

Designing experimental procedures to measure the discoverability of inputs in interactive systems

Duration : 4-6 months
Level : Master
Team : [Loki](#) (Inria Lille – Nord Europe & CRISAL)
Supervisors : Sylvain Malacria (sylvain.malacria@inria.fr)
Location : Inria Lille - Nord Europe (Villeneuve d'Ascq)
Note : can be followed by a funded PhD

This project in Human-Computer Interaction (HCI) consists in developing and comparing experimental procedures to investigate the discoverability of inputs in interactive systems. This internship is part of the ANR-funded project *Discovery*. If successful, the candidate will have the opportunity to further explore this research with a PhD.

Context

The discoverability of available interaction inputs (actions that can be used to communicate with the system) and features (commands associated with these inputs) is a critical requirement to efficiently interact with modern computing systems. However, there is surprisingly no accepted experimental procedure nor benchmarking method to efficiently investigate the discoverability of complex interaction methods in interactive systems. This is a major limitation to the introduction of efficient novel interaction inputs in future interactive devices.

Objectives

This internship will consist in developing experimental procedures to evaluate and compare the discoverability of interaction inputs in different computing systems.

More precisely, the work will consist in:

- Produce a comprehensive review of experimental procedures used in the literature to measure the discoverability of interaction inputs
- Classify these methods along various factors such as technical feasibility, or data collection process
- Reflect on novel experimental procedures and metrics to measure the discoverability of interaction inputs based on possible contexts (in-lab experiment, remote study, etc.)
- Design, implement and run user evaluations to investigate the benefits of the proposed solutions

Depending on the progress of the project, the submission of a research paper that summarizes its results can be envisioned.

Candidate

A successful candidate must be an excellent MSc student in Human-Computer Interaction or equivalent, and show a great interest in performing high quality research. He or she must demonstrate solid analytic skills and independence. He or she should also demonstrate solid experience in software development. An excellent level of technical and scientific English is required.

The candidate will join a vibrant and multicultural group of young researchers at Loki. Our students typically come from different horizons (Germany, Colombia, Canada, China, France). It is not required to speak French.

If interested in this project, simply e-mail Sylvain Malacria (sylvain.malacria@inria.fr) with the title of this internship as subject. All applications are welcome, regardless of age, gender, social or ethnic origin, sexual orientation or disability.