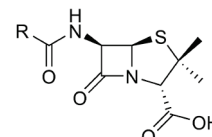
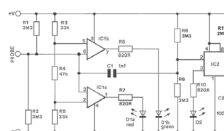
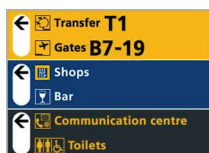


Call for proposals: Developing a new visual language for science

Animation Studio, Institute for Complex Molecular Systems (Eindhoven University of Technology) and STRP Festival invite artists, designers and scientists to submit proposals for developing a new visual language for science.

Visual languages are a valuable tool for communicating ideas and are commonly used within the scientific community. These languages can help to make the invisible visible.



Recently, a new problem has emerged for molecular scientists. For many decennia they have used a world-wide accepted way of representing molecules, even though these molecules have never really been seen. Unfortunately, this language is not suitable to represent the increasing complexity of the molecular systems and dynamic processes that are subject of modern research. The Animation Studio of the ICMS has set itself the goal to make large contributions in the development of a new visual language. We think that a breakthrough in this area is only possible with ideas of people with different specialisms and, therefore, we want to unite people from all kind of backgrounds.

Call and procedure

We are looking for input as a starting point for the development of a new visual language for molecular scientists. In the first step, marked by this call for proposals, we invite you to submit your proposals for ideas, examples, directions, artworks and experiments. We will make a selection out of the submitted proposals and invite the applicants to further develop their proposal. In a second stage, we will make a translation of these elaborated ideas into a more molecular application or, depending on the status of the project, use them to create molecular animations.

What can selected contributors expect from us?

- Close collaboration with scientists
- Temporary residency at the TU/e is possible
- Presentation of first step projects at STRP Art & Technology Festival 2010
- Financial support

Want to apply?

Deadline for submission is **February 28th, 2010**. You can submit your work via email or regular mail. Please include your full contact details with the application as well as some examples of earlier work. Submission material will not be returned. If you have any questions please email to animationstudio@tue.nl.

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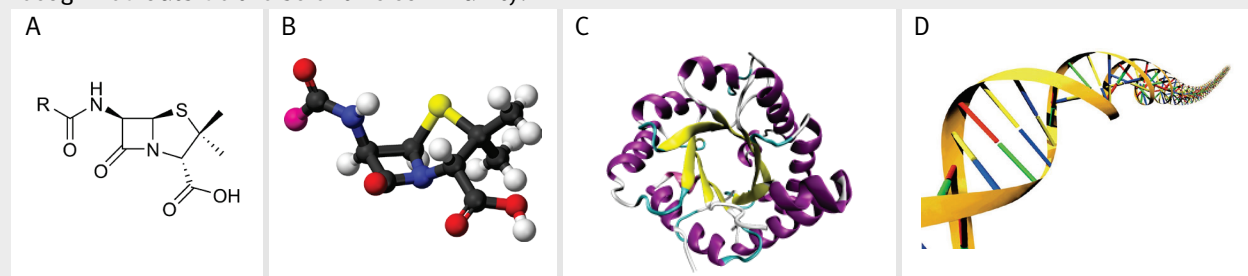
The *Institute for Complex Molecular Systems (ICMS)* was founded on April 1st, 2008, as part of the Eindhoven University of Technology (TU/e). Its goal is to establish a multidisciplinary research platform for building knowledge and infrastructure for the creation of functional complex molecular objects based on novel engineering tools and sophisticated modeling.

The *Animation Studio* was established within the ICMS to create scientific animation and visualization graphics and videos for the ICMS and TU/e in general. A special focus will be on bridging length scales, scientifically as well as visually and the development of a new visual language for complex molecular structures and processes.

STRP is one of the largest art & technology festivals in Europe. The 10-day multidisciplinary program appeals to a wide audience. STRP stands for Strijp-S, a huge industrial area where Philips came up with practically all of its revolutionary inventions during the previous century. This is where the audio cassette and the CD were born and where the world's first electronic pop song was composed by Dick Raaijmakers.

Supramolecular chemistry is an important topic within the ICMS. In this research field, the assembly and aggregation of molecules in large superstructures is investigated. The ever growing complexity of the obtained structures requires visualization to allow understanding by other scientists and the broader audience. However, it is the complexity itself which makes the general visualization of the structures a daunting task.

Chemical visual languages are used by scientist to report, discuss and design molecular structures. The visual languages they use are often two dimensional representations of three dimensional structures (see example A). Although three dimensional representations can be used (see example B), these quickly become confusing with increasing complexity of the molecular structure. More abstract representation forms are limited to well known (bio)molecular structures such as proteins and DNA (examples C and D, respectively). The former uses arrows (in yellow) and helices (in purple) to represents the well-defined three dimensional substructures of proteins, while the latter is iconic for genetic material and also widely recognized outside the scientific community.



A *supramolecular visual language* ideally should be:

- simple, yet detailed enough to allow interpretation by a chemical oriented audience
- easily recognizable
- unambiguous in two dimensional projections, but usable in three dimensional visualizations
- applicable to various supramolecular systems