Zero Checksum for SCTP

draft-tuexen-tsvwg-sctp-zero-checksum-00

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Motivation

- SCTP uses CRC32c to detect errors during transmission. Motivated by SCTP/IPv4 and SCTP/IPv6.
- The CRC32c provides no value when SCTP/DTLS (WebRTC) is used but uses CPU resources for computing.
- During the handshake, endpoints declare that they handle 0 as a valid checksum by putting the Zero Checksum Accepted parameter in the INIT and INIT ACK chunks.
- This allows, in a backwards compatible way, to use 0 as the checksum reducing the CPU resources needed.

Next Steps

- At the hackathon:
  - Add support to Wireshark
  - Add support to packetdrill
  - Add support to the SCTP FreeBSD implementation and the usrsctp implementation.
- Incorporate feedback from Mike, Gorry, and IANA.
- WG adoption?
- Early assignment of Parameter Type?