GenICam Meeting May 2011

May 16 2011

Homework Milestones from Trac

422	Basler	Ongoing
663	Basler	Still open
729	MVTec	Ongoing
737	Teledyne Dalsa	Ongoing
739	Basler	Still open
740	Basler	Still open
742	Baumer	Not possible: GenApi Schema and Document update needed (→ Basler)
745	Matrox	Reopen and assing to Jan (Leutron Vision)
746	Leutron Vision	Reopen it
752	STEMMER IMAGING	Nothing new
784	MVTec	To be checked

Homework list is not complete as the fixed stuff was reassigned to the releases. New homework item to define a proper way to enter homework items in Trac

Voting Rights

Due to the homework issues we concluded that everybody states what he has done. Companies with voting rights are:

- Basler
- Baumer
- Jai
- Leutron Vision
- MathWorks
- Matrix
- Matrox
- MVTec
- Pleora
- STEMMER IMAGING
- SVSVistec
- Teledyne Dalsa

GenApi Status

See presentation from Fritz.

Additional points:

- GenApi "Does and Don'ts" need to be updated
  - Math parser
    - No short circuiting is done (everything is evaluated)
    - Parsing occurs every time the node is evaluated as the nodes which are referenced need to be read out prior putting the values into the parsing engine.
- SwissKnife access time so far not evaluated, but loading time is (see presentation from Vincent)
  - Proposed binary cache.
  - Concerns are additional work load on keeping cache in sync with XML schema and XML loader implementation.
  - → New subgroup to investigate improvements of loader acceleration.
- New Installer
  - Trac item 744 (Eckhard).
  - pdf document (Installshield).
  - → Install Shield may result in too much maintenance work as the projects can not be automatically generated.
- Pre-Callback
  - Raised the issue of exception safety (tbd).

CLProtocol

See presentation from Fritz.

Additional points:

- Cache directory for CLProtocol XMLs should be put into a different location to get rid of problems when users delete the whole cache directory in case of problems.

GenICam Marketing

See presentation from Vincent.

GenTL Status

See presentation from Rupert.

See updated Open Comment list for GenTL.

Additional points:

- Form a subgroup discussing the Generic Chunk Adapter.

- Have test/validation suites for GenICam GenTL producers and consumers.

- Raised a point on whether why not to introduce a registration process for the other GenICam modules (→ Wrap-up).

GenTL SFNC

See presentation of Christoph.

Additional points:

- Consensus is that we need to have an SFNC for GenTL. But we need to find a name for it... Decision is deferred until Tuesday.

- And of course we need to fill the list. First base is the mandatory features from the GenTL standard document which need to be moved to the new GenTL SFNC document.

Administrative Update

See presentation from Christoph.

GenCP Status

See GenCP document from Rupert.

Additional points:

- Preamble needs to be checked not to collide with important other protocols.

- GenCP reference implementation is put in subversion.

- As well as CLProtocol 1.1.

- GenCP will be hosted by GenICam (new module).

New Subversion Structure

- Main issue with split subversion repository is that they do share code.

- Thus we still retain one repository and introduce top-level folders for each project:
GENCIAM_SVN /

  - ReferenceImplementation / (trunk, branches, tags) / …
  (old GCBase/GenApi/Logger... until it is split into the modules

  - GCBase (filled in future)

  - Logger (filled in future)

  - GenApi (filled in future)

  - CLProtocol (filled in future)

  - ThirdParty (filled in future)

  - GenTL / (trunk, branches, tags) / …

  - GenTL SFNC / (trunk, branches, tags) / …

  - SFNC / (trunk, branches, tags) / …

  - GenCP / (trunk, branches, tags) / …

  - _Releases / …
  (This folder contain externals to all components needed of a release (RI, GenAPI, GenTL, CLProtocol,…))

    - GenICam_V1.0

    - GenICam_V2.0

    - ...

- This way we can reference shared source via svn externals (like links or pointers to other directories/files).

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SFNC Review 1.5.1

See document from Stephane.

The 1.5.1 draft will be circulated after the discussion as a release candidate on the mailing list.

Additional points:

- DeviceThroughputLimit.

  - The handling of multiple streams is quality of implementation ($\rightarrow$ paragraph regarding this is more of a footnote)

  - Automatic update and recalculation is not possible with GenApi when link speed changes due to the way updates work. There are too many nodes involved.

  - This feature must be mutual exclusive to GevSCPD and thus we need an enumeration to select the mode to use.

  - The details will be discussed in the trac forum.

- Burst mode for multi-frame-triggers.

  - Two options are proposed: do we need a simple n frames per trigger (option 2) or a more configurable 40 frames acquisition with bursts of 10 frames per trigger (option 1)?

  - First vote results in 5 for option 1, 5 for option 2 and 2 abstentions $\rightarrow$ tie

  - Second vote results in 6 for option 1, 4 for option 2 and 2 abstentions
    $\rightarrow$ Option 1 voted (burst features).

- Additions to CL features and other corrections.

  - See trac entries.

- SFNC acquisition model.

  - Transfer notion is to be removed from all models.

  - Continuous/Burst
    $\rightarrow$ Will be added.

  - Multi-frame
    $\rightarrow$ Due to TLParamsLocked deferred until TLParamsLocked discussion.

  - Single Frame
    $\rightarrow$ Add a notion about that a frame-trigger is skipped if no AcquisitionStart is sent.

SFNC Timestamp Features

See document from Jan.

Additional Points:

- New timestamp features are intended to be used in addition to the GEV timestamp.
- When changing the timestamp to a float feature we loose time resolution regarding 1588 mode cameras.
  → Timestamp will remain integer and the prefix renaming will be removed from proposal (new proposal on mailing list).

SFNC WidthMax Clarification

See presentation from Mark.

Additional points:

- Clarification is good.
- Just for read-only features there is no need to set the min/max to the same value as the current value (changing the GenApi implementation to do that could break present devices – so consensus was to leave it as it is).
  → Updated SFNC proposal is posted on the mailing list.

SFNC GainAll Clarification

See presentation from Mark.

Additional points:

- Clarify the recommendation and behavior especially in multi-tap scenarios.
  → Updated SFNC proposal is posted on the mailing list.

SFNC Associate Trigger with a Command

See document from Stephane.

Needs more study and a formal proposal with use cases to better understand the impact.

→ Postponed.

SFNC Double Pulse Trigger for Exposure

See document from Stephane.

Additional points:

- First option is to introduce a new exposure mode; second option is to introduce ExposureStart and ExposureStop features with a state machine for that use case.

- Having start and stop triggers on the same line is an instable setup in cases of missing or additional pulses.
  → Option 1 is chosen for its simplicity and fulfillment of use case. Additional trigger handling is quality of implementation and AcqStop resets the state machine. ExposureMode enum entry is added.

SFNC Standardization of AOI Handling

See document from Stephane.

Additional points:

- Two options: multiple blocks or one block per streaming channel
  → first option is preferred

- Clarification is needed on which AOI goes on which stream channel.

- Clarification on how to select and enable/disable an AOI is needed
  → New proposal is needed including a RegionSelector, RegionCount and RegionMode

SFNC ExposureTimeSelector

Request by CL-HS committee.

- We need ExposureTimeSelector but we have to investigate All case (as in the GainAll case)
  → Teledyne Dalsa will do a proposal

SFNC Multi-Sensor

See presentation from Vincent.

Additional points:

- This proposal brings in a lot of more complexity.

  ○ There is now way for old applications to adapt to the multi-category selector.

  ○ Also it becomes very hard to configure such a system.

→ Proposal will be discussed more in a sub-group in future but is essential to have this standardized – also must be matched with the other new proposals like Multiple AOIs

SFNC File Operation (Delete)

On the fly item: How to delete a file.

→ Proposal from Teledyne Dalsa

SFNC Frame Transfer

See presentation from Eric B.

Additional points:

- These SFNC features will have impact on the streaming implementation as you may pause the streaming in the middle of the block. Resume will probably not work with old implementations.

- Needs to be merged with the Multi-AOI proposal and Multi-Sensor proposal.
  → Work on proposal in a sub-group for next major release

SFNC TLParamsLocked

See document from Thomas Ö.

Additional points:

- Need to decouple SFNC features from the way of setting the features from the producer or consumer
  → SFNC discussion group and GenTL discussion group

SFNC Conclusion

New Features to be in 1.5.1

- Burst Acquisition

- Acquisition Timing Drawing

- Corrections and Clarifications

- File Delete

Next version will be 2.0

- Intended for the more complex features (multi-sensor, multi-aoi, frame transfer) if accepted.

Wrap-up

Formalized Proposal Handling

- Send a proposal to the mailing list.

- Discuss it on the trac-forum (everybody interested can follow the forum and gets e-mails on updates).

- Show stopping issues should be stated here to prevent complete decline of proposal in the meeting after a lot of work after a long time.

- Discuss based on the trac-forum at the meeting.

Additional Agenda Points for Wrap-up

- Vote on the GenTL SFNC name.

  - First vote resulted in that the present members vote directly on the module's name instead of giving this in the hand of the marketing sub-committee.
    (9 in favor for going on directly with the naming, 2 in favor to give it to the marketing sub-committee and 1 abstention.)

  - Second vote reduced the name candidates to:

    - GenTL SFNC

    - SFNC-TL
      (every voting member could choose one name, the two chosen entries had both the same number of votes.)

  - Third vote was 6 in favor for GenTL SFNC and 6 in favor for SFNC-TL → tie.

  - Fourth vote was 6 in favor for GenTL SFNC, 5 in favor for SFNC-TL and 1 abstention.
    → New module name: GenTL SFNC.

- Review on the SVN structure from yesterday.
  → Accepted.

- GenApi work.

  - Build for ARM9 platform.

    - Matrix will work on the port.

  - Result of the most important new features.

    - Performance improvements on XML loading and SwissKnife evaluation.

    - Manifest and backward compatibility.

    - List of valid values for integers and floats.

New Homework

Company	Milestone	Description
AVT, Baumer	Next meeting	GenTL Validation Test Suite based on JAI unit tests
Basler	Next meeting	GenApi Manifest and backward compatibility
Basler	GenICam 2.3	GenICam 2.3 Release - GenApi 2.3 - CLProtocol 1.1 - SFNC 1.5.1 - GenTL 1.2
Basler	GenApi 2.3	Rewrite GenApi persistence code to use new SelectorSet
Basler	Next meeting	Update GenApi "Does and Don'ts"
Basler, MVTec, MathWorks	GenApi 2.3	Finish implementation of GenApi 2.3 and CLProtocol 1.1 on Windows, Linux and Mac OS
Baumer	Next meeting	GenTL TLParamsLocked lead (manage forum entry)
Baumer	Next meeting	SFNC TLParamsLocked lead (manage forum entry)
Jai	Next meeting	GenTL mock-producer to test consumers based on the simulator
Leutron Vision	GenApi 2.3	Clean-up of MathParser
Leutron Vision	Next meeting	GenTL Generic Chunk Adapter lead (manage forum entry)
Leutron Vision	Next meeting	Post SFNC FrameID proposal update
Leutron Vision	SFNC 1.5.1	Post SFNC Timestamp proposal update
MathWorks	SFNC 1.5.1	Post SFNC proposal on GainAll clarification
MathWorks	SFNC 1.5.1	Post SFNC proposal on AOI clarification
MathWorks	Next meeting	Investigate installers on Linux
MathWorks	Next meeting	Installer for MAC
Matrix	Next meeting	GenApi port to ARM9
Matrox	SFNC 1.5.1	Various work on SFNC 1.5.1 draft (too many to list here)
MVTec	Next meeting	Start GenTL SFNC document
MVTec	Next meeting	Write a trac wiki entry on how to add homework as tickets
MVTec, Teledyne Dalsa	Next meeting	Do the subversion update
National Instruments	Next meeting	Hosting next meeting
National Instruments	Next meeting	GenApi Performance lead (manage forum entry)
Pleora	SFNC 1.6	SFNC Multi-Sensor lead (manage forum entry)
Point Grey	Next meeting	SFNC MaxThrougput lead (manage forum entry)
Stemmer	Next meeting	GenTL validation procedure
Stemmer	GenTL 1.3	GenTL: add chapter about non-streaming devices/producers and how to implement them (regarding the streaming functions)
Stemmer	Next meeting	Finish GenCP standards document lead
Stemmer	Next meeting	Find a better GenCP preamble lead (manage forum entry)
Teledyne Dalsa	Next meeting	GenApi valid values for Integer and Float lead (forum entry)
Teledyne Dalsa	SFNC 1.6	SFNC Frame Transfer lead (manage forum entry)
Teledyne Dalsa	SFNC 1.5.1	Post proposal on how to delete a file in SFNC file operations
Teledyne Dalsa	Next meeting	Post proposal on ExposureTimeSelector
Teledyne Dalsa, Matrox, Pleora	Next meeting	Post SFNC proposal on Multi-AOI handling

- Baumer proposal on feature sequences postponed to next meeting.

- Windows installer found no one to investigate further.