

Trigger Simulation Software

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Current situation (and recap)

- Athena installed at QMW (and webpage made explaining process)
- •TriggerTowerMaker written: reads in generic calorimeter cells, builds trigger towers and stores in TES.
 - Currently ATLFAST is used to create trigger towers.
 - UCL team have agreed to add hadronic/em layering to ATLFAST (currently has "flat" calorimeter)
 - LVL1CaloTrigger reads in TriggerTowers
- Interface to ROI objects being defined: difficulty has arisen in working out how to link to TriggerTowers. Not trivial.
- Code documentation begun (using doxygen)

ROI_ABC

+ROIword(): unsigned int

emTauROI

-m_TriggerTowers: SmartRefVector<TriggerTower>

-m_eta: double
-m_phi: double

-m_ROIword: unsigned int

+ROIword(): unsigned int

+threshold(threshold_number:int): bool

+eta(): double
+phi(): double

EnergySumROI

-m_ROIword1: unsigned int

-m_ROIword2: unsigned int

+ROIword(word_num:int): unsigned int

JetROI

-m_ROIword: unsigned int

+ROIword(): unsigned int

MuonROI

-m ROIword: unsigned int

+ROIword(): unsigned int

To be done:

- Finalise ROI interface
- Complete/Write trigger algorithms
- Update TriggerTowerMaker to form Trigger Towers from GEANT Calorimeter cells.
- Update TriggerTowerMaker to use eventual ATLFAST hadronic layer.
- Write complete documentation.