GenICam Meeting Minutes
Montréal, September 24th and 25th, 2009

Eric Bourbonnais
DALSA Corp.
### GenICam Meeting Attendees

<table>
<thead>
<tr>
<th>Representative</th>
<th>Company</th>
</tr>
</thead>
<tbody>
<tr>
<td>Andreas Koch</td>
<td>Kappa</td>
</tr>
<tr>
<td>Christoph Zierl</td>
<td>MVTec</td>
</tr>
<tr>
<td>Damian Nesbitt</td>
<td>Point Grey Research</td>
</tr>
<tr>
<td>Eric Carey</td>
<td>DALSA Corp.</td>
</tr>
<tr>
<td>Eric Bourbonnais</td>
<td>DALSA Corp.</td>
</tr>
<tr>
<td>Eric Gross</td>
<td>National Instruments</td>
</tr>
<tr>
<td>François Gobeil</td>
<td>Pleora Technologies</td>
</tr>
<tr>
<td>Fritz Dierks</td>
<td>Balser</td>
</tr>
<tr>
<td>Jeff Fryman</td>
<td>AIA</td>
</tr>
<tr>
<td>John Le</td>
<td>JAI</td>
</tr>
<tr>
<td>Karsten Ingeman Christensen</td>
<td>JAI</td>
</tr>
<tr>
<td>Mark Delaney</td>
<td>Micro Encoder</td>
</tr>
<tr>
<td>Malcom Steenburgh</td>
<td>Point Grey Research</td>
</tr>
<tr>
<td>Manny Romero</td>
<td>DALSA Corp.</td>
</tr>
<tr>
<td>Michel Doyon</td>
<td>Matrox</td>
</tr>
<tr>
<td>Peifang Zhou</td>
<td>DALSA Corp.</td>
</tr>
<tr>
<td>Pierre Yapety</td>
<td>DALSA Corp.</td>
</tr>
<tr>
<td>Rupert Stelz</td>
<td>Stemmer Imaging</td>
</tr>
<tr>
<td>Simon Jubinville</td>
<td>DALSA Corp.</td>
</tr>
<tr>
<td>Stéphane Laplante</td>
<td>Matrox</td>
</tr>
<tr>
<td>Stéphane Maurice</td>
<td>Matrox</td>
</tr>
<tr>
<td>Thies Moller</td>
<td>Basler</td>
</tr>
<tr>
<td>Vincent Rowley</td>
<td>Pleora Technologies</td>
</tr>
</tbody>
</table>
Welcome (Eric Carey, DALSA)
ACTION: Close all completed tickets

COMPLETED:
  - Homework Review
  - Established a list of voting members in effect until the next meeting:
    o Basler
    o DALSA
    o Leutron
    o Matrox
    o MVTec
    o National Instrument
    o Pleora
    o Stemmer

GenAPI 1.2 Status (Fritz Dierks)
ACTION: Have SFNC automatically generate the enumeration entry documentation

Code Changes between 1.2.1 and 1.2

New Features:
#382: GenICam callbacks outside lock are
#383: Self Clearing Enums
#384: pIsNotCached Not Implemental
  pBlockPolling Instead
#423, #435: Node injection / merge
#380: ExposeStatic
#380: pCastAlias
#389: ValidValueSet
  ACTION: Implement the functionality to SFNC
#387: IPV4Address
#428: Add version to GenICam_LOG_CONFIG & GENICAM_CACHE
#387: GenApiTerminate function for MFC
#480: GetEntryByName
  Add GetEntry
  Add GetEntry
  ACTION: Fix the parameter name
#396: Maintain setup project
ACTION: Linux setup files
ACTION: Test the installation dialog language detection
#396: Add Comment to function in static use case
#385: XML loading time
    ACTION: Investigate the lengthy Pleora XML loading time

#482: CNodeCallback is missing GetNode()
#475: GetSelectedFeatures NO FIX
    ACTION: Create a Do&Don't for GetSelectedFeature
#397: Maintain GenApi to CI
    ACTION: Implement a continuous integration for GenApi

**Bugs Fixed**
#427 Different Cacheability for the AccessMode and Value

**GenApi 1.2 Roadmap**
The next release candidate (RC2) is planned for the week of October 9th, 2009

**Reminding tasks**

Fix GenICam Version
    GenApi do not follow the GenICam versioning
    GenICam 2.0, GenApi 1.2, Schema 1.1
    ACTION: Split the version definition in multiple defines

Bypassing XML validation
    ACTION: Add recommendations to the ‘Do & Don’t’ document and to the function headers

**Beyond 1.2**

Due to the current repository structure, module maintenance is very difficult. We need to use the Subversion capability to manage the modules as externals.
    ACTION: Rework the Subversion folders

GenApi allows users to write to the device without performing the XML defined validations. This can cause various types of errors. The committee agrees that this is a problem and that the validation bypass should be avoided. However, since existing devices rely on this validation bypass to persist their configurations, the feature must be kept.
    ACTION: Add the recommendation not to use validate=false on the write node access to functions in the comments and the Do&Don't document.

Eric Bourbonnais
DALSA Corp.
Multiple XML / Multiple ROOT

**ACTION:** Create an XML nodes extractor.
**ACTION:** Extend the validation suite to include an extractability certification.

## GenICam Documentation (Fritz Dierks)

GenApi is seen as a very complex technology. The main reason behind this complexity is the limited documentation on the technology and its availability. The committee should make sure that the standard is well Googled and that we have good tutorials, manuals, FAQs, WebCasts, etc. to support new users.

**ACTION:** Prepare a GenApi tutorial
**ACTION:** Prepare an XML tutorial
**ACTION:** Improve the documentation of the public interface
**ACTION:** Prepare a GenICam overview
**ACTION:** Create a FAQ from the mailing list archive
**ACTION:** Collect existing presentations and make them available from a Wiki page.
**ACTION:** Improve the Wikipedia GenICam profile

The GenApi and GenICam standard texts are in the same document for historic reason. This is creating some confusion since we have multiple modules that are not part of the GenICam standard text.

**ACTION:** Rework the GenICam standard text and create a separate GenApi standard text.

## CLProtocol for Camera Link (Fritz Dierks)

To avoid a conflict with the GenApi release, the development of the CLProtocol is being done in a branch “Branch_v1_2_CLProtocol_development”.

### Changes since version 0.0

#### #477: State
- Added clpDisconnect

#### #479: Error message without error number
- GetLastErr
- GetErrorText gets a cookie parameter

#### #478: Long Timeout
- CL_ERR_PENDING_WRITE & clpContinueWriteRegister

#### #481: Installation path in registry key
- Do not use the CL registry key
- Do not use a Windows registry

---

Eric Bourbonnais
DALSA Corp.
Missing a Linux / Win64 
Retrieving XML file
Problems: No schema version, missing version, missing overwrite
ACTION: Prepare a proposal for retrieving the XML that includes the multiple schemas and the multiple device version support.

Comments
IScalar is C++ but the API is C!
ACTION: Change IScalar to a C structure

CLProtocol is not validated on Linux or Win64
Delay to the next version
ACTION: Create a Linux release
ACTION: Create a Win64 release

In order to build upon the CLProtocol in the future, we need a protocol version function in the API.
ACTION: Create a function that returns the standard version

The current test suite does not accomplish 100% of the test coverage.
ACTION: Increase the test coverage to an acceptable level

CLProtocol roadmap
ACTION: Create a CLProtocol RC1 for week 41.

GenICam for new Transport Layer (Fritz Dierks)
GiGEVision
GenICam is well supported by GigEVision devices.

Camera Link
CLProtocol will allow GenICam over Camera Link.
The committee hopes that the CL community will adopt this standard.

IIDC 1.3
Fix the register set, but not the common XML
Since the GenICam standard was created after IIDC, camera vendors do not see the benefit.
The IIDC register map is hard to map in SFNC using the GenICam schema 1.0

IIDC 2.0
Same problems as 1.3 with SFNC
GenICam should promote its standards at this committee
ACTION: Elect a GenICam champion for IIDC 2.0 standard

USB 2.0
There is no machine vision standard to promote GenICam

USB 3.0

Eric Bourbonnais
DALSA Corp.
There is no machine vision standard to promote GenICam. However, since this is a new technology, it is possible for the machine vision industry to create a standard.

**ACTION:** Investigate the creation of a committee for Vision on USB3.0 that promotes one GenICam compatibility layer (API, protocol).

CameraLink 2.0

The GenICam should promote its standard to the committee

**ACTION:** Elect GenICam champion for the CameraLink 2.0 standard.

---

**GenICam Meeting – Day 2**

Montréal, September 25th, 2009
Hotel Marriott Courtyard Montréal Airport
Montréal, Québec, Canada

**GenTL (Rupert Stelz)**

**Wiki**

The GenTL standard porting to Wiki is on its way. The committee feels that the overhead for maintaining this Wiki entry might not be worthwhile. No solution was found on how to collaborate on the revision of the official documents.

**Release 1.1:**

**New features**

- Improved gcc compatibility
- Standard text was reworked to accommodate the new features
- Header files were updated

**Changes**

- Multiple interfaces
- Support for streaming mode
- Distributed installation

**ACTION:** Release standard text 1.1

**Roadmap**

- Update Wiki to 1.1
- Update reference implementation (GcBase)
- Remove GenApi dependency

**GenTL 1.2**

- High frame rate
- Pre-processing
- Streaming output
- Non frame base streaming

---

Eric Bourbonnais
DALSA Corp.
ACTION: Rename Stemmer implementation to identify it as an example.
ACTION: Create a SFNC feature for standard transport layer functionality (#322)

SFNC 1.3 Release Status (Stéphane Maurice)

Changes form 1.2 and 1.3
- Added SFNC category
- Deprecated raw/abs
- Color transformation
- Action features
- Event callback naming convention
- GEV 1.1 features

Text reformatting to be scriptable
Exporting script for SFNC validation
Remove some feature units Bytes, Pixels, bitfield and ticks

Some of the removed units might still be needed for interoperability. We need to review the pertinence of the non SI units.
ACTION: Propose the creation of SFNC standard units.

Next version
We should reintroduce the GenICam section to SFNC
VOTE: 6 in favour; 1 opposed; 1 uncast vote (absent)
ACTION: Added Root, Device and TIParamsLocked
ACTION: Add a note to SFNC specifying that ICategory and IPort are not feature names, but Node name.
ACTION: Change GenICam standard text so that it refers to SFNC for the naming of features.

To be able to extract the Chunk portion of the XML, we need to define a point of origin of the chunk tree.
ACTION: Create a ChunkROOT proposal.

SFNC currently defines the category as a feature, but GenApi do not consider categories to be features. Since the standard text suggests that categories are features, GenApi 1.2 will be changed.
ACTION: All category nods should be marked as features by GenApi

We still need to define the CL Features. Some minor changes are needed in the TAP configuration section.
ACTION: #418 (Provide SFNC for CL)

With the introduction of the validation suite and the SFNC help file, releasing this module involves multiple tasks from multiple members. We need to define a procedure in order to avoid mistakes.
ACTION: Create a SFNC check list

Eric Bourbonnais
DALSA Corp.
SFNC Review New Proposals (Stéphane Maurice)

IO Proposal
Some changes are needed to accommodate some use cases. Those changes are needed everywhere in SFNC. Source features should allow the selection of functional blocks. Activation features should specify the use of the signals exported by a functional block.

ACTION: Prepare a proposal to create design pattern Source and Activation features.

To simplify some use cases, it will be interesting to have a delay module or to add a delay in the line module.

ACTION: Create a delay module

SFNC Version
To avoid forward compatibility issues in SFNC, we need to define a version.

ACTION: Integrate SNFC version feature to SFNC

Trigger Frame Count
The current SFNC do not allow for a continuous acquisition of a sequence of frame. The committee agrees that we need to add this functionality, though different options must be evaluated. This will be accomplished by a sub-committee.

ACTION: Create a Multiple-Frame pre-trigger sub-committee

Transfer Module
There is a need to define the transfer in SFNC. This is a major task that needs to be done by a sub-committee.

ACTION: Create a transfer module sub-committee

SFNC Next Release (Stéphane Maurice)
The next release should include CL SFNC and GEV 1.2 features.

ACTION: Add GEV 1.2 feature to SFNC
ACTION: Complete #418 (CL Features)

Marketing (Fritz Dierks)

Message to the market
EMVA Boot at the Stuttgart Vision Show
We need some volunteers to answer questions on GeniCam standards at the vision show. A Doodle pool has been created to coordinate the effort.
http://www.doodle.com/giu3mutbhxtygarc

Eric Bourbonnais
DALSA Corp.
Camera Link
ACTION: Create a CLProtocol marketing slide.

The committee should try to create a permanent exhibit in the EMVA boot at the Stuttgart vision fair.
ACTION: Designate a Stuttgart demo champion

Miscellaneous Topics (Christoph Ziel)
We need to make the subversion instruction easier to find.
ACTION: Create a Subversion Wiki page and add a pointer to the build document.

Some ticket entries are used in a custom way to track homework, but this is not mentioned in any document.
ACTION: Document the use of the milestone in tickets

Some committee efforts have been temporary stopped due to the lack of resources. Those tasks are indicated in tickets. These tickets complicate homework management and can result in important tasks being forgotten.
ACTION: Create a stalled state for tickets

Track and CVS accounts are only available to EMVA-registered individuals. This is not practical if multiple individuals of a company are working on a GenICam product. We should review the account management policy. One of the proposed solutions is to have a read-only account that can be requested by an EMVA-registered individual for company members.
ACTION: Develop new account creation rules with the EMVA
ACTION: Try to get rid of the dead account

The committee is afraid that some non-EMVA members can receive the posted mail from the mailing list. After clarification on the mailing list registration process, the committee thinks the current security is enough, though the mailing list members should be verified from time to time to prevent leaks.
ACTION: Review the mailing list to ensure that all recipients belong to an EMVA-member organisation.

The committee studied the possibility of creating multiple mailing lists for different subcommittees and concluded that there was not a need for it at this time.

In addition to the EMVA registered individuals, posted mail is sent to a company generic address (Genicam-contact@<company-name>.com). Note that committee members were not aware of this practice.
ACTION: Review the pertinence of this practice.

New License Text (Fritz Dierks)
The new license is not ready
Changes that will be made
The licence will be split into three documents:

Eric Bourbonnais
DALSA Corp.
- General Guidelines for EMVA standard
- Voting rules for the GenICam standard
- Use of the logo and the reference implementation

The following clarifications will be made:

- A 30-day balloting rule will be instituted
- Establish rules for new members that have IP rights that may be in conflict with committee technologies
- Clarify that contributing members are not giving away rights to their contributions, but are giving access to them.

**GenICam Roadmap and Homework (Fritz Dierks)**

We would like to release GenICam 2.0 before the Stuttgart show.