

JOURNAL OF TELECOMMUNICATIONS AND INFORMATION TECHNOLOGY

Preface

The set of 21 papers presented during The Third International Conference on *Decision Support for Telecommunications and Information Society DSTIS-2003*, organized by the National Institute of Telecommunications in Warsaw (4–6 September 2003), has been divided into two groups. Papers relevant to operational research have been selected for the special issue of *European Journal of Operational Research*, and remaining papers, devoted to various problems of decision support, are presented here.

Some old methods of hierarchical nonlinear optimization, when combined together and properly used, can give good results with moderate computational effort. Efficient algorithm is based on Kelley's cutting planes, Benders decomposition and ellipsoid methods.

To reduce computational power, needed for networks simulation, one can use Java-based library for distributed simulation, described here. The focus is on the effectiveness of different synchronization protocols and case study results.

Modeling decision processes can be simplified when flow graphs are used to describe a decision algorithm. Branches of the graph are interpreted as decision rules, associated with the certainty and coverage factors.

Fault localization is the core of fault diagnosis in computer networks. Probes technique for locating failures is promising but complicated. Partitions and logic can help in obtaining simpler algorithms.

Multiple criteria decision analysis is presented in two papers: as a tool for evaluation of geographical information (spatial data) and as a method for selection of clients segments with similar behaviors. Different applications show broad possibilities of multicriteria approach.

Uncertainty in multiple criteria decision making is usually analyzed with formal methods, but intuitive methodology, presented here, is also possible.

In the last paper a novel agent-based intelligent communication and decision support system for providing wireless services is described.

Optimization, simulation, modeling, decision analysis – the papers show different methods with a common goal – decision support.

Wiesław Traczyk
Guest Editor