Intelligent Reservoir – Multi Agent Solution for Water Reservoir Management

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Abstract

The ancient human civilizations were originated in the river valley as an agricultural society due to accessibility to water and the fertility soil. Problems in accessibility to water are exacerbated by unsustainable development, climate change and the uncontrolled growth of the world population. Because of these reasons, world is going towards a situation of physical water scarcity. Therefore managing and utilizing water resource are very important for the sake of every living being in the world. As the solution, Water Reservoir Management system has been implemented to manage the distribution of water in a multi use reservoirs. A multi agent system is proposed as the solution to this problem. Core functionality of the system is optimized distribution of water among multiple users without effecting to public life. Water reservoir management system consists of main three components. They are Information Feeder Component (IFC), Water Resources Optimizing Component (WROC) and the database. Integration of these three components facilitates the effective, perfect and useful water distribution among power generation, agricultural uses and domestic users. And also it minimizes the water wastage and helps to preserve this scare resource for the survival of human being.