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(57) Abstract :

The present invention discloses a system (100) and method (200) for traffic minimization in a point-to-multipoint tree-switching network. The system includes a plurality of network nodes interconnected in a point-to-multipoint tree topology. Each network node is equipped with a processor and memory containing instructions for creating and managing a cache of commonly used data packets, processing received data packets, implementing multicast routing protocols, and removing expired cached data packets. The system determines if data packets are available in the cache and reuses them to minimize network traffic. If a data packet is not present in the cache, it is forwarded to an appropriate child node. The system further includes an intelligent caching algorithm, cache synchronization mechanism, load balancing mechanism, and a user interface for cache management and network performance analysis.

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