Data Communications Write Up

Project 2 Milestone 2

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We implemented GU Search on top of our implementation of GU Chord. We added a finger table to our GU Chord for this milestone. We initialized each node’s finger table when the node joins the network. Because we used SHA1 cryptographic hashing (extra credit), each node has a finger table of length 160 (the hash is 160 bits).

We added an update finger table methods to our stabilization protocol. We used the optimization where we check to see if the start value of the finger is in the range of the start value of the previous finger and the previous finger’s node hash. This seriously cut down on the amount of time required to keep our finger tables updated.

At first, we attempted to update all the other node’s finger tables when a node entered the chord ring but ran into unexpected problems and ended up using the update finger tables as part of the stabilization protocol instead.

We used a standard template library vector to store the finger tables. We used the GMP library to compare the SHA1 cryptographic hashes.