

The explained is push method.

Algorithm of push pull consistency model:

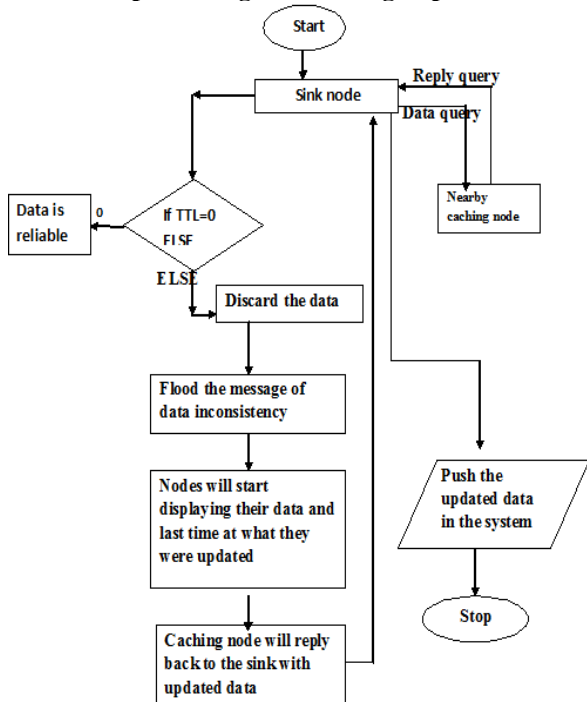
Push method:

- 1 On receiving outdated data at the sink.
- 2 Sink will flood the message of inconsistency in the system.
- 3 Nodes will start publishing their time at which the cache on its node was updated and the data that was last updated.
- 4 The node having new data will reply to sink with the latest data.
- 5 The sink will send the updated data to all the nodes and the outdated node nearby sink will update its data and will start communicating with sink.

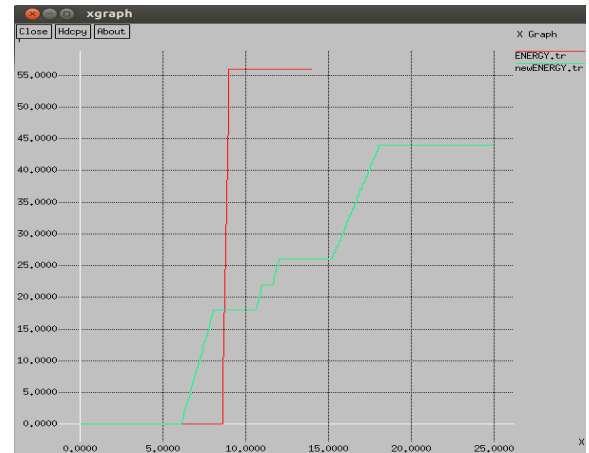


Figure 1: Updated data at the sink

Flowchart representing the working of push method:

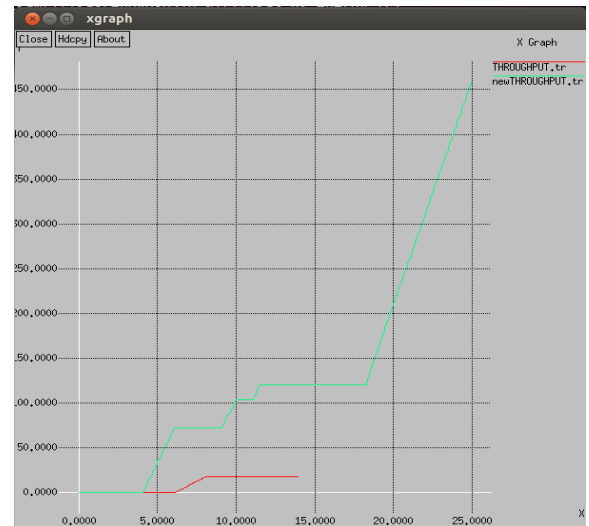


Number of sensor nodes	25
Caching nodes numbers	5,9,15,17
Cluster head numbers	20,21,22,23
Sink node number	24



Graph 1: Graph of energy

In graph 1 green line depicts the results produced by the push based technique. In the graph X-axis represents time in milliseconds and Y-axis represents energy consumption in joules. The initial energy of every node is 1 joule and the node having high residual energy is selected as cache head.



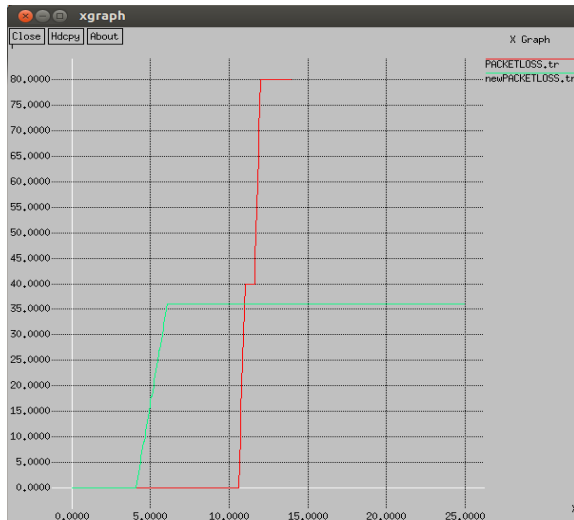
Graph 2: Graph of throughput

In graph 2 green line in the graph depicts the new throughput calculated with the push based technique. In the graph X-axis represents the time in milliseconds and throughput of the system. The produced results show the increase in average throughput of the system.

6. Results

Figure 1.2: NS2 simulation parameters

Area of sensor field	800×800 m
IFQ	Drop tail/priqueue
IFQ length	50 packets
MAC layer protocol	802.11
Routing protocol	AODV



Graph 3: Graph of packet loss

In graph 3 green line shows the amount of packet loss during the whole round of sensing. The X-axis represents the time in milliseconds and Y-axis represents packets lost. The IFQ length is 50 packets and packets size is 1000 bits then using push based scheme the results are far better.

7. Conclusion

The main objective of this research paper is to discuss various challenges and technique of WSN. We also focused on cache cooperative technique and its procedure. We believe that proposed algorithms discussed in this paper will give benefit for various research scholars. Its experimental results show that proposed technique gives better result which has better throughput and energy as compare to existing techniques.

8. Future Scope

Improvement in future, we can increase the battery life of the nodes. Improvements in selecting another caching head if present one becomes dead.

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