IP Proxying Support for HTTP
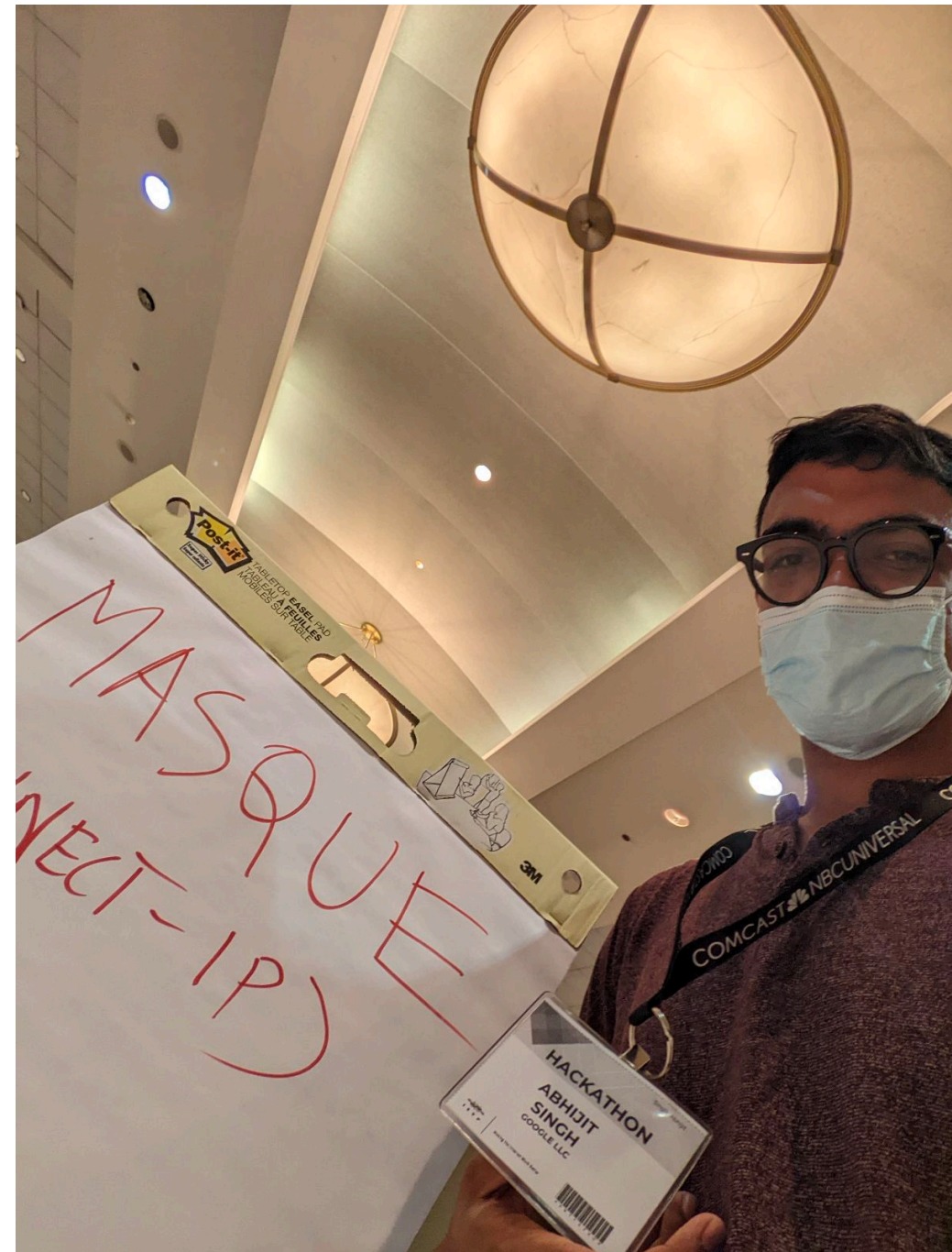
draft-ietf-masque-connect-ip

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MASQUE
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Testing progress

Hackathon projects implementing CONNECT-IP!

Multiple ongoing projects

Changes in -02

Improved text around URI template

Clarified use of ADDRESS_ASSIGN (when it is required or not)

Recommended ICMP for various error states

Ensuring MTU values for transiting IPv6 traffic

Issue #46

CONNECT-UDP has a default URI template

   This is to support configuration methods (browsers, simple input) that allow only setting a proxy name/port

Adding parallel default URI

```
https://$PROXY_HOST:$PROXY_PORT/.well-known/masque/ip/{target}/{ipproto}/
```

Issues #61 & #62

Datagram MTU in the presence of intermediaries gets messy

Previous text suggested a way to coordinate with intermediaries

New text says that either (a) you guarantee no intermediaries and pad QUIC initials or (b) you MUST do PMTUD over the tunnel

Issue #64

Clarifying some ICMP error handling

ICMP is the main mechanism for signaling packet sending errors

Recommend including ICMP in protocol routes that are accepted

   Clients should be prepared to receive ICMP

Issue #66

ADDRESS_REQUEST was hard to use

    For client <-> proxy models, ambiguous if clients needed to send, and if proxies should expect

Proposal is to always send ADDRESS_REQUEST if you expect ADDRESS_ASSIGN

ADDRESS_REQUEST capsule can include all zeros to indicate the peer doesn't have a preference

Allow address capsules to include a list of addresses

Issue #54 - Timing and ordering

When can you know it is time to assign an address?

Wait for an ADDRESS_REQUEST

When can you know it is time to send packets?

Wait for an ADDRESS_ASSIGN and
ROUTE_ADVERTISEMENT

If extensions need specific processing with regards to addresses and routes, they can define ordering rules or new capsules to create batches of capsules

Next steps

Close all the issues!

More interop testing

Not ready for WGLC yet, but getting closer