Open Issues/IETF LC feedback on draft-ietf-hybi-thewebsocketprotocol-10

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Major Issues

- Remove deflate-stream from the base spec
  - Chairs see consensus on this.
- Use DNS SRV as part of the base spec
  - Chairs do not see consensus for this.
- Add ability to add max frame size announcement [Francis Brosnan Blazquez and others]
  - Chairs see consensus for adding this option
- Missing Security Considerations [AD Review]
  - Add clarification that we can use HTTP mechanisms
  - Thus WWW-Authenticate, 401 for authentication, OAUTH related headers, etc, are all available
  - Need to add text about redirect implications.

Major Issues

- How does the server "Fails a WebSocket Connection"? [Apps Review]
- Server dropping the WebSocket connection without telling the client why [Apps Review]
- The Upgrade token has no version , why not copy/ move the version from the Sec-WebSocket-Version header field [Mark N.]
  - NOTE: Mark, what is the benefit?
  - Upgrade *could* request highest version supported
- Don't use "x-" namespace as per draft-saintandre-xdash [AD Review, Mark N.]
  - Remove mention of this in section 9.1

Major Issues

- Is language tagging needed in close /reason/? [AD Review].
  - Resolution: Add optional language tag.
- Missing text about forward/backward compatibility between different versions. Is something like **major**.**minor** needed? [AD Review].
  - Minor number not needed.
  - Major numbers imply no backwards compatibility.
- How does the client know whether cookies are really expected to be used or not? [Apps Review]
  - Inherit from HTTP per HTTP compatibility requirement
- No text about reconnection logic [AD Review]
  - Add text about exponential back off and proper care.

Major Issues

- WebSocket negotiation: use of GET instead of OPTIONS or a new HTTP method [Gen-Art, Roy F.]
  - Suggestion to leave the current text as is
- Why is masking necessary? [Gen-Art]
- Need to state the purpose of masking [Apps Review, AD review]
- Why is masking only in one direction? [Gen-Art]
- The purpose of the masking bit is not very clear. Is it used for Control frames? [AD Review]
- Unlimited buffering with fragmentation can be used for Denial-of-Service[Gen-Art]

Minor Issues

- Why invent Sec-WebSocket-Origin header field instead of reusing of the Origin header field being worked on in WebSec [Gen-Art]

- Need a reference to CORS [Gen-Art]

- The reservation of different ranges of error codes for use by extensions, libraries and frameworks, and applications doesn't make sense [Apps Review]

  - Possible solution: only one range reserved for "this protocol and extensions published within the IETF process", and another range for "libraries, frameworks and application code"

Minor Issues

- extension-param = token ["=" token]

  In HTTP header fields, parameters usually support both token and quoted-string form, it would be better to allow reuse of existing parsers [Julian R.]

- In Section 11.12 version number – clarify allowed range and which values are reserved and which are unused [Mykyta Yevstifeyev]. Ok, say, 250?

Minor Issues

- Missing syntax for some new header fields [Mykyta Yevstifeyev]

- Need to clarify whether the whole message, or each frame has to contain valid UTF-8 sequences (splitting encoding of a Unicode character across multiple frames)
    - Consensus to verify after reassembly
- Description of request-URI is inconsistent
    - Currently implies you use "ws" as URI:

    3. The request MUST contain a "Request-URI" as part of the GET method. This MUST match the /resource name/ Section 3 (a relative URI), or be an absolute URI that, when parsed, has a matching / resource name/ as well as matching /host/, /port/, and appropriate scheme (ws or wss).

Editorial/nits

- Suggestion to reorder some sections [Gen-Art]
- Registration of HTTP header fields in the IANA Considerations section need cleanup/clarification [Julian R.]
  - Add pointers within IANA section to relevant explanations
- Remove "_This section is non-normative._" from the Introduction section. [Mykyta Yevstifeyev]
- Multiple definitions of ws/wss URIs, some of them contain bugs? [Mykyta Yevstifeyev]

Editorial/nits

- "/" should be replaced with "|" if RFC 2616 ABNF is used [Mykyta Yevstifeyev]

- Why WebSockets and not existing protocols like IRC and XMPP? Better description of the motivation is needed [AD Review]

Raised, but not issues

- Key is overengineered (Why use SHA-1?) [Gen-Art]

- Why define 7/16/64 bit buffer length instead of a simple 32bit? [Gen-Art]