Mapping Canadian biodiversity

Using CA*net 4 to build the Barcode of Life

Canada has established a research network dedicated to assembling DNA barcodes on a national scale – the first country in the world to do so. Led by the Biodiversity Institute of Ontario at the University of Guelph, the Canadian Barcode of Life Network is developing the world's first comprehensive DNA barcode libraries for birds and fishes, fungi, plants and single-celled organisms.

Genome Canada is providing nearly $5 million to the Canadian Barcode of Life Network – a $9.6 million project that also includes several universities and institutes from across Canada.

CA*net 4 is providing the project with a critical networking link to computing resources across southern Ontario through the SHARCNET High Performance Computing cluster, and to collaborators in Ottawa and New Brunswick. CA*net 4 is also helping to facilitate Canada's participation in the Consortium for the Barcode of Life – a massive international project involving more than 100 organizations from 40 countries. The project could eventually lead to the development of hand-held devices that could rapidly identify millions of species. Such rapid identification has the potential to yield lifesaving drugs, or to stop the spread of an invasive species or agricultural pest.

www.bolnet.ca

In 2005, the SHARCNET High Performance Computing cluster received its first dedicated lightpath from CANARIE, enabling its over 200 research groups in south-central Ontario to share and transmit massive amounts of data, with virtually no constraints on bandwidth.