

Romain Clair

Paper : Accessible art creation tools, a generative arts application



Abstract:

The main point of our works is to use the power of computers and the latest advances in computer science to help disabled people access some art creation. More precisely, we are interested in providing accessible art creation tools following two major ideas :

- Keep our software as accessible as possible
- Provide interactive generative art routines

Thus, we follow design guidelines to create the application's interface, taking into account problems to control, to get information and to understand the software. We also study, use and possibly adapt automatic art creation methods to assist the user's creative experience.

We have conceived and developed two computer programs:

The first is a virtual music instrument. It is used to play music in real time, using only a mouse controller associating movements with notes, or a piano-like keyboard. It includes an automatic accompaniment engine, based on a path finding ant colony algorithm, interacting with the user's playing.

The second deals with visual arts. It is a drawing workshop with an original sober graphical user interface. Usual tools like pencils or rubber grow up with more advanced ones, based on generative techniques. It also includes a derived path finding drawing ants routine but we are working on others, based for example on genetic algorithms or L-systems.

The testing phase has already begun and both softwares have met some of their potential audience. We met therapists, able and disabled people, even artists and collect their comments. The results of this survey are to be taken into account to match our tools to the real user's needs.

Topic: Accessible art.

Authors:

Romain Clair

Nicolas Monmarché

Mohamed Slimane

Université François-Rabelais
Tours, Laboratoire
d'informatique (EA2101)
France

www.univ-tours.fr

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Contact:

romain.clair@univ-tours.fr

Keywords:

Accessibility, Art, Music, Drawing, Ant colony algorithm, evolutionary computation