Nature Inspired Creative Design

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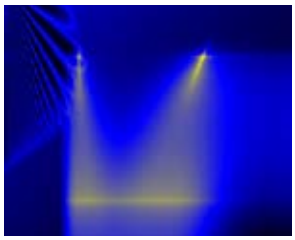
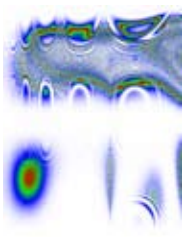

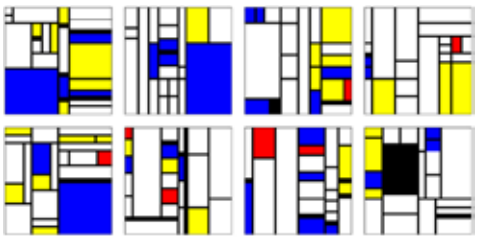

OVERVIEW

NATURE HAS SPENT MILLIONS OF YEARS COMING UP WITH INNOVATIVE, ROBUST AND EFFECTIVE DESIGNS - JUST HOW WE WANT OUR OWN DESIGNS TO BE. THIS CLUSTER EXPLORES HOW WE CAN LEARN FROM THIS EXPERTISE, BORROWING IDEAS, METHODS AND ALGORITHMS FROM NATURE AS WELL AS DIFFERENT DISCIPLINES AND INTRODUCING THEM INTO OUR OWN DESIGN PROCESSES. OUR MEMBERS INCLUDE ARTISTS, COMPUTER SCIENTISTS, PRODUCT DESIGNERS, ENGINEERS AND BIOLOGISTS. THE GOAL OF THE NETWORK IS TO EXPLORE HOW NATURE INSPIRED MODELS CAN BE USED TO IMPROVE THE DESIGNS OF THE FUTURE, BY IDENTIFYING NEW RESEARCH DIRECTIONS, DEVELOPING NOVEL RESEARCH PROGRAMMES, AND DRAFTING HIGH-QUALITY RESEARCH PROJECT PROPOSALS.

Activities

In 2005 we held three very successful meetings, each one generating a lot of lively discussion, debate and new ideas. Meetings included presentations from members as well as demonstrations of work, ideas and experiments, and we also had some nature-inspired art on display. At all three meetings we had a good cross-section of attendees representing diverse disciplines and viewpoints. This cross-fertilisation of ideas is at the heart of our aims and activities, and will drive the research proposals and future initiatives coming out of the cluster.

One very important outcome from the first meeting was input from members on what they wanted from the network, which greatly influenced the rest of the cluster's activities. Identifying areas of mutual interest lead to small groups forming around potential research areas.

Insights

Several potential research topics had been identified at the end of 2005, covering five broad themes:

- How can professional designers make use of existing nature inspired techniques?
- Are there any other forces or process within nature other than evolution we can exploit in creative design?
- What can we learn from developmental biology - how does nature produce a robust phenotype from a given genotype?
- Can we use and model natural expressions of robustness?
- Can we develop analytical tools to help in the creative process?

We will be holding a strategy meeting to discuss how we can best turn these topics and ideas (and any new ones) into effective proposals. We are also organising an exhibition to showcase the work and concepts associated with the network, due to be held at the end of March 2006. The exhibition will be held in an unusual venue, much more accessible to the general public - we want to involve people who might otherwise not be exposed to this kind of research. The exhibition is being organised with The Public, an influential community arts and developmental organisation in the West Midlands.