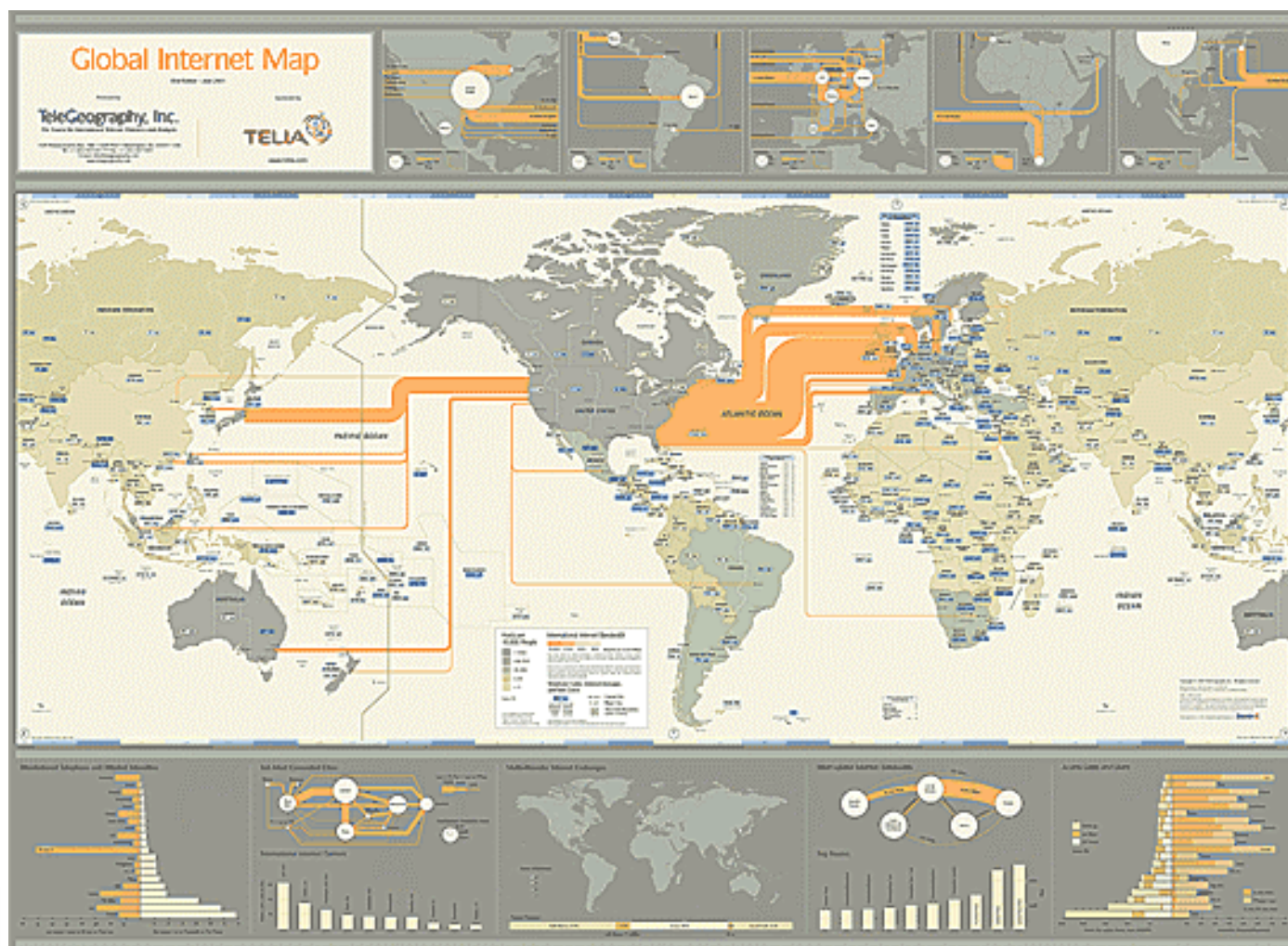


The ALICE Project - the CLARA network

CUDI Reunión de Primavera 2004

The objective of ALICE is to create a regional Latin American research networking infrastructure and its interconnection to GEANT. The ALICE project is co-funded by the European Commission.



© 2001 TeleGeography, Inc.

Size = 37" x 51" (0.9 m x 1.2 m)



ALICE

America Latina Interconectada Con Europa

@LIS



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ALICE Project Objectives

- **Ensure Substantial and sustainable increase of research networking connectivity within Latin America by creating a regional Latin American research networking infrastructure and its interconnection to GÉANT**
- **to be used by the LA-NRENs and their connected universities and institutions, as well as the @LIS demonstration projects**
 - close LA-EU digital divide
 - ensure long-term sustainability

ALICE Project Partners

- **DANTE - Co-ordinating and Contracting Partner**
- **Partners:**
 - **CLARA - Cooperación Latino Americana de Redes Avanzadas**
 - **18 Latin American NRENs**
 - **4 European NRENs (GARR, FCCN, RENATER and RedIRIS)**

DANTE - Delivery of Advanced Network Technology to Europe

- **Founded in 1993 by European NRENs as a not for profit organisation**
- **European NRENs are shareholders and customers**
- **DANTE builds and manages GÉANT, the network that provides pan-European connectivity for 27 NRENs, serving over 3500 research centres across Europe**

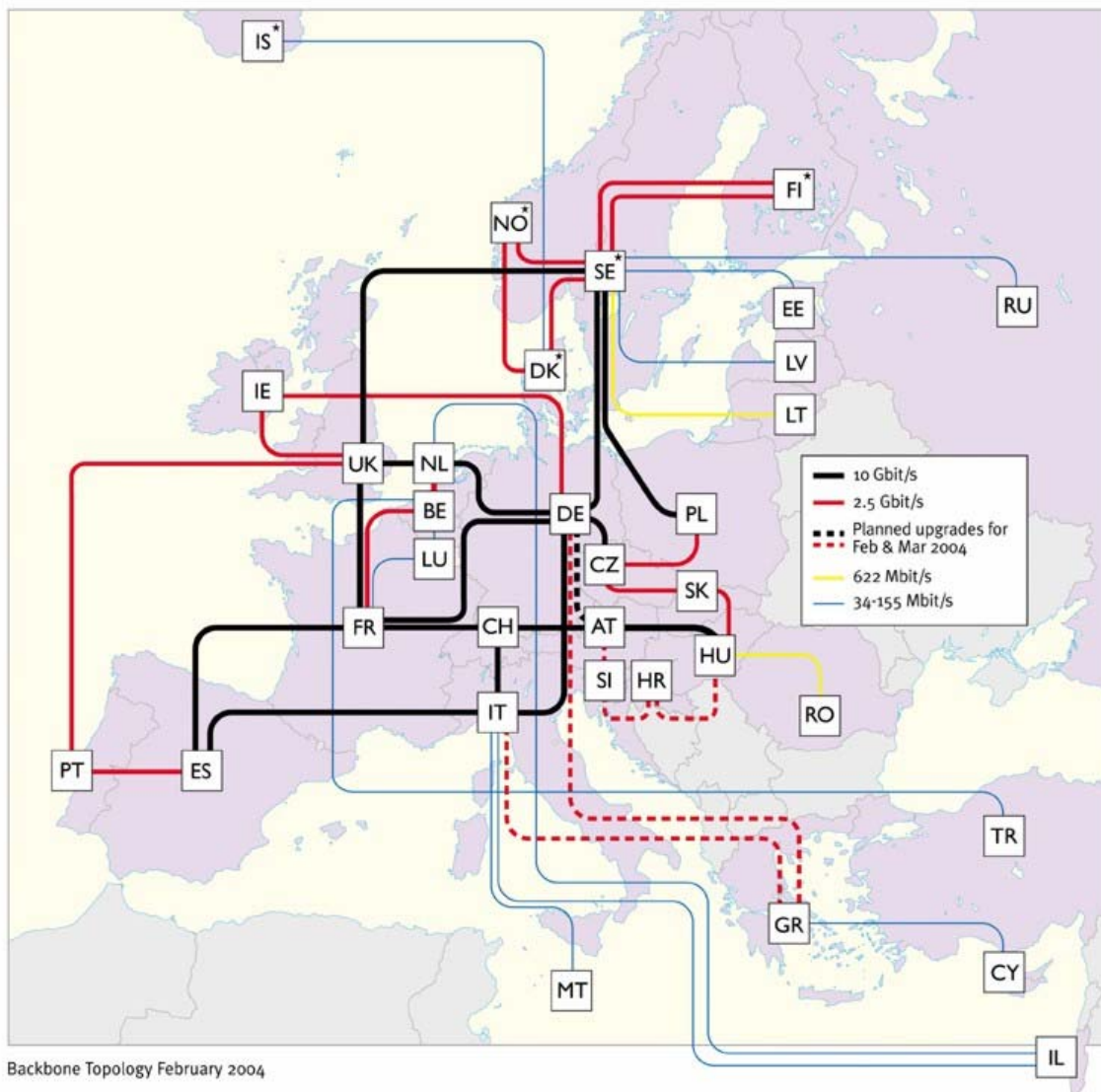


GÉANT also connects to other regional research communities across the world



GÉANT – world's largest research

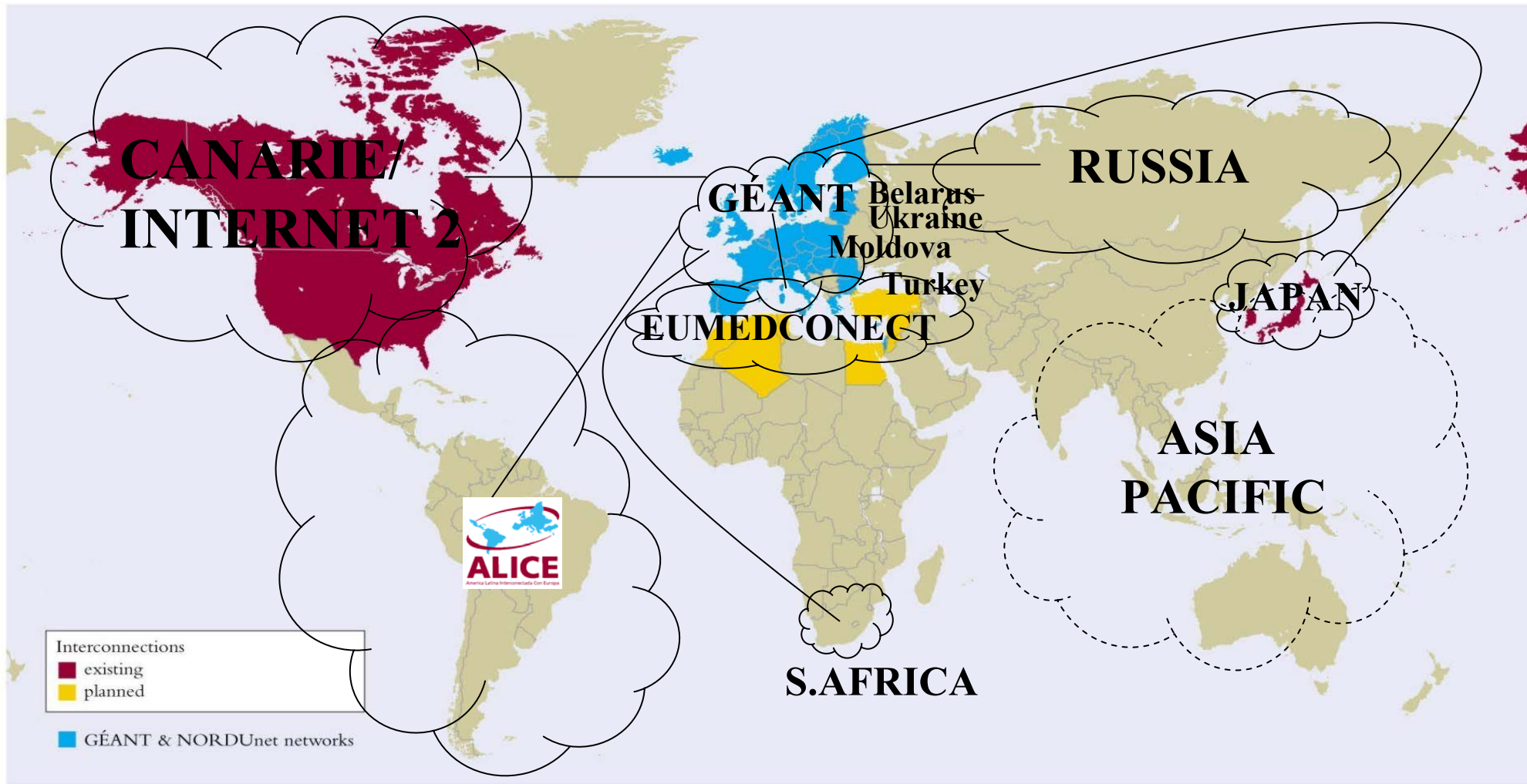
network



Backbone Topology February 2004

- 6th generation of Pan-European network
- link capacities risen from 2Mbps to 10Gbps in 12 years
- funded by 27 National Research and Education Networks, and the European Commission

Developments – Global Connectivity to GÉANT



CLARA

- **Not-for-profit organisation registered in Uruguay in 23 December 2003**
- **13 LA NRENs are already members of CLARA**
- **Currently CLARA is a consortium similar to the European NREN-PC**
- **it is expected that in the future CLARA will be the DANTE counterpart in Latin America**
- **CLARA will be responsible for the connectivity of the LA network to other world regions**

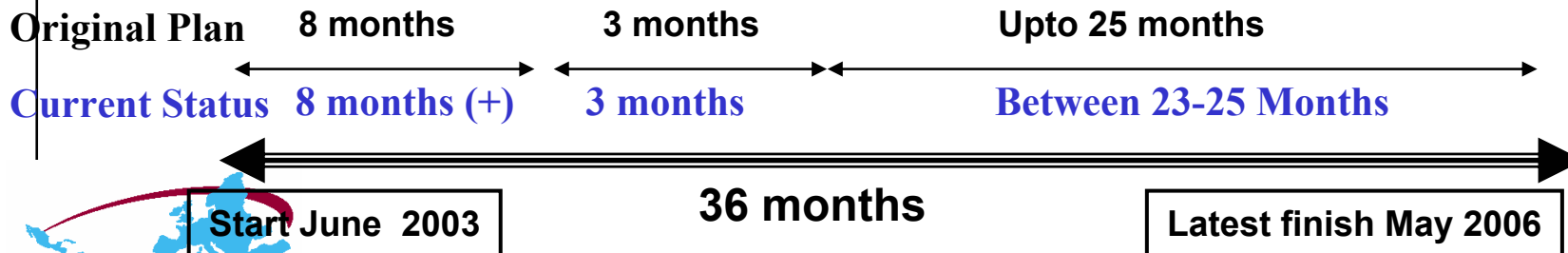
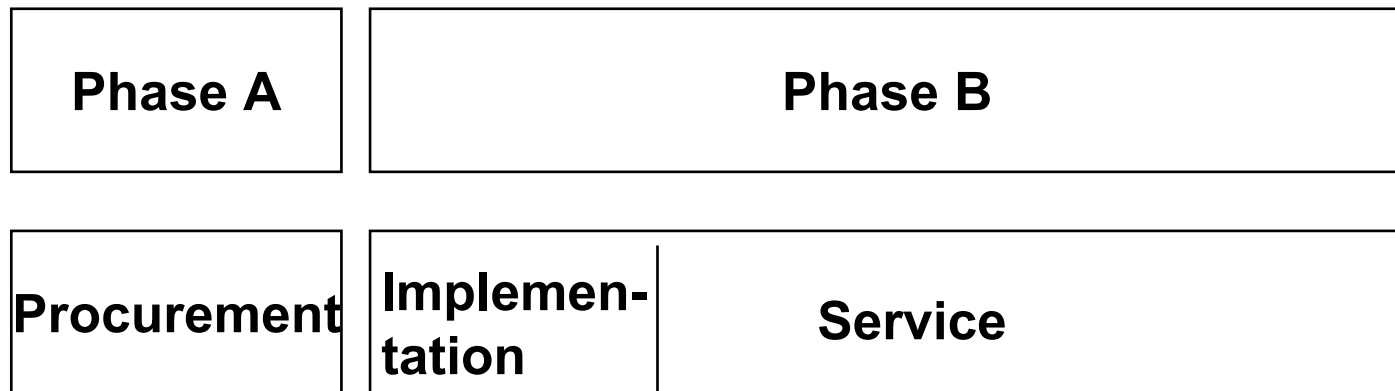
Latin American Partners

RETINA (ar)	RedUniv (cu)	CNU (ni)
ADSIB (bo)	Fundacyt (ec)	RedCyt (pa)
RNP (br)	RAICES (sv)	ARANDU (py)
REUNA (cl)	RAGIE (gt)	RAP (pe)
UNICAUCA (cc)	UNITEC (hn)	RAU (uy)
CRnet (cr)	CUDI (mx)	REACCIUN (vz)
CLARA		

ALICE Phases

- **CAESAR project - IST funded feasibility study (March to October 2002)**
- **October 2002 - June 2003 ALICE preparation (not funded)**
- **ALICE project - operational phase June 2003 to May 2006**
 - **Planning and Procurement (Phase A) - June 2003 to February 2004 (only 8 months!)**
 - **Implementation and Operations (Phase B) - March 2004 to May 2006**

ALICE Structure



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ALICE project Activities

- **Main Focus on:**
 - International Connectivity Tender
 - International Equipment Tender
- **Additional Activities:**
 - Technical Training and Support
 - Support for @LIS demonstration projects
 - PR activities

Connectivity Tender Requirements

- **Intra-regional Latin American connectivity**
- **Direct link between LA network and GÉANT**
- **Capacity expectations:**
 - 45 Mbps or higher for main LA ring
 - 10 Mbps or higher for links into the ring
 - 155 Mbps or higher between LA and GÉANT
- **Equipment housing for ALICE equipment in those Latin American countries where equipment cannot be co-located with NREN equipment.**

Connectivity Tender Results I

- **Final negotiations for the provision of an STM-1 ring between Mexico, Brazil, Argentina, Chile and Panama. This ring will at a later stage be extended to Peru**
- **The LA-ring will be connected to GEANT network in the Madrid PoP at STM-4 speed**
- **Venezuela will be connected to the ring at 45 Mbps**



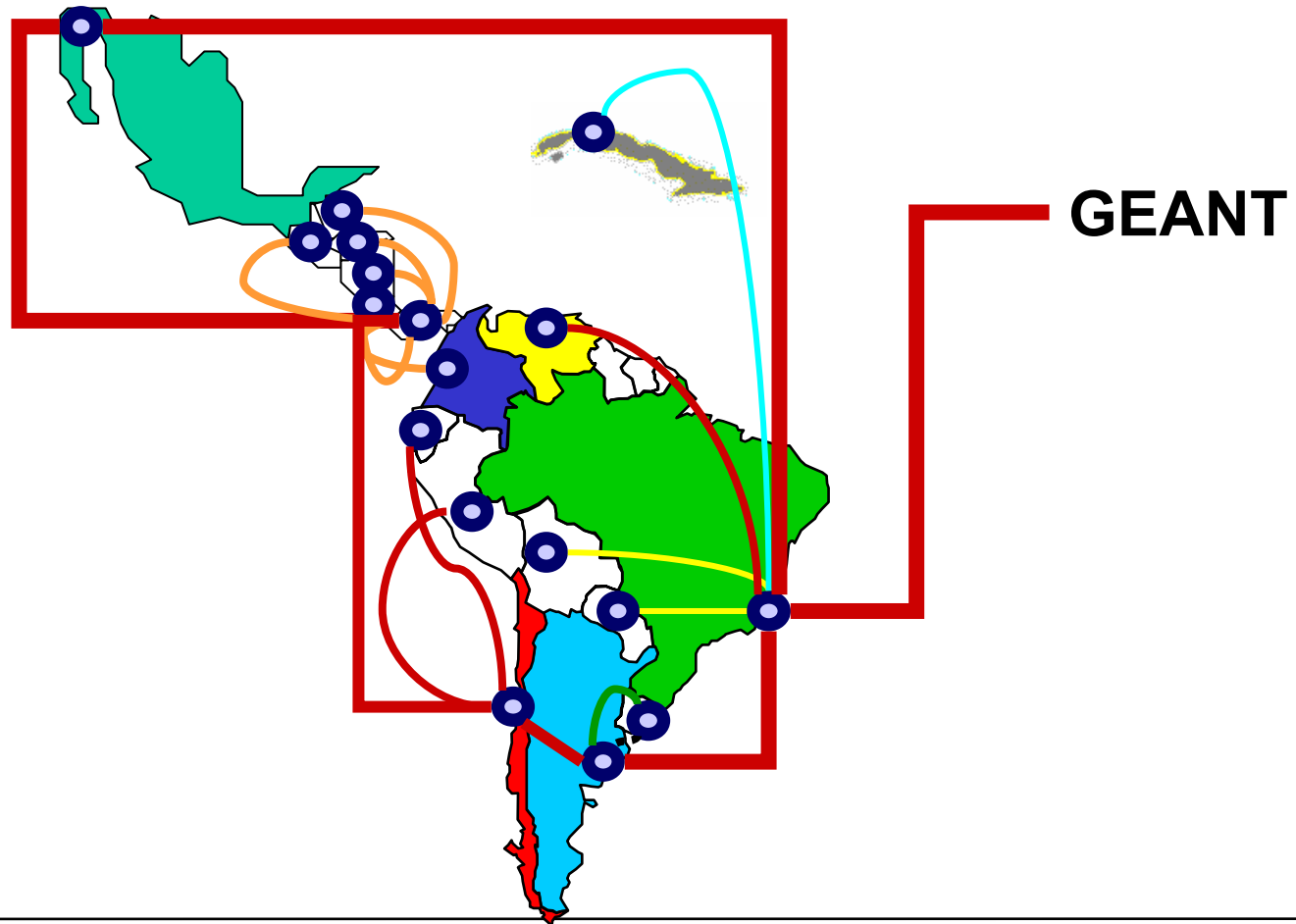
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Connectivity Tender Results II

- **The next step of the connectivity tender negotiations will focus on connecting Uruguay and Paraguay to the ring**
- **Extremely high cost of in-country connections in Central America, Colombia and Ecuador**
 - **the project will need to decide how to proceed for the connectivity to these countries as current prices are outside our budget**

Planned Network Topology



Network Equipment Tender

- **Call for Equipment Tender was launched when we new what the initial topology would look like**
- **Currently negotiating with providers**
- **Project Equipment will be installed in the core ring nodes**

Network Management

- **CLARA activity**
- **Internal CLARA Tender to decide which LA-NREN would be responsible for CLARA-NEG and CLARA-NOC activities**
- **Team of international experts analysed the proposals by the LA-NRENs**
- **CLARA-NEG to be provided by the Brazilian NREN**

CLARA-NOC to be provided by CUDI



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Network Design

- **CLARA activity in close co-operation with DANTE**
- **Network Design and operational model draws on the GEANT experience**
- **Initial Design work carried out by CLARA**
 - with co-operation of LA-NRENs and DANTE
 - very visible process: it is an LA network

On-going activity

Training and Technical Support

- Questionnaire issued in December 2003
- results received (16 LA-NRENs)
- Intermediate Training needs
 - training courses
 - LA-NREN visits
 - long-distance teaching
- Challenges
 - overwhelming number of participants
 - restricted budget
 - language



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Support to @LIS demonstration projects

- **Demo projects form part of the EC @LIS programme**
- **20 projects in the areas of e-health, e-education, e-inclusion and e-government**
- **use of CLARA network via the LA-NRENs, respecting each LA-NREN's AUP and membership policy.**

PR Activities

- **ALICE website: www.dante.net**
- **ALICE Brochure: www.dante.net (to be updated soon)**
- **Joint EC-DANTE press release on ALICE**
- **Presentations world-wide**
- **Lobbying activity to EC Delegations in Latin America**

What's next ?

- **Roll-out of the CLARA network**
 - LA-ring ready for Service Summer 2004
 - more LA-NRENs to connect to ring Fall/Winter 2004
- **Network Launch in Brazil in September**
- **EC funding ceases in May 2006**

Thank You!

**For questions, please contact:
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