

SEMINARS SEMINAIRES

Tuesday 8 November

TECHNICAL PRESENTATION

at 10.00 hrs – CN Auditorium, bldg 31/3-005

Architectural considerations for designing a PowerPC based VME board for maximum performance.

by Harry WHITE / Ron Moore, Kenneth Lewis, V.I Computer Corp.

Many design decisions and trade-offs go into the architectural structure of a high performance processor board. Key elements that drive these decisions are: performance criteria that are typically dictated by the target market, chip technology, time to market considerations, and operating systems considerations. Using V.I Computer Corps. Power.3 and Power.4 processor boards as examples, the speakers will review the major design decisions regarding VME interface, PCI/PMC interface and memory structure for getting maximum performance from the PowerPC 603 and 604 respectively. A review of OpenBoot Firmware, IEEE Standard 1275, will be given and why it was selected for the Power Series processor boards. A status report on the operating systems being ported to the PowerPC will be presented. The talk will close with a discussion of how the high performance architecture can be enhanced for future products. Time will be available for questions from the audience. The presenters will be able to deal with both hardware and software architectural questions.

Organiser : S. Cannon / CN / 5036

Tuesday 8 November

COMPUTING SEMINAR

at 10:30 - Bat 892 1-D-20 (Preessin Site)

PLEASE TAKE NOTE OF THE UNUSUAL DATE AND PLACE

Operator User Interface for Information navigation for LHC experiments

by John Meech, Senior Lecturer in Computing
University of the West of England, Bristol UK

This seminar describes the user-interface analysis and design work carried out as part of the CICERO (Control Information system Concepts based on Encapsulated Real-time Objects) project (RD38).

CICERO aims to build a generic control and information system for future experiments at CERN, including the LHC. The CICERO project will produce an integrating framework (into which distributed user control objects may be plugged) and a supporting control information system for the configuration and management of that system. The research described in this seminar concerns the design of end-user (e.g. operator) interfaces which will be implemented as part of the CICERO control framework. As part of the analysis phase of this part of the project, several existing experiments were used to identify the requirements for future control interfaces. An overview of the findings of this analysis phase will be given, together with the resulting requirements for possible future interfaces. This includes navigational requirements for the interface so information can be accessed and also possibilities

for information representation (including use of video, three-dimensional representations and use of Personal Digital Assistants for mobile viewing of information). These results are preliminary and we welcome feedback and comment from anyone interested in this area.

Organizers: Guy Baribaud / ECP, J-P. Porte / ECP

Wednesday 9 November

THEORETICAL SEMINAR

at 14.00 hrs - TH Conference Room

Extending the symmetries of the Standard Model

by Graham ROSS / CERN and Oxford University

We consider the prospects for determining the parameters of the (supersymmetric) Standard Model. An example is given of a simple Abelian flavour symmetry which generates the order of magnitude of the hierarchical structure for the quark and lepton masses and mixing angles. Anomaly cancellation requires that $\sin^2 \theta = 3/8$ at the GUT scale. The possibility that the infra-red fixed point structure of the theory determines the absolute magnitude of the masses and mixing angles (together with the remaining parameters) is explored.

Wednesday 9 November

COMPUTING SEMINAR

at 16.00 hrs – CN Auditorium, bldg 31-3005

DECnet: Present and future

by Denise HEAGERTY / CERN-CN

CERN routers have been running DECnet Phase V protocols for the past year. Now it is time for VMS systems at CERN to run the Phase V product, DECnet/OSI. This seminar will answer the following questions:

- why run DECnet/OSI software?
- what changes will DECnet/OSI bring?
- will applications run unchanged under DECnet/OSI?
- what happens if systems remain on Phase IV?

and looking to the future:

- with the clear dominance of the Internet TCP/IP protocols how does DECnet fit into the future of networking?

This seminar is intended as an “appetiser” for the course “DECnet/OSI for VMS System Managers” which will be held on Friday 11 Nov.

Organiser : D. Kemp / CN

Jeudi 10 novembre

PRESENTATION TECHNIQUE

à 14.00 h-17.00h - bât. 17/1-007

La haute technologie pour l'acquisition et le traitement de l'image

par Digital Vision Technologies (F), fabricant de micro-caméras CCD (marque MICAM) et distributeurs des cartes EURESYS (B)

Présentation des caméras MICAM:

- XR, VHR1000, VHR2000 (caméra monocoup)
- COLOR 750, VS500 (nouveaux produits)

Présentation des cartes EURESYS:

- PRIMO, SOLO, BRIO

Démonstration SOLO + VHR2000, démonstration basée sur les points suivants:

- pilotage du shutter
- prise d'image asynchrone
- intégration longue durée

Langues: français.

Renseignements: M. Diraison / FI-A / 4585

Thursday 10 November

CERN COLLOQUIUM

at 16.30 hrs - Auditorium*

Artificial Photosynthesis

by M. GRAETZEL / Ecole Polytechnique Fédérale de Lausanne

Learning from the concepts used by green plants we have developed a molecular photovoltaic device whose overall efficiency for solar energy conversion to electricity presently attains 10%. The system is based on the charge transfer sensitization of nanocrystalline films. In analogy to photosynthesis, the new photovoltaic device achieves the separation of light absorption and charge carrier transport. By virtue of its wide range of possible applications, its environmental compatibility, as well as the simplicity and low cost of production, the nanocrystalline solar cell should allow the exploitation of renewable energy and thus contribute to the achievement of sustainable development.

* Tea & coffee will be served at 16.00 hrs.

Friday 11 November

ONE DAY COURSE

from 09.00 to 16.30 hrs – CN Auditorium, bldg 31/3-005

DECnet/OSI (Phase V) for VMS System Managers

by Bob WATSON / Digital Equipment Corporation

This 1 day course is aimed at CERN VMS System Managers. You are advised to start installing DECnet/OSI once you have upgraded to VMS 6.1 and this seminar will not only describe the procedure to achieve that, but also some background and hints so that you feel comfortable with this latest version of DECnet. Whilst VMS users should see no difference (DCL commands and user programs can run unchanged), system managers need to be aware of the startup and configuration of DECnet/OSI. An example DECnet/OSI installation and configuration will be demonstrated and you will have plenty of opportunity to ask questions.

Organiser: Denise Heagerty / CN-CS

Monday 14 November

PPE SEMINAR

at 16.30 hrs – Auditorium

A new limit on the tau neutrino mass from the ALEPH experiment

by Fabio CERUTTI / INFN Frascati

Thursday 17 November

TECHNICAL PRESENTATION

9.00-12.00hrs - CN Auditorium

bldg. 31/3-005

The PCI (Peripheral Component Interconnect) Local Bus

by F. Bourgeois (ECP, TBC), J. Gipper (Motorola, TBC), T. Truong (Bull, France), A. van Praag (ECP)

Thursday 17 November

CERN ASTROPHYSICS SEMINAR

at 16.30 hrs - Auditorium*

Galaxy clusters and cosmology

by S. WHITE / Max-Planck Institute, Munich

Friday 18 November

TECHNICAL PRESENTATION

at 10.00 hrs - CN Amphitheatre

bldg 31/3-005

OS-9/OS-9000: Latest and Future Software Products

by Peter Dibble, Research Scientist, Microware Systems Corporation (USA).

Friday 18 November

TECHNICAL PRESENTATION

at 14.00 hrs – CN Amphitheatre

bldg 31/3-005

LynxOS on PowerPC and Other Lynx Developments.

by Mark Overgaard, vice-president of engineering, Lynx Real-Time Systems Inc., Los Gatos, California

POUR INFORMATION/ FOR INFORMATION

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Wednesday 9 November

SEMINAR ON PARTICLE PHYSICS

17.00 - Auditoire Stuckelberg

$B^0 - \bar{B}^0$ mixing.

by Dr Yorgos TSIPOLITIS / Carnegie Mellon University

The present status of the $B^0 - \bar{B}^0$ mixing will be presented.

Emphasis will be given on the methods and measurements by the LEP experiments.