Apply Non-Deterministic Duration Automata in Modeling Priority Network

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Abstract: Bandwidth management of a telecommunication network is a problem that is being paid attention. Reachable, point to point maximum bandwidths, maximum bandwidth through network problems are also raised. We suppose that each node is connected to others with different bandwidth, which makes a network. In this paper, difference from traditional approach when modeling network as a transportation network, we model the system using formal tool named non-deterministic duration automata. Apart from model bandwidth with normal meaning, the model was enhanced with real-time constraints on bandwidth that brings the priority property to the network. We also issues algorithms to solve the problems in model.

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