Hybrid Measurement using IPPM Metrics

draft-trammell-ippm-hybrid-ps-00

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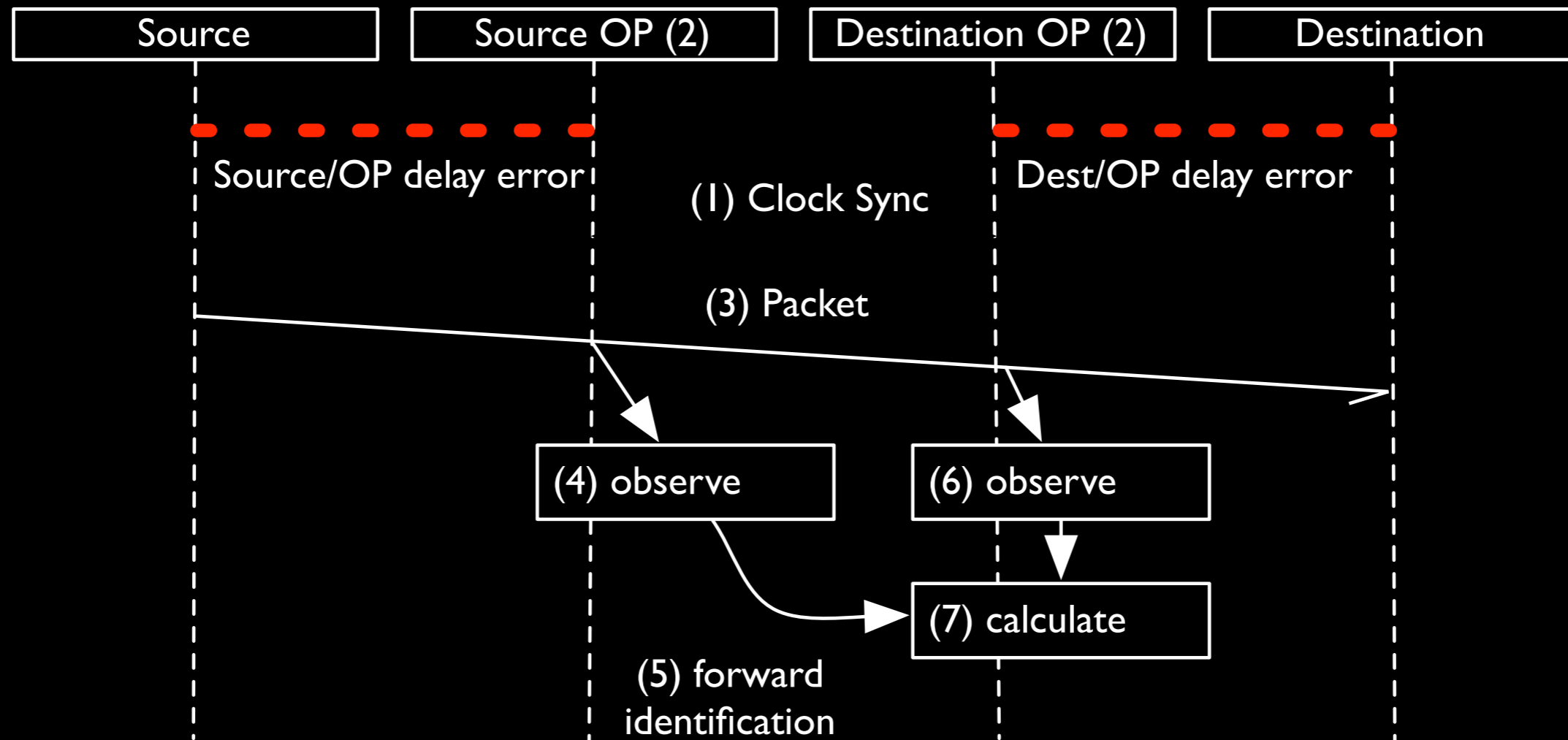IPPM – IETF 85 – Atlanta – 6 November 2012

Hybrid?

- Temporal or spatial combination of passive and active measurements of a given metric ("combined hybrid")

- Passive observation of active measurement traffic ("concurrent hybrid"), per Fabio Ricciato.

- -00 revision addresses only combined hybrid, future revisions may address both.

Requirements for Specification

- Definition of reference scenarios

- Selection of existing IPPM metrics

- Definition of passive methodologies compatible with existing active methodologies for each metric

  - Comparison and combination must support *known* or *estimated* uncertainty

Passive OWD example

Source	Source OP (2)	Destination OP (2)	Destination

Source/OP delay error

Dest/OP delay error

(1) Clock Sync

(3) Packet

(4) observe

(6) observe

(5) forward identification

(7) calculate

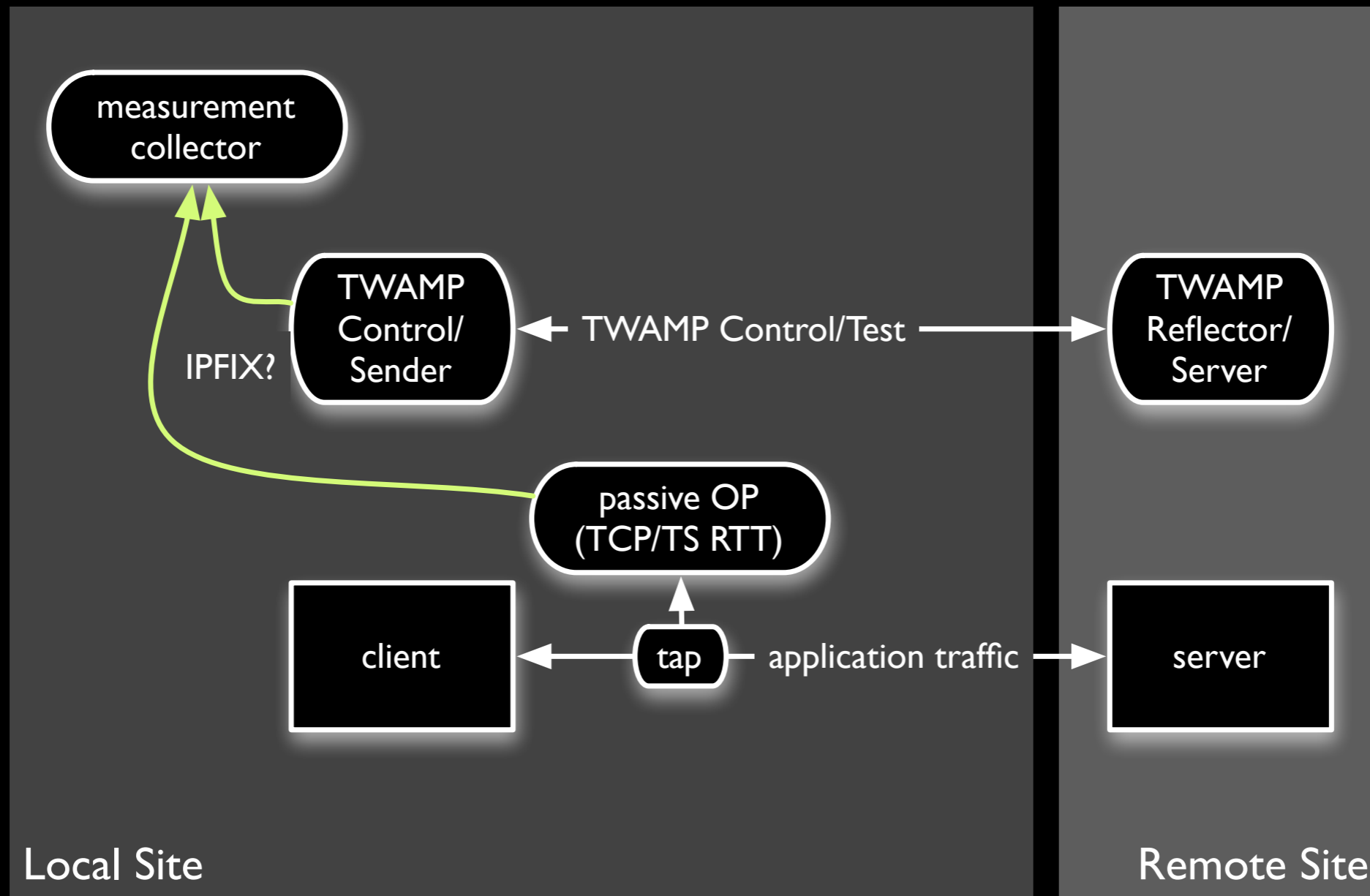Source: ETSI STQ guide EG 202 765-3

Candidate scenarios

- Active comparison to passive baseline for loss and delay

- Passive measurement of common paths supplemented with active measurement for uncommon paths

- Potential overlap with LMAP effort

IPFIX for IPPM
(future draft)

- Passive measurement requires an event-driven data export protocol.

- IP Flow* Information Export

  - asynchronous templated export

  - rich element set for network data

- Definition of IPFIX IEs for IPPM metrics?

Combined Hybrid
example deployment

Discussion

- Work is just getting started...

- *please* comment on the list or mail trammell@tik.ee.ethz.ch to participate!