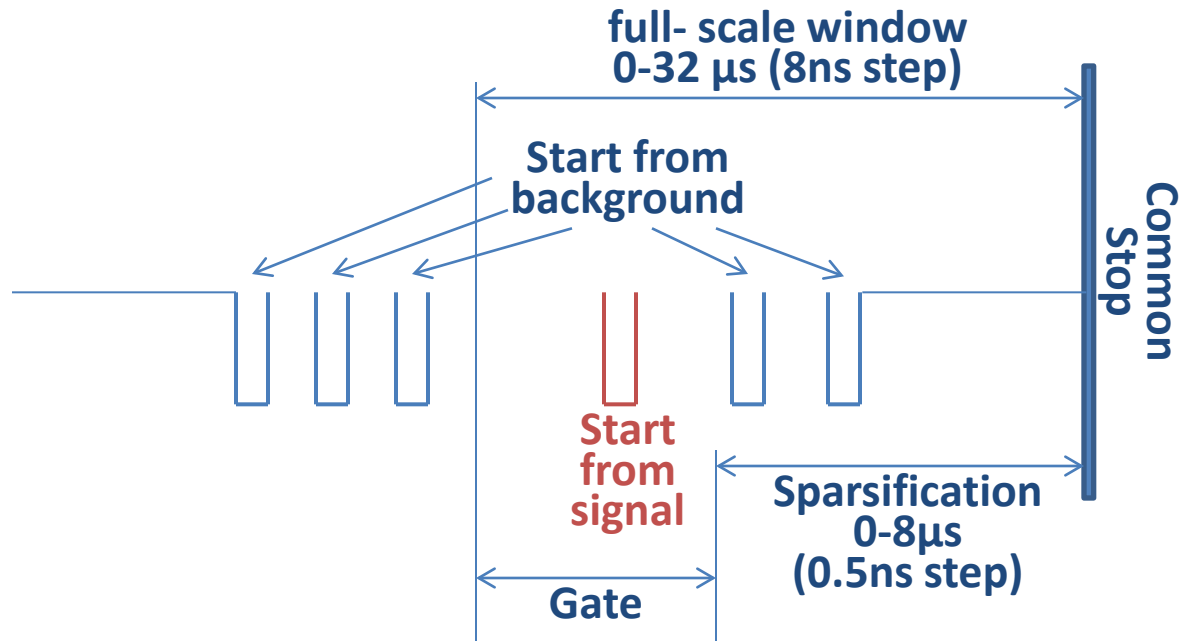


Methods to reduce dead time and achieve higher trigger rate.

- Sparsification
- Event blocking
- Parallel DAQ systems
- SFI Sequencing

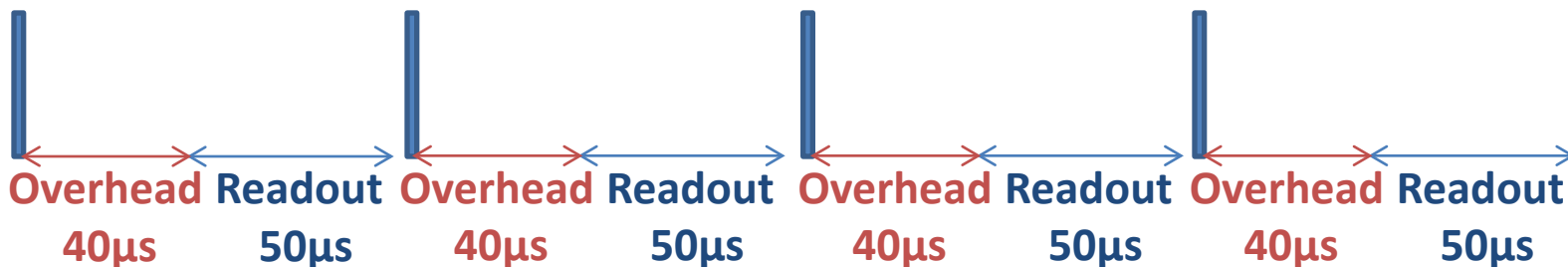
Sparsification



Not so difficult to implement, well tested on old TI
Need to be tested with new TI.

Event Blocking

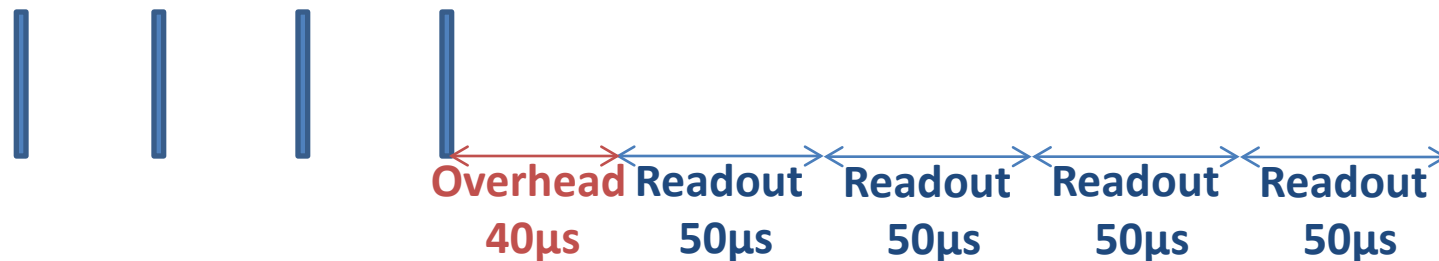
Triggers



No event blocking (360µs)

Triggers

Event blocking level = 4 (240µs)



Event Blocking Status

- New TI tested by itself
 - standard readout list.
 - event blocking working.
 - one of our TI modules does not work with standard readout list, which suggests there is some problem with that module.
- New TI with 1877s TDC in fastbus.
 - Readout list prepared.
 - Event blocking tested, seems to work for block level = 2
 - Crushed with event blocking level = 4
 - Need further investigation and debugging
- Hope to have event blocking ready and tested for block level = 4, within 1-2 weeks.

Parallel DAQ and SFI Sequencing

- Parallel DAQ
 - One of our two TI modules have some problems.
 - 2 crates will be tested as soon as we resolve problem with that TI module.
- SFI Sequencing
 - preload FASTBUS commands to SFI to reduce number of ROC-FASTBUS transactions.

FastBus ADC and TDC testing

- The automatic ADC and TDC testing setup system was prepared and tested last year.
- All software is practically ready.
- The setup in EEL building was taken apart and needs to be restored (3-4 days).