

# Analytical Modeling of Localized P2P Streaming Systems under NAT Consideration

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**ABSTRACT:** *NAT has been design to work with Internet client-server structure. The emerged of Peer-to-Peer (P2P) networks and applications revealed the incompatibility between P2P applications and NAT. Many methods has been developed and implemented to solve connectivity between peers behind NAT devices. Nevertheless, various NATing types can't communicate with one another. In this work, we are going to study the impact of NAT types on the start-up delay time of peers in P2P streaming systems. We will demonstrate the ability of NATing to expel peers in P2P live streaming systems. A new neighbour selecting algorithm will be proposed. This algorithm will utilize NAT-types configurations as a parameter. We have utilized NS2 simulator to show the performance of the new algorithm in increasing the connectivity, reducing the number of expelled peers and implementing of locality.*