



PVSS Support

ATLAS DCS Workshop
10th-12th October 2001



PVSS Support Concept

- ◆ Training via CERN Technical Training Service
- ◆ IT-CO provide first-line support
 - ☞ pvss.support@cern.ch
 - ☞ Use of Action Request (AR) System
- ◆ ETM provide second-line support
- ◆ Newsgroup
 - ☞ cern.pvss
- ◆ PVSS Users' Group



PVSS Support Miscellaneous

- ◆ PVSS downloadable via the web
- ◆ Generation of licenses (shield file)
- ◆ Co-ordination of enhancement requests
- ◆ Co-ordination of consultancy weeks



Sources of Information/Advice

◆ On-line Help

☞ Getting Started

◆ Demo project (from version 2.11 SE)

◆ PVSS Web Pages

☞ <http://itcowww.cern.ch/pvss2/index.htm>

☞ Getting Started

☐ Guidelines

☐ Introduction to PVSS

☞ CERN documentation

☐ Tips and hints

☐ Use of OPC

☐ Programming APIs, Drivers and Ctrl Extensions

◆ ATLAS Experienced people



Coming Soon.....

- ◆ SCADA Lab
- ◆ Introductory exercises
- ◆ ETM on-site support



Controls Technologies

Layer Structure

Technologies

Commercial

Custom

FSM

SCADA

OPC

DIM

Communication Protocols

PLC/UNICOS

VME/SLiC

Field buses & Nodes

Sensors/devices

Supervision

Process
Management

Field
Management

Configuration DB,
Archives,
Log files, etc.

Storage

WAN

LAN

LAN

VME

Controller/
PLC

Field Bus

Node

Node

Experimental equipment

Other systems
(LHC, Safety, ...)

Based on an original idea from LHCb



Control System Components 1

Standards defined by Controls Board, JCOP, IT/CO

- ◆ **Supervision: PVSS SCADA Toolkit**
- ◆ **Programmable Logic Controllers (PLCs):**
Siemens and Schneider (with UNICOS PLC library)
- ◆ **Field Buses**
CAN Bus, ProfiBus, WorldFIP, (and probably Ethernet)
- ◆ **OLE for Process Control (OPC)**
Interface for Commercial H/W available on Windows
- ◆ **Distributed Information Manager (DIM)**
Interim solution for non-commercial H/W

Information/Support for a variety of equipment:

Wago, Wiener, Applicom, SoftPLCs, N.I., Beckhoff, etc.

IT/CO Home Page: <http://itcowww.cern.ch/welcome.html>



Control System Components 2

JCOP "Framework": customisation for HEP

[//itcowww.cern.ch/jcop/subprojects/Framework/welcome.html](http://itcowww.cern.ch/jcop/subprojects/Framework/welcome.html)

- ◆ Provides standard utilities and pre-defined components

Drivers & Panels for HV, ADCs, ELMB, Fan Trays, ...

- ◆ PVSS implementation Guidelines

- ◆ Finite State Machine (SMI) integrated with PVSS

- ◆ Custom Front-End "SLiC"

C++ Class library + Communications & Error Handling...

For VME and PC H/W (LINUX + possibly NT)

Details: [//itcofe.web.cern.ch/itcofe/Projects/SLiC/welcome.html](http://itcofe.web.cern.ch/itcofe/Projects/SLiC/welcome.html)

- ◆ Lab. Systems: National Instruments LabView



Other Related Activities

- ◆ Rack Control Project
- ◆ CERN Safety Alarm Monitoring System (CSAM)
- ◆ Detector Safety System (DSS)
- ◆ CERN SCADA Application Support Group (SASG)
- ◆ Industrial SCADA Application Group (ISAG)
- ◆ LHC Data Interchange Working Group (LDIWG)
- ◆ Joint Cooling and Ventilation Project (JCOV)
- ◆ Subrack Project
- ◆ Gas Working Group