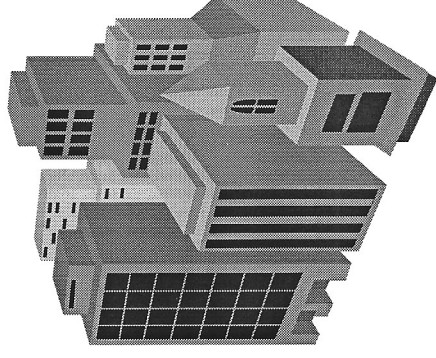


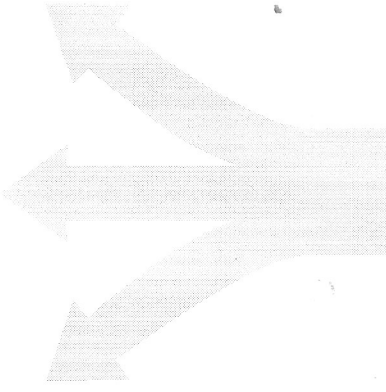
LATEST DEVELOPMENTS IN CONTINUING ENGINEERING EDUCATION

**Alfredo Soeiro
U Porto - ProRector
President IACEE
Sinaia, 14Jul01**

IACEE

- Founded in 1989, Beijing
- Headquarters in Lahti, Finland
- 12 Founder Organizations
- Mixed membership
- More than 430 members, 72 countries
- Make a difference in CEE
- www.iacee.org



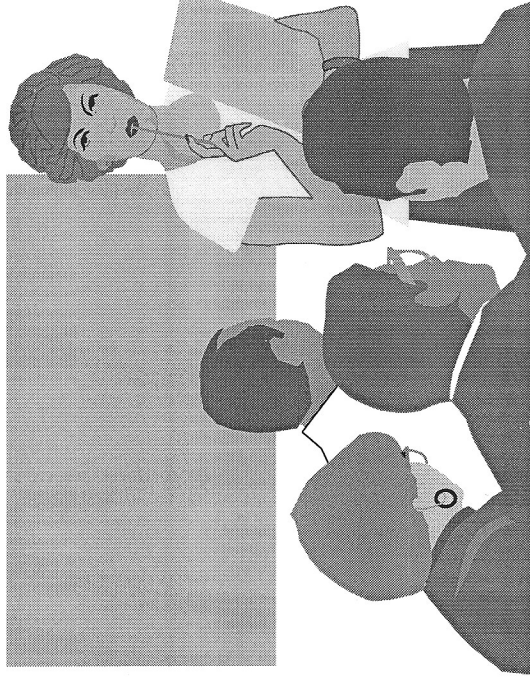


8th World IAEE Conference

- **Knowledge, Skills and Competency**
- **E-Learning**
- **Continuing Education Management**
- **The Business Case for CEE**
- **International CEE Practices**
- **Continuing Engineering Education
Issues**

FORMS of CEE

- **Individual**
- **Organizational**
- **Social**
- **Online**
- **F2F**
- **Mandatory/Optional**



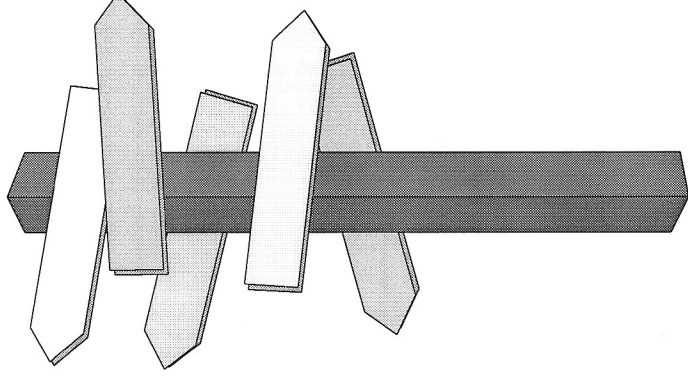
Characteristics of CEE



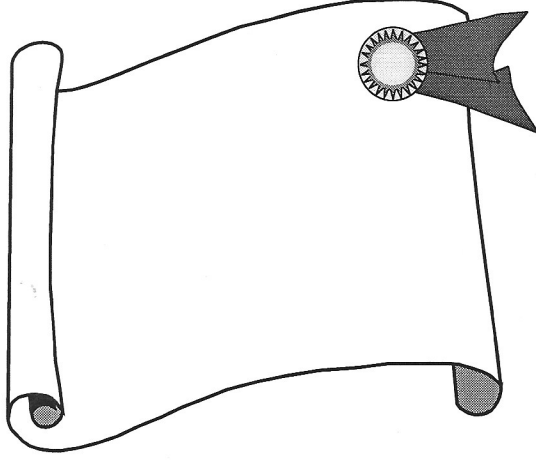
- **Process model (vs content)**
- **Self directed (vs teacher)**
- **Rich experience (vs little)**
- **Actual implementation (vs later)**
- **High motivation (vs uncertain)**
- **Reduced availability (vs free time)**
- **Student leads (vs teacher)**

CASE STUDIES

- Eurorecord
- Informal and prior learning
- Joint Initiatives
- Corporate Universities
- Accreditation Systems
- Future Trends



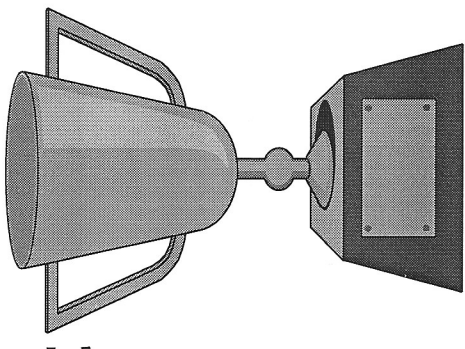
EURORECORD



- Individually driven
- Recognition of learning
- Recording progress
- Learning agreements
- Professional body, employers, providers
- Qualifications, competencies, achievements

EURORECORD (cont.)

- **Generic and not functional**
- **Ownership of prof. development**
- **Standard for eng. industry**
- **Software based tool**
- **Activity log**
- **Competence profile**
- **Learning and development plan**
- **<http://control.ethz.ch/eurorecord/>**



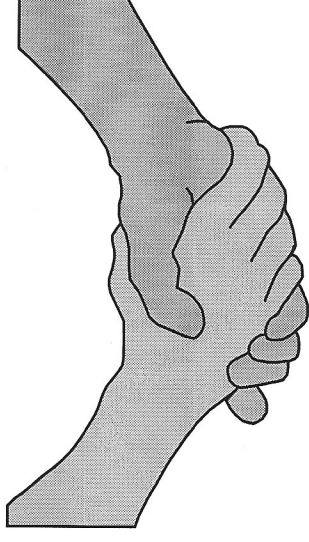
Informal and Prior Learning

- Complex working profiles
- Knowledge creation and transfer
- Disrupted path instead of career
- Role of educational institutions
- Dialogue with enterprises
- Curriculum change
- Adaptation of pedagogical methods



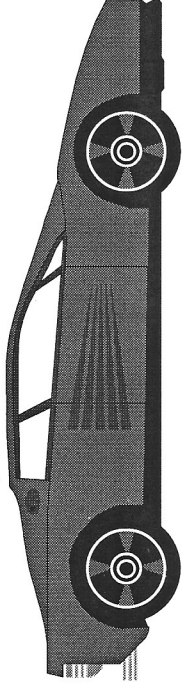
Informal and prior learning (cont)

- **Université de Lille and City University**
- **Process of information gathering**
- **Applicant guidance**
- **Education path defined**
- **Choice of training courses**
- **Portfolio of personal and professional learning**



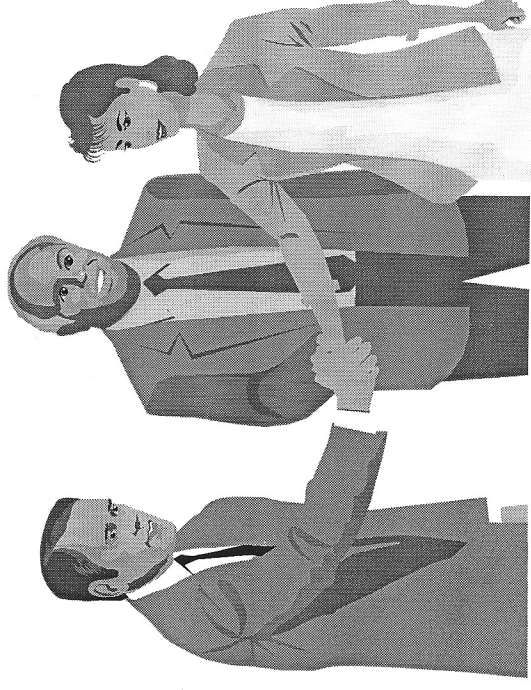
Joint Initiatives

- GM, U Michigan and U. Purdue
- Totally Integrated Vehicle and Manufacturing Engineering Program
- Job assignments, education and training
- Technical and business < 200 hrs
- Leadership development - no limit and tailored



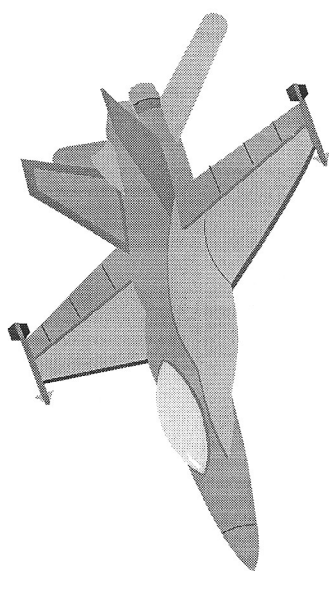
Joint Initiatives (cont.)

- Job description
- Skill setting
- Education
- Training
- Job interview
- Execution



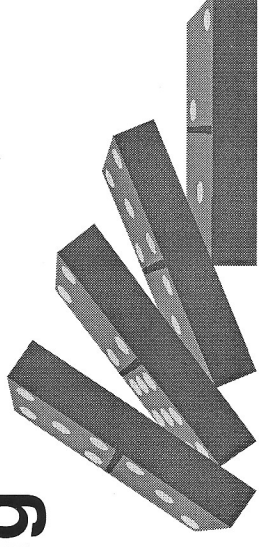
Corporate universities

- BAE and Nokia
- 80000 workers worldwide
- 450 million Euros in five years
- Strong and open leadership
- Cooperation not dependence
- Online economy of scale
- Role of universities



Bologna Declaration

- Three cycle (3, 5, 8 years)
- Shorter engineering degrees
- Student profile
- Curriculum - basic or specialized
- Importance of CEE
- CEE and initial engineering education



Future of CEE

- **Knowledge as economic asset**
- **Technology influence**
- **F2F education**
- **Technical vs Social skills**
- **Economic vs Value driven**
- **Role of educators**
- **Online CEE (global, local)**

