MQP Meeting minutes

Date and Time	Tuesday 12 November 2013 at 2:00 pm
Venue	Craig's Office
Participants	Curtis, Craig, Dan

Item	Notes and Discussion
Using HTTP for intra router communication	• Provides a consistent header for keeping track of control and session information. • Twisted already provides a lot of helper functionality for HTTP. • More of a convenience gain. Adding logic to the control information and header passing would be as simple as including an extra field in the HTTP header. Saves on development time vs writing a custom header and parser from scratch. • Why not use a static struct? Ease of development. • Make a diagram of the protocol, pen and paper is fine for now.
Trust Model	• Implement after the prototype is flushed out and finalized. Good for discussion section. • Write about it like we're actually implementing it. • Reputation based or accumulative (local) trust platform? • In our scenario, we'll likely be dealing with less then 10 neighbors for a long period of time, so the reputation model popularized by P2P networks is not necessary. • Borrow trust calculating equations from P2P networks.
Liability with asymetric cryptography	• Sender produces a digital signature of a hashed portion of the initial session request. • associate each request with IP, time, url, port, signature (to prove identity). • Each router holds public key of every neighbor (tied to IP) to use for verifying signature • Working trust value for each peer (weighted average). Alpha (recent activity), Beta (past activity) paramaters, design protocol to weigh them differently. We should probably weigh Alpha higher then Beta.
HTTPS support	• Can we support HTTPS easily? Is it worthwhile? • Recent news: HTTP 2.0 will use HTTPS by default. "C. HTTP/2 to only be used with https:// URIs on the open Internet. http:// URIs would continue to use HTTP/1 (and of course it would still be possible for older HTTP/1 clients to still interoperate with https:// URIs)." • Can we mimick one HTTPS session across multiple routers (instead of using HTTPS on each router). • At least talk about the idea and the trade offs.
Metrics for choosing Peers	• Speed vs security • trust and reliability metric