An advance to electronic communications is the use of Delay-Tolerant Networks to send information to devices. Originally designed to enable interstellar communications, the algorithm groups packages together in bundles and keeps the bundles in routing nodes until a path to the destination is present. This enables networks to function in disconnected or partly-connected environments, where routing paths to the destination come and go. The routing paths, however, are changing dynamically, meaning there’s often no clear path to the destination. How can a source node send a message to a node when the path to the node will be changed by the time the message reaches it? Most solutions involve using prior knowledge of the network layout to predict node movements, or sending copies of the message out to reach the destination node. The solution I have explored involves using social dynamics to predict which nodes will be in contact with each other, then using adjusting probability scale to indicate which nodes can consistently deliver bundles to the destination node. The nodes automatically align themselves into social groups, based on frequency of contact and the intervals between contacts. To send a message, a node review the groups he encounters, and finds which group has a history of consistent delivery to the sink node.

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Publications
