

# Same packet format for HIP and SHIM6?

---

These slides just set the baseline; if we think this is useful, there is much more to be done

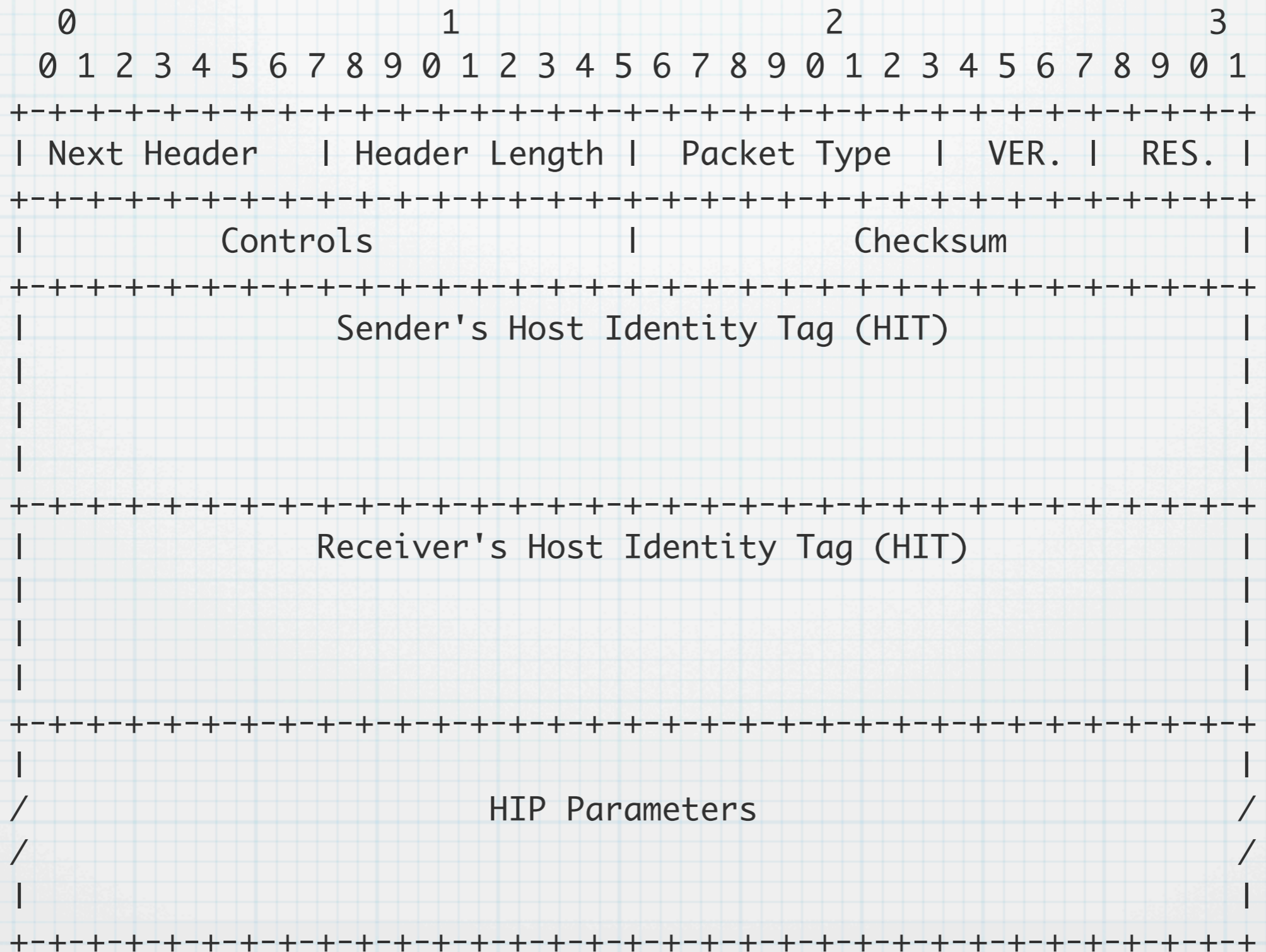
# Why?

- \* Semantically SHIM6 is a subset of the set of problems HIP attempts to solve
- \* Packet format compatibility would allow hybrid implementations

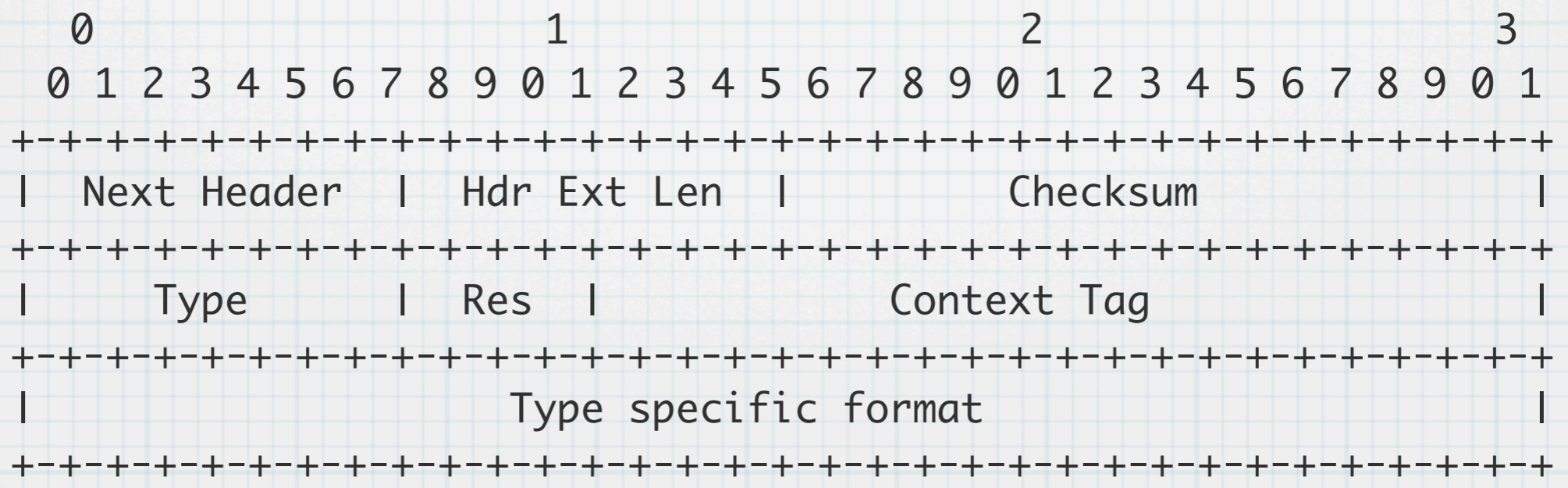
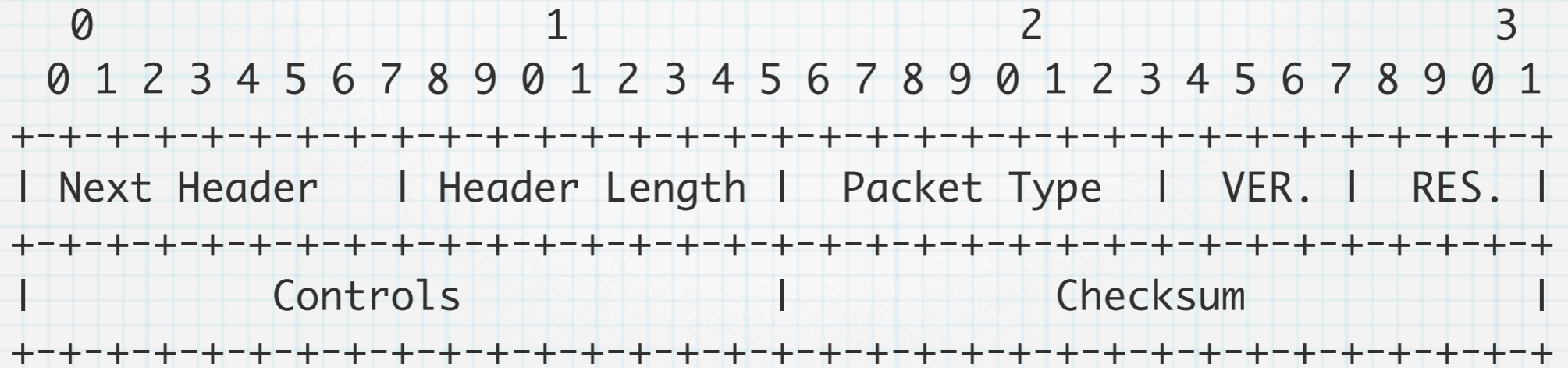
# Why not?

- \* Firewall considerations
  - \* Would it be bad to have HIP traffic on a SHIM firewall rule?
  - \* Wouldn't SHIM6 that anyway require deeper packet inspection?
  - \* Could still use same packet format but different protocol numbers?

# Current HIP header



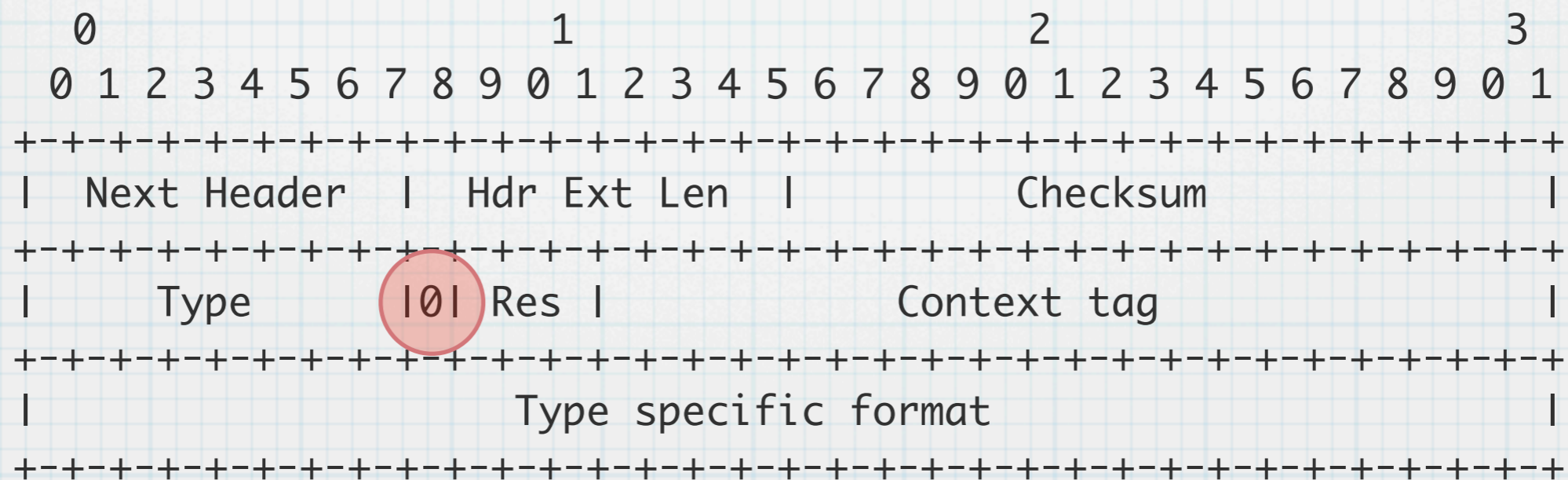
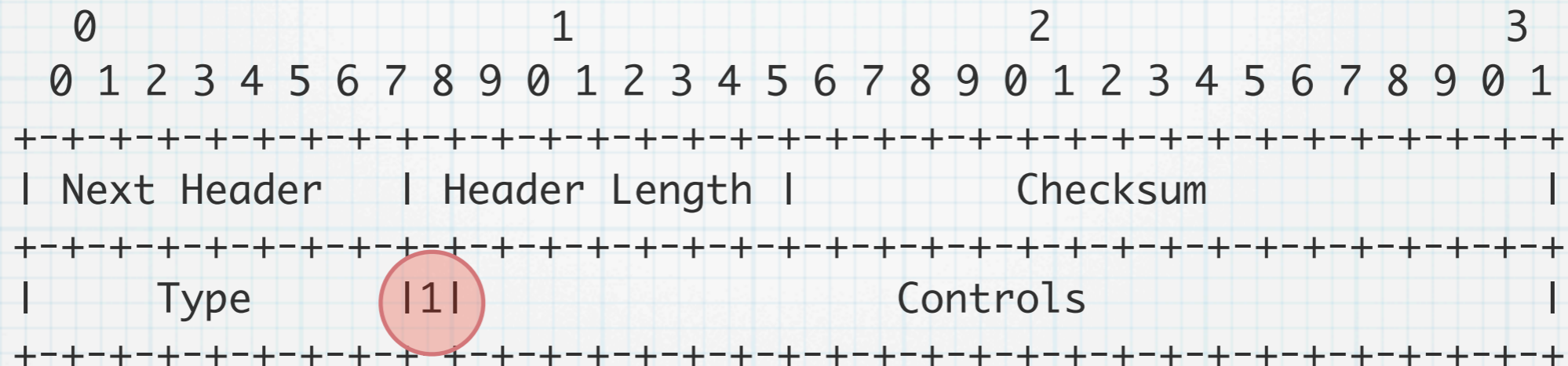
# HIP w/o HITs vs SHIM6



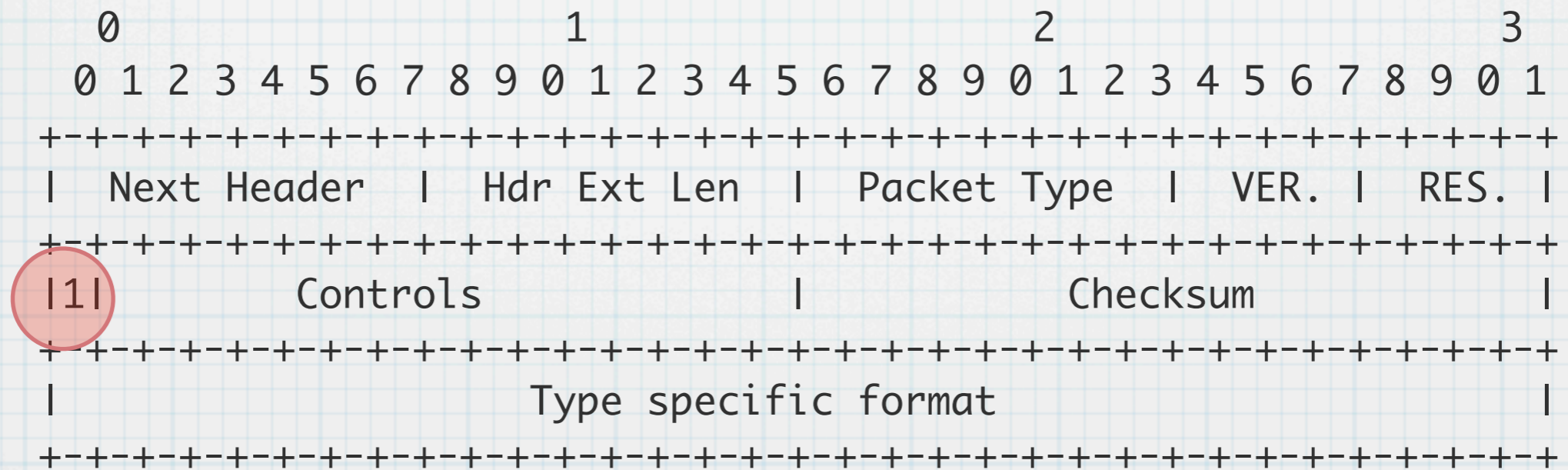
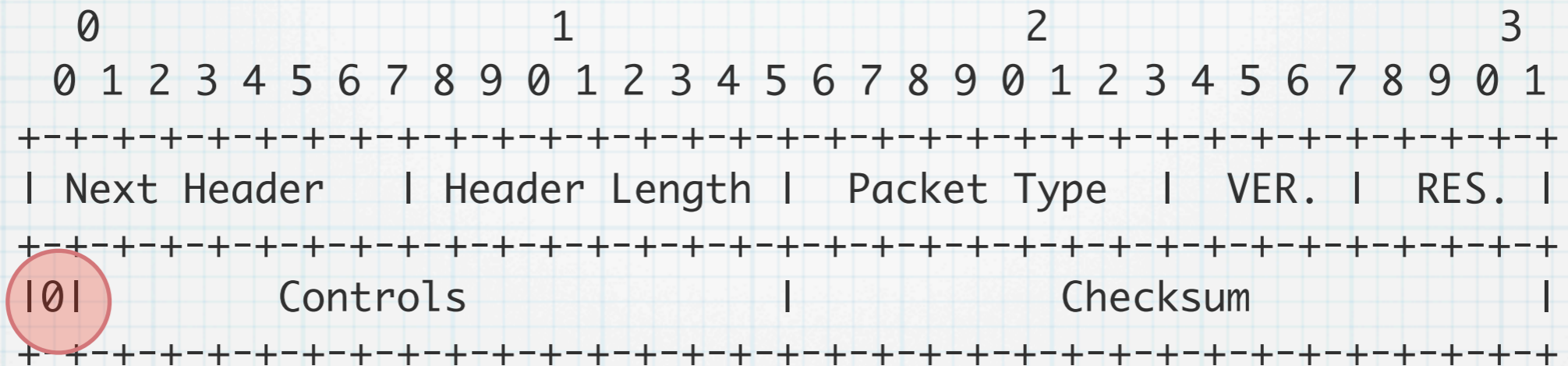
# Options

- \* Make HIP to use SHIM6 packet format
- \* Make SHIM6 to use HIP packet format
- \* Design a new common base packet format for both

# Option 1: Coerce HIP to SHIM



# Option 2: Coerce SHIM to HIP





# Option 1 vs. 2?

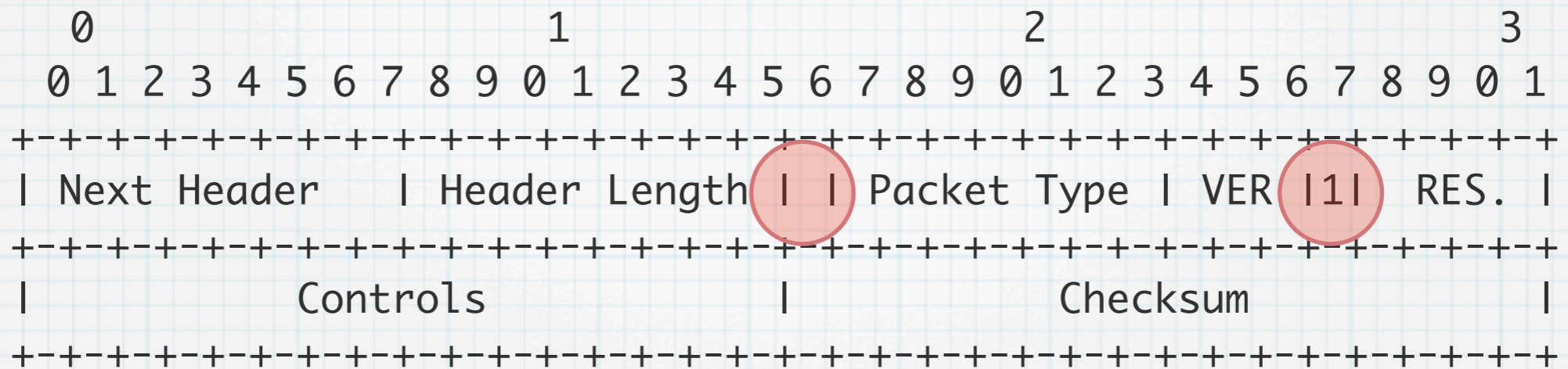
	Coerce HIP to SHIM	Coerce SHIM to HIP
Fixed header:	5 bytes	8 bytes
Existing code:	HIP needs changes	No SHIM code yet?
Protocol version:	No version number field	Includes vers. number field

Tag size?

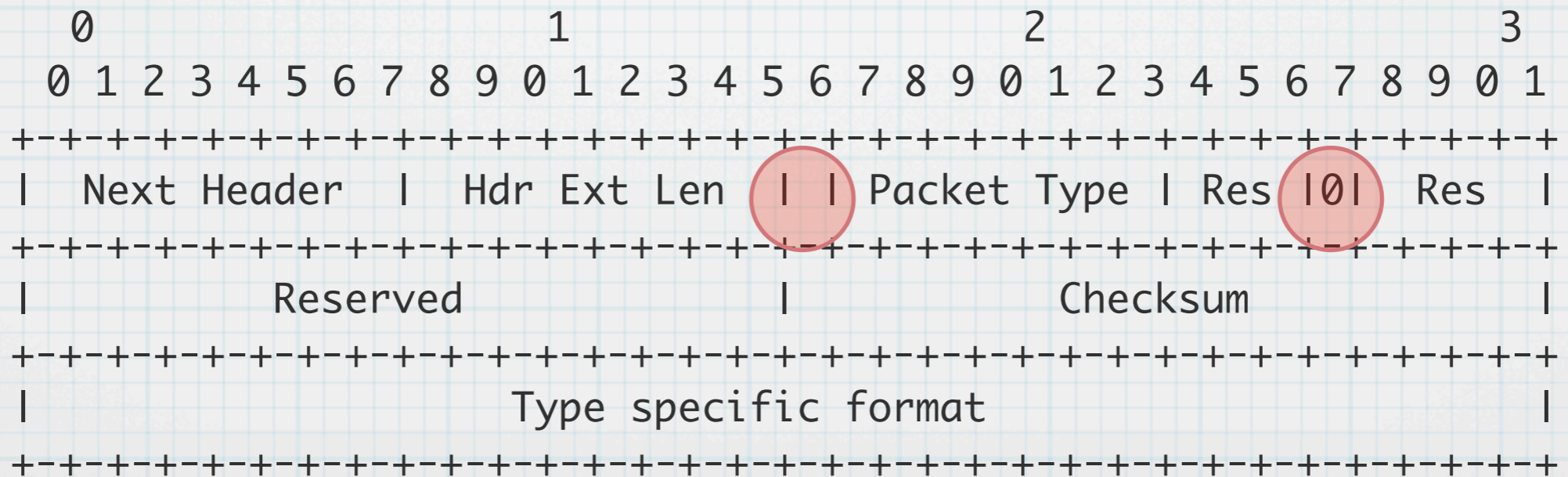
# Option format

- \* HIP options have 16-bit length and 16-bit type field
- \* SHIM6 options have 8-bit length, expressed in 8 octets, and 8-bit length field

# New HIP format



# New SHIM format



# Sent/received matrix cell

		A sends	B receives	
B sends		$\neg S_A \neg R_A$ $\neg S_B \neg R_B$	$S_A \neg R_A$ $\neg S_B \neg R_B$	$S_A \neg R_A$ $\neg S_B R_B$
	A receives	$\neg S_A \neg R_A$ $S_B \neg R_B$	$S_A \neg R_A$ $S_B \neg R_B$	$S_A \neg R_A$ $S_B R_B$
		$\neg S_A R_A$ $S_B \neg R_B$	$S_A R_A$ $S_B \neg R_B$	$S_A R_A$ $S_B R_B$

B → A works

A → B works