# Can be used FIPs after the end of DELPHI?

E. Vlasov

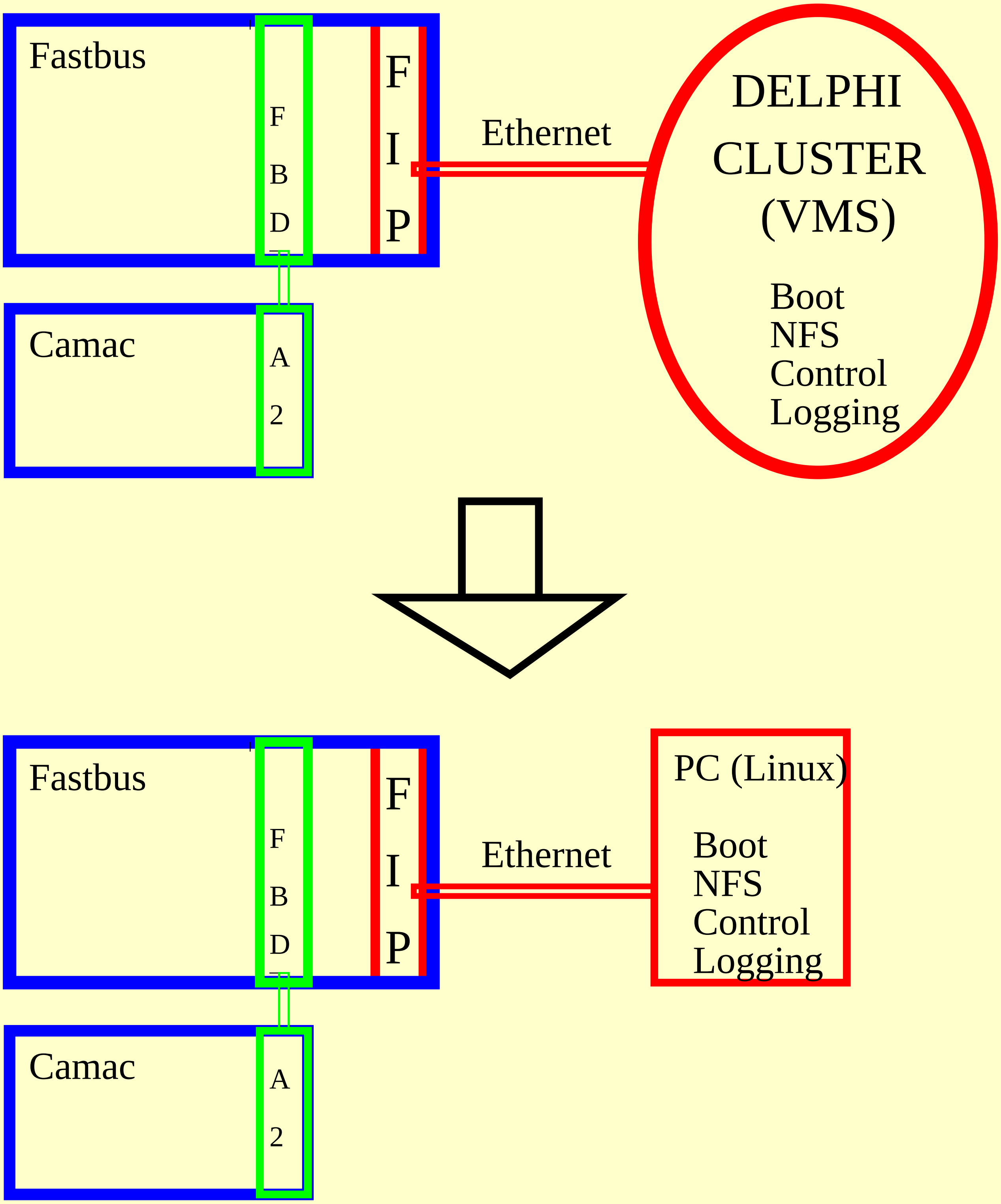
## Where:

- Small experiments and R&D (Caleido)
- Low trigger rate experiments(CosmoLEP)

## Problems:

- Centralized software and support
- VMS-based environment
- Multicomputer DAS

# STIC test-beam setup



# BOOT and NFS

## Standard programs used:

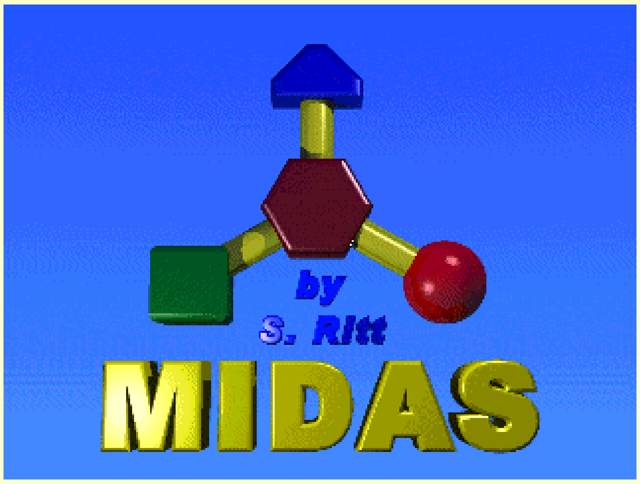
- BOOTP service - DHCPD (from WWW);
- TFTP service - TFTPD (from WWW);
- NFS service - NFSD (there is in CERN LINUX configuration).

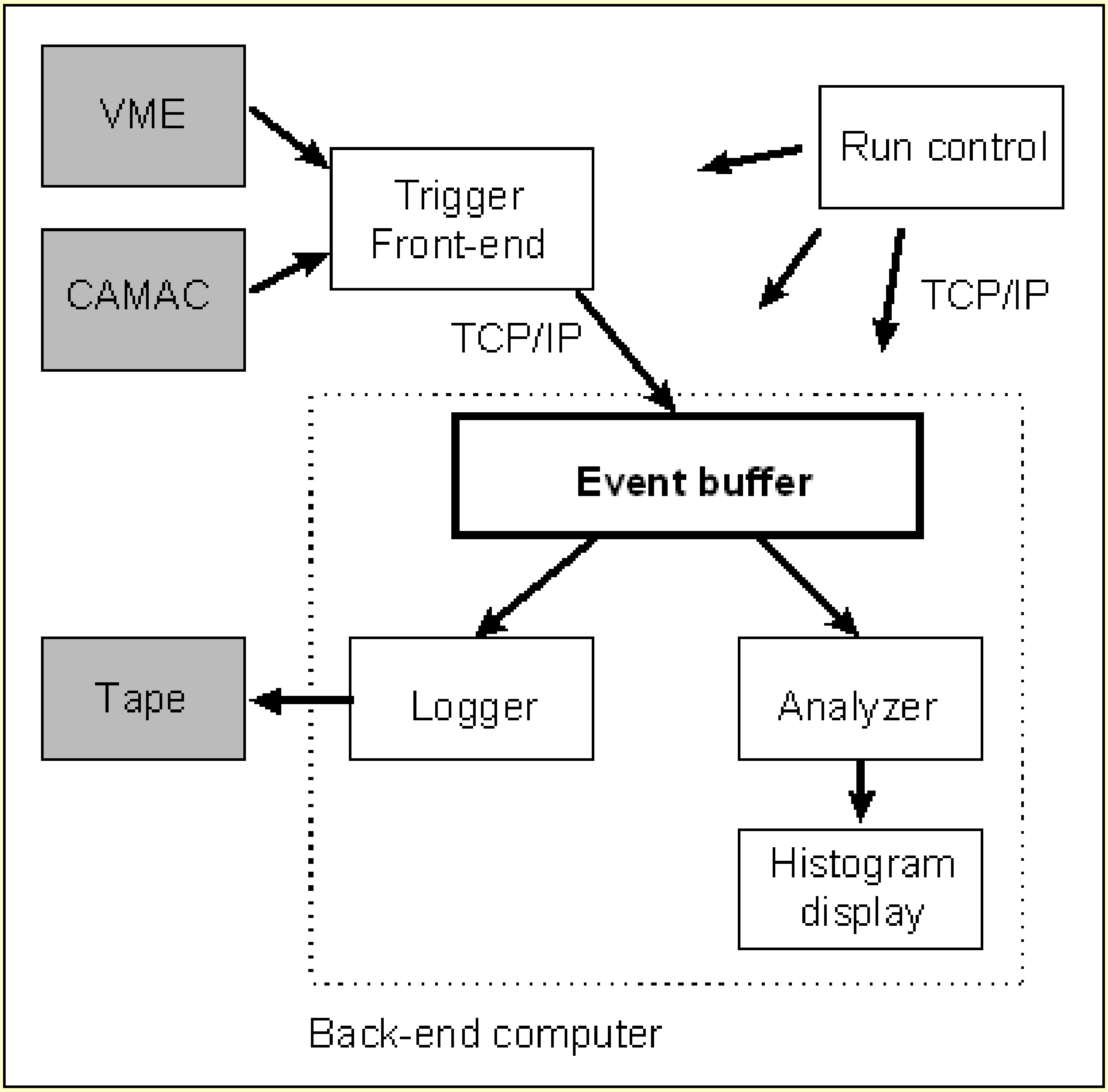
## Original or modified programs:

- VAXTAR - (modified to solve CR/LF problem) to copy files from VMS to Linux;
- EDINET - (original) to edit INETDB directly in the BOOT file on PC.

# MIDAS

http://midas.psi.ch/



# MIDAS installation

- Installation of PC side - no problems.
- Installation of FIP side:
  - OS9 version is absent in distributive. (CosmoLEP version was used as start point).
  - MIDAS uses GCC style of C. GCC was found for OS9 (WWW or FIC).
    - One or two GCC-library routines were fitted to FIP.
    - Low level routines were compiled by standard OS9 CC (Optimization?)

# Running an Experiment

| MIDAS experiment "trinat" | | | Sat Aug 5 11:02:46 2000 | | |
|---|---|---|---|---|---|
| Stop · Pause · ODB · CNAF · Messages · ELog · Alarms · Programs · History · Config · Help | | | | | |
| Run #8361 | Running | Alarms: On | Restart: No | Data dir: /data/trinat/may00 | |
| Start: Sat Aug 5 09:55:08 2000 | | | Running time: 1h07m38s | | |
| **Equipment** | **FE Node** | **Events** | **Event rate[/s]** | **Data rate[kB/s]** | **Analyzed** |
| BOR | TRINAT_FE@codaq01 | 1 | 0.0 | 0.0 | 0.0% |
| File | TRINAT_FE@codaq01 | 0 | 0.0 | 0.0 | 0.0% |
| Trigger | TRINAT_FE@codaq01 | 531518 | 148.9 | 42.4 | 0.0% |
| Scaler | TRINAT_FE@codaq01 | 3702 | 1.0 | 0.2 | 0.0% |
| EOR | TRINAT_FE@codaq01 | 0 | 0.0 | 0.0 | 0.0% |
| **Channel** | | **Active** | **Events** | **MB written** | **GB total** |
| 0 run08361.ybs | | Yes | 535848 | 2250.950 | 132.554 |
| **Sat Aug 5 11:02:46 2000 [mhttpd] Program mhttpd on host midtis01 started** | | | | | |
| TRINAT_FE [codaq01] | | MStatus [midtis01] | | Logger [midtis01] | |
| ODBEdit [midtis01] | | Nova_014019 [midtis01] | | mhttpd [midtis01] | |

Figure 4: *Midas Web server.*

- MIDAS uses HBOOK in the Analyzer (Monitor in DELPHI notation).
- Ring-Ntuple. The last 1000 events are accessible always.
- 2 crashes of system in 4 days.

## Performance of system. Installation

# Performance of system

(25 channels of CAMAC ADC and 1 register).
North area.

- June test beam run (DELPHI DAS)
  - Pedestal type run (continous) - 35 events/sec.
  - Beam type run (2.5secs spill) - 260 events/spill max.
- September test beam run (MIDAS in PC)
  - Pedestal type run (continous) - 450 events/sec.
  - Beam type run (2.5secs spill) - 1400 events/spill max.
    (20 percents of dead time - 700 events/spill)

# Installation

- CD can be produced with all the files and HOWTO file.
- One-two days should be enough to install system for experienced programmer.