Abstract

Evaluation of a Visual Programming Language in the Class Room

Yutaka Watanobe,[†1] Nikolay Mirenkov[†1]
and Rentaro Yoshioka[†1]

This presentation shows the evaluation of a visual programming language based on ideas of cyberFilms where algorithms are represented by sets of multimedia frames, and contents of frames are represented by an icon language. The introduction of such a new programming paradigm requires a great variety of tests, experiments, and evaluations. To promote this language, we developed basic constructs and created several experimental subsystems. To test expressive power of the language, we have also developed a library of cyberFilm algorithms. The goal of the presentation is to show the usability and understandability evaluation of the language by end users using some library items. Eighty six undergraduate students of Advanced Algorithm classes have been involved in the evaluation. They evaluated visual constructs, icons, and animations representing dynamical features of algorithms, as well as visual programs as a whole. Results show that in spite of very limited time of study, participants could correctly perceive semantics of visual expressions, and easier understand the visual programs in comparison with conventional text-based programs. To simplify the result perception, a brief explanation of the language and library items are also provided.

(Presented October 11, 2007)

---

†1 Department of Information Systems, The University of Aizu