

Options for Session ID and Control Code for STAMP Message Format

draft-gandhi-spring-twamp-srpm-07
draft-ietf-ippm-stamp-option-tlv-03

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STAMP Control Code Field

For a Query: TX Control Code

0x0: Out-of-band Response Requested.

This is also the default behavior.

0x1: In-band Response Requested.

Indicates that this query has been sent over a bidirectional path and the probe response is required over the same path in the reverse direction. The bidirectional path does not have to be an SR path.

For a Response -> RX Control Code - Used to return Errors

0x1: Error - Invalid Message.

Indicates that the operation failed because the received query message could not be processed.

0xN: Additional Error will be defined in future

Option 1: Variable Length Session ID Part of Existing Sequence Number

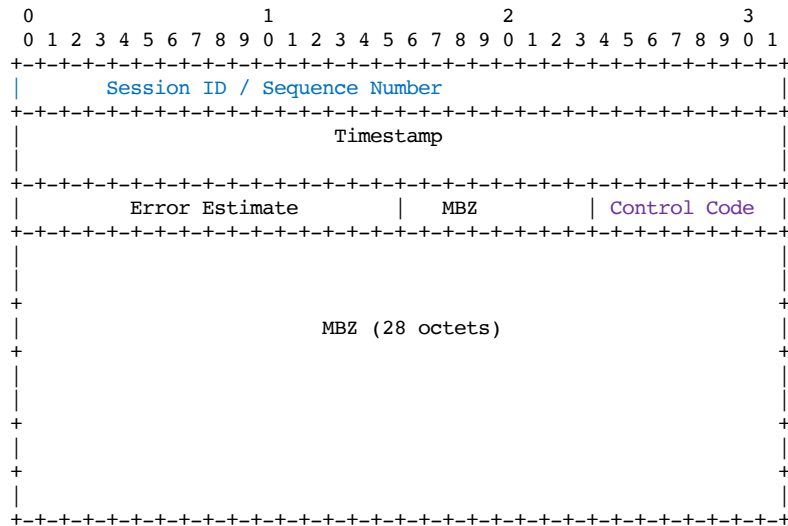


Figure: Sender Message Format in STAMP

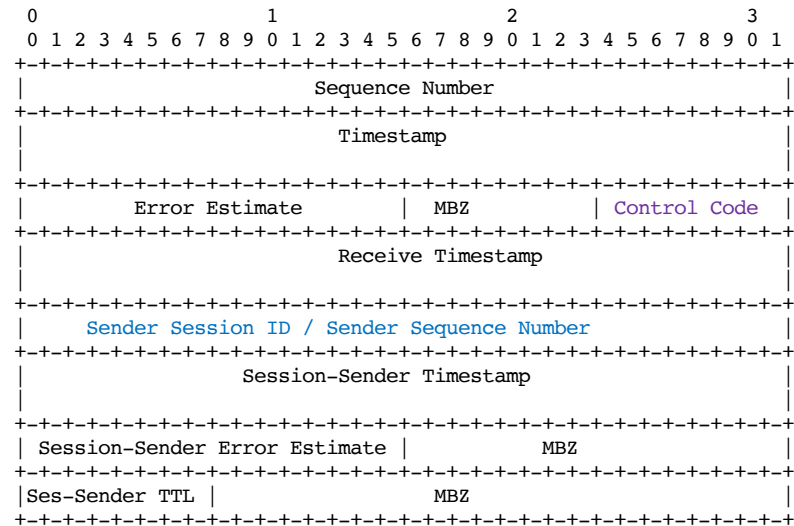


Figure: Reflector Message Format in STAMP

- ✓ No change for Session ID – local implementation behavior at Sender

Option 2: 24-bit Session ID Field

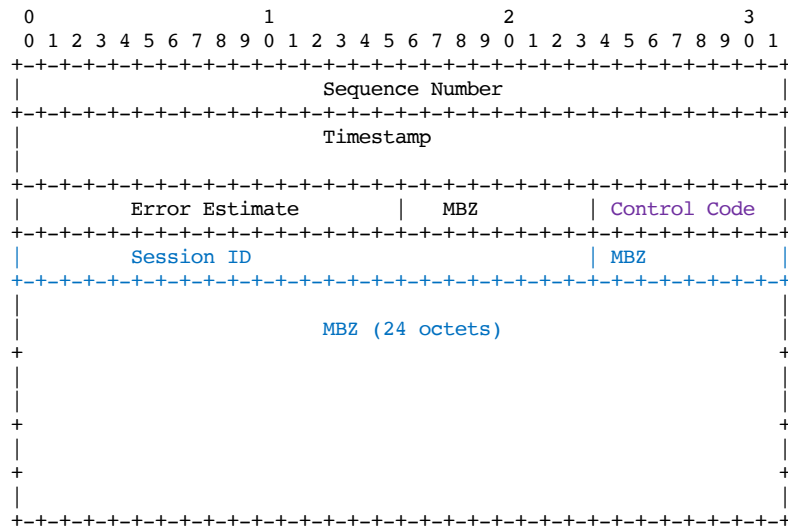


Figure: Sender Message Format in STAMP

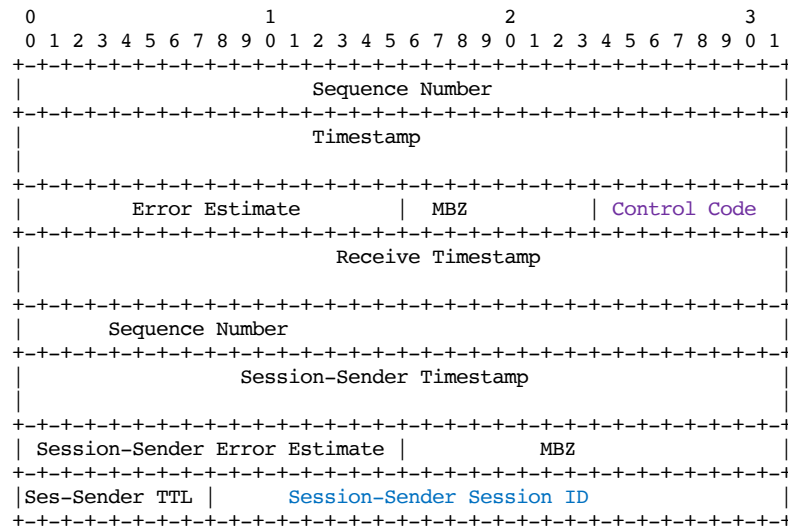


Figure: Reflector Message Format in STAMP

- ✓ Session ID has 24-bits
- Requires the reflector to copy it elsewhere in the packet to return it back - not desired
- It's also difficult to find a good place in authenticated test packets

Option 3: 32-bit Session ID in TLV

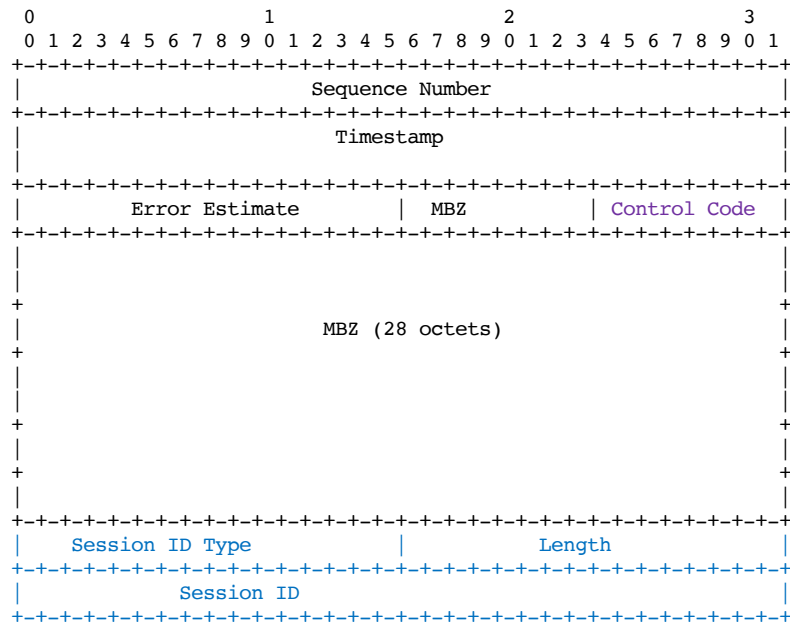


Figure: Sender Message Format in STAMP

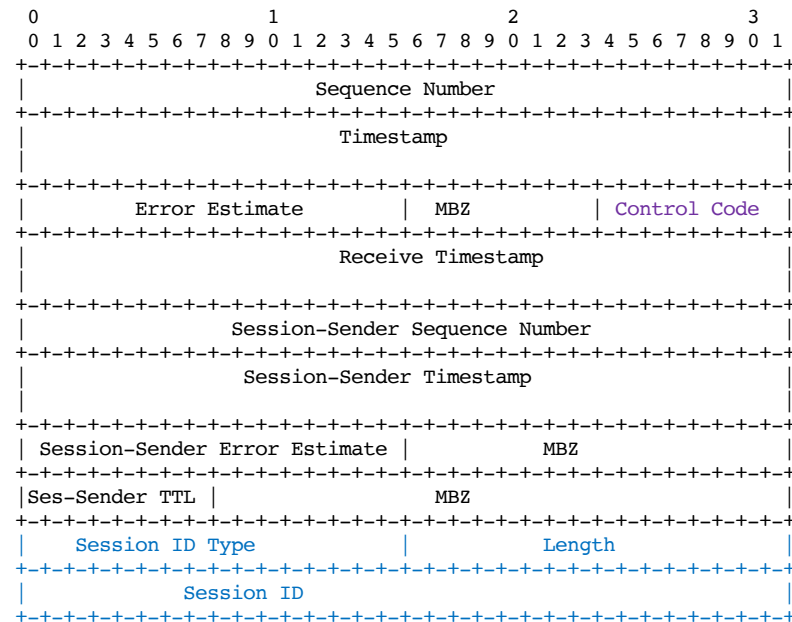


Figure: Reflector Message Format in STAMP

- ✓ Session ID has 32-bits
- Session ID is preferably placed in a fixed position of the test packets – TLV not desired

Option 4: 16-bit Session ID Field - 1

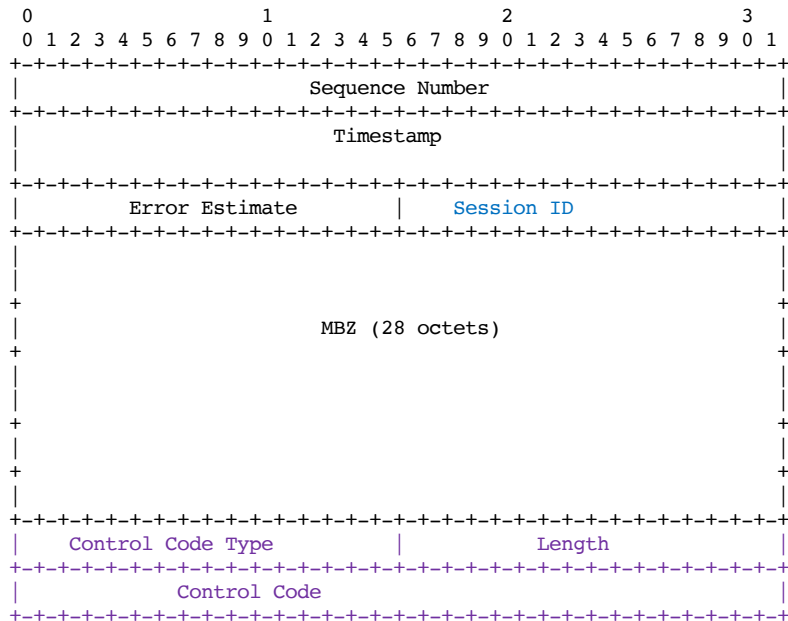


Figure: Sender Message Format in STAMP

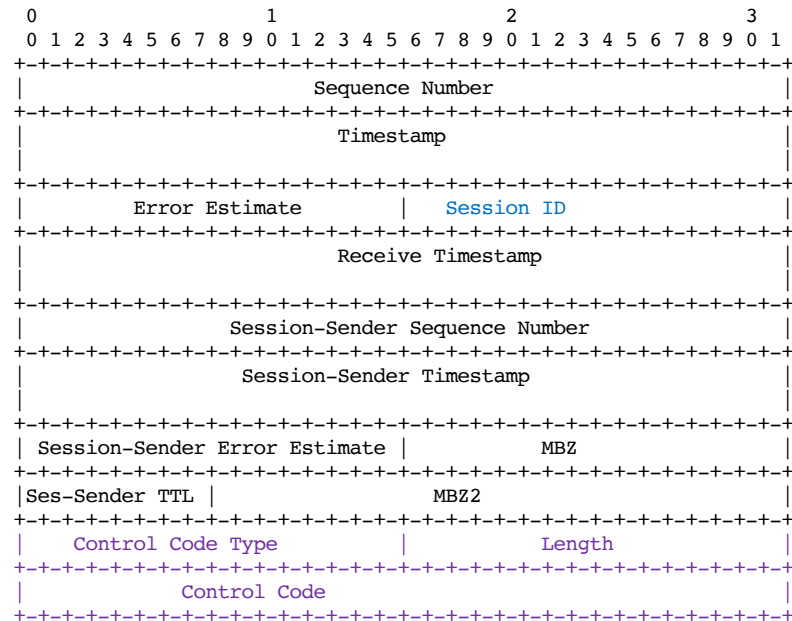


Figure: Reflector Message Format in STAMP

- ✓ Session ID has only 16-bits – is this good enough?
- Control code not compatible with existing TWAMP message – not favorable
- Control code is desired to be at fixed location when reflector implemented in hardware

Option 5: 16-bit Session ID Field - 2

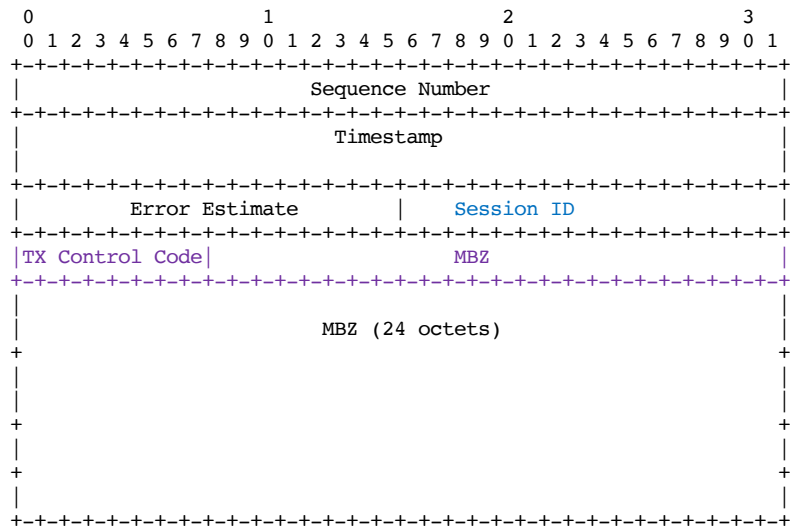


Figure: Sender Message Format in STAMP

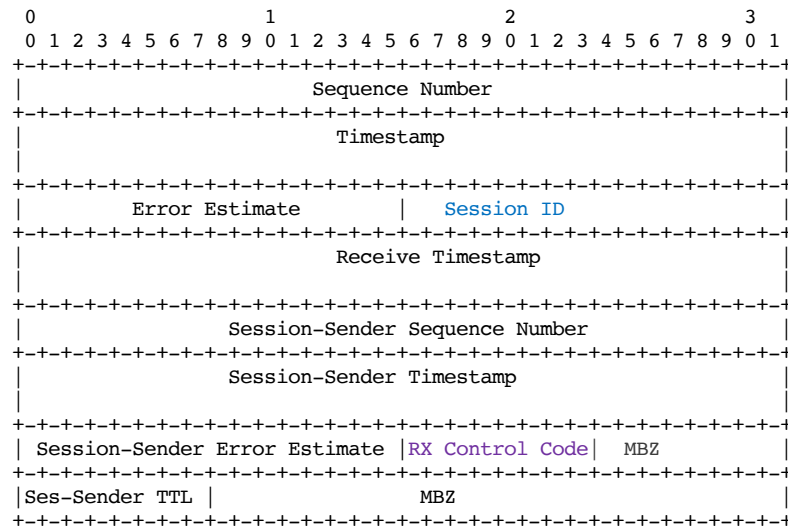


Figure: Reflector Message Format in STAMP

- ✓ Session ID has only 16-bits – is this good enough?
- ✓ Control code is TX and RX direction specific - hence copy of TX to RX not required

Option 6: 16-bit Session ID Field - 3

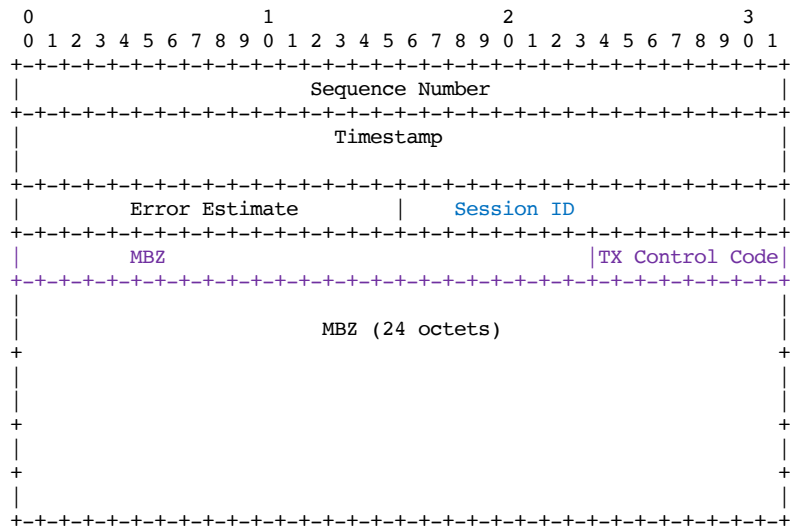


Figure: Sender Message Format in STAMP

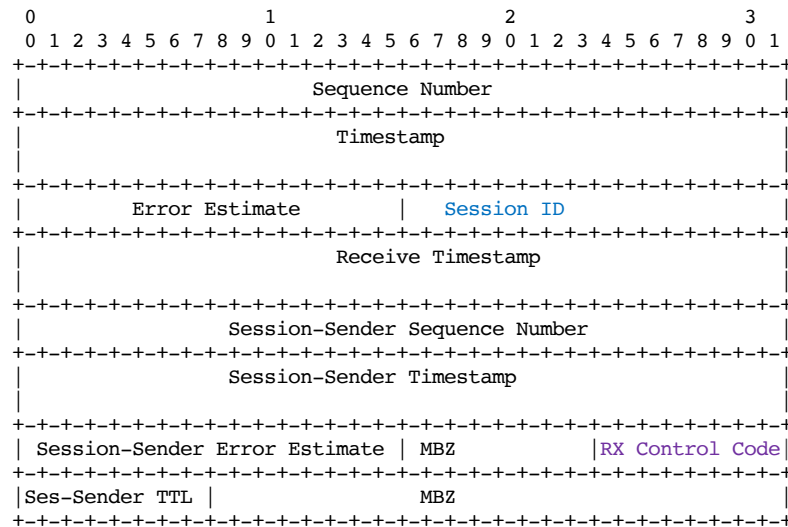


Figure: Reflector Message Format in STAMP

- ✓ Session ID has only 16-bits – is this good enough?
- ✓ Control code is TX and RX direction specific - hence copy of TX to RX not required

Next Steps

- Converge on an option for STAMP message format
- Update the respective drafts with the agreed option

Thank you