**Study Title:** *SwarmControl*: An online user study on controlling large swarms of simple robots

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**Purpose of this Study**

The purpose of the study is to compare and contrast several control techniques for directing swarms of (simulated) robots

**Procedures**

The *SwarmControl* project aims to understand the best ways to control a swarm of robots by a human. The project achieves this through a community of game-developed experts. The project is continuously changed to promote the creation of experts and to become the most effective exploration tool. To achieve this, the project continuously gathers and analyzes data. Users interact by creating an account, playing the game, or using the website or associated communication channels.

The *SwarmControl* simulation is located at http://swarmcontrol.herokuapp.com/

**Participant Requirements**

Sighted individuals who can read English, navigate a webpage, and use the arrow keys on a standard keyboard.

**Risks**

The risks and discomfort associated with participation in this study are no greater than those ordinarily encountered in daily life or during

playing an online game such as Angry Birds (<http://www.angrybirds.com/>) or from typing on a computer keyboard.

**Benefits**

There may be no personal benefit from your participation in the study but the knowledge received may be of value to humanity.

**Compensation & Costs**

No compensation will be given. We may post account names on leaderboards to highlight the best times/scores.

There will be no cost to you if you participate in this study.

**Confidentiality**

By participating in the study, you understand and agree that Rice University may be required to disclose your consent form, data and other personally identifiable information as required by law, regulation, subpoena or court order. Otherwise, your confidentiality will be maintained in the following manner:

Your data and consent form will be kept separate. Your consent form will be stored in a locked location on Rice University property and will not be disclosed to third parties. By participating, you understand and agree that the data and information gathered during this study may be used by Rice University and published and/or disclosed by Rice University to others outside of Rice University. However, your name, address, contact information and other direct personal identifiers in your consent form will not be mentioned by Rice University in any such publication or dissemination of the research data and/or results.

We are recording gameplay data for analysis and research. The game gathers and reports data generated by your activities in the game. If you create an account, this data will be associated with your account. If you play without an account or offline, data will be gathered anonymously by assigning you an anonymous identifier. If you log in with an account from a third party project, data will be associated with an identifier provided by that project and data may be reported to both SwarmControl and that project. Data may be associated with your IP address. Gameplay data such as robot configurations, scores, algorithms, tool and algorithm usage, progress, and time played may be logged and analyzed.

**Rights**

Your participation is voluntary. You are free to stop your participation at any point. Refusal to participate or withdrawal of your consent or discontinued participation in the study will not result in any penalty or loss of benefits or rights to which you might otherwise be entitled. The Principal Investigator may at his/her discretion remove you from the study for any of a number of reasons. In such an event, you will not suffer any penalty or loss of benefits or rights which you might otherwise be entitled.

**Right to Ask Questions & Contact Information**

Please contact us if you have any questions or concerns. We can be reached at swarmcontrol-feedback@rice.edu or at (713) 348-4539. If you have questions about your rights as a research participant, you may contact Vicki Colvin at Rice University. Email: vpr@rice.edu or Telephone: 713-348-2702. Please note that emails are considered insecure and privacy is not guaranteed.

**Voluntary Consent**

By signing below, you agree that the above information has been explained to you and all your current questions have been answered. You understand that you may ask questions about any aspect of this research study during the course of the study and in the future. By signing this form, you agree to participate in this research study.

PARTICIPANT SIGNATURE DATE

I certify that I have explained the nature and purpose of this research study to the above individual and I have discussed the potential benefits and possible risks of participation in the study. Any questions the individual has about this study have been answered and any future questions will be answered as they arise.

SIGNATURE OF PERSON OBTAINING CONSENT DATE

Online Consent form:

*SwarmControl* Terms of Service and Consent

Version 1, 6/21/2013

If you are under 18, your parent or guardian must agree to these terms; please have your parent or guardian read, explain, and agree to the terms.

There is a simplified explanation at the bottom of this document.

The SwarmControl project aims to understand the best ways to control a swarm of robots by a human. The project achieves this through a community of game-developed experts. The project is continuously changed to promote the creation of experts and to become the most effective exploration tool. To achieve this, the project continuously gathers and analyzes data. By creating an account, playing the game, or using the website or associated communication channels, you acknowledge that:

1. We are recording gameplay data for analysis and research. The game gathers and reports data generated by your activities in the game. If you create an account, this data will be associated with your account. If you play without an account or offline, data will be gathered anonymously by assigning you an anonymous identifier. If you log in with an account from a third party project, data will be associated with an identifier provided by that project and data may be reported to both *SwarmControl* and that project. Your IP address will not be recorded. Gameplay data such as robot configurations, scores, algorithms, tool and algorithm usage, progress, and time played may be logged and analyzed.
2. We may post surveys on the website. To better understand who plays the game, we may occasionally post research surveys on the website. These surveys will ask basic questions about topics such as motivation or demographic information, such as age, gender, and education level. Participation in these surveys is entirely voluntary.
3. Data used for research may be made public or shared with collaborators. Data and analysis may be shown in the game, on the website, and used in external publications, presentations, promotional materials, and other public venues. Data logged by the game may be shared with domain experts for analysis. We will contact you for permission before externally associating data analysis with your account name. However, your account name may appear without explicit permission in external demonstrations of the game or website, including presentations, videos, screenshots, and publications.
4. The project may terminate, suspend, or block your account at any time.
5. Project members may contact you with your account email. When creating an account, you provide an email address. This email address may occasionally be used to contact you in relation to the game. You can opt out of this email contact at any time.
6. Scientific discoveries will be made publicly available and Rice University will handle ownership of discoveries. All significant scientific discoveries (such as structures, algorithms, etc.) made in game will be made publicly available. In the event that some discoveries may warrant patent protection, Rice University will handle the patent application process. US patent law will govern IP attribution for each discovery. Individual players who contributed to the discovery will be considered co-inventors for any discovery produced through play. Data logs of player activity will assist in determination of attribution.
7. You can opt out of further data gathering at any time. To do so, discontinue use of the game software, the website, chat, and other communication channels associated with the project.
8. This policy may change in the future. This policy may change at any time. You will be asked to agree to the new terms.

Here is a simplified explanation:

1. The game records how you play. We look at this for science and to make the game better.
2. We may ask you questions about yourself. You do not have to answer them.
3. We are sharing what we learn with others from all over the world. That is how science is done. We have to share so others can learn, too.
4. If you are not playing nicely, we can remove your account.
5. We may send you email about the project. You can ask us to not send you email.
6. Scientific things you find in the game will be made public. Rice University will help decide who owns them.
7. If you want us to stop gathering data from you, stop using the game and website.
8. We may change these rules. You will have a chance of agreeing to the new rules.

Please contact us if you have any questions or concerns. We can be reached at swarmcontrol-feedback@rice.edu or at (713) 348-4539. If you have questions about your rights as a research participant, you may contact Vicki Colvin at Rice University. Email: vpr@rice.edu or Telephone: 713-348-2702. Please note that emails are considered insecure and privacy is not guaranteed.

By checking accept, you agree that you are 7 years of age or older, have read the above terms, and give your consent. If you are under 18, a parent or guardian has read the above terms, explained them to you, and agrees to give their consent

decline

accept