Optimal Broadcasting Algorithm for Multiple Messages on the Star and Pancake Graphs Using Minimal Dominating Sets

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We present broadcasting algorithms for the n-star and n-pancake graphs for m messages. Both the n-star and n-pancake have n! vertices but with sub-logarithmic degrees and diameters in terms of the total number of vertices. The algorithms use minimal dominating sets and run in $O(m + n)$ time, which is optimal.