JOINT MEETING OF ACTION TEAM ON GNSS AND
GNSS EXPERTS OF UN/USA REGIONAL WORKSHOPS AND
INTERNATIONAL MEETING 2001-2002

DEVELOPMENTS ON SIRGAS PROJECT: Regional Cooperation and Inter-regional Perspectives

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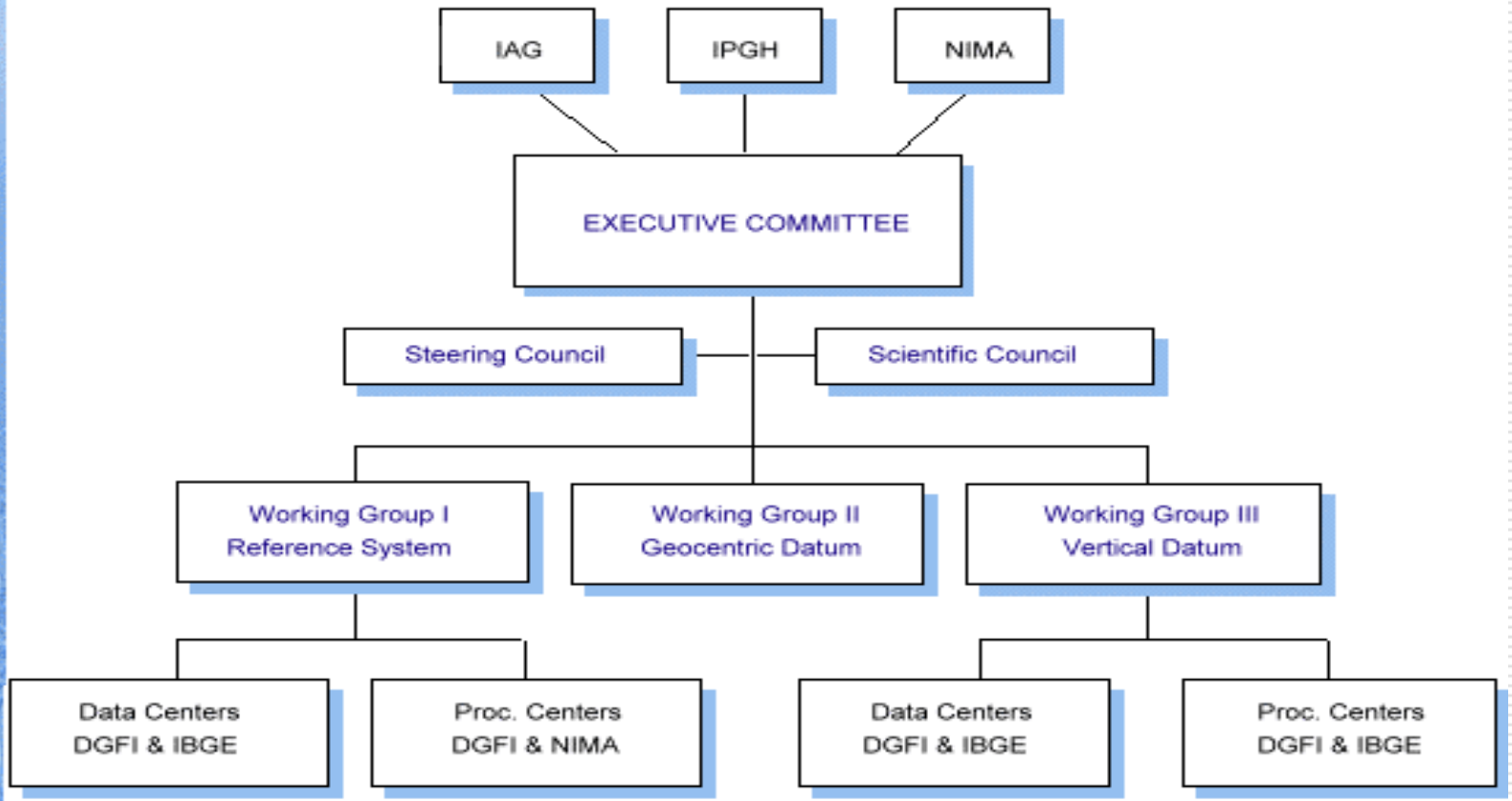
SIRGAS

- Focused on the adoption a **Common** Reference System in the continent, compatible with the modern positioning techniques
- International Conference for the Definition of a Geocentric Reference System for South America (Asuncion - Paraguay, 1993)
  - International Association of Geodesy (IAG)
  - Pan-American Institute of Geography and History (IPGH)
  - National Imagery and Mapping Agency (NIMA)
- Strategic program for spatial information users

Organizational Structure

SIRGAS Project

Structure of the



Scientific Objectives

To define, materialize and maintain a 3D Geocentric Reference System for the Americas

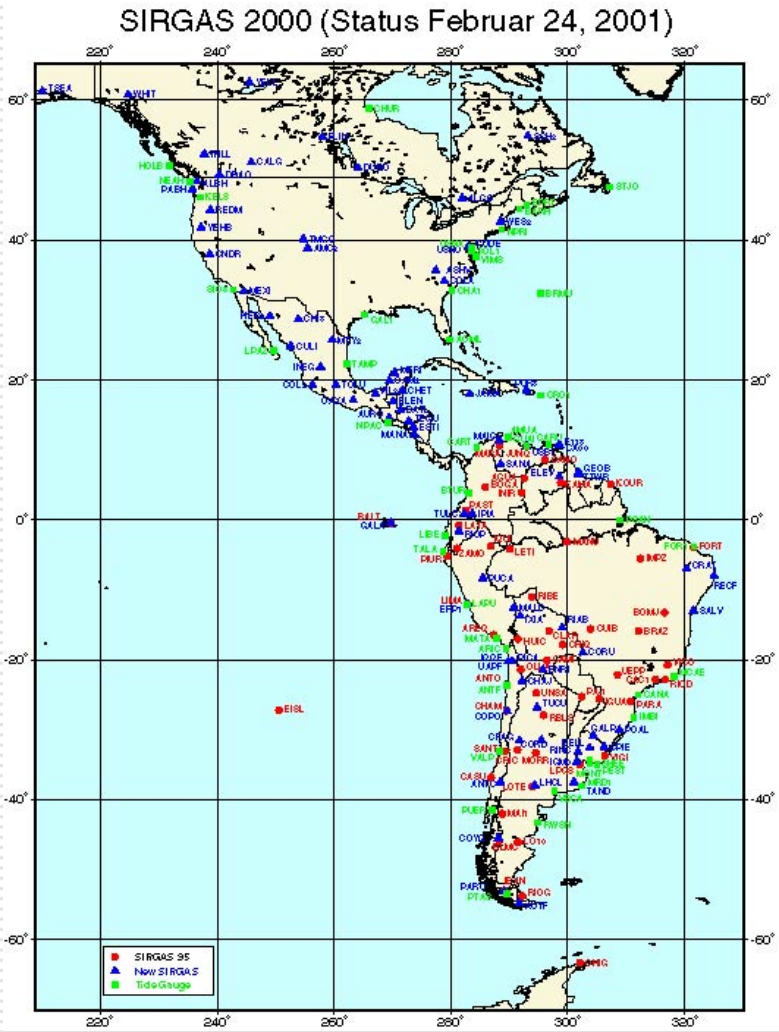
- Standardized horizontal and vertical reference
- Consistent physical and geometric parameters
- Variations with respect to time

Evolution - 1995 realization

- 58 Stations observed simultaneously with GPS
- 3D coordinates referred to the International Terrestrial Reference Frame - ITRF

Evolution - 2000 realization

- 184 stations observed simultaneously, including Central, North America and Caribbean Area with GPS
- To address the vertical component - Occupation of tide gauges (vertical reference) in each country
- To link countries - Stations nearby boundaries
- Re-occupation of the 1995 campaign stations

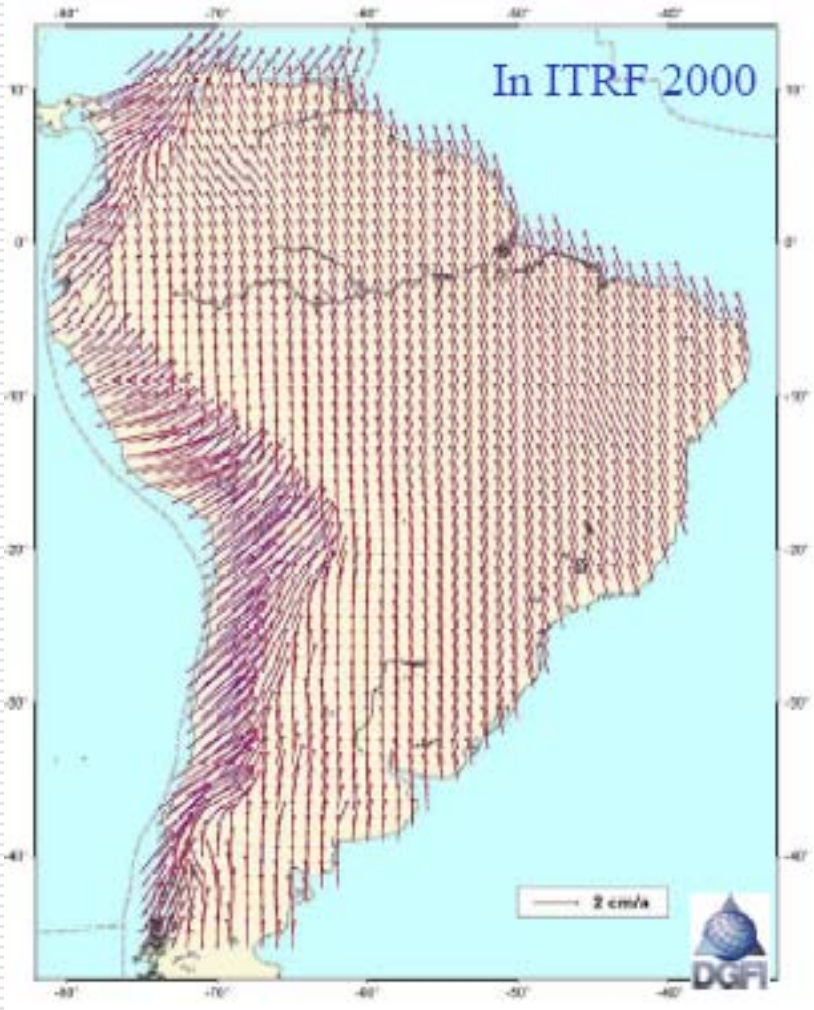


Evolution - 2003...

- Velocity field of the South America
- Permanent GNSS stations
- Quasi-Geoid determination
- Geodynamics campaigns

Short and Middle Term

- Fundamental Agreements with EUREF
- Active Network as EUPOS



SIRGAS Benefits

- American spatial information community linked to a worldwide reference
- Consistent data production
- Sharing data among several information sources
- Make the most of spatial technologies to serve public, private and sectorial applications
- Increase spatial information markets
- Spatial information usability for knowledge management

Spatial information for Sustainable Development

Sustainable development requires up to date, available spatial information to represent the resources and population depending on them.

AGENDA 21 – RIO (1992)

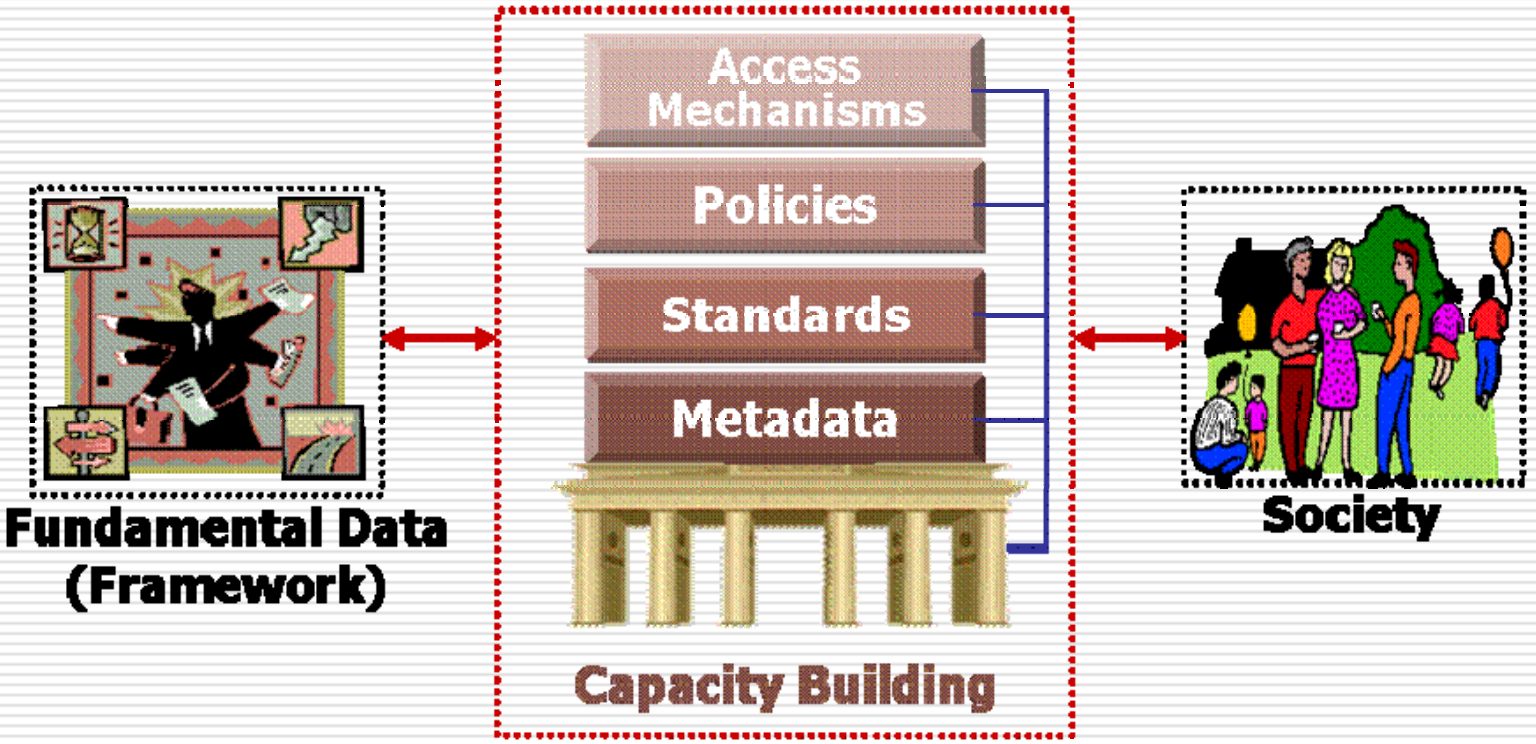
- Information availability at all levels to support sound decision making
- Decisions are related to a spatial position
- Developing countries must build capacities to share and use information, based on technologies and management methods

Spatial information for Sustainable Development

JOHANNESBURG DECLARATION – RIO+10 (2002)

- Global databases production as an essential support to sustainable development
- Encourage development, exchange and use of the Earth Observation Technologies
- Strength Nations in GIS Technologies

Spatial Data Infrastructures - SDI



- Global Level – GSDI
- Regional Level – Europe, Asia – Pacific, America, Africa
- National Level – More than 40 documented NSDI

Capacity Building

"Capacity can be defined as the ability of individuals and organizations or organizational units to perform functions effectively, efficiently and sustainably." United Nations Development Program (UNDP)

"Process by which individuals, groups, organizations, institutions and societies increase their abilities to: (i) perform core functions, solve problems, define and achieve objectives; and (ii) understand and deal with their development needs in a broad context and in a sustainable manner" Organization for Economic Co-operation and Development (OECD)

Capacity Building for SIRGAS

- Research and Development
  - Planning, promotion and coordination of the technical activities
  - Assessment of critical needs
  - Technological innovation
  - Harmonization between Spatial technologies and Information & Communications technologies

Capacity Building for SIRGAS

- Technology Transfer
  - Adopt, adapt and sustain technology and knowledge, specially in developing countries
  - Establish educational and training programs
  - Leadership encouragement
  - Disseminate advances, results and accomplishments
  - Share technological developments

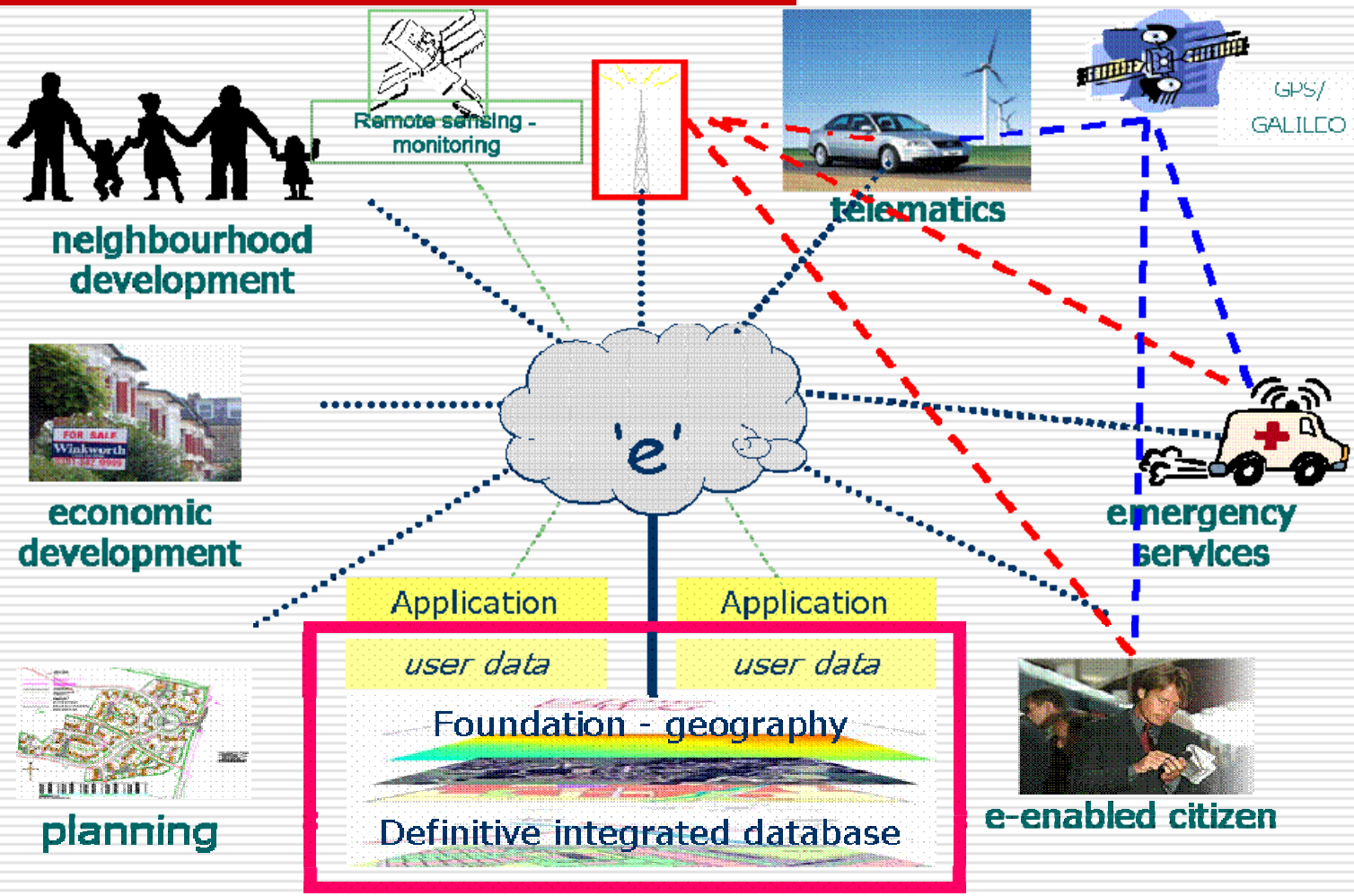
Capacity Building for SIRGAS

- Cooperation Networks
  - Establish agreements of mutual benefits
  - Define roles and responsibilities
  - Create thematic networks and forums
  - Formulate strategies for financing
  - Promote awareness and outreach
  - Share best practices

Inter-regional Perspectives

- New challenges: Scientific, Political, Economic and Social issues
- Globalization – Information Society
- Harmonization of AFREF, SIRGAS, EUREF and Asia-Pacific
- Reference systems - Backbone of SDI at all the levels
- Integration of efforts between Reference Systems and SDI Initiatives
- New solutions: UNDP-OOSA as sponsors of worldwide synergies and policies

Prospectives



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