GenICam Schongau Meeting Minutes – 2013-10-21/22

1. *Homework Status/Voting Members*
    - Active Silicon – CXP SFNC proposal
    - AVAL DATA – CXP SFNC proposal
    - Allied Vision – GenTL Validation Framework
    - Basler – GenICam 3.0 proposal
    - Baumer – Proposals for SFNC
    - BitFlow - CXP SFNC proposal
    - JAI – C-structs for GenCP
    - MathWorks – GenApi 2.4
    - Matrix Vision – GenApi 2.4, GenTL
    - Matrox Imaging – SFNC
    - Mikrotron – CXP SFNC proposal
    - MVTec – Administration, GenApi 2.4, GenTL, GenTL SFNC
    - National Instruments – GenApi extensions
    - Pleora – SFNC proposals
    - Sensor2Image - Meeting
    - STEMMER IMAGING – GenCP, GenTL
    - Teledyne DALSA – SFNC proposals

2. *GenAPI/CLProtocol – Status & Roadmap (Fritz Dierks, Basler)*
    - Release v2.4
        - Work in progress, first RC already built by Hartmut, Shankar, Stefan, and Tom
            - approx. 40 tickets closed
            - Updated log4cpp
            - Multiple fixes for Linux and BigEndian systems *(Eric Gross, NI)*
            - Added Python bindings via SWIG
            - ToDo: Get rid of named semaphores
            - ToDo: Small documentation and cosmetics issues
            - ToDo: Include patch for IntegerSet
        - Roadmap: Close tickets and go for release in Dec 2013
        - Further new and still open tickets for v2.4 are postponed to v3.0 release
    - GenApi v3.0
        - Key objectives: Make it smaller, faster, and ready for deep embedded use!
        - Re-factor GenICam
            - No DOM any more
            - Small footprint
            - Load extremely fast
            - Fix some annoying problems
            - Keep full interface compatibility to v2.3
        - No more static use case
        - New module structure within GenApi v3.0

        - XSD/e license should be based on per generated code option
            - How to raise the money? Can EMVA help?
    - Distribute workload in homework packages:
        - XMLLoader
        - CNodeMapXxx
        - Build System
        - Deep Embedded
        - GenApiTests
        - Performance
        - Maintaining
    - Roadmap
        - Release v3.0 in Q3/2014

3. *GenCP (Rupert Stelz, STEMMER IMAGING)*
    - Open comments to v1.0
        - Clarify timeout handling for PendingAck
        - Clarify how to handle commands with same request id
        - Clarify chapter 3.1.4.1 about corrupt packets
        - Increase max size for command packets to more than 16bit? No.
        - Deprecate Endianness registers
        - No names in manifest table
        - Clarify access options in chapter 5.4.19
        - Clarify that custom warning status codes do not indicate errors
        - Clarify use of channel ids for different TL technologies
    - Further extensions for v1.1
        - New commands to enable stacked read and write commands
        - Parallel/queued requests? Or simply use multiple communication channels
        - Multiple events per packet (via reserved field in event command)
    - Roadmap
        - Prepare RC for next meeting

4. *GenTL (Rupert Stelz, STEMMER IMAGING)*
    - GenTL v1.4 release candidate is already available
        - Removed technology specific names from chapter 7 and refer to GenTL SFNC
        - Hyperlinked function names
        - Added chapter 3.7 to clarify module enumeration issues
        - Extended return code information for GenTL functions
        - Added Module Event to allow GenApi aware events
        - Renamed Feature Device Event to Remote Device Event
        - Renamed of TLTYPE USB3 to U3V
        - Port names in module XMLs are no more mandadory
        - New error codes
            - GC_ERR_BUFFER_TOO_SMALL
            - GC_ERR_INVALID_INDEX
            - GC_ERR_PARSING_CHUNK_DATA
            - GC_ERR_INVALID_VALUE

        - GC_ERR_RESOURCE_EXHAUSTED
        - GC_ERR_OUT_OF_MEMORY
    - Added reference to SFNC Transfer Control features.
    - Added numeric constants for infinite timeouts and invalid handles
    - Added PFNC to PixelFormatNamespaces
    - Added UTF8 encoding
    - Added Device and Buffer info commands
    - Added Pixel Endianness
    - New PAYLOADTYPE_IDs according to GEV2.0
    - Added functions to retrieve the parent modules
    - New URL_INFO_command
    - Many clarifications
- Roadmap
    - Start voting on v1.4 in mid November
- GenTL v1.5 / v2.0
    - 3D buffer proposal
    - Static/dynamic number of streams
    - Collect more ideas in Trac discussion forum
- GenTL Validation Suite *(Holger Edelbüttel, Allied Vision)*
    - Multiple solved issues: #1180, #1187, #1194, #1195, #1197, #1118
    - Open issues
        - Remove boost-based code
        - Remove zlib
        - Add more logging levels
        - Improve messages
        - Port to Linux
        - Tests for GenTL 1.4
    - ToDo: open Trac discussion topic to collect feedback
- TLSimu
    - Updated to support Win64
    - New information in Wiki about how to build TLSimu

5. *GenTL SFNC (Christoph Zierl, MVTec)*
    - GenTL SFNC 1.0 released in May 2013
    - Collect ideas for v1.1 in Trac discussion forum
        - Adaption to changes in GenTL v1.4
        - Timeouts for Interface-/DeviceUpdateList
        - New features for better GEV IP-Assignment
        - Version info of implemented TL standards
        - Additional buffer handling mode “NewestOnly”
    - Roadmap
        - Collect ideas for v1.1 via Trac tickets and discussion forum
        - Prepare v1.1 RC before next meeting

6. *Marketing & Operations (Christoph Zierl, MVTec)*
    - General

        - Currently approx. 130 member companies and 380 individual members
        - New members more often refer to GenTL
        - Establish operations with new EMVA
            - Official member list (with member companies) maintained by EMVA
            - Trac accounts maintained by MVTec
            - Mailing list maintained by STEMMER IMAGING
            - Public member list at www.genicam.org to be maintained by EMVA
    - Trac
        - Now Trac systems in parallel for GenICam, GEV, U3V, CXP, and CLHS
        - ToDo:
            - Common entry web page
            - Overview about who is in charge for each Trac project
    - Marketing
        - Fritz and Christoph contributed to upcoming FSF brochure on MV standards
        - Open issues:
            - Extend info at www.genicam.org
            - Update content of existing GenICam flyer
            - Combined GEV/GenICam demo for MV standards booth at SPS/ipc/drives in Nürnberg and ITE in Yokohama
            - Review GenICam license text
    - Review procedures to ensure GenICam compliancy / certification
        - No plans to initiate compliancy procedures for "standard" GenICam
        - Initiate procedures for GenICam GenTL certification
            - Based on old proposal from Rupert
            - Similar to procedures of GEV/U3V/CXP compliancy
            - Re-define right to use the (redesigned?) GenICam GenTL logo

7. *3D Proposal (Jan Becvar, Groget & Mattias Johannesson, SICK)*
    - Adding 3D specific formats to PFNC
    - Transferring additional data, e.g., pixel validity/confidence
    - Allow the GenTL buffer to have multiple parts
    - Add new GEV payload type to transfer multiple parts
    - First round of 3D SFNC feature proposals *(Mattias Johannesson, SICK)*

8. *SFNC (Stephane Maurice, Matrox Imaging)*
    - PFNC *(Eric Carey, Teledyne DALSA)*
        - Make PFNC official part of GenICam SFNC, i.e., transfer it from GigE Vision technical committee to GenICam standard working group
        - New appendix C "Pixel Format Value Reference", inspired by U3V and CXP
        - Procedure to enable an easy way to request a new pixel format name and id
    - UserSet feature proposal (UserSetFeatureSelector, UserSetFeatureEnable)
        - Accepted for SFNC v2.1
    - Sequencer proposal
        - Accepted for SFNC v2.1
        - Software trigger proposal to be reviewed separately

- Deprecate list of GEV-specific features, e.g. GevDeviceClass
- Allow PayloadSize of 0 in SFNC
- Add PixelFormatInfoID[DevicePixelFormatInfoSelector]
- Generic Firmware Update proposal *(Thies Möller, Basler)*
    - Update archive as zip container with .guf binary file and JSON control file
    - Use SHA1 for file validation instead of MD5
    - Need for DeviceFirmwareUpdateEnable feature
    - Further discussion/review needed
- New features for Binning/Decimation/Scaling
    - Further discussion/review needed
- Proposal for Generic Software Trigger
    - SoftwareCommand selector in new category SoftwareCommandControl
    - Further discussion/review needed
- Rotary Decoder proposal *(Mattias Johannesson, SICK)*
    - Further discussion/review needed
- DeviceSupportedOption feature?
    - Currently not needed
- GEVPaddingY feature?
    - Not for now
- Changes to the CXP TL specific features
    - Accepted for SFNC v2.1
- New U3V TL specific features
    - New TestControl category (invisible)
    - New event for test data
- Roadmap
    - Next release will be SFNC 2.1,including Sequencer, UserSet, and revised CXP features
    - Target date before next meeting
    - Firmware Update proposal will be included later

9. Homework session

- Homework list/items
- Next meeting: March/April 2014, hosted by a US/CAN company