

Worst-case Analysis

- $(N-1)$ messages for Election message to get from Initiator (N6) to would-be coordinator (N80)
- N messages for Election message to circulate around ring without message being changed
- N messages for Elected message to circulate around the ring
- Message complexity: $(3N-1)$ messages
- Completion time: $(3N-1)$ message transmission times
- Thus, if there are no failures, election terminates (liveness) and everyone knows about highest-attribute process as leader (safety)