New observation strategies with e-control

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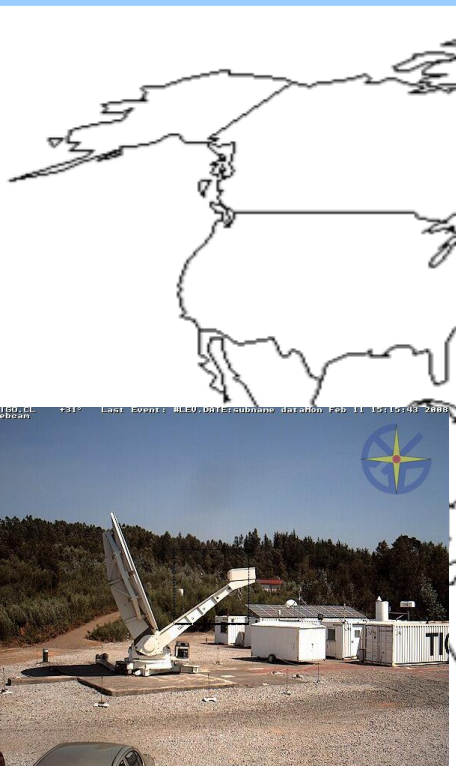
An almost given situation for the VLBI telescopes Wettzell, O'Higgins/Antarctica and TIGO/Concepción



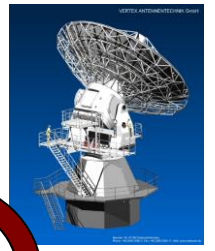
TIGO Concepción/Chile

Tele-working

Communication

RT Wettzell/ Germany

Remote Control on Site

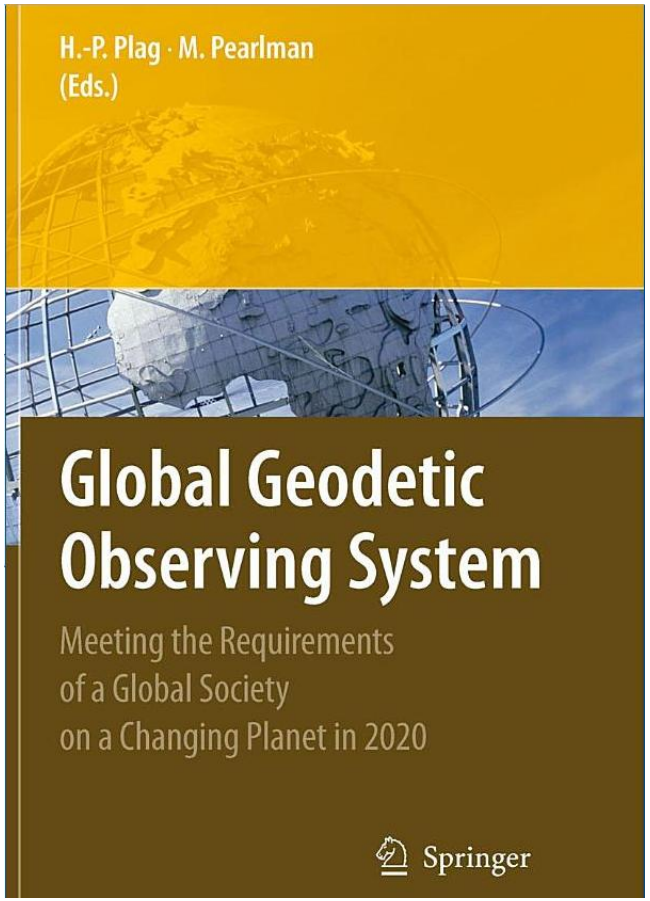


TTW Wettzell/ Germany

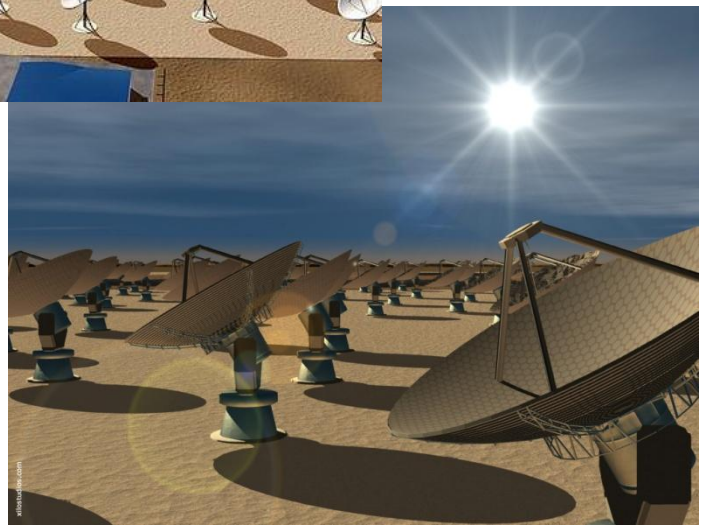
GARS O'Higgins/Antarctica

Future visions with (globally) distributed systems

GGOS



SKA



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And new ideas are on the way …

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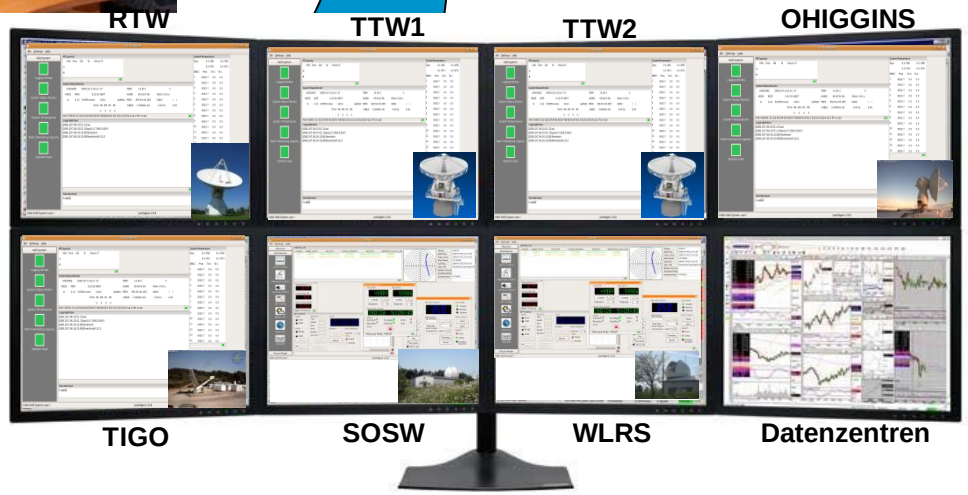

Similar to: Hase, Hayo; et. al.: Twin Telescope Wettzell (TTW) – a VLBI2010 Radio Telescope Project. IVS General Meeting 2008

New control strategies

New observation strategies for VLBI telescopes Wettzell, O'Higgins/Antarctica and TIGO/Concepción

Local

- Standard operations
- Local operator

New observation strategies for VLBI telescopes Wettzell, O'Higgins/Antarctica and TIGO/Concepción

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- Check system states from everywhere at the observatory
- Tele-working
- Remote assistance and diagnostics
- Control very remote, inaccessible telescopes

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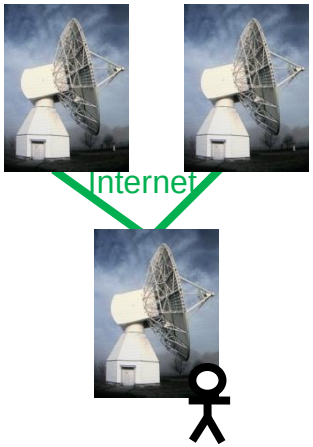

Shared

- Save, passive data live monitoring
- Dedicated control access by responsible person
- Shared access from different observatories
- Shared night shifts

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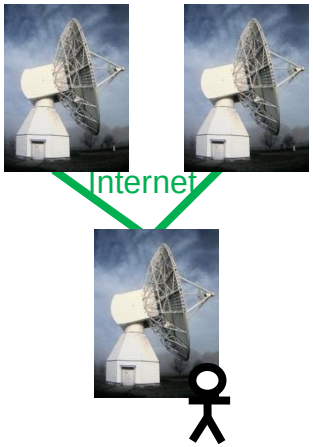

Shared

- Save, passive data live monitoring
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Unattended

- Observations run autonomous, (semi-) automated and unattended

A possible basis for such strategies: e-control and SysMon

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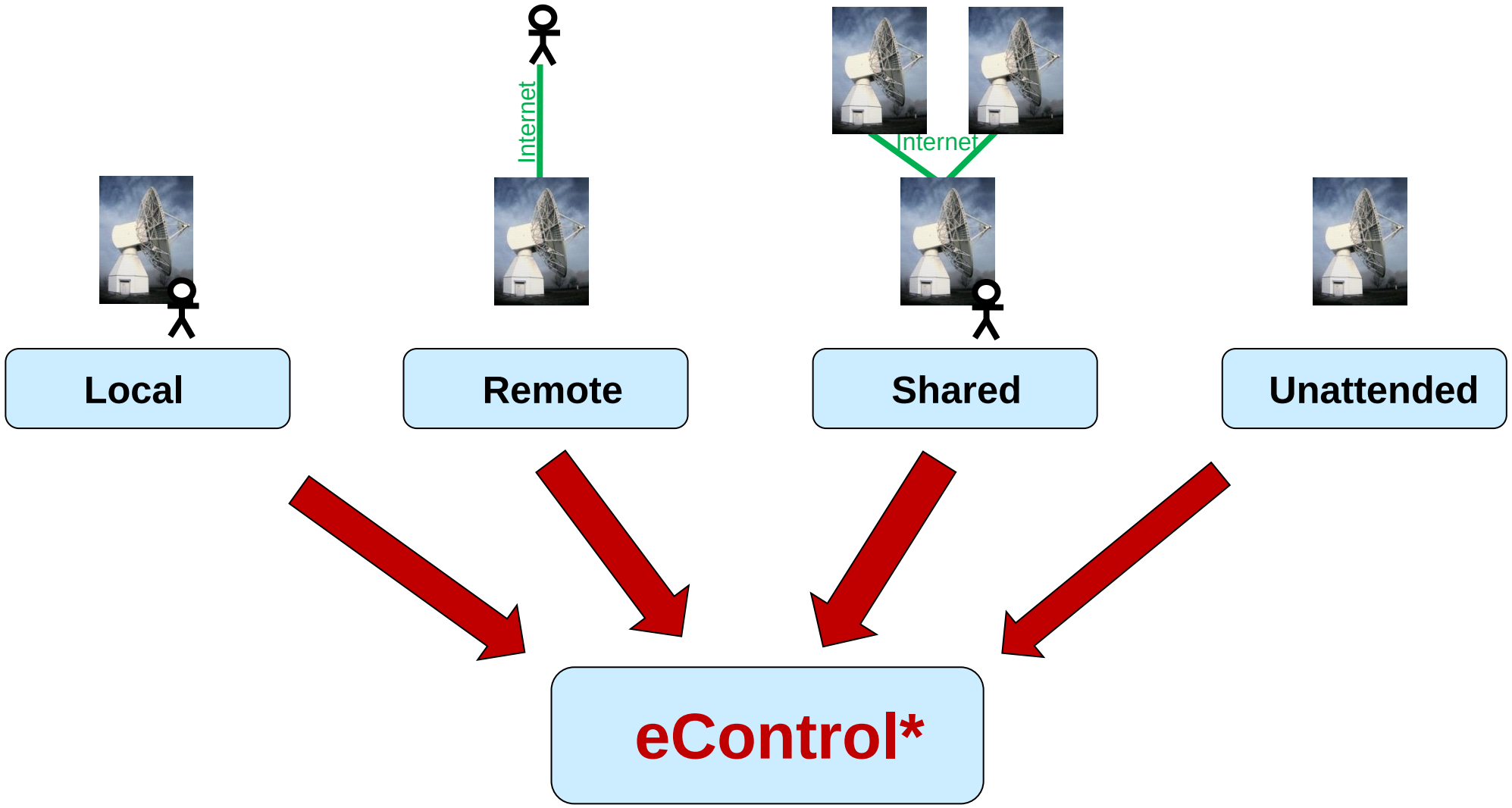

*** per system with individual restrictions and only with reliable, well educated personnel staff on site**

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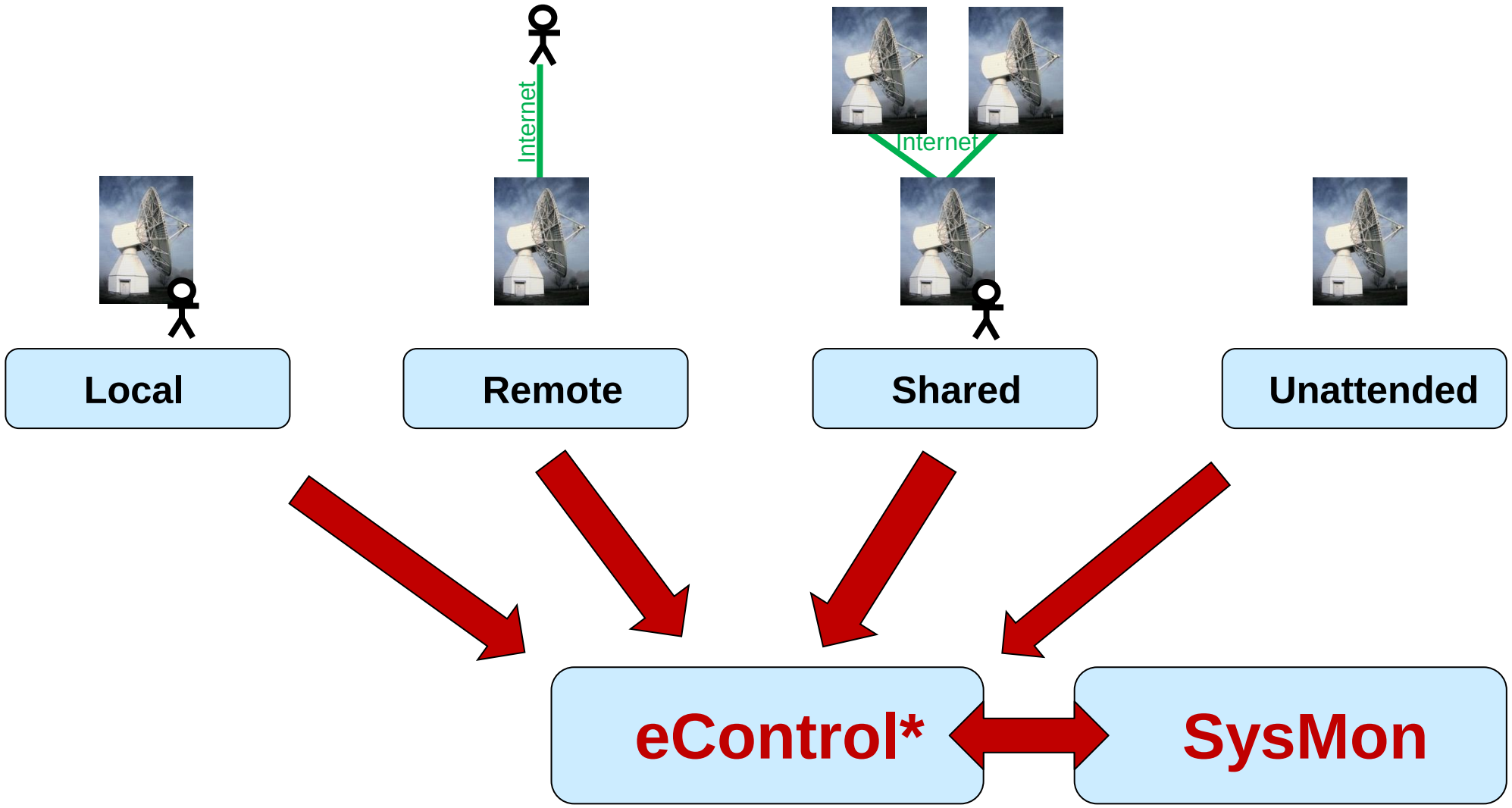

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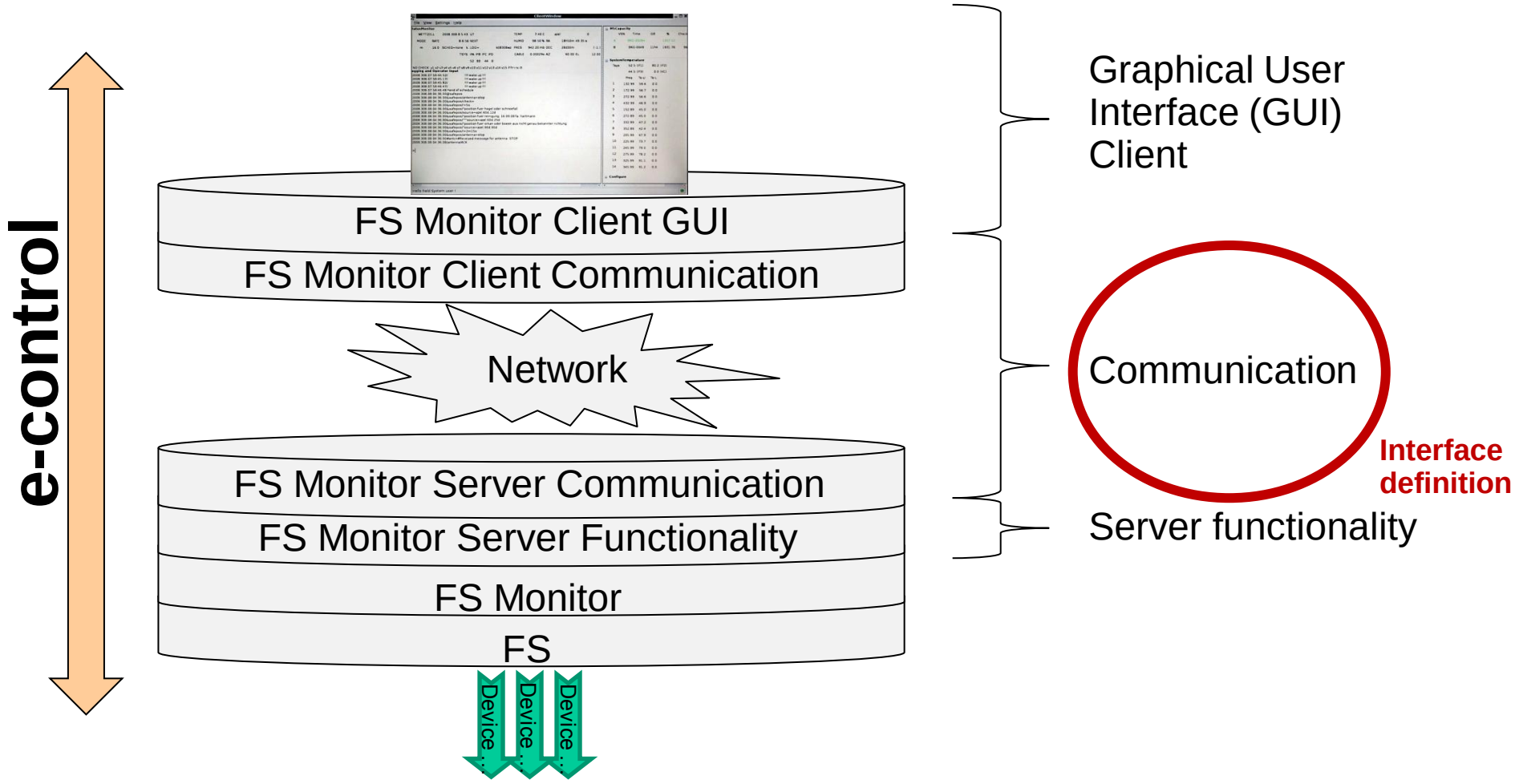
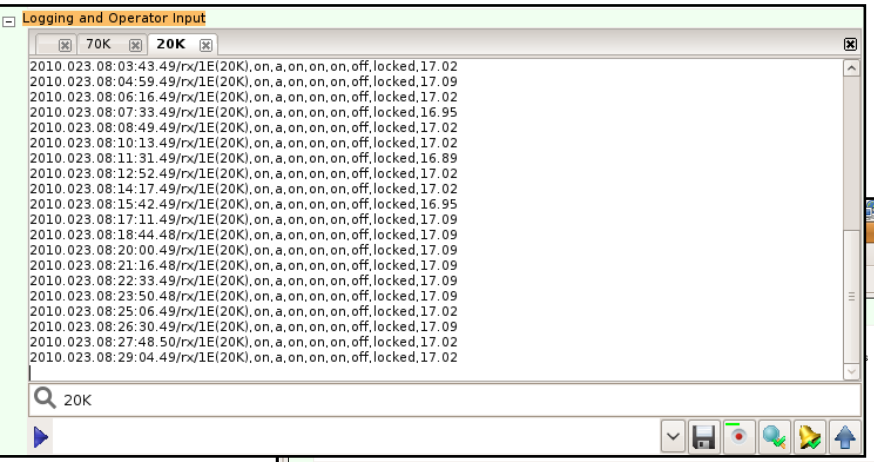
The idea: remote attendance and control of VLBI telescopes Wettzell, O'Higgins/Antarctica and TIGO/Concepción

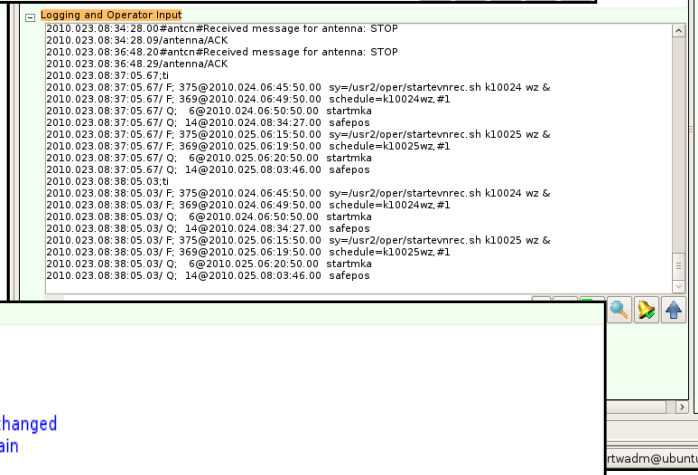


The client – graphical, textual or browser based

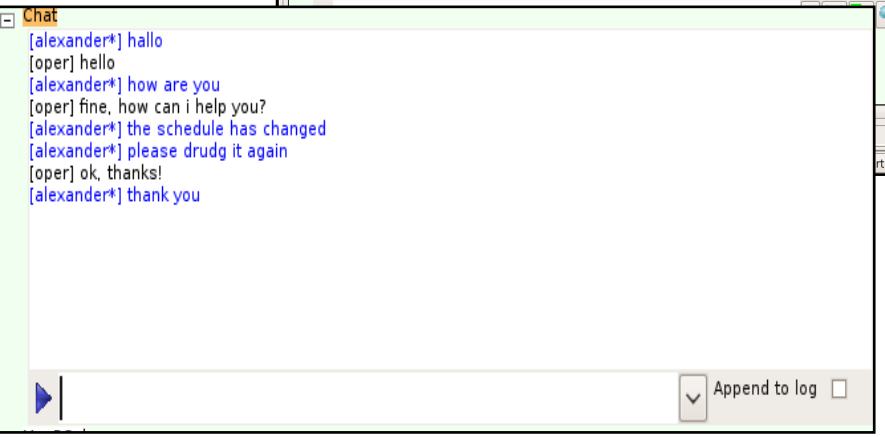
Graphic and Classic main interface

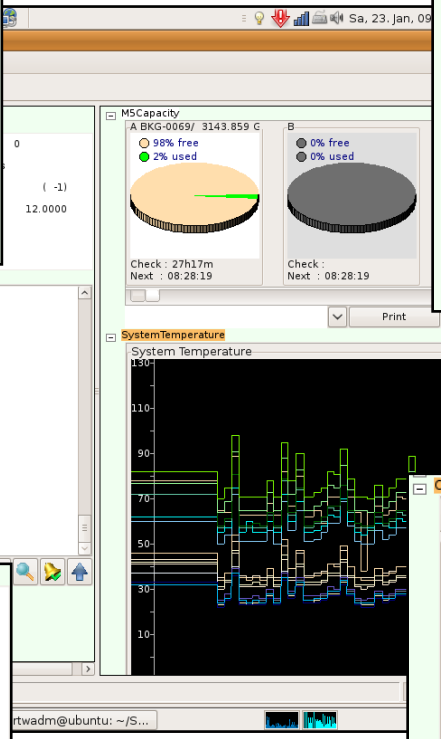


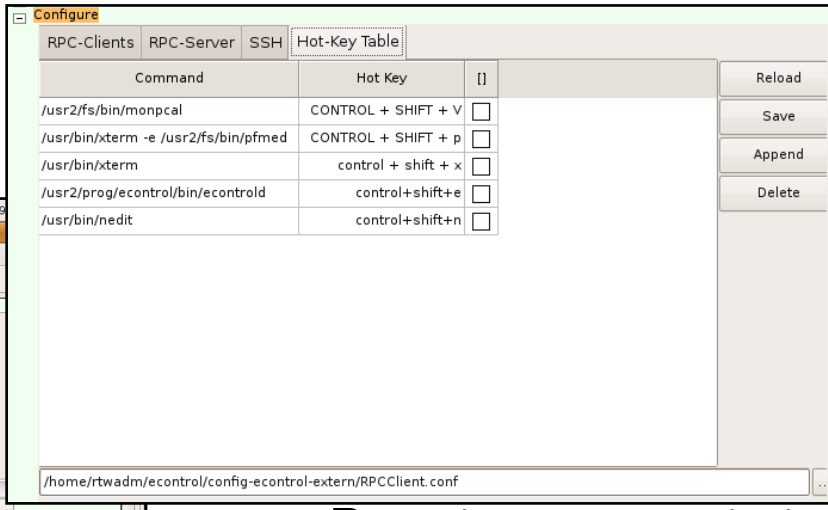
Logbook



Chat

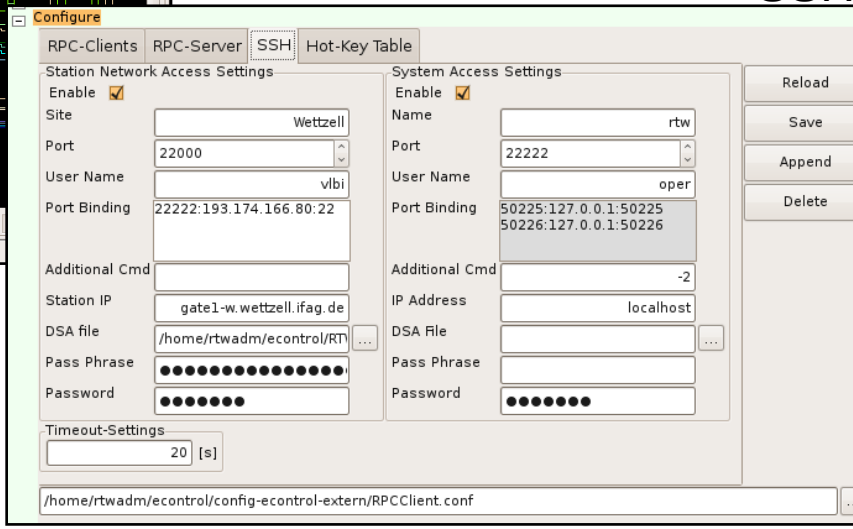






Remote program startup

SSH



Complete remote access

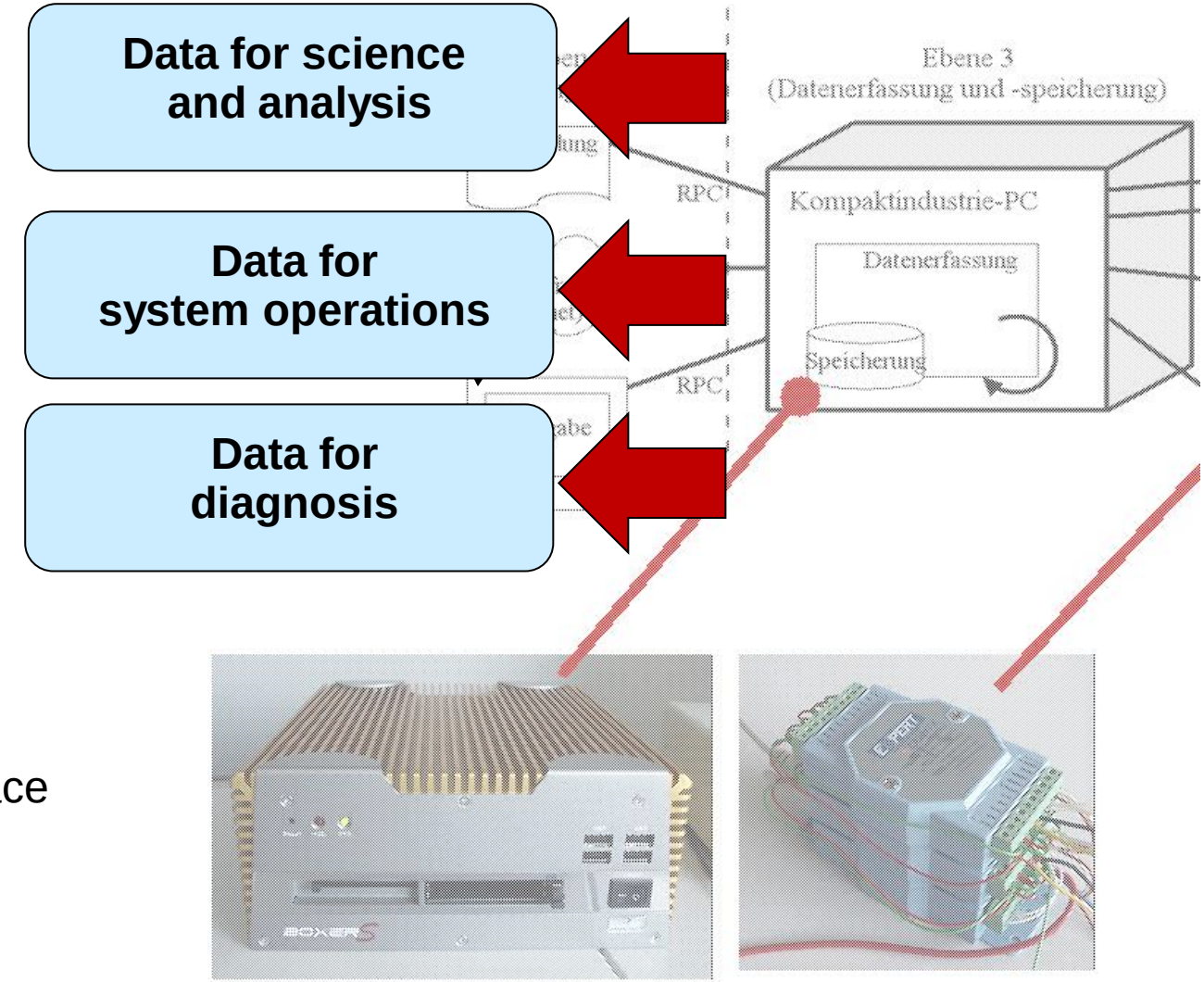
System Monitoring: SysMon

Local safety for people and systems in combination with reliability in operations

Meteo, WVR, Clock offsets, …
=> low sampling rates
=> as scheduled

Power supply, wind uploads,
emergency stops, rack temp., …
=> medium sampling rates
=> permanently

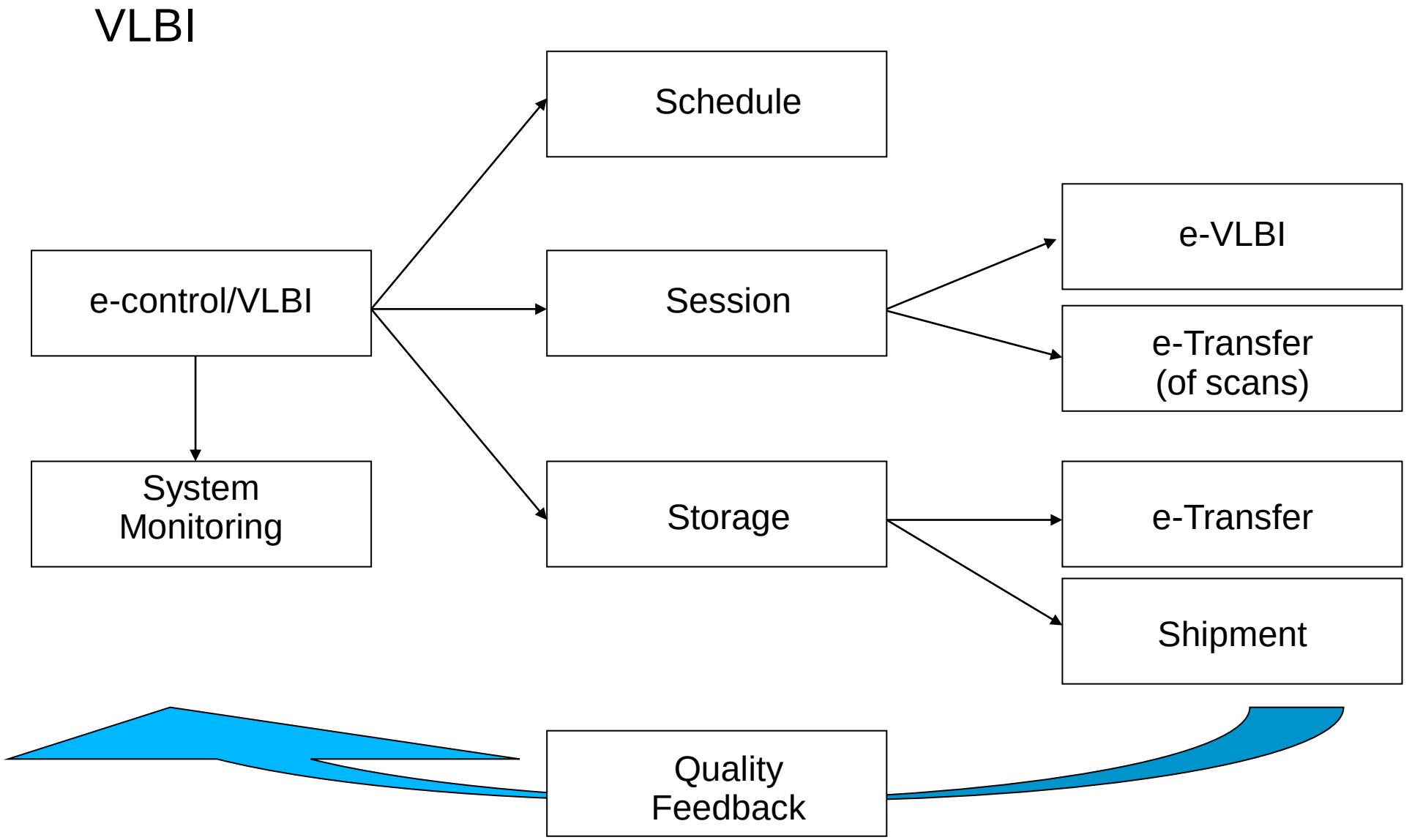
Servo currents, contouring errors, …
=> high sampling rates
=> on demand



See also:
Monitoring and Control Interface
Collaboration Group

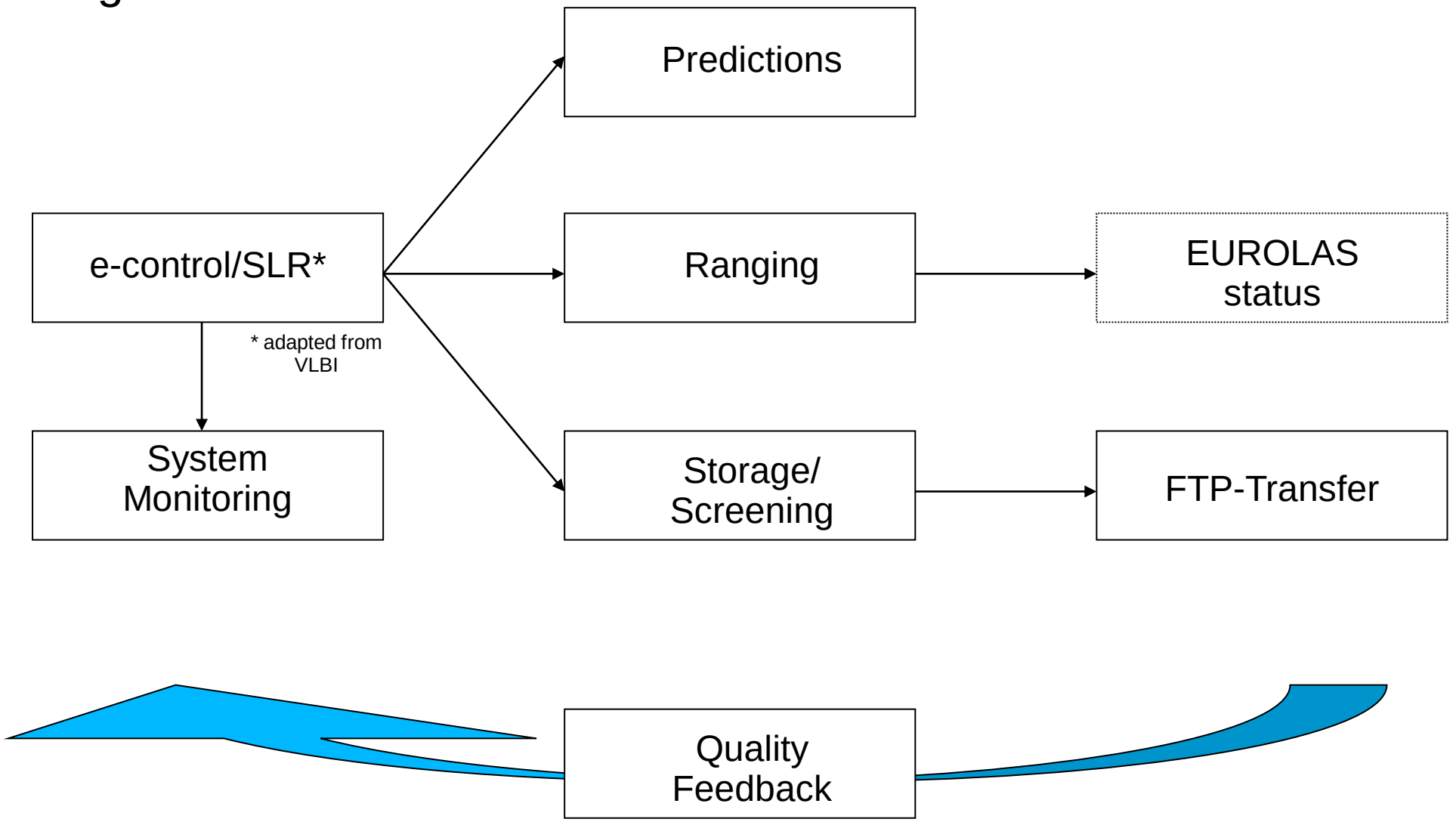
Optimization of workflows over system borders

The workflows on a technical point of view



The workflows on a technical point of view

e.g. SLR

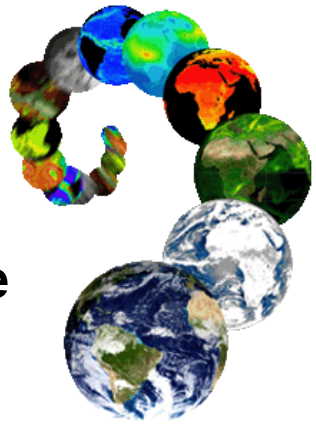


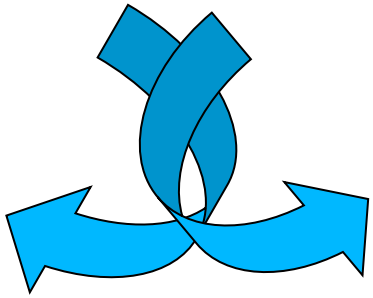
Technical synergies in …

- Models
- Software
- Data
- Observing Times
- Manpower
- …

... are the fundament for technical realizations of …

GGOS science





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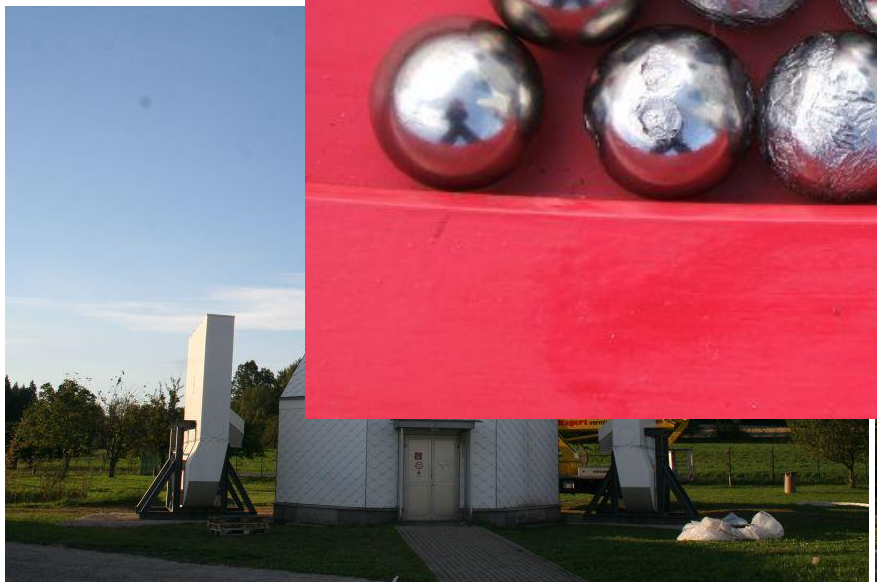
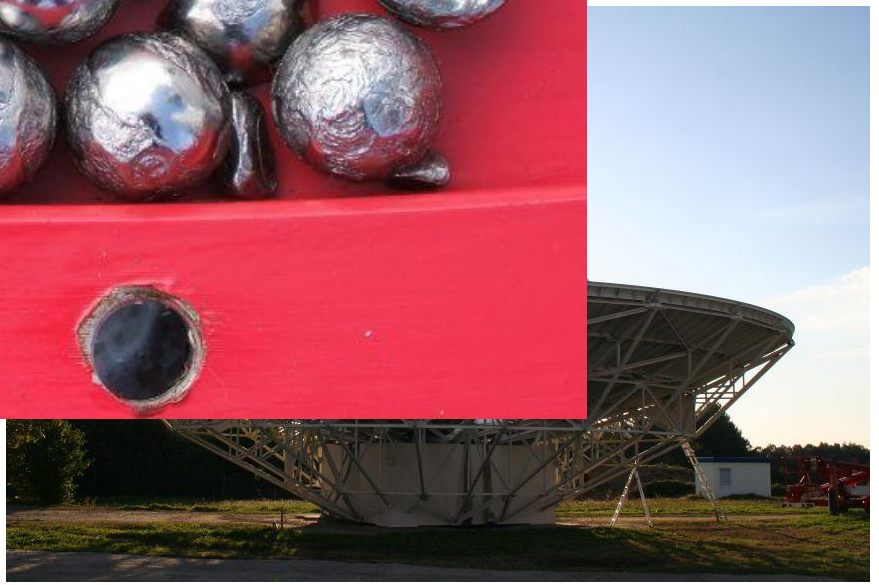
But it wont avoid this …

The Radio Telescope Wettzell (RTW): impressions of a maintenance

The Radio Telescope Wettzell (RTW): impressions of a maintenance





Thank you!