



Communications
Research Centre
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S&T in Canada and Opportunities with Europe

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ICSSEA conference

Canadian S&T Policies

- Government of Canada policy relies on sound S&T knowledge
- International S&T playing increasingly important role in wide range of domestic and foreign policies
- Canada's S&T policy based on three fundamental objectives:
 - to advance knowledge
 - to create wealth through jobs and growth
 - to enhance quality-of-life

Canadian S&T Priorities in ICT Sector

- Innovation: market-driven & global
- Connectedness
- High-speed broadband Internet access in all Canadian communities by 2005

Initiatives

- Innovation Strategy: make Canada one of top 5 innovators; double R&D investment (e.g. universities)
- Establishing more internationally recognized technology clusters
- Investing in skills and learning: e.g. increasing graduate student admissions
- Increasing venture capital investments
- Maintaining competitive business taxation
- Smart regulation
- Increasing collaboration: global partnerships key to expanding innovation opportunities, mitigating risk

Examples of Canadian Strategic Investment in Innovation

- Canadian Foundation of Innovation - C\$3.65B
- 2000 Research Chairs - C\$ 4B
- CANARIE's CA*Net 4 - C\$110M

Instruments for Fostering Collaboration

- EU-Canada S&T Agreement signed in 1996
- EU-Canada e-Health Initiative
- IST-EC
- International Connectivity of Research Networks and Grid Testbeds

Canada-EU e-Health Initiative

- Focus on
 - Tele-health
 - Continuing Medical Education
 - Research & Rehabilitation in Remote Region
- Partners: STAKE, EHTEL, CANARIE, Canadian Society of Telehealth, Industry Canada, Health Canada
- Future initiatives could focus on Aging Population, Multi-cultural Services and Home Services

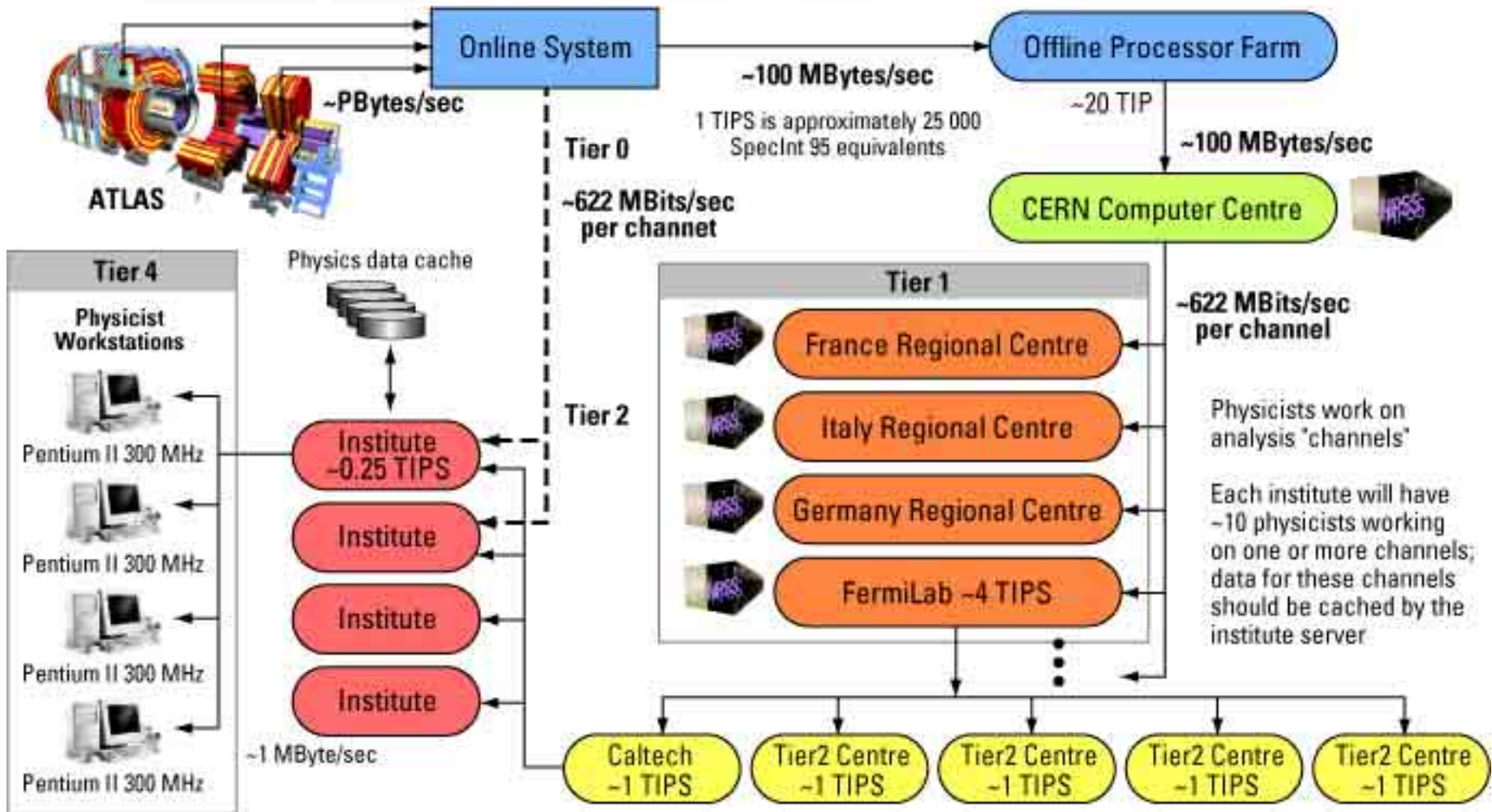
- E-learning, e-business, e-work and e-content
- Canadian partners: CRC, NRC, DFAIT, CANARIE, CITO, CRIM, LICEF and others
- Nine IST-EC brokering events held
- Resulting in 15 IST proposals.
- On-going - completion in March 2004

International Grid Testbed

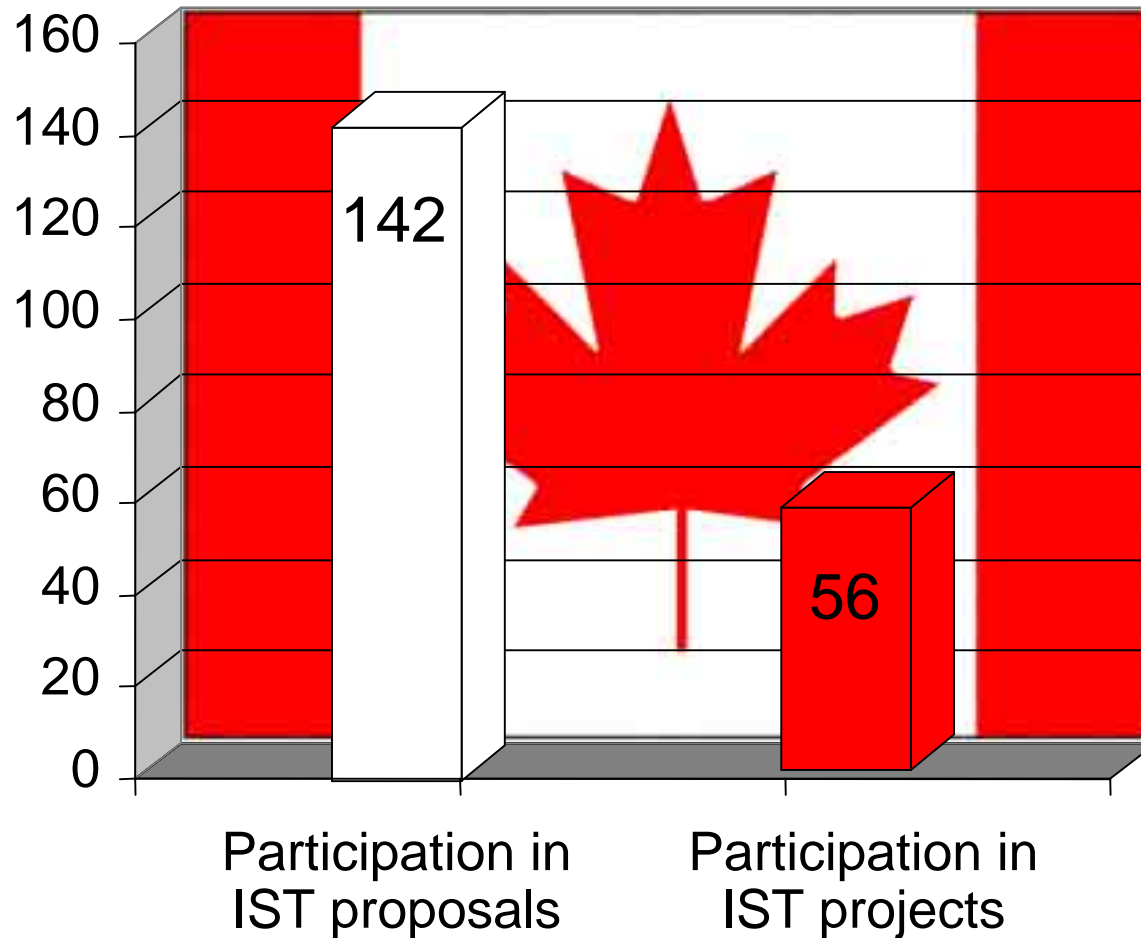
- Grid Canada collaborating with EU
- CANARIE is founding member of International Grid Testbed with Surfnet and CERN as European partners
- End-to-end lightpaths between Europe and Canada for distributed data, computation and complex problem solving projects such as; for high energy physics, imaging, etc...

- First production use of international e2e lightpaths to transfer Forward Calorimeter data from CERN to Canada
- Experiments planned to directly transfer low level trigger data from CERN to Canadian computers
- 10 GbE server to server experiments

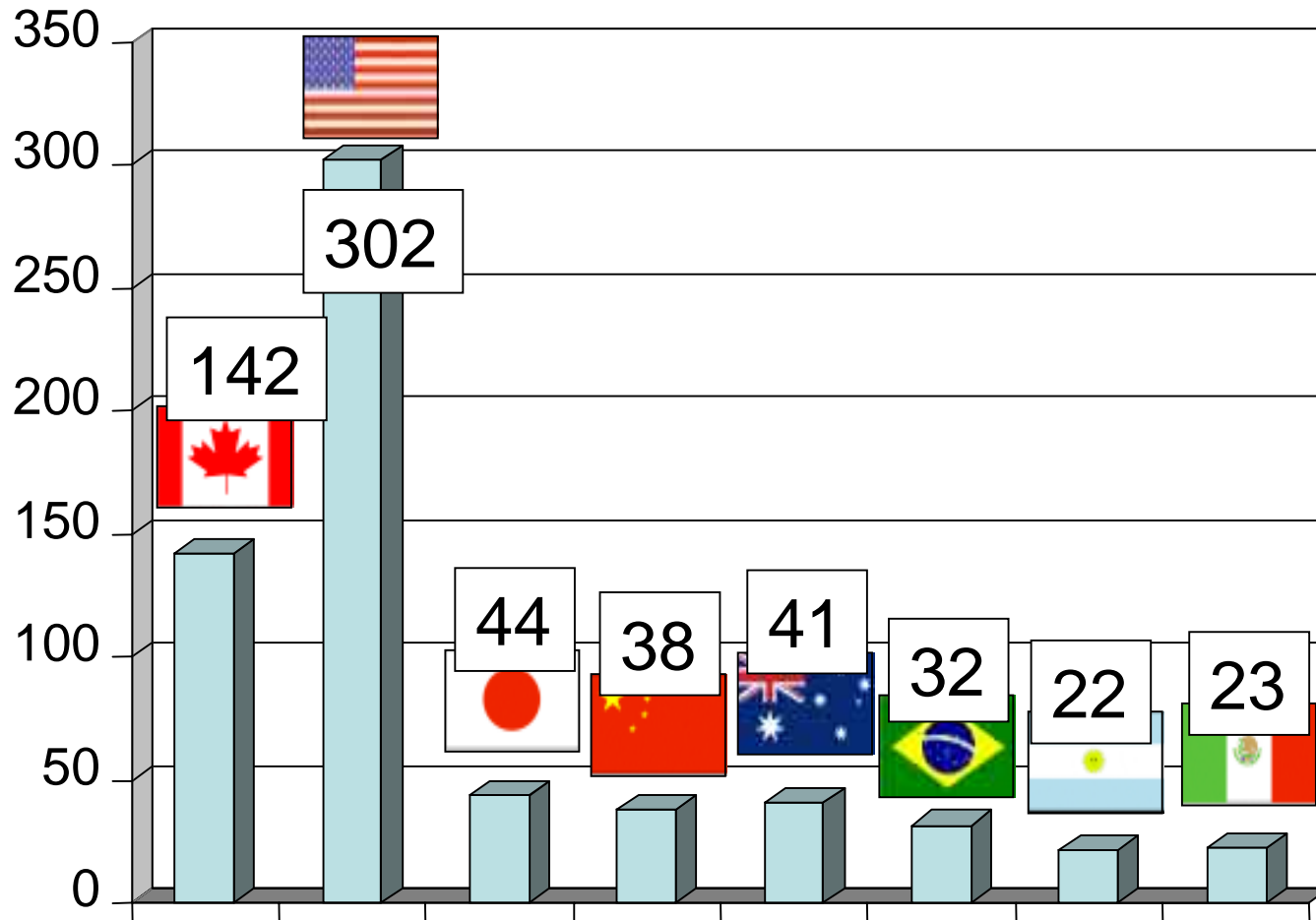
International Grid Testbed



Canadian Participation in the IST Program



Some Countries Participation in the IST Program



A Success Story ISABEL

- CRC and University Polytech Madrid have been collaborating on development and testing of a Computer Supported Collaborative Work software, ISABEL
- CRC is the only test site for ISABEL outside Europe
- ISABEL is one of the main tools for CRC's e-learning projects

An Example of Bi-lateral S&T Initiative (Canada-Germany)

- Canada-Germany bilateral S&T agreement signed in 1971 serves as backdrop to ongoing collaboration
- NRC and Helmholtz Assoc. of Nat'l Centres signed MOU in October 2001: German Ministry of Education funds university researchers for joint projects to a max. of \$140K/year for 3 years
- 6 NRC institutes and 11 German universities and research institutes participating
- \$3M funding for 11 projects in genomics, bioinformatics, molecular photonics, quantum computing, aeronautics, nanoengineering, fuel cell technologies
- Outputs so far: guest lectures, conferences, workshops, assignments, published articles

Canadian Funding Opportunities & Resources for International Collaboration

- Decentralized system
- Resources available for Canadians for collaboration with Europeans:
 - IRAP for SMEs
 - NSERC for university researchers
 - CIHR for e-health projects
 - CANARIE for broadband development
 - CFI International
 - Provincial funding sources

IRAP

- Industrial Research Assistance Program administered by NRC funds Canadian SMEs
- Connects innovative Canadian firms with the information, resources and financial assistance they need to turn ideas into commercial products and services by operating on “the shop-floor” of 12,000 firms across Canada
- Connects firms to international expertise and emerging market opportunities
- In 2002-03, IRAP’s technology missions with 65 SMEs to Europe and Asia resulted in 40 MOUs, 6 contracts and 4 joint ventures

- Supports university based research and training in the natural sciences and engineering
- Funding decisions made through competitive peer review process
- \$770M budget for 2003-04
- International Opportunity Program
- Research Partnerships Program requires partners from outside academic sector, including foreign if contribution is real and if there is a receptor capacity in Canada for research results
- Researchers can use NSERC research grants to support travel costs and to sponsor visiting researchers

ISSUES

- Synchronization of Calls for Proposal
- Peer Review Process/Outcome

Conclusion

- Continue to foster and build networking (people) between Canadian and European researchers and scientific staff
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