

# SouthernLight GOLE (São Paulo, Brazil) update

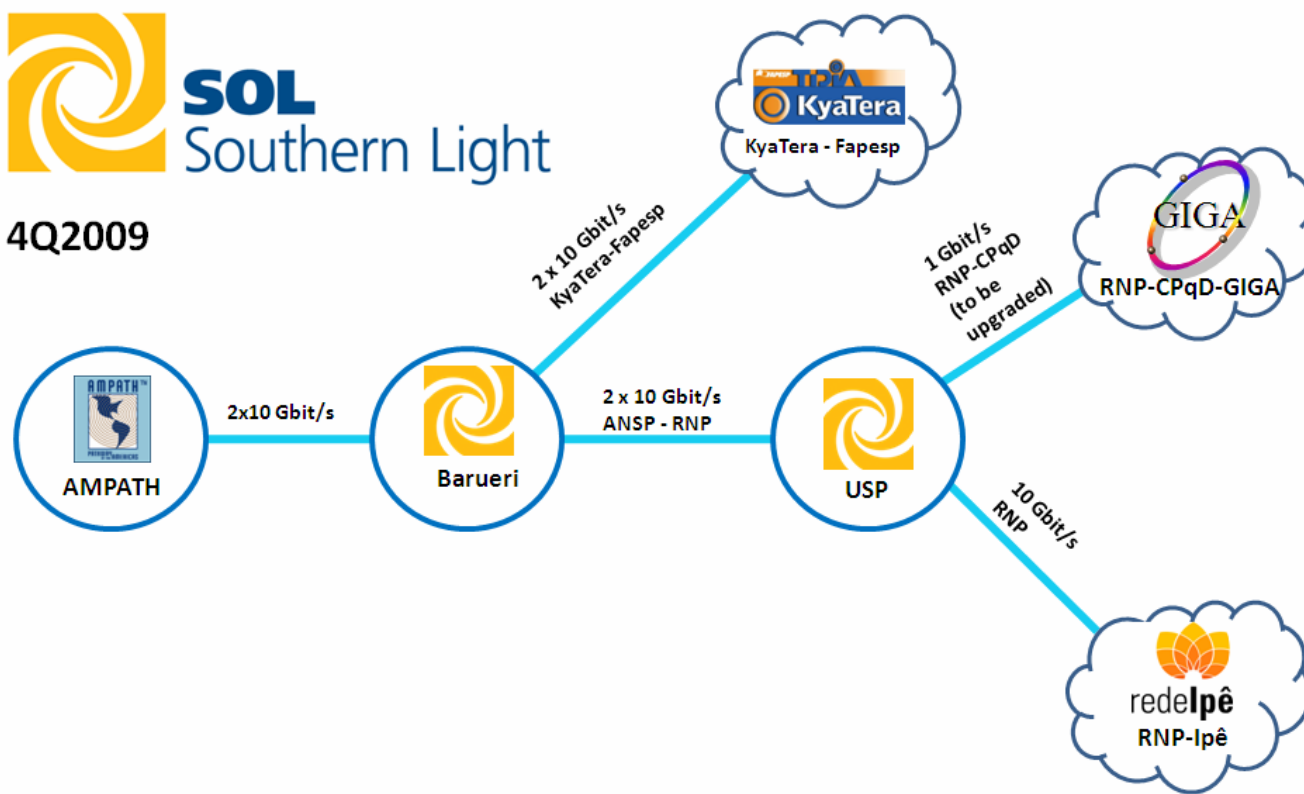
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Workshop  
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*GLIF in South America in 2008*

4Q2009



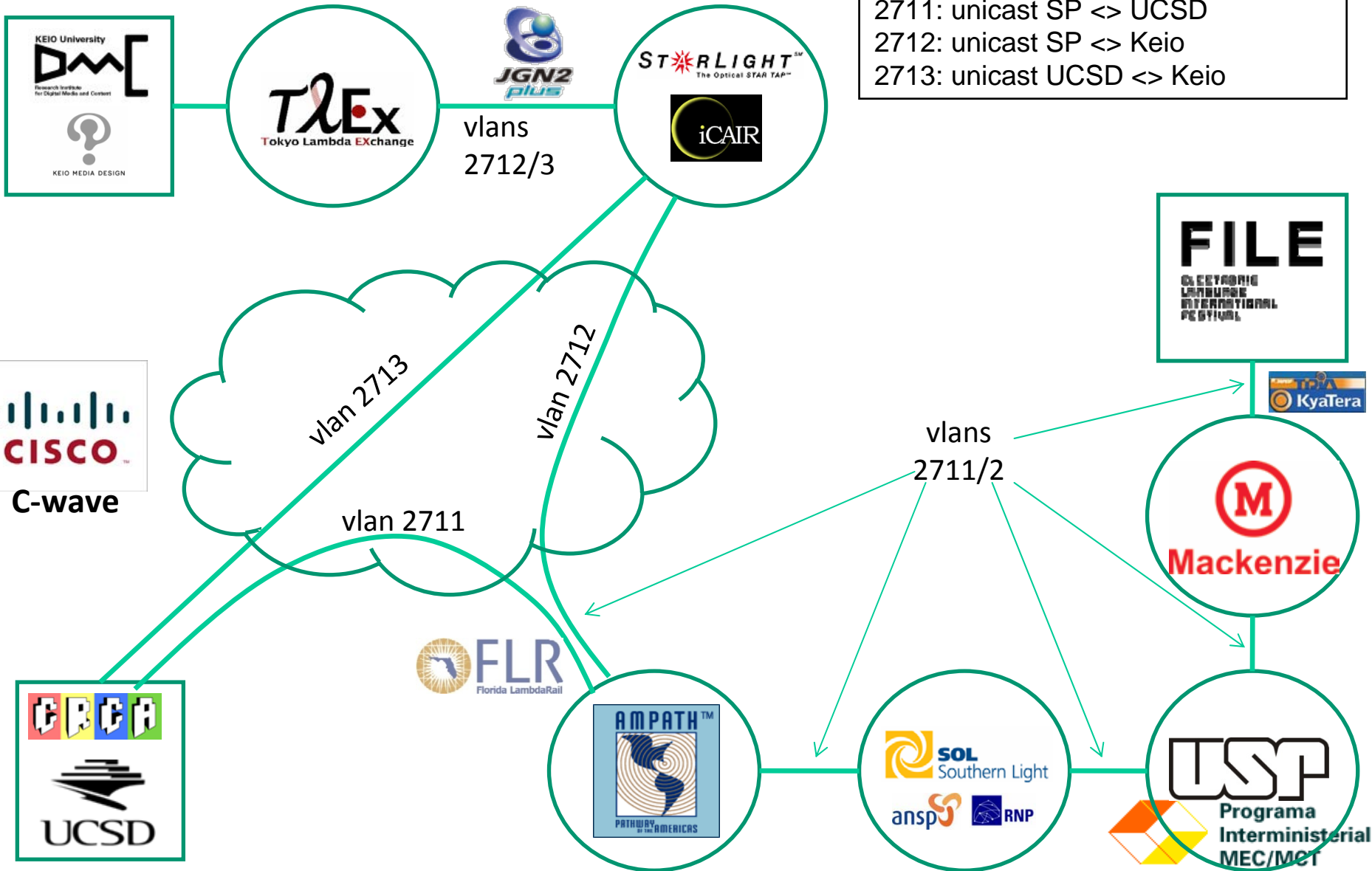
- The GOLE interconnects the 3 Brazilian participating networks:
- SOL is co-administered by ANSP and RNP
- Distributed GOLE: currently 2 interconnected sites with redundant links.
- **NEW!!** SOL now connects to the AMPATH GOLE in Miami by means of 2x10G links, installed between July and October 2009, replacing the previous 2.5G WHREN-LILA link.

# Current usage



- The first 10G link was inaugurated in July, 2009, with a lightpath demo involving the digital cinema community with the transmission of compressed 4K digital média (400 Mbps) and uncompressed HD videoconferencing (900 Mbps) between the **FILE 4KT** in São Paulo, UCSD (US) and Keio University (JP)
  - RNP and ANSP now members of CineGrid
- Regular e-science usage expected in support of HEP, e-VLBI and Dark Energy Survey communities
- Ongoing contacts with the GENI and FIRE communities for Brazilian inclusion in future network research testbeds
- Presently, about 25% of the total international capacity of 20G is being used for routed IP traffic – the remainder is available for lightpath use.

# FILE 4KT: lightpath topology (July09)



# Future developments



## Technology

- RNP's IPÊ network to reach 24 (out of 27) capital cities at 10G by mid-2010, with support for lightpaths
- RNP is carrying out a comparative study of alternative schemes for dynamic lightpath provisioning, with the aim of introduction of a pilot service in 2010. Current candidates include Internet2 DCs and GEANT's AutoBAHN.

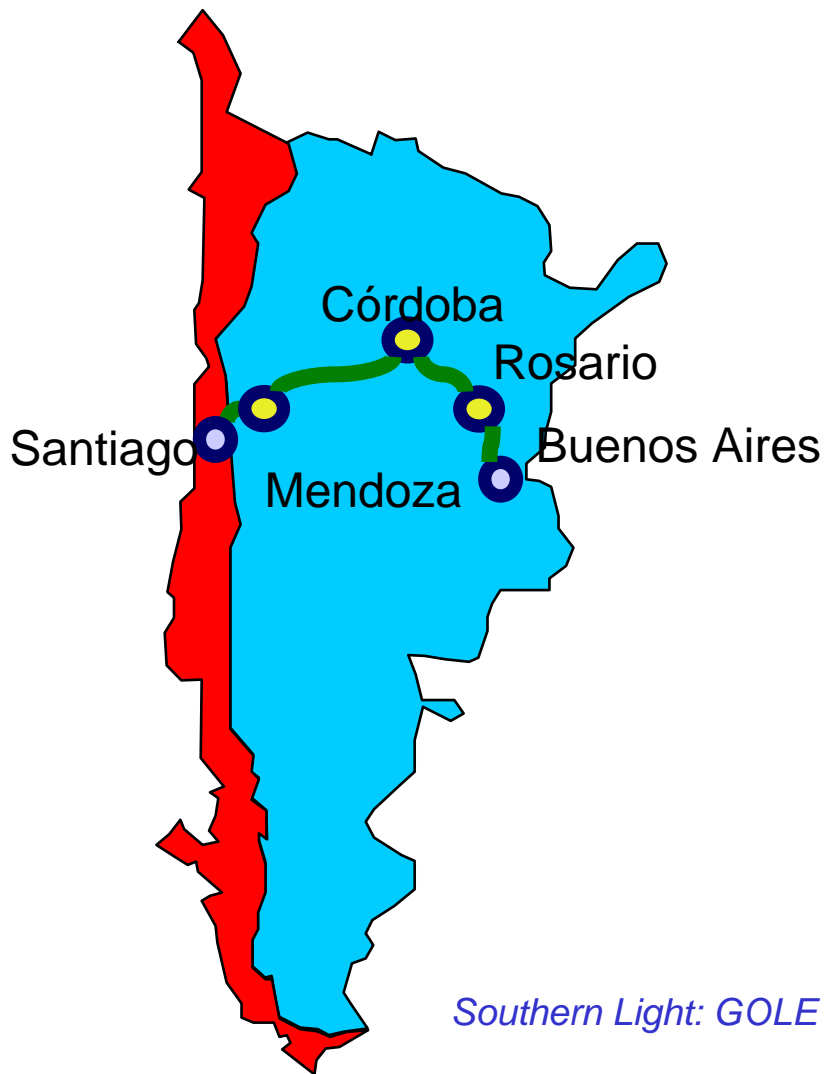
## Geography

- The RedClara2 (Latin American regional network) is acquiring cross-border fibre supporting 10G links interconnecting Brazil to Chile and Argentina by 2010
- It is expected that these links will also provide lightpath connections from SouthernLight to these countries

# RedCLARA2: first cross-border fibre



## Chile – Argentina (1Q2010)



## Argentina – Brazil (2Q2010)

