

Microsoft® Research

Faculty Summit

10
YEAR ANNIVERSARY

LACCIR

Latin American and
Caribbean Collaborative ICT
Research Federation

Dr. Ignacio Casas

LACCIR Executive Director
Pontificia Univ. Católica de Chile

MSc. Jaime Puente

Director
External Research Latin America
Microsoft Research

Dr. Sergio F. Ochoa

LACCIR Board Director
Universidad de Chile

Agenda

- Creation of LACCIR
- LACCIR's Organization
- LACCIR's Activities: 2007 – 2009
 - ICT research map preliminary data and statistics
 - LACCIR Requests For Proposals (RFPs)
 - LACCIR Collaboration infrastructure
 - Supporting programs for graduate students
- Ongoing Projects, RFP2008

Foundations for the Creation of LACCIR

ICT research and development has played an important role in **OAS's agenda:**

- Ministers Meeting Lima 2004 Action Plan
- Fourth Summit of the Americas, Mar del Plata 2005 declaration
- Ministers Meeting Mexico 2008, LACCIR presentation

Latin American and Caribbean (LAC) research universities challenges:

- Raise the visibility and importance of academic research in the region, with emphasis **in ICT applications**
- Strengthen **connections** to the worldwide research community
- Leverage **in-LAC collaboration**, research capacity and impact
- Increase **graduate students pipeline and mobility** within LAC

For several years **Microsoft Research (MSR)** has collaborated with LAC research universities, has nurtured **a partnership with OAS and IADB** and has on-going projects with **FAPESP-BRASIL and NSF-USA**



MSR calls for proposals to create LACCIR

First Announcement, MSR Summit May 2007

Microsoft
Research
Academic Summit



MAYO 2007 • VIÑA DEL MAR • CHILE

Latin American and Caribbean Collaborative ICT Research ^{Microsoft} Research

Goal: Stimulate Latin American academic **collaborative** research in ICT as an enabler of economic and social *development*

- Financially supported by Microsoft Research (MSR): US\$1.540.000 seed grant for four years + grants from IDB and OAS
- Implemented with a HUB (PUC Chile + Univ. of Chile) and SPOKE universities throughout Latin America & the Caribbean
- Sponsorship and support from IADB and OAS
- Partnerships with FAPESP-BRAZIL, NSF-USA
- Collaboration with CLARA, IAI, CONICYT, COLCIENCIAS, and other I+D agencies



250 Researchers from **50** Universities in **16** countries who have joined in LACCIR activities

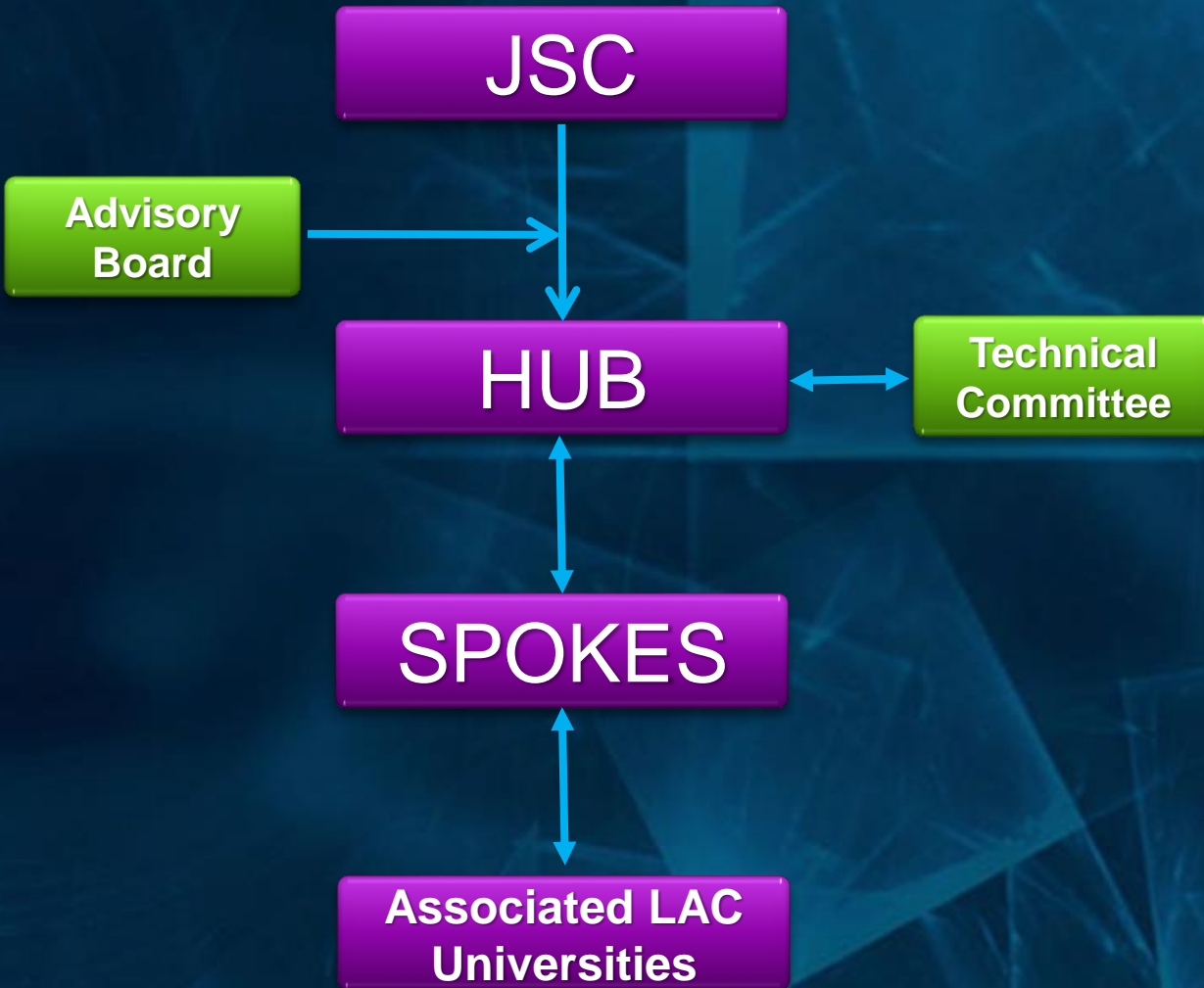
LACCIR Main Activities

- **Dynamic Web Portal:** LAC map of ICT researchers, projects and graduate programs, data collection and statistics (publications, thesis, projects, R&D resources)
- **Grants and support** for ICT applied collaborative **research projects** within LAC. Present: seed grant money from MSR & IADB. Future: new funding
- Support for **LAC graduate students** mobility: shortstays, internships, fellowships in LAC universities and MSR
- **Collaboration infrastructure** for LAC ICT researchers and educators:
 - **CXP** for video-conferencing and e-learning. MS software/servers platform
 - Workshops and **summer schools**. Repository of papers and theses

Agenda

- MSR & LATAM
- Creation of LACCIR
- **LACCIR's Organization**
- LACCIR's Activities: 2007 – 2009
 - ICT research map preliminary data and statistics
 - LACCIR Requests For Proposals (RFPs)
 - LACCIR Collaboration infrastructure
 - Supporting programs for graduate students
- Ongoing Projects

Organizational Structure



Oversees, defines goals and objectives
Seeks new research funding

Administration of LACCIR
Evaluation of research proposals

Dissemination of: RFP, scholarships,
VideoConf, network,
ICT Indicators/Metrics, matching funds

Elaboration and execution of collaborative
research projects; research map

LACCIR's Organization

“HUB” Universities managing LACCIR

- Pontificia Universidad Católica de Chile (legal representative)
- Universidad de Chile

”Spoke” Universities federated to LACCIR:

- Uruguay: Universidad de la República
- Mexico: Tecnológico de Monterrey and Instituto Politécnico Nacional
- Argentina: Universidad de Buenos Aires
- Costa Rica: Universidad de Costa Rica
- Trinidad and Tobago: University of the West Indies
- Brazil (soon): University to be selected outside Sao Paulo
- Colombia (soon): Univ. to be selected with COLCIENCIAS

Key Supporters/Collaborators

IADB and OAS

With strong support from **MSR**, the LACCIR Federation is formally working together with the **Inter-American Development Bank** (IADB) and the **Organization of American States** (OAS) to:

- Advance the ICT research agenda in Latin America and the Caribbean
- Increase research opportunities for faculty and graduate students
- Increase the capacity and visibility of the LAC research community, both within the region and worldwide
- Obtain new sources for ICT R&D funding



A partnership With FAPESP-BRASIL

MSR has established a related project with **FAPESP**: (Fundação de Amparo à Pesquisa do Estado de São Paulo) -- the largest state scientific funding agency in Brasil, located in the State of São Paulo.

- MSR and FAPESP jointly fund academic research in the State of São Paulo
- LACCIR and FAPESP are defining (during 2009) a **common agenda** for RFPs and SSPs
- More information at www.agencia.fapesp.br

Working on a Partnership With NSF-USA

Currently working on the definition of joint activities:

- NSF-PIRE: development of innovative models for long-term, international research and education partnerships. Funds for institution-to-institution research conducted by U.S. universities and LACCIR counterparts
- NSF-PASI: short courses in topics of current research activities
- Research fellowship programs
- Summer institutes

Agenda

- MSR & LATAM
- Creation of LACCIR
- LACCIR's Organization
- **LACCIR's Activities: 2007 – 2009**
 - **ICT research map preliminary data and statistics**
 - LACCIR Requests For Proposals (RFPs)
 - LACCIR Collaboration infrastructure
 - Supporting programs for graduate students
- Ongoing Projects

LAC Research Observatory

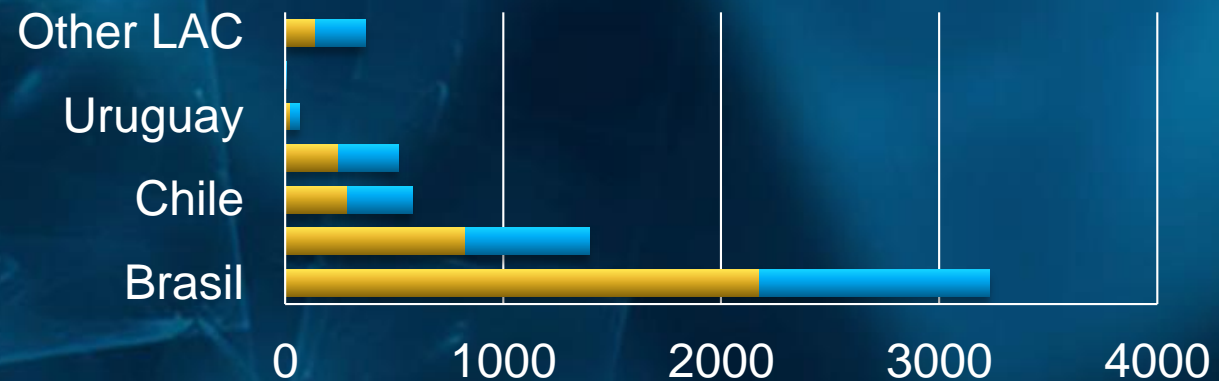
An initiative to collect statistics / indicators

- CS&ICT Education
 - PhD programs
 - Number of students / graduate
 - Number of professors with PhD degrees
- Research Funds
 - Number of international projects (and grants amounts)
 - Available funds (focus, restrictions, total amount)
- Publications
 - Journal and conference papers



Researchers and Projects Map

Collaboration in CS/CE ISI Publications 2000-2006



LACCIR Virtual Institute

Why collaboration?

Collaboration in CS/CE ISI Publications 2000-2006



LACCIR Virtual Institute

Why collaboration?

Within LAC Collaboration in CS/CE ISI Publications 2000-2006



LACCIR Virtual Institute

LAC Research Observatory

Latin American and Caribbean Collaborative ICT Research

Web Site Search

Friday, May 08, 2009 ...: LAC Research Observatory » ISI Publications and Collaboration ... Login

- Home
- About Us
- Activities & Highlights
- Research Map
- Keynote Speeches
- LAC Journals
- News
- Request for ICT Research Proposals
- Request for Short Stays Proposals
- MSR-LA Fellowships & Internships
- Technical Committee
- Research Projects
- Associated Initiatives
- LAC Research Observatory**
- Research Teams
- Contact Us
- Workspaces

ISI Publications & Collaboration

← 1 2 3 4 5 6 7 8 9 10 11 12 13 14 →

LAC publications in relevant categories

Country	Others	Biomedical Sciences	Chemistry	Physics	Computer Sciences & ICT
Brazil	100000	20000	15000	10000	5000
Mexico	40000	10000	10000	5000	5000
Argentina	30000	10000	10000	5000	5000
Chile	20000	5000	5000	5000	5000
Colombia	10000	5000	5000	5000	5000
Uruguay	5000	5000	5000	5000	5000
Costa Rica	5000	5000	5000	5000	5000

www.laccir.org

Agenda

- MSR & LATAM
- Creation of LACCIR
- LACCIR's Organization
- **LACCIR's Activities: 2007 – 2009**
 - ICT research map preliminary data and statistics
 - **LACCIR Requests For Proposals (RFPs)**
 - LACCIR Collaboration infrastructure
 - Supporting programs for graduate students
- Ongoing Projects, RFP2008

Request for Proposals (RFP) 2007, 2008, 2009

RFP Basic Requirements

1

High Quality Research (*Indexed publications*)
and ICT applications for sustainable development.
(education; healthcare; energy; earth, environment and climate change)

2

Collaboration At least two different LAC countries and one ppoke.

3

Matching Funds Potential from national funding agencies.

RFP 2007

Addressing Latin America and Caribbean priority social and economic challenges through advancing ICT research

**USD 250,000 MSR grant
distributed among 5 projects**

Participants:

- 18 Proposals Submitted
- 105 Researchers Involved
- 29 Institutions Involved
- 11 Countries

5 Winner Proposals:



- 23 Researchers Involved
- 12 Institutions Involved
- 7 Countries
- 4 ICT Application areas: Education, Productive Chains, e-Government and Healthcare

RFP 2007

Addressing Latin America and Caribbean priority social and economic challenges through advancing ICT research

USD 250,000 (MSR grant + IDB grant)

Participants:

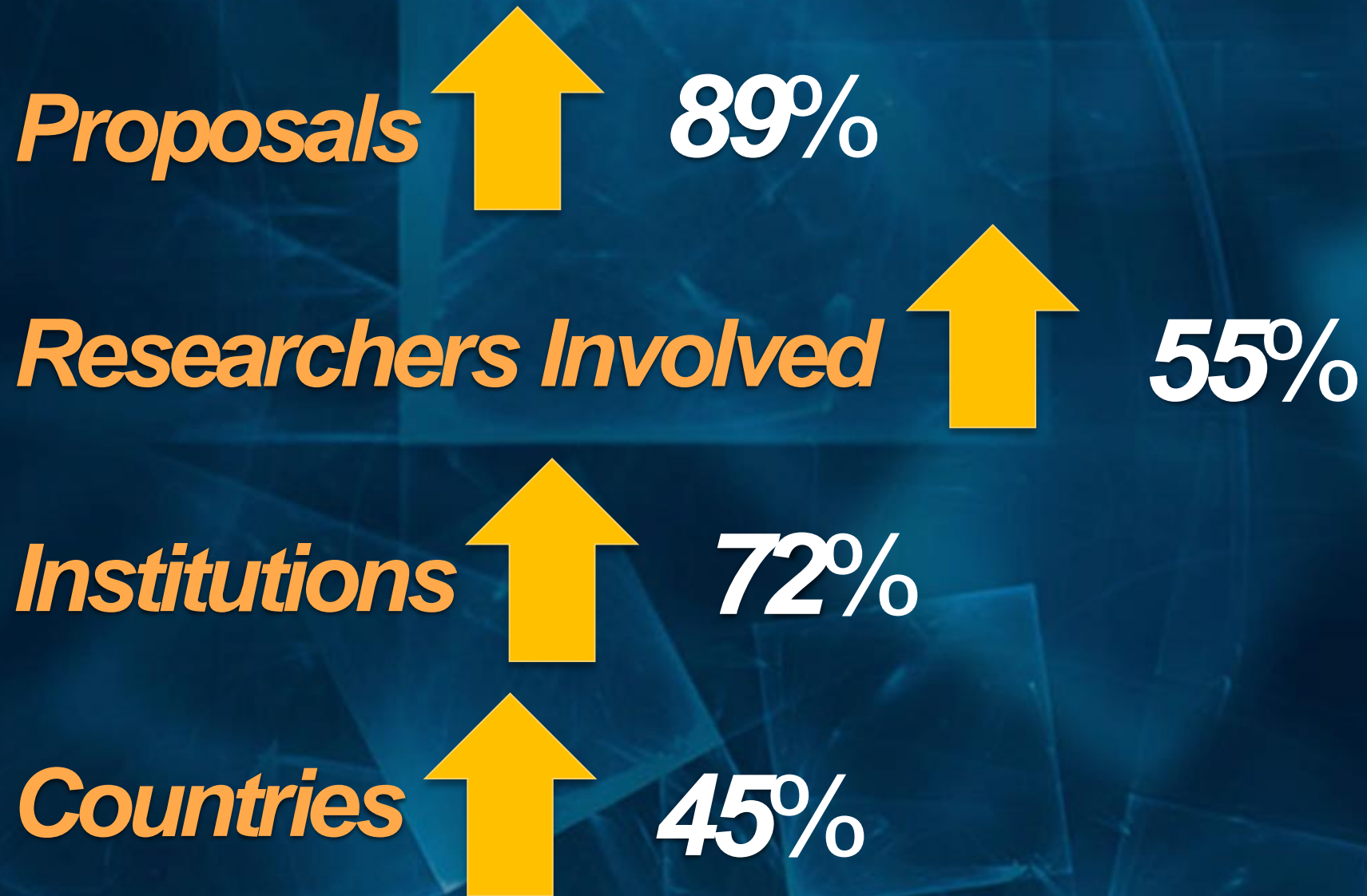
- 34** Proposals Submitted
- 163** Researchers Involved
- 50** Institutions Involved
- 16** Countries

5 Winner Proposals:

- 23** Researchers Involved
- 12** Institutions Involved
- 5** Countries
- 4** ICT Application areas: Environment, Agrobusiness, e-Government and Micro- Economies

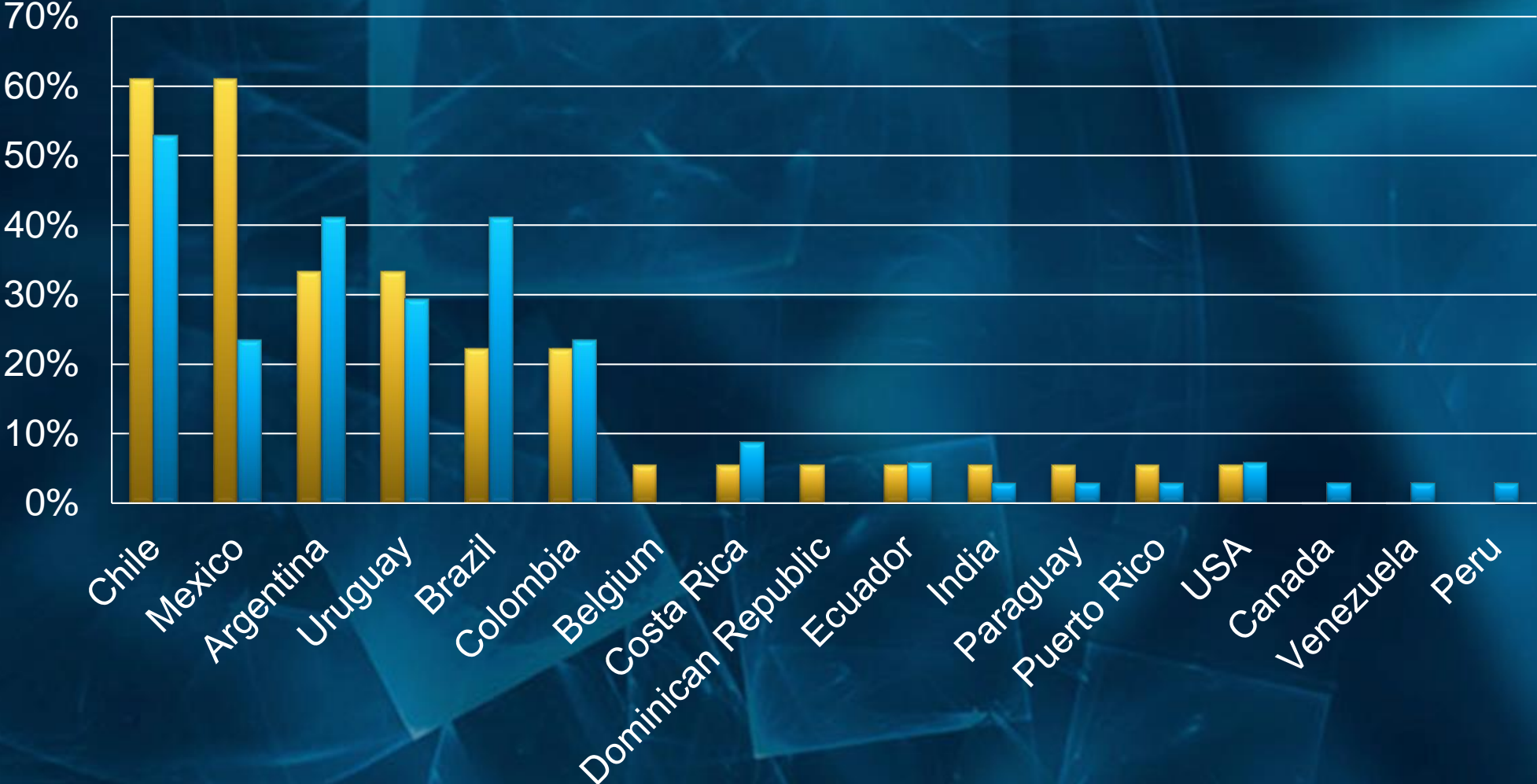


LACCIR RFP 2007-2008



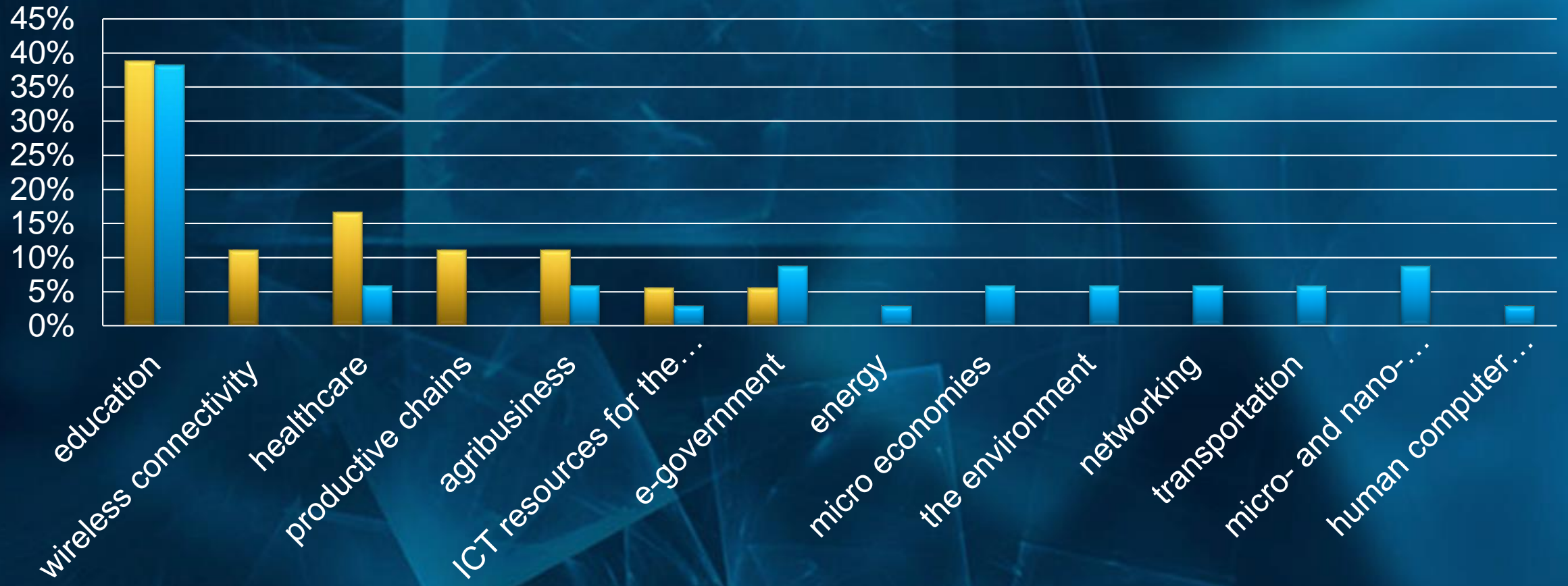
LACCIR RFP 2007 - 2008

Participation by Country



LACCIR RFP 2007 - 2008

Participation by ICT Application Area



LACCIR RFP 2009

Announced May 13th

LACCIR RFP 2009

- Total Amount: USD 300,000
- Up to 6 proposals to be selected for funding (USD 50,000 each approx.)
- More information: www.laccir.org

LACCIR RFP 2009

- Open Date: June 23rd, 2009.
- Last Date for Submission: **September 21st, 2009**
- Awards Notification: December 14th , 2009

LACCIR RFP 2009

ICT Application Areas

Healthcare

Education

Energy

Earth, environment and climate change

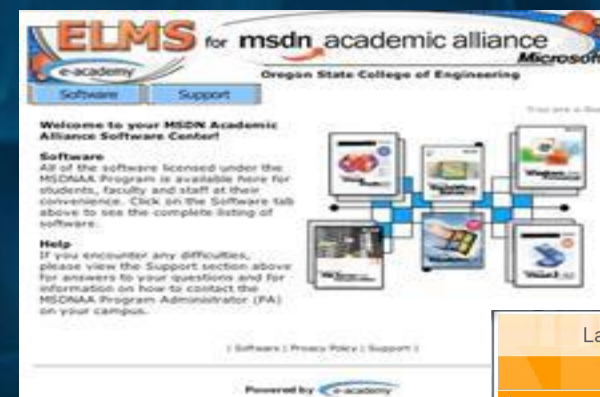
Call for Proposals available at www.laccir.org

Agenda

- MSR & LATAM
- Creation of LACCIR
- LACCIR's Organization
- **LACCIR's Activities: 2007 – 2009**
 - ICT research map preliminary data and statistics
 - LACCIR Requests For Proposals (RFPs)
 - **LACCIR Collaboration infrastructure**
 - Supporting programs for graduate students
- Ongoing Projects, RFP2008

Infrastructure for LACCIR R&D Activities

- Internet Servers
- Conference XP
- Microsoft Software Library
- LACCIR Web Portal + SharePoint



Activities on the Collaborative Infrastructure



Thesis Defenses



Projects Meetings



Virtual Communities



Keynote Speeches



Regular Courses

Agenda

- MSR & LATAM
- Creation of LACCIR
- LACCIR's Organization
- **LACCIR's Activities: 2007 – 2009**
 - ICT research map preliminary data and statistics
 - LACCIR Requests For Proposals (RFPs)
 - LACCIR Collaboration infrastructure
 - **Supporting programs for graduate students**
- Ongoing Projects, RFP2008

LACCIR SSP 2009

Second Request for Proposals:

- Main goal: Supporting the research work of MSc. and PhD students
 - Open to all universities in the Latin American and Caribbean region
 - Visiting a research center in a different LAC country of her/his university
 - LACCIR provides around U.S. \$5,000 for travel and stay expenses
 - Total amount available through this RFP is U.S. \$75,000 (15 awards)
-
- Opening Date: June 29, 2009
 - Last Date for Submission: August 31, 2009
 - Awards Notification: October 30, 2009
 - Further information at: www.laccir.org

MSR Fellowships and Internships

Request for MSR Fellowships and Internships Proposals

- Main goal: Supporting the research work of MSc. and PhD. students
- Fellowships at Local University:
 - 2 years duration
 - PhD students
 - Tuition fees
 - Living expenses
 - Conferences travel expenses
- Internships at MSR:
 - 3 months in MSR at Redmond
 - PhD. and MSc. students
 - Travel and living expenses
- LACCIR announces, disseminates and pre-selects candidates.

Agenda

- MSR & LATAM
- Creation of LACCIR
- LACCIR's Organization
- LACCIR's Activities: 2007 – 2009
 - ICT research map preliminary data and statistics
 - LACCIR Requests For Proposals (RFPs)
 - LACCIR Collaboration infrastructure
 - Supporting programs for graduate students
- Ongoing Projects

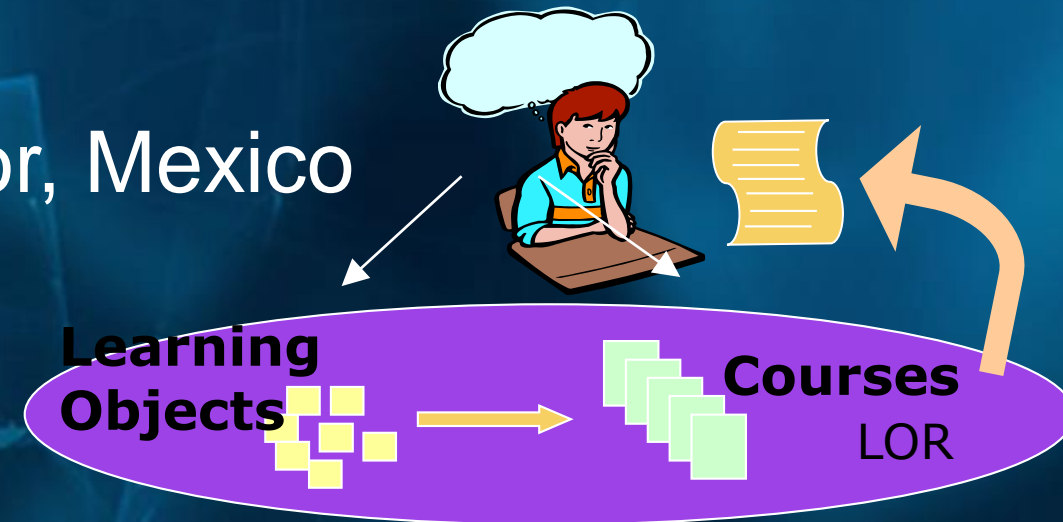
Ongoing Projects, First RFP

- 7 Countries
- 13 Research Teams
- 3 Matching Funds

- 25 Publications (so far)
- 14 Presentations (so far)

Ongoing Projects, First RFP

- **Instructional Design Assistant** → helps the teacher assemble learning objects
- Including web pages
- Produce standard packages of L.O. using SCORM. (Sharable content Object Reference Model)
- Uruguay, Brazil, Argentina, Ecuador, Mexico



Ongoing Projects, First RFP

- **Quality Evaluation of Food Products** → Computer Vision System that processes the picture and measure visual attributes related to quality
- Low cost
- For small and medium enterprises
- Chile, Mexico



Grains



Tortillas



Ongoing Projects, First RFP

- **Digital Workbook Tool** → supports asynchronous collaboration
- Tablet PC and students' class notes
- One Note 2007 and Conference XP
- Chile, Colombia

PreTest - Ingeniería de Software

Thursday, August 04, 2005
10:30 AM

1) ¿Qué significa el concepto de "madurez del proceso de desarrollo de software?"

- Significa que la empresa es más "previsible"
- Significa que para ella pesa más el proceso de desarrollo, que las personas o la tecnología que en los proyectos

2) ¿Qué son las métricas e indicadores de software?

Métrica: método de medición y cálculo

Directa → $m = f(a)$ → medida → $M_f(a)$ → val

Indirecta → $m = f(a)$ → medida → $M_f(a)$ → val

Indicador: interpreta la medida de la métrica

Global → Elemental

Satisfacción

100

60

40

Satisfactorio

Abigral

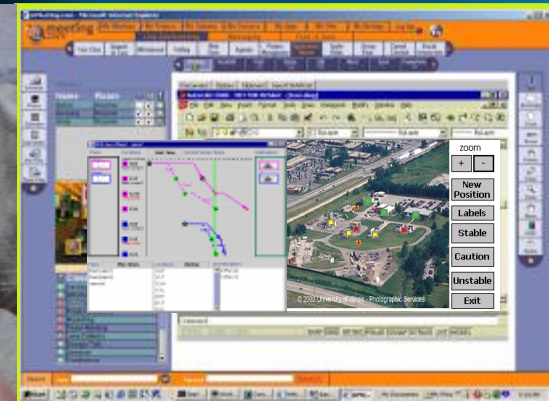
Inatisfactorio

t_{min} $t_{máx}$



Ongoing Projects, First RFP

- Collaborating in Disaster Relief Efforts → coordination between several critical information systems
- Firemen, police, national government, Red Cross Hospital personnel, armed Forces
- Brazil, Chile



Ongoing Projects, First RFP

- **Smart Phones** → collaboration in hospital work
- Discuss diagnosis and/or treatment
- Gather artifacts and human resources
- Hospital staff spends over 50% away from their base location
- Mexico, Chile



Ongoing Projects, First RFP

- 7 Countries
- 13 Research Teams
- 3 Matching Funds

- 25 Publications (so far)
- 14 Presentations (so far)



Ongoing Projects, Second RFP

- 6 Countries
- 13 Research Teams
- Starting on 2009

Ongoing Projects, Second RFP

- Domestic environment monitoring with opportunistic sensor networks
- 3 MM children under 5 die each year from environment related causes.¹
- One laptop per child
- Uruguay, Brazil.



Ongoing Projects, Second RFP

Ongoing Projects, Second RFP

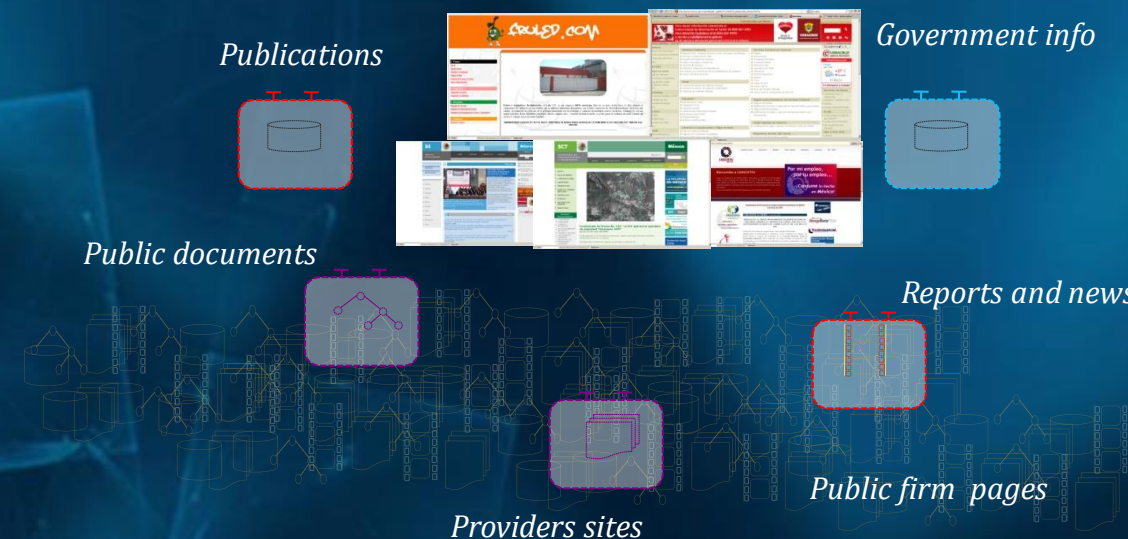
- Quality evaluation and preservation of grains in silo bags
- Harvest bags (or silobags) are a grain storage system that is being increasingly adopted worldwide
- Monitor and automatically adapt the internal conditions of the grain stored into silobags, in order to improve their preservation state

- Argentina, Uruguay



Ongoing Projects, Second RFP

- **E-Cloudss.** Building data management services in Clouds
- Unlimited computing and storage capacities transparently managed through services:
space management, computing, scalability, services management
- Mexico, Brazil, Uruguay



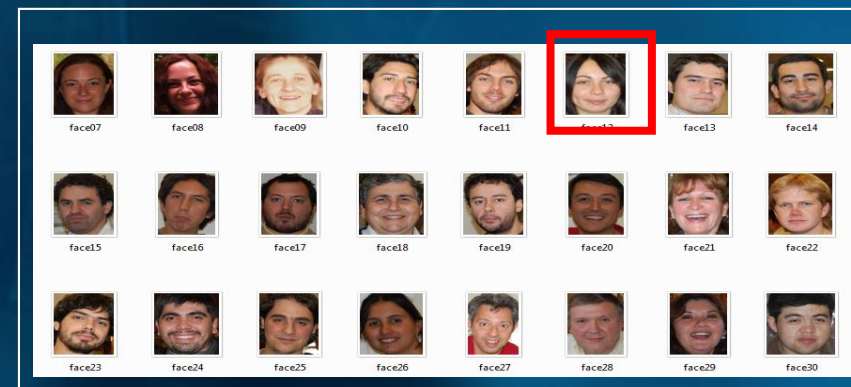
Ongoing Projects, Second RFP

- Supervise and allocate cash registers at grocery stores
- Measure waiting times of clients in queues
- Incorporate decision theory to efficiently allocate cash registers

- Chile, Mexico.



Hi Rosario:
We have a special offer
for you today, Shampoo just for \$7.99.



Latin American and Caribbean Collaborative ICT Research Federation

Microsoft
Research



www.laccir.org

laccir@laccir.org

Microsoft®

Your potential. Our passion.™