

Specification Video Signal Integration

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Video signals: applications

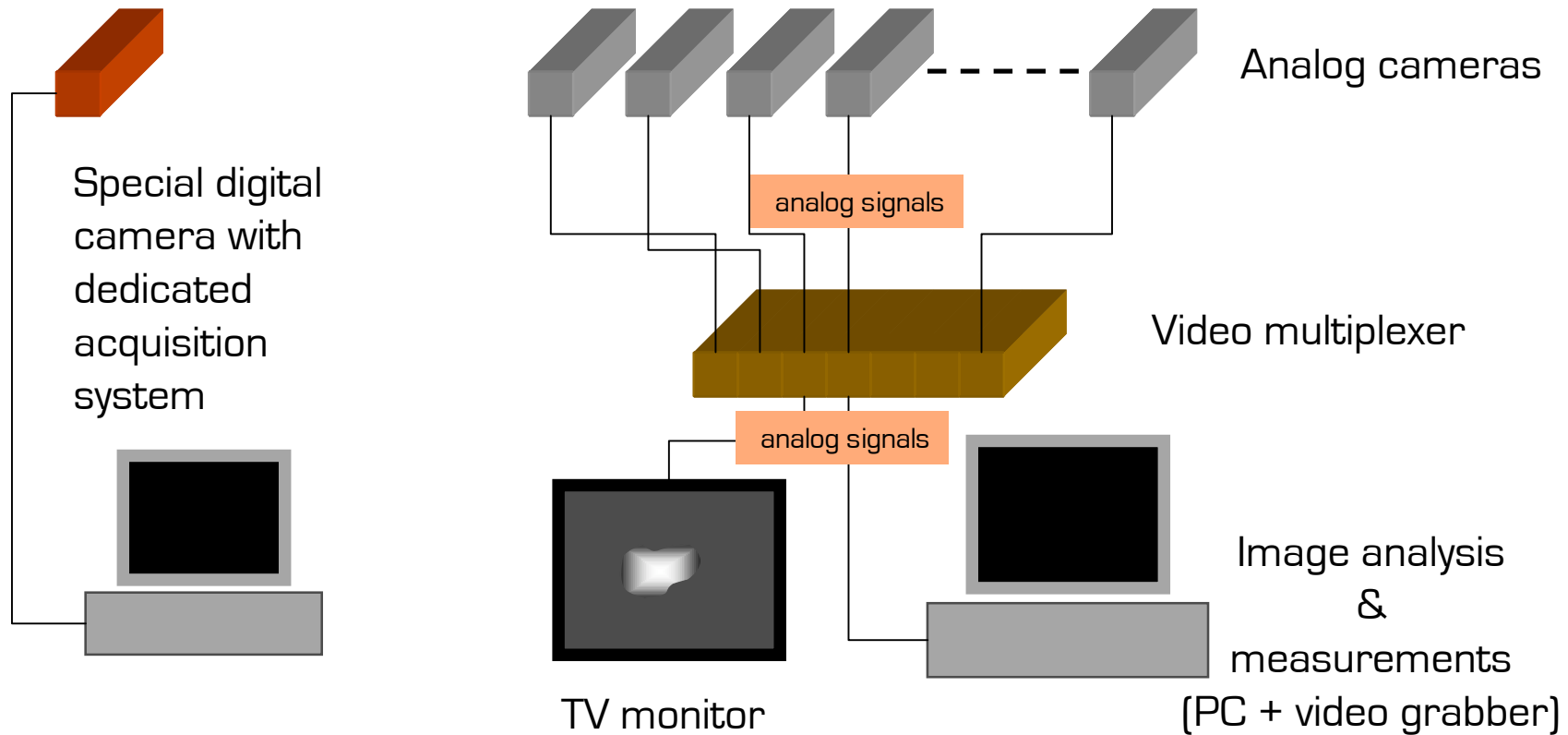
- Beam monitoring and measurements
- Remote observation (instruments, devices)
- Remote inspection (components, site)
- Security and surveillance
- Video conferences (specific software)

Video signals: sources

- Standard analog video cameras
- High-quality triggered digital cameras (firewire)
- Low-quality non-triggered digital cameras (webcams)
- Special digital cameras (with proprietary control and video grabbing system)

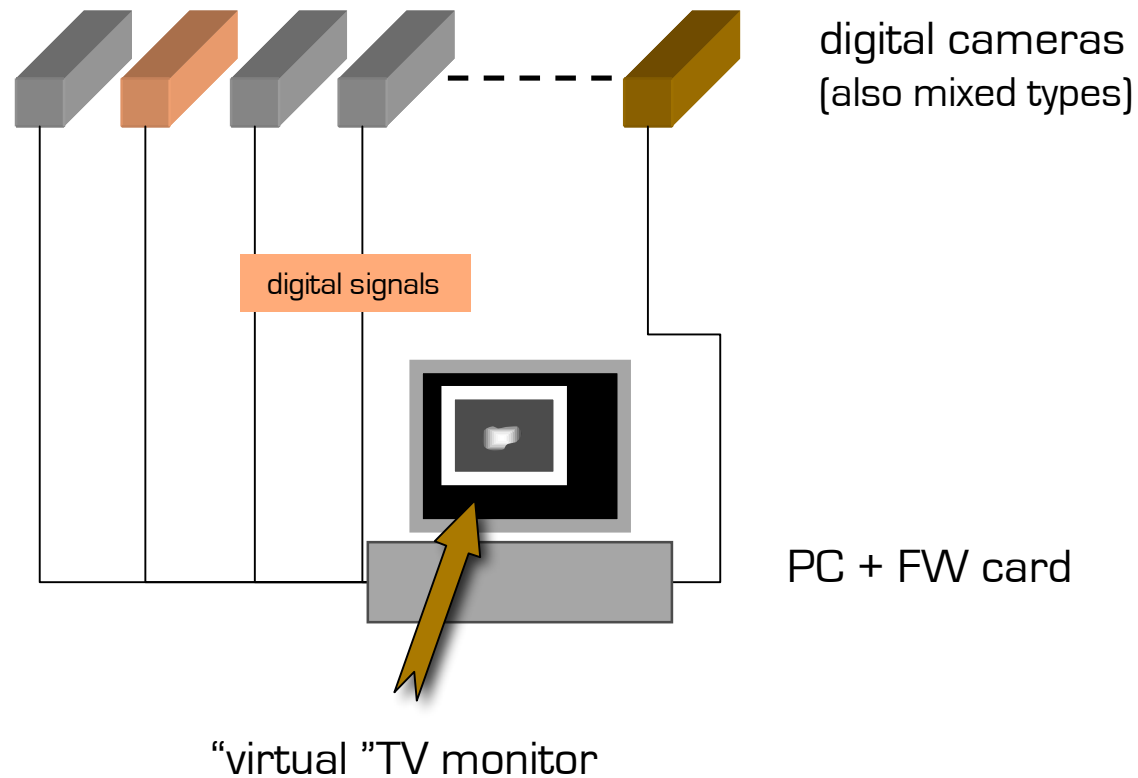
Camera Systems : topologies

- (old) analog video systems -



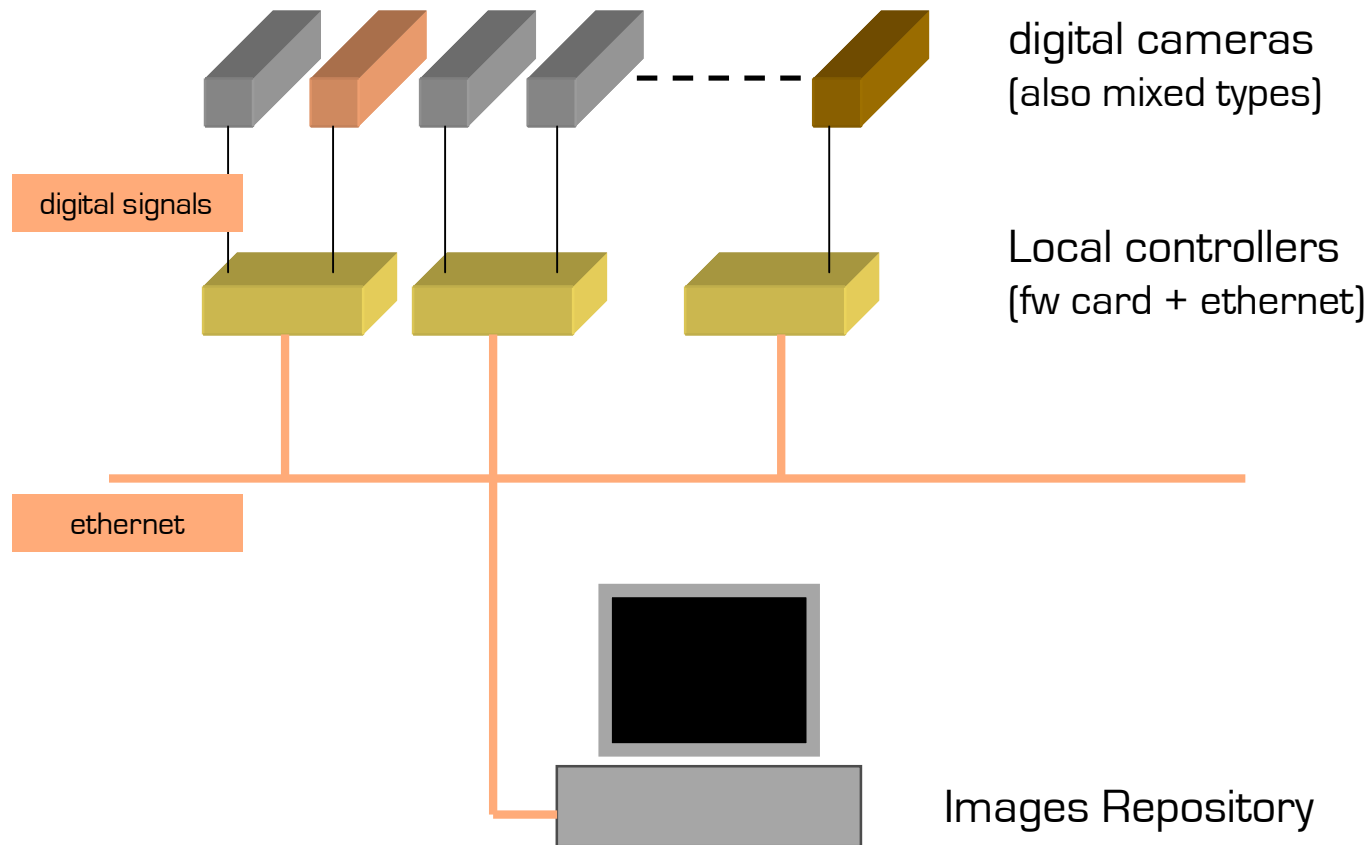
Camera Systems : topologies

- digital video systems -



Camera Systems: topologies

- large, mixed-cameras digital video systems (2) -

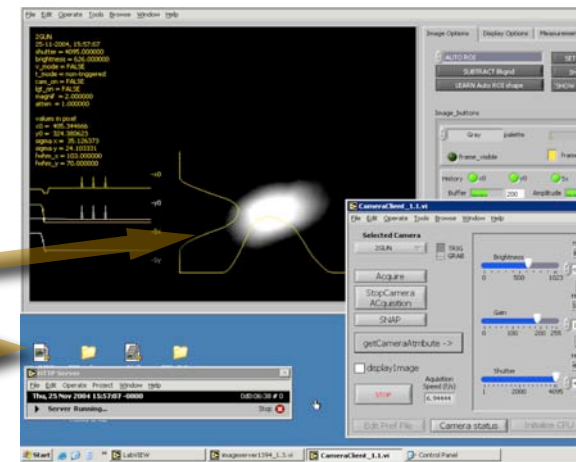


Video signals: software tools for image distribution

- Video streaming servers
 - Must be detailed studied
 - Which image sources are supported (video grabber, image files,...)
 - Which OS & hw supported
 - Attachable to a movable device ?
- HTTP
 - Highly compatible (with very few exceptions) : client software is a web browser
 - Easy (web technologies)
 - Flexible
 - simple implementation → low-performance
 - complex impl. → high-perf., more features
 - Performances good enough ?

Video signals: software tools for image distribution₍₂₎

- Use the video conferencing system
 - Image files produced by the camera system can be used as source ?
 - ..is the right tool ?
- Image applications panels are Cont.Sys. Instruments
 - Create a Virtual Instruments for images display and export them:
 - Remote network connected panels
 - VNC (whole desktop)



Video signals: conclusions

1. Select the best solution to the video signal distribution problem
2. Verify that all needs are fulfilled by this solution
3. ..if not provide more than one [ex. HTTP (+flex., -perform.) & VidConf (-flex., +perform.)]
4. If it will be integrated into one of the other services, then collaborate with colleagues to accommodate it into that software environment
5. Optimize available software tools