Hot Issues
How we did this

We went through ALL the issues (yes, we did that)

We tagged, assigned, closed. What this means:

- **quicv2**: this is not in-scope for v1; v2 will happen
- **parked**: not blocking and will re-examine before v1
- **needs-discussion**: this needs to be resolved soon
- **closed**: not an issue, or we believe that it is resolved

As always, if you disagree, say so!
Discuss on List

IETF101: QUexit
Fixing HTTP Priority for QUIC: Request IDs

Today: HTTP mapping uses Stream IDs.

Motivation:

HTTP/2 allows use of ‘phantom’ streams in PRIORITY, which QUIC doesn’t have

Proposed Mechanism:

Expand Push ID to Request ID, allowing use of phantom streams and replace references to stream IDs

Issue #441
Connection ID Privacy

**Question:** Can we encrypt connection IDs?

**Answer:** Sure, but it will hurt. A lot.

**Proposed Resolution:**

Close with no action

All of the solutions that we know of have horrible costs

If someone comes up with a good solution, we can reopen

Issue #598
Prime client with connection ID for 0-RTT

Today: Server cannot specify connection ID for 0-RTT

Motivation:

Makes it easier to limit replay and amplification attacks by routing 0-RTT to a smaller set of machines.

Possible Mechanism:

- new NewSessionTicket Frame for session tickets
- include server-issued connection ID

Issue #584
QPACK

How far do we want to diverge from HPACK?

Instructions

Add some

Compress the instruction space

String encoding

Integer encoding - Huffman

New static table
Homework Section

IETF101: QUexit
Handshake Corner Cases

Several issues with ACKs and the handshake.

Several relate to the client’s second flight:

- Marten Seeman’s pathological loss recovery case #1190
- How to acknowledge it #829
- Authentication of that flight #1018
- Packet number shadowing attacks (also #1018)

Homework: Give us some ideas
Discuss Now

IETF101: QUexit
**PADDING and PING**

**Today:** Both PADDING and PING instigate ACK frames and count towards bytes in flight

**Problems:**
- PADDING and PING are redundant
- Cannot add PADDING to all ACK-only packets

**Principle:** Instigates Ack **iff** Packet is added to bytes in flight
- Need an ACK to remove a packet from bytes in flight

**Issues** [#837, #838]
PADDING and PING

Option 1: Remove PING, because it’s redundant
- Still could not add PADDING to all ACK-only packets

Option 2: PADDING does not instigate an ACK
- PADDING-only and ACK+PADDING packets do not count towards bytes in flight
- ACK congestion control is hard, PADDING could make it important

Issues #837, #838