Streaming Media Tracing

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CTA WAVE SMT WG for the IETF CDNI WG

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Outline

- Who is doing this?
- What are they doing?
- Why do we care?
Who

- Consumer Technology Association (CTA)
- Web Application Video Ecosystem (WAVE)
- Primary Use Case: Streaming Media
- Goal: Interoperable Tracing
Three Components

- **Pull:** Data is being requested. (HTTP)
- **Push:** Data is being sent unsolicited.
- **Export:** Data was transmitted and now we’re logging it.
Pull

▶ Request Header provides visibility into request chain
▶ Response Field provides visibility into response chain
▶ Both use Structured Field Values
▶ Both represent the graph of the trace
  ▶ Not just an ordered list
Format

(Reminder: The SMT has not fully reached consensus, this is a work in progress.)

- Field is list of sublists.
- Each element of that list is a server, intermediary, or client.
- Each element of those sublists represents one of their requests.
- Sublist elements are relative indicies to indicate the target of the request.
Example

What this might look like if a full chain were exported from a client:

Trace-Data:

(); n=OriginB,

(); n=OriginA,

(0 1); n=Intermediary,

(0); n=Client
Example 2

And if you add a bunch of data to it:

Trace-Data:
  ();n=OriginB;time=1700000001006;ttfb=3,
  ();n=OriginA;synthetic,
  (0;time=1700000000003;ttc=1000
   1;time=1700000001005;ttfb=13;ttlb=18)
  );n=Intermediary;time=1700000000002;ttfb=1019,
  (0;time=1700000000000;ttfb=1032;ttlb=1035
  );n=Client;init;time=1700000000000;ttfb=1032;ttlb=1035
Where are we now?

- Near the beginning of the “pull” stage.
- Still working on the details of the data format.
- Starting with timing data.
- Will be defining much more as we go.
How does this impact CDNI?

- There will eventually be configuration elements.
  - CDNI may choose to allow them to be configured.
  - Or it may choose not to.
- It will eventually offer export (logging).
  - These interfaces are likely to be of interest.
  - But it’s hard to tell exactly what they will look like.
  - They might fit into CDNI logging-shaped things, though.
Questions

- Time permitting.