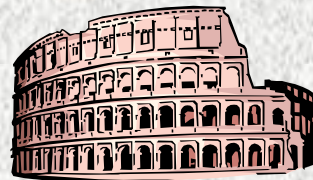




The **UMR2 DISP** **ESEG**
Welcomes you to
ESRM IM
October 21-23, 2002





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Mario Pio RUSSO, URM2

ESE ACTIVITIES

- **Code-reading and Functional-testing Comparison**
 - Java event-driven code
 - C++ Frameworks for the Air-space domain
- **Inspection of UML HL Docs.**
 - Checklist Based Reading vs. Use-case Based Reading

Experiment Process Report

- ü **Experiment Definition**
- ü **Experiment Planning**
- ü **Operation**
- ü **Statistical analysis approach**
- ü **Summary and conclusions**

Experiment Definition

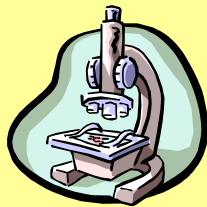
TECHNIQUE #1
(READING)

SUBJECTS
Students of different
level of experience

TECHNIQUE #2
(READING OR TESTING)

Point of view:

RESEARCH



**COMPARISON
PROCESS**

Purpose:

Efficiency
Effectiveness

Best Technique



OBJECTS

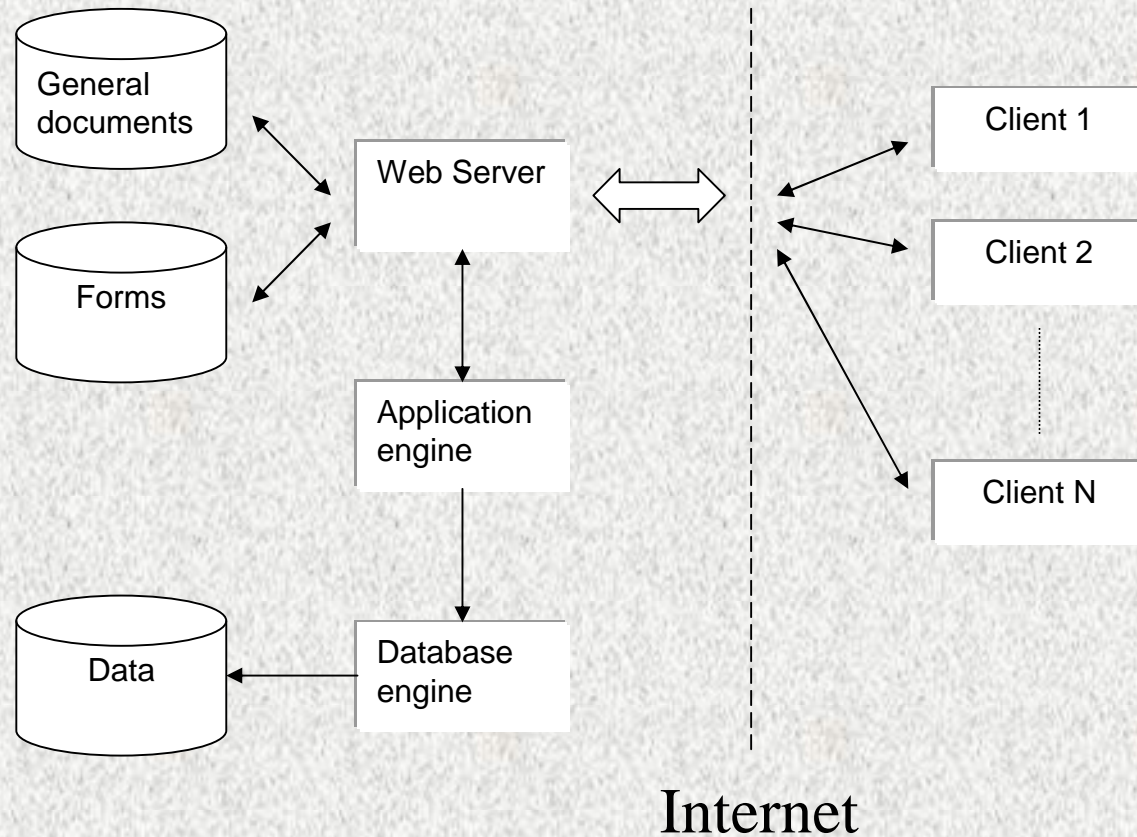
HL or LL
Software

CONTEXTS: Two Universities

Automated Data Collection System



System implementation



The Basic Experiment: *Subjects performance*

■ t-test to compare means :

P-value = 0.539

With

95.0% confidence level

■ Mann-Whitney test :

P-value = 0.555

With

95.0% confidence level

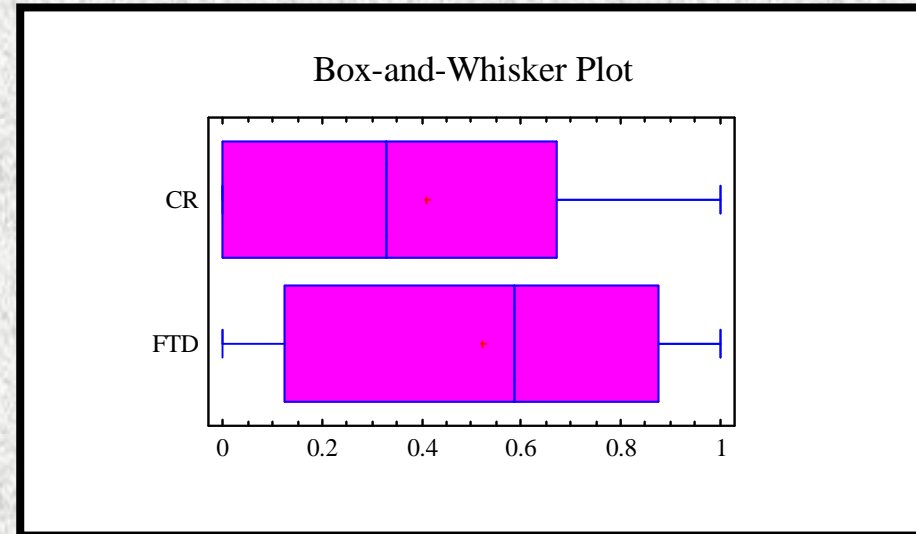
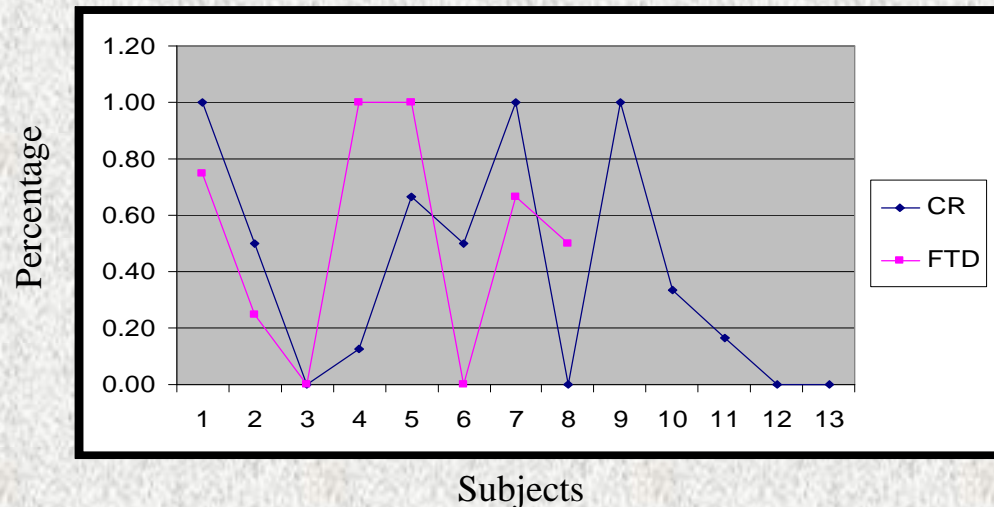


Figure 1 Box-and – Whisker plot



**Figure 2 Percentage of correct detection
for each subject**

Replication #1

Subjects performance

■ t-test to compare means :

P-value = 0.795

With

95.0% confidence level

■ Mann-Whitney test :

P-value = 0.999

With

95.0% confidence level

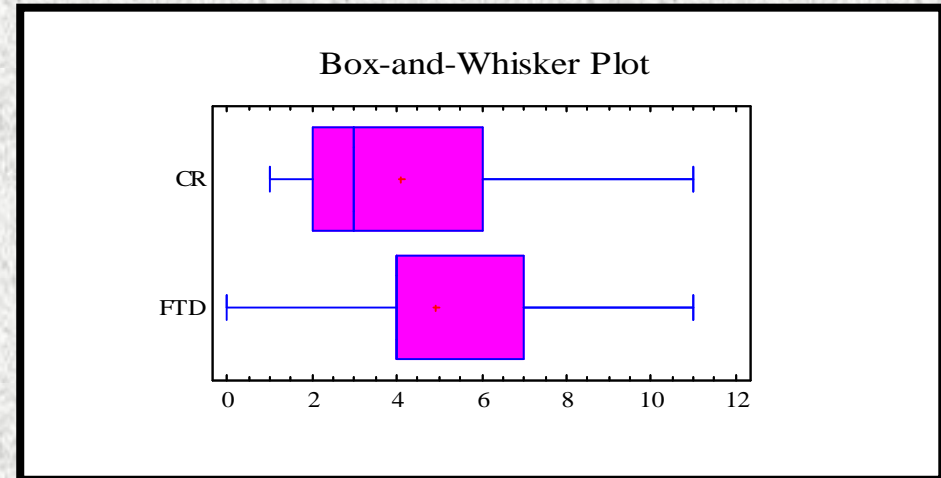


Figure 1 Box-and – Whisker plot

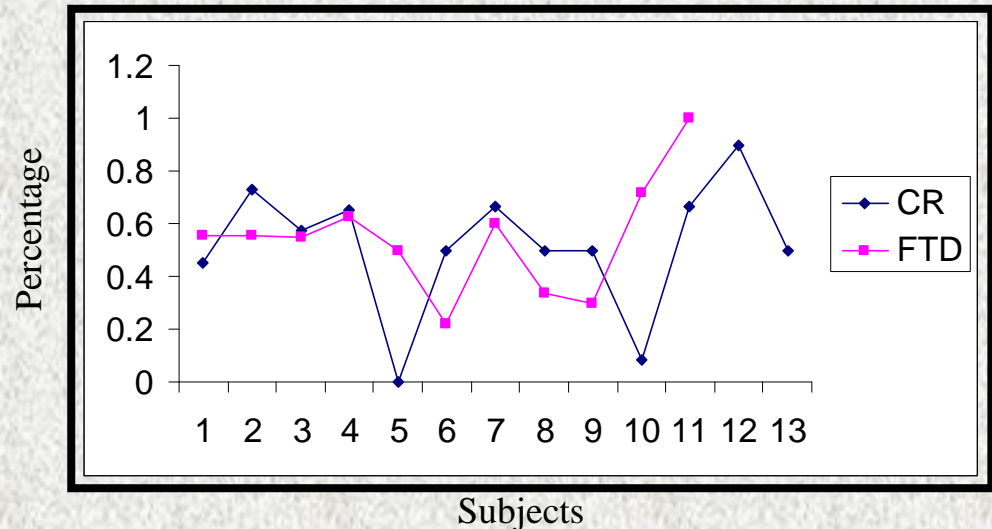


Figure 2 Percentage of correct detection for each subject

Replication #2: Efficiency

t-test to compare means :

P-value = 0.871
with
95.0% confidence level

Mann-Whitney test :

P-value = 0.973
With
95.0% confidence level

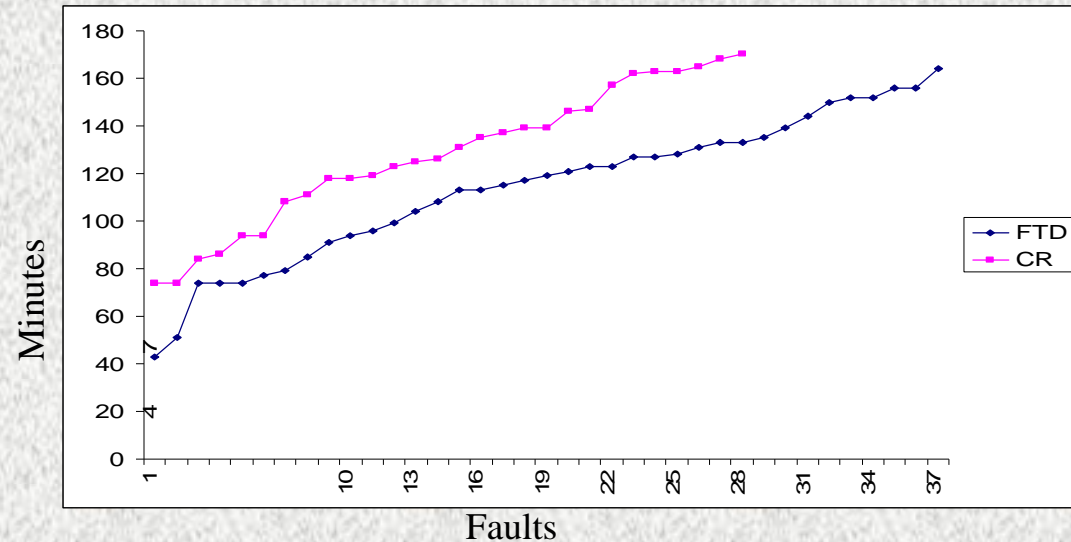


Figure 1 Duration Time1

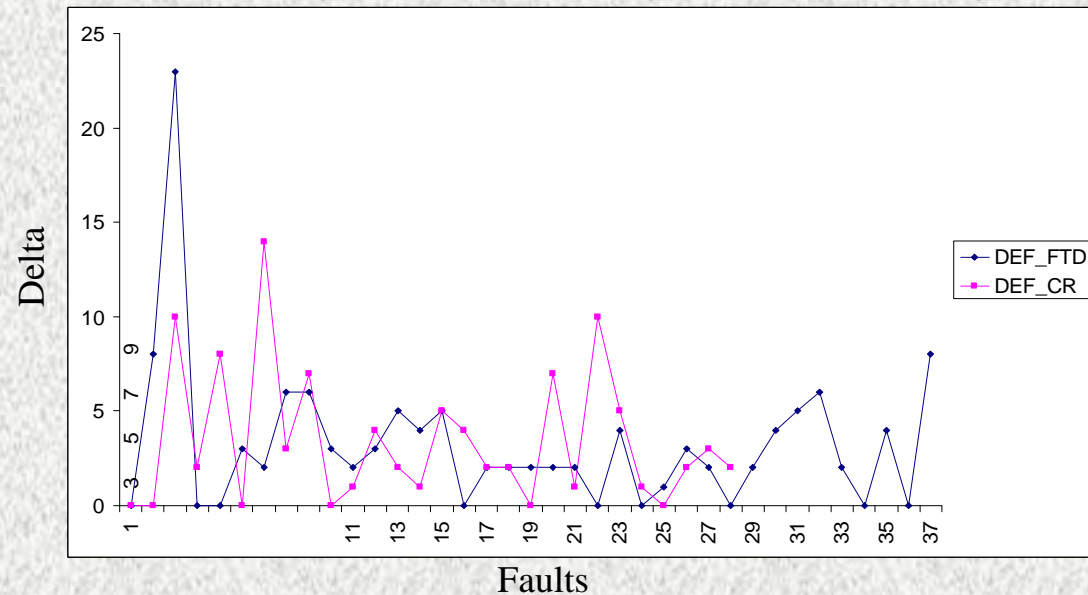


Figure 2 Delta value between detections

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Introduction
by Giovanni Cantone



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ANNOUNCED PARTICIPANTS

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OTHER POSSIBLE PARTICIPANTS

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ESRM GOALS

1. To define the state of the art of SRM, and evaluate which kind of empirical approach (Surveys, Case-studies, Experiments) can and should be followed.



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ESRM GOALS %

2. To establish a connection with empirical research in other areas, mainly ESE, and their organizations (ISERN, IEEE ISESE, EC Projects).

3.1 To call for collaboration to ESE IW

3.2 To reason on possible establishment of IEEE ESEM IW starting from 2003



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ESRM GOALS %

3. To establish a link among EC industrial and academic researchers



RELATING TO GOAL #1

To define the state of the art of SRM, and evaluate which kind of empirical approach (Surveys, Case-studies, Experiments) can and should be followed.

Talks

Each **45 minutes** length, including
**VERY WELCOME INTERRUPTS FOR
QUESTIONING & FEEDBACK**

Informal questioning

Each **15 minutes** length
During coffee break



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RELATING TO GOAL #1 %

To define the state of the art of SRM, and evaluate which kind of empirical approach (Surveys, Case-studies, Experiments) can and should be followed.

Speakers

Morning

Fred HEEMSTRA F.J. ODU
Macario POLO USAOLA UCL

Afternoon

Freimut BERND IESE, Kaiserslautern
Luigi CANTONE UNA1
Rob KUSTER, R.J. ODU



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RELATING TO GOAL #2

To establish a connection with empirical research in other areas, mainly ESE, and their organizations (ISERN, IEEE ISESE, EC Projects).

Speaker

Late Morning

Giovanni CANTONE, URM2



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RELATING TO GOAL #3

To establish a link among EC industrial and academic researchers.

Discussion to be started during previous session

(Call for Participation),

hence, continued informally at lunch or dinner (*), formally tomorrow after lunch, and/or Wednesday morning, depending on availability of industrial participants.



**Enjoy
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October 21-23, 2002**



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