consists of data that is known by and can be acted upon by the player’s character. Out-of-character information is what is known by the player, not the character, and consists mainly of rules that govern actions within the context of the game. The personality and goals of each character are defined on a character sheet that is distributed to each player. Additional information is included as a supplement to that character sheet, including negotiating styles typical within a character’s culture, political stance, or even the budget of the space agency that the character represents.

LRPGs have gained an unfortunate reputation as frivolous and escapist due to their popularity among the “freaks” who masquerade in symbolic costumes and/or medieval “garb” with interests in fantasy and science fiction. “Gamers” or “larpers” can pretend to be the characters in “The Hobbit” or “Dune” and thus the characters often have superhuman abilities or fantastic goals. Rules in these games allow characters to affect or even “kill” another character. Because of this, the entertainment possibility has obscured the educational and therapeutic potential of LARPs. In other venues, LARPing has been used as a counseling tool by psychologists, and as a teaching tool. When used as a teaching tool LARPs tend to be used in a underdeveloped or “truncated” form. In these forms, there may not be a defined character, but simply a role to play as yourself. Model United Nations “role-playing games” have been used in schools for some time to teach

international politics. This application inspired the AEGIS game which preceded our game development project. The Social Science small group experiments by Millgram, Zimbardo and others are also precursors to this gaming application.

The “Big Five”

Our game took the form of a United Nations conference to discuss the implications of a Chinese initiative to place a permanent base of operations on the moon. Characters were members of the “Big Five” space agencies consisting of the Chinese (CSA), European (ESA), Japanese (NASDA), Russian (RKA), and United States (NASA) space programs. The game was set forward several years (2006) to allow the minimum possible time for China to achieve a lunar landing and manned space program.

The “Big Five” are so named because they are the only space agencies in the world capable of mounting large scale missions into space. Other nations are building space programs, some in cooperation with other nations of the “Five”. Canada, Brazil, India, and Israel are rapidly becoming space faring nations today. Some ex-Soviet states have sizable facilities as well, especially the Ukraine, which can build the Zenit launch vehicle on its own now, and Kazakhstan, the site of the Baikonur Cosmodrome, which Russia runs under a leasing arrangement.

Previous Games

Our project was based on two previous LRPG projects, which were run six times, as well as seven supporting IQP papers on the various space agencies, their organizational mindsets, bureaucratic structures, and their possible futures. The first five LRPG runs were of the original Aegis game design by Bennet and Caprio, 1996. In each run there were some revisions, new

information was added and delegations and roles expanded and clarified as more was learned more about the Chinese and European space programs, the UN, and the development of Spaceguard. Additional information was also added regarding cultural variations in negotiating behavior and Dan Goldin's efforts to reshape NASA. The game developed an increasingly cooperative bent over time due in part to the establishment of international organizations in several of the games. Though the national composition of each alliance did vary considerably with each rewrite, it is not clear whether this was a result of random variation or of the introduction of the new elements in the game which were introduced during each successive revision. It is likely that the incremental changes introduced in the early revisions had less effect than the random factors of who was assigned which character and which characters were not assigned. However, there was a complete revision of the character sheets, based on experience from previous runs, before the sixth run and thus it must be considered the trial run of an entirely new game.

In the original game run, the ESA, Russia, and Japan formed a firm alliance for the purposes of developing technology to defend against an asteroidal threat. They were nominally joined by the US, and China was left to its own devices. In the second game, the ESA, Russia, and Japan again formed an alliance. This time, due in part to presence of the congressional representative character who was absent for part of the previous run, the US involvement was more palpable and genuine, despite ambivalence and lack of consensus on the US delegation. China again stood alone.

The third revision and game involved the first use of more detailed and formal character briefing documents. It was also the first appearance of the CICS (The Committee on International Cooperation in Space), an organization introduced to speak for the interests of the non space faring nations which would be helping to fund the asteroid defense through the UN. The results of this

run of the “conference” were another ESA, Japanese, Russian, American union, with China again removed from the effort, although this was not as obviously going to be the final outcome over the course of this run as it had been in previous runs.

On the fourth revision, “Spaceguard”, a real organization devoted to discovery and categorization of near-earth-objects (NEOs), had come to the attention of the Gamemasters and was added to the “international community” in the game. Based in Italy and connected to the ESA, Spaceguard was respected by the UN in general, but critical of the US, which had refused to offer financial support to it. The addition of Spaceguard represented a real change in the group dynamics, as a character representing it criticized NASA for refusing to help fund the search for NEOs, even when congress offered to budget it. This run produced a different set of alliances as the international powers split into two powerful groups; Russia and the United States pursued a joint Aegis design based on nuclear technology, while the remaining agencies, the ESA, Japan, and China, attempted another, non-nuclear, design.

The fifth game reflected a shift in the organizational mindset of NASA, reflecting a “Goldin Age”, so named for Dan Goldin under whose guidance NASA has downsized significantly in attempts to adjust to a smaller budget. In its new circumstances NASA could no longer afford manned space missions without outside assistance, and had begun to look at unmanned missions with greater enthusiasm. However, several of the US delegation members still held to the old mindset of NASA and sought a manned mission solution to the asteroid problem as a means of rebuilding the “old” NASA. Aegis became a possible pretext to get the monetary backing that would be necessary for those manned missions. This game unraveled into a disturbingly violent scenario in which Russia arranged to frame the United States for the occurrence of several nuclear terrorist strikes against China. Several conference delegates were assassinated, and a stunned and

fearful international community banded together. In order to placate a wronged and suspicious Chinese delegation, China was included in the resulting world alliance.

The sixth and final run followed a full scale revision which pared down the game to include only about twenty characters. In this run, SpaceCom “disappeared” into the background of the US delegation. It was represented only by a “shadowy period” in the past of the diplomat heading the delegation, and a special letter for “his eyes only”. Other characters were combined and a common format for the briefing papers and character sheets was developed. This running was also the first appearance of “The Millennial Foundation”, an underground group interested in corporate entrance into the traditionally nation-dominated realm of space. The ESA underwent significant revisions as well. Over the course of this run, the whole world, except the United States, worked together to find a solution, while the United States worked on its own solution independently. China’s inclusion in the multinational effort was controversial, but an extremely skilled diplomat on the Chinese delegation was able to play off of the “overbearing” UN presence to secure inclusion with the other nations in the Aegis effort.

We participated in this sixth revision based run before beginning work on our own game. Based on our reaction to that game we were able to come up with several ideas for changes very quickly. For example, we felt that the Aegis game did not have enough freedom for the characters to interact informally; the conference was far too structured. It is necessary to have formal rules for structuring the proceedings of the conference, but most of the real negotiations don’t take place under those strict circumstances, but rather during the break for lunch or at dinner that evening. As such we felt it was necessary to arrange for greater freedom for the characters to interact outside of their own delegations.

One distinct aspect of the existing game which we felt needed to be addressed was the overall structure which virtual forced cooperation upon competing nations. The impetus of the conference was too artificial. The introduction of an extra-terrestrial destructive force provides too much leverage to push the conference towards a cooperative venture to truly examine the normal sociopolitical forces shaping the development of world space technology. A cooperative effort of nations under threat of destruction by an outside force would almost certainly occur without much additional stimulus, but just to ensure that the nations do cooperate there is the explicit UN threat to create its own space agency to do the job if the participating nations do not cooperate enough to get the job done.

A more competitively structured game, where the antagonist is not external, but rather internal, and in which the UN is not flexing unprecedented financial muscle and political leadership, would provide a more useful test scenario for a LRPG to teach about the societal impact of technology and the social shaping of technological development. Rapid technological development typically occurs when competition is felt most strongly. The development of military air power during WWII, and the 1970s race for the moon between the US and Russia are examples of this type of rivalry fueled technological progress. In our new game a UN effort would be made to synthesize a cooperative venture in a more hostile international venue, with more typical levels of influence over the “Great Powers”.

With this in mind, our project was an extension beyond, and elaboration of, previous works, staged in a radically different sociopolitical atmosphere, with less defined “win” conditions. In the Aegis game, protecting the Earth from an asteroid was “good” and the nations involved “won” if they succeeded in their “goal” of defending against “Near Earth Orbiting Asteroids”. In the new design, “good” is not easily definable, nor are any conditions necessarily “win” conditions.

Delegations must decide how best to accomplish their national goals within the constraints of international influence.

In previous games, the role of the UN was that of coordinator. The UN led the conference and was in a relatively powerful and influential position. The role of the UN during our game was to prevent a competitive atmosphere from becoming overtly hostile. The United Nations routinely functions more as a mediator than as a policy-making body in the real world. This portrayal of the UN's role in our game was more representative of the organization's normal function.

The Purpose of this Project

The Space Policy Game is more than just fun, though we sincerely hope that it was entertaining. The purpose of the game was to provide a learning experience. A LARP offers us a unique opportunity to do more than simply convey information in comprehensive form. By allowing people to participate in a decision making process, be it cooperative or competitive, useful knowledge can be obtained from raw information. As a wise teacher once said, "Learning is not a spectator sport". It is well known that participation in the learning process will more thoroughly and permanently impart the information to a person. Information can be conveyed in a personalized context to aid the learner, increasing retention and the ability to transfer the knowledge for use in other settings. This game personalizes information about the "Big Five" space agencies, political and policy structures, the sociological interaction of several nationalities, and considerable technical information related to space, the moon, and Mars. Chemistry, biology, meteorology, and orbital mechanics previously studied by players bubbled to the surface over the course of the game. The next challenge is to teach this material in the preparation for the game for a less well rounded set of players.

The ultimate purpose of this project is to demonstrate the wholesale transferability of this LRPG to an educational venue, specifically, that of a public high school, where the general public can be exposed to these issues and informed about them, moving toward technological literacy at a level appropriate for the general citizenry. The question that must be answered before this is possible is, “What can this game teach and is it a sufficiently powerful educational tool to justify its inclusion into the science curriculum of the public schools?”

The State of Massachusetts defines its science educational framework in terms of four strands. These “strands” are guidelines for what facets of science are expected to be explored by state funded public schools with some suggestions as to how to implement them. Strand one, “inquiry”, emphasizes the investigative aspects of science. At the forefront of this strand are the processes of research and discovery utilizing scientific methodology. Strand two covers the domains of science. These are subdivided into the physical sciences, such as physics and chemistry, the life sciences, consisting primarily of biology, and earth and space science, covering such subjects as geology, meteorology, and astronomy.

Strand three focuses on technology. This subject covers man’s exploitation of science and the utilization of processes to control the world around us. Design and implementation of working machines and study of resources and manufacturing are included in this strand. Strand four promotes the study of science, technology, and human affairs. This fourth strand of the curriculum seems to have been neglected in most curricular proposals, and on those occasions when it wasn’t neglected it has been associated almost solely with environmental issues of science and technology, or the nuclear power debate. Suggested methods of study in this area include research papers, essay testing, and model building. The city of Worcester defines one aspect of this strand as desiring “Students to develop an understanding of the nature of science and technology for

knowledgeable participation in the formation of public policy”. No suggestions are made as to how to accomplish this objective. This project supplies a prototype for a means of doing this in addition to attempting to motivating students to study space science more deeply in the future.

Our project addresses many varied applications within the guidelines described by the state of Massachusetts and the city of Worcester.

Strand 1: “Inquiry” Students participating in the space policy game are encouraged to do their own research. In fact, in our run we provided technical and political publications, for advanced reading, without context. For example, international treaties involving “celestial bodies” were provided *in toto* to the player rather than summarized. This information had to be read and interpreted within the context of the goals of the individual to attain the necessary information to proceed toward their goals. Many participants brought in knowledge gleaned from other sources and even accessed the internet during the game to find information they felt they needed to accomplish some goal.

During the evolution of the game over the two days of participation, Players displayed a great deal of initiative in figuring out what they needed to know and obtaining that information. Often this information was found through provided sources or player contacts, but some information was obtained from outside of the game context (i.e. from the internet or library).

Strand 2: “Domains of Science”The inclusion of technical information relating to the Moon and Mars, as well as propulsion and life-support systems provided participants with information on subjects ranging through physics, chemistry, biology, geology, extra-terrestrial meteorology, and astronomy. This plethora of information could be presented as part of a scientific series before a game of this nature to increase its availability to the participants, though all information was included in a form readily accessible to all involved. Discussion of feasibility of

colonization of the Lunar or Martian surface based on available data should be discussed in conference. This allowed those with a greater grasp of the material to teach others. Games of this type are interesting in that it is not necessary to mandate that all participants read everything or even the same sets of things for everyone to learn about all that is discussed.

Strand 3: “Technology” What could be more technologically oriented than comparatively examining the trade-offs represented by the available launch systems and infrastructures of the five major space agencies? Information made available to delegations included launch capabilities of systems, including payload and orbital capacity, as well as descriptions of manned programs and the history of the policies and technology of each agency. To put each into perspective the relative availability, cost, and secrecy of all technologies had to be taken into account before plans could be made for the sale or implicit allowance of use of these technologies by other nations. In our case this is especially noteworthy in terms of the assessment of and response to the Chinese loss of their manned launch infrastructure by the other nations. The need of the Chinese to make alternative arrangements with another nation, or space agency, so as to avoid unacceptable delays, led to all sorts of interesting sociotechnical calculations affecting the player interaction with one another. All those present soon knew that the Earth’s rotation affects the power levels needed to achieve orbit and that the natural “push” is greatest at the Earth’s equator. A rocket designed for use in Southern China might not be as useful at a different latitude.

Strand 4: “Science, Technology, and Human Affairs” The uneasily categorized strand 4 of the education guidelines proposes to “develop skills in applying scientific and technological knowledge in making decisions about problems at the community, state, national, and international levels, and recognize that using these skills responsibly is an essential part of being a citizen in today’s world. Most suggested instructional methods within this strand involve exploring

environmental issues, such as the safety and policy of nuclear power, managing mineral resources, and consideration of alternative energy sources. These issues are addressed by model building, essay questions, and research papers. By allowing students to participate in a LRP designed around a study issue, policy making alternatives can be more actively experienced by the participant. In our game, a competitive space race format established a structure to allow those involved to propose policy on an international level with far-reaching implications. Sub-plots involving political, administrative, scientific or technological aspects allowed the game to diverge into different territories dependent upon what information became available when.

The emphasis on cultural diversity of the various space agencies encourages students to look at the same information from different perspectives. The more formal and constrained roles of the Chinese diplomats would lead them to behave very differently than the more contentious and individualistic norms of the American delegates would permit. We think this would extend to how they would approach the technological aspects of the conference, even if both delegations are trying to be realistic, or even generous, from their own point of view.

Transportability of this game to a classroom context is not only likely, it is certain, to provide a powerful vehicle for learning across the disciplines of physical science, whether it is part of an integrated science course or is officially called a social studies unit in International Relations. Different aspects of the game could be emphasized in discussions within various courses. We hope that the primary application of this game will be in science and technology courses to emphasize the impact of science on all parts of life and learning, especially with respect to multi-cultural and multi-disciplinary learning. The idea of learning about science in its social context is becoming more popular in educational circles. This approach is facilitated by certain science texts, which are directed at those who do not find science intrinsically appealing, and for whom the study of science

must be motivated. Providing a social framework within which to teach science is viewed as an effective way to engage those who require this sort of encouragement to get serious about science. It makes it relevant to their lives

Game Design

The Decisions

Game design began with the decision to prepare a LARP similar to or as a rewrite of the Aegis space policy game. The Aegis game presented the world with the threat of near earth crossing asteroids. The danger was addressed at a United Nations conference of the “Big Five” space agencies. The international community as a whole was asked to determine a strategy to deal with this threat. The obvious options were to develop a system to protect the Earth either cooperatively or independently, or to ignore the threat altogether.

Originally, we had intended to simply revise the Aegis game, incrementally improving it. At the suggestion of John Wilkes, our project advisor, we decided to create a new game with a more competitive atmosphere. Several aspects from the Aegis game would be modified for use in the new game. The overarching plot of the Aegis game was to protect the Earth from an outside threat. This structure was not suited to a competitive game. A more competitive plot had to be designed.

The Chinese space program is soon to become the third nation to launch men independently into space. They have designed, built, and tested unmanned a manned-capable rocket. “Project 921” is scheduled to launch a Chinese astronaut (taikonaut) into orbit on the 50th anniversary of the founding of the People’s Republic of China in October of 1999. The Chinese space agency has implicitly expressed its intention to return humans to the moon and to construct a base with which to maintain a permanent presence. As the foreign policy of China is almost ruthlessly independent, it seemed an easy task to create a competitive game around a plausible Chinese mission to the moon.

Information Gathering and Preparation

Following this decision, a long period of time was spent on research into the structure of the “Big Five” space agencies, their available technology, their policies, and the politics of their nations. We also scoured the content of the previous space policy games for ideas and information to use in designing characters and the structure of the conference.

We determined the minimum plausible amount of time necessary for the Chinese space program to reach the moon by comparing the launch abilities of the Russian and American space programs from their first manned launch to the completion, or lack thereof, of their lunar programs. The US space program took seven years from first manned orbital flight to a manned lunar landing. The Russian program achieved several successful unmanned lunar-lander tests ten years after first placing a man in orbit. They cancelled their lunar program soon after.

The Chinese economy and space program infrastructure, though growing, are still much smaller than those of the other two main space organizations, NASA and the RKA. We assumed that the accelerating effects of Chinese adaptation and utilization of proven technology would serve to counter the resource deficits within to Chinese program and allow them to maintain the seven to ten year time frame. We added seven years to the first Chinese manned launch and the date of the conference was set... late 2006.

Our next step, to maintain realism was to determine what advances the other four space programs would make in seven years. The International Space Station would be complete or nearing such. The United States would complete the development of the X-35 space plane. The ESA, now testing the Ariane-5 with intentions to create a manned launch vessel, would have completed at least one manned mission. Japan would have completed the creation of the HOPE, a manned vehicle for use with the H-2 rocket, and Russia would have come to an equitable

arrangement with Kazakhstan over the Baikonur Cosmodrome or constructed a new base for the staging of its manned missions, which would most likely be to the ISS since Mir will likely be abandoned by then.

Delegation Structure

Each agency at the conference would have a goal related to the primary plot or “arc-plot”. Judging from what our research had indicated as the structures and foreign policies of each agency, we then had to determine what part each delegation would play in the arc-plot. The arc-plot of each agency was devised such that not every agency could accomplish every goal. In this manner, a competitive format was maintained.

The goal of the Chinese government was to maintain its independence in its lunar mission. In addition, China has traditionally pursued a policy of selling its launch capabilities to the rest of the world. After the initial drive to set up the lunar base, it seems likely that the Chinese government would not object to and would, in fact, enjoy renting space in their facility on the moon to any nation willing to pay. Their stable position on the lunar surface and an expansion of their industrial capabilities on the moon would allow them control of the moon by default, without the necessity of officially declaring it as Chinese territory.

The European Space Agency (ESA) has always been very cooperative in its space ventures. In addition, they have no particular national or personal stance against the Peoples’ Republic which is nearly unique among the other delegations. This led us to define the ESA as the potentially cooperative organization within the competitive atmosphere we were creating. China’s setback would bring the ESA’s launch site in Guiana into focus, since it is at a suitable latitude for Chinese

launches. Would the ESA help China or let this delay occur to help allow themselves time to make-up for the Chinese lead.

Japan's relationship with China has been long and unpleasant. While Japan's space program is largely commercial, the history of these two nations would prohibit cooperation in any form. Even if Japan were to offer help, China would not be likely to accept it. In addition, Japan would resent the idea that China could achieve a permanent lunar colony before themselves. Japan was designated as the uncompromising antagonist of the arc-plot, and was determined most likely to drive a second moon "race". Their goals were to prevent the Chinese initiative if possible, and to beat them to the moon either individually or as part of an international effort.

Russia has a history of uneasy cooperation with the Chinese space agency. Russia sold China its first rockets, but not the fuel to lift them. Russia promised to supply China with nuclear weapons capability but backed out on the deal. Russia just recently sold outdated and derelict manned systems, including a pressure suit, docking apparatus, and Soyuz life-support equipment to the Chinese. They again promised more, but backed out on the deal. Russia was an interesting case. They have maintained an infrastructure capable of launching more rockets each year than any other agency, but lack the actual economic wherewithal and political stability to initiate new projects. To maintain the competitive nature of this game, the Russian space agency was set up as "devil's advocate". It was the position of the Russian government to attack the credibility and safety of the Chinese moon mission, suggesting that they need assistance, while attempting to revitalize its own program by drawing in resources from competing nations with less experience in space habitat construction and manned operations.

The United States has been cooperative internationally only when it can gain a clear advantage over other nations. America has considered itself number one in space since reaching

the Moon, and has done everything in its power to maintain that position and to make sure the rest of the world knows it. To that end, the United States would be reluctant to engage in an international venture if they felt that they could accomplish the same goals alone. If the USA had to participate in an international project, they would do their best to be in charge of that program even if that required them to bear the brunt of costs in development and infrastructure. This position would allow them to receive the most in terms of political and economic reward. With this in mind, America was set up in a position to be the hostile critic of the idea of a solely Chinese base on the Moon. The United States has no current desire to go back to the moon. NASA has its sights set on Mars but would be unwilling to let a lunar project of this nature continue without American participation. Domination of the project by NASA was the preferred option in the case of a joint international venture.

Character Development

With the establishment of the arc-plot and dominant roles of each agency, it became necessary to develop characters for each delegation. A minimum cast of four per delegation with two optional and extraneous characters would allow for the versatile participation of 20 to 30 players. The difficulty was to develop delegations of four individuals so that everyone would have an essential part to play in the arc-plot. In previous space policy games, which have been designed for up to 50 players, some characters will become more central to the game than others and some may be completely abandoned with little or nothing to do.

To avoid character degeneration, we devised a simple construct whereby each character's goals would consist of three separate but integrated objectives.

The national or agency goals of each character were identical to the delegation arc-plot. Some characters were given truncated objectives within the arc-plot and some were expanded slightly to conform to an individual's affiliations. Characters with military backgrounds were given their plot in terms of military strategy and objective. Administrators were assigned to arc-plot details of organization and structural implementation. Scientists and engineers had information relating to the feasibility of agency agendas and technological implementation.

The second objective of each character was a sub-plot tailored to their affiliation. Several characters from diverse backgrounds were given similar sub-plots and contacts which would allow communication between them and permit cooperation between delegates to accomplish their goals. In some cases, sub-plots were tangential to the arc-plot and required characters to diverge from their arc-plots to achieve these goals. In no case was a character's sub-plot completely contrary to their arc-plot. It was possible to accomplish both sub and arc-plots, though not necessarily *everyone's* sub plot. This was also designed to maintain a competitive atmosphere.

The third object assigned to each character was personal. These were structured mainly to give flavor to the conference. In a few cases, personal agendas coincided perfectly with both arc-plot and sub-plot. These characters love their job. In most cases, personal agendas corresponded with only one or neither plot. Some characters were given interests outside of space and contacts with other delegates related in some way to their personal plot. A few of the remaining personal plots were contrary to both arc and sub-plots. These individuals dislike their job, their position, and/or their duties. Some were defined as hostile to their space program or merely to the policies of their nation. In all cases, these individuals were given too much responsibility to simply abandon their plots. These people were given the singular opportunity to purposefully undermine their own agency or affiliation through clandestine means.

Structuring the Conference

Once the characters had been designed and written-up it was necessary to define the structure of the conference. The conference needed to allow times for delegation members to speak amongst themselves, as well as for the members of each delegation to speak to members of other delegations. Since it would give each character an idea of how they relate to the other delegations, each delegation was, in the beginning, assigned the task of coming up with an initial statement of intent with regards to the conference. China spoke first, since the tone they took would greatly influence the lines taken by the other delegations. What were their real intentions anyway? Was this a land grab, a symbolic gesture, or a military strategy?

Once all of the delegations had filed their statements of intent verbally, so that each person knew what the official statement of each other delegation was, the delegations were given a chance to mingle. The delegates then would split from their respective delegations and talk to members of other delegations with similar positions, interests, etc. about the issue at hand (i.e. the Chinese intent to permanently colonize the moon). Some of them would know each other already from other interests before the conference, while others would only know each other by reputation. In this way the conference would be given a chance to expand into a web of inter-personal connections. This would allow for the possibilities of inter-delegation intrigue to fester and grow.

By calling together the delegations several times over the course of the conference, we would encourage them to act as a group, sharing what information they may have learned about other delegations intentions and capabilities, and forcing them to interact with each other in determining policy of their own delegation during the conference. Finally, near the end of the second day allotted to running the game, the delegations at the conference were called together one

last time, to formulate final statements. China was given the opportunity to speak both first and last, since the conference was about their intentions and interest in the Moon to begin with.

Assigning Characters to Players

Players were assigned characters based on questionnaires (see Appendix X) that were given out well before the game. Their answers helped to determine what roles they were cast into. Since we only had eighteen players total, and not all of them gave advance warning, we were forced to consider which characters were absolutely essential. We needed to decide which characters were not going to be played due to the lack of available players.

The final decisions on roles were not entirely based on the preferences given in the questionnaires. We tried to match preferences for roles when possible, but we also looked for specific personality traits when we read the questionnaires, such as ability to prevaricate effectively on demand, what accents a person could imitate, and how they answered simple open-ended questions such as : “Rock, Paper, or Scissors? Why?”. The way a person responded to this would help determine what role that person might be assigned, not by dint of their answer, but rather by their explanation of that answer. A final consideration would be the person’s major area of study: biology, computer science, engineering, etc... While a major does not say anything definitive about a personality, differences in personality leading to choice of engineering, pure science, or management could be exploited. While this is stereo-typing, the actual differences by major are common and marked enough that this is a practical assist in the character assignment process.

The character questionnaire was not designed scientifically or even with specific ideas in mind as to what questions and answers may indicate who was assigned what role. Specifically, our

impressions of the player when spoken to and invited to play was tempered by certain creative aspects of how they filled out their character surveys.

This method did lead to a certain amount of miscasting. For example, a person who filled out a questionnaire very aggressively was given an aggressive role, and may not have been as aggressive in person. This limitation led to the US delegation performing more timidly than one would expect of American diplomats, and to a certain amount of exuberance within the Japanese delegation which did not mesh quite perfectly with the character personalities. To avoid this problem in the future it may be necessary for characters from very different cultures from that of the players to be given to those who have demonstrated an ability to act on the stage. One might use other techniques such as Myers-Briggs Type Indicator (MBTI), a personality test, to assist in assigning roles so that the characters will have an easier time behaving as befits their culture and position.

Results

During the Game

In this running of the “Chinese Conundrum” Space Policy game, the Chinese, having lost their best launch site due to an “accident” (actually sabotage), made a deal with the Russians, which allowed them to use the Baikonur Cosmodrome in nearby Kazakhstan for their launches until such time as they could rebuild their own launch facility. In exchange, they agreed to help the Russians to formulate and implement their plans for a manned Mars landing. By building a joint launch facility on the moon for use in inter-planetary launches, they set the stage for potential colonization of Mars, although it soon became evident that the greater Russian experience would be exploited by the steadier Chinese organization. This was a surprise, because for the majority of the game the Russians were setting themselves up to lead the “counter-coalition” which was going to go to the “Red Planet”, Mars, and disparaging the value of a lunar base.

Projecting ahead from the outcome of the game a few decades we, as gamemasters, extrapolated the likely future that would result from the positions taken by each delegation, as well as the implications of any treaties that had been signed by two or more delegations. The results of this extrapolation was sent to each of the participants so that they could see the results.

In the end it was decided that the Russians did get to Mars first, but they could not sustain a base there due to the limitations technology available to them, since they dropped out of the “alliance” that was researching new technology while their own space infrastructure was in decay. There was a “glory” mission, just as the U.S. lunar landing in 1969.

Meanwhile, the ESA, NASA, and NASDA, were working together to develop a nuclear second stage that would be capable of fitting to each of their own heavy-lift launch vehicles, the Ariane-5, Titan IV, and H-2 respectively. The nuclear second stage would activate just above the

altitude at which the nuclear drive would be likely to interfere with the bio-sphere below, and would allow them to send much larger payloads to the Moon and to Mars. We decided that after several years they would have succeeded at designing this nuclear second stage, gone to the moon, and then gone to Mars afterward. We reported that → a dozen years after the meeting they had landed on Mars and initiated construction of their own permanent base on the Red Planet. The Chinese were not far behind, as their own lunar base was much more elaborate and advanced than that of the western nations, but since they focused on their lunar site, they did not manage to initiate their own permanent Mars base until 16 years after the conference, 4 years later.

Each of the five space agencies represented at the conference approached the conference with a different style. For example, In the beginning of the conference the Japanese began to pool their contacts, each introducing the other members of their delegation to his/her contacts in other delegations. They felt that the more people that they knew at the conference the better able to take advantage of the conference they would be. Indeed, as the conference progressed they were the first nation to discuss any actual agreements that might be reached through the conference, initiating negotiations with the Russians on the possibility of a joint Japanese-Russian Mars effort.

Unfortunately, despite agreeing on many points of the proposed treaty, they were not able to agree on some of the necessary minor points and were unable to get both parties to sign it. The Japanese decided to take their agreement to the United States and the E.S.A., who had been willing to participate in the original Mars effort, but who had been relegated to minor roles in it by Russian insistence. The Russians had been hoping to retain the leading role in the project while extracting the funding necessary to revitalize their space program from the other participating nations.

The Russians, having decided that a Mars mission was preferable to a Lunar one, tried to encourage the other delegations not only to avoid assisting the Chinese, but indeed to help the

Russians on a manned Mars effort instead. Their claim was that Mars was the REAL PRIZE, whereas the Moon was just a big worthless rock in space. This so energized the conference that within an hour almost every space agency had plans to go to Mars, either by themselves, or in partnership with another nation. Further, the Russians kept constantly questioning the competence of the Chinese in their attempt to install a permanent base on the moon. Ridiculing the previous Chinese launch record of 1 launch in 10 failing with their previous rockets, had the effect of giving the other nations hope that they could catch up to the Chinese if they made a serious effort with the same level of commitment.

The Russian delegation's tune changed toward the end of the conference however, when they were locked out of negotiations with the U.S., Japan, and the E.S.A. about how to mount a Mars initiative. Suddenly, they needed the Chinese, whose funding could be used to refit and help maintain control of the Baikonur Cosmodrome which was being rented from the Kazakhstan government. Russian was in a state of arrears with regards to their payments almost constantly and feared that Kazakhstan would declare their contract breached, and rent to China if given the opportunity.

Over the course of most of the conference the U.S. delegation laid low. They didn't take an active role in any of the politics or debates in the beginning of the conference. It wasn't until the negotiations between the Japanese and the Russians were stalled by limitations in the ESA charter that decreased the economic value of the Mars expedition to Russia that the U.S. delegation took an active hand, taking the place of Russia in the agreement that had been worked out by the Russians and Japanese. The U.S. made a few small changes, but otherwise accepted it. Even the conditions demanded by the E.S.A. were included, pulling them in as a third partner. The ESA launch facility in French Guiana was coveted for its proximity to the equator, and the international non-military

nature of the launch site eased the fears of the Japanese as well.

The E.S.A. can be said to have “made out like bandits”. Not only did they agree to supply the least amount of resources themselves, but their largest contribution to the Mars effort was to upgrade their already existing launch facility to support launches of Japanese and U.S. rockets, something they had been planning to do in the long run anyway. With a few more changes, allowing the possibility of launching Chinese and Russian rockets, the launch facility in French Guiana would be the first launch facility capable of launching any large capacity rocket belonging to any space faring nation around the world. The only other costs to the E.S.A. were for some of the logistics which were done using their heavy-launch vehicle, the Ariane-5. In exchange they gained access to a permanent Mars base which would be shared by themselves, the Japanese, and the Americans, and they were able to ensure that the new nuclear second stage would be designed to work with their Ariane 5. In addition they were able to concentrate on the less glamorous but more lucrative unmanned support missions for the Lunar and Martian bases, which allowed them to recoup all of their costs and more.

Finally, the Chinese succeeded in their initial goals, despite several set-backs. They set out to maintain control of their own moon base initiative. They not only succeeded, but they were able to maintain their original schedule, despite the sabotage that destroyed their best launch site. An agreement with the Russians, which allowed them to use the Baikonur Cosmodrome until such time as they finished rebuilding their own launch facility, was a critical assist. They suffered another set-back in the loss of Dr. Wei Li, one of their chief scientists, who defected to England when one of his delegation members let slip to him that the Chinese military was planning to put nuclear weapons on the Moon. On the flip-side, the Chinese managed to illegally purchase the designs and technology of the H-2 rocket from one of the Japanese delegates. In the end, the

Chinese did all that they set out to do and more, but their accomplishment was somewhat diminished by the renewed space race resulting from their actions. The Chinese were forced to share the moon with an international lunar base formed by the Japanese, Americans, and Europeans. In addition, they were not the first to initiate a permanent Mars base, because the same international group, utilizing their superior technology base, did so first.

Discussion

Possible Outcomes vs. What Really Happened

The results of the game were unexpected and not entirely satisfactory with regards to the original educational objective. Our preliminary expectations as to the conclusion of the game were of two endgame scenarios.

One possible outcome was for a full scale space race of independent nations for the moon. Though the Chinese were given a considerable head-start in the early game, the destruction of their main launch facility would have allowed other nations a chance to catch up. This scenario depended strongly on the Chinese being unable to obtain alternative arrangements for immediate continuation of their manned launch program. It was possible within this scenario for one or more delegations to unite in a cooperative venture, though we did not expect a unified alliance, especially one involving the Chinese.

The second outcome for which we were prepared was the possible alliance between many nations to attempt to construct an international lunar colony in direct competition with the Chinese program. Due to the delays of reconstructing a Chinese launch facility, the international effort would be given an even chance to compete with the Chinese program. An international program would not necessarily progress faster than individual national programs due to the nature of international cooperation. To cite an example, the International Space Station project is already considerable behind schedule due to bureaucratic delays. In our opinion it was highly unlikely that any single nation would agree to cooperate with the Chinese or visa versa.

In the final outcome however, the Russians provided China with access to Baikonur Cosmodrome, a situation we neither expected nor were prepared for. If the Russian government remains true to form in its dealing with the People's Republic, China may expect to receive half of

the promised access to the facility. This however, should still be more than sufficient to allow them to reach their lunar objectives.

Another outcome which completely took us by surprise was the digression of the Lunar Conference into a Mars Conference. One of the *minor* sub-plots designed around three characters, of which only two were cast, was the possible superiority of a Martian mission. These characters had information which supported this concept, but were in no position to initiate such a policy within their respective agencies. The idea was presented as a possible alternative to an all out lunar race. The information was limited, and the characters little more than administrators with delusions of grandeur.

The Mars idea received its chance due to the casting of Richard Otero, a charismatic fellow, as a minor Russian life-support technician. He had arrived late and without an RSVP, so since the Russian delegation was missing a strong leader (due to miscasting), we cast the extra player as Russian to expand the Russian presence. Richard Otero is an experienced LARPer with a healthy ego and a handy Russian accent. He quickly took charge of the delegation and convinced them of the viability of a Martian objective. The Russians then convinced the Japanese, who in turn recruited the Europeans, who were afraid of being left out.

The Russian plan fell like Icharus who flew too high. The RSA initiated the international Mars objective and would settle for nothing less than leadership of the program. Unfortunately, though Russia has a large launch infrastructure, and a great deal of experience in space, they lacked the economic resources to contribute monetarily what the other nations felt was reasonable for the lead agency. Unwilling to make a smaller contribution, and take a back seat in the proceedings, the Russian demanded control of the mission, giving NASA the opportunity to seize their leading position. Then due to Russian reluctance to take the supporting role they had assigned to NASA

originally, and miscommunication between some of the delegates, they were forced out of the coalition by the other space agencies.

Russia then made its launch facility at Baikonur available to the Chinese government in exchange for a ride to the moon and aid in constructing a joint launch facility on the Lunar surface. This lunar launch facility would be necessary to achieve to new Russian objective: a manned Mars landing before an international effort could be mounted.

Game Master Observations

We found it plausible that the Russians would agree to aid the Chinese under the circumstances. We determined that the structure of the international Martian venture was not outside the realms of acceptable expense to Japan, the ESA, and the USA. Though the USA was initially relegated to a position of support rather than leadership, such a position would be subverted slowly to allow America to dominate the program within several years. The ESA would not be too concerned with the turn of events, and Japan would accept such a condition as long as they reaped technological and financial gain.

In the context of players and their characters, we felt that the Japanese delegates were too aggressive and the American delegates were too passive. Also, several of the Japanese and Chinese delegates worked together in a more than pragmatic way for much of the conference, which was difficult to reconcile with the attitudes of the two nations toward each other that have been historically held. Improvements in the briefing procedure will be necessary to prevent this in the future. The debriefing process would allow one to achieve the educational goals of the game despite such lapses.

Proposed Changes

A more in depth delineation of cultural and historical foreign policy boundaries should be added to the game. Also, to foment slightly more aggressive competition between nations, not entirely directed towards the Chinese, it may be necessary to contrive additional outside pressure between nations. This could be accomplished by describing a more strident economic conflict between Japan, the ESA, and the United States. Proposing a NATO “police action” in a Middle Eastern nation which is not uniformly supported internationally might also have this effect. Such a conflict might help to discourage easy cooperation between nations.

One player suggested providing each delegation with a discretionary budget, both high and low estimates based on the Agencies’ normal budgetary allowances, and benefits they claim will accrue to their nations from the project is fully funded. The game master would function as the delegates’ governments in ratifying resource allocation. Creative players may even convince their governments to exceed their normal budgetary amounts, or borrow from other nations, should the potential benefit be great enough.

Another item that could be inserted into any later running versions of this game is more in-depth cost/launch weight data. Several players were asking about the costs of launches by different launch vehicles at different sites, and hard data on factors which would affect payloads. Since some sites have certain natural advantages over others the actual degree to which these affect a launch would be useful in negotiations by different agencies over where to launch a multi-national expedition from. This aggregation of data could reduce the need for participants to find access to the information outside the game design. This would also serve to simplify the dissemination of information to the players.

Future Applications

This run of the International Space Policy Game was designed primarily as a prototype development test. The goals were minimal, consisting mainly of determining whether the rewrite concept was feasible, and if the newly structured game would even function as predicted. These midcourse testing goals were achieved completely. With some necessary expansion of a few characters and inclusion of additional, updated, or compiled information, the game has proven itself to be functional, and can now be tested on a wider scale to ensure its educational value.

A second preliminary run may be necessary before the game can be transported to the high school venue as an educational tool satisfying the requirements of the science or social studies curricula. A rewrite of the game, specifically encompassing a certain amount of additional information as well as presentation polishing and schedule accommodation should be carried out before the game is presented to the Worcester Public School System for review.

When the game has been proven in at least a second trial, and more data gathered as to its functionality, an attempt can be made to run it in a high school setting. Students from science, technology, political science, or even social science classes would benefit from this game. Students drawn from several different classes, each emphasizing different aspects of science, technology, science ethics, or social studies would be even better. It would be interesting to gather participants from several different schools for each delegation and challenge them to compete against each other, with rival schools playing rival delegations to approximate the competitive nature of international space politics.

When this type of game has been proven in a high school venue, it is our hope that it can become an accepted form of motivated learning. Perhaps “games” of this type (which we should really call “character-based learning scenarios” so as not to under-emphasize their value as serious

educational techniques) will become acknowledged in the mainstream. Once their learning potential is acknowledged, they should be adopted on a wide scale.

Conclusion

The International Space Policy Game was successful as a pilot run. It was both entertaining for all involved, and an effective instructional tool for teaching international space policy and space technology. Our goals included:

1. Teaching the players something about space science/technology
2. Showing the potentially competitive policy making atmosphere that is typically present at times which result in the expansion of said space science/technology.
3. Motivate further study into space science/technology by the players.
4. Make a case that this game is suitable for transfer into a high school level science and technology program in support of the Massachusetts science/technology curriculum framework.

This game, "*The Chinese Conundrum*", provides an opportunity for active involvement in multidisciplinary learning. It can provide a support structure for an alternative learning process within the standard learning environment. By allowing students to participate in a decision making process, be it cooperative or competitive, knowledge can be obtained as an active learning and sometimes even investigational process.

Previous versions of this game were more cooperatively oriented, using the threat of asteroid impact as the impetus for the international conference. We felt that this type of external threat would, by its very nature, *induce* cooperation, and thus would be misleading with regards to the nature of international affairs due to its atypical nature. We replaced this scenario with a

Chinese lunar colonization effort, a more likely, internal, focus for global space politics than an external threat. We expect that this will more clearly demonstrate existing political and societal norms for the making of policy than would a *forcibly* cooperative scenario. Clearly the *possibility* of a competitive scenario is more meaningful in the context of this game.

This game should also be enjoyable and spark an interest in space, science, and space-technology in the players. If the students have gained a greater interest in space science and technology, then the game has fulfilled a good portion of its purpose. This sparked interest could be manifest in many ways. For instance, students might pick up and read articles about space science that they might not have otherwise, or they might even make efforts of their own to find out more. This did occur in our test run, as several participants communicated with us for some time after the game, expressing continued interest in the project.

Finally, we tried to ensure that the game supported the Massachusetts Curriculum Framework for Science and Technology (i.e. with the four strands described therein). As preparation for the game, different players are provided with scientific and technical information that would be known by their characters. Over the course of the game this information will tend to spread between players, who may need it to accomplish their goals. In this run, players were, and probably should be, encouraged to search for relevant information on their own before the start of the game and between sessions. Finally, the players should be able to observe the methods by which societal forces influence the development of technologies through the varying agendas of each delegation and the various events which “occur” during the conference.

All of the above educational goals having been met, it is our contention that this preliminary run of this Space Policy game : *The Chinese Conundrum* can be considered successful. “Learning is not a spectator sport”, and this game provides great opportunity to participate in an active group-

oriented learning process with a coach/referee in attendance. Information about the “Big Five” space agencies, their political structures and technological capabilities, the sociological interaction of several nationalities during negotiations, and technical scientific information related to space, the moon, and Mars were all conveyed to the participants via. team briefings, et al. This provides an educational motivation for study within a compelling social context for those who do not necessarily enjoy science on its own merits. Several of the players enjoyed themselves so much that they suggested that we run this game at an SF gaming convention, and many commented that they were surprised by how much they learned overnight within the gaming venue. Clearly, this Space Policy Game :”*The Chinese Conundrum*” shows great promise and can be considered to be a success.

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Appendix 1: Introduction to the Game (Player Information)

Greetings, salutations, and welcome to International Space Policy, the Game. You will be playing the role of a delegate to an international conference on the question of a Chinese Moon Base. As that person, you will be given a personality to role-play, as well as goals to accomplish, and the information necessary to accomplish them. You may not be given every piece of information needed to achieve your every objective. It will then be necessary to find that information or disregard that objective. Keep in mind that your character's personal opinions may differ from their established goals as set forth by their nation or organization. This is what we gamers like to call a conflict of interest.

Your character packet contains a lot of information including articles, summaries, national policies, and international treaties. All of this information has been included to represent what your character knows or has access to. Though you may not have the time or desire to read all of the included information in detail, it is in your character's best interest to at least be familiar with the contents of this folder.

Some of the characters included in the game are optional identities. Therefore, if one of your contacts is not present, they may not exist as a character in this run of the game. It is also likely that they have been cast in an auxiliary role and could show up for only one of the two days of the conference.

A few hints on role-playing your character.

- Try to maintain a mindset of "What would this person do in this situation?". Your personal instincts probably differ significantly from those of your character.
- If there is some aspect of your character that is not described explicitly in the character sheet, you can make it up. If you decide that your character once vacationed in Australia and picked up a taste for raw lizard, then so be it.
- There are no guns. Very peaceful.
- Have Fun.
- You can contact your government at shaughnb@wpi.edu

Appendix 2: Introduction to the Game
(Game Master Information)

As a Game Master, you will pose as the Chairman of the Council. Your duty, under direct UN authority, is to direct the "Committee on the Peaceful Uses of Outer Space". Delegations consist of 4 to 6 members each, including skilled diplomats, scientists, administrators, and politicians, and representing five space agencies of up to 10 nationalities. Your job is to keep this morass of humanity in a reasonable facsimile of order. To accomplish this, you will need to apportion presentation time to each delegation, as well as time to discuss as individual representatives and as a group. You have prepared some opening comments:

Good Afternoon Ladies and Gentlemen, Distinguished Delegates, I am Sa&yid al Bas0t. It is a great honor to preside over this conference. I welcome you all to this, the First Special Session of the Committee on the Peaceful Uses of Outer Space. As most of you already know, the People's Republic of China has made some incredible achievements in the past few years. China launched its first manned rocket, commanded by Jon Kim, (Who is here with us today) in October of 1999 and has been following an accelerated program of manned space-flight ever since. After several terrestrial orbital flights, the People's Republic launched three lunar orbiters starting in 2002. China set a man on the moon in 2004, and has since returned four times.

China has lately announced its intention to the international community of establishing a permanent base of operations on the moon. We have gathered the five major space agencies here today to discuss the implications of this bold venture.

You will be given half an hour (or so) to discuss within your delegations, then each of you will present a short statement of intent to this conference. The time is yours.

Appendix 2: Introduction to the Game
(Game Master Information)

Following the break to allow discussion within delegations, you can ask for volunteers to present first, or randomly select a group. Make sure it is agreed upon. Do not let other delegations interrupt as these are not discussion issues, merely initial statements from countries.

After all delegations have spoken (Limit them to five or 8 minutes tops), It is once again time to address the conference.

Thank you everyone. That was most informative. We will now take a short break for refreshment. Some of you already know each other, you may have heard of some others. Now is your opportunity to meet the delegates from other nations.

Break for no more than half an hour. Make sure people remain in character, this is not a break from the game, but a break "in game". Encourage people to discuss this conference among associates from other delegations or with complete strangers. If this seems very productive, you could allow for a longer break. If people seem to be wandering around without doing anything (Listening is something... it's sometimes called spying), then try to engage them in a discussion.

After the break, ask people to return to their delegation seating and address the conference.

Now we will open the floor for debate and discussion. The chair recognizes . . . (Pick someone who seemed very active during the break.)

It is now your job to keep this debate and discussion from devolving into a shouting match. Short of providing you with lists of options, it is best to use your own judgement and authority as Chairman and Game Master. Sometimes, the use of an object such as a gavel can be passed to officially recognized delegates.

When time is up, call everyone's attention to the Chair, and address the conference:

Thank all of you for coming. Today's meeting is officially over. We will meet back here tomorrow at 1pm (Which will represent a time gap of one month game time.) Anyone wishing to contact their government is encouraged to do so before the next meeting. I will see you all tomorrow. Goodnight.

Appendix 2: Introduction to the Game
(Game Master Information)

Now it is time to begin the second day of conference. Everyone has a basic idea of the system and their characters at this point so they will be less likely to need as much supervision as yesterday. Still, it remains your job to try to make everything run smoothly, or at least less roughly.

Ladies and gentlemen, distinguished delegates. Welcome back to this, the Second Special Session of the Committee on the Peaceful Uses of Outer Space. You all know why we are here. Before we begin, some of you have undoubtedly received information from your governments regarding the disaster which has befallen a Chinese manned rocket just yesterday. Let me be the first to offer my condolences to the Chinese ambassador and his delegation on the loss of those two brave men. Though this is a sad day, we can not postpone this conference and must continue in the spirit of peace and cooperation.

You will be given a few minutes to compose yourselves and discuss the import of any new information you have received. We will then allow a brief statement from each delegation before questions are again raised for debate. The time is yours.

After no more than 15 minutes, ask for someone to begin statements. It may work best to appoint whoever was last to speak at the end of the last meeting. After each delegation has made a statement (This time no more than 3-5 minutes), allow someone to propose a question, statement, or just wing it based on what people have said. This is when gaming becomes more of an art than a science. About 1 hour into the conference, again allow time for a break (30 minutes or so) and discussion between delegates.

Appendix 2: Introduction to the Game
(Game Master Information)

Thank you everyone. That was most informative. We will now take a short break for refreshment. You can feel free to talk to other delegates at this time.

This is it, the end of the conference. The last hour or so should allow nations to wrap up plans, finalize intentions, and perhaps come to conclusions regarding what the international community intends to do about the Chinese moon mission. The form should be debate style, but an attempt should be made to foment competition or cooperation between nations. The last half hour should be taken up with Nation presentations of intent unless everyone has agreed on a single course of action, in which case, someone should present it to the conference. Nonetheless, 30 minutes should be allowed for wrap-up. The Chairman can then address the delegates for the last time. Wing this one. Thank everyone for coming. Congratulate everyone on a job well done (or poorly done). Hit upon important points of whatever conclusion was arrived at. Tell everyone to go home.

Appendix 3: The Proposed Future of the Chinese Space Program

The Chinese space program dates back to 1956 when the first test bases and production plants were set up. Construction of the Jiuquan launch site began on June 1st of that year. China launched its first rocket in 1964 from Juiquan and its first satellite on April 24, 1970 using the Long March-1 launch vehicle. In November of 1975, China launched its first recoverable satellite using the LM-2C launch vehicle.

More benchmarks in the growth of the Chinese space program followed with the development of the Long March 3 (primarily designed for insertion into a geosynchronous transfer orbit) and the successful launches of communication and broadcasting satellites in 1984 and 86. The first commercial launch vehicle which carried French test equipment was launched in 1987. Continuous redesigns of the LM-1, 2, and 3 vehicles continue today.

By the end of 1998, a man-rated LM-2E(A) launch vehicle had been designed, built, and flown into LEO without a crew. In October of 1999, China launched its first manned mission, code named Project 921, to coincide with the 50th anniversary of the founding of the People's Republic. A nose-to-nose docking of two Project 921 craft took place shortly after.

The successful manned program led to an increase in the rate of Chinese launches and the expansion of the space program. Toward the end of 2002, the Chinese lunar-lander was tested unmanned on a flyby of the moon and its successful return to Earth. Six months later the first Chinese citizens walked on the moon. Over the next three years, China mounted six more successful manned lunar landings. The LM-3D heavy launch vehicle, first used earlier this year (2006), allowed for the flight of massive amounts of research equipment to precede Chinese astronauts to the lunar surface.

It has come to the attention of the world that the Chinese have begun lofting industrial capable, rather than pure research, devices to the lunar surface as well as possible components of

Appendix 3: The Proposed Future of the Chinese Space Program

habitat modules. The People's Republic may be capable of placing a permanent base of operations on the moon by 2013. Under the terms of the "Agreement Governing the Activities of States on the Moon and Other Celestial Bodies", the Secretary-General of the United Nations has convened a conference of the "Big Five" space agencies to consider the implications of a permanent Chinese presence on the moon.

Appendix 4: Character Questionnaire

International Space Policy: The Game

The Chinese Conundrum

Character Questionnaire

e-mail: shaughnb@wpi.edu, wolfus@wpi.edu

Name: _____ Email: _____

All of these questions are optional. They are to help us to assign you a character which you will play successfully and enjoy playing. Answer all or only those which you deem necessary. If you do not answer any questions you may not get a role.

Are you? Male___ Female___

Would you prefer to play a? Male___ Female___

Can you spare a Saturday and Sunday afternoon for 3 hours each? _____ If we provide lunch?

What is your Major:

Rock, Paper, or Scissors? Why?

Can you fake an accent? Can you badly fake an accent? Which ones?

Can you bullshit? Well? For example?

On a scale of 1 to 10, ten being the most desirable, which character traits would you like to play in a character?

Honest	_____	Political	_____	Optimistic	_____
Outgoing	_____	Ambitious	_____	Analytical	_____
Stubborn	_____	Gullible	_____	Married	_____

Which description(s) would best describe the character you want to play?

Administrator, Academic, Diplomat, Engineer, Explorer, Military, Politician, Scientist

Any other preferred character traits, nationalities, etc. which you would like to play or would refuse to play?

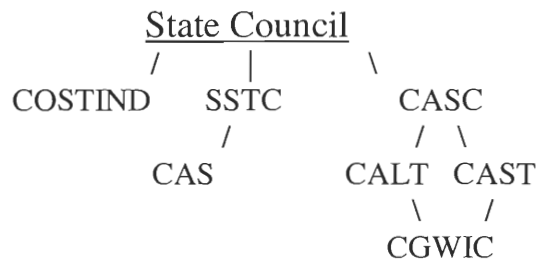
Appendix 5: History of the CSA
(Player Information)

Overview of China's Space Program

The Chinese space program began with the purchase of two R-1 missiles from the Russians in 1956. China launched its first home-built R-1 in 1960. In 1970, the first satellite was placed in orbit by a CZ-1. In November of 1975, China launched its first recoverable satellite using the CZ-2C launch vehicle. The first commercial launch, containing French test equipment, was launched in 1987.

The space program is run in several branches directly under the State Council. The Committee of Science, Technology, and Industry for National Defense (COSTIND) is the federal ministry which plans and organizes national and military ventures. The State Science and Technology Commission (SSTC) spearheads space research ventures. The China Aerospace Corporation (CASC) is a national corporate entity which develops, builds, markets launch technology, and satellites.. The China Academy of Sciences (CAS) technically reports directly to the State Council, but in actuality is nominally subordinate to the SSTC.

Under the CASC, the China Academy of Launch Vehicle Technology (CALT) develops and builds launch systems. The China Academy of Space Technology (CAST) develops and manufactures satellites. The China Great Wall Industry Corporation (CGWIC) directly markets Chinese launch capability to the rest of the world.



China has three launch facilities. All recoverable satellites and most science satellites are launched from Jiuquan (East Wind) which was constructed in 1956. Xichang, built in 1984, supports all geostationary (GEO) satellite launches. Taiyuan, built in 1988, supports all sun-synchronous (SSO) and polar orbiting satellites.

China's launch systems, known as the "Long March" rockets, are designated FB-#, DF-#, and CZ-#. The DF family are ballistic missiles. The FB class are disposable rockets, utilizing boosters rather than engines. The CZ type rockets are the backbone of the Chinese space program. CZ-1 rockets consist of one to two stages. CZ-2 models have two stages. CZ-3 rockets have three stages. The CZ-2E(A) is the manned capable launch vehicle currently in use by the PRC.

China's manned space program got a large boost from the Russian Federation when they bought a Soyuz-TM life-support system, an androgynous docking unit and a pressure suit. While China did not copy these designs, the study of them certainly aided the acceleration of the manned program.

Appendix 5: History of the CSA (Player Information)

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The successful manned program led to an increase in the rate of Chinese launches and the expansion of the space program. Toward the end of 2002, the Chinese lunar lander was tested unmanned on a flyby of the moon and its successful return to Earth. Two years later the first Chinese citizens walked on the moon. Over the next year, China mounted two more successful manned lunar landings. The LM-3D heavy launch vehicle, first used earlier this year (2006), allowed for the flight of massive amounts of research equipment to precede Chinese astronauts to the lunar surface.

Appendix 6: History of the ESA (Player Information)

Overview of the ESA

The European Space Agency (ESA) was established on May 30, 1975 out of the remains of two preceding organizations, the European Space Research Organization (ESRO) and the European Space Vehicle Launcher Development Organization (ELDO). Those agencies had been formed at the suggestion of NATO in response to the Russian launch of Sputnik in 1959. The financial disasters which plagued the previous organizations have not surfaced in the ESA.

The ESA consists of 14 member nations including Austria (1986), Belgium (1978), Denmark (1977), Finland (1995), France (1980), Germany (1977), Ireland (1980), Italy (1978), Netherlands (1979), Norway (1986), Spain (1979), Switzerland (1976), and the United Kingdom (1978), and one cooperating state (Canada).

Each nation automatically donates monies each year based on the GNP (Gross National Product) of that nation. These funds are distributed among “mandatory” projects, those agreed upon by the Convention. Each nation is further allowed to donate funds to “option” projects. This money is above and beyond the mandatory contribution. Private industry can donate to optional projects.

The ESA directs its programs under five directorates:

- 1) Space Science
- 2) Telecommunications
- 3) Observation of Earth and its Environment
- 4) Manned Spaceflight and Microgravity
- 5) Launches

If a project runs over budget by more than 20%, it is immediately brought before Council for review. The decision of whether or not to continue funding is made based on the necessity of the program.

The ESA has no aerospace industry as an organization so must contract out to industry for the development of its space projects. The monies obtained from each national government are distributed proportionally to national corporations based on the amount contributed by that nation. This is called the “Fair Return Rule”. Funds donated from a country to the ESA are spent in that country by the ESA.

Offices and Facilities

ESA Headquarters in Paris, France. Handles the creation of policy and diplomatic relations between member nations and international projects.

European Space Research and Technology Centre (ESTEC) in Noordwijk, Netherlands. Development and management of ESA projects. Specifically Launch Systems. ESTEC employs more than half of the ESA’s personnel.

Appendix 6: History of the ESA

(Player Information)

European Space Operations Centre (ESOC) in Darmstadt, Germany. Ensures the smooth function of working spacecraft. Tracks and controls satellites in orbit.

European Space Research Institute (ESRIN) in Frascati, Italy. Information retrieval and Earth Observations. Also coordinates corporate infrastructures.

European Astronauts Centre (EAC) in Cologne, Germany. The newest ESA facility, established in 1980 for the training of astronauts.

Kourou Launch Facility in French Guiana. The only ESA controlled launch base. In South America.

Launch Vehicles

The Ariane family of launch vehicles constitutes to entirety of the ESA launch capability.

The ESA is an active participant in the International Space Station project (ISS).

Appendix 7: History of NASDA/ISAS
(Player Information)

Overview of the Japanese Space Program

The Japanese space program is composed of two main groups, NASDA(National Space Development Agency of Japan) and ISAS (Institute of Space and Astronautical Science). Indirectly, both groups are answerable to the SAC (Space Activities Commission), a committee that advises the Prime Minister, but the chain of command leads differently for the two. ISAS is funded through the Ministry of Education, Science, and Culture, whereas NASDA is funded via. the Science and Technology Agency, the Ministry of Transport, and the Ministry of Posts and Telecommunications.

The net distribution of funding is approximately 70-30, NASDA-ISAS. This is just as well, since ISAS is mostly interested in unmanned scientific missions, whereas NASDA is interested in the high-profile manned missions, as well as unmanned missions.

The original rockets used by the Japanese were the N-1 and N-2. These were designed by the Japanese using American parts. To counteract the cost of American parts the Japanese designed the H-1 rocket. It was superior to both of the previous rockets, and some of the parts were made in Japan, although some were still made in the U.S. Finally, the Japanese designed and tested the H-2 rocket. It was made entirely out of Japanese parts. It began testing in 1994, and since has flown numerous times.

The main headquarters of NASDA lies in Tokyo, Japan. Following is a list of all the NASDA Field Centers:

Tsukuba Space Center
Tanegashima Space Center
Earth Observation Center
Earth Observation Research Center
Kakuda Propulsion Center
Headquarters
Katsuura Tracking and Communication Station
Masuda Tracking and Communication Station
Okinawa Tracking and Communication Station
Ogasawara Downrange Station
Kiruna Mobile Tracking and Data Acquisition Station
Nagoya Liason Office

NASDA is an active participant in the International Space Station Project.

Appendix 8: History of the RKA
(Player Information)

Overview of the Russian Space Program

The advent of the Russian space program began with a race to orbit between the United States of America and the United States of Soviet Russia. The Soviet Union consistently beat the USA at every turn. First satellite (Sputnik, 1957), first man in space (Gagarin), first woman in space (Tereshkova), first one day flight. Then the USA pulled ahead and passed. First spacewalk (White), first lunar orbit, first man to walk on moon (Armstrong). Russia shortly dropped out of the lunar race entirely.

The Soviet Union maintained a strong presence in space during the Cold War, including the Space Station Mir and accounting for 68% of the world's launches from 1957 to 1991. With the end of the Cold War, a new era of international cooperation, especially between the USA and USSR began. It became familiar to find Soviet and American astronauts sharing space on Mir, docking shuttles, and helping each other out. With the dissolution of the USSR into the Russian Federation in 1991, the space program underwent organizational changes while maintaining its new international objectives.

The Russian Space Agency (RKA) and Space Forces (VKS) were formed in 1992, and inherited 170 operational craft and the infrastructure to support them. The VKS is primarily in charge of military space missions, while the RKA organizes scientific missions and cooperative ventures. The VKS is also in charge of maintaining launch facilities in Russia.

Russia has three launch facilities. Plesetsk Cosmodrome supports only four launch vehicle types: Kosmos-3M, Soyuz/Molniya, Tskylon-3, and Start. Kosmos-3M. This supports most of Russia's launch capabilities with the exception of manned missions. The Baikonur Cosmodrome in Kazakhstan supports nearly all manned missions from Russia. The Svobodny Space Launch Facilities, built in the far east and completed in 2001, are beginning to take an equal amount of launch load from the other two facilities.

The launch vehicles of Russia consist of five basic families with seven major variants and numerous variations in minor craft. The main launch vehicles include the Energia, Proton, Soyuz, Molniya, Volna, and Kosmos.

Russia is an active member of the International Space Station Project (ISS).

Appendix 9: History of NASA (Player Information)

Overview of the United States Space Program

The advent of the American space program began with a race to orbit between the United States of Soviet Russia and the United States of America. The Soviet Union consistently beat the USA at every turn. First satellite (Sputnik, 1957), first man in space (Gagarin), first woman in space (Tereshkova), first one day flight. Then the USA pulled ahead and passed. First spacewalk (White), first lunar orbit, first man to walk on moon (Armstrong). Russia shortly dropped out of the lunar race entirely.

In 1958, the National Aeronautics and Space Administration was founded. It supplanted and absorbed the original NACA (National Advisory Committee for Aeronautics), which had been established shortly after the Wright Brothers flew at Kitty Hawk. The development of larger and more powerful launch vehicles as well as the continued development of satellites for communication and information gathering during the Cold War served to keep America in the running of a slower space race.

The development of the Space Shuttle in the 1970's gave the United States a space vehicle unmatched in the world. The US is currently developing a Single Stage to Orbit (SSTO) space-plane designated the X-38.

Offices and Facilities

NASA Headquarters in Washington D.C. Under which operates:

1. The Office of Aeronautics, Exploration, and Technology (OAET), which develops new technologies for use by NASA and US industry.
2. The Office of Space Flight (OSF), which plans, tests, develops, and operates all space vehicles including the space station.
3. The Office of Space Science and Applications (OSSA), which develops remote sensors and space communications devices to study the universe.
4. The Office of Space Operations (OSO), which tracks orbiting objects and provides ground control to space launches and ground to space communication.

NASA operates three launch facilities: at Cape Canaveral in Florida, Vandenberg, and Wallops Island.

NASA is the leading nation in the International Space Station Project (ISS).

Appendix 10: The Chinese Delegation

Communiqué

You have been selected to represent your nation before the United Nations "Committee on the Peaceful Uses of Outer Space". Four other delegations, representing the United States (NASA), Japan (NASDA), Russia (RSA), and the European Space Agency (ESA) are also in attendance. The purpose of this meeting is to discuss the implications of the possible establishment of a permanent Chinese base of operations on the moon. The project has been in the works for the last seven years and is scheduled to be completed by 2015. Your delegation will consist of:

Commander Liu Mao Cheng who will maintain leadership of this delegation. You will all defer to him.

Qin Sun will represent the head of this delegation at the conference. He is a skilled diplomat attached to the UN.

Dr. Wei Li, a specialist in many fields. He works with CAST and will function as a scientific advisor to this conference.

Sen Tzi-tsu, a head administrator from the CNSA.

Jon Kim, the first Taikonaut of the People's Republic. He is the first Chinese citizen to orbit the Earth aboard the CZ-2EA, and the first human to set foot on the moon in over 30 years.

Lui Shi, a professor and department head at the Nanjing University of Aeronautics and Astronautics. He is attending this delegation primarily as an observer, but has an extensive knowledge of launch technology.

You will all be working together to insure that the interests of the People's Republic are maintained in the international venue. China's primary concern is to remain independent in design and implementation of its manned space initiative.

Appendix 10: The Chinese Delegation

Commander Liu Mao Cheng:

You are career military, an officer in the People's Army of the PRC, People's Republic of China. Specifically, you work for The Commission of Science, Technology, and Industry for National Defense (COSTIND). You have been part of the plan to colonize the moon since it began and now you must find a way to salvage those plans now that the rest of the world wants to jump on the bandwagon. You have arranged to be part of the delegation for the upcoming UN conference on international space policy. The other nations are either going to try to stop you, or they'll want to be part of it. Neither option is desirable, because the main colony is only a front. It is from the main colony that a second, military, colony will be based. Technically this is illegal according to international law, but international law is for most intents and purposes simply the application of the law of force. Whoever is most powerful makes the rules for everyone else. With a permanent moon base, China will have the strategic "high ground" and no other nation will be able to do anything about it. Unfortunately, you have to get there first.

Personality: You are calm, reserved, and outwardly undistinguished. You prefer the role of puppet master, letting others talk for you, so long as they say the right things anyway. If necessary you will take obvious control, but only ...

You are not above using threats, blackmail, or any other means to convince or intimidate others to do what is right... Right being what the party says is right, of course. (There are four fingers.)

Note: This means you might even be willing to befriend one or more of those miserable capitalist scum if it would benefit the PRC.)

Contacts:

1. Junko Fujikaze (Japan) → You bought an outdated H launch system from him. Technically this was illegal.
2. Wolfgang Mueller (ESA) → A space operations engineer for ESOC, He called your office several times to complain about a Chinese military satellite he was tracking. He said it was not listed in his databanks and would be hazardous to legitimately logged and recorded satellites. He was right of course, but you wouldn't give him the satisfaction. You suspect he doesn't like you.
3. Jon Kim (China) → The 1st Taikonaut, he has walked on the moon. You are as proud of him as if you were his father. You have met all of the trained taikonauts and have spent some time with him. You like to give him advice and friendly lectures about duty and country.

Appendix 10: The Chinese Delegation

Qin Sun

You are from the Ministry of Foreign Affairs, and you are heading the PRC delegation at the UN Conference on International Space Policy. Your objective is to sustain the right of the PRC to a dominant position on the moon as a result of the colonization effort. You wish to 1) Maintain that since China is the nation setting up a lunar colony, China should have control of that colony, and 2) Discourage other nations from seeking to found their own lunar bases.

Personality: You are calm, reserved, and uncompromising. If you give in on an issue, you try to save face by appearing to have supported the issue all along.

Background: You are China's permanent ambassador to the UN headquarters in New York City.

Contacts:

1. Liu Mao Cheng (China) → He has a position of power in this delegation, perhaps surpassing your own. As a loyal Party officer, he may have the power to end your career, and possibly even your life.
2. Jean Valjean (ESA) → A fellow UN ambassador, the Frenchman is loud, rude, and a brilliant strategist.
3. Kevin Agwanda (USA) → You recognise him from somewhere, though you can't figure out how.
4. Olev Petrov (Russia) → He is with the Office of International Cooperation. You have faced off in the past. Deliberations have taken an almost personal turn since 1998, when Olev sold you small outdated manned vehicle components which kick-started this whole program. Technically, you owe him one for that, but you wouldn't give him the satisfaction of knowing it.

Appendix 10: The Chinese Delegation

Dr. Wei Li

You are an environmental systems engineer working for the Chinese Academy of Space Technology (CAST). You have degrees in Biotechnology, Electronics Engineering, Mechanical Engineering, and Physics, ... and your contributions to Project 921 were indispensable. Your work with the life support systems solved a serious stumbling block in waste reclamation that could have set back the program for years. In fact, a device you designed is being sent up some time during this conference. You have dreamed of walking on the lunar surface, and begin to see a definite possibility of this becoming a reality. Indeed, You hope that you will be able to see the Earth from space before you die.

Personality: You know that you are smarter than your peers, but this doesn't bother you, nor does it make you feel especially superior. You feel that everyone has their place, and their possible contribution. They simply must find what it is and pursue it.

Background: You used to work for the China Great Wall Industry Corporation.

Contacts:

1. Lui Shi (China) → A young man with potential. He attended all of your classes at Nanjing, and assisted you in the lab for 5 years. Now a department head, but still with potential.
2. Andrei Titov (Russia) → An expert on materials processing, you have consulted with him on several occasions when working with especially complex materials problems. He knows more about material science than anyone else you know.
3. Jerrod Helms (USA) → He is a U.S. military man who reads far too much. Very few people know that you write science fiction under the name "Lee Wade". He is one of them. You have communicated several times regarding your work both fictional and non.
4. William Smythe (ESA) → An engineer at ESTEC, He wrote an intriguing paper on aerodynamics of reentry and recoverable spacecraft designs. You began correspondence after reading it. He tends to hedge a bit on some of the more elegant mathematical models you've proposed.

Recognizance:

1. Katsumi Yamaguchi (Japan) → You have read a few of her papers. She seems like a bright young lady.

Degrees: Ph.D. Biotechnology ; Ph.D. Mechanical Engineering ; MS. Electronics Engineering ; BS. Applied Physics (Materials)

Appendix 10: The Chinese Delegation

Sen Tzi-tsu

You work for the Chinese National Space Administration. You serve a dual role as an administrator and scientist. Your work with missile technology puts you in contact with the military on a daily basis. Being a loyal Party member has allowed you much freedom. Unfortunately, you are constantly under close surveillance due to the sensitive nature of many of your projects. One minor mistake could easily get you killed.

Personality: You are cautious to action, almost to a fault, but stubborn when you know you are right.

Background: The party gave you nearly all that you have. Your schooling, your position, even your family in a way. You met your wife while on party business, and the party has allowed you to have more than the one child allowed most couples. You are aware that your government has military intentions toward the moon.

Contacts:

1. Iwo Yamabatchi (Japan) → This man is an informant in the middle levels of the Japanese government. He is high enough to have access to useful information, but not so high that he becomes too loyal to it to be useful. You have been able to extract much useful information out of him over the past ten years, although always at a price.
2. Ivan Arbatov (Russia) → A cosmonaut, he wants to be the first non-chinese to orbit the earth in a Long March vehicle. No one else has asked or indicated interest, and you like the idea enough. It has to be someone eventually.
3. Sarah Wilcox (USA) → A top administrator at NASA, she has contacted you several times regarding the CZ-2E(a) specifications. NASA does need a heavier launch vehicle.

Appendix 10: The Chinese Delegation

Jon Kim

You are an astronaut, a cosmonaut, a spaceman, a taikonaut. You were the first man to orbit the Earth in a Chinese rocket and were the first human to walk on the moon since Eugene Cernan of America's Apollo 17 mission in December of 1972. (You are something of a history buff). You know that you're here mostly as window dressing, but you enjoy that sort of grandstanding.

Contacts:

1. Niccolo Giovanni (ESA) → You ran into him and his wife twice in Beijing after getting back for the first time. He recognized you from TV. You got to talking about the space program, then ate at an expensive restaurant on your expense account. Nice Guy... You think he does something with computers.
2. Kevin Agwanda (USA) → He is a fellow taikonaut, even if he is American. You met him at your congratulatory banquet in Beijing. He told disgustingly vivid medical stories at the dinner table. You found that highly amusing.
3. Liu Mao Cheng (China) → COSTIND military. He seems to have adopted you. He tells you stories, lectures you on duty, and glows with pride when introducing you to others. He works with all of the taikonauts (there are six of you), but he occasionally treats you to dinner or a show. An O.K. guy to have around.

Appendix 10: The Chinese Delegation

Lui Shi

As a department head at the Nanjing University of Aeronautics and Astronautics, you have helped design three generations of the Long March rocket. You have taught students from all over the world. You have friends in high places and called in a few favors to attend this conference.

Contacts:

1. Sansuke Takahashi (Japan) → Went to space aboard the heaviest lift vehicle designed, the H-2. You asked him about it. He said “It was a Kamikazi run, but instead of crashing into the ground, you crash into the sky. Then go through it.”
2. Dr. Wei Li (China) → He taught you nearly everything you know about rocketry. A brilliant man, and humble. You worked in his lab for 5 years.
3. Cassandra Spence (USA) → U.S. Diplomat at the UN. She has contacted you in response to a paper you published on using less fuel to reach orbit. She seems obsessed with minimization of fuel consumption.

Appendix 11: The ESA Delegation

Communiqué

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Jean Valjean, a diplomatic attaché to the UN from ESA headquarters.

William Smythe, a manned systems administrator from ESTEC who has been working with the Ariane-5 Crew Transport Vehicle.

Wolfgang Mueller, an operations specialist from ESOC, who has been working almost exclusively with the ISS.

Niccolo Giovanni, from ESRIN. He works primarily with Earth observations satellites.

Ernst Mendaza, a scientist and astronaut associated with EAC.

Vilhelm Straus, also with ESTEC in a scientific capacity.

You will all be working together to insure that the interests of the ESA are maintained in the international venue. The ESA maintains an objective of international cooperation either with the Chinese government or with a majority of other national space programs.

Appendix 11: The ESA Delegation

Jean Valjean

A Frenchman by nationality, you are a diplomatic attaché from the ESA headquarters in Paris to the United Nations. Your job is to coordinate international cooperative projects among the ESA member states as well as dealing with other space agencies such as the USA, Japan, and Russia. You handled some of the technical aspects of the International Space Station project, especially when something was behind schedule. You have had some contact with China in the past, but their foreign policy is ruthlessly internalized, making cooperation difficult at best.

The ESA policy is to participate in international endeavors and promote cooperation between nations. This moon base idea may have some merit, provided you can get involved. Unfortunately, public opinion of the Chinese space program is incredibly low, which may make it difficult to get ESA support if China remains head of this initiative.

Personally, you think it's just about time for another space race. Plans have been laid for years about setting up permanent outposts on the moon and Mars, but no one has actually done anything about it until now. (At least, not that you've heard). You definitely think that "up" is the direction to be going.

Contacts:

1. Qin Sun (China) → A fellow UN diplomat, You've dealt with him in the past, and found him to be intelligent, well in hand, and stubborn as a mule.
2. Vladamir Ilyovich (Russia) → You met him while you were visiting Russia. He was the military man designated to show you around the Plesetsk Cosmodrome Launch Facility. He doesn't seem to like his job very much.
3. Sansuke Takahashi (Japan) → The 1st Japanese National Astronaut. (Not much substance, waste of space... military pilot, not a scientist.)

Appendix 11: The ESA Delegation

William Smythe

You were born and raised in London, England. You have lately been attached to the Manned Spaceflight Programme Department of ESTEC in Noordwijk in the Netherlands. You used to work on the new Ariane-5 Crew Transport Vehicle (CTV) in a scientific capacity, but lately spend more time shuffling paperwork and making phone calls. Space travel is what got you into aerospace engineering in the first place and this idea of a permanent base on the moon appeals to your sense of adventure.

You have been instructed to function primarily as an advisor to the ESA delegation, specifically to provide sound scientific consideration to what may or may not be possible for the Chinese to accomplish, based entirely on what you have heard they may be attempting now or in the near future. You do know that the Chinese Long March rockets have traditionally been unreliable, with a failure rate upwards of 15%. This would be an unacceptable margin for a manned spacecraft, but the new CZ-2EA launch vehicle seems to be holding together well enough for now.

Contacts:

1. Niccolo Giovanni (ESA) → An Italian at ESRIN. He juggles satellite usage time to anyone who needs it. You got some recordings of radiation in orbit from him for help in CTV design.
2. Wei Li (China) → A truly disgusting individual who holds degrees in Biotechnology, EE, ME, and Physics. He read one of your papers on design of recoverable spacecraft and reentry aerodynamics and wrote you about it. Some of his ideas are intriguing, but some of his questions are so far beyond you its scary.
3. Mark Thiir (USA) → An American engineer, He frequently works with the Department of Energy, and sometimes with NASA. You met him at a symposium in Boston, something about possible use of external shuttle tanks as space stations. You got along well enough with him.

Appendix 11: The ESA Delegation

Wolfgang Mueller

You are a senior space operations engineer at ESOC in your hometown of Darmstadt, Germany. Your work consists mostly of coordinating information coming into the Operations Centre from orbiting satellites and, most importantly, the International Space Station. Now that the ESA has sent up its own manned rocket, you may begin to act as mission control for the Crew Transport Vehicle (CTV). While this represents a major breakthrough for the program, it seems like a waste of resources to you.

The ESA has been able to send astronauts into orbit on board US and Russian craft for years. Now that China and Japan have manned capable systems, the availability of space travel should be more than sufficient for the needs of the ESA. It is unnecessary to develop the CTV at this time. Likewise, if the Chinese want to go to the moon, let them spend the time and money to develop it. The ESA should be able to piggy back to the moon when it needs to. Your only concern is that the UN police China's action to make sure it doesn't become a military outpost.

You are unsure as to your exact function at this delegation, except to represent the ESA's European Space Operations Centre (ESOC). Your work with the ISS may be important. If a similar international structure were set up on the moon, your experience in coordinating activities could prove useful.

Contacts:

1. Liu Mao Cheng (China) → A military officer working for COSTIND. A Chinese military satellite was dangerously close to ESA orbits and hadn't been logged and recorded properly. When you asked him about this, he berated you mercilessly and suggested you ...
2. Olev Petrov (Russia) → He works for the RSA in International Cooperation. He more or less button-holed you into coordinating a Russian spacewalk from the ISS. You suspect he makes his living getting others to do his work for him.
3. Ernst Mendaza (ESA) → An astronaut and computer systems design engineer. You keep bugging him about the user interface on the newest satellite tracking program, but he keeps dodging you. He also has been unsuccessfully trying to hide the fact that he has installed a copy of the latest Duke Nukem game in the Unity computer banks on the ISS.

Appendix 11: The ESA Delegation

Niccolo Giovanni

You are an Italian working at the ESRIN facility in Frascati, Italy. Your primary functions there involve apportioning satellite time to member nations, and making sure monies are distributed equally to corporations in various states. Your background is in telecommunications and business, though you always wanted to be a politician.

You have been assigned to this UN conference to represent the European Space Research Institute (ESRIN). This will provide you with the perfect opportunity to test your diplomatic capabilities. If people start talking cooperation, you can organize national contributions, and hopefully funnel a few contracts back toward Italy.

Contacts:

1. Techo Mitsuhashi (Japan) → You helped him to arrange access to ESA intelsats for NASDA (Japan's largest space agency)
2. William Smythe (ESA) → An engineer pushing papers at ESTEC. You have only dealt with him over the phone involving satellite time for data collection; something to do with cosmic rays.
3. Jon Kim (China) → Shortly after the 1st Chinese flight, you and your wife visited China. Just a vacation: walk the Great Wall, Climb a mountain, take pictures of rice patties, eat authentic Chinese rice. Who should we bump into in Tiananmen Sq.(Beijing), but The “John Kim” the 1st taikonaut. Then we saw him later again at the Summer Palace . He said he was enjoying the Earth again, now that he was back. We talked for a while, and he took us to eat at an exclusive restaurant. I guess fame doth have its privileges

Appendix 11: The ESA Delegation

Ernst Mendaza

You are a Dutch astronaut and computer systems design engineer, associated with the EAC in Cologne, Germany. The ESA became the fifth space agency to launch a manned vehicle into orbit earlier this year (2007). The program was slowed due to budgetary concerns and was beaten to orbit by less than a year by the Japanese HOPE space-plane design.

Contacts:

1. Katsumi Yamaguchi (Japan) → A life-support systems specialist, and cute too. You met her at some space science seminar. She seemed a bit stand-offish, but had some interesting ideas about closed support systems.
2. Wolfgang Mueller (ESA) → He works in the Space Operations Centre in Darmstadt. You designed the computer satellite tracking programs he's using. He keeps bugging you about the interface. It's not as if you programmed the system, you just designed it. He'd shit a brick if he knew about Duke Nukem on the Unity computer system on the ISS.
3. Ivan Arbatov (Russia) → A cosmonaut and pilot. You spent two weeks with him aboard the International Space Station (ISS). He is definitely pompous, but you really like the guy. It helps that he smuggled aboard some Vodka.

Appendix 11: The ESA Delegation

Vilhelm Straus

You are a Belgian administrator working at ESTEC in Noordwijk, in the Netherlands. Your pet project has been the possibility of manned stations located on Mars and the moon.

You've written a book on the topic. You have not had much luck drumming up support, but apparently, someone has been paying attention or you wouldn't be here. You've written a book on the topic.

You outline the inescapable need for nuclear power, whether fission or fusion, to provide the power for extra-terrestrial stations. Solar just isn't enough for the kind of industry that would allow the base to pay for itself.

Contacts:

1. Andrei Titov (Russia) → A professor of Chemistry at the Institute for Space Research (IKI). A truly brilliant man who can think of hundreds of uses for moon dust and Martian soil. If you can get his support, he may lend some credibility to your plans.
2. James Oryx (USA) → You met Jim about six years ago, when he did his senior project in the Netherlands. The two of you became quick friends, finding that you agreed on many issues relating to space. Since then you haven't stayed in as close contact as you would have liked, but at least you talk to each other a couple times each year.
3. Hiro Oshi (Japan) → A JDSF (Japanese military) commander who read your book. He seemed interested, especially in the part about needing nuclear power.
4. Peiter Budarin (Russia) → An administrator at the Baikonur launch facility whom you've contacted regarding support for a private lunar venture. You don't think he's taken you very seriously.

Appendix 12: The Japanese Delegation

Communiqué

You have been selected to represent your nation before the United Nations "Committee on the Peaceful Uses of Outer Space". Four other delegations, representing the European Space Agency (ESA), the United States (NASA), China (CSA), and Russia (RSA) are also in attendance. The purpose of this meeting is to discuss the implications of the possible establishment of a permanent Chinese base of operations on the moon. The project has been in the works for the last seven years and is scheduled to be completed by 2015. Your delegation will consist of:

Iwo Yamabatchi is a representative of the Ministry of International Trade and Industry (MITI). He is in charge of the delegation.

Techyo Mitsuhara represents NASDA.

Junko Fujikaze has joined us from Sanwa Corp. He has a working knowledge of our own space industries which may come in useful.

Katsumi Yamaguchi is a scientist specializing in life-support. She normally works for the Hokkaido National Industrial Research Institute.

Hiro Oshi is representing the JSDF.

Sansuke Takahashi is the 1st Japanese National Astronaut.

You will all be working together to insure that the interests of Japan are maintained in the international venue. Japan regards the exploitation of any celestial body by an individual or national entity as undesirable. In the interests of world peace, a joint lunar project of many states should take precedence over any such attempt by a single nation.

Appendix 12: The Japanese Delegation

Governmental Representative →

Iwo Yamabatchi (MITI – Ministry of International Trade and Industry)

The official view of your government is horror that the Chinese might be allowed to maintain a position of dominance over the moon. Especially as this would potentially lead to a position of dominance in all NES (near earth space). Personally you don't mind quite so much as your higher ups. Although you wouldn't want them to know that. The money the Chinese have been lining your pockets with hasn't hurt that opinion either. Besides, a good part of the reason that the Chinese space program has made so much progress over the past decade has been due to the information you've been feeding them.

There is another reason that you are unworried about the Chinese. You feel that the actions of the Chinese will most likely spur the rest of the civilized world, mainly Japan and the U.S., into reconsidering the small sums that they have been giving to their respective space programs as of late, and reinvesting in space. After all, what chance have the Chinese compared to Japan and the U.S. working together. Throughout history Japan has consistently beat out China, despite the latter's resource advantage. The only nation to truly best Japan was the U.S. The Japanese once made the mistake of underestimating the U.S. Perhaps it is now the Chinese turn to learn what happens when you awaken a sleeping giant.

Contacts:

1. Sen Tsi-tzu (China) → Your contact when you've sold information in the past, is a member of the Chinese delegation.
2. Mark Thiir (USA) → An American engineer. You met him several years ago when he was in Japan working on a robotics contract.
3. Katsumi Yamaguchi (Japan) → A young scientist who you met while you were attending college. She was a student of biology at the time. Now you hear she has been working on some of the life-support work for the space program.

Appendix 12: The Japanese Delegation

NASDA Administrator → Techyo Mitsuahara

For the most part your job consists of helping organize international cooperative ventures in space. You've dealt with the ESA, USA, and some with the Russians, although your opinion of Russian engineering is pretty low.

You believe that mankind's ultimate destiny lies in space. You have devoted your life to the goal of getting him there. Given the amount of funding the government is willing to spend on projects of that nature, you had almost given up on seeing a permanent colony in space during your lifetime, but if the Chinese are truly serious about setting up a permanent base on the moon then surely other nations will act. Perhaps you may yet see Japanese colonies in space, and even more, perhaps you might be able to join them.

Contacts:

1. Pieter Budarin (Russia) → You've dealt with him before. He seems a decent enough man, from what you've seen. Back when the U.S.S.R. broke up, and the Khazakstani were trying hard to find customers for their space program, you were sent to size up their capabilities, and see if they met Japanese requirements. The administration decided not to hire them then, because they felt that the U.S. could do a better job for the cost, but that's not necessarily his fault.
2. Niccolo Giovanni (ESA) → You arranged NASDA access to ESA intelsats via. this man. He seems to be the man who allots most of the access to the ESA satellites.
3. Jerrod Helms (USA) → Last year you came across his sci-fi fan page on the web. You emailed him, and you've been communicating back and forth ever since. You look forward to seeing him in person at the conference.

Appendix 12: The Japanese Delegation

Corporate Administrator → Junko Fujikaze

You are here representing the Zaibatsu. You are part of what westerners quaintly call “upper management”. You feel that this recent Chinese activity is an excellent means of convincing the government to become more active in space themselves. This would result in an increase in profits from the ensuing lucrative aeronautics contracts.

Contacts:

1. Liu Mao Cheng (China) → You sold him an outdated H launch system for an exorbitant amount of money. Technically, it was illegal anyway, so you don’t feel so bad about ripping him off.
2. Lev Babakin (Russia) → An engineer from the Office of Manned Spaceflight. You were discussing the possibilities of launching people to the ISS with the H-2. He wanted to wait until the H-2 had been more thoroughly tested.
3. Sansuke Takahashi (Japan) → You called in a few favors to help him get on the 1st Japanese National Manned Mission. He owes you one for it.

Appendix 12: The Japanese Delegation

Corporate Scientist → Katsumi Yamaguchi

You are a young scientist, with dreams of one day living in space. That is part of what lead you to specialize in life-support systems. It would be awfully hard to live in space without good life-support systems. So far you know of no way to support a truly closed system life support. For most manned missions there is no need for life-support to be completely closed (there will always be a chance to refuel upon return to base), but for a permanent base there would need to be a more efficient system, since most transports between the base and elsewhere will not only not be refueling the base, but likely will want to be refueled by it. You would love to know how the Chinese plan to do it.

Contacts:

1. Iwo Yamabatchi (Japan) → You remember him from college. He was a political science major at the time. Apparently he has made something of himself since then, because he is a high level official in the Ministry of International Trade and Industry. He is also in charge of this delegation.
2. Cassandra Spence (USA) → An ambassador to the UN. You met her in the cafeteria the first time you were there. You like her. She likes the idea of a completely enclosed life system. Most peopl think it's disturbing. She sounded very enthusiastic about it.
3. Ernst Mendoza (ESA) → An ESA computer systems designer and astronaut. Cute too. You met him at a space science seminar. He seemed slightly stand-offish, but had some interesting ideas about automated-manned spacecraft.

Recognizance:

1. Dr. Wei Li → a member of the Chinese delegation, Dr. Wei Li is an expert on life-support systems. The man is a demigod in the field of life-support, and he's not even completely specialized in the field. You recognize him from a conference you attended in San Francisco, U.S., he was a guest speaker there.

Appendix 12: The Japanese Delegation

Japanese Military → Commander Hiro Oishi

You are a commander in the JSDF (Japanese Self Defense Force), specifically the ASDF (Air Self Defense Force). Your superiors have arranged for you to be part of the Japanese delegation in the upcoming conference, due to concerns that the Chinese may seek to put nuclear weapons on the moon. The prospect of having nuclear missiles aimed at Japan from the moon is profoundly unsettling to them, as it should be. Missiles launched from the moon would be much harder to shoot down or otherwise disable before it was too late.

Contacts:

1. Vilhelm Strauss (ESA) → An ESTEC administrator who wrote a book about colonizing Mars and the moon. He was fairly insistent that a nuclear plant would be necessary for such a venture. Nuclear plant, means nuclear materials, means materials for nuclear missiles on the moon.
2. Lev Babakin (Russia) → This man is active in regards to the International Space Station. You contacted him about some concerns you had about the defensibility of the ISS, but he didn't seem to take you very seriously. He said something about "little green men". You haven't spoken since.
3. Mark Thiir (USA) → This American beat your brother in a GO tournament several years ago. Most Americans have never even heard of GO. Your brother and he have kept in touch since then, and you have met him on several occasions when visiting your brother.

Appendix 12: The Japanese Delegation

Japanese Astronaut → Sansuke Takahashi

You are the 1st Japanese National Astronaut to reach space, and you're proud of it. You beat the ESA by almost a full year. You are proud of that too. Now you want to go further, unfortunately, Japan does not currently have plans to start any permanent colonies or bases off of earth, so you're chances of going further are slim. You hope that Japan will choose to challenge the Chinese position as sole base-holders on the moon, and, while you don't have any real authority in the delegation, perhaps you can convince the delegation head to your point of view...

Contacts:

1. Junko Fujikaze (Japan) → He pulled some strings to get you on the 1st manned mission. You owe him.
2. Lui Shi (China) → Fascinated by the H-2, he approached you about the mission afterwards. He wanted to know what it was like. You said something snappy. Maybe you should have slugged him with a chair.
3. Jean Valjean (ESA) → A diplomat from the ESA. He is a pompous blowhard who keeps trying to get more time on the ISS at the expense of other nations.

Appendix 13: The Russian Delegation

Communiqué

You have been selected to represent your nation before the United Nations "Committee on the Peaceful Uses of Outer Space". Four other delegations, representing the United States (NASA), Japan (NASDA), China (CSA), and the European Space Agency (ESA) are also in attendance. The purpose of this meeting is to discuss the implications of the possible establishment of a permanent Chinese base of operations on the moon. The project has been in the works for the last seven years and is scheduled to be completed by 2015. Your delegation will consist of:

Major Vladamir Ilyovich who is the head of this delegation directly under the auspices of the Ministry of Defense.

Lev Babakin, a specialist in manned spacecraft and life-support systems, who has been working on the International Space Station.

Olev Petrov, a skilled diplomat and negotiator from the Office of International Cooperation.

Andrei Titov, a scientist from the Russian Academy of Sciences. He is a specialist in materials processing and holds degrees in chemistry, biology, and astrophysics.

Ivan Arbatov, a pilot and cosmonaut.

Peiter Budarin who is on loan from the Khazakhstan Space Agency. He is a head administrator from the Baiknur Cosmodrome.

You will all be working together to insure that the interests of Russia are maintained in the international venue. The official position of this nation is to maintain that the Chinese Space Program is incapable of pursuing a safe and reliable manned agenda.

Appendix 13: The Russian Delegation

Major Vladamir Ilyovich

You work for the Committee of Defense Industries (CDI) under the Ministry of Defense. In this capacity, you have access to more information about the Russian Space Agency and its current projects than perhaps any other person on the planet. Your current work, in the modern spirit of international cooperation, has largely consisted of coddling visiting bureaucrats and showing them around launch facilities and research complexes that would have been top secret ten years ago. This irks you. The USSR used to be a great leader in space and now seems to be tagging along for the ride.

Now you have been assigned to a UN conference to discuss the implications of a permanent Chinese position on the moon. The official position of your country is that the Chinese space program is dangerous, untested, and unready for such a risky venture. Historically, Chinese rockets have failed more than one time in ten. The next Chinese launch will be their twelfth manned mission.

You have been aware for some time of Russia's desire to occupy the L4 and L5 positions in Earth orbit, where the gravitation fields of the earth and moon cancel out, providing unique military potential. It has also been clear for some time that the United States is more interested in Mars and thus Russia, also, is more interested in Mars. Both of these positions are more desirable presently. However, just because neither major superpower has plans to inhabit the moon immediately does not mean that either one of you wants the Chinese there.

You've never liked the Chinese personally or politically. You're not racist, but do maintain certain prejudices about most people, be they Russian or otherwise, but if anyone goes to the moon, to Mars, to anywhere, it should be you.

Contacts:

1. Ivan Arbatov (Russia) → He is cosmonaut and pilot. Technically you are his superior, but everyone expects you to defer to him. You have met him several times at Plesetsk.
2. Cassandra Spence (USA) → She is a UN ambassador. You have crossed swords with her in the past at UN conferences. Your opinion of her is dismissive at best. She should be ignored. Too bad you find her very attractive.
3. Jean Valjean (ESA) → One of those "foreign dignitaries" you escorted through the Plesetsk Launch Facility, He seemed far too cheerful and kept asking stupid questions. You would like to have had him shot.

Appendix 13: The Russian Delegation

Lev Babakin

You work in the Office of Manned Spacecraft and Transport Systems for the Russian Space Agency. You have worked with the ESA, Japan, and the United States on the International Space Station for the last five years. You helped design some of the life support systems and crew modules. You're very proud of the ISS. You see no need to go to the moon. Mars perhaps, but the moon is a big rock. A space station makes a much better staging ground to the rest of the solar system and deep space because of the microgravity environment.

The ISS is nearing completion (just slightly over schedule) and will make trips to Mars or the moon much more effective. With the ISS as infrastructure, missions can be assembled in orbit and launched as huge space faring vessels instead of one rocket shot after another of a few hundred tons of supplies. Let the Chinese scrape out a base on the moon for the next ten years. When a massive colony effort arrives from the ISS with enough supplies and structure to build a real base, they'll regret not joining in with us.

The RSA wants you to assess the Chinese manned systems, life-support and the like, and make a recommendation to the UN against it. Call it unsafe. Call it shoddy. Make sure they haven't stolen any of it from us. That sort of thing. Maybe you'll just get drunk with an American and make nuclear missile jokes.

Contacts:

1. Sarah Wilcox (USA) → She is an administrator at NASA. Both of you have worked on the International Space Station. You've also worked together on joint Russian/U.S. ventures, and in organizing cosmonaut/astronaut exchanges. Incidentally, You both really like the idea of colonizing Mars.
2. Junko Fujikaze (Japan) → Keeps trying to "sell" the H-2. He wants to lift ISS astronauts as soon as possible. You are hesitant to recommend the idea to your supervisors until the H-2 is tested more completely.
3. Hiro Oishi (Japan) → This man is a member of the JSDF (Japanese Self Defense Forces). He had some concerns about the defensibility of the International Space Station. From what, you aren't sure. You think he may have been worried about "little green men."

Appendix 13: The Russian Delegation

Olev Petrov

You work for the Russian Space Agency in the Office of International Cooperation. International cooperation is desirable only if Russia gets something in the deal. If other nations agree to help the Chinese to the moon, Russia will have to join in on some front. You don't expect this however. You know from past experience when negotiating with the People's Republic that they take great pride in unilateral accomplishment. That is, they will want to do everything on their own.

Your position on this delegation is to find a way to keep them off the moon, or get everyone on the moon at the same time so that no one country has a major position advantage. The US once laid claim to the moon "For all mankind". So it's all or nothing time. Russia can't allow the Chinese to place a national colony on the lunar surface. They won't want to let anyone else in. You've negotiated from tough spots before, but this is ridiculous.

Personally, you don't think it's a big deal. If the People's Republic needs a moral boost, let them have it. Once one nation's on the moon, others will follow. It won't be that much of a head start. Besides, even if they do put missiles on it, we've had missiles pointed at us for 40 years. What's a few more.

Contacts:

1. Wolfgang Mueller (ESA) → He is an operations engineer at ESOC. You've coordinated a Russian spacewalk through him.
2. Peiter Budarin (Russia) → An administrator at Baikonur, He's always bothering you about money. You always send it a few days late so he remembers who's in charge. It's a fun dance.
3. Qin Sun (China) → You've negotiated with him before, it's like negotiating with a wall. He is polite, but stubborn, and he refuses to give on most issues. You'd think he was afraid of death by compromise. You got the short end of a deal in 1998 by selling junk manned spacecraft components to him. It somehow kick-started this whole program.

Appendix 13: The Russian Delegation

Andrei Titov

You are a Professor of Chemistry specializing in materials processing. You have been working with non-terrestrial matter (specifically lunar dust, some Mars soil samples obtained from the US, and various meteorites) at the Institute for Space Research (IKI), part of the Russian Academy of Sciences. You have academic background in astrophysics and biology, and dabble in model rocketry. You have always been fascinated by space programs, especially the United States' SETI project. You know that there's life out there just waiting for us to find it.

You have been assigned to this delegation to help assess the possibilities and probabilities of Chinese success in a permanent moon colony venture. Also, you have worked with other national space programs in the past, and the RSA feels that you will be known to other delegates and perhaps friendly with them. You aren't a spy and don't want to be, but then, you aren't a diplomat either. Most of your colleagues don't think the China is capable of completing their plans, but you're not so sure.

If they do put a moon base up, maybe they'll need a materials processing chemist.

Contacts:

1. Dr. Wei Li (China) → This man is extremely intelligent, but sometimes he comes to you for assistance with materials questions. After all, you are the specialist in Materials.
2. Vilhelm Strauss (ESA) → An administrator for ESTEC. He really seems to want to go to Mars and the Moon. He wrote a book about it.
3. James Oryx (USA) → An American Scientist, He wrote to you asking some rather intriguing questions about superconductor theory. It made you think... Not many people come up with questions that make you think much anymore.

Appendix 13: The Russian Delegation

Ivan Arbatov

You are a Cosmonaut. You are a hero of the Russian Space Agency. You have spent time on Mir and the International Space Station, and logged more hours in space flight than any other Russian cosmonaut. Unlike many of the other people who travel to and from the stations, you are not a scientist, or only marginally so. You are a pilot. You began your career as a military test pilot and have had the opportunity to test new Russian designs in rocketry and earth return vehicles. You love your job.

Contacts:

1. Major Vladimir Ilyovich (Russia) → A career military man who has been relegated to playing footsie with foreigners. He is technically your superior, but you are far better known and respected. You like to take advantage of this. It really pisses him off.
2. Ernst Mendaza (ESA) → An astronaut and a scientist. You spent two weeks with him aboard the International Space Station. He didn't rat on you for the vodka, and you didn't rat on him for the new Duke Nukem game on the \$5 million Unity computer system. All in all, a swell guy.
3. Sen Tsi-tzu (China) → An administrator at the CNSA. You called him up and told him you wanted to fly the Long March. You want to be the first non-Chinese to pilot one. He hasn't told you no yet, but he hasn't told you yes either. Maybe if you keep bothering him about it.

Appendix 13: The Russian Delegation

Peiter Budarin

You are the Second Project Administrator of the Baikonur Cosmodrome in Kazhakstan. You are not supposed to be here. Your boss, Gregarin Petrovich, was invited to this conference but was too involved in his social calendar to attend. He sent you in his place.

Several years ago, Baikonur was all but destroyed due to a lack of funds. The military who maintained the place began looting it and any rockets that rolled into the area. Russia finally realized it needed Baikonur and paid its back dues. Though they are now paying you, relations are still strained.

Contacts:

1. Techyo Mitsuvara (Japan) → A NASDA administrator, he wanted to launch from Baikonur. Though you never said no, negotiations wound down until he stopped asking.
2. Olev Petrov (Russia) → Office of International Cooperation. He pays you, well, he releases the funds to Baikonur to keep it running and its staff paid. You always have to remind him to send the check, but he's always late anyway.
3. Vilhelm Strauss (ESA) → A Belgian who has some kind of club that wants to use Baikonur as a personal launch site for hobbyists. Or something like that.

Appendix 14: The American Delegation

Communiqué

You have been selected to represent your nation before the United Nations "Committee on the Peaceful Uses of Outer Space". Four other delegations, representing the European Space Agency (ESA), Japan (NASDA), China (CSA), and Russia (RSA) are also in attendance. The purpose of this meeting is to discuss the implications of the possible establishment of a permanent Chinese base of operations on the moon. The project has been in the works for the last seven years and is scheduled to be completed by 2015. Your delegation will consist of:

Captain Jerrod Helms is a member of the U.S. Space Command. He will be representing the military perspective during this conference.

Sarah Wilcox will be representing the administration of NASA.

Cassandra Spence has been part of the U.S. Diplomatic Core for some time and has experience in the U.N. She is officially in charge of the delegation.

James Oryx is also from NASA, representing the scientists and engineers.

Mark Thiir is a civilian contractor with expertise in controls and power systems. He is here to evaluate the feasibility of the Chinese plan from a power stand-point.

Kevin Agwanda is a shuttle astronaut and has spent time aboard the International Space Station

You will all be working together to insure that the interests of the USA are maintained in the international venue. The United States does not have any interest at this time in pursuing a mission to the moon or participating in any international venture of that nature. However, America has no desire to see any national entity obtain control of the moon at this time.

Appendix 14: The American Delegation

Captain Jerrod Helms of the U.S. Space Command

You have been appointed to the U.S. delegation for the upcoming conference to represent the military. The official stance of the U.S. Military is that China cannot possibly be allowed to have an independent moon base. Even if they share it with the other nations, it would be too easy for them to hide weapons of mass destruction there. The last thing we need is for the Chinese to have nuclear weapons pointed at us from the moon.

If the Chinese cannot be made to desist in their efforts to initiate a moon they must be convinced to allow the U.S. equal position in regards to that moon base. The potential threat of an independent Chinese moon base is too high.

Personally, you think it would be a wonderful means of stirring the U.S. to get off their collective butts and do something, but such are not your orders... , and you always follow your orders.

You are also an engineer, and love hardcore sci-fi. Want to see mankind colonize the solar system, but want U.S. to be at the fore front. Independent leadership of humanity is not necessary, but membership in the leadership is. You do not accept that the U.S. needs to accept a position of inferiority to anyone.

Contacts:

1. Tachyo Mitsuhashi (Japan) → An administrator at NASDA who found your science fiction fan pages on the internet last year. He e-mailed you and you've been communicating ever since.
2. Wei Li (China) → Writes novels under the pen name "Lee Wade". One of your favorite authors. He is also a multi-faceted scientist whose papers you have read as well. You sent him some fan mail and have corresponded two or three times.
3. Kevin Agwanda (USA) → An astronaut and MD who specializes in pharmaceutical chemistry. You met him at NASA. You find his work fascinating and love to talk with him about space.

Appendix 14: The American Delegation

NASA Administrator Sarah Wilcox

You have been part of NASA since you graduated from college in '98 at the age of twenty. Since then you've risen quickly, now you are one of the senior administrators. The official position of NASA is threefold:

- 1) Mars is infinitely superior to the Moon, as a future place for a colony.
- 2) The Chinese don't have the technology necessary to make an economically feasible space colony.
- 3) Even if the Chinese did have the technology to make it feasible, that wouldn't change that Mars is inherently superior as a place of human habitat. There is already sufficient gravity to establish a clear orientation, and to reduce accidents significantly. There is an atmosphere; habitation complexes need not be as pressure resistant on Mars. Plus a plethora of other good reasons for choosing Mars over the Moon.

Let the Chinese have the moon if they want. It makes no difference to us.

You are highly intelligent, competent, and you know it. You have little to no tolerance for incompetence or stupidity in your underlings. (and if they come to a different conclusion that you then obviously they're wrong, unless they can prove otherwise,... yesterday.)

Contacts:

1. James Oryx (USA) → You've met him in your work at NASA. The man is an unrepentant freak. He probably was part of some silly sci-fi club while he was growing up.
2. Sen Tzi-Tsu (Japan) → A rocket propulsion specialist at the CNSA. He was instrumental in designing the CZ-2E(a). You have spoken to him about it in passing. NASA needs a heavier lift vehicle.
3. Lev Babikin (Russia) → An administrator at the RSA Manned Spacecraft Division. You have arranged missions through him for joint US/Russian programs and astronaut exchange. You have discussed the possibilities of going to Mars and staying. You see eye-to-eye.

Appendix 14: The American Delegation

National Diplomat -> Cassandra Spence

For 8 years you have been part of the U.S. Diplomatic Core attached to the UN. You are not affiliated directly with the space program, but have had experience dealing with it in the past. Your job here is to restrict the possibility that China will go to the moon.

You are 37 years old. For the past 18 years you've been active in Earthshield, an environmentalist group that seeks to stop humanity from abusing the Earth. You dislike the space program. It is the epitome of wasted resources that would be better spent finding efficient CLEAN fuel sources, and cleaning up the damage we've already done to our planet. Not only does the space program waste resources, but it also contributes more to the problem with every launch. The noxious gases that result from the spent rocket fuel poison the air, and the wasted sections of rocket that burn up in the air don't help either.

If the Chinese permanently occupy the Moon, it would be a disaster. They would need to arrange regular launches to supply their colony, and the effects on both the local, and global, ecosystems would be terrible. You seek to have the Chinese stopped from their actions. There must be no reason to increase the number of launches. If anything, it would be better to stop launches altogether.

Contacts:

1. Mark Thiir (USA) → He's done some work with alternative energy sources with Earthshield.
2. Katsumi Yamaguchi (Japan) → She is a life-support systems scientist. You met her in Paris at a UN building. You talked for hours about clean energy and efficient systems.
3. Vladamir Ilyovich (Russia) → You have met him at over the conference table before. He is a stubborn man with a violent streak, and he always stares at your chest. Needless to say, you have never seen eye-to-eye.

Appendix 14: The American Delegation

NASA Scientist -> James Oryx

Personally, you think it's really cool that the Chinese are going to start up a permanent lunar base. Maybe now the U.S. government will get its collective butt in gear and give you (NASA) some more money so that you can do something like it. Although Mars seems to be a better option than the moon, at least if you want it to become self-sufficient faster.

You are extremely curious about almost everything. Sometimes it drives other people up the wall. Other times people think it's pretty darn cool. You graduated from WPI in 2000 with a degree in Electrical Engineering. While you were there you taught yourself all about ham radio operation and construction. You like having your own radio that you can use to talk to friends all over without paying a phone bill. It's great. Oh, yeah... You also played in several LARPs while you were in school. You never got into the table-top stuff, but you liked the live-action games.

Note: To the outside observer you seem extremely disorganized. When you look around you see that everything is where you put it. You never have any problems unless someone else tries to organize your stuff, then you can't find anything for weeks.

Contacts:

1. Dr. Andrei Titov (Russian) → The man must know everything about material science. You were working on a project involving superconductors, and thought up some questions which seemed to be unanswered by current superconductor theories that you've seen. You sent a question to Dr. Titov, and received an answer back in a relatively short period of time, telling you why exactly it all worked that way. You were impressed.
2. Sarah Wilcox (USA) → You've met her back at NASA. She is stuck-up and full of herself. Someday when you get tired of working for NASA you'll arrange for her to be taken down a peg or two.
3. Vilhelm Strauss (ESA) → You met Strauss going on 6 years ago, back when you were doing you're MQP in the Netherlands. You agreed with a lot of what he was saying about space. You've tried to keep in touch, but you only manage to get around to talking to him a few times each year.

Appendix 14: The American Delegation

Department of Energy -> Mark Thiir

You specialize in control systems and power supply/generation. You have been contracted by the government to assess the viability of a possible Chinese permanent Moon base in the near future. To efficiently supply power to a permanent lunar base the Chinese would need to either :

- a) Transport fuel to the moon.
- b) Build a nuclear reactor, fusion or fission.
- c) Use another form of alternative energy such as solar power.

1. Transporting fuel up to the moon as a power source there would be horribly inefficient.
2. Building a fission reactor would work. (No efficient fusion reactors developed yet.)
3. Large arrays of solar cells or other alternative energy source.

Think about the possibilities, which is most likely? Definitely the fission reactor option. This could be bad, after all, it takes much less uranium to make a bomb than a reactor.

Contacts:

1. Cassandra Spence (USA) → You've met her before while working with Earthshield. She is a fanatic environmentalist, and doesn't understand the benefits of the space program. You want to help the environment too, but some things are too important to not do.
2. William Smythe (ESA) → An engineer with ESTEC's Manned Spaceflight Programme Department. You met him at a symposium in Boston on theoretical spacecraft design mechanics. Neither of you were presenting, only attending, so you ended up spending a lot of time together at the bar. Some of his aerodynamics designs are incredibly cool.
3. Iwo Yamabatchi (Japan) → A representative of Japan's "Ministry of International Trade and Industry", who contracted you to work on some robotics systems while you were in Japan several years ago.
4. Hiro Oshi (Japan) → A JSDF commander whom you met through his brother while you were in Japan. You beat the young man at a game of GO, whereupon he took you home for a good meal and an introduction to his family, Hiro among them. Apparently, an American skilled at GO is rare enough to cause comment.

Appendix 14: The American Delegation

Dr. Kevin Agwanda

You are an astronaut and medical doctor. You hold degrees in medicinal chemistry and biology, and received your MD in New York. Your work has mostly involved the effects of microgravity on the human body, but you have also worked on the creation of zero-gravity crystalline pharmaceuticals.

You love puns and word plays. It really makes your day when you can get everyone around you to groan in dismay at your punningicity.

Contacts:

1. Jerrod Helms (USA) → He is a Captain in the US Space Command whom you met at NASA. He loves space, loves rockets, and is always curious about your research. He is nice, is sometimes annoying.
2. Qin Sun (China) → A UN ambassador that you met briefly while studying in New York. He was admitted into your care with chest pain when you were an intern. Turns out it was gas. He probably doesn't remember you.
3. Jon Kim (China) → China's first taikonaut. You attended his congratulatory banquet in Beijing. You told horrifying medical stories at the dinner table. He laughed.

Chinese Rocket Explodes on Launch Pad !!!

Disaster occurred today at the Jiuquan (East Wind) launch facility in China. A manned CZ-2E(a) rocket exploded on the launch pad killing two taikonauts. The explosion, which rained debris over several square miles, also destroyed the launch pad and damaged several buildings in the area. The mission was to be the nation's 21st manned launch, and its 7th lunar landing.

The rocket carried surveying and scientific equipment for testing undisclosed sites for the future location of a Chinese moon base. The payload is also rumored to have included a small scale life-support system designed by Dr. Wei Li and populated by two white mice.

Officials at the Chinese National Space Agency have not determined the cause of the explosion, nor disclosed the names of the pilots. Damage to the Jiuquan Launch facility is reported to be extensive. At this time, the Jiuquan facility was the only national location capable of supporting China's manned space program.

The Chinese government have not yet issued a statement as to the future of their space program in light of this tragedy.

Appendix 16: Character Communications

Dave Martin (**Commander Liu Mao Cheng**)

I contact my government/(powers that be) and inform them...

...of the ESA/RSA/NASDA joint venture/flight to Mars scheduled to take place in about 10 years, the availability of the two seats aboard, and the cost per seat to go (you were there so I wont get into the details). I ask how they wish us to proceed in that matter. If they think it would be a good idea to get in on, I ask how much funding I conceivably have to work with.

...of the possibility of getting additional rockets and economic support from Japan through Junko Fujikaze. This time it would be through more "legal" means. Japan asks for in return...Shared space with in OUR (as in China's) lunar station as well as mining rights to parts of Manchuria. I also mention that I'm not sure how much Junko can be trusted, as he told myself one thing and then Japan's government said another. This leads me to believe one of two things, a.) he isn't informed well enough to be worth while or b.) he is intentionally trying to deceive our delegation. I have as of yet not confronted him with accusations though.

...they know about the availability of water and want their cut. In return they offer further economic support etc...We have reached an agreement that neither delegation will mention the possibility of lunar water to the rest of the assembly. We hope that by doing this, the water wont become something that everyone tries to jump in on to stake their claim. We, as of yet, have not told Japan that we WILL give them a cut but rather have told them that it could be discussed etc...

...of the tendencies of other delegates to put words into our mouths and then accuse us of things (even before we get to correct the words they put in our mouths, I give the example of the Satellites at L4 and L5 (I believe the points were called, but would defer to the science advisors for their names) that could then conceal weapons...)

Request any new instructions, advice, points of view, etc... and how do you wish us to proceed?

Commander Liu Mao Cheng

--

Dave

Appendix 16: Character Communications

Dave Martin (**Commander Liu Mao Cheng**)

Re: Brian Dewhurst (Dr. Wei Li)

> I'd like to point out that the inclusion of missiles to our lunar base, in
> my opinion, needlessly jeopardizes the safety of our personnel, works
> against our credibility and doesn't seem to serve any tactical purpose other
> than to strike targets in space. Placing weapons in our lunar base will
> merely encourage our opponents to do the same and will ruin any hopes we
> have of peaceful coexistence with our future lunar neighbors. I will of course
> stand by our parties decision as greater minds than mine are at work here,
> but I think this isn't the most diplomatically sound move we could make.

1.) We aren't including Missiles in this lunar base and if you were actually working on Lunar base project you would know this. So you need not worry about them.

2.) We also haven't said anything to this effect nor has the issue come up yet. It therefore wouldn't change our credibility at this time.

3.) I have been part of the Moon colonization plan since its inception and I won't see these foreigners bring it down. Nor will I see them take advantage of China's hard work simply on the grounds that they don't get an equal say in the matter. If they had put the work in I suspect they might have similar feelings. It's one thing to throw money around, but it's another to invest the time and labor.

4.) You are a scientific advisor to our delegation and have done an admirable job. You are quite versed in many areas however "tactics" isn't one of them (I would suggest you stay out of that department). You also are not in a position to make diplomatic dissections or stances for China.

I expect you will remember your place when the conference resumes today.

Commander Liu Mao Cheng

PS

ooc:

Brian, I'm not being at all bitchy to you. I'm not even trying to be that bitchy to your character. I'll c-ya later.

And as an aside, I really enjoyed playing. The game is "still going" among a few of us (not seriously, but rather as a topic of discussion and debate etc...)

--

Dave

Appendix 16: Character Communications

Nikki Vega (**Cassandra Spence**)

The Chinese delegation is proving difficult to convince of the validity of a reevaluation of their technology. I need information on US and Chinese launch emissions and any information you may have on fuels used in each program, with emphasis on alternative fuels used by the US. [ooc: I just need validation here...have I been successful in convincing NASA to do alternative fuels research? It would be great if we had a promising hydrogen-drive prototype...]

Geoff Greene (**Captain Jerrod Helms**)

At approximately 2:00am on the night after the first summit I'm telling my government that an anonymous source on the Chinese delegation has told me that his country is planning on putting nuclear weapons on the moonbase. Please forward this to the other members of my delegation, since I don't know their email addresses.
Geoff Greene/Captain Jerrod Helms

Brian Dewhirst (**Dr. Wei Li**)

this isn't exactly directed to my gov't but I figured you'd want to be aware of it.

I'm writing up something informational for my diplomats (dave and ross) so I'll be having some of my research faxed/emailed up to me...

my secondary reason for this is I intend to defect to england. After hearing from lenny) that my gov't intended to place missiles in our lunar base I finalized my decision. I've spoken with William Smythe (Mike Galvin) and I've told him a great deal about whats going on. I've also informed Jerrod Helms (Geoff Greene) that my gov't plans to install missiles in the base. [I went to his room at 2 am along with an advance copy of my next book. I was very careful about getting killed w/ regards to both meetings... ie those are the only two souls I've told and I tryed not to be overheard etc. I also passed certain documents on to William (mikey).

Appendix 16: Character Communications

Dr. Wei Li, hoping to live out the next few months.

The following is our in-house timeline. we anticipate a 2 year delay via a variety of concerns, but we're still shooting for 2013. This is where the 2015 date comes from...

2007: conclude surveying

- Lunar orbiter launched which will map the moons surface, paying particular attention to locations [bla bla bla, file attached].
- final landing/base site selected.
- send manned mission to site, mission will return after site is confirmed appropriate.

2008:

- finalize biosphere designs
- launch of unmanned supply vessel to confirm it can safely be landed on lunar surface. will contain construction material and basic tools.

2009:

- launch large supply of army-ration style food and water to final landing site.
- launch spare return vehicle to landing site.
- send manned mission to the moon to begin construction of basic habitat. team will return after 2 months.

2010-2011:

- three to 5 more supply missions to transport up additional material inc nuclear reactor, more food, additional tools buildint materials etc, scientific gear, clothing sheets etc, water reclamation gear, biosphere gear... [bla bla, document enclosed with more details].
- two three month manned missions to complete base camp and set up minimal scientific experiments [bla bla, data enclosed]. after missions, an experimental airtight greenhouse, water reclamation facility, nuclear reactor, and pressurized human habitats should be in place but unfurnished/liveable only for short periods in emergency.

2012:

- scouting missions around base find best sources of essential resources such as soil found to have [bla] and concentrations of water (mission will be constructing base near southern pole).
- additional communications satelites will be set up in lunar orbit to facilitate longer range exploration.

Appendix 16: Character Communications

2013 (2015):

- permanent crew sent up in 2 flights of 4 men each. crew will expand greenhouse, continue construction with periodic resupply. [bla bla bla]
- base declared operational, suggested name: Mao 1

2014 (2016):

- methods for lunar fuel refining completed
- frontier hospital finished. increased crew size will necessitate such to deal with a larger number of construction related boo-boos [medical bla bla].

2015 (2017):

- large scale oxygen production plant up and running.
- most buildings are buried under an additional 10 feet of lunar regolith with the aid of [bla machinery] to provide increased safety against radiation and micrometeorites.
- 'lunar concrete recipe' perfected.

2016 (2018):

- lunar launch site completed a safe distance away from colony. Allows for future flights after refueling to other extraterrestrial locations. erection equipment for rockets won't be ready at this stage so vessels landing here that wish to take off must possess VOTL capability as expected. possibility of future construction of more advanced launch facility in future [bla sketchy plans]

2017 (2019):

- lunar mining and industry has increased to the point where additional structures can be constructed with 90% lunar supplies. crew reaches 20 with 5 to 8 visiting crew. crew will periodically expand as base facilities allow. return vehicles receive periodic maintenance to provide evac in case of emergency.

[Dr. Li would have sent a more detailed, more accurate document, but Brian isn't as cool as Wei]

I'd like to point out that the inclusion of missiles to our lunar base, in my opinion, needlessly jeopardizes the safety of our personnel, works against our credibility and doesn't seem to serve any tactical purpose other than to strike targets in space. Placing weapons in our lunar base will merely encourage our opponents to do the same and will ruin any hopes we have of peaceful coexistence with our future lunar neighbors. I will of course stand by our parties decision as greater minds than mine are at work here, but I think this isn't the most diplomatically sound move we could make.

Appendix 16: Character Communications

Lenny Frank (**Sen Tzi-tsu**)

any word on how long that would take us to repair and get working, or what caused the crash, from a rocket point of view?

since im the rocket scientist, as it were, this might be good to know, since im going to get grilled on a stick tomorrow. :)

thanks. :)

-elf

Message to Game Master from **Olev Petrov**, diplomat, Russian delegation.

If I act fast we will hold the fate of the Chinese in our hands to toy with them as we wish letting them succeed or not at our whim.

So, I must return to Moscow immediately, may be able to show up briefly to instruct my team and pass on the delegation leadership to my top scientist, But clearly the Chinese will now seek to try to obtain the Baikonur space cosmodome from Khazahstan. Technically we are in violation of our leasing agreement due to being arrears in payments. I must get an executive order signed releasing all arrears and future payments for the next year and hand deliver it to the Khazahstani authorities in the next 24 hours. If I do not do that the agreement we have made with the Japanese and the ESA will be breached since we will not be able to support manned missions of any kind. I will also need to mobilize detachments to conduct war games on the southern border of Russia while the Cossacks are making up their minds about the new 10 year lease we will offer them on generous terms.

Meanwhile, the rest of the delegation must stall the chinese in acting first and I want them to make sympathetic entreaties to the chinese and suggest that we want to help them stay on schedule, soothe them into brief inaction, while I swing the noose around their necks and prepare to stab them in the back for old times sake. I doubt the Japanese will object, but keep an eye on the Europeans- they alone could save the Chinese now by offering them access to the French Launch facilities in Guiana if we can hold Baikonur. I do not think the Brazilians, the Chinese western technology Allies, have ever been allowed to get into the launch end of

Appendix 16: Character Communications

the business and building them up would take as long as repairing the chinese facilities.

Once we lock up Baikonur the Chinese will have to repair their base to proceed with their plans and this will delay them 3-5 years, and that is enough to allow us to recoup our past humiliation by the Americans on the Moon landing by setting up a "practice" landing site on the moon as we set up to go to Mars, thus preempting the Chinese on the Moon and the US on Mars. Ah a glorious day is coming for Mother Russia indeed.

While I am at home I will assess the current state of the Energia rocket production facilities and see if the Buran shuttle design can be strapped to the new generation of 2nd stage launchers and reach the moon. It is time to dust off all those old designs as time is short and the money is about to flow in. We need foreign exchange desperately, so I will be able to get whatever I need from the Executive office of the President. He has shown a willingness to rule by decree before in a moment of emergency or opportunity.

It bothers me that the new drive we will be developing will be fitting to the Ariane 5 and H2 systems and we have nothing of our own to fix it to. If they pay for its development they will own it, but a second generation version done by the same company for ourselves, after doing the foreign contract fitted only to our own best heavy lift first stage, would position us well for the future.

Game master, send this communique to all my delegation members and tell them that I will appear only briefly today and want them all to be thinking about how they can best contribute to our success in carrying out this strategy.

We need to set up to use the Japanese and Europeans to leapfrog their technology and settle old scores with the US and People's Republic of China.

Olev.

>From Jean Valjean,

My sources in Switzerland and the Netherlands tell me that Olev, the Russian diplomat is under investigation by the World Bank and the Russian Authorities for "investing" large amounts of foreign aid money to Russia in European Chocolate companies on behalf of a secret group of high ranking officials. He seems to be able to get virtually anything he wants

Appendix 16: Character Communications

from the DUMA these days and has influence over the executive office too, much too much for someone of his rank to have under normal circumstances.

There is an Interpol investigation going on and we think that the Top Russian officials will sacrifice Olev to cover their own involvement in the scandal. I suggest that you hold him in Austria for questioning for the next few days, not let him escape to Russia with his ill gotten gains to be protected from extradition by his friends and accomplices.

His tongue wags freely when under the influence of French Wine and Vodka--the combination I offered him at dinner last night while he was distracted by the young lady he was trying to impress--an interpol agent. She kept saying he was cute but could not afford her expensive tastes--described herself as a chocoholic. Before you knew if he was bragging about how well off he was, how sure he was that she would never run short of her favorite treat and how soon there would be several plants in Russian churning out cheap imitations of expensive European candies for foreign exchange.

The cheek of this fellow, taking our humanitarian aid, diverting it back to invest in the west to steal our secrets and competing with us in the future. I do not trust him as a partner in future dealings any more and insist that you expose him for the cad that he is to the other people at the conference. Tell the Interpol agents watching him that they should be on the lookout for any sudden departures from Vienna to Moscow by this fellow. If he remembers any of what he said last night he might be on the run.

I want to offer my condolences to my Chinese Colleagues on the loss of life and bitter disappointment these events overnight must represent.

I understand that the Japanese Scientist on the delegation has been dispatched directly to the site of the disaster to assess the level of damage and offer assistance from that neighboring land in the reconstruction of the base, which is expected to take 3-5 years. She will be sending in her report by messenger before the end of the conference

Given the pace of events I am sure that the Chinese will not want to simply rebuild, but may want to lease facilities from The French in Guiana as does ESA. My services to arrange such a "joint venture" at the new International space Flight Center we French are building on the site for use by many nations with logistics and support needs could be arranged for a suitable "finders" fee and introductions subsidy. A French and Chinese joint venture should be able to keep the Chinese Lunar program on schedule

Appendix 16: Character Communications

and I understand that the logistical requirements of sustaining the base will be large so the Ariane 5 can also be rented to help out while the problem in the Chinese Launch Vehicles are being sorted out.

Yes, a venture to build cooperating and adjoining bases on the Moon, a large one for the Chinese and a modest one for ESA, really just a refueling depot (mining Oxygen) and transshipment point, a lighthouse and rescue point for space farers on their way elsewhere is all we have in mind. Of course, the stores we would stockpile in lunar facilities might be of use to the Chinese colony as it grows should there be some temporary shortfalls of supplies as they build toward self sufficiency.

Please convey this offer of international aid and comfort in getting their program back on track- and try to stay on schedule.

>From well wishers in Europe who understand that a spirit of peaceful coexistence sometimes requires extending a helping hand. Generosity in time of need is generally amply rewarded and as China is the new emerging economic super power we anticipate friendly trade relationships on Earth and in Space and we go forward together.

Please contact our Friends at NASA and say that their lack of enthusiasm for a Mars mission surprises us, but we have thought of a way to help them avoid humiliation by the Chinese at low cost.

We think that the new Ariane 5, even without the new 2nd stage booster, would be able to get an American shuttle to the Moon.

Your ship seems to be designed to be strapped on to many types of boosters, and although we consider it too heavy to be practical in the long run, with a crew of 4 and reduced life support requirements we think we can get a crew there and then support it with supply missions using the same booster in unmanned missions.

We have a small presence in mind, but one arriving about the same time as the Chinese can get there in force given their recent setbacks?

Are you up for a new Moon Race? No one else seems interested in the Moon, but we think it is important, at least symbolically, to send the Chinese a message. Your money and Astronaut experience, a joint crew and our boosters could do the job fast.

Given the ISS in place now we can sustain a presence on the moon- the way Werner Von Braun wanted to do it in the first place. He never liked the idea of Apollo as the technology was not going to allow those who reached the moon to stay, if a space station was not done first.

Appendix 16: Character Communications

Well, between us we now have all the pieces to do it right the way the brilliant German wanted to do it from the start.

I propose a joint venture but of course, unless you will want to alter your launch facilities in Florida to fit the Ariane 5, we will have to launch from Guiana. I can arrange that, if you like.

Game master, send this to both the ESA and NASA delegations.

Appendix 17: LRPG Conclusions
Based on data from this game

China LARP Conclusion

In 2006, when China began its drive to the moon, a conference was called to discuss the implications of a permanent human presence on the moon. The conference was attended by the “Big Five” space agencies, consisting of the USA, the ESA, China, Japan, and Russia. The consensus of that conference began to take shape as an interest by the international community not in the moon, but in the planet Mars. China was unwilling to accept international cooperation in its moon mission, and the rest of the international community was unwilling to mount a competitive venture. According to international law, use of any facility constructed on the moon would be open to all nations, though China felt that its unilateral approach to the project allowed the nation a modicum of control over the lunar base.

During the conference, a manned Chinese rocket exploded on its launch pad, killing the taikonauts involved and damaging the facility. China’s program would have been slowed considerably had they not obtained Russian permission to launch from the Baikonur facility in Kazakhstan until repairs could be completed. In return for their cooperation, the Chinese government agreed to aid in the construction and maintenance of a joint lunar launch facility to be used as a stepping stone to Mars.

A joint international program, spearheaded by the Japanese and including the American and European space agencies, began its drive to Mars via the moon. International cooperation on rocket design and a sharing of infrastructure boosted the program to the moon in three short years. The design of a nuclear second stage for use with the Ariane-5, H-2, and Titan-4, 2 years later, opened the way to Mars, and increased the heavy lift capacity enough to establish a strong base of operations on the moon.

As the Japanese, Americans, and Europeans were designing the nuclear second stage, China established the beginnings of an underground inhabited complex, powered by a small nuclear plant. The base included habitation, scientific, and industrial complexes. China began the first full scale exploitation of the moon with a portable plant for the creation of concrete from the lunar regolith. Oxygen supply lines from Earth dwindled to nothing as oxygen generation became feasible. China did place conventional weaponry on the moon, though it was never used and never discovered by the international community.

The international launch facility which was established on the lunar surface did grow from a simple base of operations into a permanent manned facility and is rapidly becoming self sufficient. After the initial push, China seemed delighted to sell its proven technology to the international effort, helping them to develop a base of their own.

Stepping from the moon to Mars proved to be within the abilities of the chewing gum and baling wire program of the Russians. Instead of designing new equipment for use on the Martian surface, Russia succeeded by purchasing Chinese lunar technology and jury-rigging them for flight to and use on Mars. This method beat the International attempt at Mars by nearly a decade. Unfortunately, the Russian program was designed only to set down in a single launch window, allowing for only five days of excursion after several months of travel. Further programs by the

Appendix 17: LRPG Conclusions

Based on data from this game

Russians to return to Mars and remain there met obstacles at design and conception. Much like the Shuttle Buran, the Russian program never fully materialized and was scrapped by the time the International program had succeeded.

The Chinese were more careful, not rushing to Mars as did the Russians. They sent a token taikonaut with the first Russian mission, but for the next eight years sent only unmanned probes to the red planet, solely for the purpose of determining the best locations for a permanent Martian base. Four years after the launch of the international expedition the Chinese launched their own Mars expedition using a nuclear second stage similar to the one designed by the Japanese, Americans, and Europeans, in conjunction with their LM-3D rocket.

Problems arose in both programs at early stages. Preliminary tests of the nuclear second stage by the Japanese led agenda were unsatisfactory and nearly led to the cancellation of the program after the first few prototypes exploded during testing. Meanwhile, frictions between the Russian and Chinese governments caused numerous delays in the launch schedules. The twenty year, 40 billion dollar international plan ended up costing slightly in excess of 65 billion dollars over 25 years. The United States accounted for most of the excess spending, which led to allegations of fraud and international trade violation. The United States covered some 15 billion of these losses with an increase in their national contributions, although Japan was required to provide the remaining 10 billion to cover corporate contracts.

With international support, the Kourou launch facility in French Guiana became the leading space port in the world, capable of launching any manned vehicle (and several additional heavy capacity lifters) built by the USA, ESA, and Japan. Later support from the Russian government brought about modifications to allow for Energia launches from the same facility.

Dr. Wei Li managed to avoid assassination at the hands of Chinese or Russian agents and lived for many more years doing research in the U.S. and England. Sadly, Junko Fujikaze was not quite as lucky. He was arrested three years after the conference on charges of industrial espionage; He had sold the plans and technology necessary for construction of the H-2 rocket to the Chinese. He spent the next 25 years in a prison cell, and the space technology company that he formed with his ill-gotten money was seized by the government of Japan, and its assets were sold to the industry. Everyone else continued on much the same as before.

Appendix 18: Completed Character Questionnaires

International Space Policy: The Game
The Chinese Conundrum
Character Questionnaire

e-mail: shaughnb@wpi.edu, wolfus@wpi.edu

Name: Catherine Email: ixion

All of these questions are optional. They are to help us to assign you a character which you will play successfully and enjoy playing. Answer all or only those which you deem necessary. If you do not answer any questions you may not get a role.

Are you? Male Female

Would you prefer to play a? Male Female

Can you spare a Saturday and Sunday afternoon for 3 hours each? If we provide lunch?

What is your Major: Undecided / Math and Economics

Rock, Paper, or Scissors? Why?

Paper, since most people throw rocks... ☺

Can you fake an accent? Can you badly fake an accent? Which ones?

Oh... No

Can you bullshit? Well? For example?

On a scale of 1 to 10, ten being the most desirable, which character traits would you like to play in a character?

Honest	<u>5</u>	Political	<u>10</u>	Optimistic	<u>10</u>
Outgoing	<u>6</u>	Ambitious	<u>5</u>	Analytical	<u>5</u>
Stubborn	<u>10</u>	Gullible	<u>1</u>	Married	<u>5</u>

Which description(s) would best describe the character you want to play?

Administrator, Academic, Diplomat, Engineer, Explorer, Military, Politician, Scientist

Any other preferred character traits, nationalities, etc. which you would like to play or would refuse to play?

International Space Policy: The Game
The Chinese Conundrum
Character Questionnaire

e-mail: shaughnb@wpi.edu, wolfus@wpi.edu

Name: Richard Oterc Email: _____

All of these questions are optional. They are to help us to assign you a character which you will play successfully and enjoy playing. Answer all or only those which you deem necessary. If you do not answer any questions you may not get a role.

Are you? Male X Female ___

Would you prefer to play a? Male X Female ___

Can you spare a Saturday and Sunday afternoon for 3 hours each? yes If we provide lunch?

What is your Major: CS, ME, AS

Rock, Paper, or Scissors? Why?

Scissors. I just always seem to start that way.

Can you fake an accent? Can you badly fake an accent? Which ones?

I'll try, my very best

Can you bullshit? Well? For example?

YES, YES I CAN...

On a scale of 1 to 10, ten being the most desirable, which character traits would you like to play in a character?

Honest	_____	Political	_____	Optimistic	_____
Outgoing	_____	Ambitious	_____	Analytical	_____
Stubborn	_____	Gullible	_____	Married	_____

Which description(s) would best describe the character you want to play?

Administrator, Academic, Diplomat, Engineer, Explorer, Military, Politician, Scientist

Any other preferred character traits, nationalities, etc. which you would like to play or would refuse to play?

International Space Policy: The Game

The Chinese Comundrum

Character Questionnaire

e-mail: shaughnb@wpi.edu, wolfus@wpi.edu

Name: Peter Johansen Email: Kane@wpi.edu

All of these questions are optional. They are to help us to assign you a character which you will play successfully and enjoy playing. Answer all or only those which you deem necessary. If you do not answer any questions you may not get a role.

Are you? Male Female

Would you prefer to play a? Male Female

Can you spare a Saturday and Sunday afternoon for 3 hours each? If we provide lunch?

What is your Major: Biochemists

Rock, Paper, or Scissors? Why?

Paper

Can you fake an accent? Can you badly fake an accent? Which ones?

No

Can you bullshit? Well? For example?

Yes

sort of

On a scale of 1 to 10, ten being the most desirable, which character traits would you like to play in a character?

Honest	<u>2</u>	Political	<u>7</u>	Optimistic	<u>3</u>
Outgoing	<u>4</u>	Ambitious	<u>6</u>	Analytical	<u>8</u>
Stubborn	<u>2</u>	Gullible	<u>1</u>	Married	<u>4</u>

Which description(s) would best describe the character you want to play?

Administrator, Academic, Diplomat, Engineer, Explorer, Military, Politician, Scientist

Any other preferred character traits, nationalities, etc. which you would like to play or would refuse to play?

International Space Policy: The Game
The Chinese Conundrum
 Character Questionnaire

e-mail: shaughnb@wpi.edu, wolfus@wpi.edu

Name: Nate Wilkes Email: _____

All of these questions are optional. They are to help us to assign you a character which you will play successfully and enjoy playing. Answer all or only those which you deem necessary. If you do not answer any questions you may not get a role.

Are you? Male Female

Would you prefer to play a? Male Female

Can you spare a Saturday and Sunday afternoon for 3 hours each? hell yes If we provide lunch?

What is your Major? ~~Minor in defense~~ skill in Middle school
 Rock, Paper, or Scissors? Why? but interested in computer technologies.
ROCK, because it is hard, blunt, and it hurts!

Can you fake an accent? Can you badly fake an accent? Which ones?
NO Hell NO None!

Can you bullshit? Damn Strait! Well? ISI! For example? I convinced somebody I was a PSYCHO killer!

On a scale of 1 to 10, ten being the most desirable, which character traits would you like to play in a character?

Honest	<u>1</u>	Political	<u>4</u>	Optimistic	<u>5</u>	PSYCHO	<u>10</u>
Outgoing	<u>2</u>	Ambitious	<u>8</u>	Analytical	<u>3</u>		
Stubborn	<u>9</u>	Gullible	<u>6</u>	Married	<u>7</u>		

Which description(s) would best describe the character you want to play?
PSYCHO, PISSAGE, CANDY-ADDICT, MINESTER OF DEFENSE
 Administrator, Academic, Diplomat, Engineer, Explorer, Military, Politician, Scientist

Any other preferred character traits, nationalities, etc. which you would like to play or would refuse to play?
NO!

International Space Policy: The Game
The Chinese Conundrum
 Character Questionnaire

e-mail: shaughnb@wpi.edu, wolfus@wpi.edu

Name: Andrew Davis

Email: adavis@wpi.edu

All of these questions are optional. They are to help us to assign you a character which you will play successfully and enjoy playing. Answer all or only those which you deem necessary. If you do not answer any questions you may not get a role.

Are you? Male Female

Would you prefer to play a? Male Female

Can you spare a Saturday and Sunday afternoon for 3 hours each? Probably If we provide lunch?

What is your Major: CS

Rock, Paper, or Scissors? Why? all of the above!
ROCKS are shiny sometimes
Paper burns.. FIRE!!
Scissors are nice and sharp :)

Can you fake an accent? Can you badly fake an accent? Which ones?
I can fake a bad Australian accent

Can you bullshit? Well? For example?
NO! of course not!! how dare you accuse me of such a thing?!! I would NEVER bullshit..

On a scale of 1 to 10, ten being the most desirable, which character traits would you like to play in a character?

Honest	<u>10</u>	Political	<u>1</u>	Optimistic	<u>5</u>
Outgoing	<u>5</u>	Ambitious	<u>8</u>	Analytical	<u>6</u>
Stubborn	<u>9</u>	Gullible	<u>2</u>	Married	<u>2</u>

Which description(s) would best describe the character you want to play?

Administrator, Academic, Diplomat, Engineer, ~~Explorer~~, ~~Military~~, Politician, Scientist

Any other preferred character traits, nationalities, etc. which you would like to play or would refuse to play? I absolutely refuse to play a mad goat.

International Space Policy: The Game

The Chinese Comundrum

Character Questionnaire

e-mail: shaughnb@wpi.edu, wolfus@wpi.edu

Name: Adam Mossey

Email: adammm@wpi.edu

All of these questions are optional. They are to help us to assign you a character which you will play successfully and enjoy playing. Answer all or only those which you deem necessary. If you do not answer any questions you may not get a role.

Are you? Male X Female

Would you prefer to play a? Male X Female

Can you spare a Saturday and Sunday afternoon for 3 hours each? If we provide lunch?

What is your Major: C.S

I suppose it will give me a reason to get up by 1.

That makes it more tempting I do have a wandering for some liver.

Rock, Paper, or Scissors? Why?

Poor dependable Bart, always chooses Rock

Good ol' Rock, nothing beats that...

Can you fake an accent? Can you badly fake an accent? Which ones?

I do Russian, Ukrainian, Indian, Pakistanian, British, French,

American, Bostonian, Scottish, Irish, Australian, and Antarcticain

Can you bullshit? Well? For example?

Yes, just look at my IQP

On a scale of 1 to 10, ten being the most desirable, which character traits would you like to play in a character?

Honest	<u>3</u>	Political	<u>7</u>	Optimistic	<u>4</u>
Outgoing	<u>2</u>	Ambitious	<u>6</u>	Analytical	<u>6</u>
Stubborn	<u>7</u>	Gullible	<u>2</u>	Married	<u>5</u>

Which description(s) would best describe the character you want to play?

Administrator, Academic, Diplomat, Engineer, Explorer, Military, Politician, Scientist

Any other preferred character traits, nationalities, etc. which you would like to play or would refuse to play?

International Space Policy: The Game

The Chinese Comundrum

Character Questionnaire

e-mail: shaughnb@wpi.edu, wolfus@wpi.edu

Name: Ross Borgeson

Email: RBorgeson@Wpi.edu

All of these questions are optional. They are to help us to assign you a character which you will play successfully and enjoy playing. Answer all or only those which you deem necessary. If you do not answer any questions you may not get a role.

Are you? Male ✓ Female

Would you prefer to play a? Male ✓ Female

Can you spare a Saturday and Sunday afternoon for 3 hours each? No If we provide lunch? yes

What is your Major: EE

Rock, Paper, or Scissors? Why? Scissors, you can cut duct tape with it

Can you fake an accent? Can you badly fake an accent? Which ones? Not Really, But I can try

Can you bullshit? Somewhat Well? ✓ For example? There isnt enough room to fit ever;

On a scale of 1 to 10, ten being the most desirable, which character traits would you like to play in a character?

Honest	<u>2</u>	Political	<u>2</u>	Optimistic	<u>2</u>
Outgoing	<u>8</u>	Ambitious	<u>8</u>	Analytical	<u>5</u>
Stubborn	<u>3</u>	Gullible	<u>2</u>	Married	<u>1</u>

Which description(s) would best describe the character you want to play?

Administrator, Academic, Diplomat, Engineer, Explorer, Military, Politician, Scientist

Any other preferred character traits, nationalities, etc. which you would like to play or would refuse to play?

Nope, just something fun

International Space Policy: The Game
The Chinese Conundrum
 Character Questionnaire

e-mail: shaughnb@wpi.edu, wolfus@wpi.edu

Name: Nicci Vega Email: diyad@wpi

All of these questions are optional. They are to help us to assign you a character which you will play successfully and enjoy playing. Answer all or only those which you deem necessary. If you do not answer any questions you may not get a role.

Are you? Male Female

Would you prefer to play a? Male Female

Can you spare a Saturday and Sunday afternoon for 3 hours each? yes If we provide lunch? yes

What is your Major: BBT/CS

Rock, Paper, or Scissors? Why?

*Paper ... what? That's not much of a weapon?
 It's all in the application, m'dear...*

Can you fake an accent? Can you badly fake an accent? Which ones?

*Light Southern, New York passable ... Slavic w/ difficulty
 Not French.*

Can you bullshit? yes Well? hell yes For example?

*My Friends call me "diplomatic". I've survived C.B.F meetings...
 and been invited back.*

On a scale of 1 to 10, ten being the most desirable, which character traits would you like to play in a character?

I'll play the fool and love the part

Honest	<u>3</u>	Political	<u>7</u>	Optimistic	<u>3</u>
Outgoing	<u>8</u>	Ambitious	<u>9</u>	Analytical	<u>8</u>
Stubborn	<u>8</u>	Gullible	<u>3</u>	Married	<u>1</u>

Which description(s) would best describe the character you want to play?

Administrator, Academic, Diplomat, Engineer, Explorer, Military, Politician, Scientist

Any other preferred character traits, nationalities, etc. which you would like to play or would refuse to play?

Military type only if a hothead, preferably gullible, wants a lot... But as long as don't have to affect a French accent, I'll play anything

International Space Policy: The Game

The Chinese Conundrum

Character Questionnaire

e-mail: shaughnb@wpi.edu, wolfus@wpi.edu

Name: John M Wilkes

Email: jmwilkes@wpi.edu

All of these questions are optional. They are to help us to assign you a character which you will play successfully and enjoy playing. Answer all or only those which you deem necessary. If you do not answer any questions you may not get a role.

Are you? Male Female

Would you prefer to play a? Male Female

2-3 hrs

Can you spare a Saturday and Sunday afternoon for 3 hours each? If we provide lunch?

What is your Major: Sociology

Rock, Paper, or Scissors? Why?

Scissors - for incisive + cutting remarks.

Can you fake an accent? Can you badly fake an accent? Which ones?

Un peu d'français; si, vous plait?

Can you bullshit? Well? For example?

If necessary Assuming I survive this latest bout of Malaria and the SINGERS THAT

On a scale of 1 to 10, ten being the most desirable, which character traits would you like to play in a character?

Honest	<u>5</u>	Political	<u>9</u>	Optimistic	<u>9</u>
Outgoing	<u>10</u>	Ambitious	<u>8</u>	Analytical	<u>7</u>
Stubborn	<u>1</u>	Gullible	<u>6</u>	Married	<u>4</u>

Overcome
M

Which description(s) would best describe the character you want to play?

Administrator, Academic, Diplomat, Engineer, Explorer, Military, Politician, Scientist

Any other preferred character traits, nationalities, etc. which you would like to play or would refuse to play?

Middle Eastern

International Space Policy: The Game
The Chinese Comundrum
Character Questionnaire

e-mail: shaughnb@wpi.edu, wolfus@wpi.edu

Name: Michael Galvin Email: mogalvin@wpi

All of these questions are optional. They are to help us to assign you a character which you will play successfully and enjoy playing. Answer all or only those which you deem necessary. If you do not answer any questions you may not get a role.

Are you? Male Female

Would you prefer to play a? Male Female

Can you spare a Saturday and Sunday afternoon for 3 hours each? yes If we provide lunch? of course!

What is your Major: CS

Rock, Paper, or Scissors? Why?

Rock, because it's my favorite.

Can you fake an accent? Can you badly fake an accent? Which ones?

somewhat?

American
British
French

Can you bullshit? Well? For example?

not much

no

On a scale of 1 to 10, ten being the most desirable, which character traits would you like to play in a character?

Honest	<u>5</u>	Political	<u>7</u>	Optimistic	<u>7</u>
Outgoing	<u>8</u>	Ambitious	<u>8</u>	Analytical	<u>9</u>
Stubborn	<u>10</u>	Gullible	<u>4</u>	Married	<u>1</u>

Which description(s) would best describe the character you want to play?

~~Administrator~~, Academic, ~~Diplomat~~, Engineer, Explorer, Military, Politician, Scientist

Any other preferred character traits, nationalities, etc. which you would like to play or would refuse to play?

International Space Policy: The Game
The Chinese Comundrum
 Character Questionnaire

e-mail: shaughnb@wpi.edu, wolfus@wpi.edu

Name: Brian Dewhurst

Email: dir4@wpi.edu

All of these questions are optional. They are to help us to assign you a character which you will play successfully and enjoy playing. Answer all or only those which you deem necessary. If you do not answer any questions you may not get a role.

Are you? Male Female

Would you prefer to play a? Male Female

Can you spare a Saturday and Sunday afternoon for 3 hours each? If we provide lunch? please.

What is your Major: physics

Rock, Paper, or Scissors? Why?

Paper, because you can do physics on paper.

Can you fake an accent? Can you badly fake an accent? Which ones?

not really. how bad is bad?

Can you bullshit? Well? For example?

not really

well I once convinced a devout Catholic I was Jesus because

On a scale of 1 to 10, ten being the most desirable, which character traits would you like to play in 1.42 a character? carpenter;

Honest	<u>6</u>	Political	<u>3</u>	Optimistic	<u>8</u>
Outgoing	<u>5</u>	Ambitious	<u>3</u>	Analytical	<u>10</u>
Stubborn	<u>7</u>	Gullible	<u>5</u>	Married	<u>5</u>

Which description(s) would best describe the character you want to play?

Administrator, Academic, Diplomat, Engineer, Explorer, Military, Politician, Scientist

Any other preferred character traits, nationalities, etc. which you would like to play or would refuse to play?

Intense desire to have a continuing national presence in space, with no concessions for nationalism or economic profit.

International Space Policy: The Game
The Chinese Comundrum
Character Questionnaire

e-mail: shaughnb@wpi.edu, wolfus@wpi.edu

Name: Joe Cree

Email: jee@wpi.edu

All of these questions are optional. They are to help us to assign you a character which you will play successfully and enjoy playing. Answer all or only those which you deem necessary. If you do not answer any questions you may not get a role.

Are you? Male Female

Would you prefer to play a? Male Female

Can you spare a Saturday and Sunday afternoon for 3 hours each? Yes If we provide lunch?

What is your Major: CS

Rock, Paper, or Scissors? Why?
paper, its the most versatile.

Can you fake an accent? Can you badly fake an accent? Which ones?
=)

Can you bullshit? Well? For example?
never

On a scale of 1 to 10, ten being the most desirable, which character traits would you like to play in a character?

Honest	<u>4</u>	Political	<u>10</u>	Optimistic	<u>7</u>
Outgoing	<u>7</u>	Ambitious	<u>10</u>	Analytical	<u>6</u>
Stubborn	<u>7</u>	Gullible	<u>1</u>	Married	<u>1</u>

Which description(s) would best describe the character you want to play?

Administrator, Academic, Diplomat, Engineer, Explorer, Military, Politician, Scientist
Businessman?

Any other preferred character traits, nationalities, etc. which you would like to play or would refuse to play?

I'm game for most anything.

International Space Policy: The Game
The Chinese Comundrum
Character Questionnaire

Faked

e-mail: shaughnb@wpi.edu, wolfus@wpi.edu

Name: Ray Roberts

Email: claire @ ayp.limay.net

All of these questions are optional. They are to help us to assign you a character which you will play successfully and enjoy playing. Answer all or only those which you deem necessary. If you do not answer any questions you may not get a role.

Are you? Male Female

Would you prefer to play a? Male Female

Can you spare a Saturday and Sunday afternoon for 3 hours each? Yes If we provide lunch?

What is your Major: IE

Rock, Paper, or Scissors? Why?

Rock

Can you fake an accent? Can you badly fake an accent? Which ones?

No

Can you bullshit? Well? For example?

Not really

On a scale of 1 to 10, ten being the most desirable, which character traits would you like to play in a character?

Honest	<u>1</u>	Political	<u>1</u>	Optimistic	<u>1</u>
Outgoing	<u>1</u>	Ambitious	<u>1</u>	Analytical	<u>5</u>
Stubborn	<u>10</u>	Gullible	<u>1</u>	Married	<u>1</u>

Which description(s) would best describe the character you want to play?

Administrator, Academic, Diplomat, Engineer, Explorer, Military, Politician, Scientist

Any other preferred character traits, nationalities, etc. which you would like to play or would refuse to play?

International Space Policy: The Game
The Chinese Conundrum
Character Questionnaire

e-mail: shaughnb@wpi.edu, wolfus@wpi.edu

Name: John D. Beegle Email: april12@wpi.edu

All of these questions are optional. They are to help us to assign you a character which you will play successfully and enjoy playing. Answer all or only those which you deem necessary. If you do not answer any questions you may not get a role.

Are you? Male Female

Would you prefer to play a? Male Female

Can you spare a Saturday and Sunday afternoon for 3 hours each? Yes If we provide lunch?

What is your Major: Aerospace and International Studies

Rock, Paper, or Scissors? Why?

Scissors. Random Choice.

Can you fake an accent? Can you badly fake an accent? Which ones?

No, but is that important not everyone has an accent.

Can you bullshit? Well? For example?

Yes. I'm pretty good off the cuff.

On a scale of 1 to 10, ten being the most desirable, which character traits would you like to play in a character?

Honest	<u>10</u>	Political	<u>8</u>	Optimistic	<u>5</u>
Outgoing	<u>5</u>	Ambitious	<u>8</u>	Analytical	<u>8</u>
Stubborn	<u>5</u>	Gullible	<u>1</u>	Married	<u>5</u>

Which description(s) would best describe the character you want to play? Analytical

Administrator either, or Academic, Diplomat, Engineer, Explorer, Military, Politician, Scientist

Any other preferred character traits, nationalities, etc. which you would like to play or would refuse to play?

I would prefer not to play a Russian
(because of their lack of money)

International Space Policy: The Game

The Chinese Conundrum

Character Questionnaire

e-mail: shaughnb@wpi.edu, wolfus@wpi.edu

Name: Kevin Wilkes

Email: jjhurdle890@hotmail.com

All of these questions are optional. They are to help us to assign you a character which you will play successfully and enjoy playing. Answer all or only those which you deem necessary. If you do not answer any questions you may not get a role.

Are you? Male Female

Would you prefer to play a? Male Female

Can you spare a Saturday and Sunday afternoon for 3 hours each? If we provide lunch?

What is your Major:

Rock, Paper, or Scissors? Why? I'm still in High School, but am looking into music.

Paper

Because it can give a small cut, but it can fester, and get infected and hospitalize you.

HELL YES!

Can you fake an accent? Can you badly fake an accent? Which ones?

Can I!

Oh yeah,

French, Australian, Indian, British, Spanish, Irish, Jamaican

Can you bullshit?

Well?

For example?

Hell yes!

I was able to convince my can't even! English teacher that I had actually prepared for a presentation speech.

On a scale of 1 to 10, ten being the most desirable, which character traits would you like to play in a character?

Honest	<u>1</u>	Political	<u>5</u>	Optimistic	<u>1</u>
Outgoing	<u>10</u>	Ambitious	<u>1</u>	Analytical	<u>10</u>
Stubborn	<u>10</u>	Gullible	<u>1</u>	Married	<u>5</u>

Which description(s) would best describe the character you want to play?

Administrator, Academic, Diplomat, Engineer, Explorer, Military, Politician, Scientist

Any other preferred character traits, nationalities, etc. which you would like to play or would refuse to play?

I can "do" almost any accent necessary
I would like to have a nervous twitch, and/or trigger finger.

(PS) I did this while riding in a car. (no gun needed)

International Space Policy: The Game

The Chinese Comundrum

Character Questionnaire

e-mail: shaughnb@wpi.edu, wolfus@wpi.edu

Name: Zahoor Karim

Email: zahoor@wpi.edu

All of these questions are optional. They are to help us to assign you a character which you will play successfully and enjoy playing. Answer all or only those which you deem necessary. If you do not answer any questions you may not get a role.

Are you? Male Female

Would you prefer to play a? Male Female

Can you spare a Saturday and Sunday afternoon for 3 hours each? If we provide lunch?

What is your Major: Biotechnology

Rock, Paper, or Scissors? Why?

Paper
but all course paper is essential to success.

Can you fake an accent? Can you badly fake an accent? Which ones?

Can you bullshit? Well? For example?

hardly some

On a scale of 1 to 10, ten being the most desirable, which character traits would you like to play in a character?

Honest	<u>8</u>	Political	<u> </u>	Optimistic	<u>10</u>
Outgoing	<u>5</u>	Ambitious	<u> </u>	Analytical	<u> </u>
Stubborn	<u> </u>	Gullible	<u> </u>	Married	<u> </u>

Which description(s) would best describe the character you want to play?

Administrator, Academic, Diplomat, Engineer, Explorer, Military, Politician, Scientist

Any other preferred character traits, nationalities, etc. which you would like to play or would refuse to play?

International Space Policy: The Game
The Chinese Conundrum
Character Questionnaire

e-mail: shaughnb@wpi.edu, wolfus@wpi.edu

Name: Geoff Greene

Email: gggreene@wpi.edu

All of these questions are optional. They are to help us to assign you a character which you will play successfully and enjoy playing. Answer all or only those which you deem necessary. If you do not answer any questions you may not get a role.

Are you? Male Female

Would you prefer to play a? Male Female

Can you spare a Saturday and Sunday afternoon for 3 hours each? yes If we provide lunch? definitely

What is your Major: CS

Rock, Paper, or Scissors? Why?

rock, because if it's a big enough rock it would tactically beat both paper and scissors.

Can you fake an accent? ^{yes} Can you badly fake an accent? ^{yes} Which ones?

not I can do monty python quotes in scully and british.

Can you bullshit? never Well? nope For example? see previous answers in the question.

On a scale of 1 to 10, ten being the most desirable, which character traits would you like to play in a character?

Honest	<u>0</u>	Political	<u>5</u>	Optimistic	<u>3</u>
Outgoing	<u>2</u>	Ambitious	<u>5</u>	Analytical	<u>10</u>
Stubborn	<u>4</u>	Gullible	<u>3</u>	Married	<u>5</u>

Which description(s) would best describe the character you want to play?

Administrator, Academic, Diplomat, Engineer, Explorer, Military, Politician, Scientist

Any other preferred character traits, nationalities, etc. which you would like to play or would refuse to play? American, otherwise British would be good.

Sat. 1-4 pm
Sun 1-4 pm

International Space Policy: The Game
The Chinese Comundrum
Character Questionnaire

e-mail: shaughnb@wpi.edu, wolfus@wpi.edu

Name: LENNY FRANK Email: cif ewpi

All of these questions are optional. They are to help us to assign you a character which you will play successfully and enjoy playing. Answer all or only those which you deem necessary. If you do not answer any questions you may not get a role.

Are you? Male Female

Would you prefer to play a? Male Female

Can you spare a Saturday and Sunday afternoon for 3 hours each? sure If we provide lunch? even better

What is your Major: EECS

Rock, Paper, or Scissors? Why?

PAPER
CAUSE W/O IT, PICKING UP THIS WOULD BE DIFFICULT AT BEST

Can you fake an accent? Can you badly fake an accent? Which ones?

MAYBE - DUNNO

Can you bullshit? Well? For example?

DUNNO HM...

SEE ANSWER FOR RPS

On a scale of 1 to 10, ten being the most desirable, which character traits would you like to play in a character?

Honest	<u>5</u>	Political	<u>9</u>	Optimistic	<u>3</u>
Outgoing	<u>9</u>	Ambitious	<u>7</u>	Analytical	<u>10</u>
Stubborn	<u>8</u>	Gullible	<u>2</u>	Married	<u>1</u>

THAT'S CALS
9 SPACES,
FREAKS!

Which description(s) would best describe the character you want to play?

Administrator, Academic, Diplomat, Engineer, Explorer, Military, Politician, Scientist

Any other preferred character traits, nationalities, etc. which you would like to play or would refuse to play?

NOTHING KNOWN - JUST DON'T STICK ME W/ A GIT.

International Space Policy: The Game

The Chinese Comundrum

Character Questionnaire

e-mail: shaughnb@wpi.edu, wolfus@wpi.edu

Name: David Martin

Email: lost@wpi.edu

All of these questions are optional. They are to help us to assign you a character which you will play successfully and enjoy playing. Answer all or only those which you deem necessary. If you do not answer any questions you may not get a role.

Are you? Male Female

Would you prefer to play a? Male Female

Can you spare a Saturday and Sunday afternoon for 3 hours each? _____ If we provide lunch?

What is your Major: ME

Rock, Paper, or Scissors? Why? Paper

it has to be good for something...

Can you fake an accent? Can you badly fake an accent? Which ones?

Can you bullshit? Well? For example?

On a scale of 1 to 10, ten being the most desirable, which character traits would you like to play in a character?

Honest	<u>2 3</u>	Political	<u>4</u>	Optimistic	<u> </u>
Outgoing	<u>6</u>	Ambitious	<u>4</u>	Analytical	<u>7</u>
Stubborn	<u>7</u>	Gullible	<u> </u>	Married	<u> </u>

Which description(s) would best describe the character you want to play?

Administrator, Academic, Diplomat, Engineer, Explorer, Military, Politician, Scientist

Any other preferred character traits, nationalities, etc. which you would like to play or would refuse to play?