Abstract

## Code Generator from Cyberfilm Specifications and an Example of Code Generation Process

Masaaki Nemoto, $^{\dagger 1}$  Nikolay N. Mirenkov $^{\dagger 1}$  and Yutaka Watanobe $^{\dagger 1}$ 

A user-oriented programming environment is developed at the University of Aizu. Within this environment, a source program is input as a "cyberfilm" that is a series of multimedia frames where different groups of frames represent different features of an algorithm. Because of the multiple views, programmers can watch, understand, and manipulate (edit, compose) the cyberfilm. Results of programmer's activities within the environment are recorded in a special internal format to generate a source code in C. In this presentation, a code generator from cyberfilm specifications related to software components in the cyberfilm format and an example of code generation process are presented. This code generator automatically creates a C language program from the special internal metafile which keeps the current situation of the cyberfilm specification. The generator also supports operations of checking and discovering compile time and runtime errors. An example of template programs supporting the cyberfilm is also presented.

(Presented October 11, 2007)

<sup>†1</sup> Department of Information Systems, Graduate School of Computer Science and Engineering, The University of Aizu