We consider lightweight decentralized algorithms for achieving consensus in distributed systems. Each member of a distributed group has a private value from a fixed set consisting of, say, two elements, and the goal is for all members to reach consensus on the majority value. We explore variants of the voter model applied to this problem. In the voter model, each node polls a randomly chosen group member and adopts its value. The process is repeated until consensus is reached. We generalize this so that each member polls a (deterministic or random) number of other group members and changes opinion only if a suitably defined super-majority has a different opinion. We show that this modification greatly speeds up the convergence of the algorithm, as well as substantially reducing the probability of its reaching consensus on the incorrect value.