

# Video System: Status Report

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- Client library (C++, Linux and Windows)

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# Video System: Status Report

Video @ Regae => **production level**

- three cameras (JAI BM141 type), one server PC installed at site
- Universal slow control, video readout (raw and jpeg) set-up
- dedicated camera network (video data from GigE camera to server PC is not transported via controls network)
  
- good place to study odd behaviours seen sometimes at BM141 cameras / JAI SDK used for readout and control
- progress was made in last days, hopefully the 'odds' are now even (looks good, but only time will tell)
- odds:
  - camera sometimes delivers more frames per second than it is set to
  - Camera frames (when set to evenly deliver a fixed number of frames per second) come at odd intervals (3.8 fps -> 1000 ms/3.8 fps -> ~263 ms, but values from 0 to 500 ms seen)
  - video frames sometimes contain invalid bits (12 vs. 16bpp)

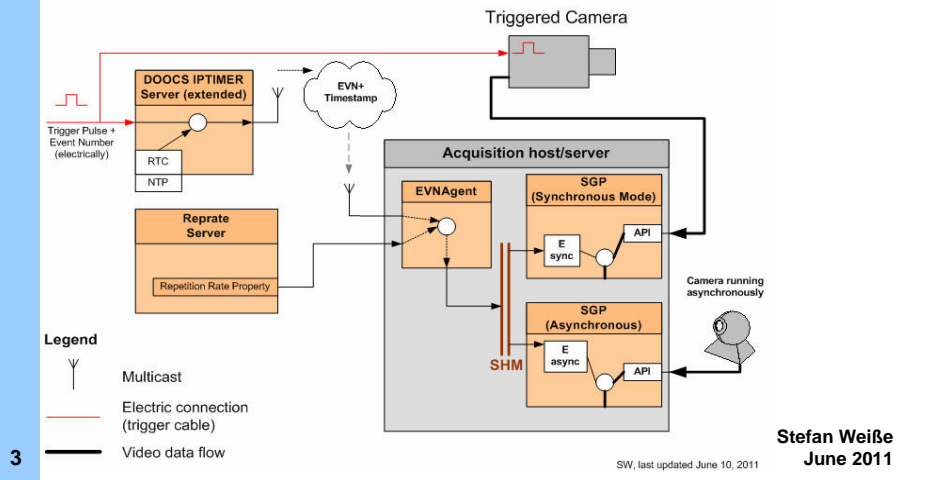
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## Video System: Status Report

Attach Event numbers to each video frame

- now in production at PITZ



## Video System: Status Report

Bug Fixing/Improvements at Software Components

- Problem at Hasylab
  - some model of Prosilica camera was hard to open via API (~1 out of 10 times it succeeded, failed otherwise)
  - workaround implemented + upgraded to newer version of API and DLL of API
  - Issue seems to be fixed now
- TINE fixes (Phil@Zeuthen)
  - Requesting video frames via TCP could lead to TINE server deadlock
  - Odd TCP slowness (when trying to consume full gigabit bandwidth with video data)
  - Tine callback called twice with same payload (for data transfers where such is illegal because it should not happen at all)
- Logging improved
  - In the past: logfiles could grow and grow and grow
  - Now: 10 files backlog, ~ 10 Megabytes per file

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### Short-/Medium Term Topics

- Put effort into some usable event-based video storage/readback (prototype exist, but for users I'd like to make it more sophisticated)
- work on Andor scientific CCD camera going to be used at Regae (may be integrated to Video System, subject of investigation)
- Network upgrade at PITZ/Zeuthen
  - from 2x 1 GB/s to 2x 10 GB/s for PITZ backbone
  - bottleneck was identified transferring many video data, video image size is increasing...
- PITZ framegrabber servers will get dedicated PCIe fibre network cards (PCI bus sometimes is bottleneck which makes infrastructure hard to control)

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## Video System: Status Report

### Topics Waiting Afterwards...

- make setup at PITZ simpler to use, remove VSv2 Legacy support
- document video system components, video webseite at [tine.desy.de](http://tine.desy.de), user documentation
- interfaces, libraries and API for accessing video system and video frames using Video System 3 interfaces according to demands
- continue and finalize release of PNG and PNG sequence 'technology'

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