

RENATER, the French Research  
and Education Network, a  
building block of GEANT, the  
pan-European network  
infrastructure.

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*Renater*

# RENATER, a legal body

# « GROUPEMENT D'INTERET PUBLIC »

- Composition:
  - Ministries: Higher Education + Research
  - Main public research organisations: CNRS, CEA, INRIA, INRA, CNES, CIRAD, INSERM, CEMAGREF, IRD, BRGM.
- Staff headcount: 29; Turnover: 26 M€
- Founded in 1993.

# RENATER, a research infrastructure

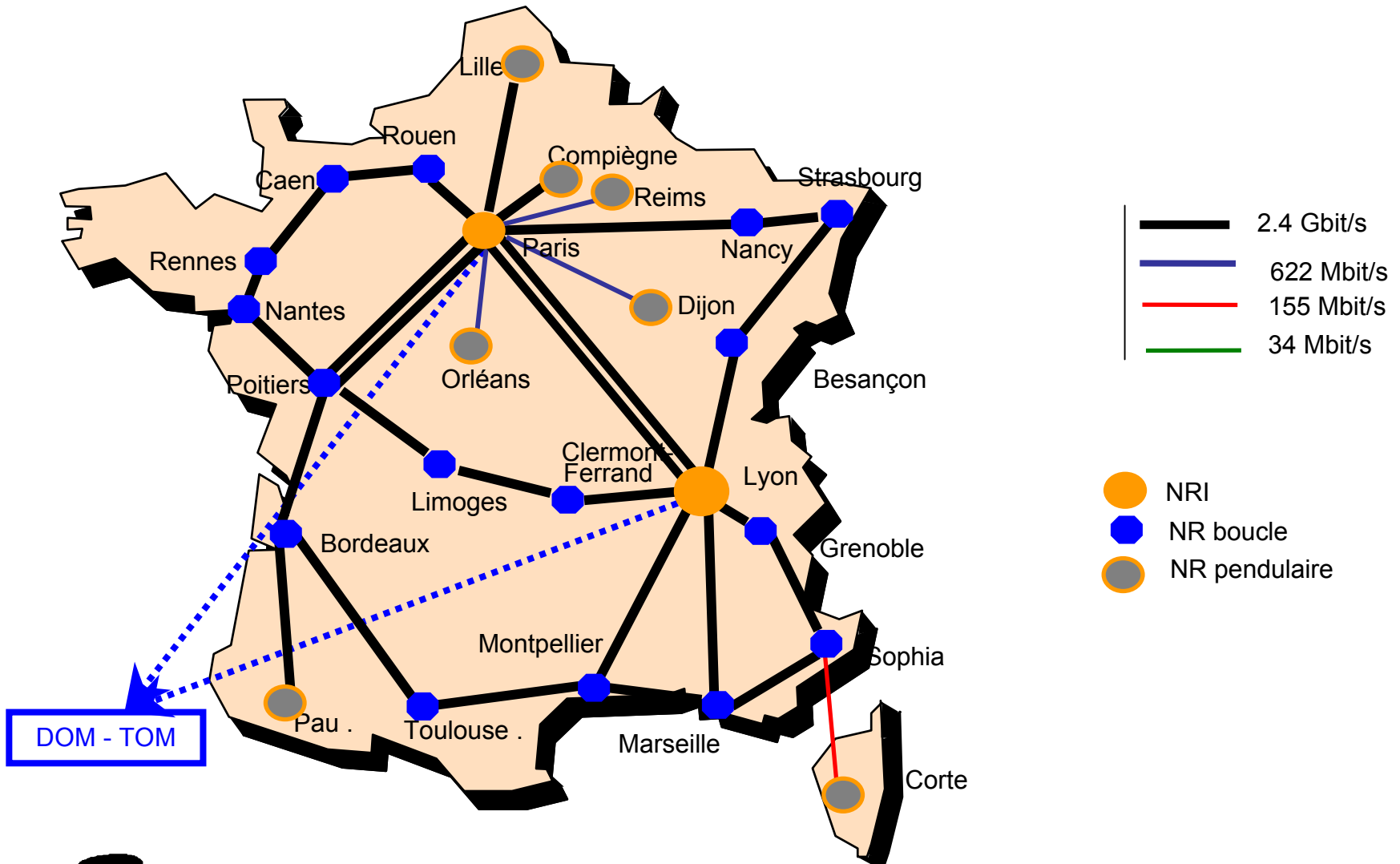
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CUDI, 28 April 2005, Vera Cruz, Mexico

# The network infrastructure

- Made of 30 points of presence (NR) with interconnection circuits
- 7 Points of presence outside main land (overseas)
- Backbone infrastructure provided by a variety of telcos since 1999
- A unique network service management provider

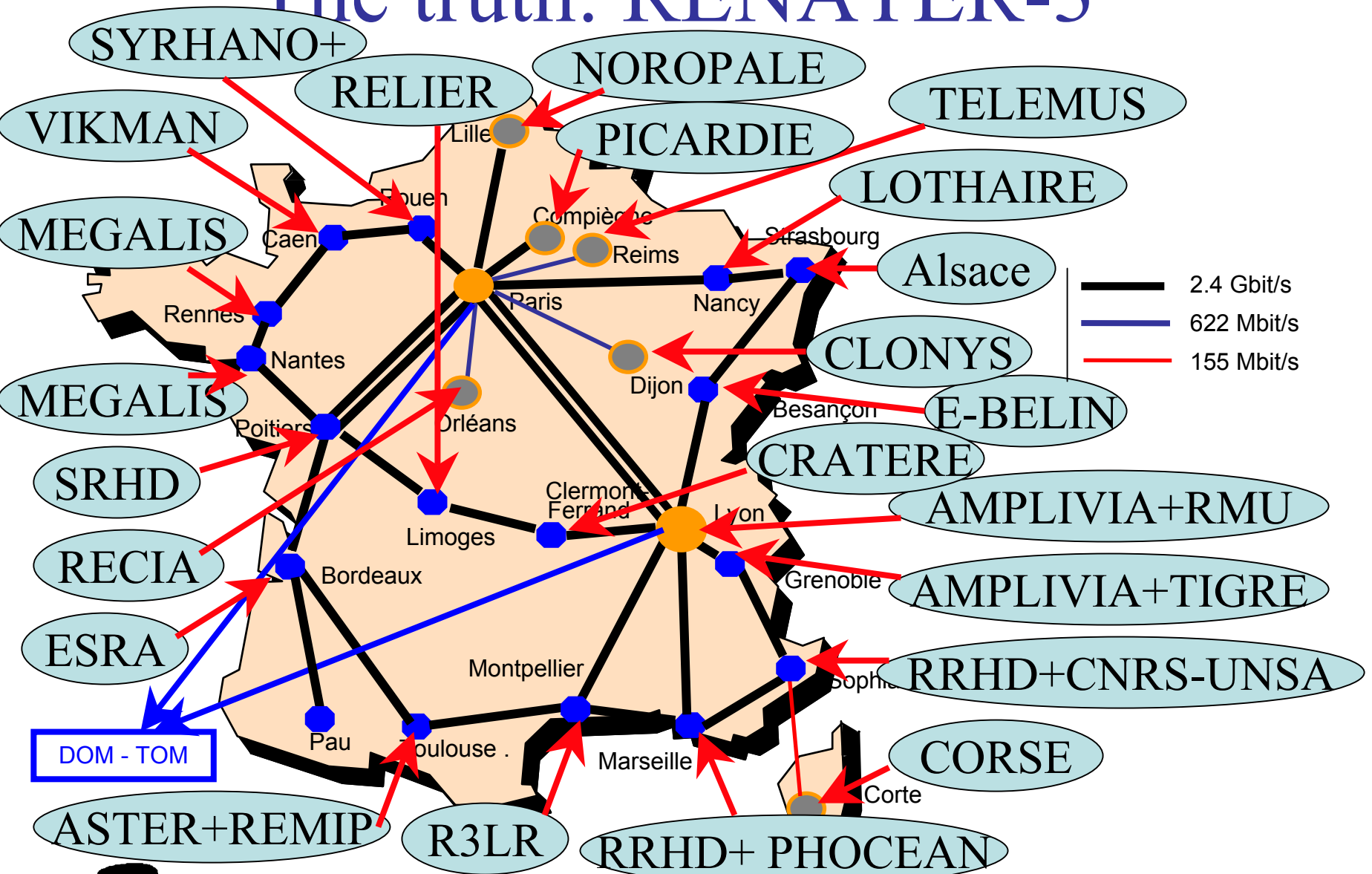
# The current RENATER-3



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# The truth: RENATER-3



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PACRET

ROYAL

RAP

QuickTime™ and a  
TIFF (Uncompressed) decompressor  
are needed to see this picture.

RUBIS

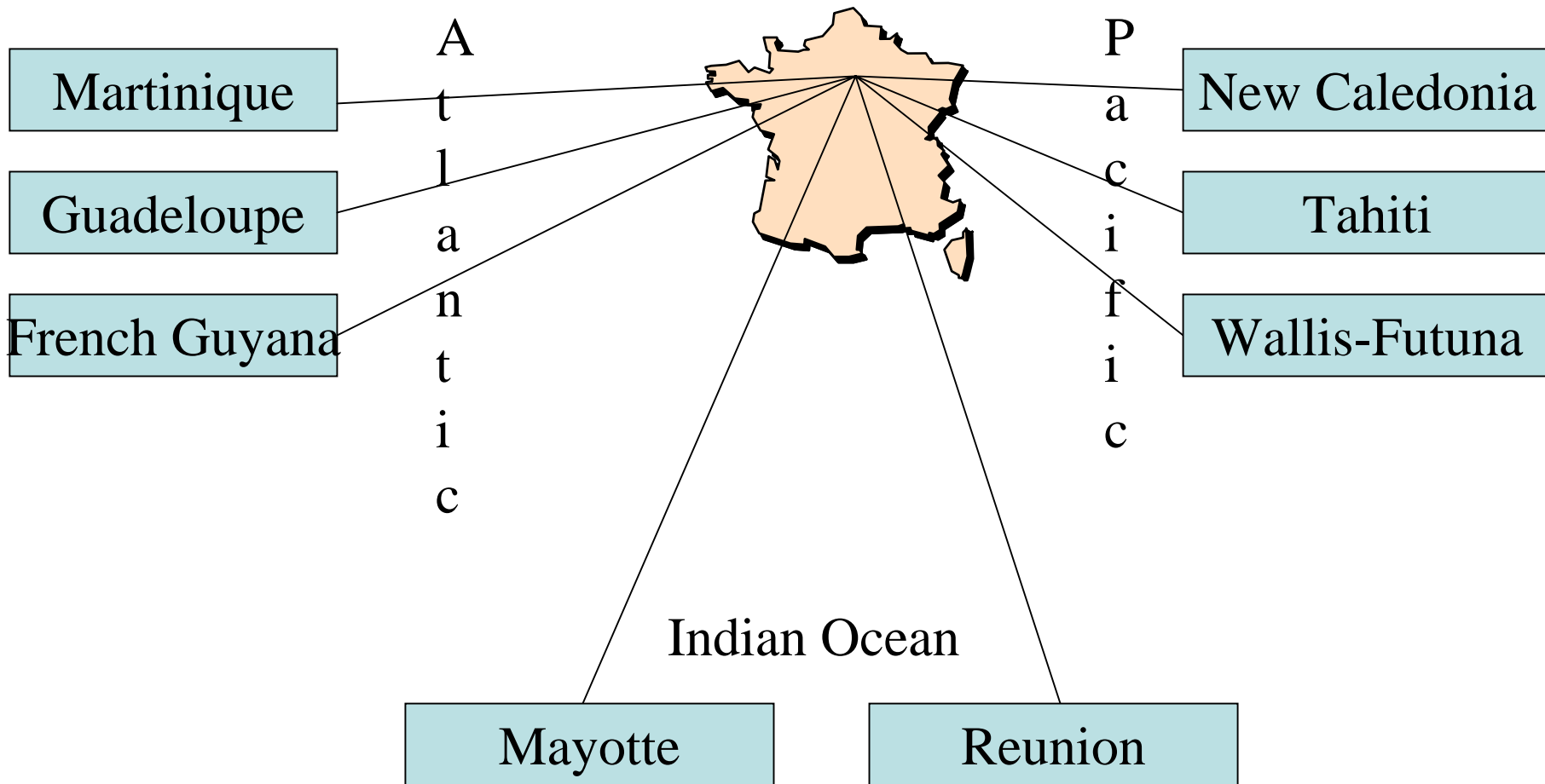
REMUS

REVE

Paris area



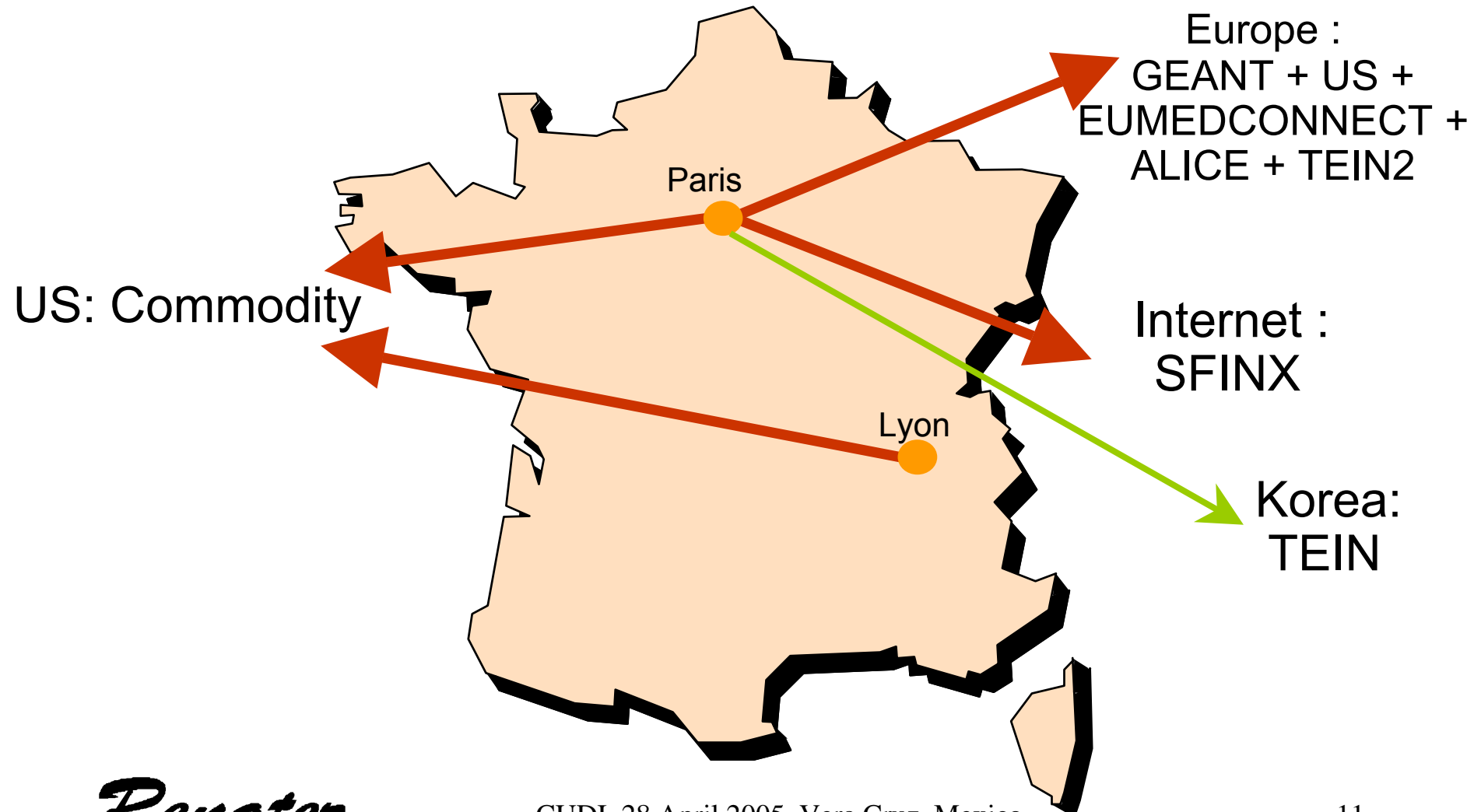
# A wider view of RENATER



# Various network services

- IPv4 + IPv6, unicast and multicast
- QoS, VPN
- VideoConferencing
- CERT
- GIX
- Rootserver hosting
- CDN

# INTERNATIONAL CONNECTIVITY



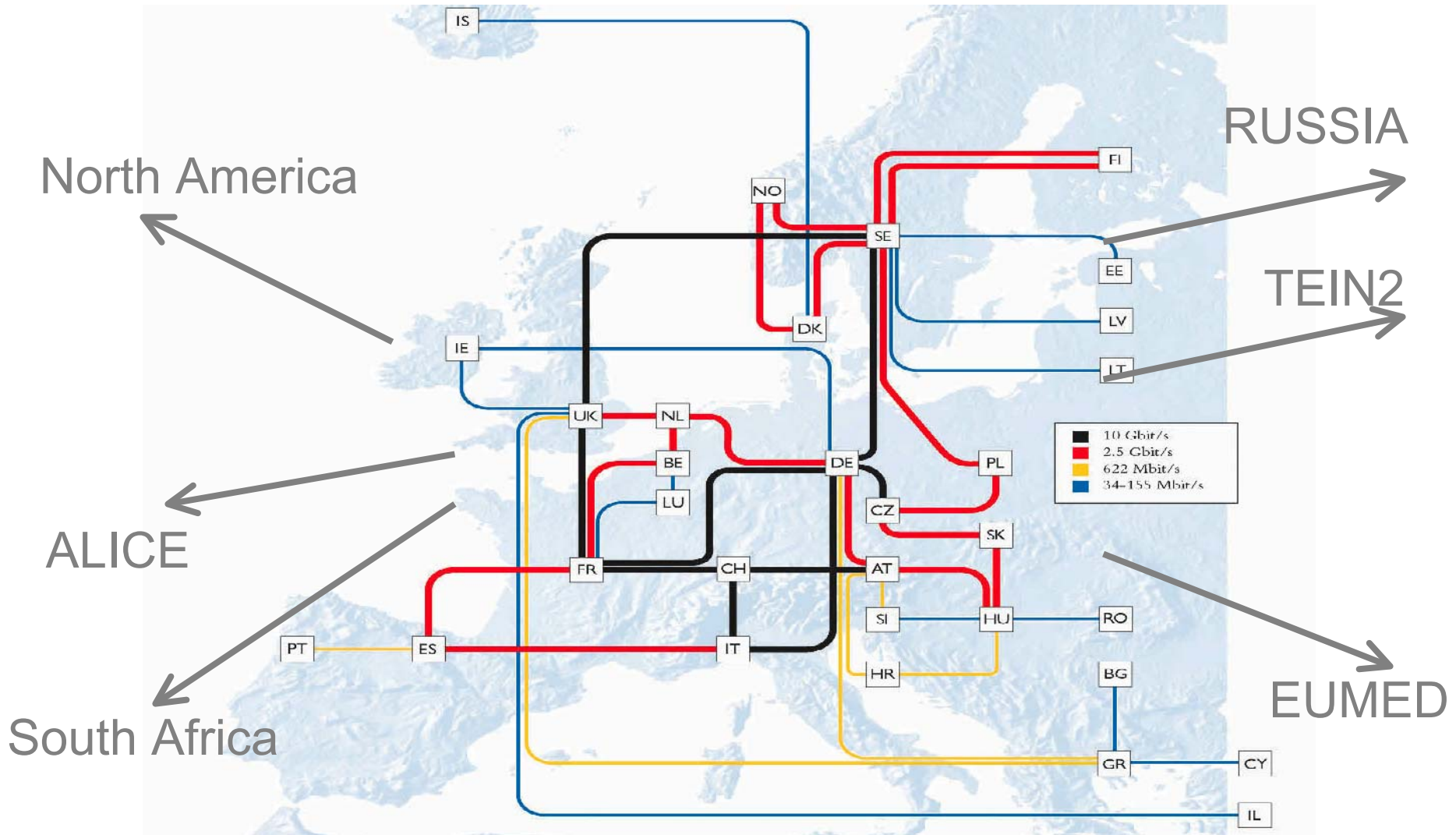
# GEANT Network

- Pan-European interconnection backbone for 32 NRENs
- Successor of TEN-34 and TEN-155
- GEANT-2 in final procurement phase (operation in 2005)
- An academic community made of + 3500 universities or research centres
- Shared funding between European NRENs and the European Commission
- EU FP5: 80 M€(40 % of total cost)
- EU FP6: 100 M€(> 50 % of total cost)
- [www.geant.net](http://www.geant.net)

# GEANT : Organisation

- NRENPC: National Research and Education Policy Committee is the highest level of authority on GEANT
- DANTE (Not for profit limited liability company, based in Cambridge, UK) is the Consortium coordinator.
- [www.dante.org.uk](http://www.dante.org.uk)
- Overall infrastructure capacity: [+ 150 Gb/s]
- Global connectivity :
  - 3 x 2.5 Gb/s towards North America research networks (Abilene, ESNET, CANARIE etc.)
  - 10 Gb/s from US (supported by National Science Foundation: Abilene, Canarie)
  - 2.5 Gb/s SINET (Japon)

# GEANT



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# Associated Projects

- TEIN-1 (155 Mb/s between Paris and Seoul (EU-AP) [www.transeurasia.org](http://www.transeurasia.org))
- TEIN-2 : Interconnection with SEA ASEM countries
- EUMEDCONNECT for the Mediteranean region: [www.dante.org.uk/eumedconnect](http://www.dante.org.uk/eumedconnect)
- ALICE for the Latin America [www.dante.org.uk/alice](http://www.dante.org.uk/alice)

# ACCEPTABLE USE POLICY

- Restriction to professional use for education, research, technology, culture, etc.)
- Because of subsidiarity principle, each NREN is responsible for its own AUP
- Commodity traffic is supported but no commercial traffic!



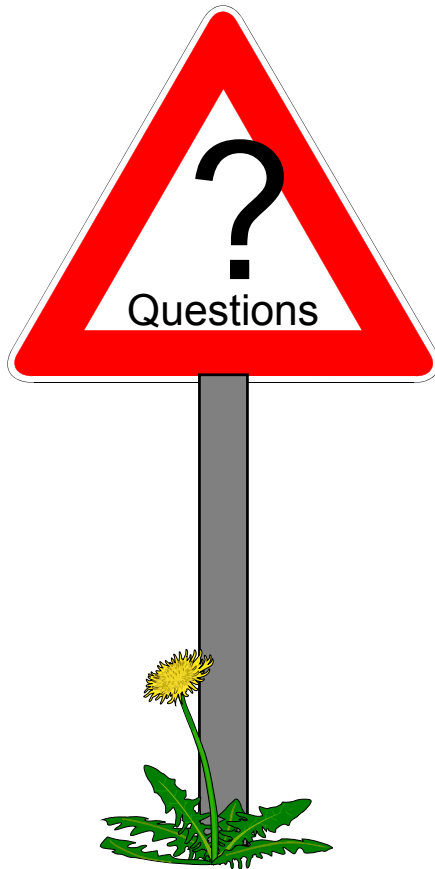
# FR-MX cooperations

- 2 MX-FR laboratories:
  - LAFMAA (R. Lozano, UTC)
  - LAFMI (M. Adiba, Grenoble, Cristina Loyo, Jalapa  
<http://lafmi.imag.fr>  
<http://lafmi.lania.mx>)
- Strong partnership with ENST-bretagne (L. Toutain, [toutain@irisa.fr](mailto:toutain@irisa.fr))

# FR-MX cooperations

- INRIA
  - Robotic and vision yearly summer school
  - A list of INRIA partners:
    - Universidad Autonoma de Puebla, CONACYT, LANIA, UDLA/BD, UDLA/XALTAL, Centro de Sistemas Inteligente", ITAM, University of Guadalajara, Univeritad Autonoma Metropolitana Mexico, Centro de Sistemas Inteligente, ITESM, etc...
- RENATER:
  - University of Guadalajara

# END OF PRESENTATION



Any questions?