



EXPLANATORY STATEMENT

(all groups)

Project ID: 30873

Project title: Alternative Routes Quality Exploration on Game Maps

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You are invited to take part in this study. Please read this Explanatory Statement in full before deciding whether or not to participate in this research. If you would like further information regarding any aspect of this project, you are encouraged to contact the researchers via the phone numbers or email addresses listed above.

What does the research involve?

Modern navigation systems often provide to the users more than one paths (also called routes) from a starting location (called source) to the destination location (called target). The goal is to provide the users with multiple options so that they can choose a route of their choice for traveling. Intuitively, the routes provided to the users should be significantly different from each other but should have similar traveling time (so that the users have more diverse but feasible options). We call these multiple routes provided to the users "alternative routes". While there has been a lot of existing work on recommending alternative routes in road networks (e.g., Google Maps and other navigation systems), there has not been much work on computing alternative routes in game maps. Unlike roads where users can only travel on the roads, in game maps, characters can move anywhere on the plane except the areas blocked by obstacles (e.g., buildings, rivers etc.). In this research, we have selected three different approaches that compute a set of alternative paths in game maps between the source and target. It is not always clear what constitutes a set of "good" alternative paths because it is subjective and depends on a user's personal experience. Therefore, in this research, we display the alternative paths generated by the three approaches and ask the users to rate each approach from 1 to 5 based on their perceived quality of the provided paths (higher number indicates better quality). We request you to complete two different sets of questions (the links are given at http://aamircheema.com/paths_games/). In the first set of questions, you will be shown some pre-selected source target pairs on different games and you will be asked to enter rating for the three approaches named A, B and C. In the second set of questions, you can select the source and target yourself and the alternative paths generated by each approach will be shown to you one by one and you will be asked to enter the ratings. After choosing your rating (1 to 5) for an approach, please click "Save Rating" to save your response

Why were you chosen for this research?

Since this study involves pathfinding on game maps and we know that you are familiar with the game maps, we have identified you as a potential participant for this research.

Consenting to participate in the project and withdrawing from the research

Participation in this study is optional. If you complete the online survey, it implies your consent. Since we do not collect any personal information, you cannot withdraw your participation after you have submitted your ratings. This is because we are unable to identify your submissions. If you do not want to participate in this research, please do not submit your feedback.

Possible benefits and risks to participants

This study will help us to compare and evaluate the quality of different approaches that generate alternative paths. To the best of our knowledge, this is the first user study that compares different approaches. Thus, this will help understanding what types of routes are perceived better by the users and which approach is better. Also, we hope that the user study will give insights on how to further improve the existing approaches. Thus, the study will help improve the quality of navigation systems and map-based systems.

There is no discomfort, harm or risk associated with completing this survey.

Confidentiality

We do not collect any personal information. Thus, the participants are anonymous and cannot be identified. We will publish the results based on the ratings provided by the users. The results may be published in a conference, journal or PhD thesis and will not contain any information that can identify an individual.

Storage of data

Our online system is running on Nectar Research Cloud. Therefore, the data entered by the users will be collected at Nectar. Once the data has been collected, we will copy the data to Monash folder with access restricted to the investigators. The data will be deleted from Nectar Research Cloud and will be maintained by A/Prof. Aamir Cheema in the Monash folder for 5 years. The data will be destroyed after around 5 years (in 2027).

Results

We plan to publish a research paper based on the data submitted by the users. The paper will be available on the personal webpages of the investigators. The results may also be included in the PhD thesis of the student investigator and can be accessed after the thesis is published online.

Complaints

Should you have any concerns or complaints about the conduct of the project, you are welcome to contact the Executive Officer, Monash University Human Research Ethics Committee (MUHREC):

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Thank you,



Muhammad Aamir Cheema