

GenICam Seoul Meeting Minutes – 2013-04-15/16

1. Opening (Hooshik Kim, Vieworks)

2. Homework Status/Voting Members (Fritz Dierks, Basler)

- Active Silicon – GenTL SFNC
- AVT – GenTL Validation Framework
- Basler – GenICam 3.0 proposal
- Baumer – Proposals for SFNC
- Matrix Vision – GenTL, GenTL SFNC
- Matrox – SFNC 2.0
- MathWorks – GenCP, GenTL
- MVTec – Administration, GenTL SFNC, Demos
- National Instruments – Integrate ZIP library
- STEMMER IMAGING – GenCP, GenTL, GenTL SFNC
- Teledyne DALSA – Zipped XML files
- Vieworks – Meeting

2. GenAPI/CLProtocol – Status & Roadmap (Fritz Dierks, Basler)

- Old tickets
 - 177 old active tickets
 - Accepted procedure:
 - Module maintainers propose what to do
 - Review by mailing list
 - Either somebody volunteers to implement, otherwise close ticket
- New tickets
 - CConverterImpl::InternalGetMin() incorrect for varying slope
 - ExtractTree_1_v1.1.xsl is missing from the Runtime installation
 - LoadFromBag throw exception where it should log error
 - CCLPort::MakeURLfromXMLID creates invalid file-URL
 - Specific Mac OS X and Linux issues
 - Create Python Bindings USB3Vision test code
 - Add U3V chunk and event adapters
 - U3V chunks will use the same data layout as GEV
 - Update the list of standard namespaces
 - Manage zipped XML file
 - Ask on the mailing list if that would break somebody's compatibility
- GenICam v2.3.2 or v2.4 Release?
 - We will release a v2.4 including various bug fixes and some new features (Python bindings, U3V chunk and event adapters, IntegerSet, GenCP)
 - Roadmap
 - Goal is to have the v2.4 release before next meeting in October 2013
- GenICam 3.0

- Key idea: Re-factor GenApi reference implementation
 - Small footprint, load extremely fast
 - Keep full interface compatibility to v2.3
 - Get rid of Xerces and Xalan
- Use XSD/e code generator from CodeSynthesis
 - Compact code as binary equivalent of the DOM
- First results from prototype implementation
 - x 7 / x 50 speed-up as compared to GenICam v2.3.1 / v2.3 (first time)
 - x 5 / x 5 speed-up as compared to GenICam v2.3.1 / v2.3 (cached)
 - x 2 decrease of DLL size
 - x 6 decrease of memory foot print
- Extending the Loader Interface
- The XSD/e license
 - Use “per product license” = 4.500 EUR
- Discussion
 - We will implement GenApi 3.0 based on proposed XSD/e approach
 - We will not do the re-factoring
 - We’ll get rid of the static use case
 - We will not touch the installer issue
 - We will streamline the build system so that building the Win64 version does not use GenICam built Win32 tools anymore
- Contributors for developing GenApi3
 - Basler, Teledyne DALSA, Pleora, Sensor2Image, STEMMER IMAGING, Baumer, NI, MATRIX VISION

3. *GenCP (Rupert Stelz, STEMMER IMAGING)*

- GenCP 1.0 released in December 2012
- No feature requests for future release received so far

4. *Election of chair and sub-chairs (Eric Carey, Teledyne DALSA)*

- Chair and 3 vice-chairs have been re-elected for next 3 years:
 - *Chair* : Fritz Dierks, Basler
 - *Vice-chair (SFNC)* : Stephane Maurice, Matrox Imaging
 - *Vice-chair (GenTL)* : Rupert Stelz, STEMMER IMAGING
 - *Vice-chair (GenTL SFNC, marketing & operations)* : Christoph Zierl, MVTec

5. *Organizing Future Standards Meetings (Jochem Herrmann, EMVA)*

- *Introduction of G3 Future Standards Forum (FSF)*
 - *Interface Standards Working Group*
 - *Current status of developing MV standards overview brochure*
 - *Common introduction text*
 - *Comparison of six transport layer protocol standards*
 - *Comparison of two software standards*
- Local machine vision organization to assist the host company (EMVA, AIA, JIIA)
- Meetings should further alternate between North America, Europe and Asia

6. *Marketing & Administrative Issues (Christoph Zierl, MVTEC)*

- Daily work: Membership and Trac administration
- Trac:
 - Now Trac systems in parallel for GenICam, GEV, U3V, CXP
 - Probably, the existing Trac system for CL(HS) will be migrated there, too
 - Idea: Sync passwords across various Trac systems? Yes, to be evaluated
- Marketing
 - Subcommittee will be closed
 - Marketing issues to be handled via mailing list and tickets as usual
 - Open issues:
 - Extend info at www.genicam.org
 - Prepare EMVA press release about re-elected GenICam (vice-)chairs
 - Contribute to new FSF brochure
 - Prepare new GenICam flyer
 - Review GenICam compliancy / certification
 - Christoph assigned to liaise with EMVA

7. *SFNC (Stephane Maurice, Matrox Imaging)*

- SFNC 2.0 released in October 2012
- Updated info at <https://genicam.mvtec.com/trac/genicam/wiki/SFNC>
- Current draft SFNC 2.0.1
- Sequencer proposal (Marcel Naggatz, Baumer)
 - Added configuration mode
 - ChunkFeatureSetActive
 - New FeatureSetChanged event
 - Adjust payload size if necessary
 - Introduce TriggerSoftwareSelector?
 - Integrate 2 I/O lines proposal by Basler
 - Final proposal by Baumer, reviewed by Teledyne DALSA, Matrox, Basler, ...
- UserSet proposal (Marcel Naggatz, Baumer)
- Firmware Update proposal (Basler)
- Scope of GenTL
 - SFNC should be indeed the home of all device features in general, in particular to avoid double definitions (however, mismatches are expected in particular for features used for device discovery)
 - SFNC should better clarify its scope and maybe the feature definitions should be extended somehow to define the "scope" of each feature (category)
 - To avoid double definitions, GenTL SFNC then needs a mechanism to refer to certain features in SFNC, including the possibility to add the missing info about for which GenTL module and category the feature is valid, and presumably also the possibility to extend/limit some feature definitions
 - Vote: 6:0 for this scenario
- Additional tap mode 4X2E (Stefan Battmer, MATRIX VISION)
- Review and extend CXP features released in SFNC 2.0

- Deprecate old-style GEV features, e.g. `GevDeviceClass`
- Roadmap
 - Next release will be SFNC 2.1
 - Including Sequencer, UserSet, Firmware Update and revised CXP features

8. *GenTL (Rupert Stelz, STEMMER IMAGING)*

- Work on v1.4 (already 2 conf calls, 29 completed changes, more to come)
 - New `PAYLOADTYPE_IDs` according to GEV2.0
 - Removed technology specific names from chapter 7 and refer to GenTL SFNC
 - Renamed of `TLTYPE USB3` to `U3V`
 - Added functions to retrieve the parent modules
 - Added Device and Port info commands
 - Added Pixel Endianness
 - Added numeric constants for infinite timeouts and invalid handles
 - Added reference to SFNC Transfer Control features.
 - Clarification on Module enumeration issues
 - Added PFNC to `PixelFormatNamespaces`
 - Extended return code information for GenTL functions
 - Added UTF8 encoding
 - ...
- Open issues
 - New payload type for chunk data
 - `PixelFormat`: Number vs. name
 - GenTL references numbers only
 - Using namespace to refer to technology specific names
 - Separate namespace for `U3V`
 - Clarification of `PORT_INFO_ID` and `EVENTSRC_HANDLE`
 - Clarification of `EventKill` function behavior
 - ...
- Roadmap
 - Release v1.4 in July, maybe in sync with GenICam 2.4
- Validation
 - Use and test the validation framework and please give feedback
 - Still open issue: Maintain/update `TLSimu` and other examples
 - Develop official certification procedures (Christoph & Chris Beynon & EMVA)

9. *GenTL SFNC (Christoph Zierl, MVTec)*

- Short overview about background
 - First ticket in 2008, first work on draft started in 2010
 - Standard texts (`GEV`, `U3V`, ...) should only include a small set of features
 - First release should comply with feature definitions in GenTL 1.3 spec
 - Home for all TL-specific GenTL features
- General agreement about the scope of GenTL SFNC (see vote in SFNC session)? Yes
- Current release candidate v1.0 RC4:
 - `TLType` enumeration from SFNC 2.0
 - Diagrams to explain buffer handling modes

- Categories for each GenTL layer
- No more duplicates of CXP host features (since already defined in SFNC)
- General review
- No more known showstoppers for first official release
- Roadmap
 - Immediately start ballot process for GenTL SFNC 1.0
 - After releasing v1.0, start work on v1.1 (aligned to GenTL v1.4)

10. Homework session

- Homework list/items
- Next meeting: ~2nd half of October 2013, hosted by Sensor2Image in Germany

11. Participants

Bob McCurrach	AIA
Geoff Roddick	Pleora
Marcel Naggatz	Baumer
Fritz Dierks	Basler
Stephane Maurice	Matrox
Seunghyun Kim	Vieworks
Eric Bourbonnais	Teledyne DALSA
Uwe Hagmaier	Matrix Vision
Eric Carey	Teledyne DALSA
Christoph Zierl	MVTec
Eric Gross	NI
Werner Feith	Sensor2Image
Kazunari Kudo	Toshiba Teli
Thomas Hopfner	MVTec
Jochem Herrmann	Adimec / EMVA
Stefan Battmer	MATRIX VISION
Jaeseong Eom	Vieworks
Jean-Philippe Arnaud	Active Silicon
Sadafumi Torii	Hamamatsu
Silvio Voitzsch	Baumer
Damian Nesbitt	Point Grey
Tim Vlaar	Point Grey
Rupert Stelz	STEMMER IMAGING
Masahito Watanabe	Adimec
Chris Beynon	Active Silicon
Andreas Ertl	Mikrotron
Sachio Kiura	Symco / JIA
David Lee	AVT
Dan Frisch	BitFlow
Hiroyuki Takano	Hamamatsu
June Hwang	Crevis
Masahide Matsubara	AVAL Data
Dave Park	Vieworks
Jinho Jung	Vieworks