

Game-Based Learning Models & Simulations: Expert Blueprints for Project Success

Working with outside experts, the Woodrow Wilson Center's Foresight and Governance Project will convene a one and a half day conference (on February 5 and 6, 2003) entitled "Game Based Learning Models & Simulations: Expert Blueprints for Project Success" at its facilities in Washington D.C. The conference will feature four working group sessions – addressing hospitals, public high schools, and national/state parks -- each of which will deliver summary plans of what is needed to successfully build a game-based learning product.

The primary goal of the workshop is to bring together individuals who can develop plans geared toward the development of four game-based simulations. This includes a working plan of the game, an implementation plan, and a potential funding plan for the product.

Frequently Asked Questions (FAQ)

What are the key organizations involved in the Project?

This project involves three main groups. The **Woodrow Wilson Center's Foresight and Governance Project** is developing a series of projects around the theme of "Gaming Our Way to A Better Future" (see the attached op-ed we've included) that seeks to create simulation games which could be used by policy stakeholders and administrators to better train, explore, and think about policy implementation and management.

The **Alfred P. Sloan Foundation** which is funding the conference is interested in a number of broad based management and e-learning issues. The foundation is also a pioneer in the movement of game-based learning and simulations. In 2000 the foundation released Virtual U (www.virtual-u.org) a computer simulation game about university management. That project, its experiences, and successes led to the idea of exploring more ideas that could be possible. The foundation's grant to Wilson Center is enabling these four working groups to get started.

Digitalmill, Inc., a consulting firm in Portland, Maine is helping with all aspects of the conference and contributing to Woodrow's overall project. The company has a background in gaming, and managed the development and

subsequent evangelization of the Sloan Foundation's Virtual U product. Ben Sawyer, principal of Digitalmill, is working with David Rejeski from the Wilson Center to build each group, interact with game developers, and develop the final simulation design treatments.

When does the workshop take place am I expected to confirm my attendance?

The workshop will take place on February 5th and 6th, 2003. We need your tentative confirmation now. We would like absolute binding confirmation by mid-December. Last second issues should be made known to us no later than January 15. We are hoping to announce the tentative participants by December 15.

How long will each group meet?

Each group will meet for approximately four hours a day over the day and a half period. Prior to the meeting email discussion lists and a supporting Web site will allow for some communication prior to each group. This will allow us to compile data and materials ahead of time so the conference can focus on those activities and conclusions best done in a physical group setting.

After each meeting, email and Web support will allow conferees to engage further as each group evolves from a working group into a bona-fide steering committee for each project.

What are the four working areas/groups?

Public High Schools

Public high schools enroll approximately 14 million students in the U.S. and the number is expected to rise slightly by 2011. Over the next decade, expenditures on a per-pupil basis are expected to rise from an average of \$6,000 to more than \$7,000 per year.

Hospitals

There are presently 5,340 hospitals in the United States representing total expenditures of more than \$1.2 trillion per year and employment of 4.3 million people. Hospitals treat nearly 600 million outpatients and 100 million emergency room patients per year. Expenditures in the medical care sector are presently greater than those for either housing or transportation.

National and State Parks

Each year, more than 280 million people visit our national parks, which cover 78 million acres of land throughout the U.S. An additional 786 million people visit state parks annually. Total expenditures for the national park system amount to about \$1.5 billion per year. National and state parks generate a combined revenue stream of almost \$1 billion per year.

Why am I being asked to participate?

Our research and networking has indicated you would make a good member of our initial working groups. Qualifications include any of the following:

- Unique policy experience in the simulation's subject area.
- Unique work experience in the simulation's subject area.
- Unique experience with statistics in the subject area.
- Educational and training experience with target users of the simulation's subject area.
- General or specific simulation and/or game designing, or programming experience.

Can you describe the workshops in more detail for me?

To explore each of these areas, we will establish four groups of 10-12 people with diverse backgrounds relevant to the model being developed. They will meet in several sessions over two 4-5 hour periods during the day and a half. Each group will make specific recommendations on how game-based learning simulations should be built to provide the most effective level of help to the identified industries or organizations. The groups will be guided by moderators familiar with the subject area, goals, and structure of building a game-based model as well as a set of specific questions each group will answer (see later). Work on these questions will be conducted prior to the workshop via online communications, research, and reporting, to ensure efficient use of the face-to-face meeting time.

We hope to not only provide blueprints for each model but also build networks of key advocates and potential "early adopters" that could ensure successful creation and application of the models (i.e. an implementation plan). Each group will also develop a robust funding plan for the models and be required to submit a final question-and-answer sheet to the project. These reports will be further organized and supplemented by pre-conference and post-conference efforts before being presented on a public Web site for others to comment upon.

What does a "blueprint of the game" actually involve?

The blueprint should include:

1. A description of the area being simulated, focusing on the key management and policy issues facing the sector.
2. A statement of the goal of the simulation, which addresses the issues identified in point one above.
3. A description of the basic "game play" of the simulation, i.e., what does the user do?
4. A description of the basic "look and feel" of the simulation as well as technical issues, including recommendations for technology and delivery platforms for the model (e.g. Windows, Web-based, Mac, Linux, etc.) and development methods to use.
5. An inventory of the resources each model will use, including chief statistical (or other input) sources needed to accurately model the subject/sector?

What should the "implementation plan" look like?

Unlike entertainment games, products like Virtual U or other educational or policy game-based simulation products must have an implementation plan to be effective. This includes understanding how a finished product would be distributed, how people would be encouraged to use it, and how it would be shepherded and nurtured by a community of peers within the policy area. Each group will be responsible to answer questions that will help write a fully qualified implementation plan. The basic outline would answer the following questions:

1. Who are the primary, secondary, and tertiary target users for this product?
2. What are the best ways to get each group to use this product?
3. What sorts of training, syllabus material, and pedagogy will need to be developed to support this product?
4. What sorts of marketing endeavors should be considered to help promote, sell usage of, and distribute this product?

What about the funding plan?

Each working group is responsible to answer questions and provide feedback on how each simulation could be capitalized for development. On average each simulation will require \$500,000 - \$1.5 million to develop. This requires serious funding from either qualified single sources or a consortium of interested parties. Furthermore some of these funds (or even additional funds) may be required to properly execute the implementation plan for each simulation. Producing the product may cost \$500,000 but producing a qualified syllabus and implementing it across the country may require an additional \$150,000-\$250,000.

Each group is responsible to try and brainstorm suggestions for qualified foundations, contacts, and interested private and public interests. The funding plan should also suggest angles of approach to each qualified funding source as well as a budget breakdown. Potential organizations or individuals through which grant applications could be made, as well as leaders who can evangelize to funding sources the merits and applications of each model should also be identified.

Finally, suggestions – or outright designs of cost-benefit models – should be proposed and discussed in order to provide strong economic incentive in addition to more subjective arguments that might be used for persuasion purposes.

What is the true scope of the work outside of the actual workshops? Am I responsible to contribute prior-to and after the D.C.-based workshop?

No. While we expect and encourage most people to participate it is not a requirement that you do any extra work. However, we do hope you are enthused by the endeavor and feel you have a stake in seeing each game successfully built. The scope of the pre- and post-workshop work is fairly minimal. Through emails, and other Web-based functions we will seek to collect much of the basic background information each member of the working group can provide.

This includes answers to simple questions such as; do you recommend any books that might be used by developers to help design the game, or do you know of someone who has statistics on the number of people who visit national parks? By answering these questions in advance and reading some nominal background material we can better prepare the project, and minimize the time needed for each group to hit the ground running when they meet in D.C. After each workshop, staff members will prepare some follow-up questions we would

hope you'd take the time to answer, as well as some follow-up networking based on your feedback during the D.C. workshops.

Can I participate in more than one working group?

The most you can participate in is two working groups since two groups will run concurrently in the mornings and afternoons. You must however be properly qualified to be a core member of each group. People with core backgrounds in gaming and simulations would be the most likely to span two different working groups.

Can I suggest people who should be a part of the working groups?

We are limited by space to no more than 16 members in each sector group at the workshop in D.C. Online we have much more capacity. If you want to suggest someone for the D.C. workshops please send an email to Ben Sawyer (bsawyer@dmill.com) or Beth Bryant (bbryant@dmill.com).

If you want suggest to friend, peer, or colleague to work via our online system and support a particular model, there will be an online means to do so and we welcome that immediate assistance. We expect our supporting Web site to be up and running by mid-December 2002.

Must I attend to participate in the working groups? Do I have to attend both days?

It would be easy for us to say no to these questions, however we really hope that everyone who participates can make it to D.C. and be available both days. The groups will benefit significantly from this level of participation. The exception may be two people participating via email and one attending in person from the same organization. That is acceptable.

The second day of the conference is a half-day event. The ability for everyone to take a night to digest the first day's discussions and then reconvene the next day is also important to our goals. Thus if you attend we really need your participation the following morning after the first day.

What about other simulations ideas?

We chose the three areas we felt could best provide a cross section of interests in policy and economic value, and which had viable interest groups, statistics, and research that would supply the needs for building a simulation. However, the *Serious Games* project is interested in other ideas for future workshops or steering committees. Our goal is to focus on the three working areas we have identified. What we learn from building out these groups, coupled with

previous efforts like Virtual U, SimHealth, and more will prove useful for future ideas. Eventually we would like to create a common blueprint for launching similar projects.

Who will build the simulations?

That is yet to be determined. Each group will have one or two qualified representatives from game/simulation development companies present. If any of the projects receives funding, a qualified development company will already be attached to the project.

When do you expect each simulation to be completed?

Our goal would be to have at least one funded and underway within 12-18 months. If we find they are all plausible, our hope is that they would be completed – or even in second generations – in three to four years,

Is there anything I can read now to get up-to-date on the issues?

Four documents that exist today will help you find out more about the project. The first is this FAQ, the second is the tentative agenda for the meeting, third is the "Gaming Our Way to a Better Future" op-ed by David Rejeski (available at <http://www.avault.com/developer/getarticle.asp?name=drejeski1>), and fourth is the "Game Based Simulations" whitepaper developed by Ben Sawyer (available at <http://wwics.si.edu/foresight/game/index.htm>). If you have further questions after perusing these documents please contact Ben Sawyer (bsawyer@dmill.com) or David Rejeski (rejeskidw@wwic.si.edu) and they will be happy to answer all of your remaining questions.