

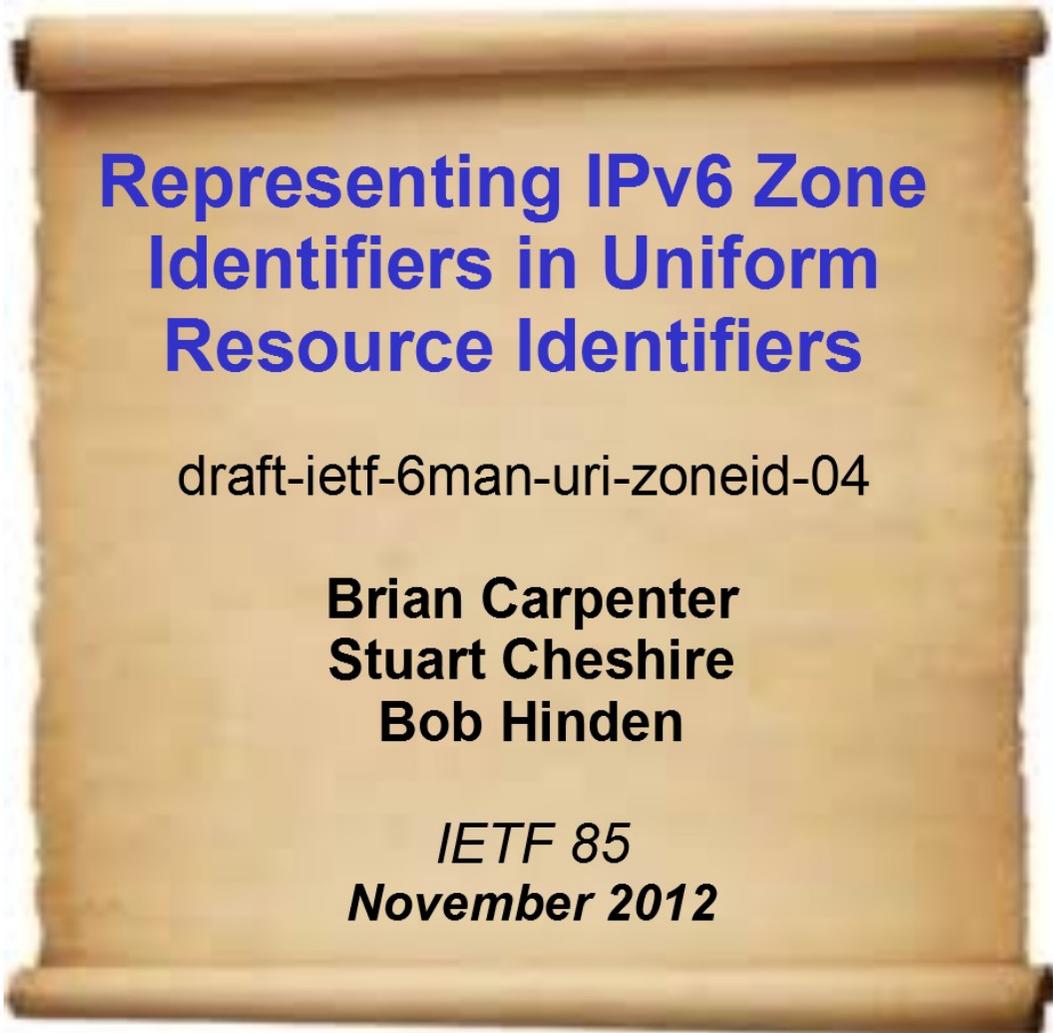
Representing IPv6 Zone Identifiers in Uniform Resource Identifiers

draft-carpenter-6man-rfc6874bis

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We discussed this just recently...



**Representing IPv6 Zone
Identifiers in Uniform
Resource Identifiers**

draft-ietf-6man-uri-zoneid-04

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... which
became
RFC 6874

Motivation

- Literal addresses in URIs are mainly intended for operational and diagnostic use.
- Sometimes, there is a need to make tests that relate to IPv6 link local addresses via a specific interface on the host.
 - A web browser may be the handiest tool for this
 - It may be the only tool for reconfiguring misconfigured devices
- At least one application (CUPS printing) requires HTTP usage of link local addresses via a specific interface.

Fail

- For link-local addresses, RFC 4007 defines a text representation of the Zone Identifier (in practice equal to an interface name):

fe80::abcd%eth0

- Widely supported and used in IPv6-land
- RFC 6874 defined a mapping for the Zone ID in URI syntax.
 - No known current browsers support it.
 - The browser community (WHATWG) decided this explicitly.

Problems with RFC6874 (1)

- Modifies the IP-literal branch of the ABNF for URIs (RFC 3986)
 - `http://[fe80::abcd%25eth0]` becomes legal
 - using `%25` as separator, i.e. RFC 4007 notation with URI escaping
- This prevents cut and paste (e.g. from ping to URL)
 - Arguably, required because `%` is always an escape character in URIs
 - Arguably, unnecessary if parsers follow ABNF rigidly
- Proposal: no change

Problems with RFC6874 (2)

- Requires hosts to delete the Zone ID from outgoing URIs (in the HTTP *Host* header)
 - Violates the normal behaviour of HTTP/1.1 (RFC 7230)
 - At the least, awkward to code
 - Breaks CUPS
- Proposal: delete this requirement

Problems with RFC6874 (3)

- Suggests URL parsers should support the %25 encoding but heuristically accept (for example)

fe80::abcd%eth0

instead of

fe80::abcd%25eth0

- Very tricky to code
 - Confusing to users
- Proposal: delete this suggestion

Feedback requested

- IPv6 community, including operators
- ART Area
- W3C
- Browser implementers, including
WHATWG