103 Early Hints

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indicates that the server is likely to send a final request with the headers included in the informational response.
Use case 1: trigger H2 push

- app. server can be H1
- already implemented by: nghttp2 & H2O
- sending links only is better than H2 push if the intermediary is a cache

```
GET / HTTP/1.1
Host: example.com

HTTP/1.1 103 Early Hints
Link: </style.css>; rel=preload

HTTP/1.1 200 OK
Content-Type: text/html
Link: </style.css>; rel=preload

<!DOCTYPE HTML>
...
```
Use case 2: trigger preload of 3rd party assets

- good complement to H2 push
  - with 1 RTT increase
  - note: use of H2 push is limited to same origin
Other use cases

- hint the client to setup a MIME decoder
- hint the client to preload anything:
  - codec, shared dictionary, redirect destination, …
Existing semantics are preserved

- headers sent in 103 are just **hints**
  - i.e. some of the headers that are likely to be included in the final response

- in H2, repeating the same header in final response consumes only 1 or 2 octets per header
  - you won’t be using H1 if bandwidth matters
do we need negotiation?

- e.g. Accept-Early-Hints: link
- reasoning: many H1 clients would have issues handling the informational response
- header-based negotiation does not always work
  • since headers are end-to-end by default
  • an intermediary might handle 103 incorrectly