



E-infrastructure shared between Europe and Latin America

The EELA Project

Rafael Mayo

CIEMAT

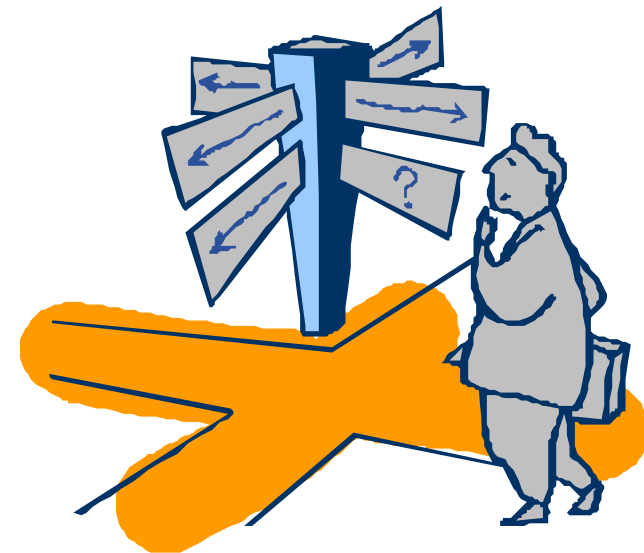
IBERGRID Conference

Santiago de Compostela, 14-16.05.2007

www.eu-eela.org



- The EELA Project
- Structure
- E-Infrastructure
- Applications
- Dissemination





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AIMS

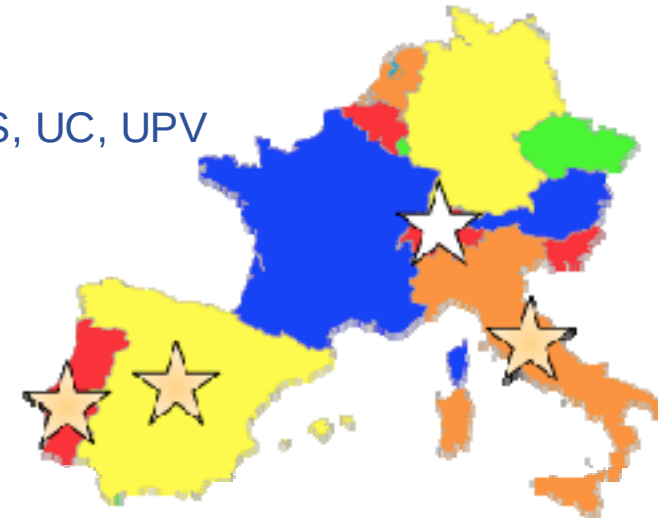
**BUILD A BRIDGE BETWEEN
CONSOLIDATED E-INFRASTRUCTURE
INITIATIVES IN EUROPE AND
EMERGING ONES IN LATIN AMERICA**

**REINFORCE COLLABORATION
BETWEEN LATIN AMERICA AND
EUROPE**

Italy: INFN

Portugal: LIP

Spain: **CIEMAT**, CSIC, Red.ES, UC, UPV
CERN



Argentina: UNLP

Brazil: CEDERJ, RNP, UFF, UFRJ

Chile: REUNA, UDEC, UTFSM

Cuba: CUBAENERGIA

Mexico: UNAM

Peru: SENAMHI

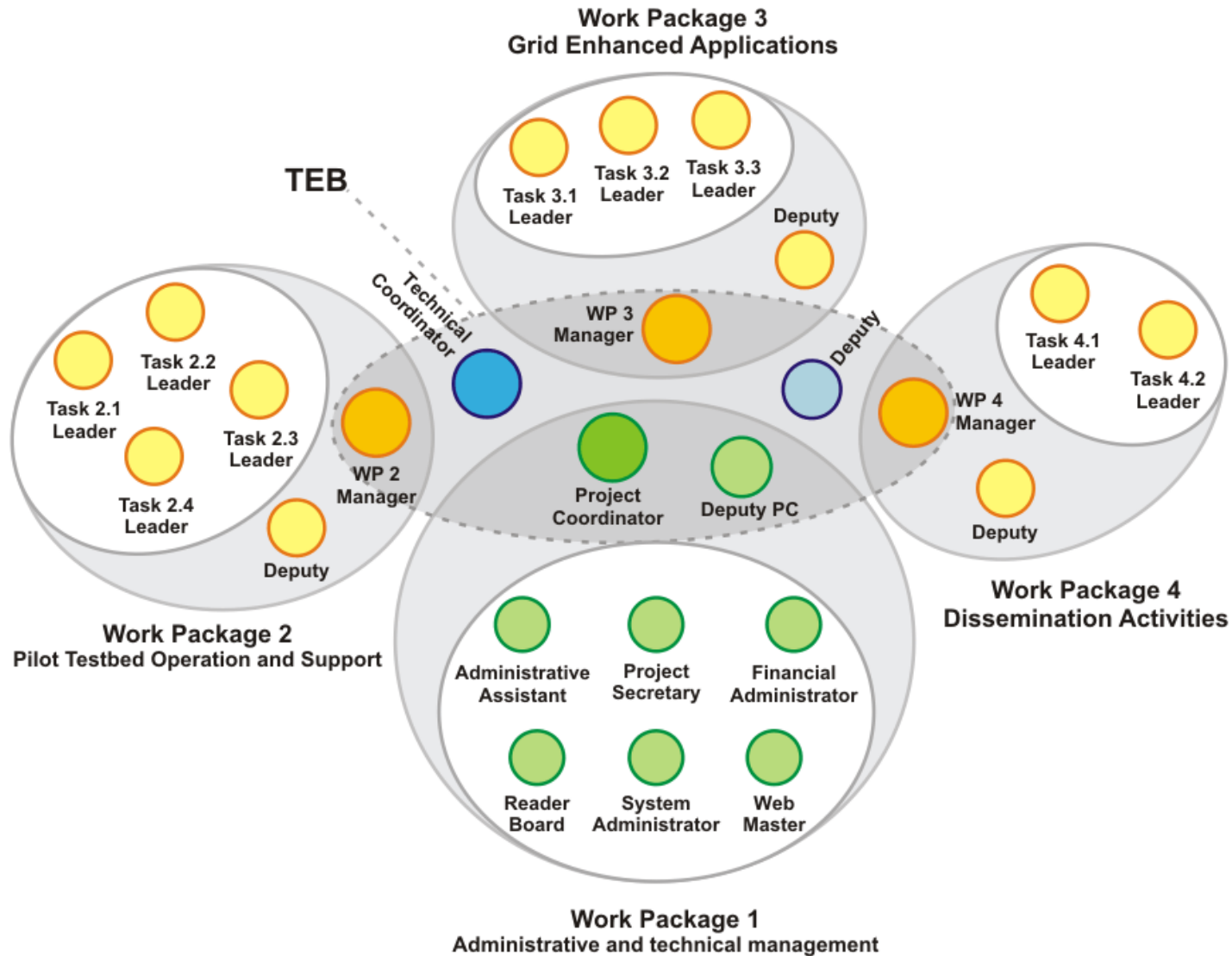
Venezuela: ULA

CLARA

- **10 Countries**
- **21 Partners**



MANAGEMENT STRUCTURE





THE EELA e-INFRASTRUCTURE

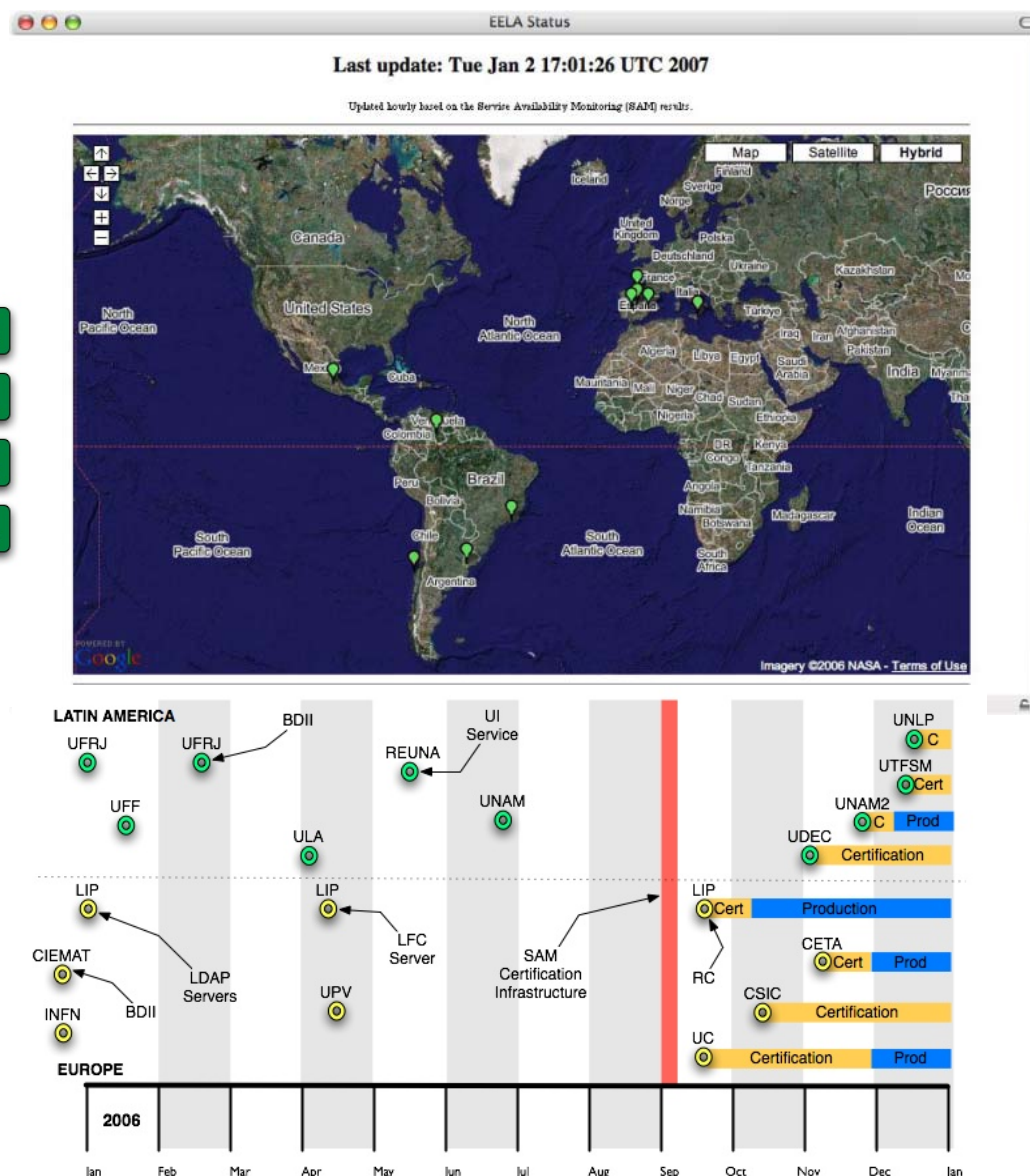
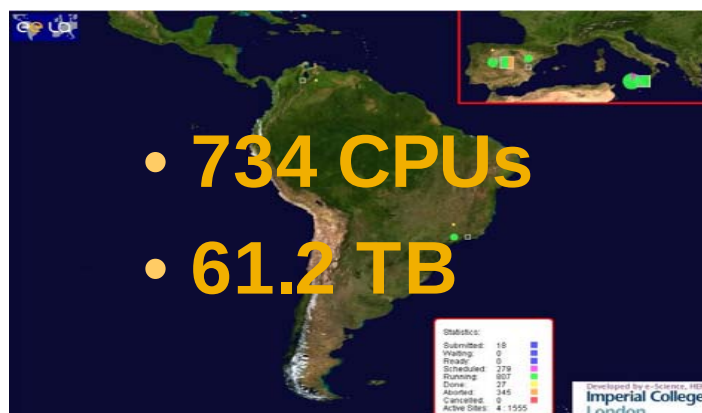
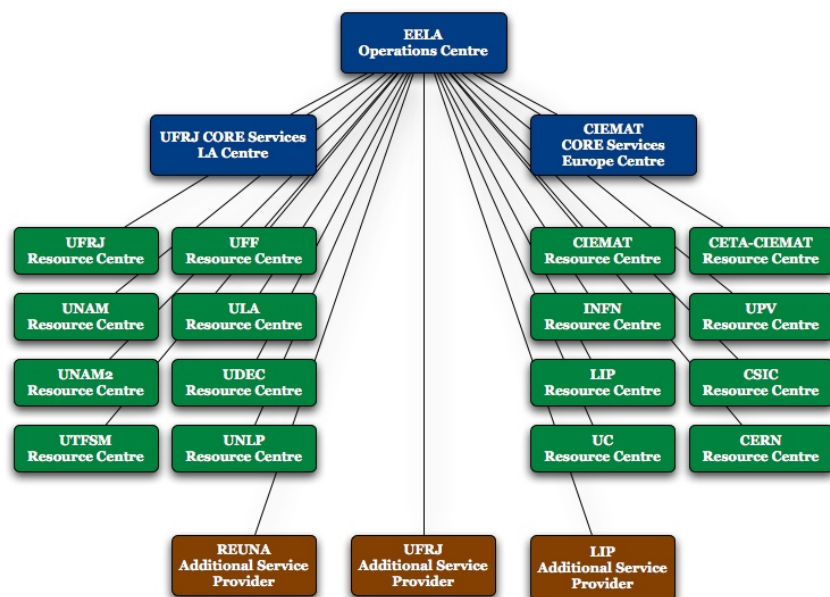
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WORK PACKAGE 2 STATUS

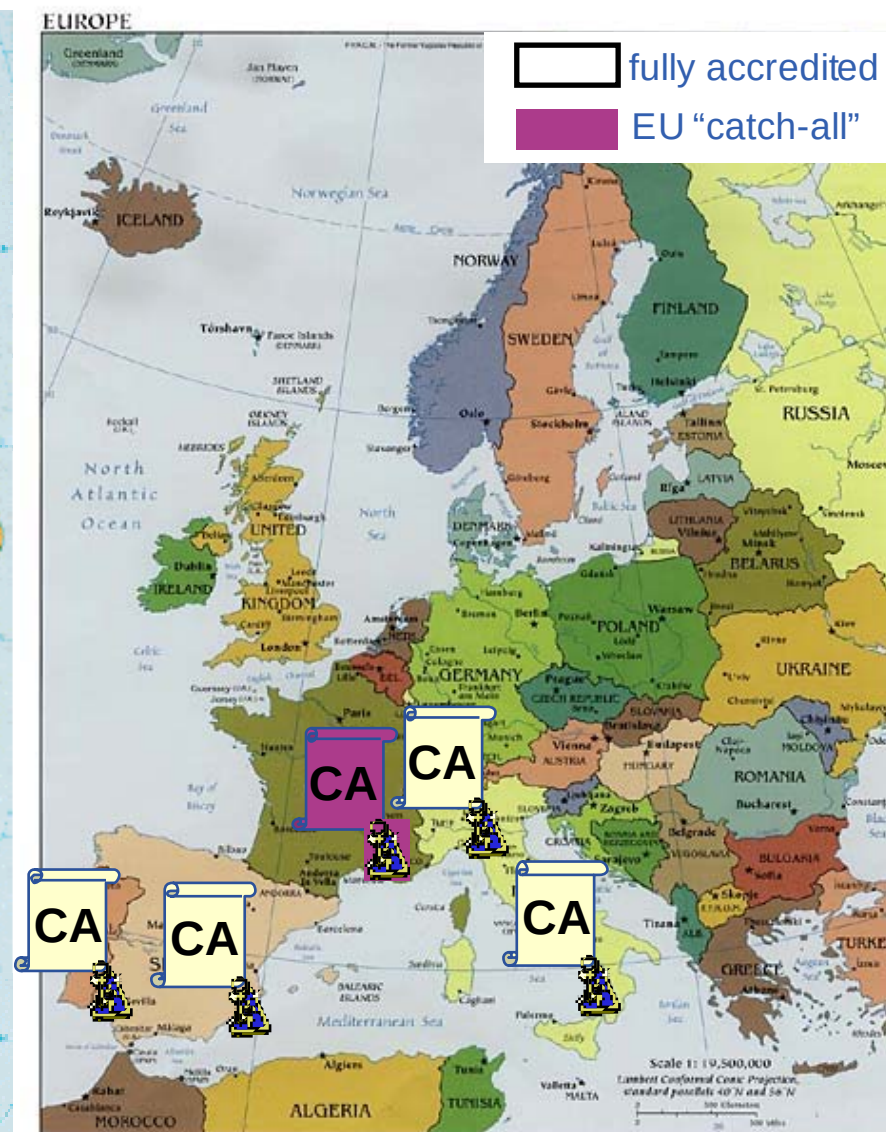
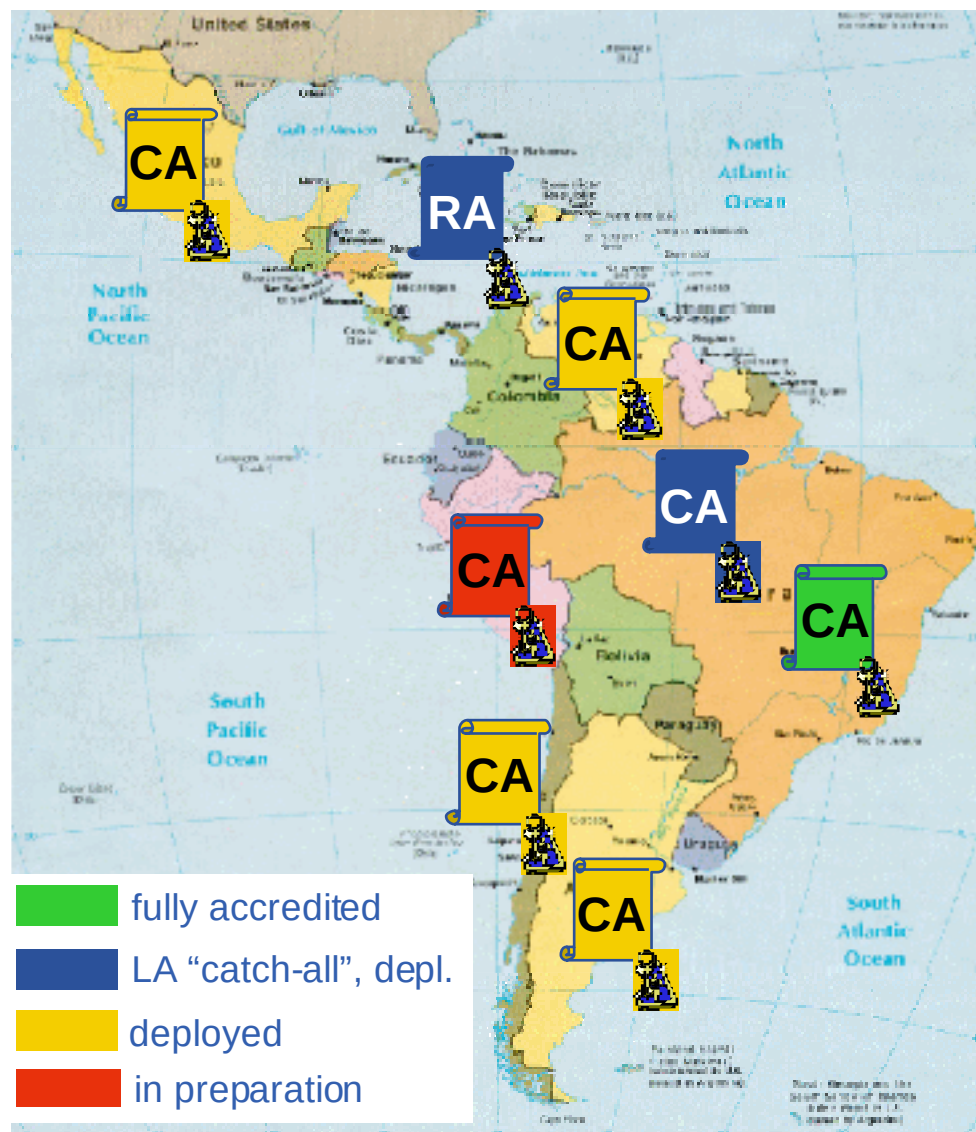
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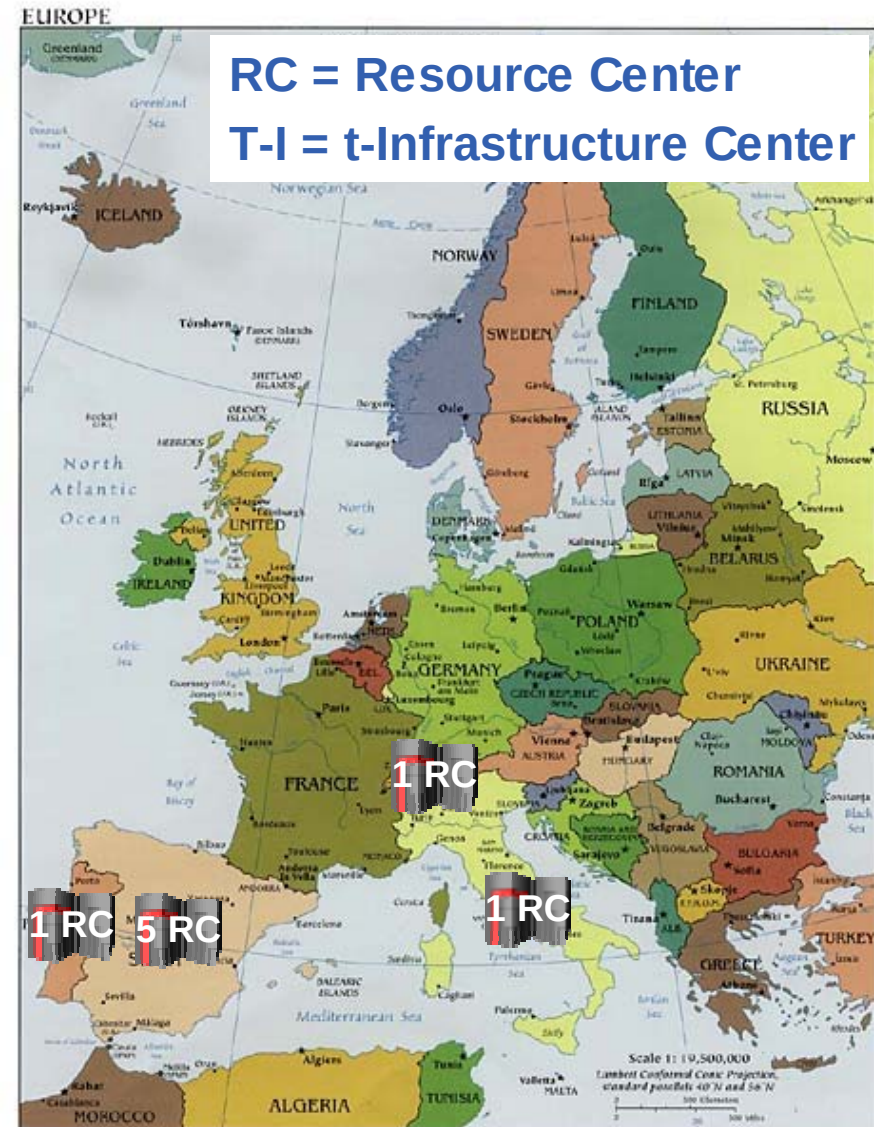
EELA CAs



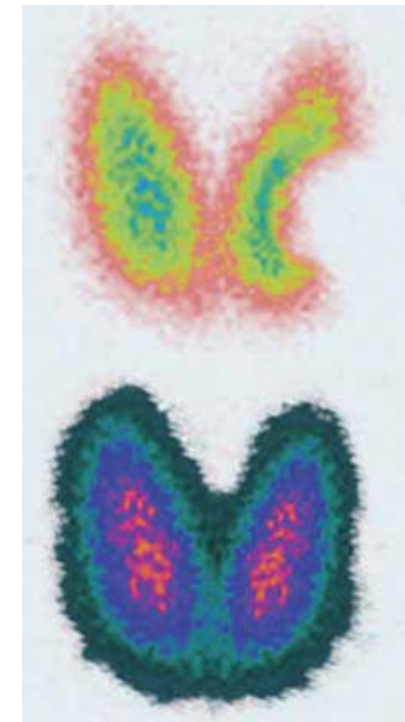


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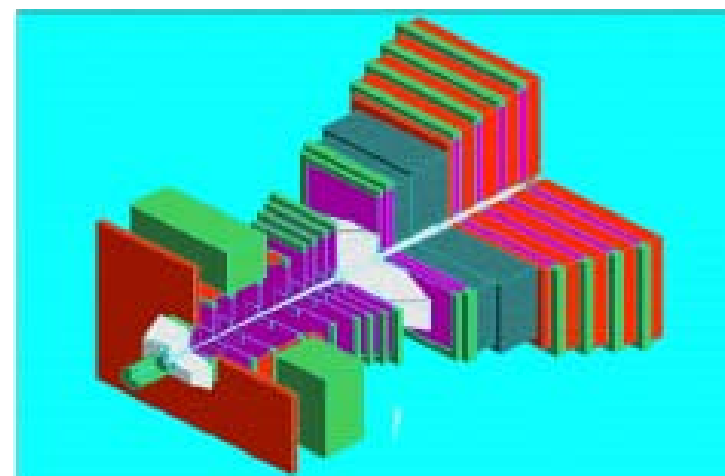
THE EELA PILOT TEST-BED



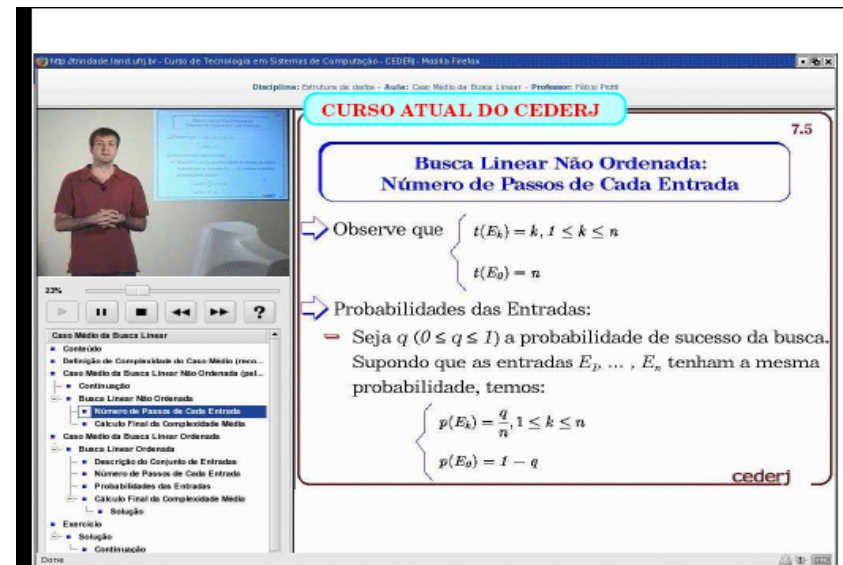
- **GATE**
 - Thyroid Cancer
 - Treatment of Metastasis with P^{32}
- **WISDOM**
 - 2 Targets in *Plasmodium vivax*
 - Fully docked in EELA e-infrastructure
- **BiG**
 - New EELA application
 - Biomed ULA web portal
 - Genome of the *Plasmodium falciparum*
- **Phylogeny**
 - New EELA application
 - In progress...



- **ALICE**
 - 4 Resources Centres
 - More than 60000 jobs
- **LHCb**
 - 3 Resources Centres
 - 0.26 %
- **ATLAS**
- **CMS**
- **PAO**
- **Theoretical Apps.**



- **VoD**
 - Multimedia Server on VO-Boxes
 - Interaction Teacher-Student
- **CuGfL**
 - Moodle
 - Web-based courses
- **LEMDist**
 - Remote access
 - NMR
- **SATyrus**
 - Engine function
- **PILP**
 - Relevant knowledge from structured data



The screenshot shows a web browser window displaying a course page. On the left, there is a video player showing a man in a red shirt. On the right, there is a slide titled 'CURSO ATUAL DO CEDERJ' and 'Busca Linear Não Ordenada: Número de Passos de Cada Entrada'. The slide contains the following text:

Observe que $t(E_k) = k, 1 \leq k \leq n$
 $t(E_0) = n$

Probabilidades das Entradas:
 Seja q ($0 \leq q \leq 1$) a probabilidade de sucesso da busca. Supondo que as entradas $E_1, \dots, E_n$ tenham a mesma probabilidade, temos:

$$p(E_k) = \frac{q}{n}, 1 \leq k \leq n$$

$$p(E_0) = 1 - q$$

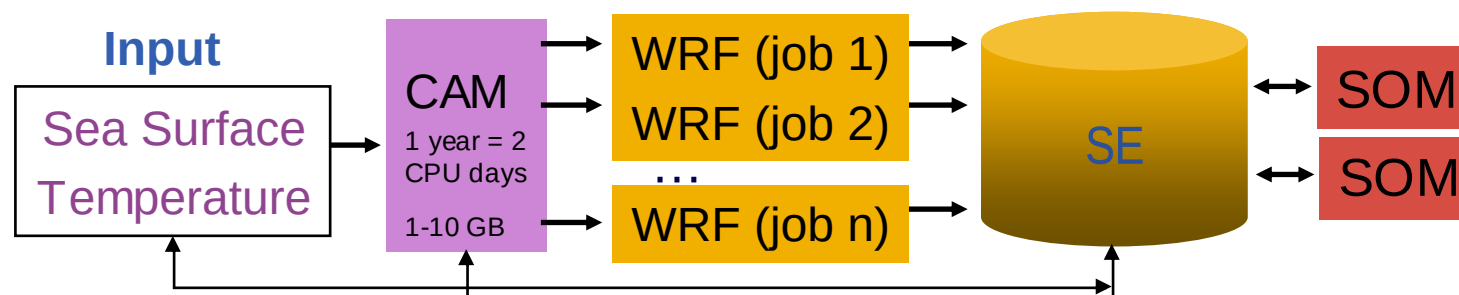
The slide also includes a 'cederj' logo in the bottom right corner.

Three applications have been identified (climate sequence):

- Global atmospheric circulation model (**CAM**)
- Regional weather model (**WRF**)
- Datamining clustering tools (SOM)

This sequence poses several computational challenges

Nontrivial dependent relationships among the applications.



This sequence of jobs demands middleware solutions for:

- Preparing and submitting dependent jobs / data sharing (workflow).
- Restarting interrupted experiments.
- Manage metadata (for datasets and application status).

VOLCANO SONIFICATIONS

- Currently no definitive method to predict the eruption of a volcano has been discovered or implemented (yet)
- Some of the calculations have been performed in the EELA e-Infrastructure.





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EGRIS-1

T3.3 Applications have been ported to the Grid in
EGRIS-1 Itacuruça (Brazil) 04-16/12/2006

But also new ones:

EMBOSS

SegHidro

**Distributed Simulation of Multiple
Failure Events on Optical Networks**

GENECODIS



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EGRIS-2

EGRIS-2 Mérida (Venezuela)

30/07-10/08/2007

THE CALL IS OPEN!

<http://indico.eu-eela.org/conferenceDisplay.py?confId=90>

Or just look for “egris-2” in Google...



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WORK PACKAGE 4 STATUS

– 15 TUTORIALS: **More than 1200 participants-days delivered so far in 2006!**

■ For grid users (total # of participants: 300)

- *Madrid - Spain* (20-22 February 2006)
- *Merida - Venezuela* (27-29 April 2006)
- *Itacuruçá - Brazil* (26-28 June 2006)
- *Mexico City - Mexico* (28-30 August 2006)
- *Santiago de Chile* (6-7 September 2006)
- *Madrid – Spain* (16-18 October 2006)
- *Merida – Spain* (7-9 November 2006)
- *La Plata – Argentina* (11-12 December 2006)
- *Bogota – Colombia* (6-7 March 2007)

■ For grid system administrators (total # of participants: 160)

- *Madrid - Spain* (20-24 February 2006)
- *Itacuruçá - Brazil* (26-30 June 2006)
- *Mexico City - Mexico* (28 August - 01 September 2006)
- *Madrid – Spain* (19-20 October 2006)
- *Itacuruçá - Brazil* (29 November-01 December 2006)
- *Bogota – Colombia* (6-9 March 2007)



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WORK PACKAGE 4 STATUS

- 1st EELA GRID SCHOOL. – Itacuruçá - Brazil (4 -15 December 2006)
 - Training for “gridification” of new applications to be run on EELA infrastructure (23 participants): **7/8 applications gridified**
 - *Climate applications, proposed by UC-SP, SENAMHI-PE and UDEC-CL (EELA applications)*
 - *Dist Simulation of Multiple Events, proposed by UNESP-BR, UNICAMP-BR and USP-BR (non-EELA application)*
 - *EMBOSS, proposed by UNAM-MX (non-EELA application)*
 - *LEMDist, proposed by UNAM-MX (EELA application)*
 - *LMS in Grid Env, EELA application proposed by CITMATEL-CU (non-EELA partner) and CUBAENERGIA-CU (EELA partner)*
 - *SATyrus, proposed by UFRJ-BR (EELA application)*
 - *SegHidro, proposed by UFCG-BR (non-EELA application)*
 - *VoD, proposed by UFRJ-BR and CEDERJ-BR (EELA application)*

WORK PACKAGE 4 STATUS

- DISSEMINATION: 2 bulletins, 2 brochures, 4 posters, 17 press releases, 10 Inf. Sheets, 72 news





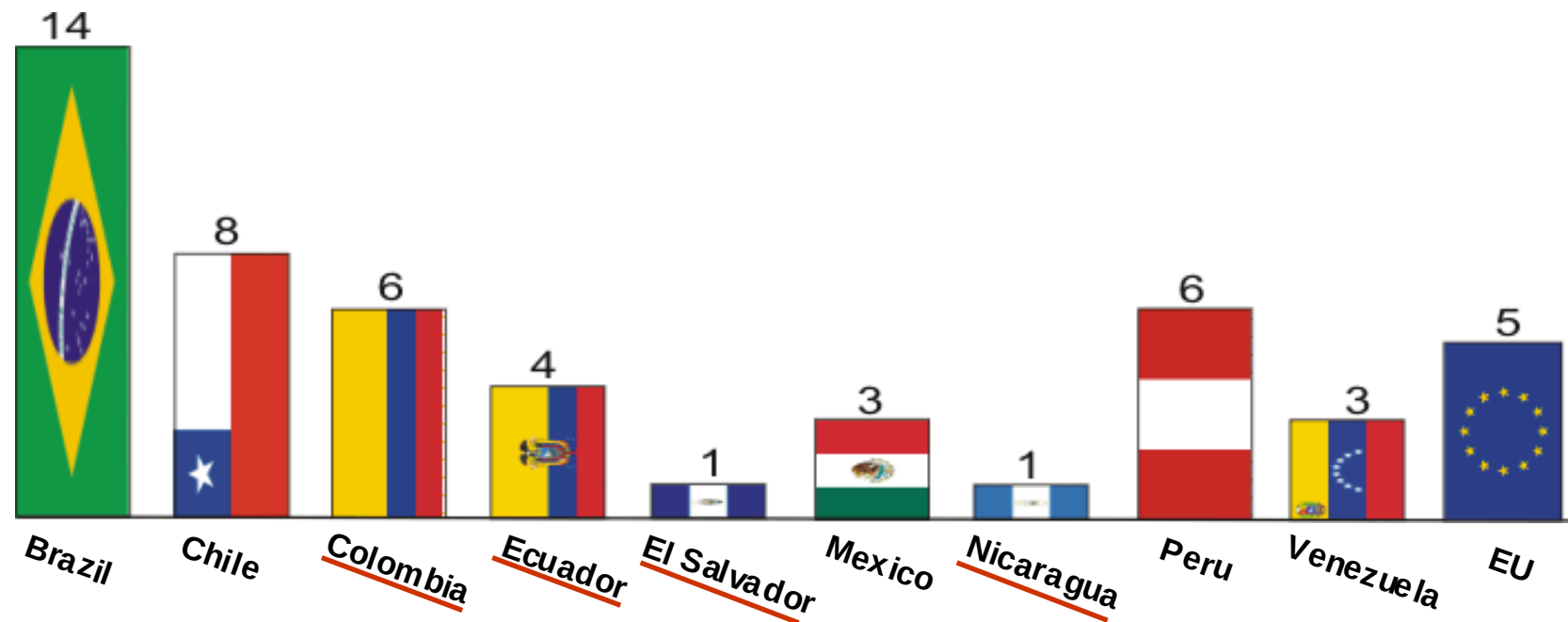
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WORK PACKAGE 4 STATUS

- **5 WORKSHOPS**
- **1 CONFERENCE**
- **Future events:**
 - **2 WORKSHOPS (Cuba – Mexico)**
 - **1 CONFERENCE (with BELIEF – Brazil)**
- **Potential new EELA collaborators or partners: 51**

- **Survey of Communities: results**

- **46** LA communities
- **5** European communities from France, Luxembourg, Spain, UK





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CONTACTS



<http://www.eu-eela.org>

WP3 documents:

<http://documents.eu-eela.org>

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Thanks for your attention!