



## Video System: Status Report

### What happened in the last months?

- little changes and bug fixes in Universal Slow Control
  - synchronisation mode
  - single unavailable property of camera does not lead to state that all properties of camera are unavailable
- measuring of multicast performance
  - on good 1 GigE end-to-end network w/ 10+ GE backbone
  - raw 1360x1024, 16 bit, 20hz possible = 53 MB/s
  - drops less than 0.1% of video images

Stefan Weiße  
June 2012

1



## Video System: Status Report

### What happened in the last months? (cont'd)

- little changes and bug fixes in ACOP video component
  - normalisation fixed
  - keep aspect ratio fixed
  - dropped frames are not displayed by default from now on
    - can be switched on by a ACOP video property, if wanted
- moving of projects and libraries to Visual Studio 2010
  - Visual Studio 6 (released 1998!) only works with limitations in Windows 7/64
  - on migration, no major issues so far
  - Visual Studio 2010
    - very complex (too complex I think)
    - could need some design improvements

Stefan Weiße  
June 2012

2



## Video System: Status Report

### What happened in the last months? (cont'd)

- Video System shared library (Win32, Win64 (XP, 7), Linux)
  - Beta version finished, development paused currently
- CFEL (Laser) video server installed at Regae
  - integration of laser monitoring into Video System
- Video System name search **completed**
  - voting unsuccessful (each choice got exactly 1 vote)

→ AVIS: Advanced Video and Imaging System  
(name not used yet)

Stefan Weiße  
June 2012

3



## Video System: Status Report

### What happened recently

- 2 new camera types (GigE Vision, GenICam) evaluated
  - SONY XCG-H280E
    - 1920x1440 pixels, 2/3" progressive IT-CCD (Sony ICX674?)
    - 4.54 um square pixels, <= 32 fps, 8, 10, 12 bit readout
    - 0.5 lx at +18 dB w/ shutter off
  - Basler Aviator avA 1600-50gm
    - 1600x1200 pixels, 2/3" progressive IT-CCD (Kodak KAI-02050)
    - 5.5 um square pixels, <= 55 fps, 8, 12 bit readout
- both are fully supported in Video System 3
  - interfaced via JAI SDK
- both get kind of hot
  - contain internal temperature sensor
  - airflow/heatsink/cooling mandatory I think

Stefan Weiße  
June 2012

4

## Video System: Status Report

Current work: Video Client 3 (for PITZ and Regae)

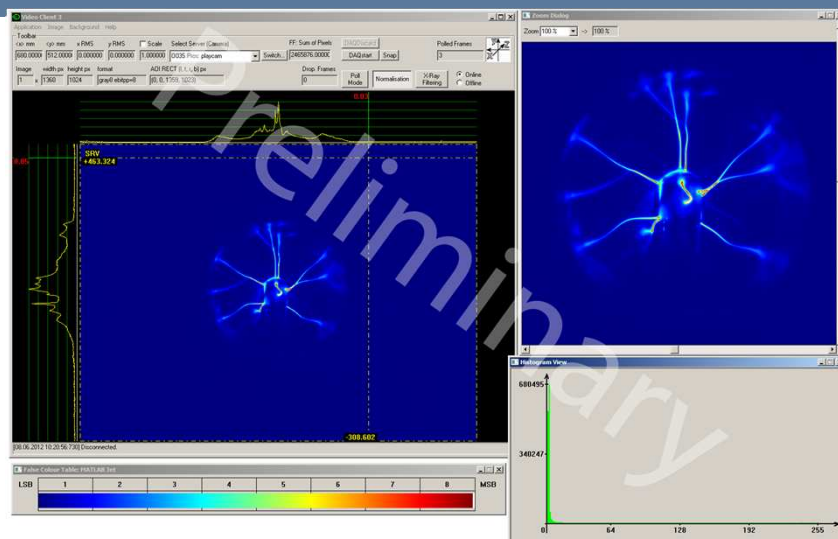
- Video System 3 release of Video Client 2
  - Video System 3 interface
    - TINE CF\_IMAGE
    - JPEG, RGB24
    - scan TINE namespace for available video servers
  - Zoom (includes 1:1 view)
  - enhanced drawing compatibility (vnc, timbuktu)
  - online histogram
  - offline mode
  - color lookup table can be shown
  - adjustment of size and position of AOI by keyboard
  - config files shortened, XML
  - some algorithms can be fine-tuned

Stefan Weiße  
June 2012

5

## Video System: Status Report

Current work: Video Client 3 (for PITZ and Regae)

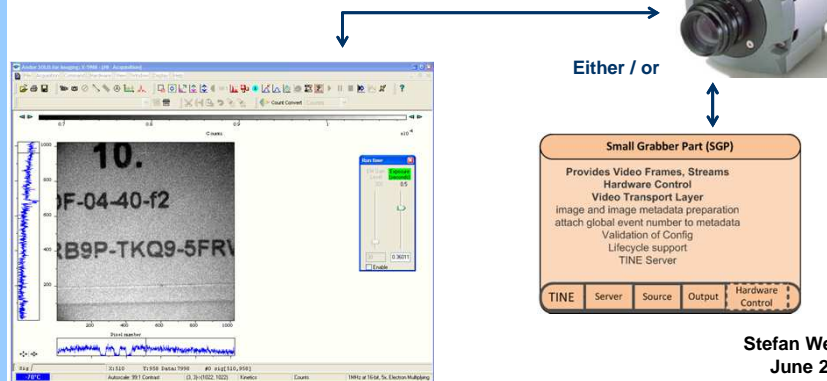


6

## Video System: Status Report

### Current work (cont'd)

- Andor iXon detector-like camera at Regae
  - effort on video system integration is being spent
  - vendor-support: room for improvement



Stefan Weiße  
June 2012

7

## Video System: Status Report

### For the near future

- investigation and tests on native server components for Win7/64 platform
- Tests on Microsoft Visual Studio 2010
  - Intel Compiler
  - Intel Performance Primitives (speedup JPEG encoding option)
- Linux port of some Video System components
  - SGP/Prosilica, RawToJpeg
- get rid of VSv2 legacy at PITZ
- Video System client-side library
  - Matlab, Labview? on top of it

Stefan Weiße  
June 2012

8