Transatlantic networking and services

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WS on Transatlantic networking for the LHC experiments

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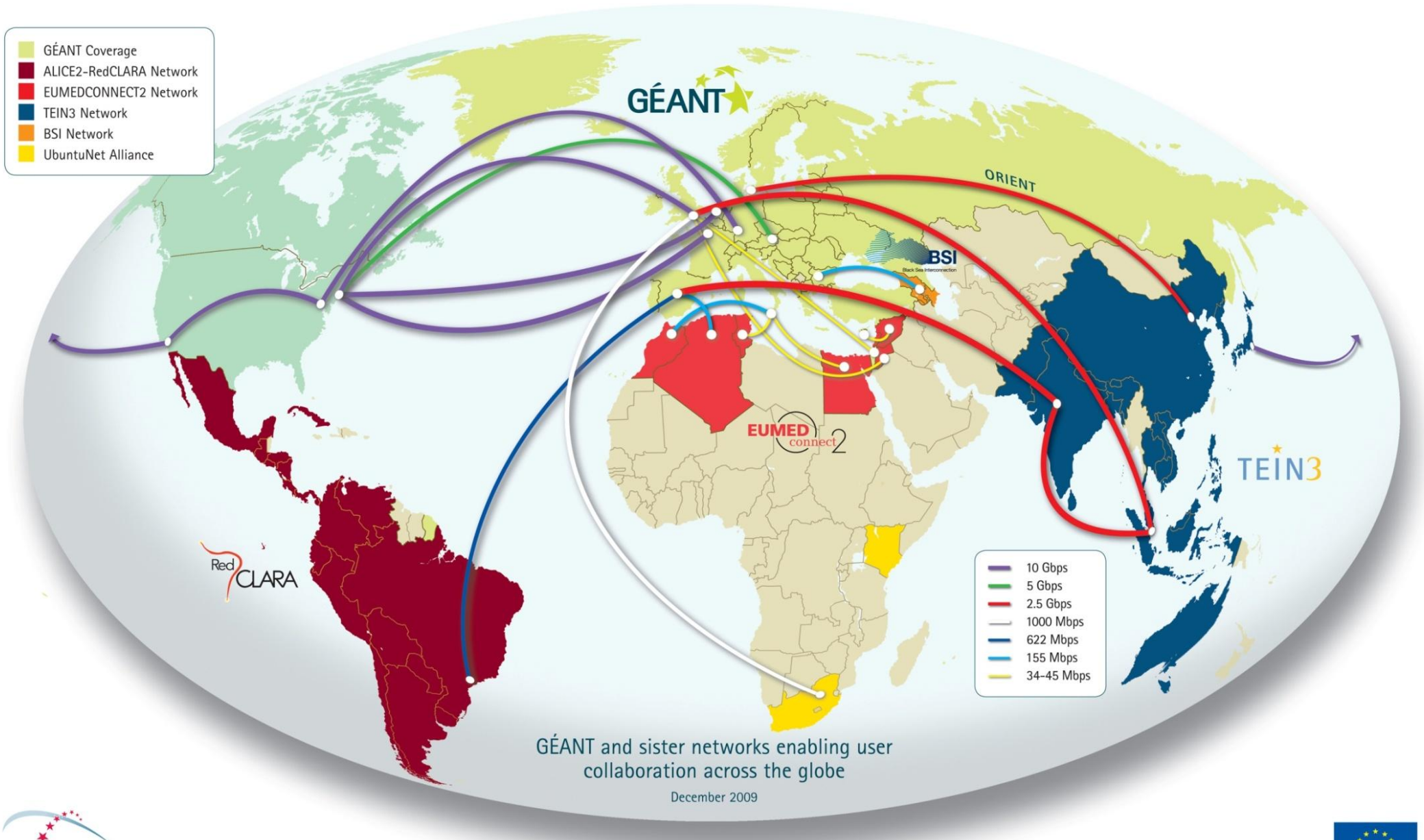
GÉANT At the Heart of Global Research Networking



GÉANT and sister networks enabling user collaboration across the globe

December 2009

connect • communicate • collaborate

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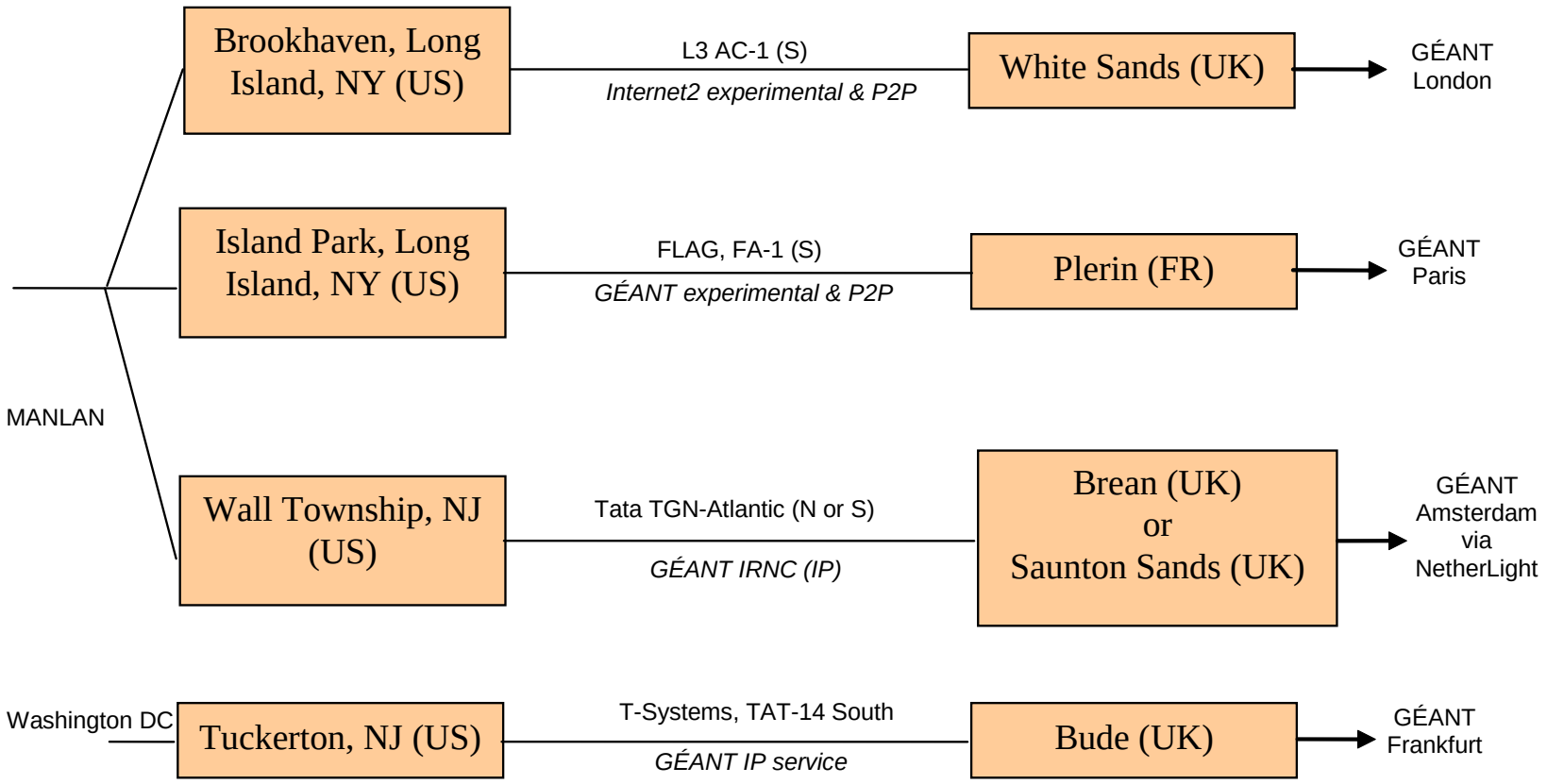
Current transatlantic connectivity



Transatlantic dynamic bandwidth service

- A one year plan was set for the definition and introduction of dynamic bandwidth services in the DICE transatlantic collaboration between:
  - Internet2
  - ESnet
  - USLHCnet
  - Canarie
  - GÉANT

- 2010 Q3 – each domain have a running IDCP compatible agent
- 2010 Q4 – operational status available through perfSONAR
- 2011 Q1 – prototype installation testing and AA roll-out
- 2011 2H – (subject to results of the test) service available

High capacity transatlantic lambda delivery

- The GÉANT community is in the process of establishing a framework agreement with several (5+) network operators for transatlantic connectivity on 6 transatlantic cables
- Purpose – effective and rapid delivery of transatlantic lambdas in support of connectivity services
  - 10G (available)
  - 40G (available)
  - 100G – as soon as available.
- Key location in North America and EU covered
- Close cooperation with Internet2 and the ACE project to ensure full path diversity

Conclusions

The GÉANT partners will be able to serve the LHC community by:

- Rolling out a transatlantic dynamic bandwidth service in collaboration with the North American partners (DICE)
- Implementing quick delivery of trans-Atlantic 10G, 40G and 100G lambdas to key North American locations.
  - *close cooperation with Internet2 and America Connects to Europe (ACE) to ensure path diversity*
- Further supporting and upgrading IP services across the Atlantic