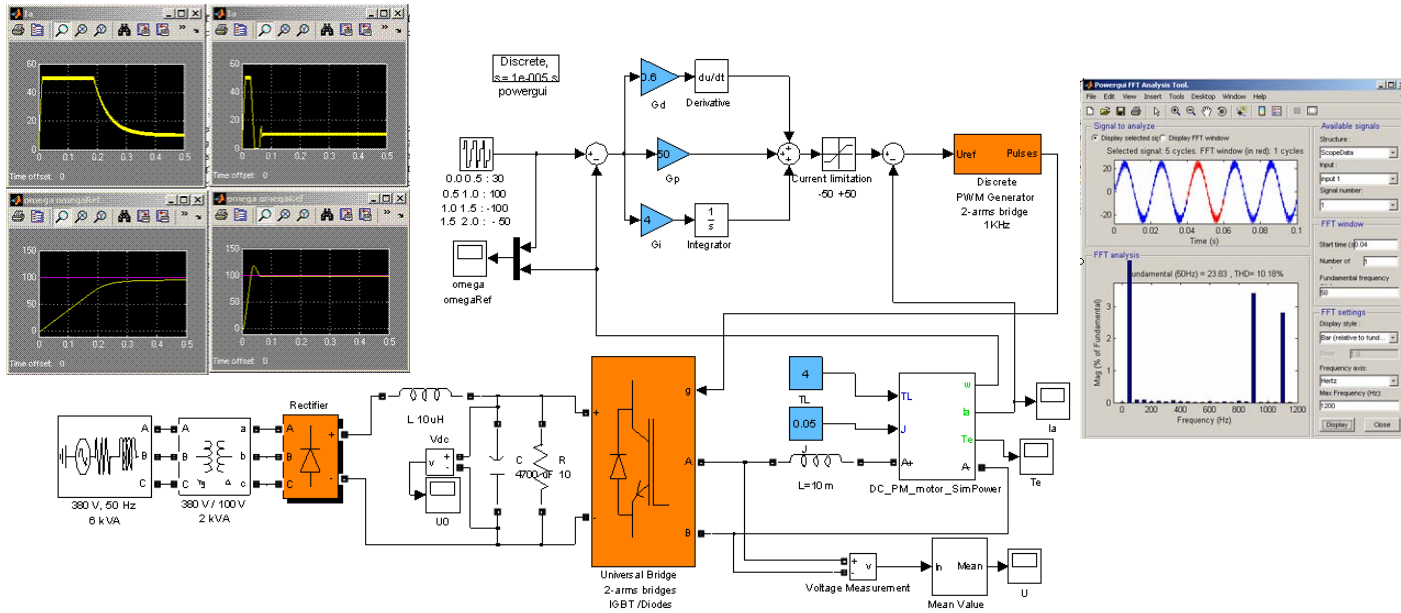


MATLAB/SIMULINK in Drives and Power Electronics



4 Faculties , 3 Institutes of Technology

Sciences

Medicine

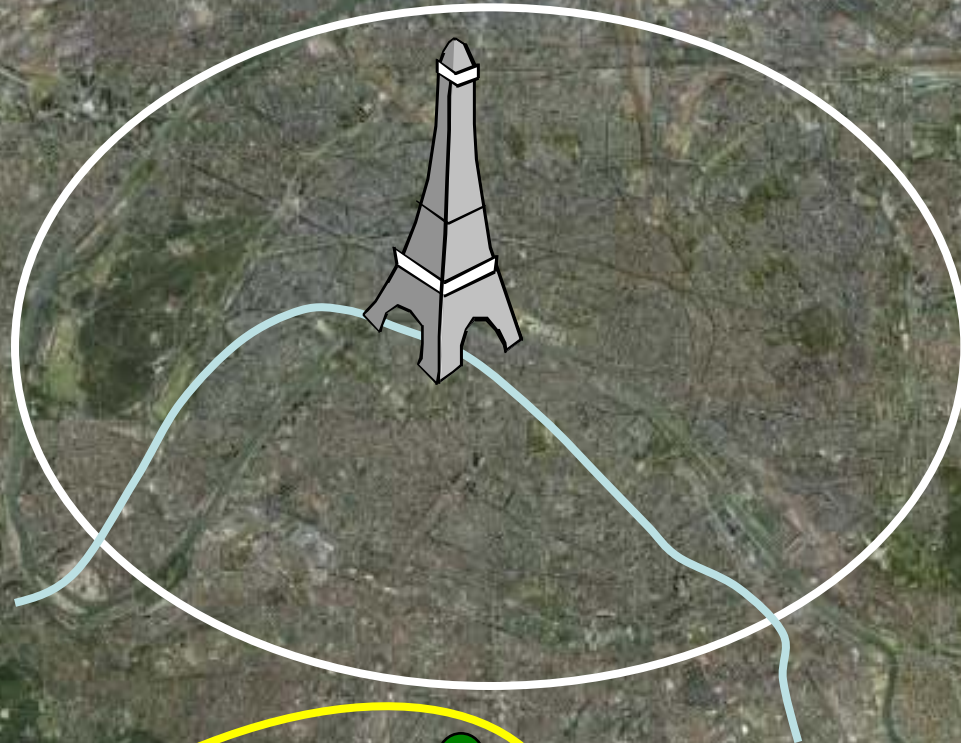
Pharmacy

Law and et Economy

IUT Sceaux

IUT Orsay

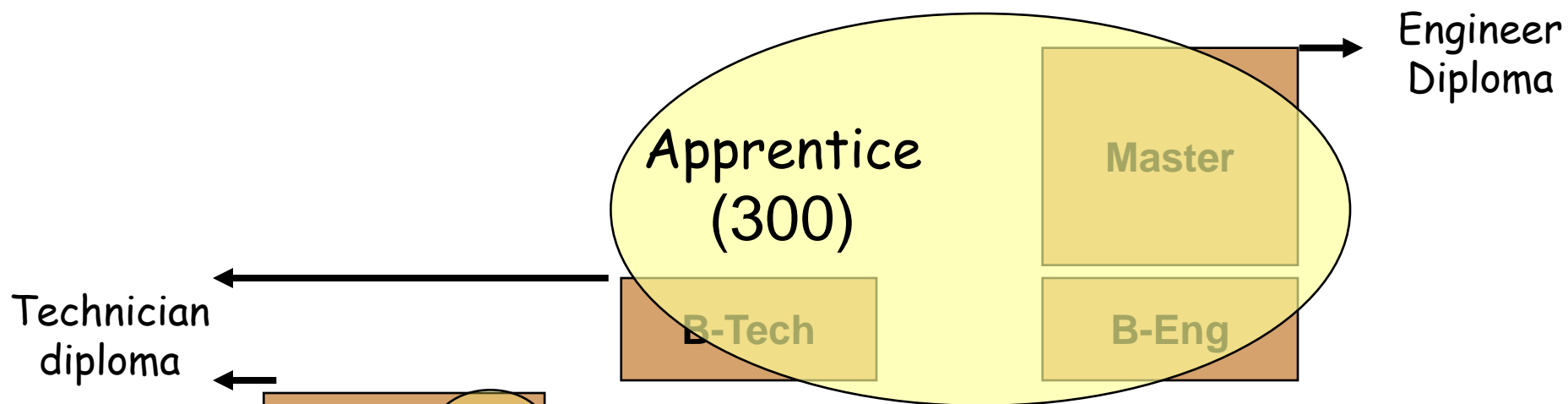
IUT Cachan



Departments of Electrical Engineering & Industrial Data Processing

3 Specialties :

- Telecom Systems Integration*
- Power Systems Integration*
- Industrial Data Processing*



(30)

DUT
(500)

4 Specialties :

- Electronics*
- Automation and Systems*
- Energy and Power Electronics*
- Industrial Data processing*

Up to 11 Specialties (flexibility):

- Telecom Systems Integrations*
- Industrial Automation*
- Embedded Real Time Systems*
- Car Electronic Systems Integration*
- Car Computer networks*
- Technical sales*

.....

Department ***MOCOSEM***
Modeling and Control of Electromagnetic Systems

Team ***COCODI*** : **C**Onception **C**OMmand and **D**iagnostic

Team ***ICHAMS*** : **I**nteraction **F**ields – **M**aterials - **S**tructures

Department ***MADELEC***
Materials and Devices for Electronics

Team ***CE*** : **E**lectrical **C**ontacts

Team ***MDMI*** : **M**aterials and **D**evices from **M**icrowaves to **I**nfrared

Team ***SCM*** : **T**hin **L**ayer **S**emiconductors

1993 ...

PALESTINE

Software & Databases
 Industrial Data Processing
 Electronic circuits CAD
 Industrial Automation & Control
 Electronics for Telecommunications

1997

Summer
 Universities
**(Lebanon
 Syria
 Jordan)**

Electrical
 Engineering,
 IDP

2003-2006

**TEMPUS
 (Lebanon
 Syria
 Jordan
 Palestine)**

Training for Industrial
 System Integrators

2003 ...

**SYRIA
 (FPGA
 PLC
 μ P, μ C)**

2004 ...

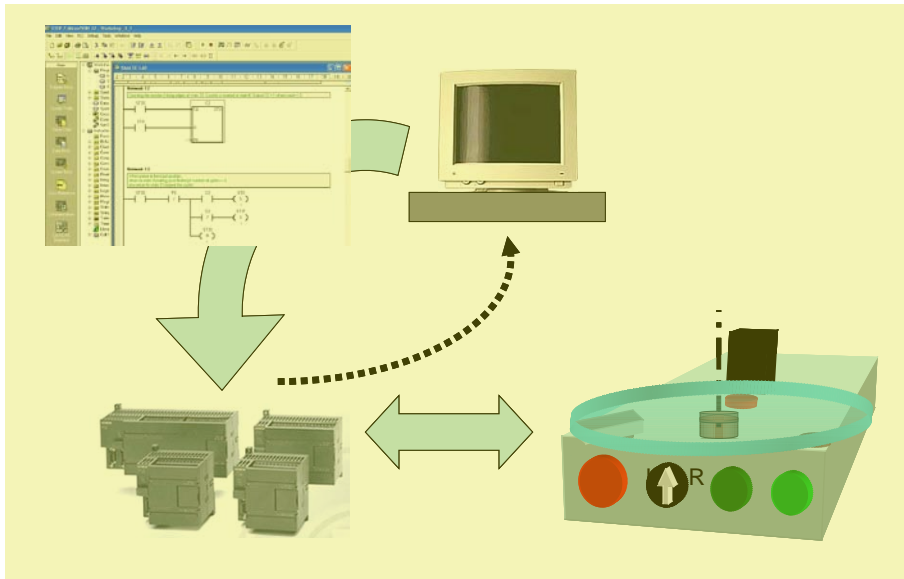
**LEBANON
 (μ C, FPGA,
 PLC)**

2004 ...

**JORDAN
 (PLC, μ C)**



Programmable Logic Controllers



Bir Zeit, November 2004

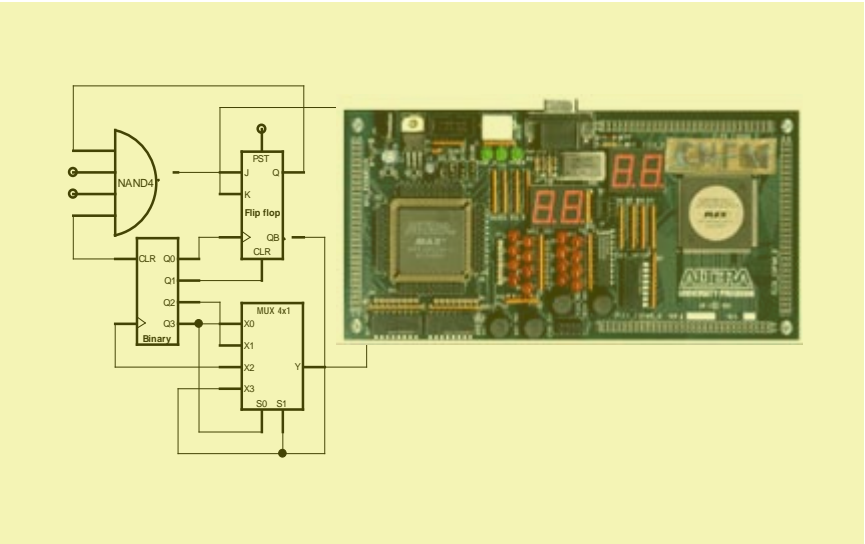
Jean Deprez

- 1- Introduction to PLC
- 2- Combinatorial systems
- 3- Sequential systems, SFC
- 4- Predefined function blocks
- 5- Analog expansion module
- 6- Structuring programs
- 7- Introduction to Functional Analysis applied to Automated Production Systems

18 participants

Bir Zeit	12
An Najah	1
Hijjawy College	1
Al Quds	2
PPU	2

Development methods for FPGA



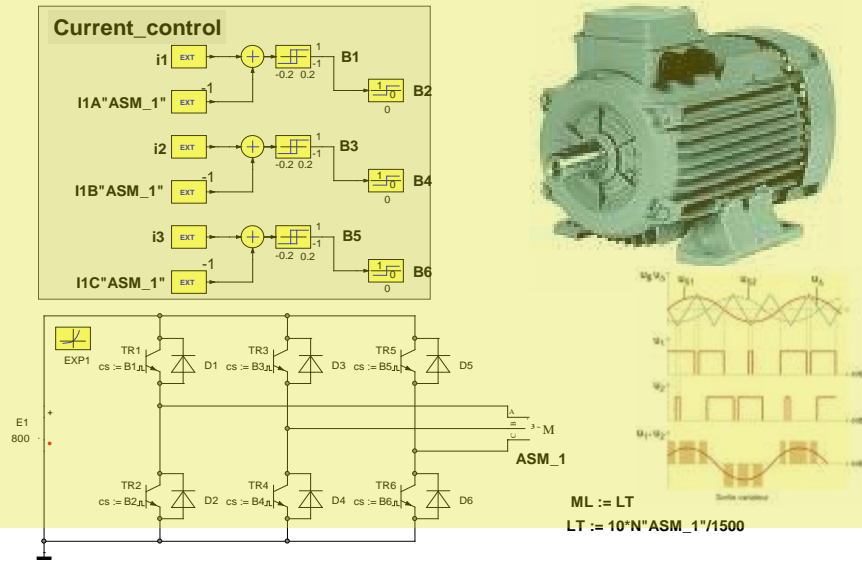
Bir Zeit, February 2005 Joëlle Maillefert

- 1- Introduction to PLDs and FPGA
- 2- VHDL language in combinatorial logic
- 3- VHDL language in sequential logic - state machines
- 4- Project : design of a 2 digits counter
- 5- Architecture of PLDs and FPGAs
- 6- Advanced use of MaxPlus 2 / Quartus

16 participants

Bir Zeit	10
An Najah	2
Al Quds	2
PPU	2

AC Drives : practice and simulation



PTC Tulkarem, September 2005

Anthony Juton, Yves Guinand,
Jean Deprez

- 1- Introduction to SIMPLORER: bridge inverter
- 2- Induction motor in sine-waves operations
- 3- Scalar control in open loop
- 4- PLC control of the frequency inverter
- 5- Scalar Control in closed loop
- 6- Introduction to Vector Control

13 participants

PTC Tulkarm	6
PTC Al Aroub	2
Hijjawy College	1
Vocational Schools	2
PPU	2

Microcontrollers & Robotics

```

if (PORTBbits.DB3==0)
    PORTAbits.BA6=PORTCbits.BC2;
else
    PORTAbits.BA6=PORTCbits.BC1;
    
```



PTC Tulkarem, April 2006

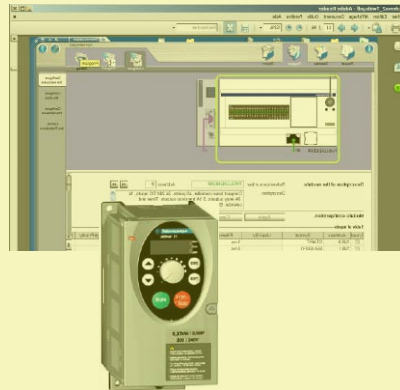
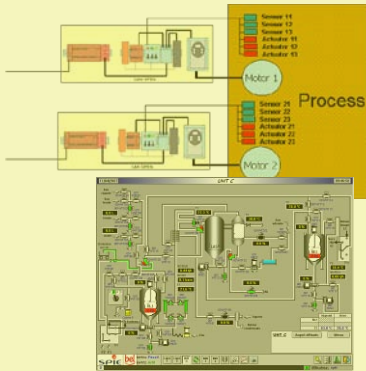
Joëlle Maillefert, Anthony Juton,
Yves Guinand, Jean Deprez

- 1- PIC Microcontroller
 - Integrated development environment
 - Embedded C-language, Digital inputs/outputs
- 2- Timers / Counters, Pulse Width Modulation
- 3- ADC, Serial Communication Interface
- 4- Communication Interface: I2C , Interrupts
- 5- Basic States Machines
- 6- Robotic Cup

23 participants

PTC Tulkarm	9
An Najah	2
Hijjawy College	1
Vocational Schools	2
PPU	5
Bir Zeit	2
Al Quds	2

Networking PLCs Supervision



PTU Tulkarm, November 2008
 Joëlle Maillefert, Anthony Juton,
 Jean-Louis Bianchi, Jean Deprez

- 1- Introduction to networked automated systems.
- 2- Ethernet TCP-IP
- 3- MODBUS TCP-IP
- 4- CAN - CANopen
- 5- Introduction to supervision (SCADA)
- 6- OPC Server, Vijeo Look
- 7- Project : Induction motor control and supervision

21 participants

PTU Tulkarm	10
An Najah	2
PPU	3
Bir Zeit	2
Al Quds	2
Al Quds Open	2

جامعة فلسطين التقنية



Kadoorie
 خنطورى
 Palestine Technical University



Sport activities...





... and other activities



MATLAB/SIMULINK in Drives and Power Electronics

28 hours over 4 days

- Introduction to Matlab
- Introduction to Simulink
- DC-Motor Control design
- DC-Motor Chopper design SimPowerSystems
- Introduction to Stateflow/Statechart
- Induction Motor Inverter Control
- Synchronous Motor Modeling
- Synchronous Motor Control

Focus on Practice

