IXmaps Helps Canada See Where their Data Travels Online

The launch of a powerful Internet Mapping tool means Canadians now have an easy way to track exactly where their data is traveling across the Internet. The tool at IXmaps.ca — IXmaps stands for Internet Exchange Mapping — is the brainchild of a team of researchers at the University of Toronto and York University, led by Professor Andrew Clement.

The IXmaps tool has been greatly improved to make it more user-friendly and accessible to the public, with a grant from the Canadian Internet Registration Authority's (CIRA) Community Investment Program and financial support from the Office of the Privacy Commissioner of Canada (OPC). The launch of the tool comes against a backdrop of growing concern about steps taken by the Trump administration to strip privacy rights from data on Canadians held by the U.S.

Researchers estimate that the vast majority of Canada's Internet traffic travels through the U.S., where it's especially vulnerable to NSA surveillance. Even a lot of the traffic between Canadians 'boomerangs' through the U.S., often because the big carriers don't want to peer with their competitors in Canada. Canadians can now use the IXmaps tool to help researchers gain a better understanding of this phenomenon.

"The Trump Administration is adding to the legitimate concerns that Canadians have about their data traveling to the U.S., where it loses Canadian legal and constitutional protections and is exposed to increasingly unfettered mass surveillance," said Professor Andrew Clement, IXmaps team lead, University of Toronto. "Much of this privacy risk is needless, as Canadians' data often unnecessarily travels to the U.S. before being routed back home for delivery. IXmaps enables individuals to map the routes their personal data takes across the internet, where along the way it may be subject to NSA surveillance and how their ISP measures up in protecting their privacy."

"CIRA has long been an advocate for the development of made-in-Canada Internet infrastructures. We're working with Internet leaders across the country to build and maintain a robust set of Internet Exchanges," said Jacques Latour, CTO at CIRA. "This research from IXmaps provides further evidence as to why these efforts are both critical and urgent. Ensuring that Canada has resilient and higher-performing networks that fall within Canadian control is critical to our modern digital sovereignty."

"Few of us stop to consider what's actually happening to our data when we hit 'send' on an email, click on a link, or tap 'reply' to an instant message," said OpenMedia's communications manager David Christopher. "The IXmaps tool empowers Canadians to see where their data travels, and how much of it is being captured by the NSA. This will enable us to have an informed debate about what needs to be done to keep more Canadian traffic in Canada."

IXmaps researchers Andrew Clement and Jonathan Obar have made a number of specific recommendations to help create a Canadian network architecture and Internet policy that is more likely to ensure that domestic Canadian traffic does not 'boomerang' to the U.S. and back. These include:

- Building up our domestic infrastructure by creating new Canadian Internet exchanges;
- Expanding Canada's long-haul Internet backbone capacity;
- Ensuring that government procurement policies give greater priority to all-Canadian routing and privacy protection;
- Requiring greater transparency and accountability on the part of Canadian telecom carriers in terms of their internetwork routing practices, long-haul carriage capacity and utilization, and data-protection provisions in the contractual arrangements with transit providers.

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