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Multi-agent system for monitoring and analysis Prahova hydrographical basin. (English)

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Summary: The development of an efficient flood forecasting and river monitoring system requires the use of an automated data acquisition system and the analysis of several hydro graphic basin parameters that are monitored. Due to the strategic importance of river basin monitoring, in the last years, different modern technique were applied, including some techniques based on artificial intelligence, such as knowledge based system, agent-based modelling and neural networks. This paper presents the development of a multi-agent system in the Prahova hydrographical basin. For monitoring and analyzing the Prahova River parameters it was necessary to design and implement in the Zeus Agent Toolkit generator a prototype agent-based system that was experimented as a simulation. The monitoring and analyzing multi-agent system (MASMA) is a distributed system which includes central aspects (the dispatcher agent) and local aspects (the measuring agents).

MSC:

[86A32](#) Geostatistics

[62P25](#) Applications of statistics to social sciences

[86A05](#) Hydrology, hydrography, oceanography

Keywords:

[floods](#); [flood forecasting](#); [hydrology](#); [intelligent agent](#); [multi-agent system](#)

Software:

[ZEUS](#)