TWAMP Features – Reflect OCTETS draft

draft-ietf-ippm-reflect-octets-02

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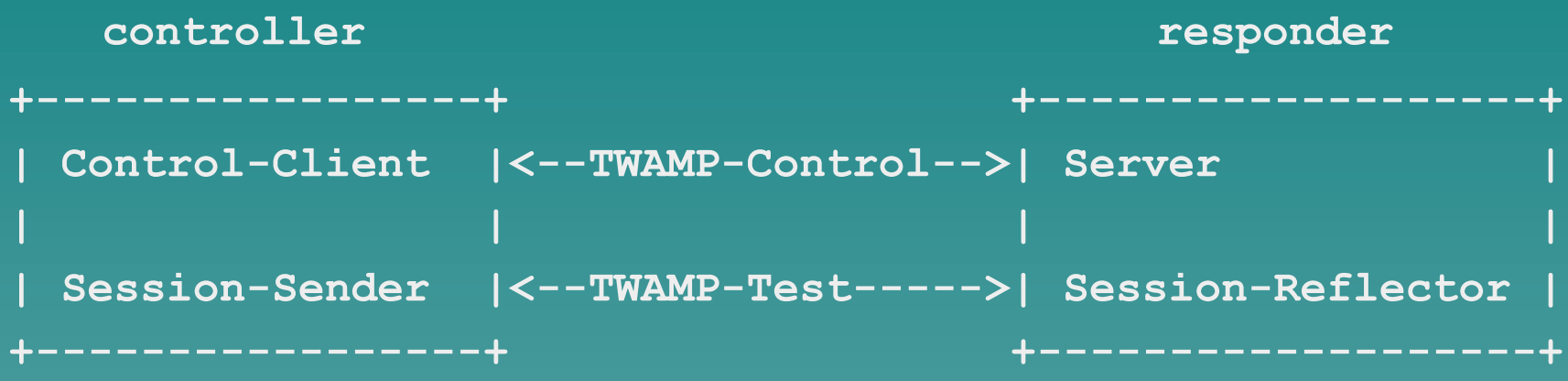
Refresh: TWAMP Entities



2009, The year of New TWAMP Features

- RFC 5357 done
- Lots of implementations
- New readers = New Ideas
- First new Feature – Mixed Security Mode, IESG APPROVED
- Individual Session Control to WGLC?
- IPPM WG added Reflect Octets to the charter in 2008

Reflect Octets in BOTH Control and Test Packets

- TWAMP-Control:
  - Contol-Client Inserts 2 octets in Request-TW-Session
  - Server moves 2 octets from Request-TW-Session message to the Accept (reply) message, and
  - Can Insert 2 Octets of its own, and
  - Learns the length (N) of padding in Test packets that it will need to reflect.
  - Length N < Overall Padding Length

Reflect Octets in BOTH Control and Test Packets (2)

- TWAMP-Test:
  - Session-Reflector moves N octets of the Padding to the reflected Test packet
- Control-Client and Session-Sender know what was put in, the format used, etc.
- Adds some possibilities for senders
- Change in ver 02: No format changes involved in Reflect Octets aspect

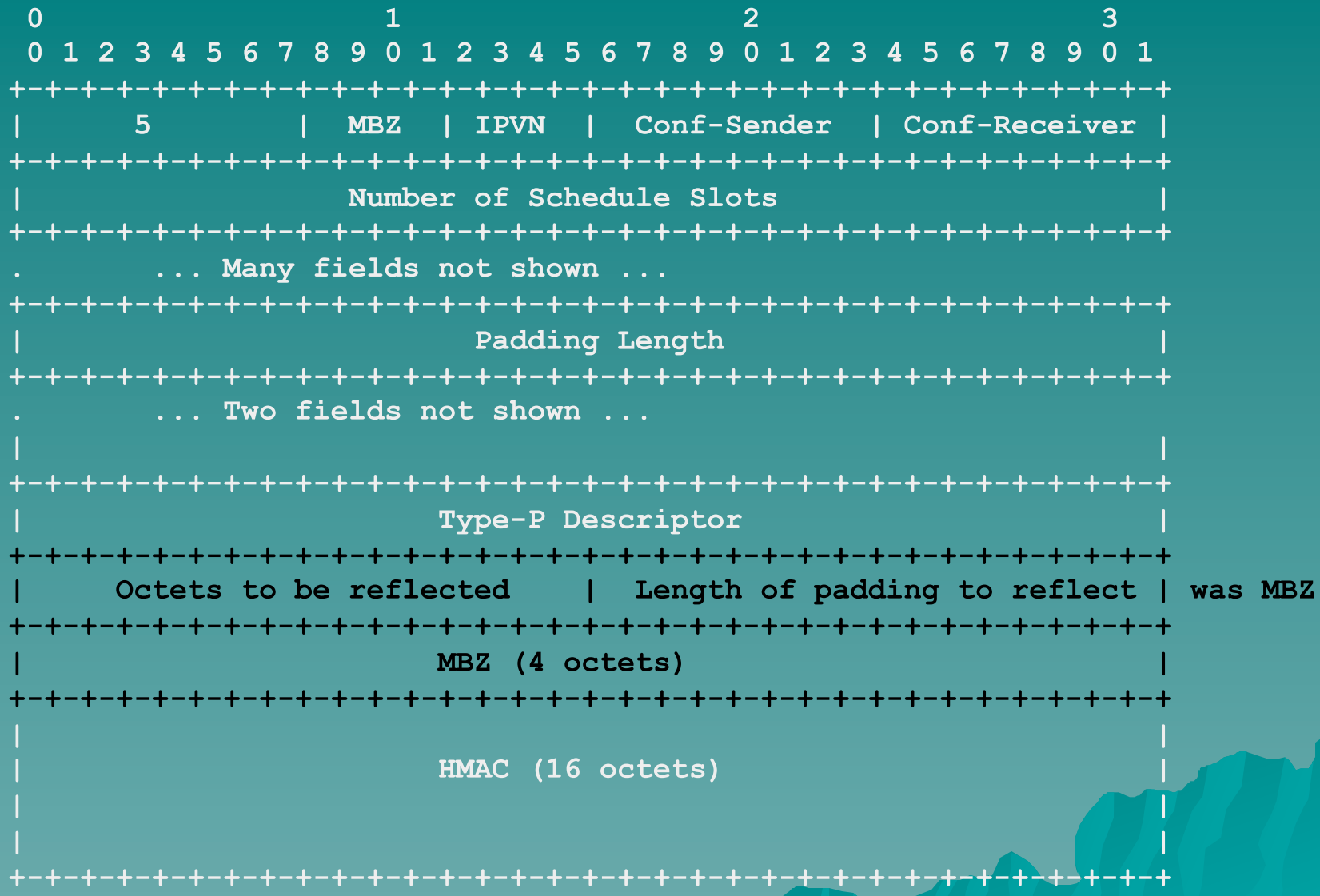
Truncate Padding Option

- TWAMP Test packet formats are:
  - octets from Sender to Reflector
  - octets from Reflector to Sender
- Most want symmetrical sizes, so…
- TWAMP core spec RECOMMENDS
  - Reflector reduce pad. to compensate
  - Sender SHOULD add sufficient padding
- This feature makes the behavior above a selectable option (certain).
- Interaction w/ Reflect Octets Option

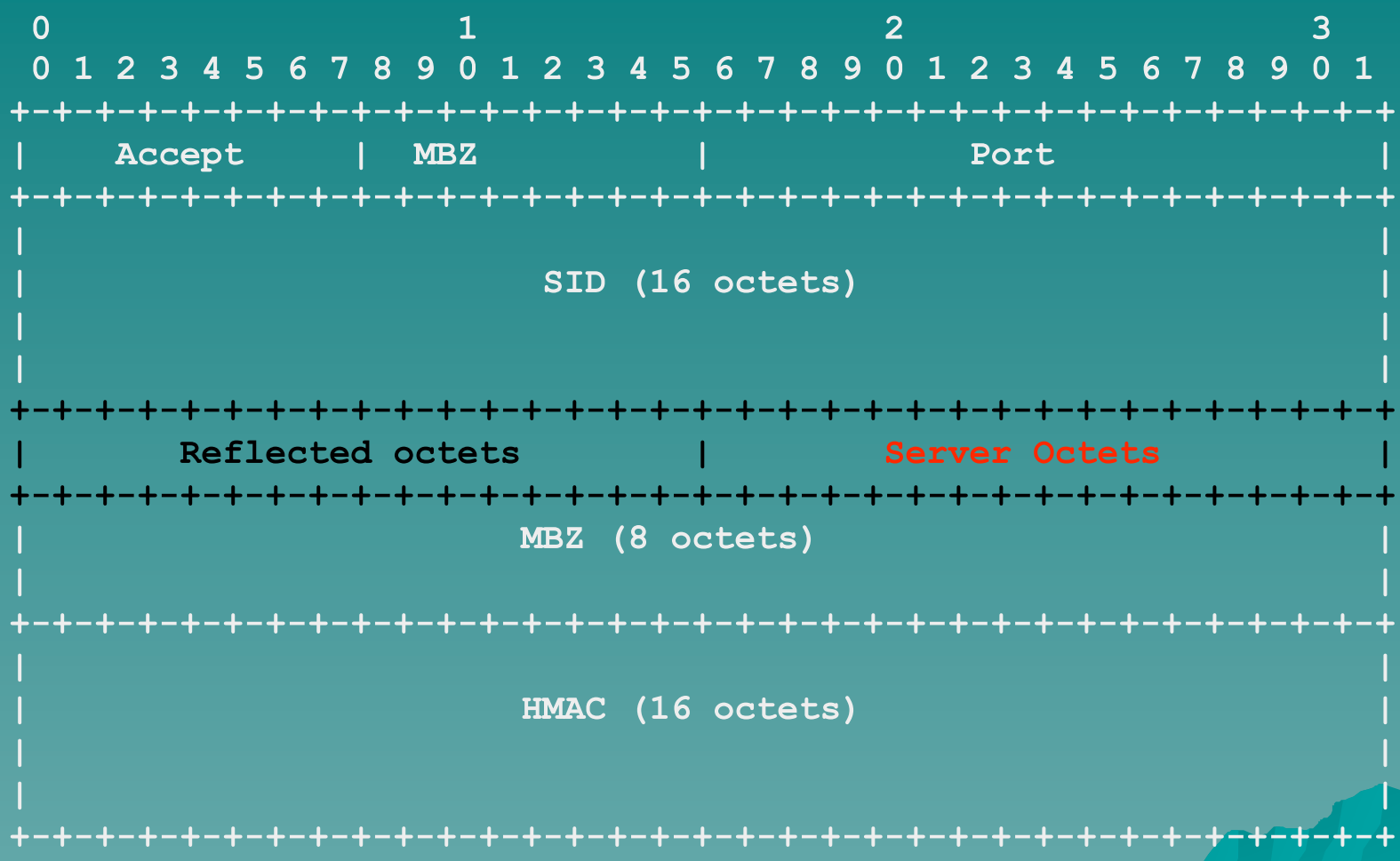
Reflect Octets: New Modes Field Values

Value	Description	Reference/Explanation
...		
8	Unauth. TEST protocol, Encrypted CONTROL	new bit position (3)
xxx	**Reflect Octets Capability**	**new bit position (X)**
yyy	**Truncate Padding Capability**	**new bit position (Y)**

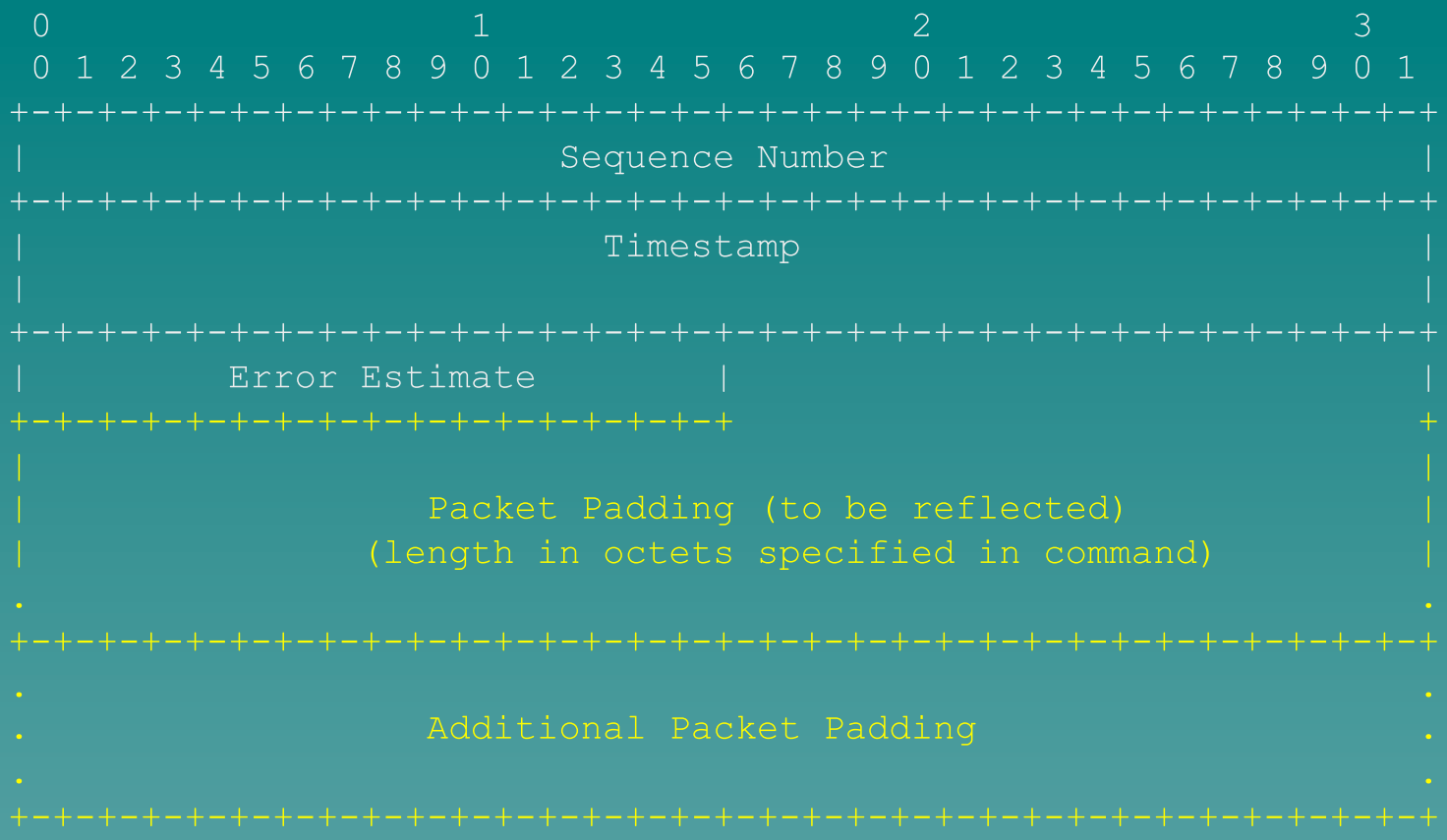
TWAMP Control: Request-TW-Session Command



TWAMP Control: Accept-Session Command

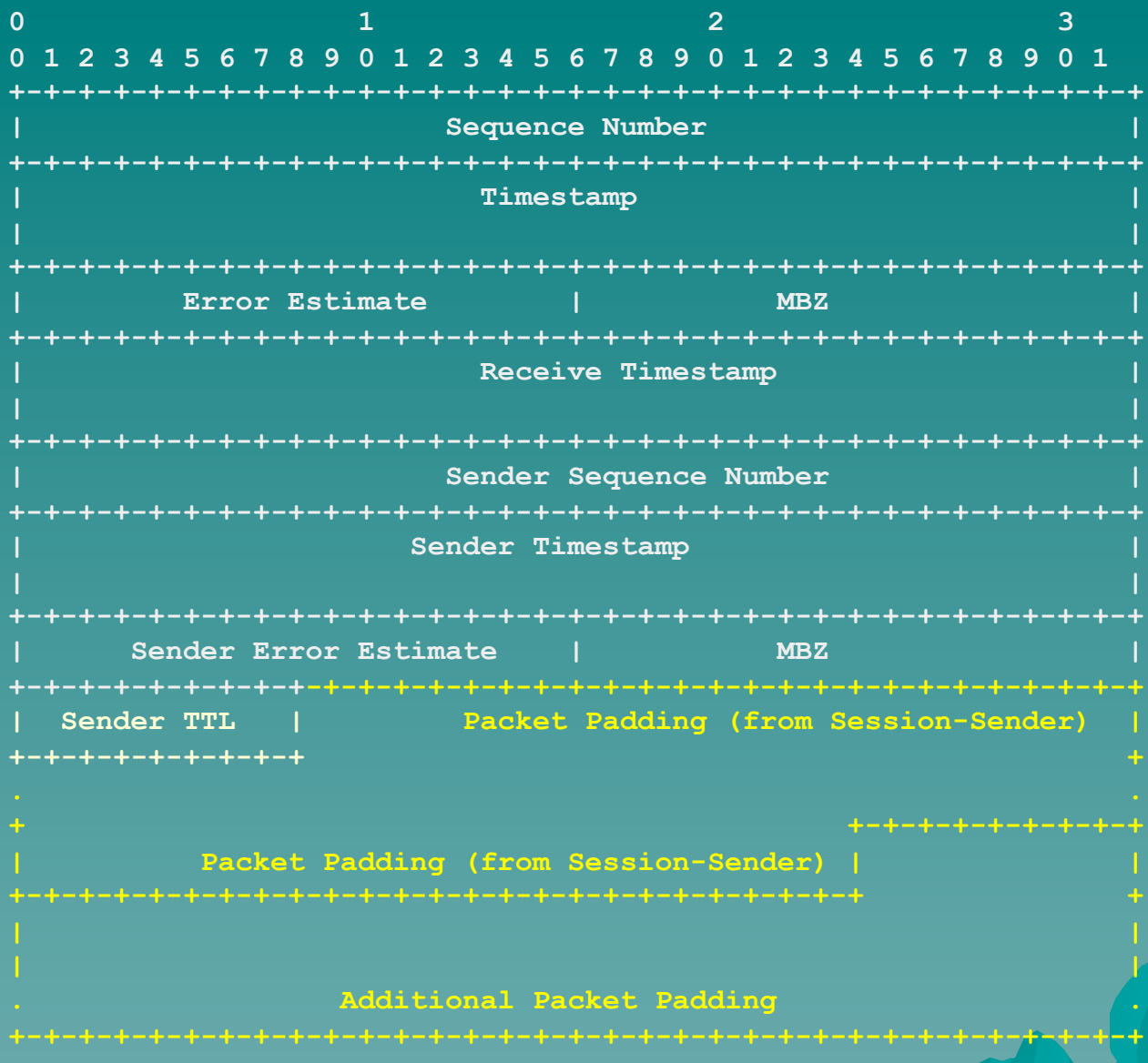


Reflect Octets: TWAMP Test Sender packet



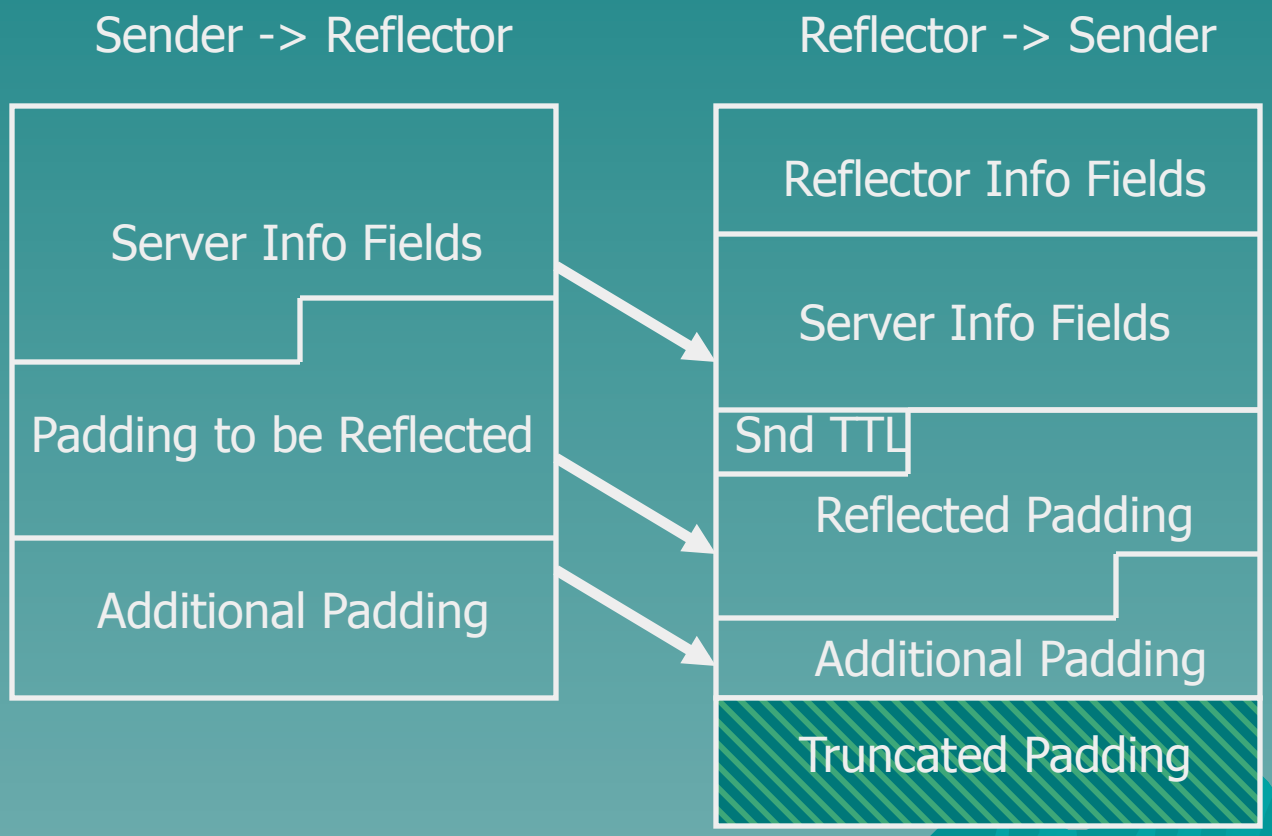
(Additional padding includes enough to truncate and keep sizes symmetrical if the TRUNCATE PADDING option is turned-on)

Reflect Octets: TWAMP Test Reflector packet

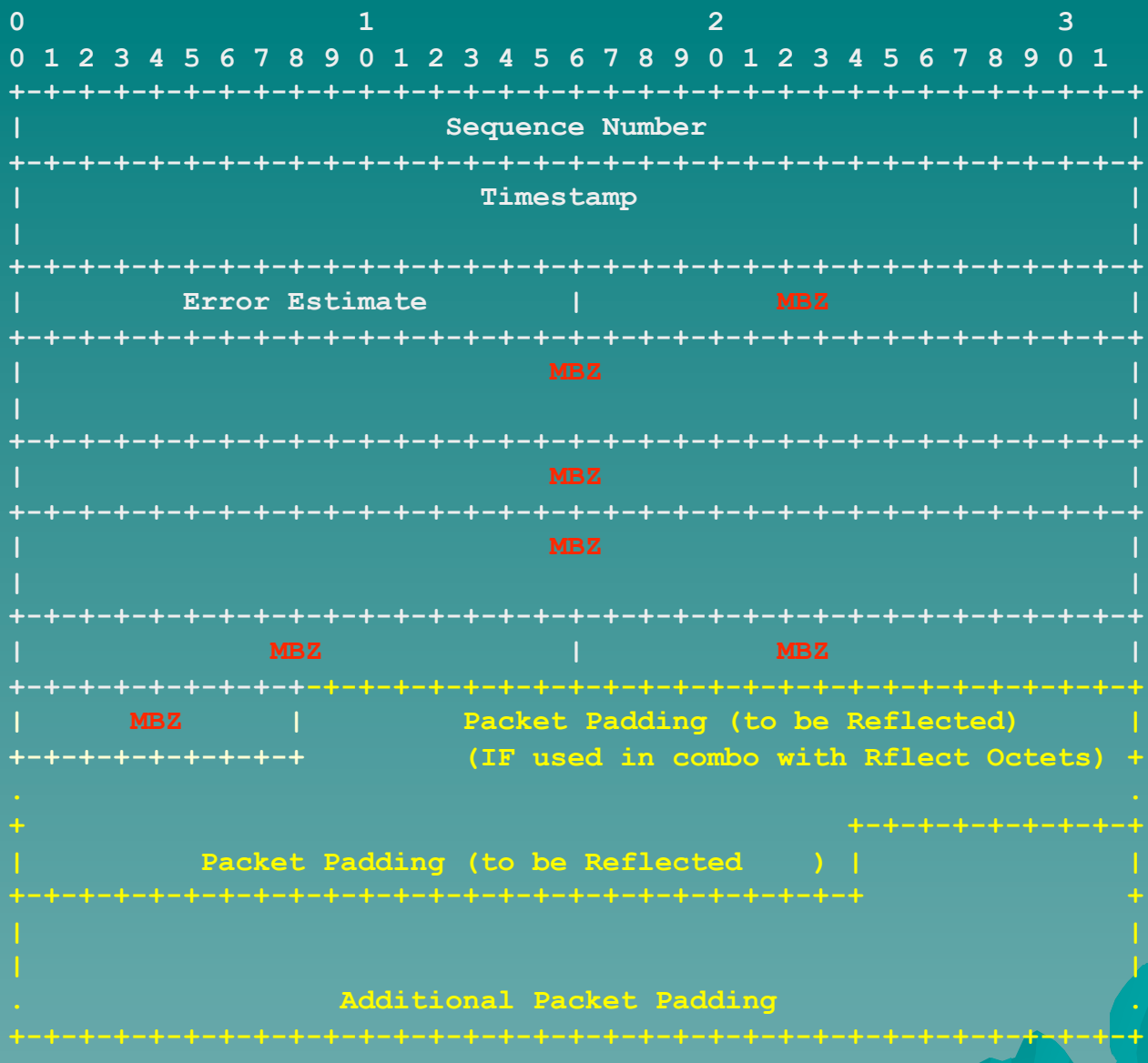


Question for IPPM

For Symmetric Packet Size in both directions Would a minimal change to the Sender Format Only be acceptable?



Symmetric Size: TWAMP Test SENDER packet

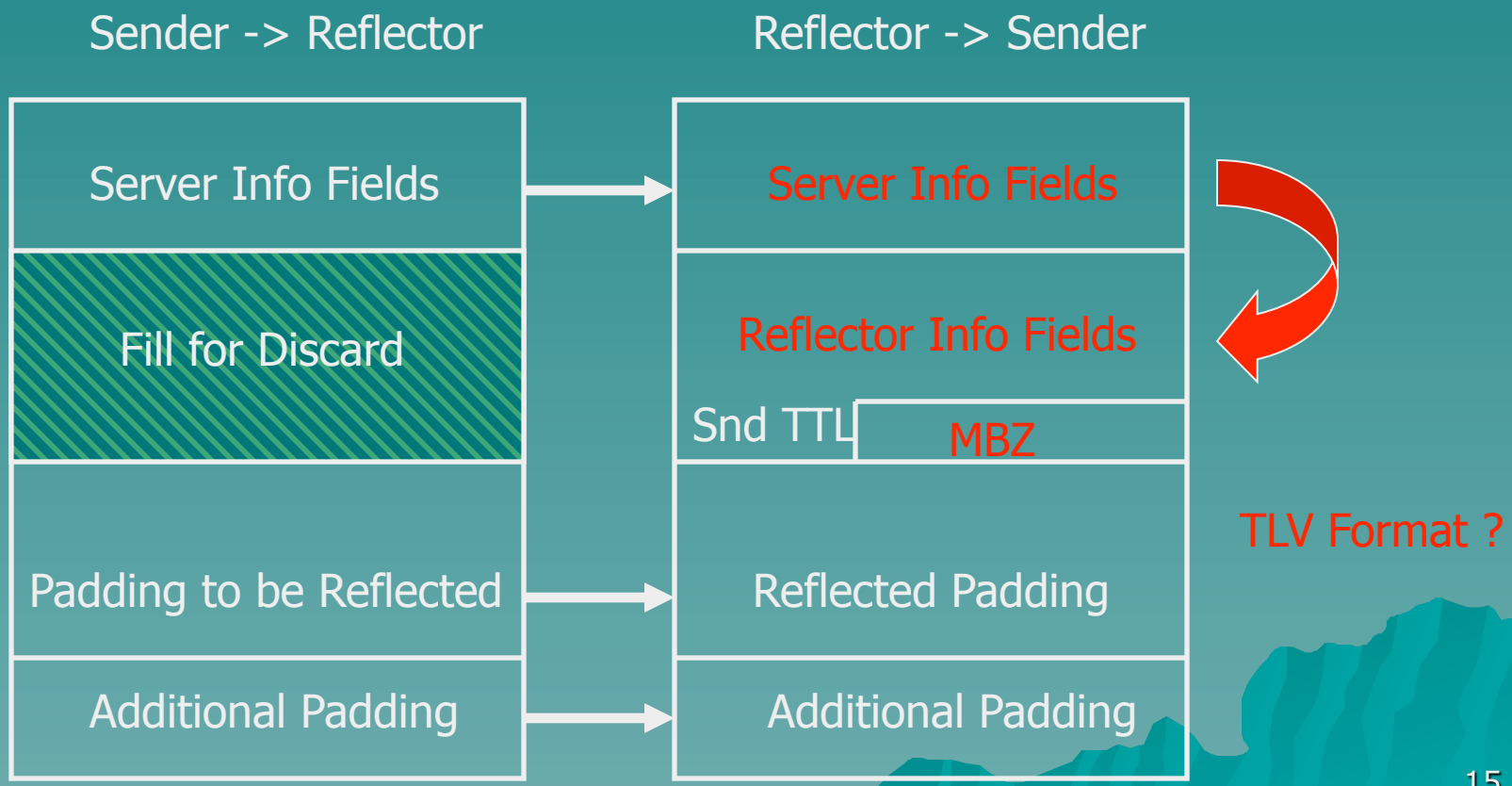


Symmetric Size?: Modes Field

Value	Description	Reference/Explanation
...		
8	Unauth. TEST protocol, Encrypted CONTROL	new bit position (3)
xxx	**Reflect Octets Capability**	**new bit position (X)**
yyy	**Symmetric Sender Test Packet Format**	**new bit position (Y)**

We asked about more complicated proposals, and nothing happened.

OR, Should we deal with the un-even boundaries and the truncation issue using NEW Test Packet Formats that specify the Reflected Padding?



Next Steps

- We will just specify what we think is reasonable if no other opinions!
- We think it's ALWAYS Reasonable as an OPTION (at least) to be certain of symmetric packet sizes in Both Directions
  - Symmetric Sender Size is Simple for Reflector
  - Does anyone oppose a simple Sender format OPTION to ensure symmetry ? HUM needed
- Comments on all aspects appreciated, Authors are fully satisfied with the TWAMP-Control modifications…
- Authors will gladly discuss changes