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MADALGO seminar by Kostas Tsichlas, Aristotle University of Thessaloniki and Spyros Sioutas, Ionian University

Deterministic Structures over P2P Networks

We design a new P2P data structure, called the Deterministic Distributed tree (DDtree). The DDtree compares favourably to other designs for the following reasons: a) it divides the overlay structure of the P2P environment from the actual elements stored in it and b) it provides better complexities (which are deterministic) compared to all previous solutions. Additionally, the division between elements and nodes results in a load balancing problem in which we have provided an innovative and very efficient solution. This load-balancing scheme can also be applied to any other tree structure in a P2P environment. Finally, a small discussion on models of P2P Networks is initiated.