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Networking with VISIR

11 April 2017

Rio de Janeiro - Brazil

CARINTHIA
UNIVERSITY
OF APPLIED
SCIENCES



FACHHOCHSCHULE
KÄRNTEN

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AGENDA OF THE MEETING

11. April. 2017

9:00 – 10:45 VISIR – Special Interest Group

- VISIR under iLab

10:45 – 11:00 Coffee break

11:00 – 11:30

- PILAR project – Strategic partnership

11:30 – 12:30 Wrap up/ Discussions

AGENDA

1. What is the VISIR Special Interest group
2. What is iLab
3. How to include Online labs in iLab
4. PILAR project – Synergy with VISIR+
5. Exploratory discussion on networking in Brazil
6. Wrap up/ Discussions

NETWORKING WITH ONLINE LABS (SHARING)

- Organizational level
- Technical level (RLMS)
- Platform level (e.g. VISIR)



VISIR SPECIAL INTEREST GROUP

Special Interest Group inside IAOE – speaker: Prof. Gustavo Alves, ISEP

Members: open membership, no official registration

Achievements 2016

- 2 more VISIR nodes PUC-RIO and UFSC
- Over 100 publications
- Best paper award CIPSEE 2016 and TEEM 2016
- GOLG Award 2016 for VISIR
- Projects: VISIR+, PILAR, Next-Lab, OLAREX, Go-Lab

EVENTS AND NEWS

Plans for 2017

- Install new VISIR nodes in Argentina and Brazil
- Build the VISIR federation under PILAR
- Tutorial/ workshops/ seminars at international conferences
- Reach 10.000 students who are learning with VISIR (PILAR)

If you are interested to be part of the community please subscribe to the mailing list

<http://lists.online-lists.org/mailman/listinfo/sig-visir>

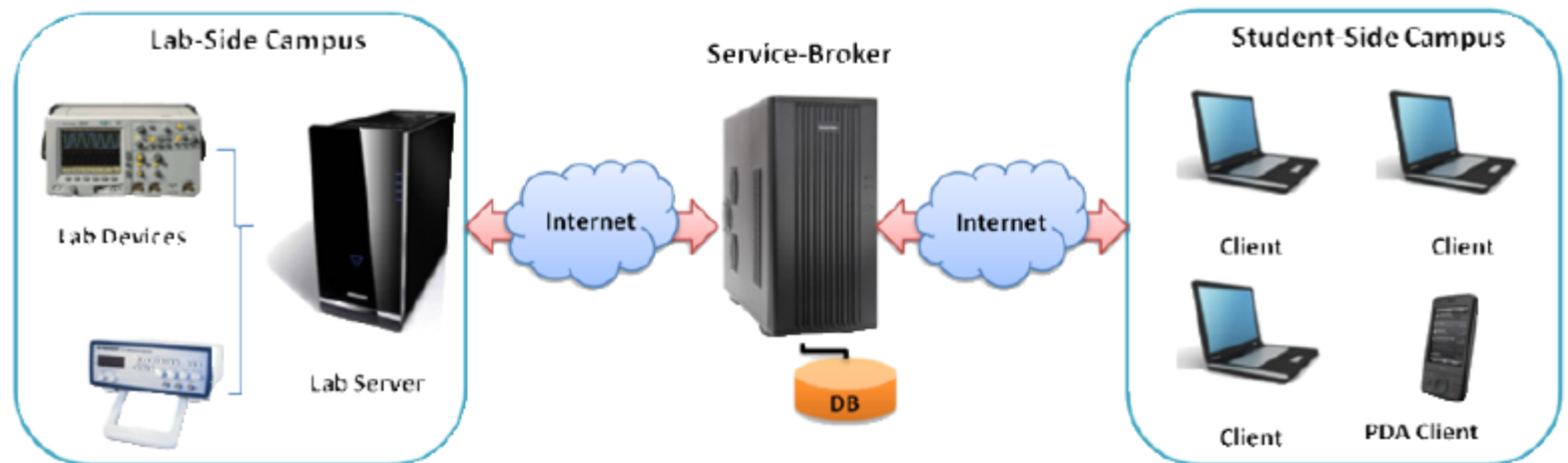
VISIR UNDER DIFFERENT RLMS



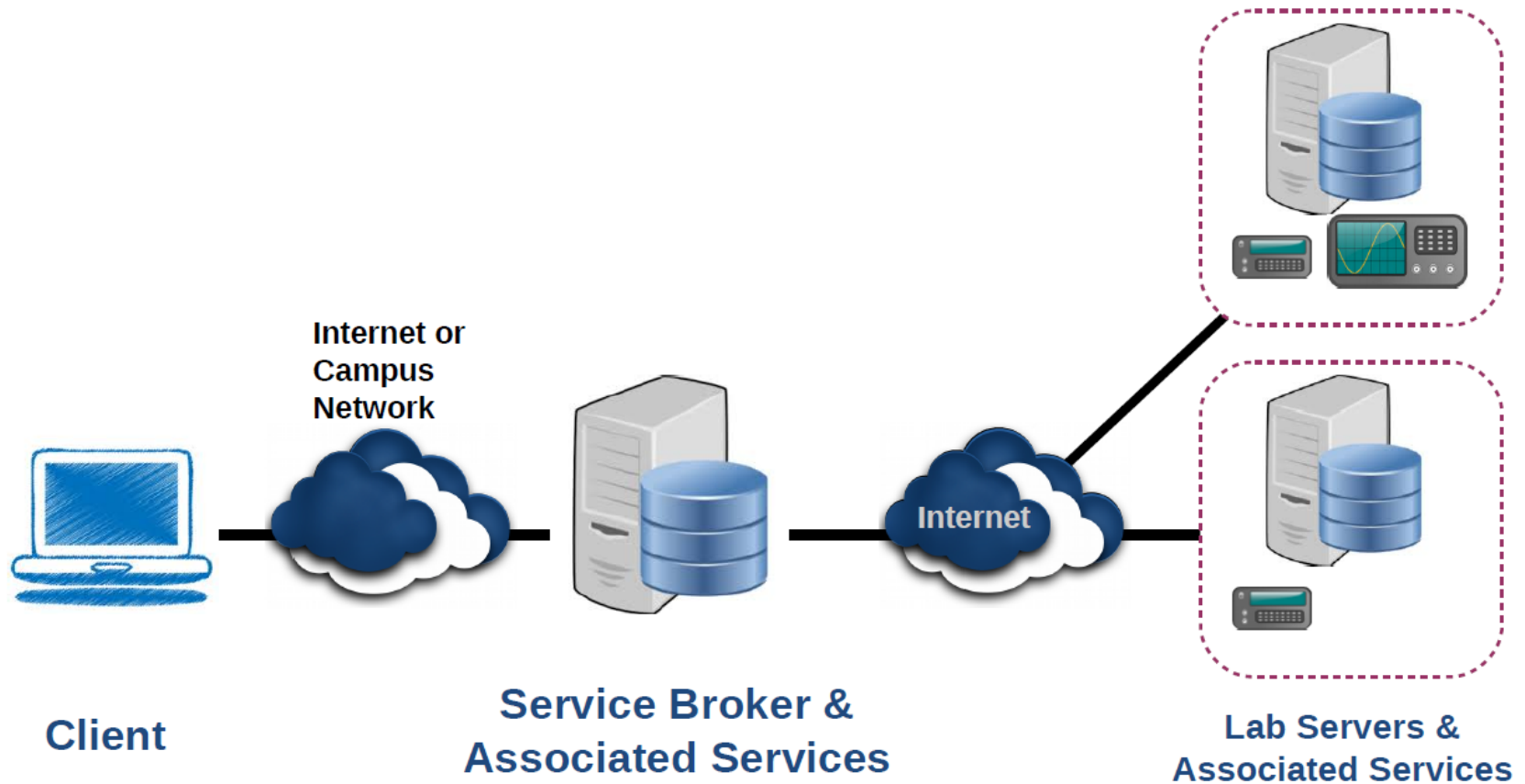
THE ILAB SHARED ARCHITECTURE

MIT ISA

- A software architecture developed at the MIT
- Offers a common framework for sharing online labs
- Provides a platform-independent API based on Web services
- User management
- Experiment session maintenance (scheduling, execution)
- Supports Batched and Interactive Experiments



THREE-TIER ARCHITECTURE



THE ILAB SHARED ARCHITECTURE

Link to VISIR experiments under iLab

ilabs.cti.ac.at

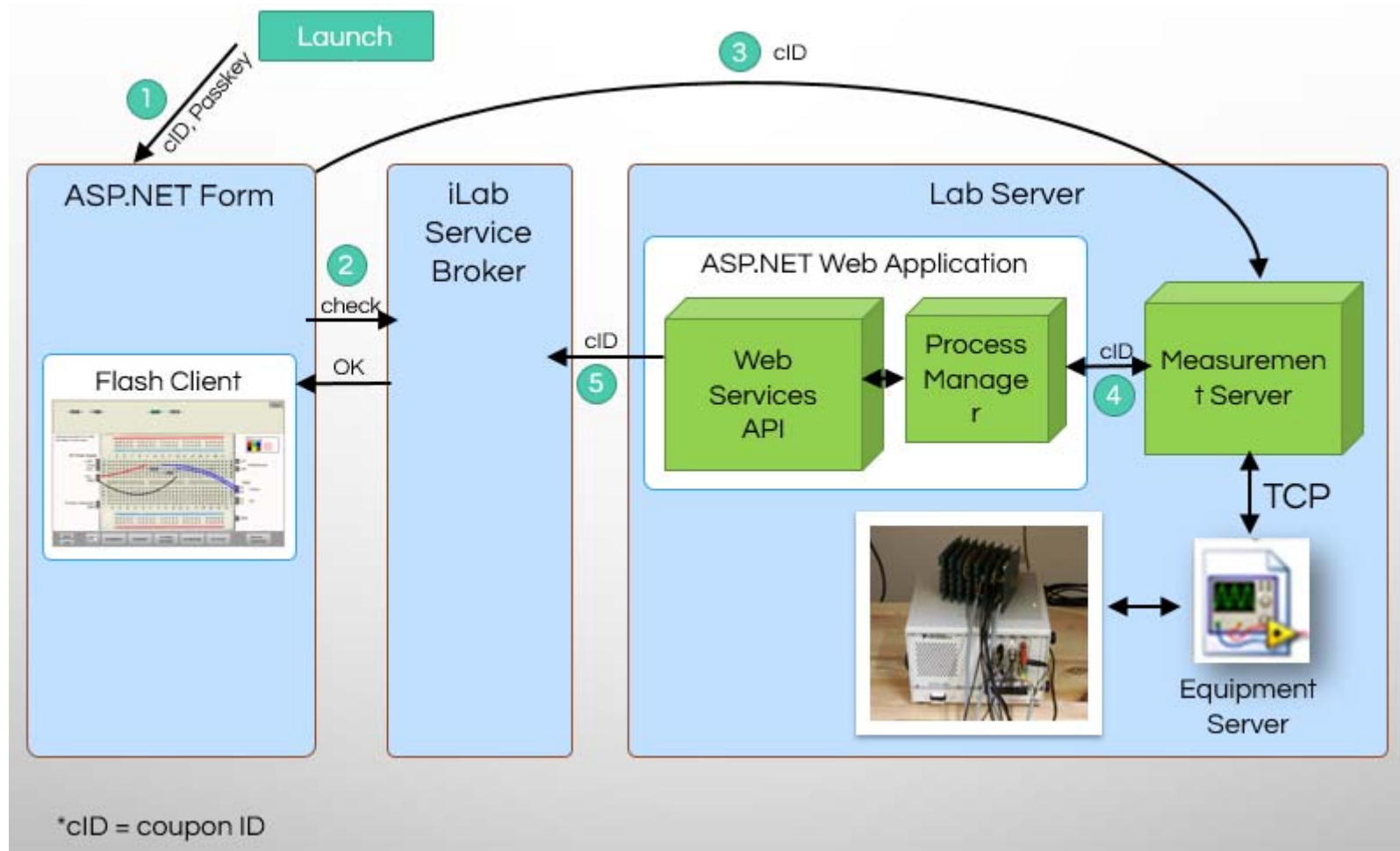
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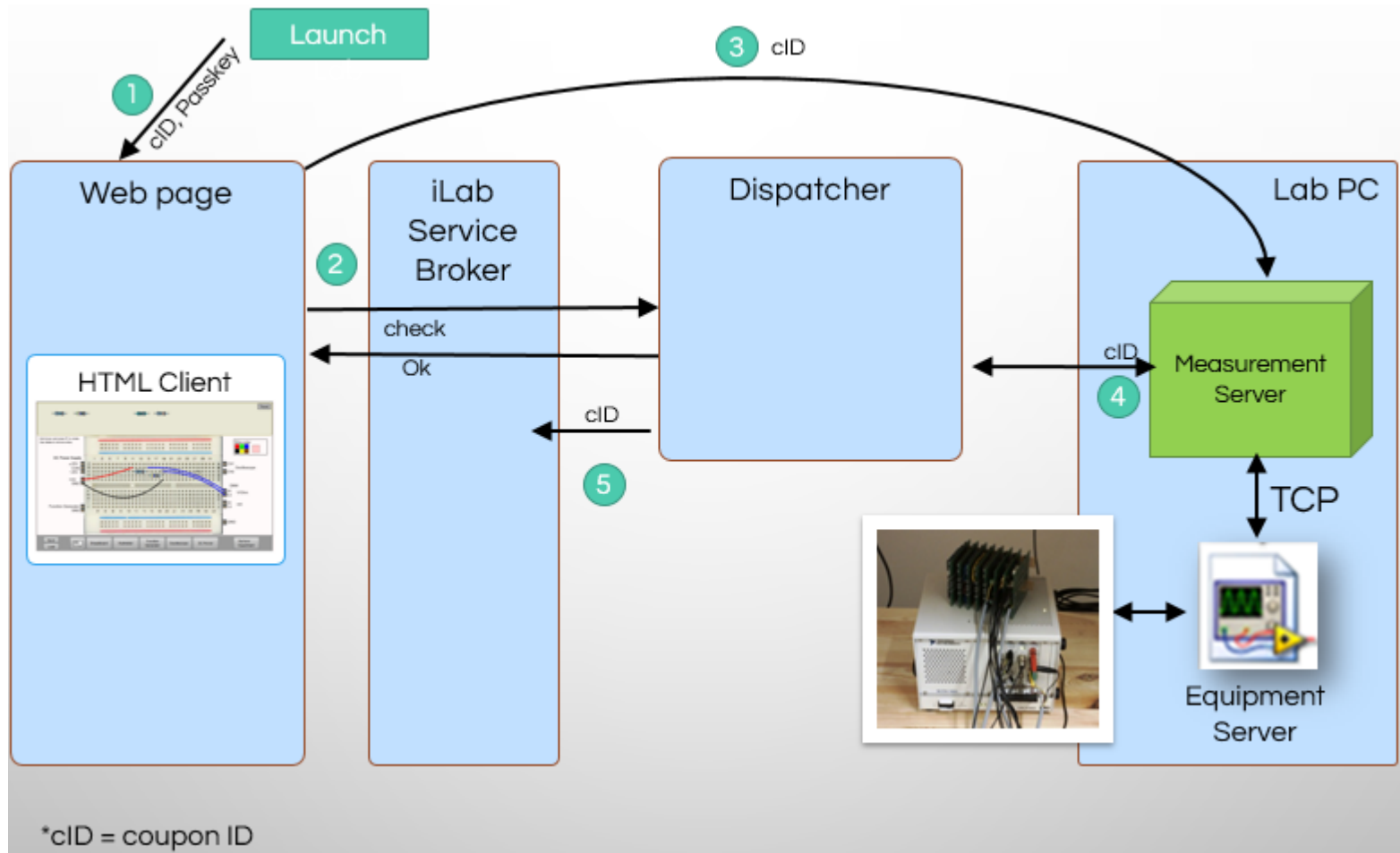
Or directly to the experiments without registration

http://clients.onlinelabs4all.org/labLauncher/?lab_id=visir

SYSTEM ARCHITECTURE - ILAB



SYSTEM ARCHITECTURE - DISPATCHER



CONNECTION RLMS AND LMS

- Example: iLab and Moodle
- Advantage:
 - Single sign on – no need to manage user accounts on the RLMS side
 - Sharing data and resources
 - Easier to integrate experiment with learning material

VISIR IN MOODLE

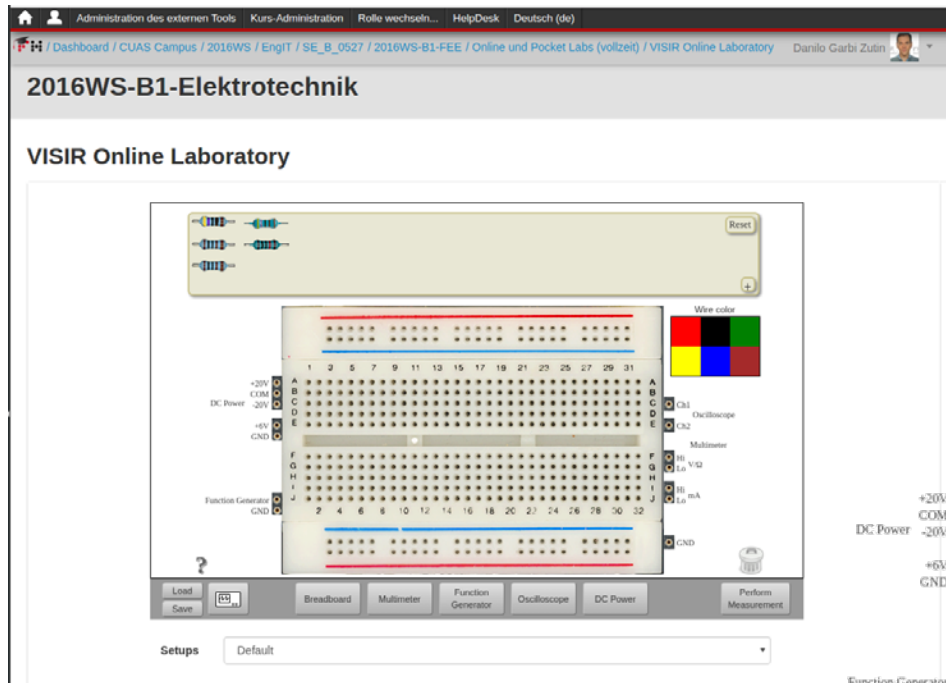
- Gateway4labs supports LTI standard (Learning Tool Interoperability)
- All labs which use supported RLMS can be integrated
 - iLabs
 - Weblab Deusto
 - RemLab
 - And more...
- **Allows single-sign on**

HOW WE USE VISIR IN TEACHING

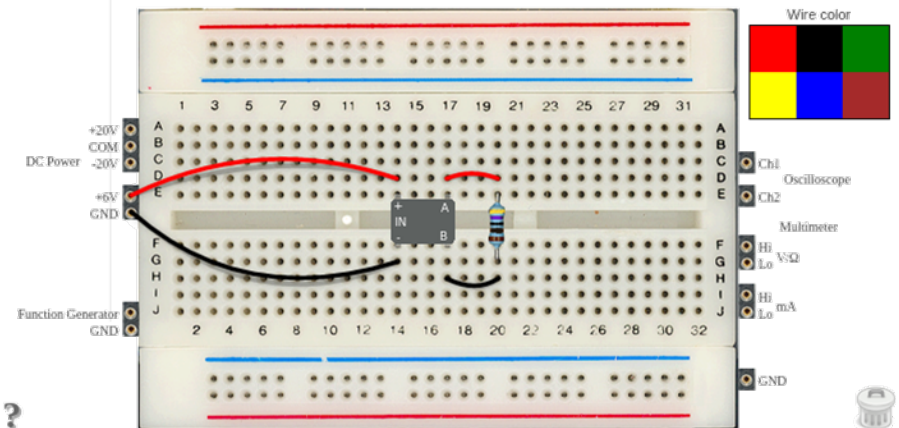
- VISIR is used in the **Basics of Electronics** course as part of CUAS's Online & Pocket Labs Initiative
- Experiments:
 - Ohm's Law, current and voltage divider
 - Thévenin and Norton's theorem
 - Measurement of the time constant of an RL circuit
- Experiment assignment in Moodle
- Students submit an experiment protocol

HOW WE USE VISIR IN TEACHING

- Course material is delivered via Moodle
- VISIR is included as an external tool into Moodle (via Gateway4Labs)



Exemple: Thévenin and Norton's theorem





THANK YOU FOR YOUR ATTENTION!

QUESTIONS?

OPEN DISCUSSIONS

PILAR

Platform **I**ntegration of **L**aboratories based on the **A**rchitecture
of visi**R**

Erasmus+

Strategic Partnerships for higher education
Development of Innovation

36 months → From 01/09/2016 to 31/08/2019



PILAR - PARTNERS

8 partners

- 1. UNED- DIEEC**
- 2. Instituto Politecnico Do Porto**
- 3. Blekinge Institute Technology**
- 4. Deusto University**
- 5. Carinthia University of Applied Sciences**
- 6. International Association of Online Engineering**
- 7. EVM Project Management Experts SL**
- 8. Omnia the Joint Authority of Education in Spoo Region**

PILAR - GOALS

- 1. Building a reliable, highly available, unique international VISIR platform federation**, that integrates all the different resources used by VISIR in each of the partners (BTH, CUAS, UDEUSTO, IPP, UNED)
- 2. This federation will be completely opened to other partners** in Europe, through **easy gateways to the federation**, allowing to extend the capabilities of PILAR to **much more interested educational institutions**
- 3. Building a set of remote practices**, based in this new platform, **for electrical and electronics circuits, at school, grade and master level, and also as a lifelong learning activity**
- 4. Those new remote Practices as VISIR Internet services must allow, in a transparent way, the use of the best set of remote learning services** of each partner in each moment

PILAR – STATUS MARCH

1st Step: define what means a Federation → during KOM

2nd Step: VISIR State of the art → analyzing received information

3rd Step: VISIR now and in the future → WIP

PILAR – SYNERGY WITH VISIR+

- Building a reliable international VISIR network:
 - universities, high schools, etc.
- Having a lot of practices available anytime and everywhere:
 - School
 - Grade
 - Master
- Improvements (for every VISIR system):
 - A more efficient use of VISIR resources
 - A better control of student's learning process

PILAR & VISIR+

- All results in VISIR+ project will benefit PILAR
- All results in PILAR project will benefit VISIR+
- And the VISIR remote lab community will grow



THANK YOU FOR YOUR ATTENTION!

QUESTIONS?

OPEN DISCUSSIONS