

# **Q-Routing in Dynamic Networks using Mobile Agents**

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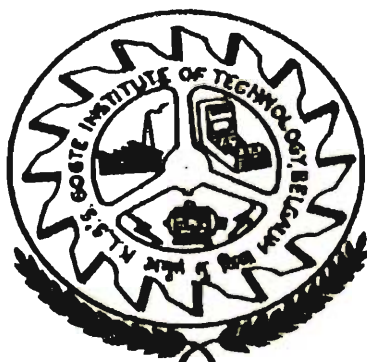
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## ABSTRACT

*To optimize the performance of the dynamic network, we need to design good control algorithms for routing packets at the support nodes. The nodes need to adapt to changing conditions and communication patterns. We focus on the routing problem here. Q-routing is an adaptive packet routing protocol for dynamic networks based on the Q-learning algorithm, it is very similar to a distributed Bellman-Ford algorithm. The algorithm allows a network to continuously adapt to congestion node failure, or link failure by choosing routes that require the least delivery time or shortest distance. It makes use of mobile agents. Mobile agent is a distributed computing paradigm. It has become viable, with recent technologies such as those provided by Java. It has great potential for network applications. It is "an independent software program which runs on behalf of a network user". A mobile agent is a program which, once it is launched by a user, can travel from node to node autonomously, and can continue to function even if the user is disconnected from the network.*