little things that I would like to change in HTTP/2.0 that I don’t feel I have the authority to change without working group feedback (or at least ensured that a wider audience don’t have objections)
Stream identifiers

• The framing layer specifies a 32-bit hole
• Most frames use this for a stream identifier, but not all
  • SETTINGS uses it for a settings count, which can be inferred from size
  • GOAWAY uses it for the highest valued stream ID that the sender is prepared to process
  • PING uses it for a correlator

• Proposal:
  • Make the frame header always contain a stream identifier
  • Stream ID 0 is for frames that aren’t stream-related
  • SETTINGS loses its count, PING can use frame payload for correlation
  • GOAWAY needs an extra 4 bytes
Error codes

• RST_STREAM and GOAWAY have different error code spaces
• Values differ:
  • INTERNAL_ERROR is 2 on GOAWAY and 6 on RST_STREAM
• Proposal: combine the two error spaces
IANA Policies (#33)

- **Frame type:** IETF Review
  - Reasoning: limited space available, interaction with frame flags

- **Error codes:** Expert Review
- **& Settings:** Expert Review
  - Expert template provides a slot for description (which could be a reference)
  - Expert is advised to attempt to discourage duplication
  - Reasoning: lots of space here
Framing layer common flags

• Flags are currently interpreted on a per-frame-type basis
• The FINAL flag is on most frames
• …but interpretation has to be frame-type-specific
• Proposal:
  • Define common flags for all frames
  • Leave reserved flags that don’t have an assigned semantic for any frame types in a quantum state (could be frame-type-specific or common)?
• Above depends on frame-type registration policy, see previous slides
Connection-based authentication (#49)

• Current text is vague and defines two optional mechanisms
  • A new realm parameter
  • Limiting concurrency

• Neither option seems workable

• Proposal: remove connection-based authentication text
  • Restore if the WG can achieve consensus
  • Track status with an issue
:version

• The ‘:version’ synthetic field includes the protocol version
• This is redundant, confusing and unactionable
• Proposal: remove ‘:version’ entirely
100-continue (#18)

- SPDY didn’t define what to do with Expect: 100-continue
- Proposal: **just send a HEADERS frame**
  - ...with ‘:status’ of 100
  - Use the normal mechanisms for expectations (417)
Multiple RST_STREAM

• Current text allows multiple RST_STREAM messages
• Advises not sending duplicates (i.e., same error code)
• Proposal: **just send one**
  • Suppress others
  • Keep it simple
The TCP CWND is a persisted only setting.
For fast startup of the TCP CWD.
Proposal: remove it.
Data Compression (#46)

• There is a bit for this in the data frame
• AND Content-Encoding
• Proposal: **remove the bit**