Meeting Minutes – GenICam – 2011-10-03/04

1. *Homework Status/Voting Members*
   - Basler
   - Baumer
   - JAI
   - Leutron
   - Matrix Vision
   - Matrox
   - MathWorks
   - MVTec
   - National Instruments
   - Pleora
   - Point Grey
   - STEMMER IMAGING
   - Teledyne DALSA

2. *GenAPI/CLProtocol – Status & Upcoming Features (Fritz Dierks, Basler)*
   - 2.3 RC ready to build
   - Unicode build problems delayed release
   - Open topic: Win64 naming of CLAllSerial.dll
     - Conclusion: Will try to follow Camera Link committee's suggested naming/path conventions for vendor DLLs
   - Bug fixes described (see presentation)
   - Release plan for 2.3
     - RC to be built directly after Austin meeting
     - Release done before Stuttgart
     - GenApi 2.3, SFNC 1.5.1, GenTL 1.3
   - Discussion of new open bugs/feature requests (see presentation)
   - Towards GenICam 3.0
     - Challenges (see presentation)
       - Performance
         - First time loading
         - Cache loading
           - Goals: Create system which always loads in <1s
         - Memory footprint
           - Goals: Create a system with ~2MB footprint
       - Manifest handling
         - Rules for backwards compatibility
         - Common code for manifest
       - List of valid values for integers and floats (Eric B's presentation)
         - New schema needed?

- o Timelines
  - 2.3 RC soon, release for Stuttgart
  - GenApi next version
    - Add compact code – 2.4
    - Store compact code on camera – future version
    - Add manifest handling code – 2.4
    - Add ListOfValidValues – 2.4

3. *Marketing Update (Vincent Rowley, Pleora)*
   - o See presentation
   - o Discussion on whether to produce new flyer for Stuttgart

4. *GenTL (Rupert Stelz, STEMMER IMAGING)*
   - o Changes for 1.3 (see presentation)
     - Clarifications
     - New features/extensions
     - Validation
   - o Steps for 1.4
     - Discussed "Feature change event"
       - Invalidate registers instead of nodes
   - o TL "Glue" (Mark Jones, MathWorks)
     - See presentation
     - Consensus was that we see no way to do this automatically in all situations. The end-user or end software needs to manage the configuration dependencies between camera and framegrabber
   - o Discussion on how to handle chunk data from standards that don't have defined chunk format (e.g. CameraLink)
     - How to have camera self-describe mechanism (buffer layout, invalid timeslots)
     - SFNC feature? TBD
     - CoaxPress does not currently define this – this would be nice to address before their release (ActiveSilicon keeping an eye on this)

5. *Administrative Update (Christoph Zierl, MVTec)*
   - o See presentation

6. *GenTL SFNC (Christoph Zierl, MVTec)*
   - o See presentation
   - o Rupert Stelz described responsibilities of each of the various XML files provided by different parts of a GenTL system
     - Clarification/drawings to be updated to make some of this more clear
   - o Open Issues
     - Add buffer handling mode to allow overwriting of undelivered buffers to keep acquisition from stalling
     - How to not copy all of existing SFNC? (e.g. I/O, PixelFormat, …)
     - Generalize some features to be usable on both GEV and CoaxPress
     - GenTL spec should link to GenTL SFNC
   - o Next steps
     - Review CoaXPress feature proposal

- Feedback from GenTL plugfest
- Develop 1.0 RC
- Phone conference to possibly be organized to discuss
- Possible homework items listed in presentation

7. *SFNC (Stephane Maurice, Matrox Imaging)*
   - SFNC Review
     - See discussion document
     - Major changes
       - Made more TL-neutral
       - Added Burst Mode functionality
       - Clarifications on several features added
       - New diagrams added explaining model better
       - AcquisitionMode optionally read-only
       - Added recommended visibility to CL-specific features such as ClConfiguration
     - Formally documented procedure for adding/modifying SFNC features (see Word document)
       - Will be put in wiki
       - Do features need formal review? Conclusion: No?
   - SFNC model documentation (see document from Stephane M)
     - Usage model has been inconsistent between vendors
     - Question on how far to go
       - Do we start out being flexible and then clarify as we get further a long?
       - Eric B suggested that Trigger model (example) is getting more important to be very well modeled as we go towards new framegrabber-based GenICam implementations that need trigger interactions between the two framegrabber and camera
     - Migration path to more model-based approach
     - Two topics decided for improvement
       - Trigger signal exact definition
       - Internal signal definition
       - Dalsa, Matrox, and Pleora volunteered to lead effort
   - Where to list Mandatory features?
     - Some might be mandatory for certain TLs and not for others
     - SFNC should be more neutral and mandatory features should be listed in TL's spec
     - Maybe note or guide to be provided for features generally mandatory for a TL
   - Matching PixelFormats listed in SFNC to Pixel Naming Convention of the AIA
     - Existing formats came from GEV
     - ~20% of GEV ones don't match Pixel Naming Convention
       - These will be explicitly marked as being GEV-specific
     - Reference to PFNC will be added to SFNC and list maintained in SFNC will be reduced
     - Target is next SFNC (Stephane M to complete)

- CoaXPress SFNC
  - See draft 1.0 proposal by Masahide Matsubura
  - Discussion of making some of the proposed features be more generic rather than CXP-specific
  - Discussion about "link reset" and how this would be generic (or not). Conclusion was that is TL-specific. CXP committee will decide for their spec to expose it
  - See modifications/generalizations made to spec document during meeting
  - Will be reviewed by CXP committee + Stephane M. + Christoph Z. Target date: before Stuttgart
- DeviceThroughputLimit feature proposal discussed
  - Adjusted wording on feature (see updated doc)
- Adding "multi-video source" global selector to features in SFNC
  - See presentation and proposal document from Vincent Rowley
  - Discussed high level features that are selected for by this selector and which ones explicitly are not
  - Discussed why events are not selected by source selector
- Multi ROI discussion (Vincent R)
  - See block diagram in Vincent's presentation
  - Either multiple ROIs per stream or one per stream
  - Mapping of ROIs to different streams is possible
- Transfer / acquisition model (Eric B and Vincent R)
  - See block diagram presented showing different configurations of acquisition data paths and their relationships to the video sources
  - Proposing adding "AcquisitionSelector" and maybe other selectors per conceptual block
  - Subcommittee to discuss different approaches as there was no consensus on how to represent the various models and use cases without adding too much complexity
- Sequence Proposal (Thomas O – Baumer)
  - See presentation
  - Decided to form subcommittee with Dalsa, Basler and Baumer
- Transfer Proposal (Eric B – Teledyne Dalsa)
  - See presentation from Eric B
  - Approved to be added; Stephane M will work to help with names
  - Updated proposal to be sent via mailing list
- Next SFNC Release (Stephane M)