The IP Geolocation HTTP Client Hint
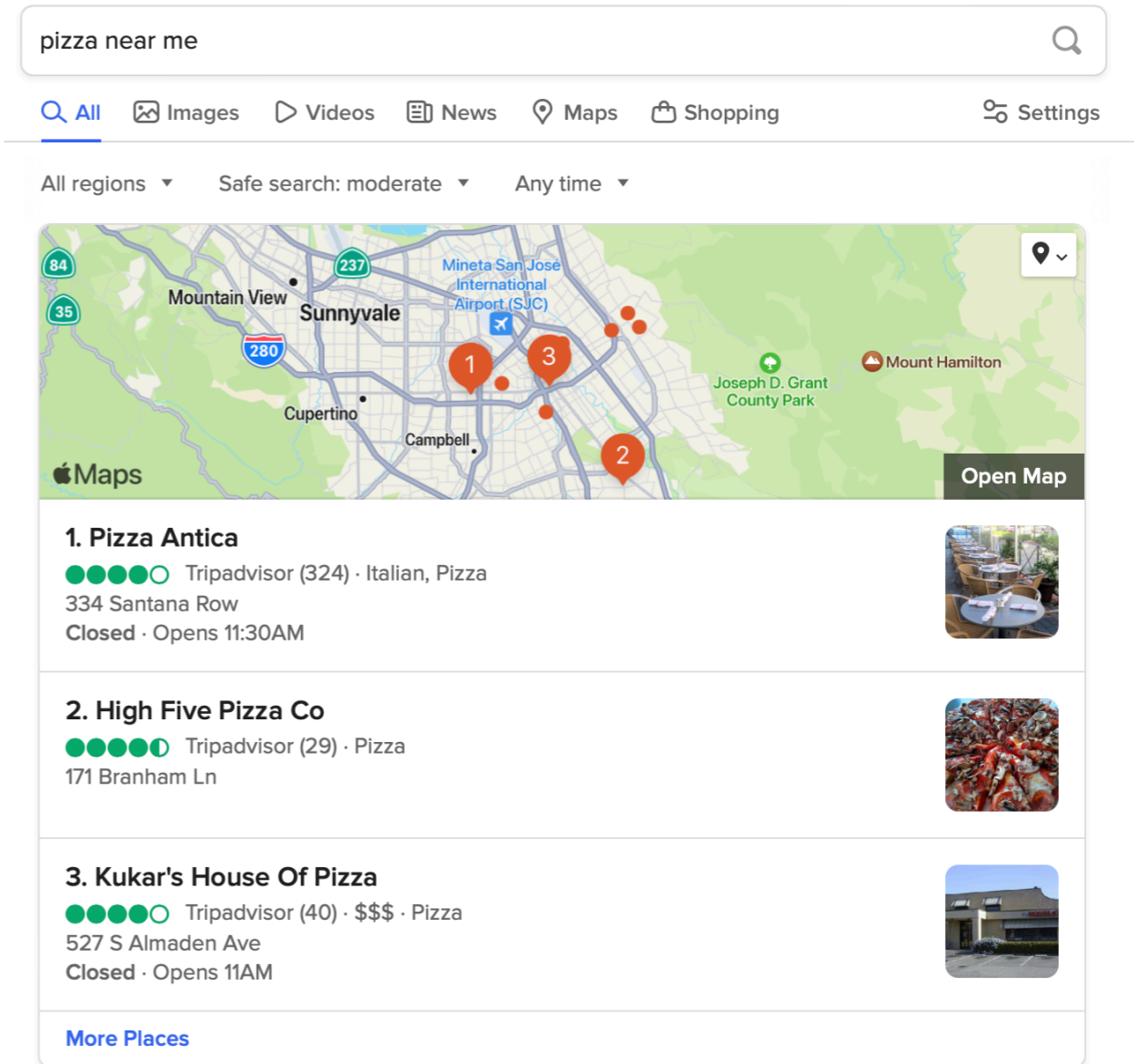
draft-pauly-httpbis-geoip-hint

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IETF 114, July 2022, Philadelphia

What is this for?

Clients (sometimes) want to get content relevant for their general location

Servers look up client IP addresses in geolocation databases to check location

So what's the problem?

These databases are often wrong!

Relies on aggregating geo IP services, not authoritative databases

Some databases add incorrect specificity — turning "US" wide IP into a city in Kansas

Particularly bad for privacy proxy services, or new IP ranges

Recognizing that databases are mismatched and getting them fixed is a manual outreach process

What are the dangers? ⚠️

Previous proposal sent a client geohash

This can be dangerous! Sending information derived from location is a great way to open up tracking vectors

The "safe" use case was to match the geohash to the IP location that was already revealed

New proposal

Sharing the "correct" IP geo mapping for the IP address a server already sees doesn't reveal new location information

```
Sec-CH-IP-Geo = "US,US-AL,Alabaster"

Sec-CH-IP-Geo = "SG,SG-01,Singapore";
feed="https://noc.ietf.org/geo/
google.csv"
```

Client behavior

Expects that the client has a way to know what IP geo they have

Works well for privacy proxies

Other clients could learn from their ISP / Carrier

Client only shares if they opt-in

Server behavior

Options for how to use the hint:

1. Implicitly trust the client hint (fine if just about convenience, and not security / access)

2. If the "feed" parameter is a trusted feed, prefer it instead of a default IP geo database

3. If mismatched, refetch the "feed" if not recently updated

4. If an unknown/untrusted "feed" starts becoming common, flag it to be added as a new IP geo input

Next steps

Interest in working on this?