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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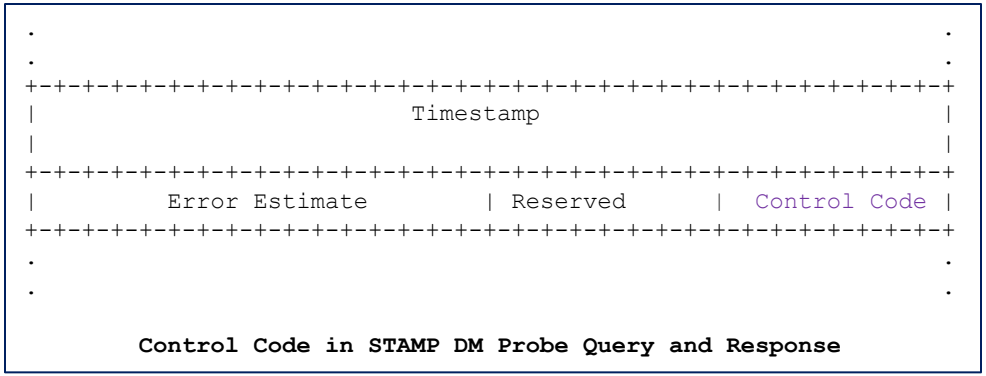
STAMP Control Code Field

For a Query:

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.



Control Code in STAMP DM Probe Query and Response

For a Response -> Need 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

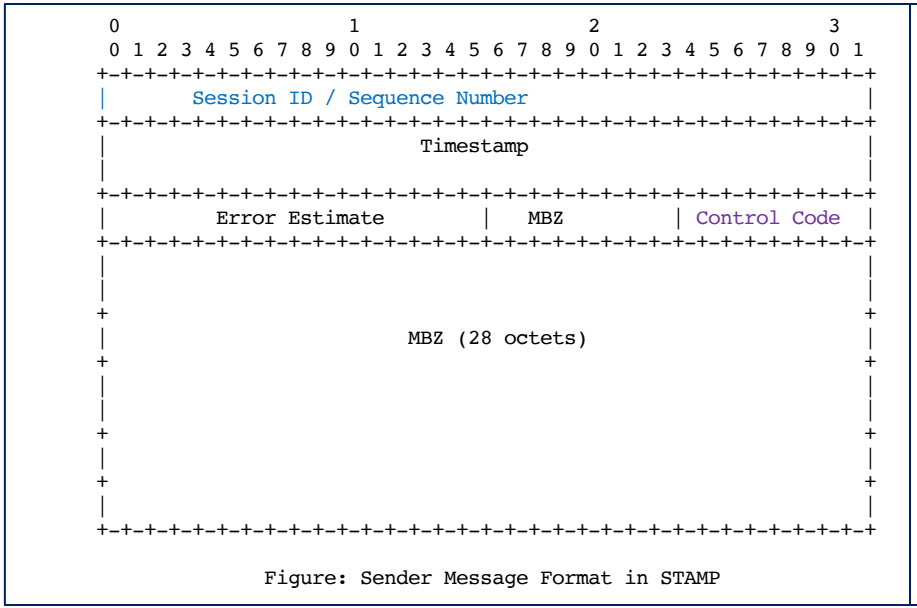


Figure: Sender Message Format in STAMP

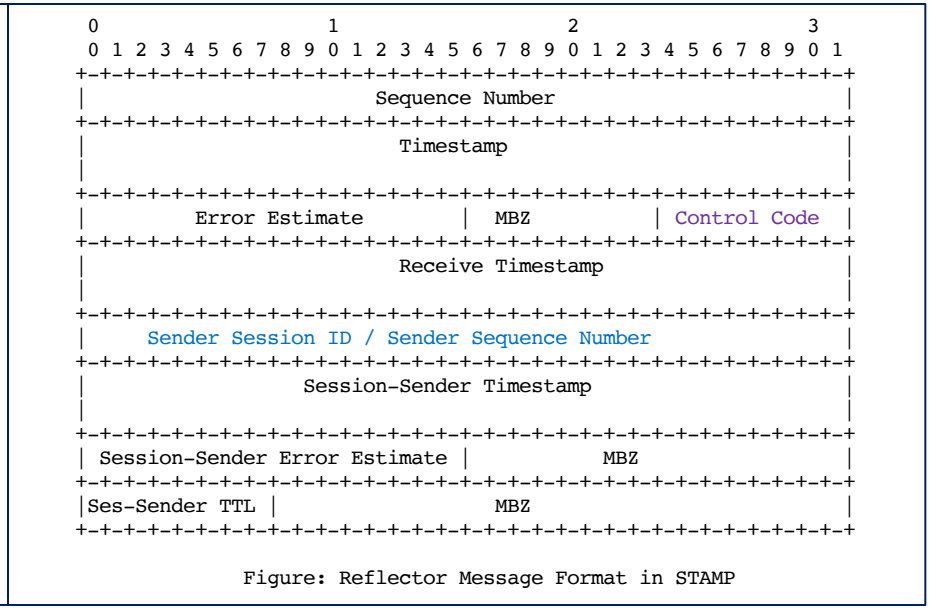


Figure: Reflector Message Format in STAMP

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

Option 2: 24-bit Session ID Field

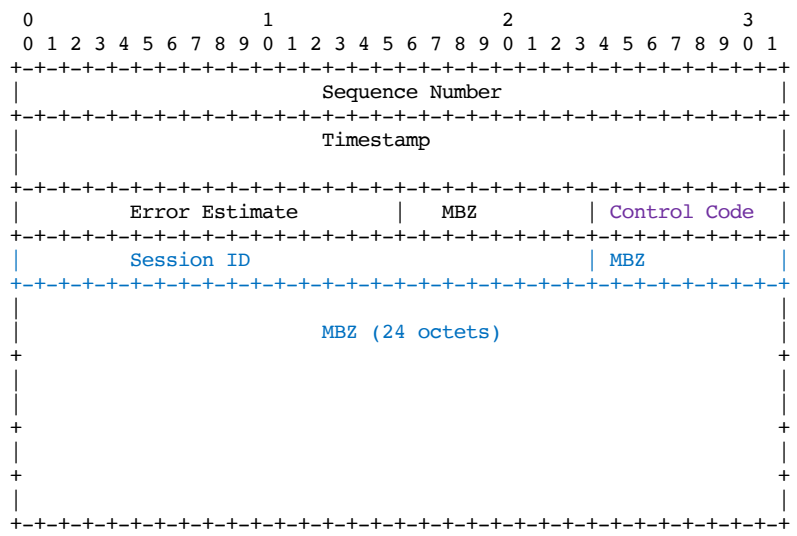


Figure: Sender Message Format in STAMP

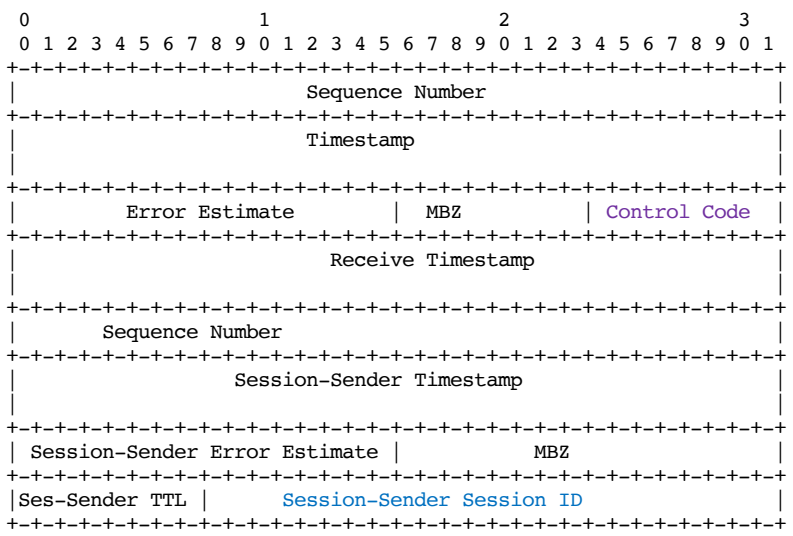


Figure: Reflector Message Format in STAMP

- ✓ 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

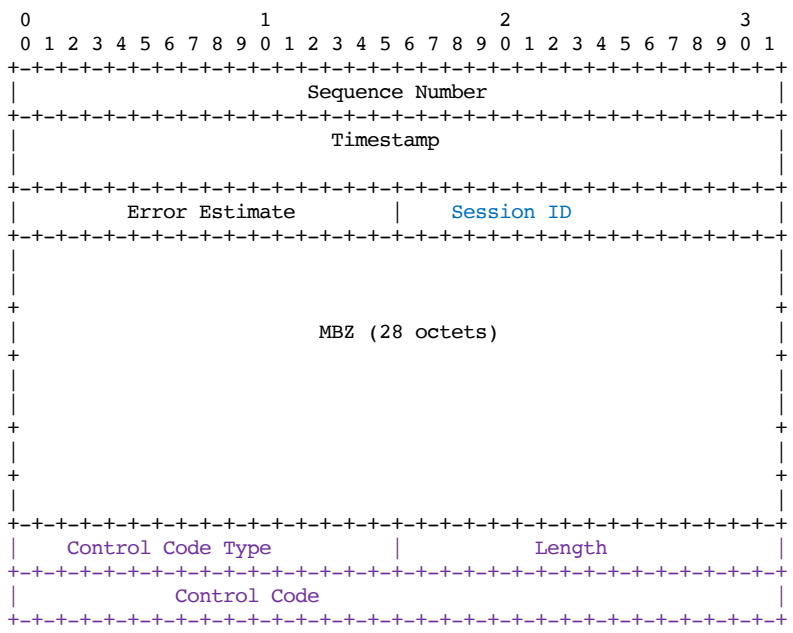


Figure: Sender Message Format in STAMP

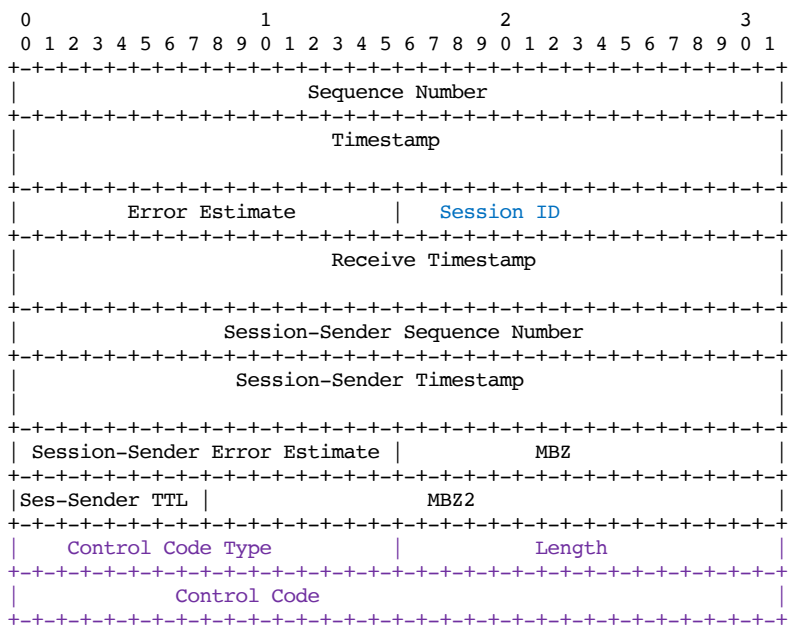


Figure: Reflector Message Format in STAMP

- ✓ 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

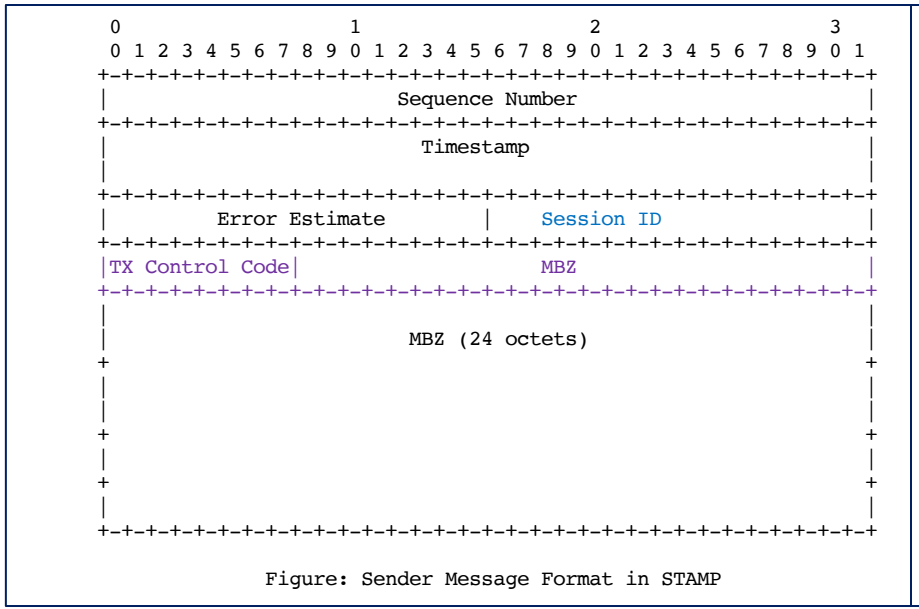


Figure: Sender Message Format in STAMP

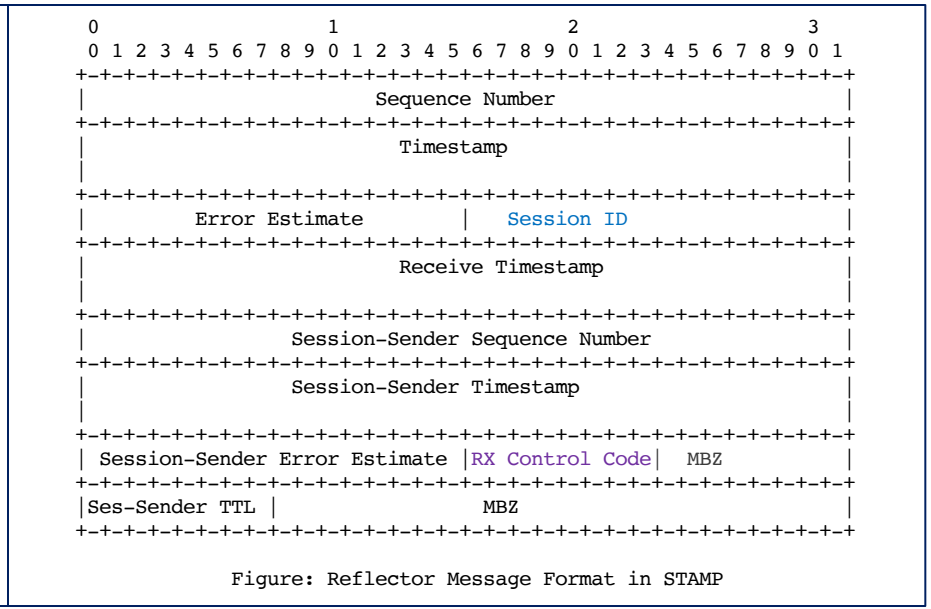


Figure: Reflector Message Format in STAMP

- ✓ 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

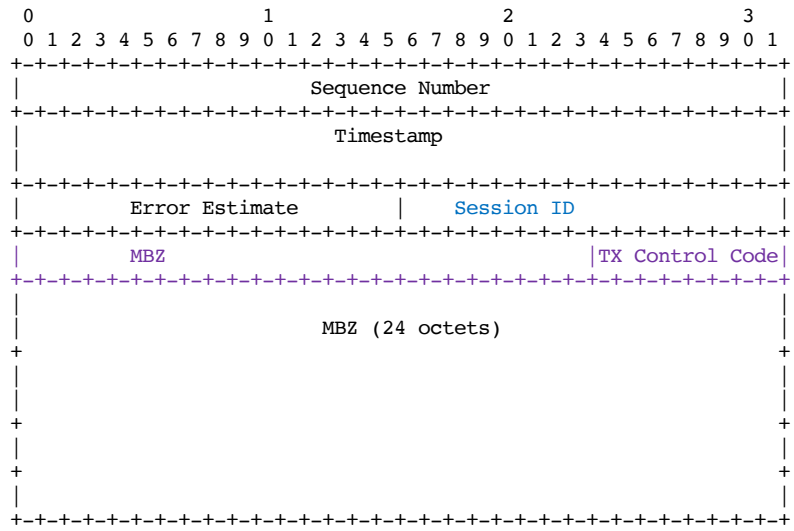


Figure: Sender Message Format in STAMP

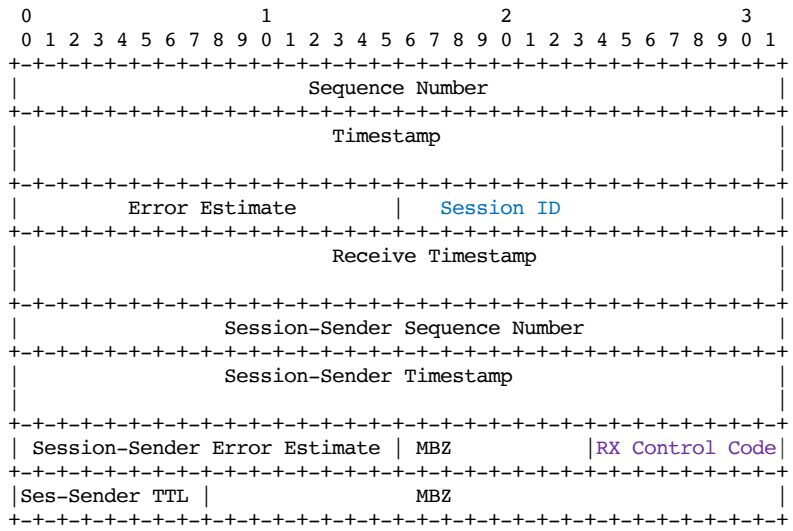


Figure: Reflector Message Format in STAMP

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Next Steps

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

Thank you