

OPINION



for the thesis of Ekaterina Antonova Gospodinova on the topic
"CONCEPTS FOR BUILDING DISTRIBUTED INFORMATION SYSTEMS WITH SPECIAL PURPOSE"
for the acquisition of the educational and scientific degree "Doctor"
by professional field 5.3. Communication and Computer Technology
by Prof. Sotir Sotirov from the University "Prof. Dr. Assen Zlatarov ", Burgas

According to the Order of the Rector of the University "Prof. Assen Zlatarov, PhD, was appointed as a member of the Scientific Jury for the preparation of an opinion on the thesis of Ekaterina Antonova Gospodinova on the topic

"CONCEPTS FOR THE CONSTRUCTION OF SPECIAL PURPOSE DISTRIBUTED SYSTEMS"
for the acquisition of the educational and scientific degree "Doctor"
by professional field 5.3. Communication and Computer Technology

Brief CV

Ekaterina Gospodinova was born on January 25, 1971 in Sliven, where she completed her high school education in Western languages school. She then graduated from the Technical University of Sofia, IPF, Sliven, specialty of Electronics and Automation, and after that in Computer Science and Information Technology. She was consistently a teacher, system administrator, and later a teacher and an assistant, the last of whom at TU-Sofia-IPF-Sliven.

Description

The dissertation is presented with a list of used abbreviations, introduction, Conclusions, Purpose and tasks of the dissertation four chapters, conclusion, summary of the results, a declaration of originality and a bibliography containing 120 literatures.

Chapter 1 includes a literature review: distributed process control systems, which includes a large number of common positions; Organization and storage of data and information; Stages of development, opportunities for integration with other management platforms and the impact of current IT trends; model and architecture of the information system, as well as Automated Level Meter Systems and IFSF Communication Standard. The chapter concludes with Conclusions, Aim and Tasks of the Thesis.

Chapter 2 includes the analysis of data transmission and the study of the IFSF communication standard and the Lonworks[®] platform. Design of interface and software for connection to network technological platform for automation of level systems. An adapter, platform architecture, connection interface and data exchange protocols are designed. The structure of the IFSF communication protocol has been analyzed. I / O controller for communication and communication software is also designed.

Chapter 3 consists of the software for an automated gas station leveling system based on the IFSF communication standard. Technical and functional description of software installed and operating at filling stations based on IFSF communication standard. Software has been developed for a leveling system for filling stations in accordance with Ordinance No. 4 of the Ministry of Finance and in accordance with Ordinance No. 18. The developed software is installed, tested and operated at commercial sites.

Chapter 4 is entitled Comprehensive analysis of measurement errors obtained in experimental studies. Methods for removing them. This includes designing a calibration table. A mathematical model for compiling calibration tables is proposed.

The conclusion contains a summary of the results obtained, the author's claims for scientific contributions, a list of scientific papers presented, contributions to projects and dissertation publications, a statement of originality.

Actuality

The application of up to date. Intelligent techniques to the design and analysis of real technical problems, taking into account data imperfections, is an actual scientific problem. The introduction of flexible distributed information systems, as well as the implementation of controllers using up-to-date protocols, is a part of solving real problems.

In my opinion, the structure of the dissertation is at a good level. There are theoretical descriptions that are well reasoned, along with literary sources that reflect different perspectives on the process. Literary sources are on the subject of dissertation work, but they are mixed and unordered.

The list of dissertation publications includes nine publications, and six of the publications are conference reports in Bulgaria and Macedonia. Three of the articles are in journals - one in the Annual of the Technical University - Sofia and two in international publications, one of them (Mathematics) with an impact factor. This article is a little confusing, not with its content, but with its attitude towards dissertation work, because it is unclear where the paper is used. It is similar with the publication [8].

The abstract accurately reflects the results obtained in the dissertation, but is full of technical and synthetic errors.

I accept the contributions formulated by the doctoral student.

In conclusion, I can say that the topic and dissertation are actual and that good results have been obtained. The dissertation work satisfies the requirements of ZRAS and the Rules of the University "Prof. Dr. Assen Zlatarov ", Burgas. I give my positive opinion and recommend to the honorable members of the Scientific Jury to vote for the award of Ekaterina Antonova Gospodinova for the educational and scientific degree " Doctor "in the professional field 5.3. Communication and computer technology.

Signature:

Подпис заличен
Чл.2 от ЗЗЛД