

Abstract

master's certification

object:

“Compilers for special-purpose processors”

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Actuality

Problem of translation, when above the flow of data it is necessary to carry out the row of conservative transformations after the in good time certain set of rules, saving semantics of the text, are spread for the developer of software.

Every technology sooner or later gets symptoms of programming language be that design of electronics, software or even music. Thus each programming language try to solve same problems, general for all programming languages. There are no approach to solution of such tasks – each developer, running into such task, try to solve it from a zero or at the best case using ineffective instruments, each of that has a narrow application domain.

Instrument that would allow to unify approach for development of compilers, translators and programming languages, undertaking all spectrum of functions that must execute such instrument and minimize expenses for their development is claimed today and a requirement in it only will grow tomorrow that is why actuality of such research is implicit.

Object

The object of this work is investigation of compiling and translation techniques, in particular for special processors, and development on their basis theoretical base for realization flexible and universal solution for such issues.

Solved problems

An accent is done on practically-useful approaches and conceptions, that describe a theoretical base necessary for realization of instrument for development of

compilers, translators and programming languages, in particular for special of processors.

Achievements

By a this job generalized and well-organized theoretical base for the solving of problems related to translation, compiling, process program developments and their application domains.

Scientific novelty

Regardless almost century history of the computing engineering we should consider the year of appearance of compilers is 1957 a year of appearance of the first efficient compiler of Fortran, designed under the direction of John Backus in IBM. Since that times lots of changes have been done in domain of information technologies: calculable powers grew considerably, the volume of informative space grew considerably, the Internet and distributed computing appeared, hundreds programming languages and thousand compilers to them were invented, processors became more complex, requirement to them and programs executed by them are higher now. So requirements to compilers grow intensively, that requires the innovative approaches for their design.

The article o are closely related to linguistics, natural languages processing, semantic networks, logic and meta-logic. Works of Noam Chomsky and Marcel-Paul Schutzenberger have direct influence for the purpose research.

The practical value

Practical value – basic factor that managed a research process. Exactly practical problems that arise up in this area of science, but not general approach were directed the research. This work can be used as theoretical basis for realization of universal solution of information translation problem.

Conclusion and recommendations

To increase efficiency of design, regardless of domain of that design, it is worthily develop instrument of wide application for solution of information translation problems, theoretical basis for what there is this research.

Keyword list

Scientific activity in the Internet, top universities, ranking sites, increasing the rating, research portal, automated site analysis, Webometrics, QS TopUniversities.

Work on 119 sheets contains 41 illustrations. In preparation of the materials used from 24 sources.