Grand Challenges in Computer Science Research in Latin America

Charla 2008

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Organizers

Supporters

What are Grand Challenges?

- Ambitious, visionary, feasible within a time frame - 10 years
- Social & economic impact
- Multidisciplinary both in nature & solution
- Scientific advances, beyond a typical grant
- Subject to clear and objective evaluation

Integrate abilities & competences in solutions to multidisciplinary, relevant, complex problems in Latin America

Latin American Grand Challenges in Computer Science

SBC
GCCS
2006-2016

Charla

Call for Proposals   Paper presentation

Paper selection   Working groups

20 researchers invited   **Definition of 4**
+ LA Sci. Soc. Presidents   **Grand Challenges**

Technical Report
Portal
Research Initiatives
…

Great Latin American Challenges

1 Citizen-oriented Information & Communication Technologies

Tecnologias de la Informacion y la Comunicacion orientadas al ciudadano

Tecnologias de Informação e Comunicação Orientadas ao Cidadão

2 Multilinguism & Latin American Identity in a Digital World

Multilinguismo e Identidad Latinoamericana en un Mundo Digital

Multilinguismo e Identidade Latinoamericana em um Mundo Digital

3 Computing for environmental monitoring and control

Computacion para monitoreo y control ambiental

Computação orientada ao monitoramento e controle ambiental

4 Complex Collaborative Networks in Latin America

Redes Colaborativas Complejas en America Latina

Redes Colaborativas Complexas na América Latina

Great Latin American Challenges

1 Citizen-oriented Information & Communication Technologies

Development and use of technologies (web, telephony, radio, tv, …) to support citizen-oriented activities for knowledge dissemination and citizen empowerment

2 Multilinguism & Latin American Identity in a Digital World

To preserve Latin American language and cultural heritage, with digital inclusion and universal access to LA citizens

3 Computing for environmental monitoring and control

To create and apply a computing and communication infrastructure to gather and disseminate relevant environment information.

4 Complex Collaborative Networks in Latin America

To develop a collaborative network for sharing experiences, infrastructure, knowledge, and efforts, and for addressing diverse issues facing our countries

For Example
3. Computing for environmental monitoring and control

To create and apply a computing and communication infrastructure to gather and disseminate relevant environment information

- Potential applications
  - Monitoring of environmental conditions
  - Management of disasters and development of forecast models
  - Increasing productivity (food production, agribusiness)
  - Energy-aware systems
- Research questions
  - Theories & techniques for WSN cross-layer design
  - Modeling of the systems
  - Integration of various input data sources (e.g., field, satellite)
  - Data analyses

Probably the best biological sensors to detect early environment problems

Scientific Challenges:
- Theory
- Techniques
- Methodologies
- Tools
- Processes

Design of the Monitoring Application
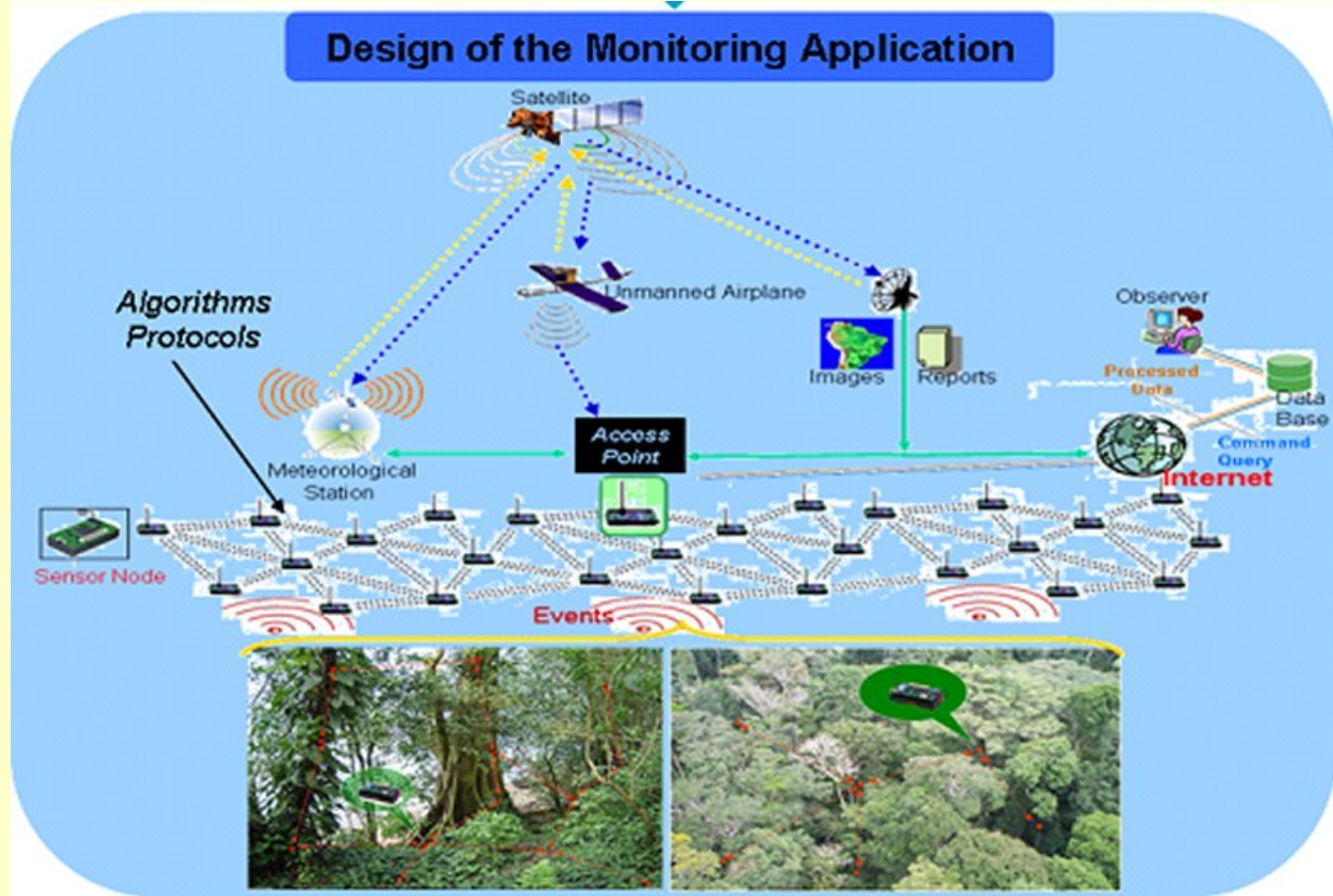
Stay tuned, coming soon:

Latin American Great Challenges

- Complete Technical Report
- Portal
- Dissemination & Evolution Process
- Latin American funding agencies initiatives