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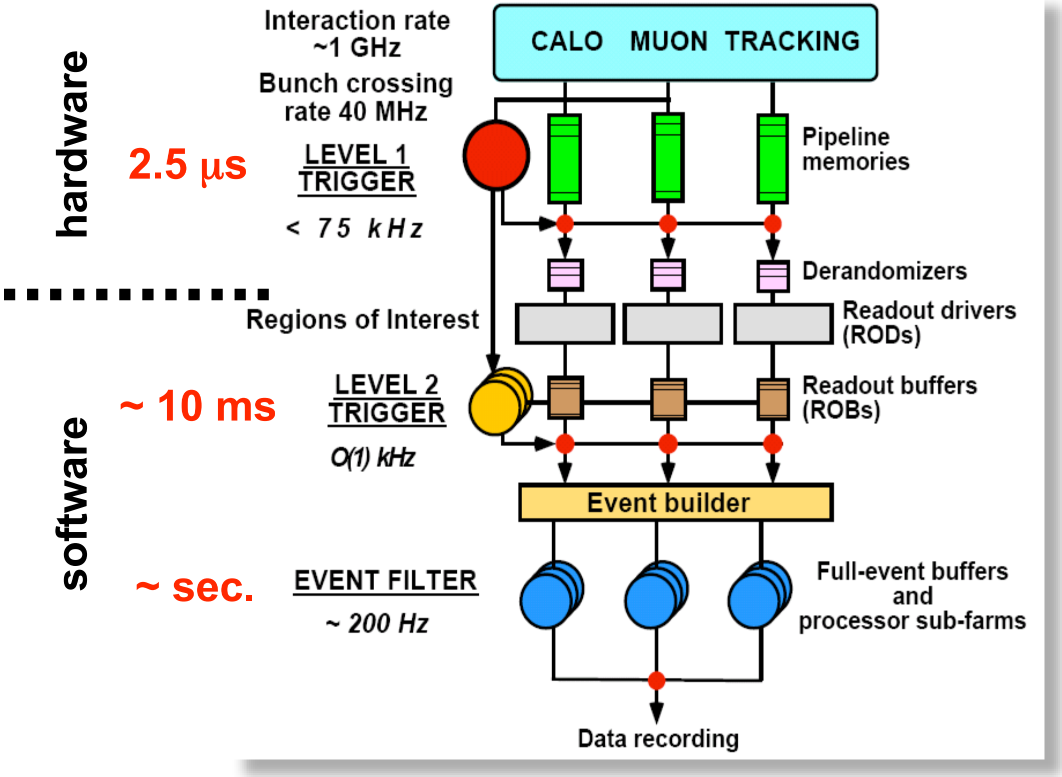
21 November 2005, MPI

ATLAS
Trigger Configuration

- The ATLAS Trigger
  - LVL1 selection and configuration
  - HLT selection and configuration
- ATLAS Trigger Configuration System:
  - TriggerDB
  - TriggerTool
  - Tools for data retrieval

Reminder: ATLAS Trigger System

3-Level Trigger System:

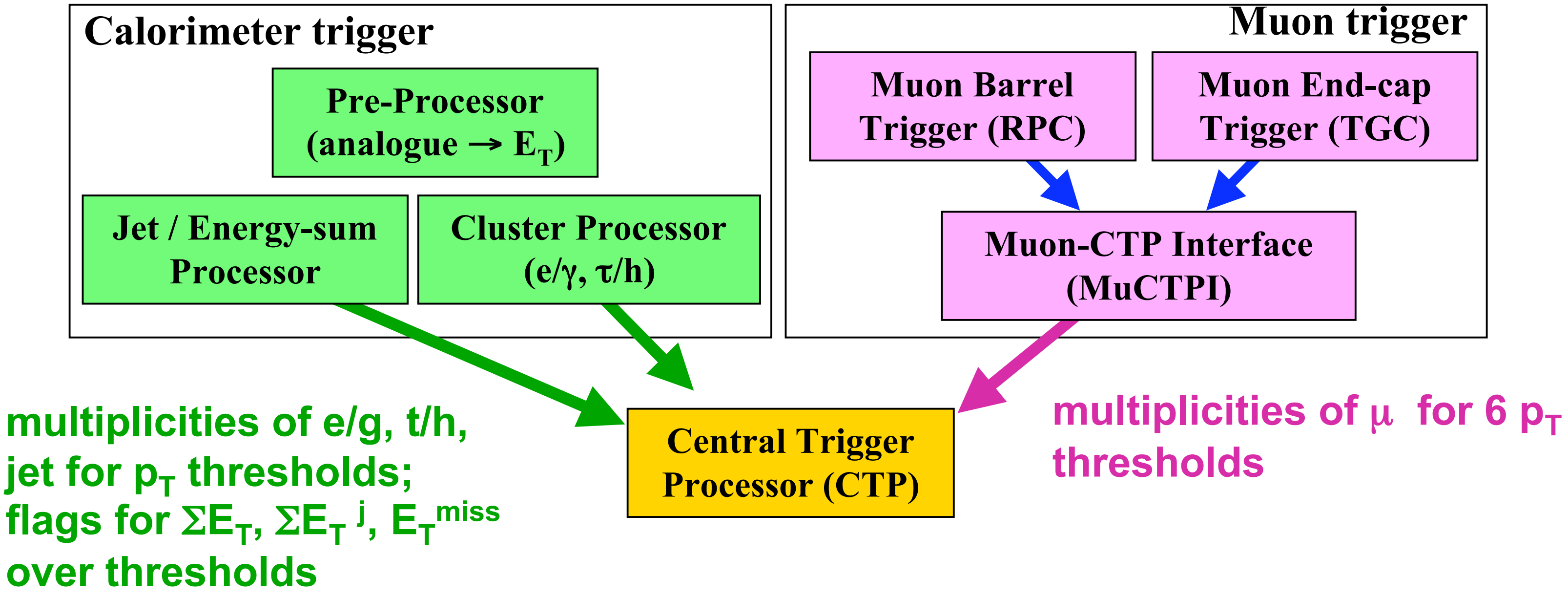


1) **LVL1** decision based on data from calorimeters and muon trigger chambers; synchronous at 40 MHz; bunch crossing identification

2) **LVL2** uses Regions of Interest (identified by LVL1) data (ca. 2%) with full granularity from all detectors

3) **Event Filter** has access to full event and can perform more refined event reconstruction

LVL1 selection



Calorimeter trigger

Pre-Processor (analogue → E_T)

Jet / Energy-sum Processor

Cluster Processor (e/γ, τ/h)

Muon trigger

Muon Barrel Trigger (RPC)

Muon End-cap Trigger (TGC)

Muon-CTP Interface (MuCTPI)

Central Trigger Processor (CTP)

multiplicities of e/g, t/h, jet for p_T thresholds; flags for ΣE_T, $\Sigma E_T{}^{j}$, E_T^{miss} over thresholds

multiplicities of μ for 6 p_T thresholds

CTP: trigger decision based on inputs, deadtime, random triggers bunch groups

LVL1 configuration

LVL1 trigger menu information for all LVL1 subsystems: RPCs TGCs, L1Calo, CTP, MuCTPI.

LVL1 trigger menus have hierarchical stucture:

- A Trigger Menu (e.g. “lumi_01”) is composed of many Items (e.g. “2J25+XE45”)
- A Trigger Item is composed of some Thresholds (e.g. “J25”)
- A Trigger Threshold is composed of many Threshold Values (e.g. “E_T=25, cone=4, η_{min}=1.2, η_{max}=1.4, φ_{min}=0., φ_{max}=0.2”)

plus extra information like: dead-time parameters, bunch-group definition, random trigger rates, prescaled clocks, prescales, trigger type definition, jet input thresholds,…

example trigger menu:

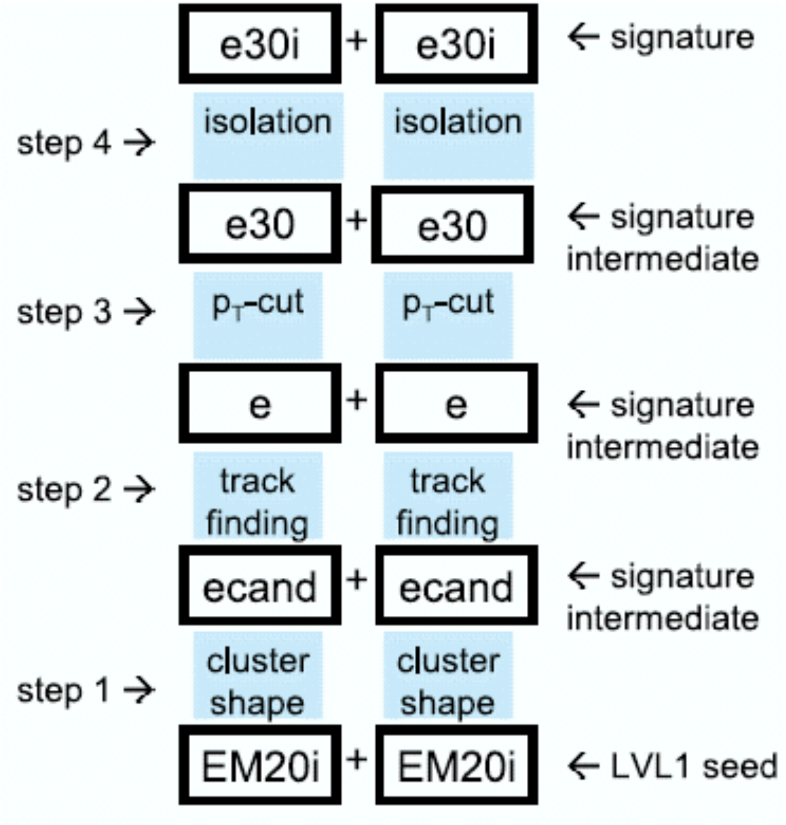
LVL1 Menu	2x10^{33}cm^{-2}s^{-1}
MU20	0.8
2MU6	0.2
EM25i	12.0
2EM15i	4.0
J200	0.2
3J90	0.2
4J65	0.2
J60+xE60	0.4
TAU25+xE30	2.0
MU10+EM15i	0.1
Others	5.0
Total rate (kHz)	**~ 25**

Configuration must fulfill hardware limitations, e.g. available thresholds, number of allowed inputs, LUT configuration in CTP, etc.

HLT selection and configuration

HLT strategy: refinement of TriggerElements (seeded from LVL1) in stepwise processing, perform stepwise decisions

example of step-wise processing:



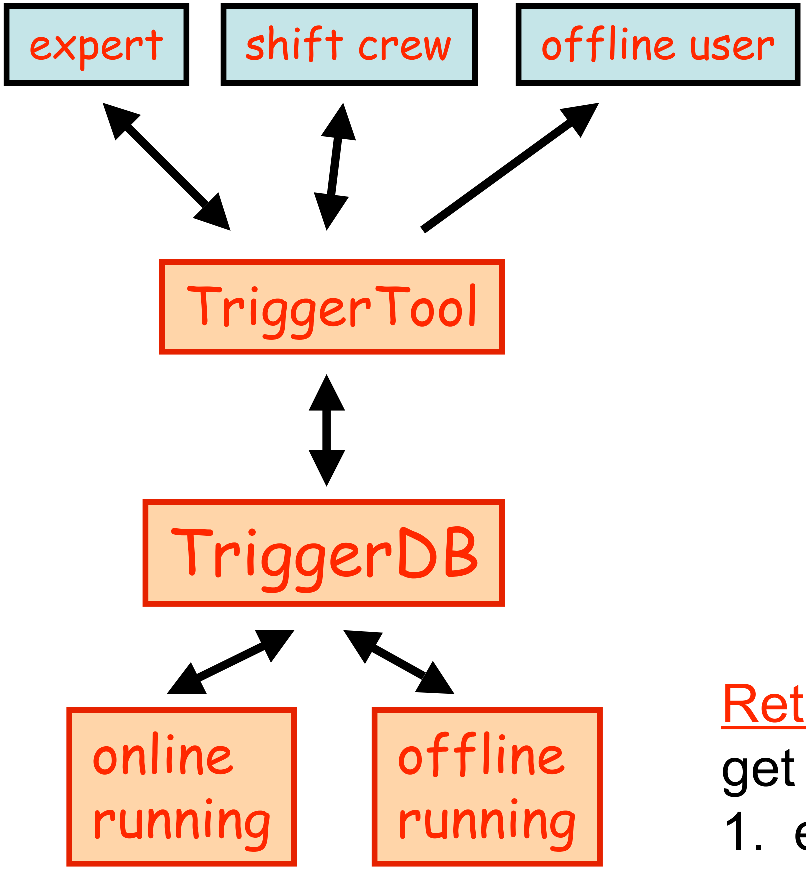
← Consistency (with LVL1) important

HLT uses the offline reconstruction SW framework ATHENA on ~3000 CPUs

parts to be configured:

1) HLT Menu: determines which algorithms are called at which step and which signatures need to be fulfilled for accepted events
2) all configuration parameters of the algorithms, called JobOptions (JO), compatibility with offline important
3) release information

ATLAS Configuration System



TriggerTool:

- GUI for DB population
- easy and consistent menu changes for experts (HLT and LVL1)

TriggerDB:

- stores all information to configure the trigger: LVL1 menu, HLT menu , HLT algo. parameters (JO), HLT release information
- stores all versions used with a key

→ Configuration and Condition DB

Retrieval of information for running:

get information via a key via two paths:

1. extraction of data in XML/JO files
2. direct read-out (e.g. online or GRID jobs)

TriggerDB

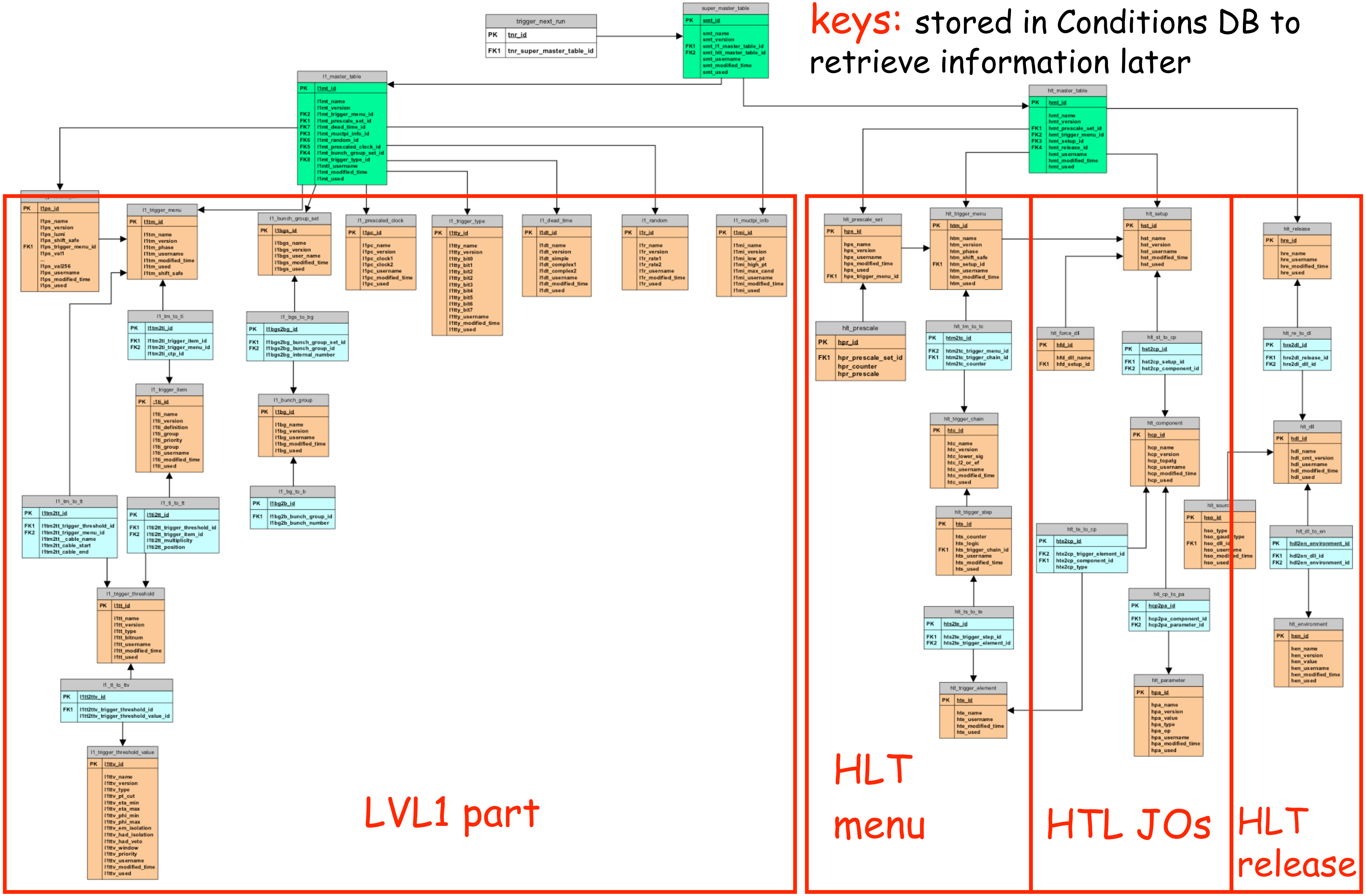
general:

- stores all information to configure the trigger: LVL1 menu, HLT menu, HLT algorithms+services parameters (JO properties), HLT release information
- stores all versions (used and prepared) with a key
  → acts as Configuration and (with COOL) as Conditions DB

- implemented in SQL
- runs on MySQL and ORACLE
- tables are ‘external’ part of the ATLAS online DB (COOL)
  → used online and offline (e.g. ATHENA trigger simulation)
  → used outside CERN via replications done by CERN IT
  → use of infrastructure provided by ATLAS/CERN-IT

TriggerDB schema

keys: stored in Conditions DB to retrieve information later



trigger_next_run	
PK	tnr_id
FK1	tnr_super_master_table_id

super_master_table	
PK	smt_id
	smt_name
	smt_version
FK1	smt_l1_master_table_id
FK2	smt_hlt_master_table_id
	smt_username
	smt_modified_time
	smt_used

l1_master_table	
PK	l1mt_id
	l1mt_name
	l1mt_version
FK2	l1mt_trigger_menu_id
FK1	l1mt_prescale_set_id
FK7	l1mt_dead_time_id
FK3	l1mt_muctpi_info_id
FK6	l1mt_random_id
FK5	l1mt_prescaled_clock_id
FK4	l1mt_bunch_group_set_id
FK8	l1mt_trigger_type_id
	l1mtl_username
	l1mt_modified_time
	l1mt_used

PK	l1ps_id
	l1ps_name
	l1ps_version
	l1ps_lumi
	l1ps_shift_safe
FK1	l1ps_trigger_menu_id
	l1ps_val1
	...
	l1ps_val256
	l1ps_username
	l1ps_modified_time
	l1ps_used

l1_trigger_menu	
PK	l1tm_id
	l1tm_name
	l1tm_version
	l1tm_phase
	l1tm_username
	l1tm_modified_time
	l1tm_used
	l1tm_shift_safe

l1_bunch_group_set	
PK	l1bgs_id
	l1bgs_name
	l1bgs_version
	l1bgs_user_name
	l1bgs_modified_time
	l1bgs_used

l1_prescaled_clock	
PK	l1pc_id
	l1pc_name
	l1pc_version
	l1pc_clock1
	l1pc_clock2
	l1pc_username
	l1pc_modified_time
	l1pc_used

l1_trigger_type	
PK	l1tty_id
	l1tty_name
	l1tty_version
	l1tty_bit0
	l1tty_bit1
	l1tty_bit2
	l1tty_bit2
	l1tty_bit3
	l1tty_bit4
	l1tty_bit5
	l1tty_bit6
	l1tty_bit7
	l1tty_username
	l1tty_modified_time
	l1tty_used

l1_dead_time	
PK	l1dt_id
	l1dt_name
	l1dt_version
	l1dt_simple
	l1dt_complex1
	l1dt_complex2
	l1dt_username
	l1dt_modified_time
	l1dt_used

l1_random	
PK	l1r_id
	l1r_name
	l1r_version
	l1r_rate1
	l1r_rate2
	l1r_username
	l1r_modified_time
	l1r_used

l1_muctpi_info	
PK	l1mi_id
	l1mi_name
	l1mi_version
	l1mi_low_pt
	l1mi_high_pt
	l1mi_max_cand
	l1mi_username
	l1mi_modified_time
	l1mi_used

l1_tm_to_ti	
PK	l1tm2ti_id
FK1	l1tm2ti_trigger_item_id
FK2	l1tm2ti_trigger_menu_id
	l1tm2ti_ctp_id

l1_bgs_to_bg	
PK	l1bgs2bg_id
FK1	l1bgs2bg_bunch_group_set_id
FK2	l1bgs2bg_bunch_group_id
	l1bgs2bg_internal_number

l1_trigger_item	
PK	:1ti_id
	l1ti_name
	l1ti_version
	l1ti_definition
	l1ti_group
	l1ti_priority
	l1ti_group
	l1ti_username
	l1ti_modified_time
	l1ti_used

l1_bunch_group	
PK	l1bg_id
	l1bg_name
	l1bg_version
	l1bg_username
	l1bg_modified_time
	l1bg_used

l1_bg_to_b	
PK	l1bg2b_id
FK1	l1bg2b_bunch_group_id
	l1bg2b_bunch_number

l1_tm_to_tt	
PK	l1tm2tt_id
FK1	l1tm2tt_trigger_threshold_id
FK2	l1tm2tt_trigger_menu_id
	l1tm2tt__cable_name
	l1tm2tt_cable_start
	l1tm2tt_cable_end

l1_ti_to_tt	
PK	l1ti2tt_id
FK1	l1ti2tt_trigger_threshold_id
FK2	l1ti2tt_trigger_item_id
	l1ti2tt_multiplicity
	l1ti2tt_position

l1_trigger_threshold	
PK	l1tt_id
	l1tt_name
	l1tt_version
	l1tt_type
	l1tt_bitnum
	l1tt_username
	l1tt_modified_time
	l1tt_used

l1_tt_to_ttv	
PK	l1tt2ttv_id
FK1	l1tt2ttv_trigger_threshold_id
	l1tt2ttv_trigger_threshold_value_id

l1_trigger_threshold_value	
PK	l1ttv_id
	l1ttv_name
	l1ttv_version
	l1ttv_type
	l1ttv_pt_cut
	l1ttv_eta_min
	l1ttv_eta_max
	l1ttv_phi_min
	l1ttv_phi_max
	l1ttv_em_isolation
	l1ttv_had_isolation
	l1ttv_had_veto
	l1ttv_window
	l1ttv_priority
	l1ttv_username
	l1ttv_modified_time
	l1ttv_used

hlt_master_table	
PK	hmt_id
	hmt_name
	hmt_version
FK1	hmt_prescale_set_id
FK2	hmt_trigger_menu_id
FK3	hmt_setup_id
FK4	hmt_release_id
	hmt_username
	hmt_modified_time
	hmt_used

hlt_prescale_set	
PK	hps_id
	hps_name
	hps_version
	hps_username
	hps_modified_time
	hps_used
FK1	hps_trigger_menu_id

hlt_trigger_menu	
PK	htm_id
	htm_name
	htm_version
	htm_phase
	htm_shift_safe
FK1	htm_setup_id
	htm_username
	htm_modified_time
	htm_used

hlt_prescale	
PK	hpr_id
FK1	hpr_prescale_set_id
	hpr_counter
	hpr_prescale

hlt_tm_to_tc	
PK	htm2tc_id
FK2	htm2tc_trigger_menu_id
FK1	htm2tc_trigger_chain_id
	htm2tc_counter

hlt_trigger_chain	
PK	htc_id
	htc_name
	htc_version
	htc_lower_sig
	htc_l2_or_ef
	htc_username
	htc_modified_time
	htc_used

hlt_trigger_step	
PK	hts_id
	hts_counter
	hts_logic
FK1	hts_trigger_chain_id
	hts_username
	hts_modified_time
	hts_used

hlt_ts_to_te	
PK	hts2te_id
FK1	hts2te_trigger_step_id
FK2	hts2te_trigger_element_id

hlt_trigger_element	
PK	hte_id
	hte_name
	hte_username
	hte_modified_time
	hte_used

hlt_setup	
PK	hst_id
	hst_name
	hst_version
	hst_username
	hst_modified_time
	hst_used

hlt_force_dll	
PK	hfd_id
	hfd_dll_name
FK1	hfd_setup_id

hlt_st_to_cp	
PK	hst2cp_id
FK1	hst2cp_setup_id
FK2	hst2cp_component_id

hlt_component	
PK	hcp_id
	hcp_name
	hcp_version
	hcp_topalg
	hcp_username
	hcp_modified_time
	hcp_used

hlt_te_to_cp	
PK	hte2cp_id
FK2	hte2cp_trigger_element_id
FK1	hte2cp_component_id
	hte2cp_type

hlt_sourc	
PK	hso_id
	hso_type
	hso_gaud type
FK1	hso_dll_id
	hso_user me
	hso_modi ed_time
	hso_used

hlt_cp_to_pa	
PK	hcp2pa_id
FK1	hcp2pa_component_id
FK2	hcp2pa_parameter_id

hlt_parameter	
PK	hpa_id
	hpa_name
	hpa_version
	hpa_value
	hpa_type
	hpa_op
	hpa_username
	hpa_modified_time
	hpa_used

hlt_release	
PK	hre_id
	hre_name
	hre_username
	hre_modified_time
	hre_used

hlt_re_to_dl	
PK	hre2dl_id
FK1	hre2dl_release_id
FK2	hre2dl_dll_id

hlt_dl	
PK	hdl_id
	hdl_name
	hdl_cmt_version
	hdl_username
	hdl_modified_time
	hdl_used

hlt_dl_to_en	
PK	hdl2en_environment_id
FK1	hdl2en_dll_id
FK2	hdl2en_environment_id

hlt_environment	
PK	hen_id
	hen_name
	hen_version
	hen_value
	hen_username
	hen_modified_time
	hen_used

LVL1 part

HLT menu

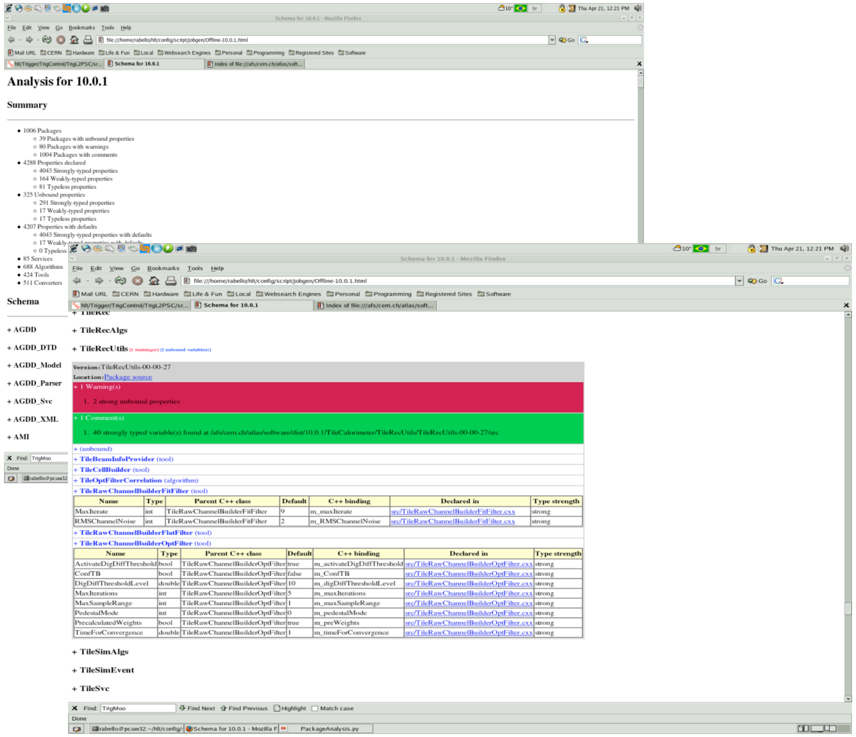
HTL JOs

HLT release

Population of the TriggerDB

HLT JobOptions and release part

- Difficulties: get all JobOptions of all algorithms, services etc. for a certain release (offline uses Python files, difficult to map to DB)
- Tool to scan the release and populate the TriggerDB automatically with default values has been developed
- Foreseen to be done once per release with check of changes
- Afterwards interactive changes of algorithm parameters
- Overlap with configuration of offline reconstruction jobs and offline property DB efforts


Schema for 10.0.1 - Mozilla Firefox
File Edit View Go Bookmarks Tools Help
file:///home/rabello/hlt/config/script/jobgen/Offline-10.0.1.html
Go
Mail URL CERN Hardware Life & Fun Local Websearch Engines Personal Programming Registered Sites Software
hlt/Trigger/TrigControl/TrigL2PSC/sr...
Schema for 10.0.1
Index of file:///afs/cern.ch/atlas/soft...
10°
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Thu Apr 21, 12:21 PM

Analysis for 10.0.1

Summary

- 1006 Packages
  - 39 Packages with unbound properties
  - 80 Packages with warnings
  - 1004 Packages with comments
- 4288 Properties declared
  - 4043 Strongly-typed properties
  - 164 Weakly-typed properties
  - 81 Typeless properties
- 325 Unbound properties
  - 291 Strongly-typed properties
  - 17 Weakly-typed properties
  - 17 Typeless properties
- 4207 Properties with defaults
  - 4043 Strongly-typed properties with defaults
  - 17 Weakly-
  - 0 Typeless
- 85 Services
- 688 Algorithms
- 424 Tools
- 511 Converters

Schema

+ AGDD

+ AGDD_DTD

+ AGDD_Model

+ AGDD_Parser

+ AGDD_Svc

+ AGDD_XML

+ AMI

+ TileRecAlgs

+ TileRecUtils [1 warning(s)] [2 unbound variable(s)]

Version: TileRecUtils-00-00-27
Location: Package source

+ 1 Warning(s)

1. 2 strong unbound properties

+ 1 Comment(s)

1. 40 strongly typed variable(s) found at /afs/cern.ch/atlas/software/dist/10.0.1/TileCalorimeter/TileRecUtils/TileRecUtils-00-00-27/src

+ (unbound)
+ TileBeamInfoProvider (tool)
+ TileCellBuilder (tool)
+ TileOptFilterCorrelation (algorithm)
+ TileRawChannelBuilderFitFilter (tool)

Name	Type	Parent C++ class	Default	C++ binding	Declared in	Type strength
MaxIterate	int	TileRawChannelBuilderFitFilter	9	m_maxIterate	src/TileRawChannelBuilderFitFilter.cxx	strong
RMSChannelNoise	int	TileRawChannelBuilderFitFilter	2	m_RMSChannelNoise	src/TileRawChannelBuilderFitFilter.cxx	strong

+ TileRawChannelBuilderFlatFilter (tool)
+ TileRawChannelBuilderOptFilter (tool)

Name	Type	Parent C++ class	Default	C++ binding	Declared in	Type strength
ActivateDigDiffThreshold	bool	TileRawChannelBuilderOptFilter	true	m_activateDigDiffThreshold	src/TileRawChannelBuilderOptFilter.cxx	strong
ConfTB	bool	TileRawChannelBuilderOptFilter	false	m_ConfTB	src/TileRawChannelBuilderOptFilter.cxx	strong
DigDiffThresholdLevel	double	TileRawChannelBuilderOptFilter	10	m_digDiffThresholdLevel	src/TileRawChannelBuilderOptFilter.cxx	strong
MaxIterations	int	TileRawChannelBuilderOptFilter	5	m_maxIterations	src/TileRawChannelBuilderOptFilter.cxx	strong
MaxSampleRange	int	TileRawChannelBuilderOptFilter	1	m_maxSampleRange	src/TileRawChannelBuilderOptFilter.cxx	strong
PedestalMode	int	TileRawChannelBuilderOptFilter	0	m_pedestalMode	src/TileRawChannelBuilderOptFilter.cxx	strong
PrecalculatedWeights	bool	TileRawChannelBuilderOptFilter	true	m_preWeights	src/TileRawChannelBuilderOptFilter.cxx	strong
TimeForConvergence	double	TileRawChannelBuilderOptFilter	1	m_timeForConvergence	src/TileRawChannelBuilderOptFilter.cxx	strong

+ TileSimAlgs

+ TileSimEvent

+ TileSvc

LVL1 part and HLT menus part:

- can (must) in principle be filled interactively:
- difficult : consistency of all parts
- use of GUI to ease the operation:

TriggerTool

Set of offline packages required at Point1

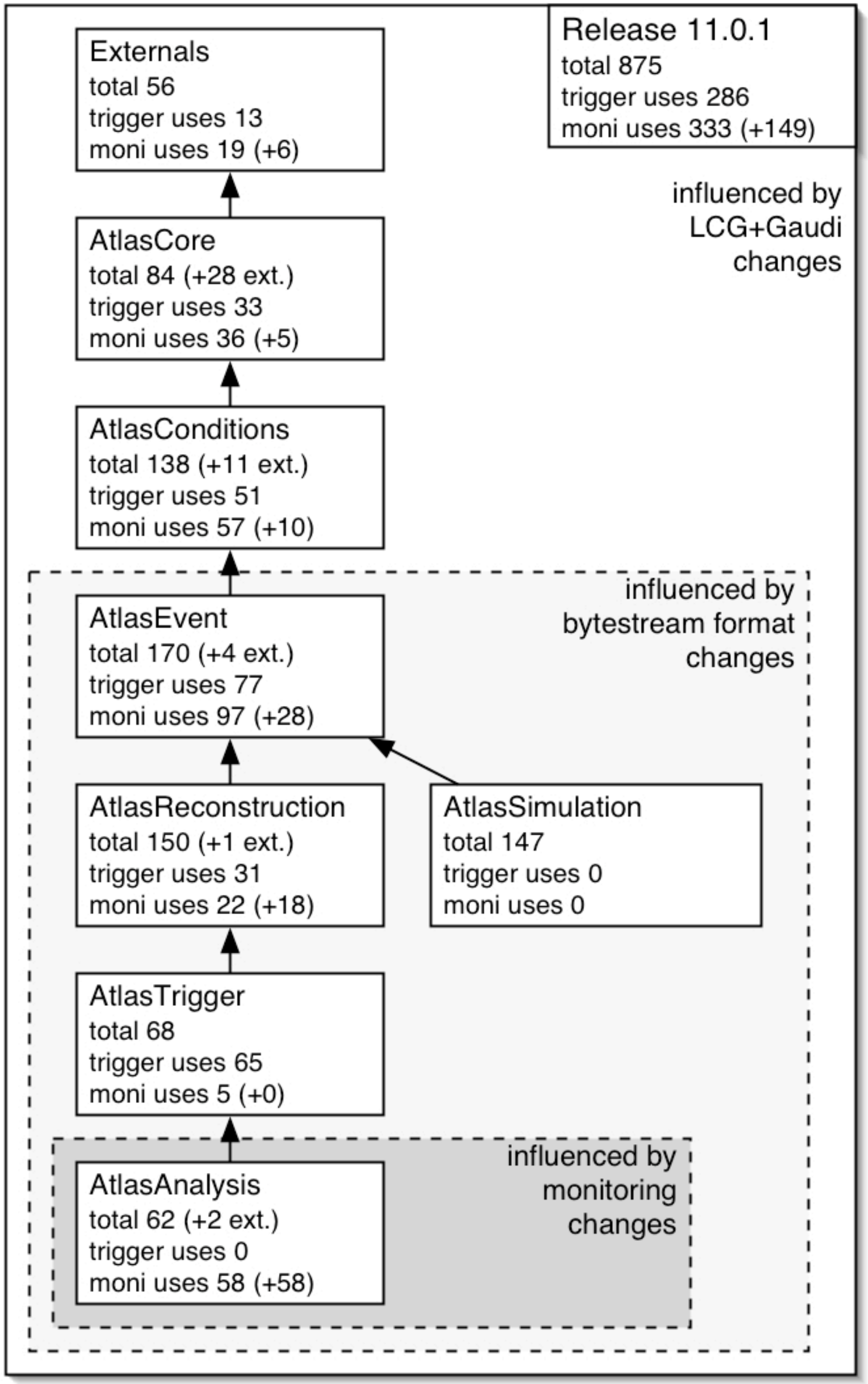
- Recent analysis of packages contained in release 11.0.1
  - Analysis of the cmt requirements files (use statements etc.) as well as of the include statements in the c++ code
  - Ideally these two should coincide - not always the case

    Conservatively, use union of the two in order not to miss any dependencies - so the obtained set of packages may by slightly too large

- Done for “project based” builds
  - No need to wait for this feature - the set of packages possibly used by HLT is independent and could be extracted also from the monolithic build
  - The move to project based builds has sorted packages nicely into unidirectionally-dependent sets of packages: the 7 projects from Core via Trigger to Analysis
  - For now (and including release 12) monolithic and project builds will be done in parallel
  - Current list of offline packages needed by HLT is on CVS

    [atlastdaq]LVL1/TrigConf/releasetools/doc/athena-for-trigger.out

    Format: (project) package

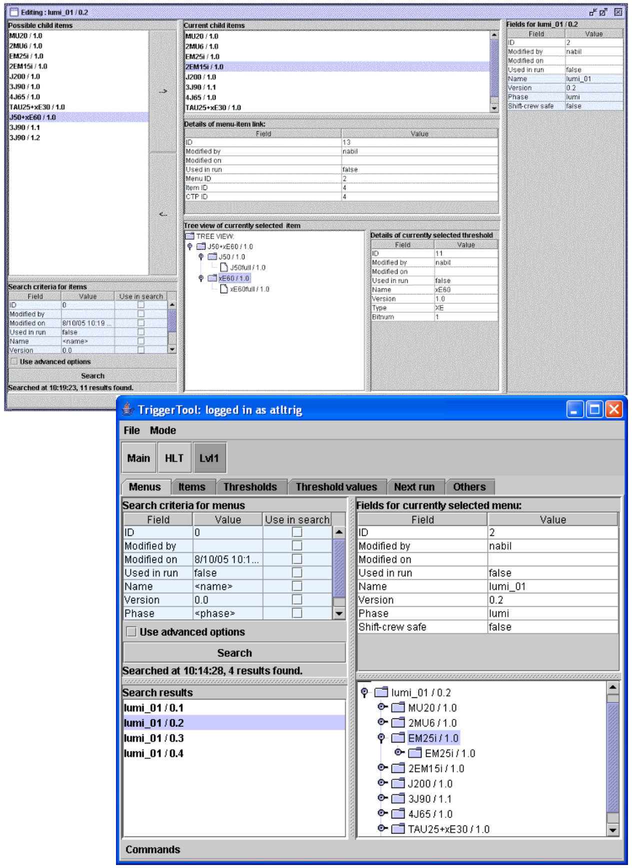


Statistics for 11.0.1 packages

- Total of 875 packages in release including externals (excluding some others)
- Only a fraction needed at Point1
- AtlasTrigger needs 286 packages from Offline (plus HLT+online packages)
  - HLT does not depend on Simulation or Analysis
  - Important for the stability of HLT operation
    - less frequent software changes
    - keep monitoring in separate processes and processors - avoid HLT crashes
  - 666 instead 286 packages when using coarse (entire projects) granularity
- Monitoring is part of AtlasAnalysis which uses 333 packages
  - 149 of which are in addition to Trigger needs
- These numbers may still change a bit

TriggerTool

- ➢ TriggerTool is an interface to TriggerDB.
- ➢ central tool for:
  - experts to prepare and change (LVL1 + HLT) menus consistently.
  - restricted menu changes online (by shift crew)
  - offline users to browse the DB (the menus) and extract files (maybe also via command line)
- ➢ covers online and offline use cases



Possible child items

MU20 / 1.0
2MU6 / 1.0
EM25i / 1.0
2EM15i / 1.0
J200 / 1.0
3J90 / 1.0
4J65 / 1.0
TAU25+xE30 / 1.0
J50+xE60 / 1.0
3J90 / 1.1
3J90 / 1.2

Current child items

MU20 / 1.0
2MU6 / 1.0
EM25i / 1.0
2EM15i / 1.0
J200 / 1.0
3J90 / 1.1
4J65 / 1.0
TAU25+xE30 / 1.0

Details of menu-item link:

Field	Value
ID	13
Modified by	nabil
Modified on	
Used in run	false
Menu ID	2
Item ID	4
CTP ID	4

Fields for lumi_01 / 0.2

Field	Value
ID	2
Modified by	nabil
Modified on	
Used in run	false
Name	lumi_01
Version	0.2
Phase	lumi
Shift-crew safe	false

Search criteria for items

Field	Value	Use in search
ID	0	□
Modified by		□
Modified on	8/10/05 10:19 ...	□
Used in run	false	□
Name	<name>	□
Version	0.0	□

□ Use advanced options

Searched at 10:19:23, 11 results found.

Tree view of currently selected item

TREE VIEW:
- J50+xE60 / 1.0
  - J50 / 1.0
    - J50full / 1.0
  - xE60 / 1.0
    - xE60full / 1.0

Details of currently selected threshold

Field	Value
ID	11
Modified by	nabil
Modified on	
Used in run	false
Name	xE60
Version	1.0
Type	XE
Bitnum	1

Search criteria for menus

Field	Value	Use in search
ID	0	□
Modified by		□
Modified on	8/10/05 10:1...	□
Used in run	false	□
Name	<name>	□
Version	0.0	□
Phase	<phase>	□

□ Use advanced options

Searched at 10:14:28, 4 results found.

Fields for currently selected menu:

Field	Value
ID	2
Modified by	nabil
Modified on	
Used in run	false
Name	lumi_01
Version	0.2
Phase	lumi
Shift-crew safe	false

Search results

lumi_01 / 0.1
lumi_01 / 0.2
lumi_01 / 0.3
lumi_01 / 0.4

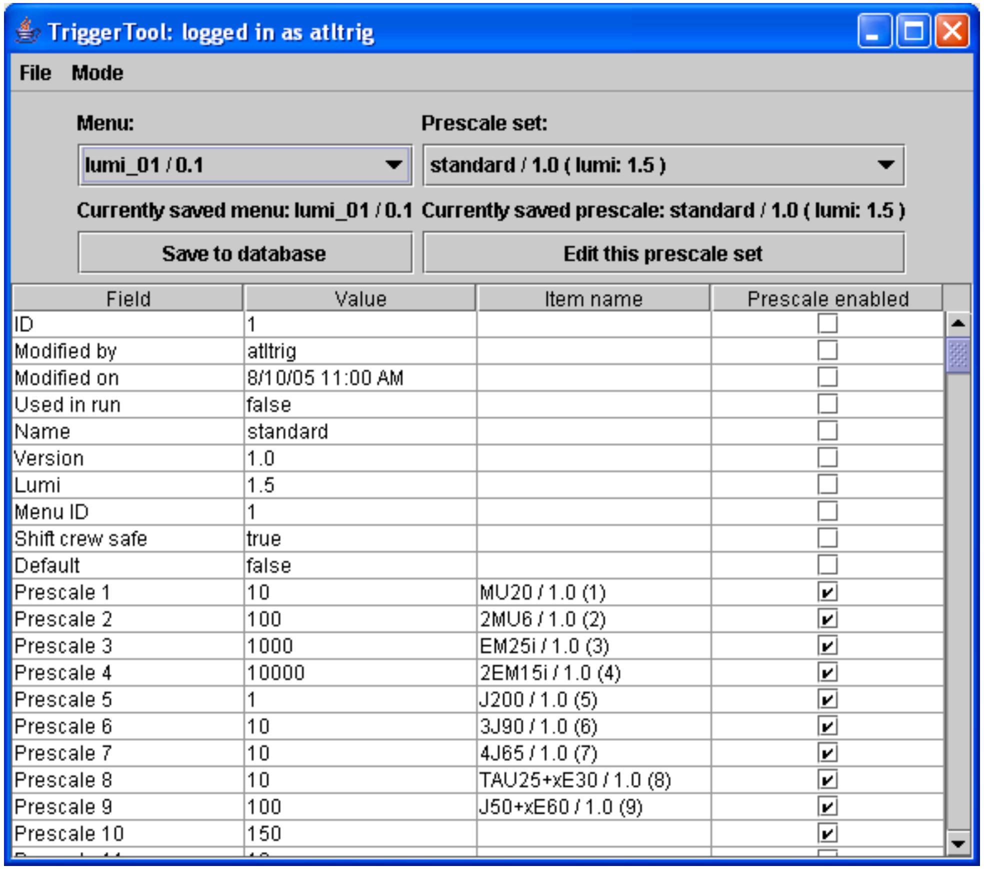
- lumi_01 / 0.2
  - MU20 / 1.0
  - 2MU6 / 1.0
  - EM25i / 1.0
    - EM25i / 1.0
  - 2EM15i / 1.0
  - J200 / 1.0
  - 3J90 / 1.1
  - 4J65 / 1.0
  - TAU25+xE30 / 1.0

Implementation :

- JAVA based stand-alone GUI
  → can be used on all platforms
- can access the TriggerDB from everywhere
  (internet access required); PWD protected
- LVL1 part implemented, HLT part underway

TriggerTool: Shift Crew

- Limited functionality; can only change properties for the *next* run.
- Can only choose from trigger menus and prescale sets that an expert has made "shift-crew safe".
- Can change prescales



Menu: lumi_01 / 0.1

Prescale set: standard / 1.0 (lumi: 1.5)

Currently saved menu: lumi_01 / 0.1

Currently saved prescale: standard / 1.0 (lumi: 1.5)

Field	Value	Item name	Prescale enabled
ID	1		□
Modified by	atltrig		□
Modified on	8/10/05 11:00 AM		□
Used in run	false		□
Name	standard		□
Version	1.0		□
Lumi	1.5		□
Menu ID	1		□
Shift crew safe	true		□
Default	false		□
Prescale 1	10	MU20 / 1.0 (1)	☑
Prescale 2	100	2MU6 / 1.0 (2)	☑
Prescale 3	1000	EM25i / 1.0 (3)	☑
Prescale 4	10000	2EM15i / 1.0 (4)	☑
Prescale 5	1	J200 / 1.0 (5)	☑
Prescale 6	10	3J90 / 1.0 (6)	☑
Prescale 7	10	4J65 / 1.0 (7)	☑
Prescale 8	10	TAU25+xE30 / 1.0 (8)	☑
Prescale 9	100	J50+xE60 / 1.0 (9)	☑
Prescale 10	150		☑

Next steps for the Trigger Tool

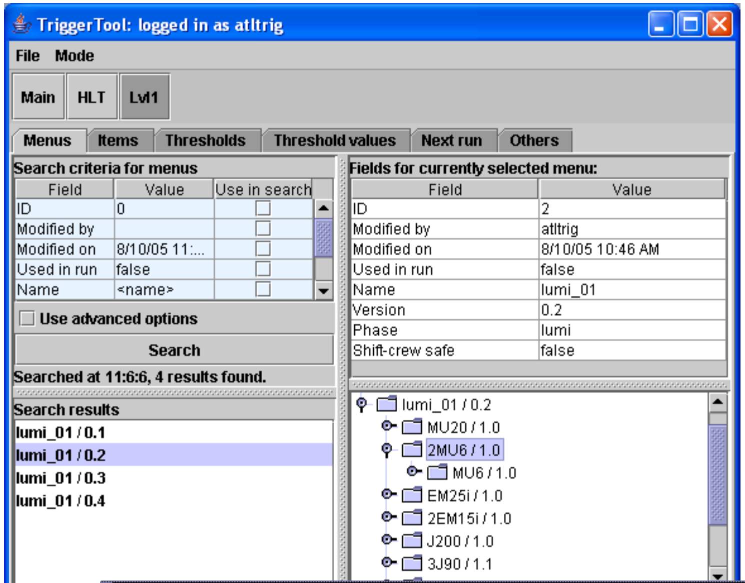
- Extension of functionality to HLT (DB population, consistency checks, connection to L1)
- Incorporate consistency constraints on CTP hardware (by calling the existing CTP trigger menu compiler)
- Incorporate xml-write capabilities (exist for L1, worked on for the HLT
- Adjustments to DB schema for “next-run” procedure for shift crew
- More flexible access control for users (read only access for the real TriggerDB for users, possibility to specify private copies to manipulate it with expert privileges, …)
- Make sure all functionality is there for Oracle & MySQL

Additional slides

TriggerTool: e.g. Experts

- “easy” preparation of new menus
- changing data, adding, removing, creating copies of elements, etc.
- automatic internal consistency checks (important help!)
- Sophisticated searches in TriggerDB possible

shown:
LVL1 part



Search criteria for menus

Field	Value	Use in search
ID	0	□
Modified by		□
Modified on	8/10/05 11:...	□
Used in run	false	□
Name	<name>	□

□ Use advanced options

Search

Searched at 11:6:6, 4 results found.

Search results

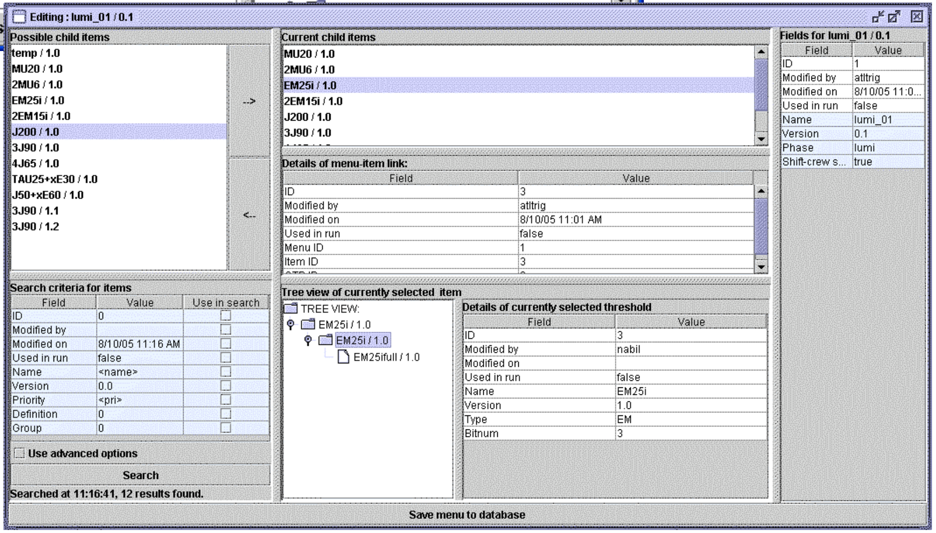
lumi_01 / 0.1
lumi_01 / 0.2
lumi_01 / 0.3
lumi_01 / 0.4

Fields for currently selected menu:

Field	Value
ID	2
Modified by	atltrig
Modified on	8/10/05 10:46 AM
Used in run	false
Name	lumi_01
Version	0.2
Phase	lumi
Shift-crew safe	false

lumi_01 / 0.2
MU20 / 1.0
2MU6 / 1.0
MU6 / 1.0
EM25i / 1.0
2EM15i / 1.0
J200 / 1.0
3J90 / 1.1

Commands



Possible child items

temp / 1.0
MU20 / 1.0
2MU6 / 1.0
EM25i / 1.0
2EM15i / 1.0
J200 / 1.0
3J90 / 1.0
4J65 / 1.0
TAU25+xE30 / 1.0
J50+xE60 / 1.0
3J90 / 1.1
3J90 / 1.2

Current child items

MU20 / 1.0
2MU6 / 1.0
EM25i / 1.0
2EM15i / 1.0
J200 / 1.0
3J90 / 1.0

Details of menu-item link:

Field	Value
ID	3
Modified by	atltrig
Modified on	8/10/05 11:01 AM
Used in run	false
Menu ID	1
Item ID	3

Search criteria for items

Field	Value	Use in search
ID	0	□
Modified by		□
Modified on	8/10/05 11:16 AM	□
Used in run	false	□
Name	<name>	□
Version	0.0	□
Priority	<pri>	□
Definition	0	□
Group	0	□

□ Use advanced options

Search

Searched at 11:16:41, 12 results found.

Tree view of currently selected item

TREE VIEW:
EM25i / 1.0
EM25i / 1.0
EM25ifull / 1.0

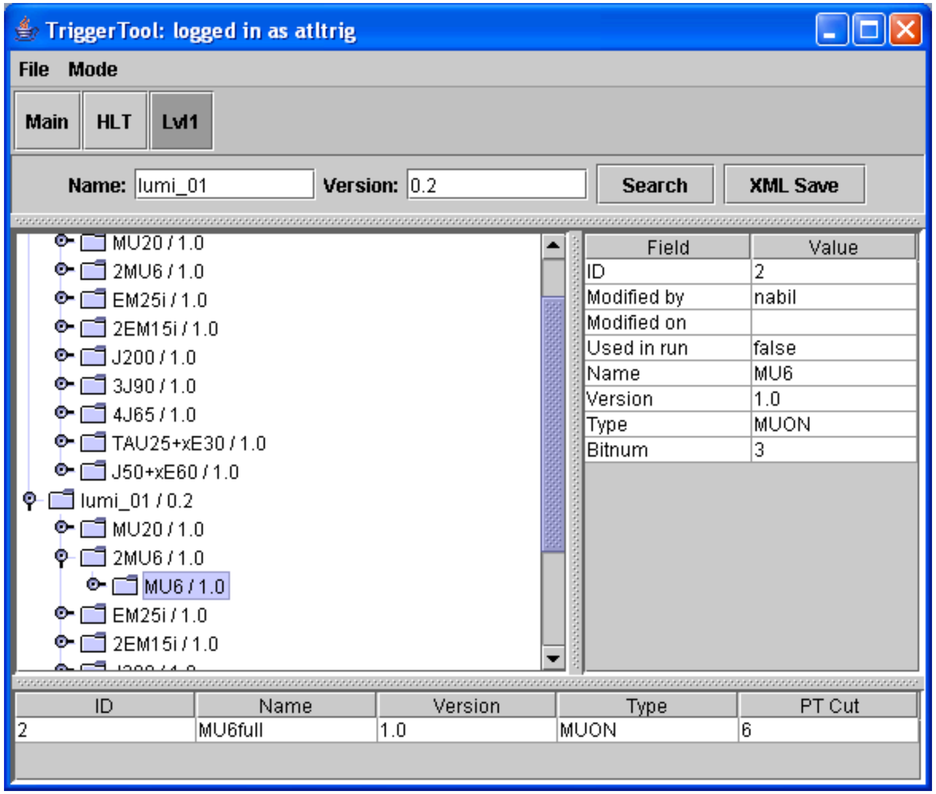
Details of currently selected threshold

Field	Value
ID	3
Modified by	nabil
Modified on	
Used in run	false
Name	EM25i
Version	1.0
Type	EM
Bitnum	3

Fields for lumi_01 / 0.1

Field	Value
ID	1
Modified by	atltrig
Modified on	8/10/05 11:0...
Used in run	false
Name	lumi_01
Version	0.1
Phase	lumi
Shift-crew s...	true

TriggerTool: Users



Name: lumi_01 Version: 0.2

Field	Value
ID	2
Modified by	nabil
Modified on	
Used in run	false
Name	MU6
Version	1.0
Type	MUON
Bitnum	3

ID	Name	Version	Type	PT Cut
2	MU6full	1.0	MUON	6

- Allows browsing of the TriggerDB
- Searching of menus
- Export to XML file for standalone running

Data Retrieval from DB for running

reminder : two data paths for both HLT and LVL1 (online and offline)

1) extraction of intermediate files (XML, JO) from TriggerDB

- allows standalone tests for e.g. development of new menus
- tests of online trigger without interference with the DB
- using formats compatible with current simulation input files
- very different format for LVL1 (XML), HLT menu (XML) and HLT JO (PYTHON), first versions exist (except HLT menu, currently under development (Andreas Hoecker)

2) direct read-out of configuration objects from TriggerDB

- the various clients contact the TriggerDB directly to get their configuration objects (first version for full LVL1 exist)
- to be used for the online running
- for production jobs on the grid (simulation, reconstruction)