

```
class CompassEventSegment : public CEventSegment
```

**Input**

Constructor has sourceID, link, node, base\_add, XML file

**Key Actions:**

1. Read XML files, translate parameters for selected board
2. Write and setup registers on each board

```
class CompassProject
```

**Input :**

settings.xml

**Key Actions :**

(1) initialize(): prepare CAENPhaParameters m\_board which matches the link, node, address, type in constructor. No check for PHA/PSD performed

(2) initialize each m\_board with CAENPhaChannelParameters[15]

CompassEventSegment::setupBoard

```
class CaenPha
```

**Input :**

CAENPhaParameters& m\_board

**Key Actions :**

(1) setup() converts m\_board to register values and writes them to the digitizer.  
(2) Read() reads out all available physics data from digitizer during its turn in CompassMultiModuleEventSegment round robin  
(3) Update (public) trg counter data in CompassEventSegment during Read()

3. Check for trigger with CAEN\_DGTZ\_SLAVE\_TERMINATED\_READOUT\_MBLT  
- read data into pBuffer for use by pExperiment in Readout

```
CompassEventSegment::read(pBuffer, maxwords)  
CompassEventSegment::checkTrigger()  
-----
```

How to optimally checkTrigger() ? Mediated by  
\* CompassMultiModuleEventSegment,  
\* ConeOnlyEventSegment  
which supersume this class

CPHAScaler initialized to this class  
can periodically poll & update trg  
counter to get scaler data. Mediated by  
CompassMultiModuleEventSegment

pbuffer with physics data

Output to NSCL Ringbuffer

```
class CDPpPsdEventSegment : public CEventSegment
```

**Input**

Constructor has sourceID, link, node, base\_add, XML file

**Key Actions:**

1. Read XML files, translate parameters for selected board
2. Write and setup registers on each board

```
class PSDBoardParameters
```

**Input :**

settings.xml

**Key Actions :**

(1) initialize(): make PSDBoardParameters m\_pCurrentConfiguration which matches link, node, address, type in constructor.  
No check for PHA/PSD performed

(2) initialize each m\_board with PSDChannelParameters[15]

*CDPpPsdEventSegment::setupBoard*

No Additional 'board' class

(1) setup() converts m\_pCurrentConfiguration to register values and writes them to the digitizer.  
(2) Read() reads out all available physics data from digitizer during its turn in the CpsdCompoundEventSegment round robin  
(3) Update (public) trg counter data in CDPpPsdEventSegment during Read()

3. 'Check for trigger' : CAEN\_DGTZ\_SLAVE\_TERMINATED\_READOUT\_MBLT - read data into pBuffer for use by pExperiment in Readout

```
CDPpPsdEventSegment::read(pBuffer, maxwords)  
CDPpPsdEventSegment::checkTrigger()
```

-----  
How to optimally checkTrigger() ? Mediated by  
\* CPsdCompoundEventSegment,  
\* ConeOnlyEventSegment  
which supersume this class

CPSDScaler initialized to this class  
can periodically poll & update trg  
counter to get scaler data. Mediated by  
CPsdCompoundEventSegment

*pbuffer with physics data*

Output to NSCL Ringbuffer