Useful Device Servers and Gadgets in TACO

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- Wishful thinking
- Gadgets

Motivation

- All sites have site-specific hardware however some tasks come up again and again (e.g. serial lines, gpib, counters, ...) why not try to create a catalogue of device servers for commercial hardware which can be shared ?

Device Server Catalogue

- Each entry needs :
  - description
  - author
  - documentation
  - hardware
  - platforms
  - language
  - notes
- send info to taco@esrf.fr or goetz@esrf.fr

Device Server Categories 1

- Serial line
    - Posix + Windows version exist
    - Rocketport products from Comtrol (2/4/8/16/32 ports Ethernet/PCI)
    - try DeviceMaster embedded controller
- GPIB
    - generic device server exists
    - LAN-ENET from NI
    - C/PCI on Linux from NI

Device Server Categories 2

- ## Stepper Motors
  - generic multiple axe server exists (Maxe)
  - Oregon in VME/PCI/PC-104
  - ESRF VPAP in VME
  - Flexmotion from NI in CPCI/PCI
  - Huber via GPIB
  - Berger via serial line
  - Paragon via serial line (TO DO)

- ## DC Motors
  - Galil in VME/PC-104
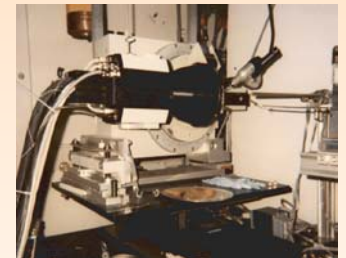
Device Server Categories 3

- Powersupplies
  - Danfysik 8100 + 8800 via serial line
  - many ESRF specific powersupplies
- Counters
  - Lecroy 1151 in VME
  - CAEN V462 in VME
  - ESRF VCT6 in VME

Device Server Categories 4

- CCD cameras
  - Sensicam for Windows
  - Matrox frame grabber for Windows
  - Princeton for Windows
  - ESRF Frelon fast readout camera
  - Mar for Linux
  - ADSC for Windows
  - Bruker CCD for Windows
  - Imagepro for Windows
    - Photonics Science, Medoptics, Frelon, Sensicam

Device Server Categories 4

- Input/Output
  - ADAS ICV150 analog in in VME
  - ADAS ICV712 analog out in VME
  - ADAS ICV196 digital in/out in VME
  - ADAS ICV101 fast scope in VME
  - WAGO 750 series input/output via serial line or Ethernet
  - NI C/PCI general purpose input/output (TO DO)

Device Server Categories 5

- Sample Environment
  - Linkam temperature controller via serial line

  - Impac Pyrometer via serial line
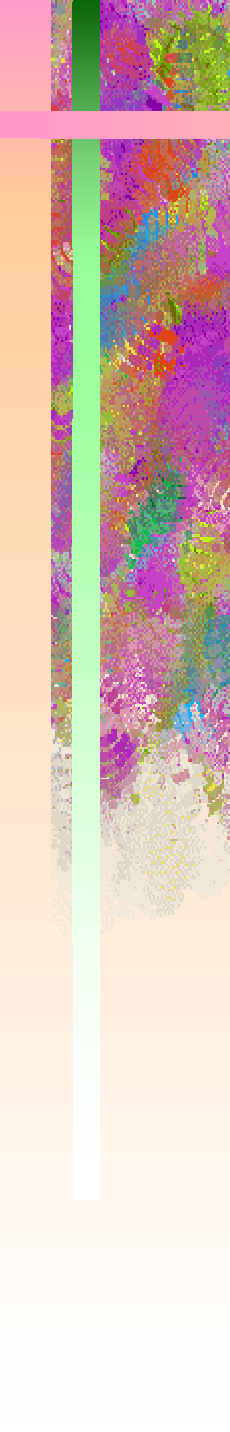 - Torsion strain device via WAGO (ESRF specific)

Device Server Categories 6

- Protocols
  - Modbus (Ethernet, RTU and ASCII)
- PLCs
  - Telemecanique TSX17
  - Allen Bradley
  - Siemens S5
  - WAGO

- Scripting language servers
  - Tcl
  - Python
  - Matlab

TACO Box – an idea before its time ?

- Last TACO Box built at the ESRF was in 1999 (by Jacques Brechet for cryogenics monitoring)

- ESRF has "lost interest" in TACO Boxes (they have been replaced by WAGO boxes)

- TACO Boxes remain an excellent idea

- In the future we will buy them from Industry e.g. DeviceMaster

Wishful thinking

- Write device servers for all those common devices presently controlled by scripting languages e.g. SPEC, Python
  - Keithley DVMs
  - Cryostreams
  - DC motors
  - Piezo motors
  - Sample controllers
  - Et cetera …

Gadgets

- Wireless devices e.g. Rocketport

- iPAQ for handheld control