

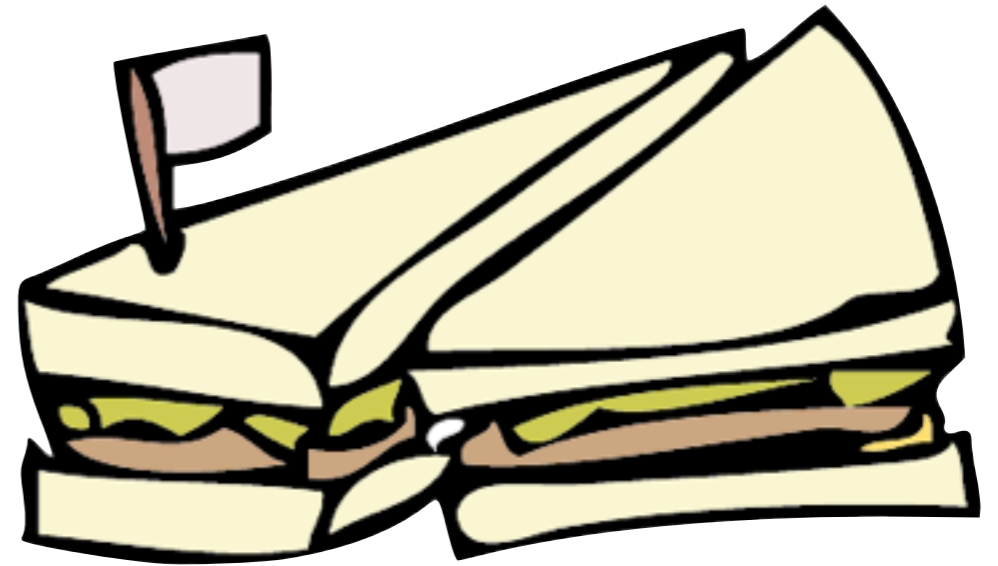
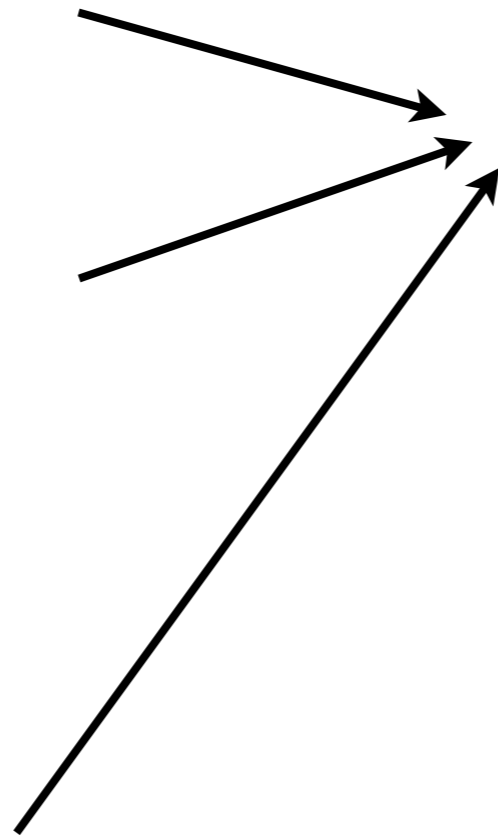
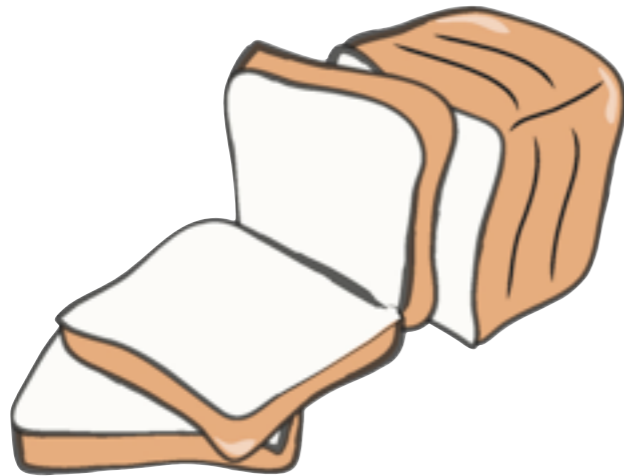
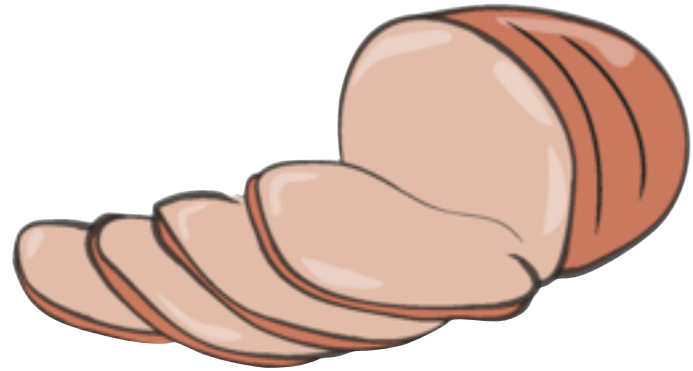
EVB2

Soh. Yamagata. Suzuki

EVB2

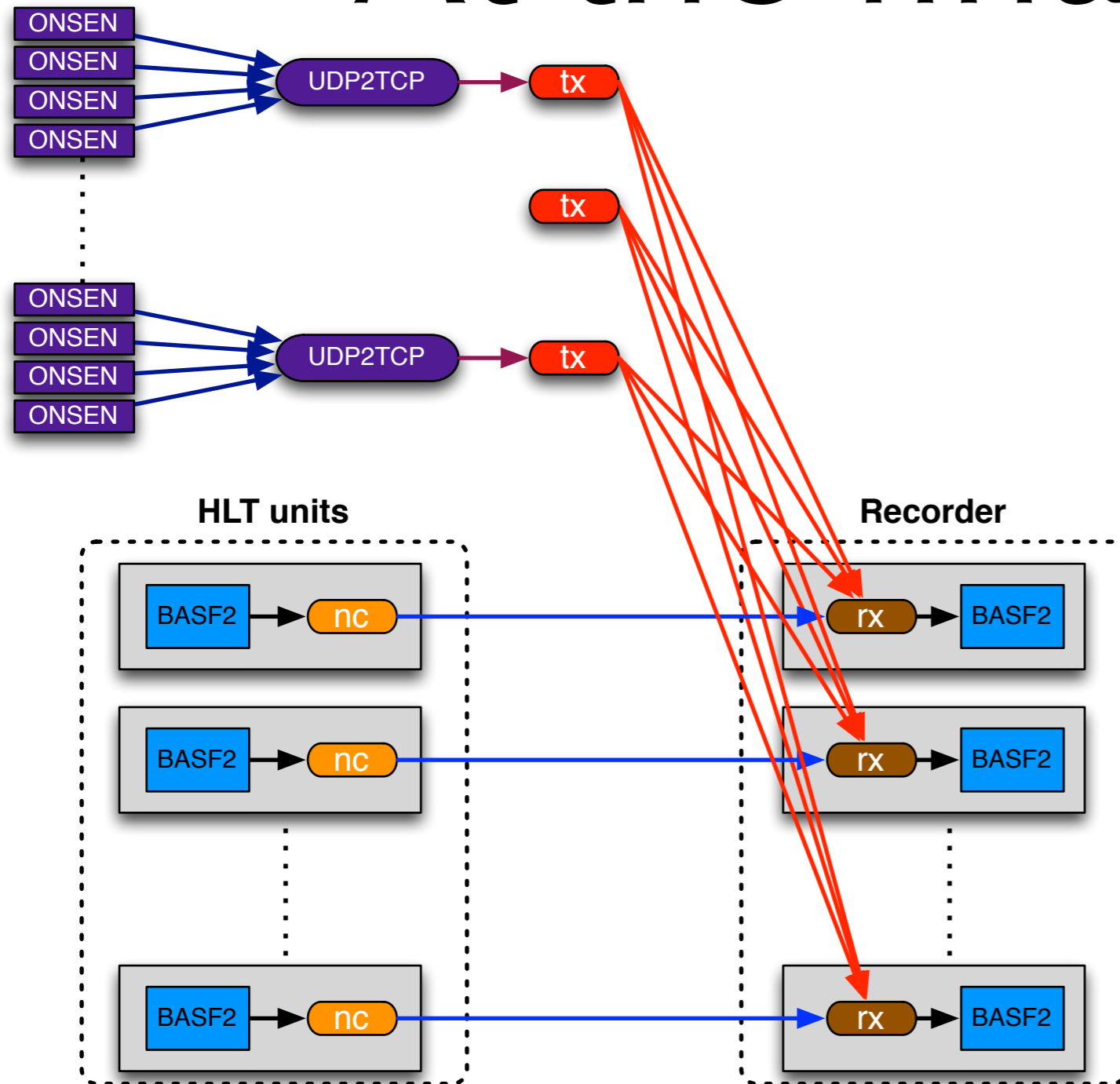
- Collects data from
 - ONSEN(s)
 - one HLT unit
- Concatenates them and pass to the recorder program.
- Does not record any data by itself.

That is,



Just sandwiching!

At the final stage,

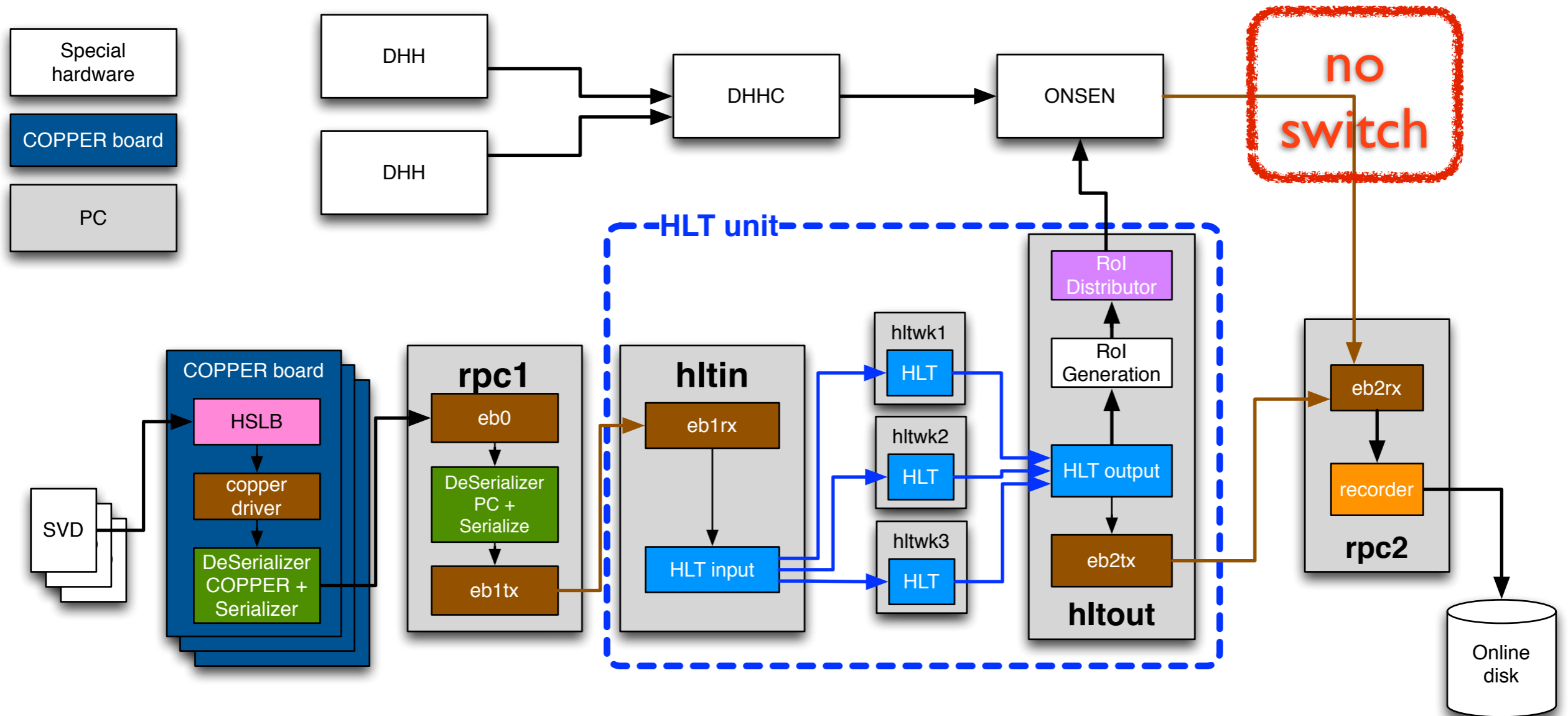


- Many HLT
- Many Recorder
- # of HLT = # of Recorder
- 20 ONSENs
- RX receives data from one HLT and many ONSEN.

Consists of

- Full-10G network switch
- eb2tx
 - runs on HLTout and UDP2TCP node.
- eb2rx
 - runs on the recorder node

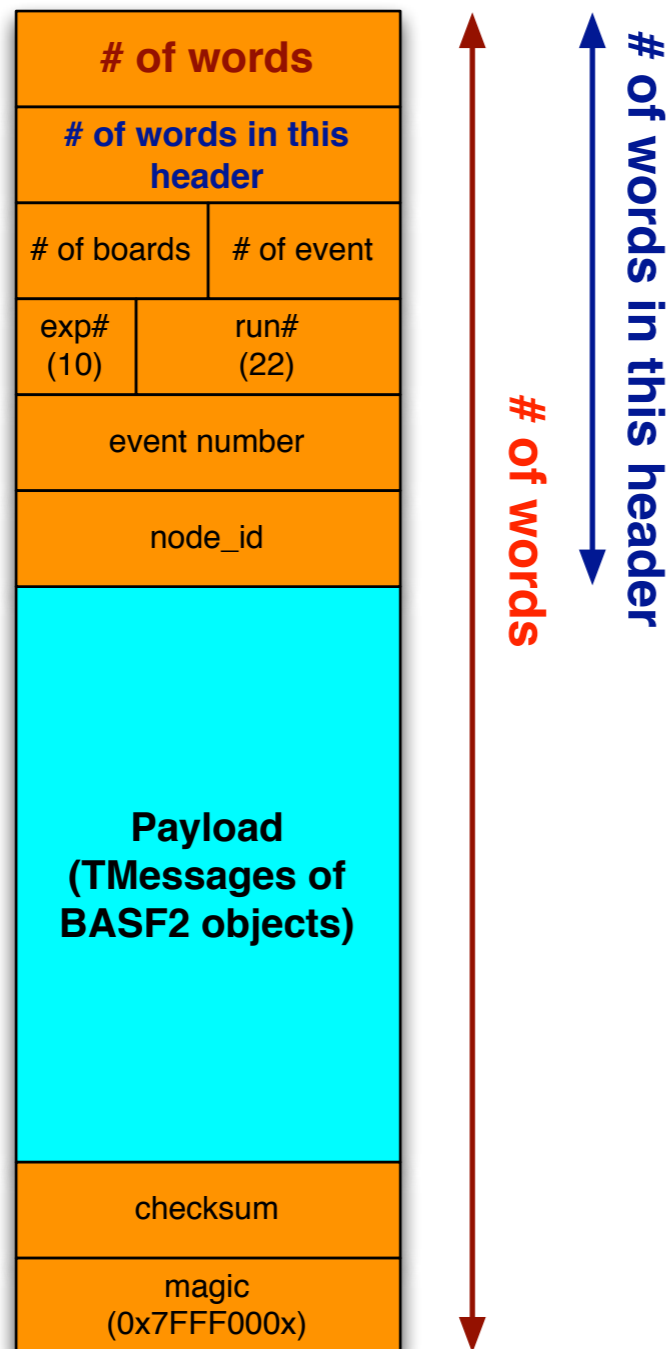
Setup for the coming beam test at Jan.2014



EVB2 programs for the beam test Jan.2014

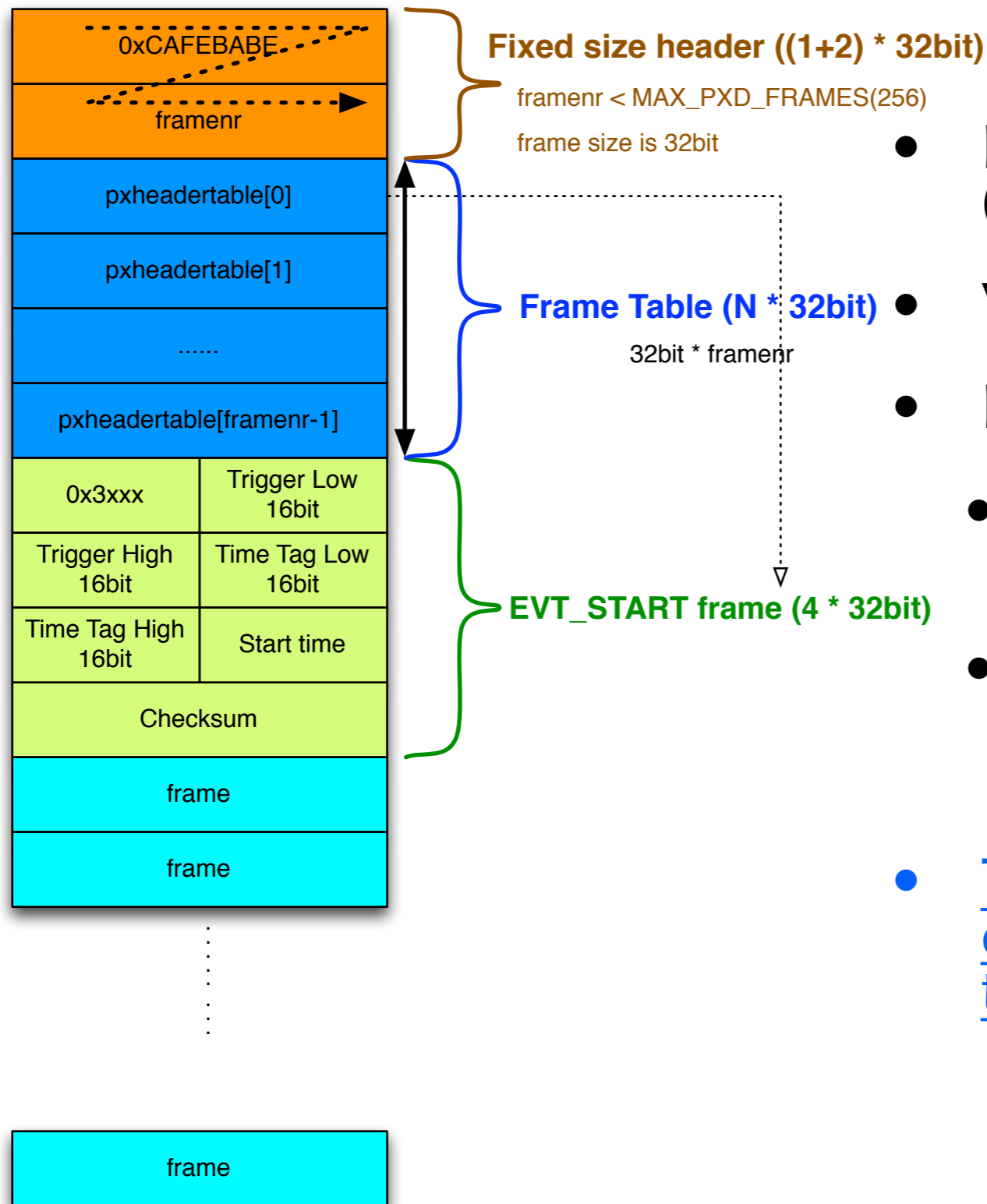
- **eb2tx for HLT:** 1in+1out => "nc" enough
- **eb2tx for ONSEN:** not need, because ONSEN sends data by SiTCP and # of Recorder is 1.
direct connection from eb2rx to ONSEN is enough
- **eb2rx:** concatenates 1ONSEN and 1HLT

HLT stream format



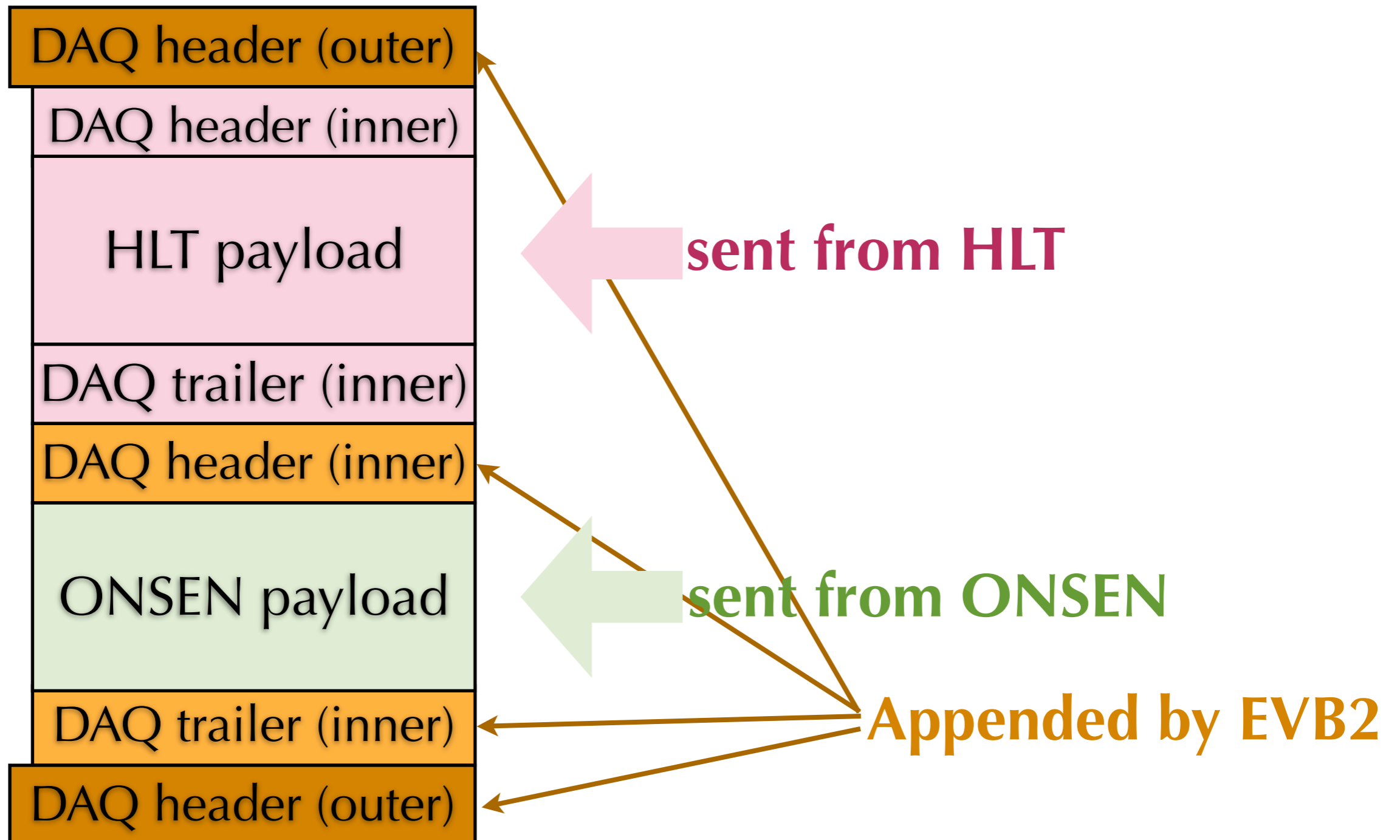
- Byte order is the little endian (Intel like)
- Capsuled by the DAQ header and trailer
- Fixed size header + trailer
- contains the event#, run#, experiment# and the total # of words.
- Header maybe updated if we need.

ONSEN stream format

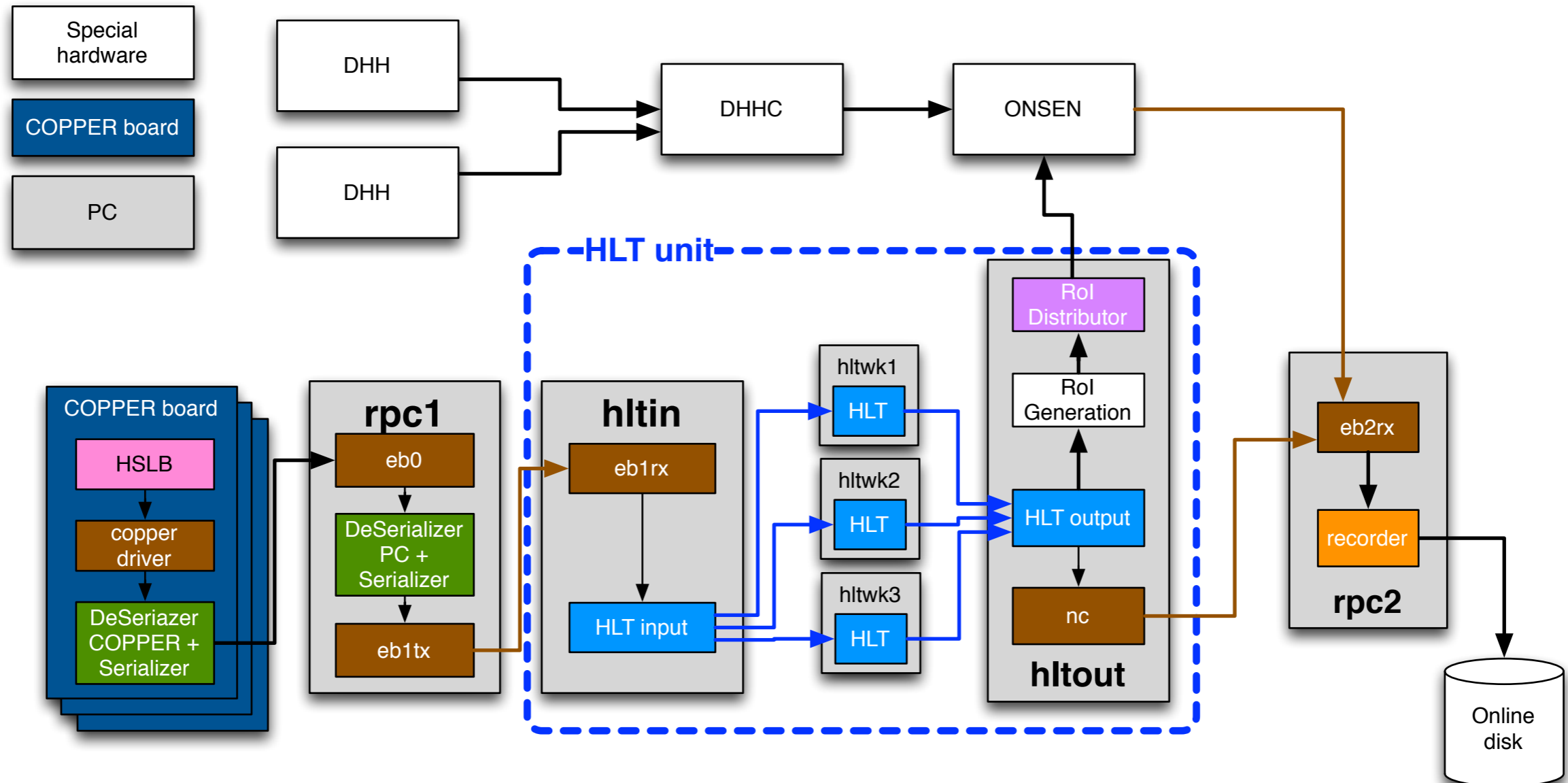


- Byte order is the big endian (Motorola)
- Variable size header
- Framed structure for PXD
- already fixed, hard to modify
- The start frame contains the trigger number (= event number), and the time tag.
- Total event size must be calculated using the frame table.

Output from EVB2



Current setup at 1d 412



Dummy data come from HSLBs on 3 COPPERs.
Dummy Rol data are sent to ONSEN.

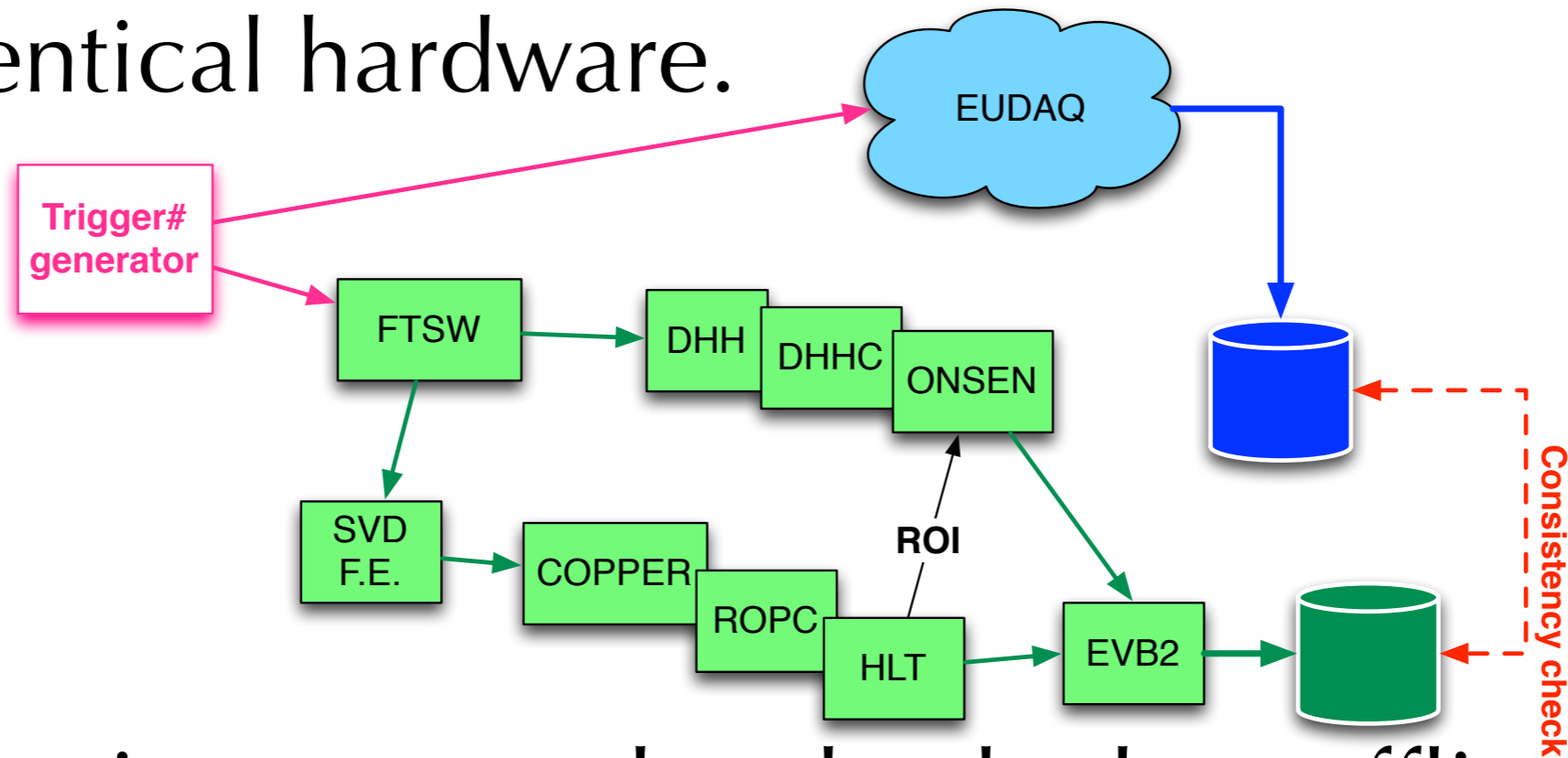
Status

- EVB2 successfully joins the ONSEN stream and the HLT stream.
- Sometimes the event start frame may be corrupted under the high trigger rate.
- Longer test is needed before the SVD integration.

Many thanks to Spruck-san!

About EUDAQ

- How should we work with EUDAQ?
- Trigger number will be assigned by the identical hardware.



- Consistency can be checked on offline.
- Is it enough?

Question about SiTCP

- Is it usable in the final stage setup?
- If so, UDP2TCP node will behave as the merger of TCP streams.
- Difference is the receiver program for the ONSSEN stream
- **eb2tx** is completely same.

