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HST495

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Research Project Proposal   
[*Draft, Last Revised 10/28*]

**Title**

*Meltdown*

**Abstract**

We want to create an educational, historically informed, and engaging video game experience based on the accounts and experiences seen during meltdowns of nuclear reactors, like at Fukushima and Chernobyl. The game will take place in a fictitious nuclear power plant, and the player will witness a disaster unfold through the eyes of a maintenance worker. Through simple and relevant gameplay mechanics based on nuclear technology, informative dialogue, and character interactions, we aim to provide a historically accurate experience that will help people understand the gravity and consequences of these events, while dispelling incorrect notions and portrayals provided by other media on similar topics.

**Background**

Both of us are on the executive board of the Stevens Game Development Club, and we have many years of experience with game development and related tools. Games are a very powerful and valuable storytelling medium, and a project of this nature can prove instrumental in achieving our goals with this project: dispelling misconceptions about nuclear power and nuclear weapons, and engaging the user in the subject matter.

Nuclear war and disaster is a subject matter already covered in popular video games, notable examples including the *Fallout* series and *Metro 2033* (an adaptation of a novel bearing the same name). These experiences bend or misstate facts about nuclear weapons to fit a constructed narrative or gameplay schematic; while this makes for a great experience, it only serves to reinforce misconceptions and public superstition instead of dispel it. Games more heavily focused on telling a story have seen a surge in popularity, especially coinciding with the rise in independently-developed games not necessarily designed with a profit margin in mind. Utilizing a story-based approached grounded in facts allows us to focus on mechanics that reinforce the facts around nuclear technology, rather than using it as a (potentially misinformed) backdrop for tangentially related or entirely unrelated gameplay. These gameplay mechanics will include simulations of processes related to nuclear technology (possible example: a small minigame requiring regulation of a nuclear water-reactor, based on existing schematics and inspired by an interactive experiment at the Liberty Science Center).

Games can give unique, memorable experiences to players who feel they are immersed in the world, and the lessons taught have the potential to resonate more powerfully with our user base than a research paper might.

**Project Plan**

Professor Wellerstein has provided us with various books about the Trinity test, Fukushima, Chernobyl, and more. We plan to use these alongside class-provided readings and discussion to inform our studies and provide an experience that is both engaging and faithful to historic accounts. The result of this project will be a playable game exploring the causes and consequences of nuclear meltdown, and allowing the player to witness firsthand the horror and desperation throughout. Minigames and smaller gameplay systems focused on maintenance of nuclear reactors, varied cutscenes with dialogue and visualizations which serve to inform and progress the story, and exploration will be the focus of the title. Our intention is to deliver a complete experience with roughly an hour of gameplay, and provide an accelerated demonstration version to showcase the contents of the complete game.

**Project Team**

James Romph – Gameplay Systems, Graphics and Visuals, Programming

Adam Gincel – Programming, Level Design and Layout, Dialogue Writing, Game Direction

**Timeline**

11/10 – Functioning Gameplay Systems (movement, dialogue, core mechanics)

11/24 – Dialogue, Story introduction and narrative progress

11/29 – 12/6 – Presentable game, gameplay presentation in class

**References**

*No Breathing Room* – Medvedev, Grigori

*The Day The Sun Rose Twice –* Szasz, Ferenc Morton

*Understanding Comics* – McCloud, Scott

*Hiroshima* – John Hersey

*Voices from Chernobyl* – Svetlana Alexievich

*The Making of the Atomic Bomb* – Rhodes, Richard

*Command and Control: Nuclear Weapons, the Damascus Accident, and the Illusion of Safety* – Schlosser, Eric