HTTP API

HTTP API for Registering Impressions

Impressions are the simplest case, because there's no return data from the API.

```
GET /some-resource
Host: intermediary1.example
```

Server includes a header in the response:

```
HTTP 200 OK
Save-Impression: conversion-site=advertiser.example,
  histogram-index=2, filter-data=12, lifetime-days=7
Content-Type: image/jpeg

AD DATA
```

Questions to consider

- Do we need to support registering multiple impressions with one header?
- Browser-initiated requests only, or XHR/fetch as well?
- Any differences in permission policy handling vs. Javascript calls?
- Add a nonce to avoid duplicate impressions for repeated requests?

Registering multiple impressions

May be useful if there are multiple sites where conversion could occur

Adds complexity and has implications on structured header syntax

Proposal: Only one impression per HTTP resource

Fetch integration

The fetch spec doesn't have any concept of hooks for other specification

So we'd need a monkey🐒 patch🩹 (🙊) … [ARA has one](#)

Basic 🐒🩹 shape:

 (Maybe) add any parameters that the operation needs

 Move those parameters to the request when initializing

 Pass the response (and any parameters) to a function in our spec

Proposal: defer creating any patch, track with an issue

How much can HTTP differ from JS?

We have an opportunity to set different options

  Permissions policy defaults

  Additional options

Structured header syntax is limited

Proposal: make the HTTP API identical to JS (to the greatest extent possible)

HTTP request retries

Requests are often retried by the browser or by content

If the API calls that a response invokes are called multiple times, what then?

Might need different answers for saving impressions vs. registering conversions

Last touch logic won't be affected by a few extra impressions

Other attribution logic might be affected

Budget expenditure on conversion is potentially a big deal

Proposal: Open an issue to reconsider once we are further along

HTTP API Extensions

- Support for registering conversions ([ppa-api#47](#), [ppa-api#48](#))
- Support for conversion delegation API ([ppa-api#32](#))

Links

- Tracking issue: https://github.com/patcg/ppa-api/issues/46
- PR: https://github.com/patcg/ppa-api/pull/56

Extensions:

- Partial HTTP API for delegation (ppa-api#47)
- Full HTTP API for delegation (ppa-api#48)