VIRTUAL PROTOTYPING OF DESIGNED EXTENDED PIPELINE, INTEGRATED IN THE CITY WATER SUPPLY NETWORK

A.K. BUZDOV, A.S. TITOV

Institute of Computer Science and Problems of Regional Management –
branch of Federal public budgetary scientific establishment "Federal scientific center
"Kabardin-Balkar Scientific Center of the Russian Academy of Sciences"
360000, KBR, Nalchik, 37-a, I. Armand St.
E-mail: iipru@rambler.ru

One of the main problems of urban water supply is the design of new extended pipelines (EP), built into the existing urban water supply network. The problem arose due to the aging of existing networks and the incorporation into the existing urban environment of a significant number of new apartment buildings and the consequent impossibility of providing consumers with a normalized amount of water through the existing network. Moreover, a significant part of the design time is taken by the design of the pipeline route and the determination of its parameters. The paper presents an enlarged algorithm and the main fragments of the developed software for computer-aided design, integrated into the Unity3D environment in order to provide design organizations with tools for visualizing the EP route, its parameters, and optimizing the EP. Its application will provide a significant reduction in design time and optimization of EP.

Keywords: water supply system, long pipeline, computer-aided design, visualization of the EP route, pipeline optimization.

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Buzdov Aslan Karalbievich, Candidate of Physics and Mathematics, SPS of the Department "Automation and Informatization of Regional Management Systems" of the, Institute of of Computer Science and Problems of Regional Management, a branch of the Kabardin-Balkar Scientific Center of the Russian Academy of Sciences.
360000, KBR, Nalchik, I. Armand street, 37-a.
Ph. 8 (8662) 42-65-52.
E-mail: abuzdov@rambler.ru

Titov Alexander Sergeevich, trainee researcher at the Department of Automation and Informatization of Regional Management Systems, Institute of Computer Science and Problems of Regional Management, a branch of the Kabardin-Balkar Scientific Center of the Russian Academy of Sciences.
360000, KBR, Nalchik, I. Armand street, 37-a.
Ph. 8 (8662) 42-65-52.
E-mail: 88ats88@gmail.com