

# Remote Operations @ PSI

Success and failure ...

# Problem...

- Operation of the SLS from the Cyclotron control room when in user operation
- Machine development shifts still from SLS control room

# Control System

- Requirements for remote operation are anyway desirable for a control system.
- Therefore any modern well designed control system should be suitable for remote operations without modification!

# Requirements

- E- log book
- No data hiding
- Thin clients
- Good diagnostics (>50 PS params)
- Remote scope display
- Analogue video signals
- Field Replaceable Units

# Technical issues

- Live video (1Hz -> 10Hz)
- Lack of space

# Success

- 1.5 days to bring into operation
- Radiation safety also available

# Failure

- Culture
- Language
- Facilities

# Commitment to future success

- One team of operators for both machines
- Training
- Improvement in facilities

# Differences to GAN

- Experts are available if needed
- Shift change can be local