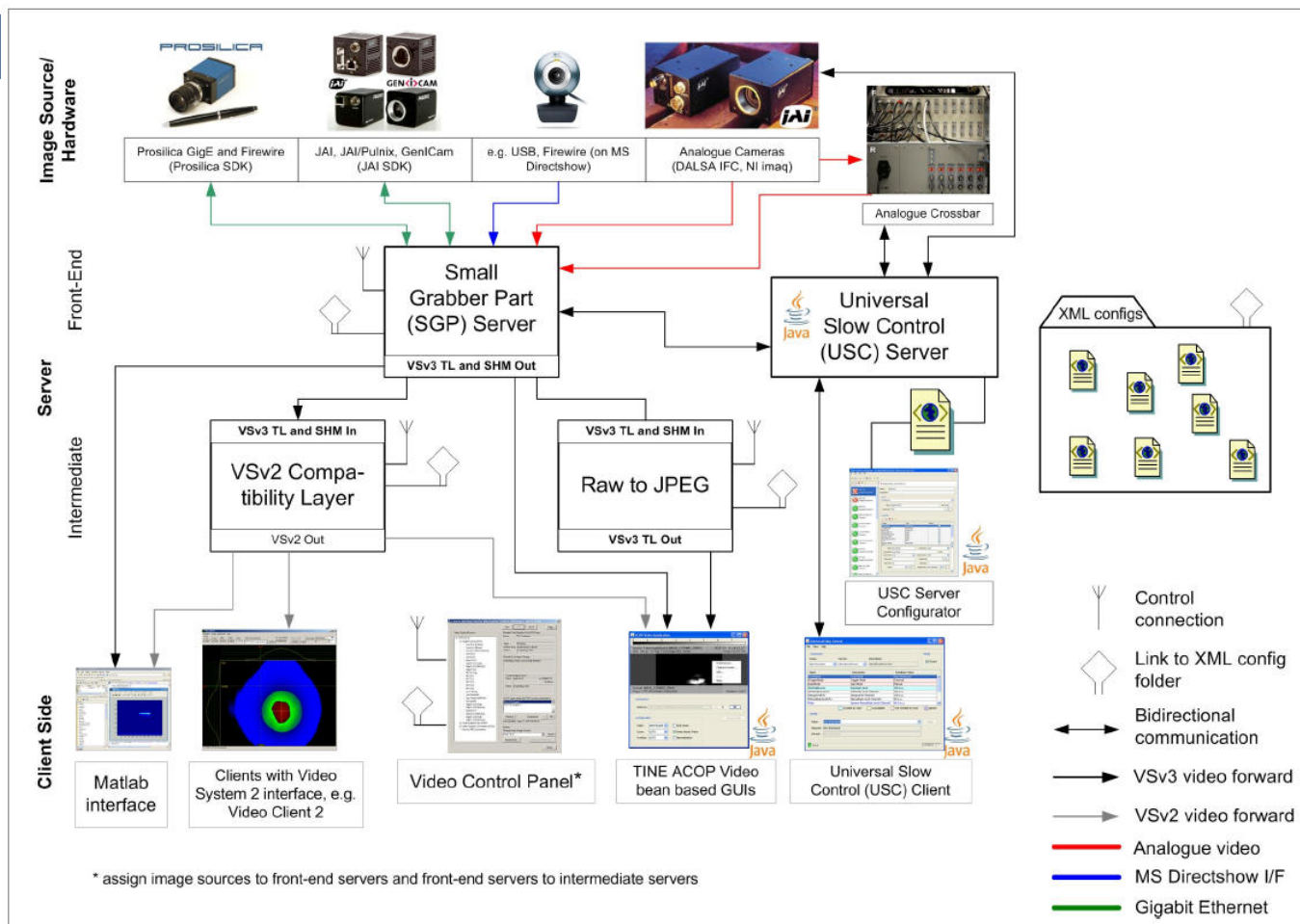


# Video System: Status Report

## Current Collection of Components



More information available on PCaPAC 2010's **WEPL016** poster and paper

### Acronyms:

|             |  |             |   |
|-------------|--|-------------|---|
| <b>VSv3</b> | Video System 3                               | <b>USC</b>  | Universal Slow Control                  |
| <b>VSv2</b> | Video System 2                               | <b>ACOP</b> | Advanced Component Oriented Programming |
| <b>TINE</b> | Three-fold Integrated Networking Environment | <b>I/F</b>  | Interface                               |
| <b>TL</b>   | Transport Layer                              | <b>SHM</b>  | Shared Memory                           |

**Stefan Weiß**  
February 2011

# Video System: Status Report

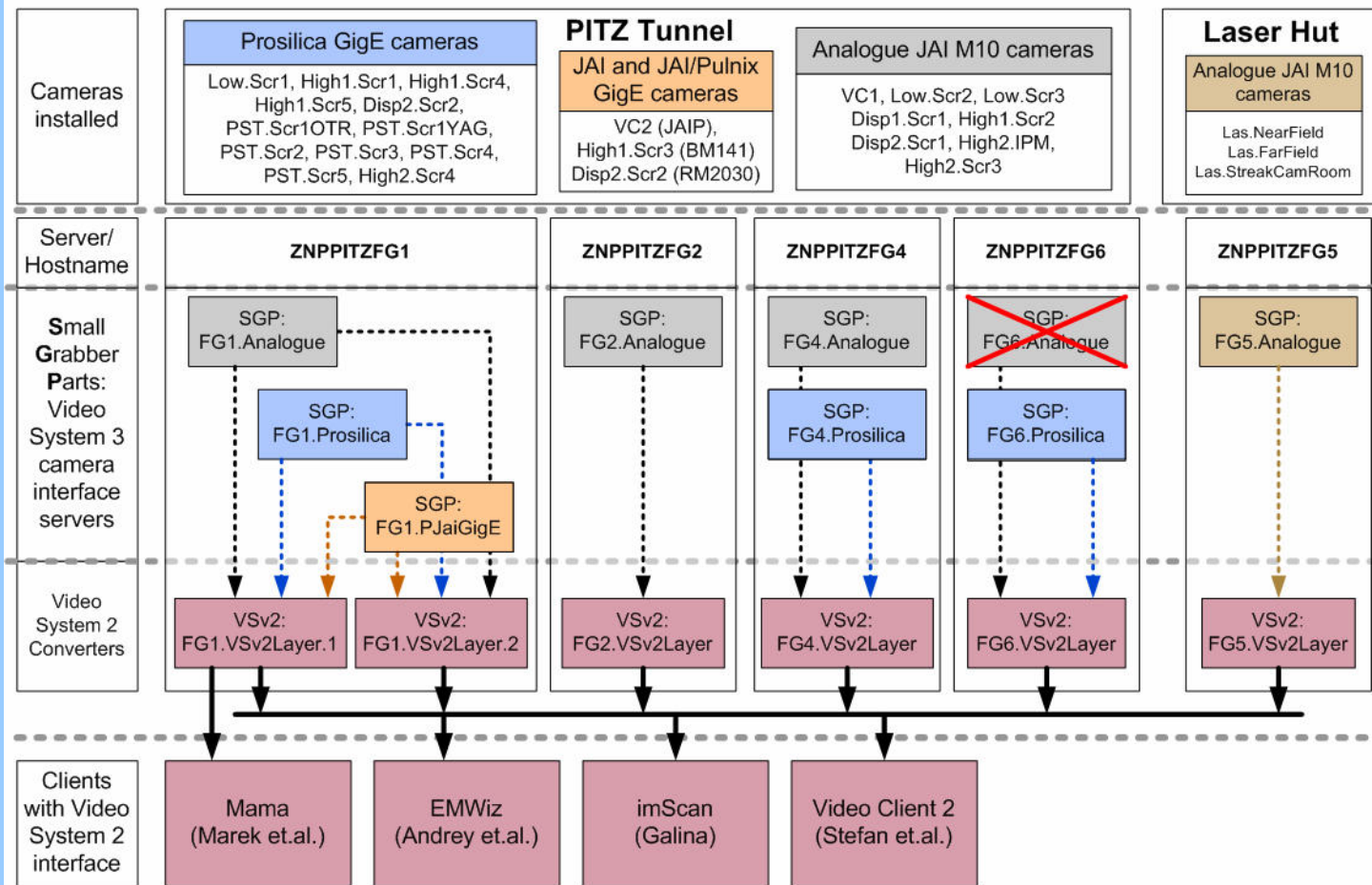
## Upgraded Video Components at Hasylab

- major upgrade last year
  - adds requested functionality like orientation changes
  - contains updated components, bug fixes, improvements...
- last upgrade done recently (Jan 2011)
  - to provide less administrative overhead on Karol's Watchdog <-> TINE Video Servers <-> Cameras going on and offline now and then
  - Universal Slow Control was updated, too

# Video System: Status Report

## Shift PITZ Video Infrastructure from VSv2 to VSv3

**PITZ Camera Assignment Map to Video System 2 (VSv2) clients**



- transition performed September/October last year
- migration ongoing (slowly move away from VSv2 support for/on client side)

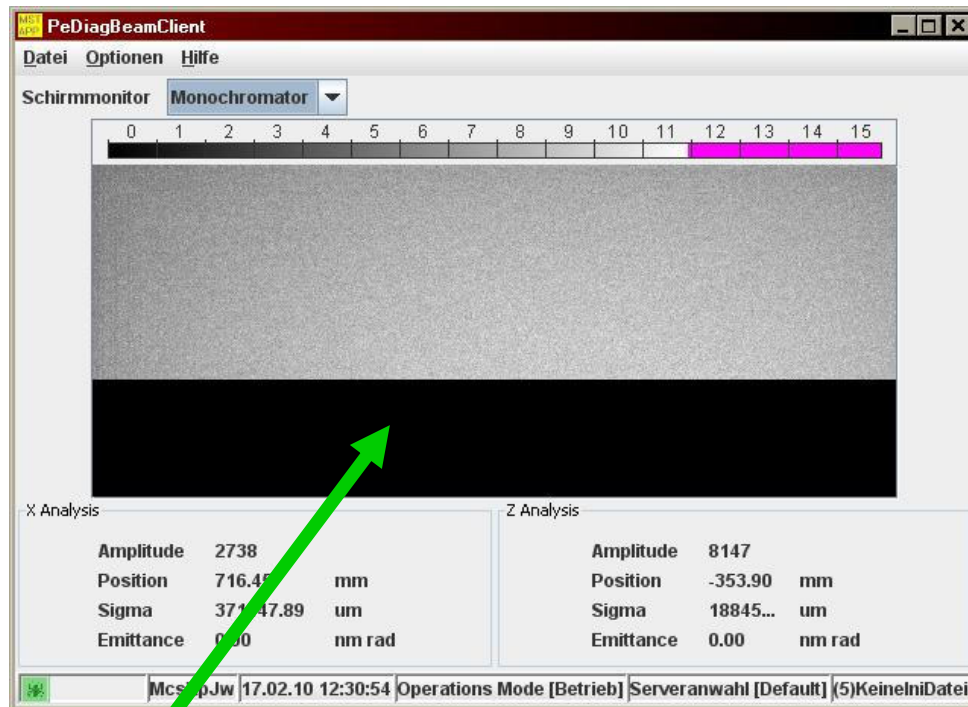
Map last updated Feb 11, 2011

**Stefan Weiße**  
February 2011

# Video System: Status Report

Shift PITZ Video Infrastructure from VSv2 to VSv3 (cont'd)

- during rollout and usage at PITZ some behaviours could be reproduced which we have already seen at Hamburg installations earlier

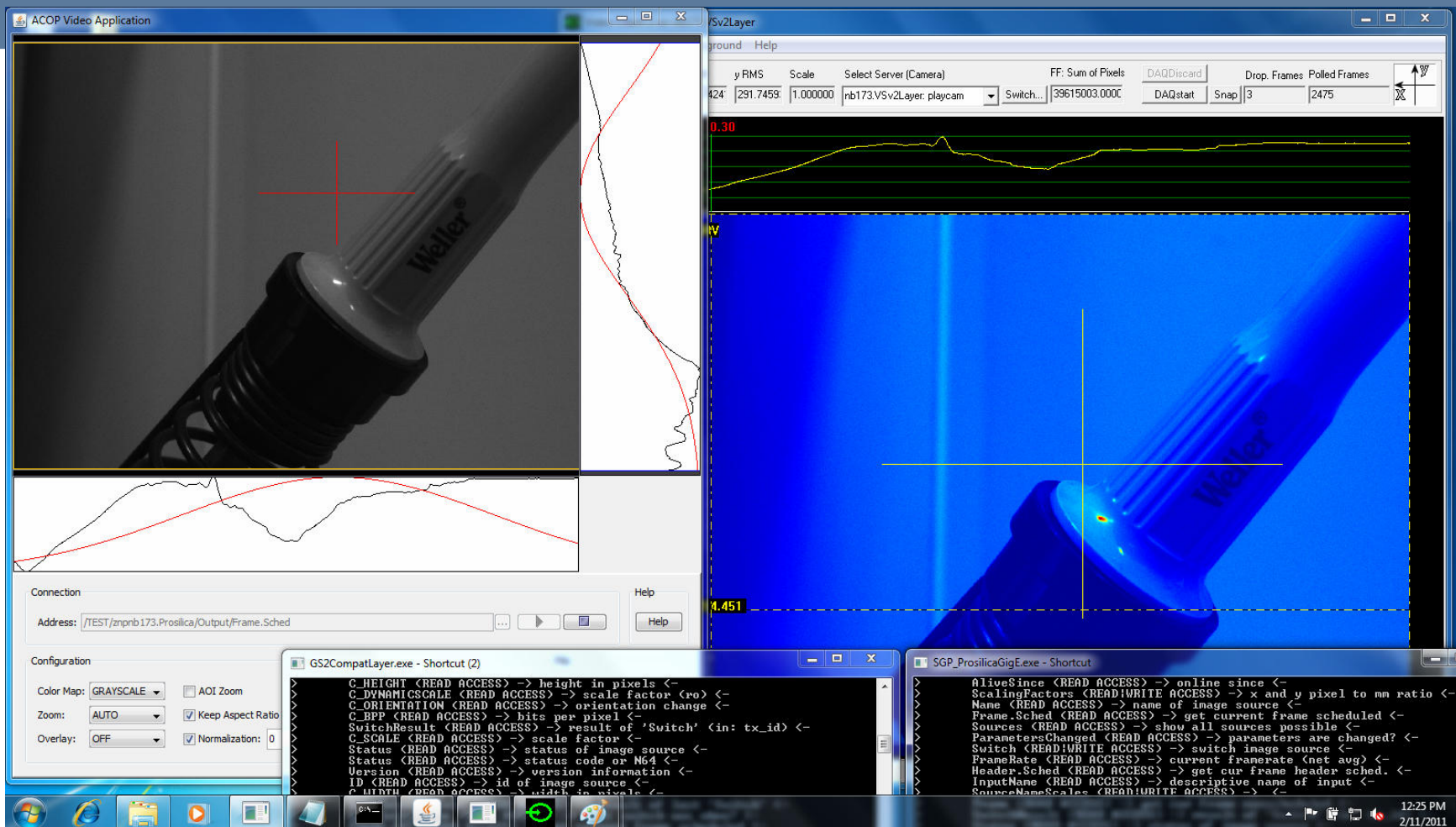


“only part of video image is shown”-issue

should be fixed now

# Video System: Status Report

More Experience on Windows 7 (32+64 bit)



The screenshot displays a complex software interface for video system monitoring. The main window, titled 'ACOP Video Application', is split into several sections:

- Top Left:** A live video feed showing a 'Weller' brand marker. A red crosshair is overlaid on the marker.
- Top Right:** A histogram showing the distribution of pixel intensities, with a red line indicating a specific threshold or measurement.
- Bottom Left:** A configuration panel with settings for 'Color Map' (set to GRAYSCALE), 'Zoom' (set to AUTO), and 'Overlay' (set to OFF). It also includes a 'Connection' section with an address field and a 'Help' button.
- Bottom Center:** A terminal window titled 'GS2CompatLayer.exe - Shortcut (2)' displaying a list of system parameters and their values, such as 'C\_HEIGHT', 'C\_DYNAMICS', and 'C\_SCALE'.
- Bottom Right:** Another terminal window titled 'SGP\_Pro silicaGig.exe - Shortcut' showing a list of system parameters and their values, including 'AliveSince', 'ScalingFactors', and 'FrameRate'.

The Windows taskbar at the bottom shows the system clock as 12:25 PM on 2/11/2011.

# Video System: Status Report

More Experience on Windows 7 (32+64 bit)

- GigE (GigE Vision) video cameras, software
- TINE, JAVA and VSv2 legacy on Windows 7 64 bit
- Tests show: server components work without modification on Windows 7 64-bit, also Java webstart and AcopVideo(Application) works just fine
- Windows 7 networking firewall 'understanding' and configuration took the most time
- Shortcuts, start menu changes and WOW64 layer (folders etc.) are another important things to keep in mind

# Video System: Status Report

Perspective: A Lot of Topics are Waiting...

- replace few VSv2 relicts from Hamburg installation by VSv3 stuff
- add intermediate JPEG compr. component at Hasylab/Petra 3
- PITZ video installation
  - hardware upgrade at server side due
  - make it simpler to use
  - slowly move away from Video System 2 legacy support
- event archive of video frames, readback video from event archive, bring event numbering into production level at PITZ
- documentation of video software components (xml files, layout, video website below [tine.desy.de](http://tine.desy.de), user documentation)
- interfaces, libraries and API for accessing video system and video frames, continue and finalize release of PNG and PNG sequence

**Stefan Weiße**  
February 2011



# Video System: Status Report

Just Ideas...

- gain knowledge and competence regarding video transfer stalls
  - automatic adaptive bandwidth usage?
  - may circumvent UDP performance breakdowns
- more Windows 7 experiments
  - setup of binary components
  - VSv3 source code compile using 64 bit compiler
- a closer look on Stemmer Imaging's 'Common Vision Blox' (toolkit, SDK, API etc.)
- a closer look on OpenCV, maybe interface?