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.
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

- 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

Cathrin Stöver, DANTE, cathrin@dante.org.uk
Developments – Global Connectivity to GÉANT

Interconnections
- existing
- planned

GÉANT & NORDUnet networks
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

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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

Phase A

Procurement

Phase B

Implementation

Service

Original Plan

8 months

3 months

Upto 25 months

Current Status

8 months (+)

3 months

Between 23-25 Months

Start June 2003

36 months

Latest finish May 2006

Cathrin Stöver, DANTE, cathrin@dante.org.uk
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
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 knew 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
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
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:
cathrin@dante.org.uk