



UNIVERSITY of WASHINGTON

HUMAN SUBJECTS DIVISION

Box 359470
Seattle, WA 98195-9470
Phone: 206-543-0098
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APPLICATION: Determination, Exempt Status

FOR HSD OFFICE USE ONLY

DATE RECEIVED STAMP:

Application Number: 48133

Committee: ED

Master Copy checkbox

Researcher Copy checkbox

ACCEPTED - See Notice of Determination checkbox

EXEMPT CATEGORY: 7

DOES NOT QUALIFY checkbox

RECEIVED Human Subjects Division

AUG 25 2014

UW

HSD Staff Signature: Denis C. Jones

Date: SEP 11 2014

1. Research Study & Contact Information

Full Application Title: Investigation of Benefits of VR Implementation for 4D Modeling in Construction Industry

Lead Researcher Information (change of lead researcher requires a modification)

Name: Lucky Agung Pratama; Title: Mr.; Position: Student

Home Institution: University of Washington

UW Department: Built Environment; UW Division: Construction Management

UW Position or Appointment of Lead Researcher: Student

Phone #: (206) 454-0910; Email: pragungl@uw.edu; Other address: 4009 15th Ave NE Apt # 326

Contact Person for the IRB (Change of contact person requires a modification)

Name, Title, Position fields

Home Institution: University of Washington

UW Department, UW Division fields

UW Position or Appointment of IRB Contact Person: Faculty

Student
 UW Resident or Fellow UW Administration or Staff None

Phone #: _____ Campus Box#: _____ Email: _____ Other address if not at UW: _____

Name and Mailing Address for all paper-based correspondence
 (If blank, correspondence will be directed to contact person or lead researcher if no contact person.)

Name: _____ Campus Box #: _____ Other address if not at UW: _____
 Lucky Agung Pratama _____ 4009 15th Ave NE Apt # 326

END PART ONE

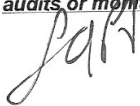
2. Assurances and Signatures

LEAD RESEARCHER (must be signed by all Lead Researchers, including those who are students)

- I certify that I am **aware of and agree with the information** provided in this application.
- I understand that **I am ultimately responsible** for the conduct of this research, the protection of the subjects, and for the work of those I hire or supervise (including the content and accuracy of any correspondence or materials that they provide HSD on my behalf).
- I understand my responsibilities concerning **significant financial interest**, as described in UW policy GIM 10. This includes (but is not limited to):
 - My compliance with **all relevant requirements of GIM 10** prior to beginning the project, and throughout the project.
 - Ensuring that **all investigators** (as defined by GIM 10) on this project are aware of GIM 10 and their responsibility for complying with its relevant requirements. This includes any investigators that are added after the project has begun.
- I agree to **comply with all applicable UW policies and procedures**, and federal and state regulations regarding human subjects in research, including, but not limited to, the following:
 - This research will **not begin until a determination** is received.
 - **The research personnel are qualified and appropriately trained.**
 - **Adverse events and unanticipated problems** related to the research will be reported to HSD.
 - There are **adequate resources** (personnel, funding, time, equipment, space) for conducting the research. The research will stop if adequate resources become no longer available.
- **A co-investigator** will assume full responsibility for the research if I am unavailable to direct this research (such as sabbatical leave, vacation, or other absences). I will advise HSD in advance.
 - I will immediately inform HSD about **audits or monitoring visits** (except by industry sponsors).

Lucky Agung Pratama

Typed name



Signature of LEAD RESEARCHER

8/22/2014

Date

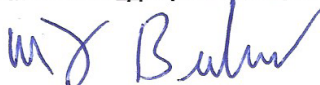
DEPARTMENT OR DIVISION CHAIR, CENTER DIRECTOR of Lead Researcher

If it is unclear which department should provide this assurance, consult document #931, Signatures on IRB Forms.

- I certify that the **researcher is qualified** to conduct the research, and that there are **adequate resources** (researcher time, personnel, financial support, equipment, facilities) available.
- (If applicable) I concur with the student's choice of an **appropriate faculty advisor**.

William J Bender

Typed name



Signature of DEPARTMENT CHAIR

9/22/14

Date

LEAD RESEARCHER who is a STUDENT

Students may be a Lead Researcher on a human subjects research project only if they provide the following consent in addition to signing the Lead Researcher assurance (above).

The Family Educational Rights and Privacy Act (FERPA) (20 U.S.C. § 1232g; 34 CFR Part 99) is a Federal law that protects the privacy of student education records. By signing below, I hereby give my consent to the UW, and to any institution whose IRB reviews this project for or with the UW, to disclose the necessary personally identifiable information from my education records, which are related to and may include by IRB application and my human subjects research for the limited purposes listed below, to: UW school officials, including by not limited to IRB members; representatives of relevant state and federal agencies, including by not limited to the Office of Human Research Protections, the Food and Drug Administration, and the Office of Civil Rights; research subjects or recruiters for research subjects; individuals, organizations, or agencies that raise a

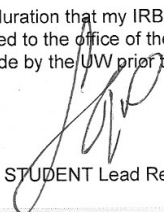
complaint with the IRB or any UW office or official about my research.

Any disclosure subject to this consent shall only be for one or more of the following purposes: to comply with contractual obligations, funding-related obligations, and state and federal laws and regulations regarding human subjects research; to provide research subjects or recruiters for research subjects with information regarding potential risks and benefits of my research; to investigate and/or respond to any complaint or concern that I may not have complied with UW policies and/or procedures and/or federal, state and local regulations in conducting my human subjects research; to verify whether my research was approved by the IRB; and to confirm what research activities were approved by the IRB.

I agree that this consent shall remain in effect for the duration that my IRB file is retained by the UW, unless my consent is revoked by me in writing, and my revocation is delivered to the office of the UW Human Subjects Division. Any revocation of this consent shall not affect disclosures previously made by the UW prior to the receipt of my written revocation.

Lucky Agung Pratama

Typed name



Signature of STUDENT Lead Researcher

8/20/14

Date

FACULTY ADVISOR of Student Lead Researcher

- I confirm that ***I am responsible*** for working with the Student Lead Researcher to ensure that this research is performed in an ethical manner that complies with appropriate human subjects regulations and with the information provided in this application.
- I have ***reviewed and concur with this research proposal***, including: purpose, design, methodology, procedures, subjects, and the provided description of risks and benefits.
- I will ***assist the student and HSD*** as requested if any problems develop with the research.
- I will provide ***continued oversight and guidance*** to the student during the course of the research, as appropriate.
- If I will be unavailable (such as during a sabbatical leave or vacation), I will ***arrange for an alternate faculty advisor*** to assume responsibility during my absence, and I or the Student Lead Researcher will advise HSD in advance.

Carrie Sturts Dossick

Typed name

cdossick@uw.edu

Email



Signature of FACULTY ADVISOR

8/13/14

Date

END PART TWO

3. Financial Conflict of Interest

3.1. Confirm by checking the box that the principal investigator on this application has ensured that all investigators (as defined by UW policy GIM 10) are aware of policy GIM 10 and their responsibility for complying with its relevant requirements.

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3.2. Does the individual who is the principal investigator on (1) this application or (2) any grants or contracts supporting this research have a financial conflict of interest with respect to this research?


YES

NO


END PART THREE

4. Exempt Category Selection

Select which category(ies) of exemption you are applying for (please see the [SOP Exempt Determination](#) or click the plus sign for assistance in determining the category(ies) under which your research might fall):

Category 1: Educational Practices 

Category 2: Educational Tests (Cognitive, Diagnostic, Aptitude, Achievement), Survey Procedures, Interview Procedures, or Observation of Public Behavior 

Category 3: Educational Tests, Survey Procedures, Interview Procedures, or Observation of Public Behavior 

- Category 4: Existing Data - Research on existing data in which the researcher views identifiers but records data in such a way that individuals cannot be identified from the recorded research dataset. *The existing data cannot come from medical records to fit this category.* If using medical records, please submit the Use of Identifiable Biological Specimens/Data form instead of this form. DO NOT COMPLETE BOTH FORMS
NOTE: if you are doing research with existing, de-identified data and identifiers are never viewed by the research team, please complete the Use of Non-Identifiable Biological Specimens/Data form instead of this form. DO NOT COMPLETE BOTH FORMS
- Category 5: Research and Demonstration Projects Conducted by or Subject to the Approval or Department or Agency Heads
- Category 6: Taste and Food Quality Evaluation and Consumer Acceptance Studies
- Category 7: Minimal Risk, Non-Physically Invasive, Interventions or Interactions Associated with Educational Tests (Cognitive, Diagnostic, Aptitude, Achievement), Survey Procedures, Interview Procedures, or Observation of Public Behavior.

END PART FOUR

5. Study Information

NOTE: if you are using more than one group of subjects in your research, please list each separately under each question.

5.1. Is this research federally funded, supported or regulated? In addition to federal funding, this also means any of the following: 1) involvement of federal personnel, 2) any research team member (including students) who is paid or supported by any federal award, including federal training, program, or center grants, 3) contractual obligations to follow federal research requirements, 4) involvement of the Department of Veterans Affairs, and 5) conducted under a federal Certificate of Confidentiality. If yes, provide the name of the federal funding agency:

This research is not federally funded, supported, or regulated. No federal personnel, student team member who is supported by any federal award takes part in this research. Hence, this research is not obliged to follow federal research requirements nor it is conducted under a federal Certificate of Confidentiality.

5.2. Specific Aims: indicate the purpose of your research specifying what the hypothesis or goal of your research is and what questions you will address to test your hypothesis or accomplish your goals.

The purpose of this research is to explore the benefits and limitations to the usage of immersive Virtual Reality tool for 4D modeling for Constructability Review

5.3. Describe the Subject Population

5.3.a. What are the characteristics of the group you are studying? Examples: age, gender, race, ethnicity, etc.

The group I am studying consists of people who have been involved in construction industry. There is no restriction on age, ethnicity, or gender.

5.3.b. What are the inclusion and exclusion criteria you are using?

People who have been involved for at least a year in construction industry and has experience with construction scheduling

5.4. Number of study participants: indicate the anticipated number of research participants to be included in the study (a range is acceptable). If you are not able to estimate the number of participants, please describe why.
Example: if you are posting a questionnaire to a web site or a blog, you may not know the number of respondents.

The anticipated number of study participants for this experiment are 12 participants.

5.5. Recruitment Process

5.5.a. How will you identify potential participants?

The potential participants will be identified from information given by each institution where the participants work. The institutions are expected to send at least one voluntary participants for the

project. A preliminary survey will be distributed among the institutions.

5.5.b. How are subjects being approached and informed about the research?

The subjects will be informed about the research during AEC Hackathon that will take place in September 12-14, 2014 at PNCCRE, Sand Point, Seattle.

5.5.c. What information will you give the subjects about the research? Include how and when information will be provided to the subjects.

Subject will be provided with the research background and the possible benefits of the application of Virtual Reality for visually identifying errors in scheduling. The information will be distributed during the AEC Hackathon 2014 event in Seattle.

5.5.d. If you are including children, how will parents be informed?

No children will be included in this research.

5.6. Research Design and Methods

5.6.a. What is the design and methodology for the study?

The study will place participants in group. One group will use a commercial software and another group will use a software developed by the research team. The participants in each group will work in pairs to complete the given tasks as a part of the research procedure. A post-experiment survey will be distributed among participants to collect suggestions for future development of the tool.

5.6.b. If data collection instruments will be used, please check all that apply. Copies of any survey instruments or interview guides used for the study must be attached to this application. At minimum, attach a representative list of sample questions.

- Interviews
- Educational tests
- Questionnaires/Surveys
- Observation
- Other

5.6.c. What is the expected time it will take for subjects to complete the procedures?

The procedures are expected to take approximately thirty to sixty minutes

5.6.d. Where/how will the procedures be administered? Examples: Internet, telephone, mail, in person.

The procedures will be administered in person at the day of test

5.6.e. If you will be recording participants, please check all that apply:

- Audio (tape or digital)
- Video (tape or digital)
- Photographed (including digital)
- N/A

5.7. Data Security and Confidentiality

5.7.a. How will the information obtained be identified?

- No identifiers associated with the information obtained.

- Names and other identifying information is obtained but not shared with anyone except the study staff.
- Names and other identifying information is obtained and potentially used in publications.

5.8. If applicable, what measures will be taken to protect the confidentiality of the data (including audio and video recordings.)

Personal information of the participants are stored in written forms and electronic documents. The research will not publish any personal information including name, mail address, home address, or phone number. After the research has been completed, written forms will be destroyed and electronic documents will be password-protected.

5.9. What do you perceive as the foreseeable risks to subjects who participate in this research?

The tool used for this research might cause a minor motion sickness among participants who are not used to Virtual Reality.

END PART FIVE

(Part 6, Category 1 is hidden until selected from Contents or Part 4)

6. Category 1 Specific Questions

(Part 7, Category 2 is hidden until selected from Contents or Part 4)

7. Category 2 Specific Questions

(Part 8, Category 3 is hidden until selected from Contents or Part 4)

8. Category 3 Specific Questions

(Part 9, Category 4 is hidden until selected from Contents or Part 4)

9. Category 4 Specific Questions


(Part 10, Category 5 is hidden until selected from Contents or Part 4)


10. Category 5 Specific Questions

(Part 11, Category 6 is hidden until selected from Contents or Part 4)

11. Category 6 Specific Questions

12. Category 7 Specific Questions

See Category 7 Guidance (either open the [guidance document](#), or click the plus sign) 

Examples of Research Likely to be Exempt under Category 7 

12.1. Describe how the proposed research methodology meets the criteria of involving either **Non-Physically Invasive Interventions or Interactions Associated with Educational Tests (Cognitive, Diagnostic, Aptitude, Achievement), Survey Procedures, Interview Procedures, or Observation of Public Behavior**. The SOP Exempt Determination document contains useful information about the definition of "survey" and "interview". This issue is crucial to the exempt eligibility decision.

The research will involve an observation of subjects' interactions with an interactive software. Participants' actions to complete the tasks will be recorded solely for research purpose. There will be no physical contact done to participants.

12.2. Could disclosure of the subjects' responses outside the research reasonably place them at risk of civil or criminal liability, or be damaging to their financial standing, employability or reputation? Please explain your answer. Note this question is about the risks to subjects if accidental disclosure were to occur, and not about how you will maintain confidentiality.

No, the disclosure of the subject's responses outside the research will not place the at any risk regarding their safety. The research will take place within an enclosed environment and participants will only interact with each other and the research tool. The participant selection criteria will ensure that no participant may place other participant's safety in danger over disclosure of his/her identity.

12.3. If the research is determined to qualify for category 7 exempt status and later becomes federally funded, supported or regulated, please confirm that you will immediately cease research activities until IRB approval is obtained.

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12.4. Will any of the data be individually-identifiable data that you obtain without the subject's consent from a Washington State public institution of higher learning, the Washington State Department of Early Learning, the Department of Social and Health Services, the Department of Corrections, or the Department of Health? If "yes", the research likely does not qualify for exempt status.

No

Please note that research under this category may not involve survey or interview procedures with children. Research under this category may include observation of children, but only if the researcher does not participate in the observed activities.

Please refer to the SOP Exempt Determination document for more information on what is considered to be public behavior.

END PART TWELVE

[RETURN TO EXEMPT CATEGORY SELECTION](#)

[Print Form](#)



Guidance for HSD PDF Forms

Radio Button Choose only one from the list of options.

Check Box Choose as many as needed from the list of options.

Click to reveal all branching and guidance

Shows all logic branching and hidden guidance in the form. Some forms may not have this feature.

Click to hide all branching and guidance

Hides all logic branching and guidance in the form. Some forms may not have this feature.



Reveals further information, instructions, or examples for the adjacent question.



Hides the information, instructions, or examples for the adjacent question.



Indicates that an attachment is needed for the adjacent question.

TAB

Tab out of the input field and it will expand to the size of the text.

ENABLE COMMENTS in ADOBE READER or ACROBAT

Choose File, Print, then change printer to Adobe PDF. In the printer dialog box under "Documents and Forms" make sure that "Comments and Forms" is selected. Click the "Print" button. The form will now be "flattened" and able to take comments. This removes the ability fill in the form, so save the "flattened" version with a different name if the form is not completed, or changes need to be made.

PDF SIGNATURE FIELDS

HSD currently accepts both ink and "electronic" signatures. Click in the signature field and follow the instructions to create a PDF signature, or use another type of electronic signature.



For help with Adobe Reader: <http://www.adobe.com/support/reader/>