

HTTP Availability Hints

draft-nottingham-http-availability-hints

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Vary is awful.

First try: draft-ietf-httpbis-key

- Response header carries a recipe for determining a cache key

- E.g.,

```
Key: user-agent;substr=MSIE;Substr="mobile",  
      Cookie;param="ID"
```

```
Vary: User-Agent, Cookie
```

- **Pro:** very flexible / doesn't require cache to know headers
- **Con:** complicated / awkward / footgun

Second try: draft-ietf-httpbis-variants

- Response header carries information about what variants are available, and which created this request

- E.g.,

```
Variants: Accept-Language=(en jp de)
```

```
Variants: Accept-Encoding=(br gzip)
```

```
Variant-Key: (en br)
```

```
Vary: Accept-Language, Accept-Encoding
```

- **Pro:** Much less footgun-y / more declarative
- **Con:** Cache has to know about header semantics / still kinda complex, non-intuitive

Let's try again.

draft-nottingham-http-availability-hints

- Response headers describe what representations are available, facet-by-facet.
- ‘d’ parameter indicates a default representation.
- E.g.,

```
Vary: Accept-Encoding, Accept-Language, ECT  
Avail-Encoding: gzip, br  
Avail-Language: fr, en;d  
Avail-ECT: (slow-2g 2g 3g), (4g);d
```

- **Pro:** Intuitive / declarative / other use cases for this information
- **Con:** Does not contain information regarding relative preferences between facets

Adopt?