

Network Algorithms: Exercise 13

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1. Consider a radio packet network with n nodes and without collision detection. Furthermore, assume that each node has a token of size $O(\log n)$ and is equipped with memory of size $O(\log n)$. Present an *uniform algorithm* which allows the nodes to determine the median in $O(n)$ time slots with high probability. You may assume that n is odd and each token is unique (50 points).