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OPPONENT RECORD

Thesis compiled by Robert Wideberg & Christoffer Wiss (group 9)

Title of thesis: Simulating Urban Pedestrian Behavior

Opponent: Aref Mohammadi

Was it easy to understand the underlying purpose of the project? Comments.

Yes. The purpose of the project is described clearly in the purpose-section. Few questions have been stated regarding the purpose of the project, which they later have been answered.

Do you consider that the report title justly reflects the contents of the report?

Yes. The report deals with how to simulate pedestrian behavior using some algorithms and the authors tried to improve the simulations by adding some more attributes. All these are absolutely related with the given title that is: " Simulating Urban Pedestrian Behavior".

How did the author describe the project background? Was there an introduction and general survey of this area?

The authors have carried out a study about the previous works but a discussion is missing about the merits and demerits behind the mentioned simulators. It might be needed a brief description of these works in case the reader wants to know what others have done and not the reader is referred to the webpage.

They have studied some algorithms that already exist and they have used these algorithms to simulate the pedestrian behavior and all these are described in proper way, which help the reader to understand better what the report is based on.

To what degree did the author justify his/her choice of method of tackling the problem?

The authors have presented a few algorithms and explained how each algorithm performs. They have chosen the A* algorithm which is combined of two other algorithms. It seems that the performance of the A* algorithm is better than other algorithms and this is obvious in the text.

Did the author discuss the extent to which the prerequisites for the application of such a method are fulfilled?

It is difficult to find such discussions in the text. But by reading the background and approach-sections, the prerequisites for the application can be found. It would be useful to have a section to describe in detail which prerequisites are needed to develop the simulator.

Is the method adequately described?

Yes, The methods have discussed in details in the Approach-section. In this section there is a figure that shows all the processes that are supposed to be carried out. An explanation on which methods and how these methods are used exist in this section.

Has the author set out his/her results clearly and concisely? Yes, they have discussed about how they have used the proposed methods in the simulator and analyzed the result properly step by step. They have mentioned also what kind of limitation exist in each situations.

Do you consider the author's conclusions to be credible?

It seems to be credible, since the report depends on testing and experimenting so it is difficult to state that the result is credible. But according to the context of the report it is so.

What is your opinion of the bibliography? What types of literature are included? Do you feel they are relevant?

By checking some of literatures presented in the report, it is found that they are relevant to the text and the topic of the report. The references are mostly taken from webpages on the Internet.

Which sections of the report were difficult to understand?

Background-section may need more improvement by giving more explanation how a simulator works and what components it is made of. Despite the flow chart in section-3, an illustration of another flow chart explaining the processes step by step in background-section may make the work more understandable.

Other comments on the report and its structure.

Generally the structure of the report is well-organized and a technical language is used.

What are the stronger features of the work/report?

Terminology is used in proper way it makes that nothing is misunderstood by reading the text. The report is more technical and well-written. The essay contains an appropriate structure especially in the approach-section using a flow chart that makes it easier for the reader to follow the text. Additionally, the report is researched properly since the methods that are used in the project are examined in details.

What are the weaker features of the work/report?

Some of the words, which are used too much in the text, could be avoided by using some synonyms. But the authors might be aware that the context can be misunderstood in case other words are used (words such as: simulate, simulation and pedestrian).

As mentioned before a brief study on how a simulator works with all component are missing in the background. It would have been easier for the reader if more explanations were given about the simulator in the background-section to understand the followed sections. It is unclear whether the authors have implemented the mentioned algorithms and other components or they have used pre-implemented algorithms. The conclusions-section may be a bit longer, because the reader wants some clear points about the result of the work when one comes to the end of the report..

What is your estimation of the news value of the work?

It is a good try to simulate a pedestrian behavior by using a fast algorithm and examining in order to improve the simulator. As the authors have stated there are other simulators that already do the same work so this cannot count as news value. But it has the potential to be in the future work.

Summarize the work in a few lines.

The report is based on simulating pedestrian behavior using some known algorithms. The authors have investigated how these algorithms are used in simulating pedestrian behaviors and the result shows that the proposed simulator is able to simulate urban pedestrians behaviors with varying speeds and needs.

Questions to author:

1) What is the reason that there is no limitation how many people visit the same toilet at the same time? Don't you think this does not match the real situation? I mean the purpose of simulator is to simulate the real situation as accurate as possible.

2) How does the simulator identify sidewalks from streets or houses?

3) How well does your simulator perform compared to those on the market? (Urban Analytics Framework2 and PTV Viswalk)