Visualization module solving logical problems for the FORMULA system

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Abstract

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1. INTRODUCTION

We have designed the module of visualization of solutions obtained via the smt solver Formula. Solvers for satisfiability modulo theories (SMT) check the satisfiability of first-order formulas containing operations from various theories such as the booleans, bit-vectors, arithmetic. A thorough consideration of various methods of visualization was made. As a result of studies the declarative programming language for solutions of logic problems such as Einstein task or the problem of queens was developed.

2. PROCEDURE FOR PAPER SUBMISSION

2.1. Selecting a Template (Heading 2)

The developed system is designed for data visualization. The purpose of the study is to consider an information visualization solutions of logical problems derived from the FORMULA system, which is fundamentally different from existing visualization tools. The most obvious advantage of the new system is that the developed module operates with a much smaller amount of information, which saves time and expense of resources for the visualization process.
The main task of the investigation is to design an integrated module of visualization solutions and the results of logical tasks.
The developed module should maintain the following functions:

1. Integration module logical solution FORMULA tasks, analysis of the results of using it
2. Display of static solutions with support for the following types of visualization:
   (a) Table
   (b) Counts
   (c) Vectors
3. Display of the process of solving problems by means of a dynamic visualization:
   (a) Moving objects
   (b) Time Management

2.2. Figures and Tables

Table 1. An Example of a Table

One	Two
Three	Four

We suggest that you use a text box to insert a graphic (which is ideally a 300 dpi TIFF or EPS file, with all fonts embedded) because, in an document, this method is somewhat more stable than directly inserting a picture.

Figure 1. Inductance of oscillation winding on amorphous magnetic core versus DC bias magnetic field

3. CONCLUSIONS

As a result of studies the integrated module of visualization solutions and the results of logical tasks was designed. Also visualization language was developed. For that rules and a new programming language syntax have been formulated, on the basis of which carried out the lexical, syntactic and semantic analysis. Graphical system module is also designed to visualize input data in a predetermined format, namely in the form of static and dynamic table moving objects.

References

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