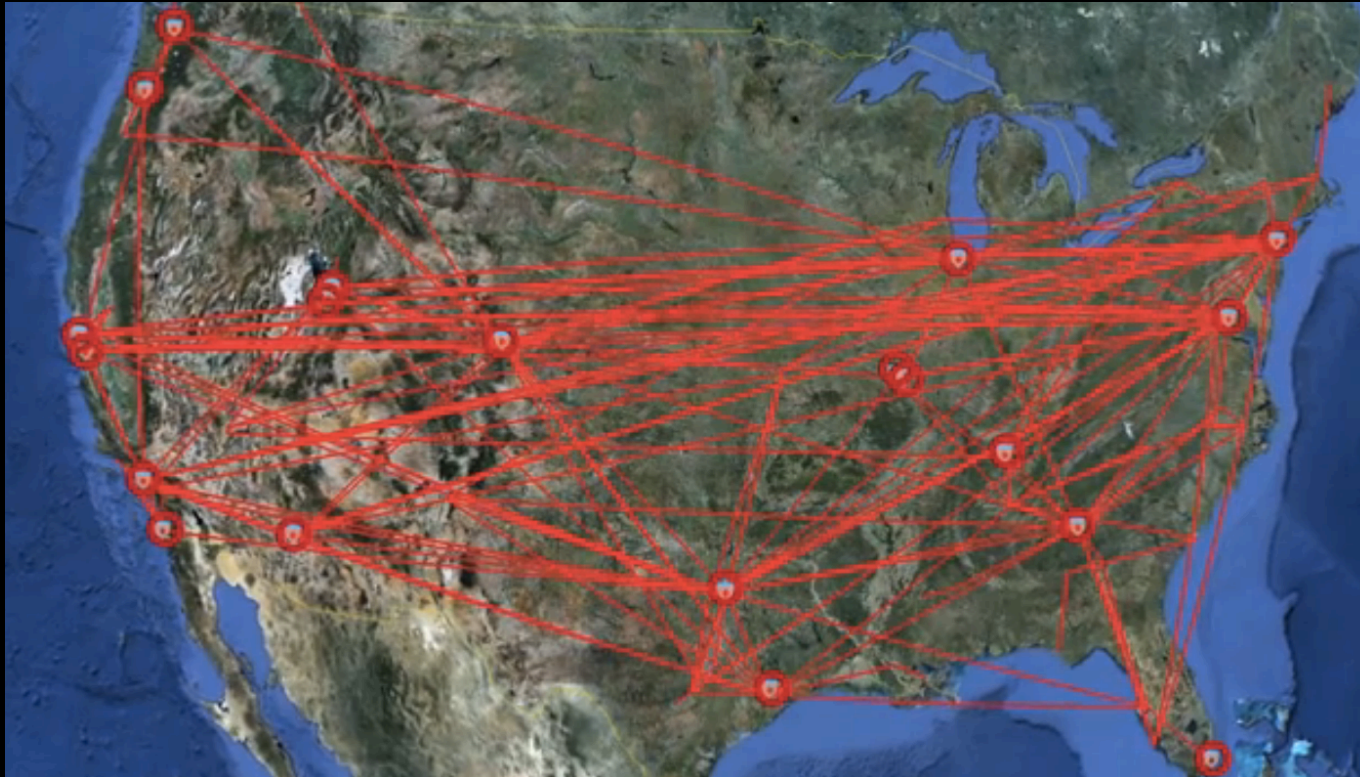


# Privacy, NSA surveillance and Canadian internet 'boomerang' traffic:

Policy implications for Canadian businesses and public institutions



Andrew Clement

Faculty of Information, University of Toronto

Identity Privacy and Security Institute

The New Transparency: Surveillance and Social Sorting

Big Surveillance Demands Big Privacy

IPC- International Privacy Day

MaRS, Toronto

January 28, 2014

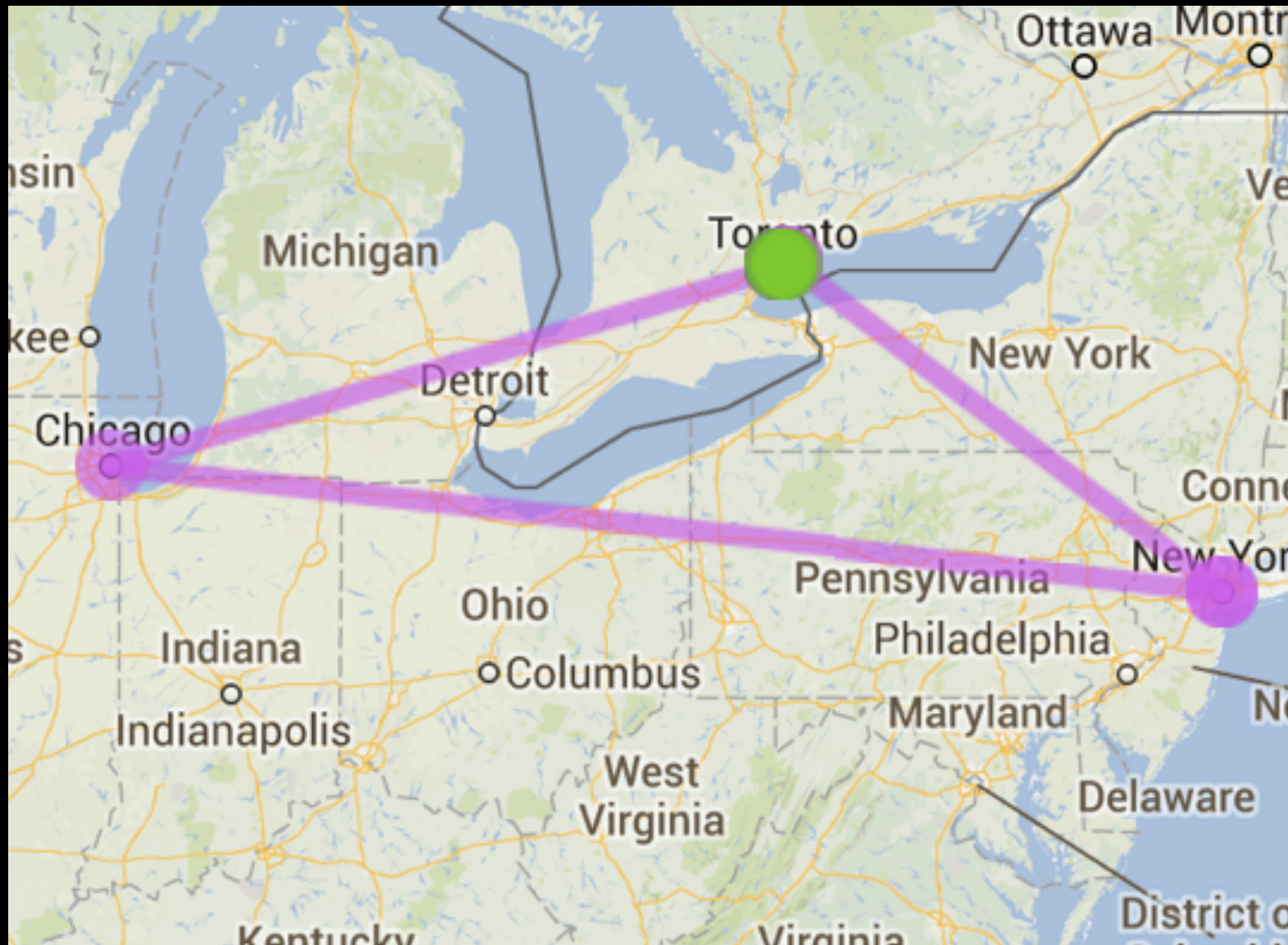
# Traceroute of a 'boomerang' route

**MaRS > Cogent > Telus > Ont Gov OSAP**

- 1 (10.100.1.1) **Toronto (MaRS)**
- 2 (38.116.198.2) **Toronto (Cogent)**
- 3 (192.168.250.4) **Toronto (Cogent)**
- 4 vl1150.na31.b010935-0.**yyz**01.atlas.**cogent**co.com (38.112.30.241)
- 5 vl3597.mag02.**yyz**01.atlas.**cogent**co.com (38.20.70.145) **Toronto (Cogent)**
- 6 te8-1.ccr01.**yyz**01.atlas.**cogent**co.com (154.54.86.77) **Toronto (Cogent)**
- 7 te0-1-0-5.ccr22.**yyz**02.atlas.**cogent**co.com (154.54.5.82)
- 8 be2119.ccr22.**jfk**02.atlas.**cogent**co.com (154.54.0.129) **New York (Cogent)**
- 9 be2061.ccr21.**jfk**05.atlas.**cogent**co.com (154.54.3.70) **New York (Cogent)**
- 10 **telus.ord**03.atlas.**cogent**co.com (154.54.10.238) **Chicago (Cogent)**
- 11 eyrkonaedr07.bb.**telus**.com (154.11.6.32) **Toronto (Telus)**
- 12 (207.219.86.174) **Toronto (Telus)**

**Toronto > Toronto (Ont Gov OSAP)**

**UofT > Cogent > Telus (IXmaps TR6896)**



# Cogent's 'privacy' policy

*Cogent makes no guarantee of confidentiality or privacy of any information transmitted through or stored upon Cogent technology, and makes no guarantee that any other entity or group of users will be included or excluded from Cogent's network.*

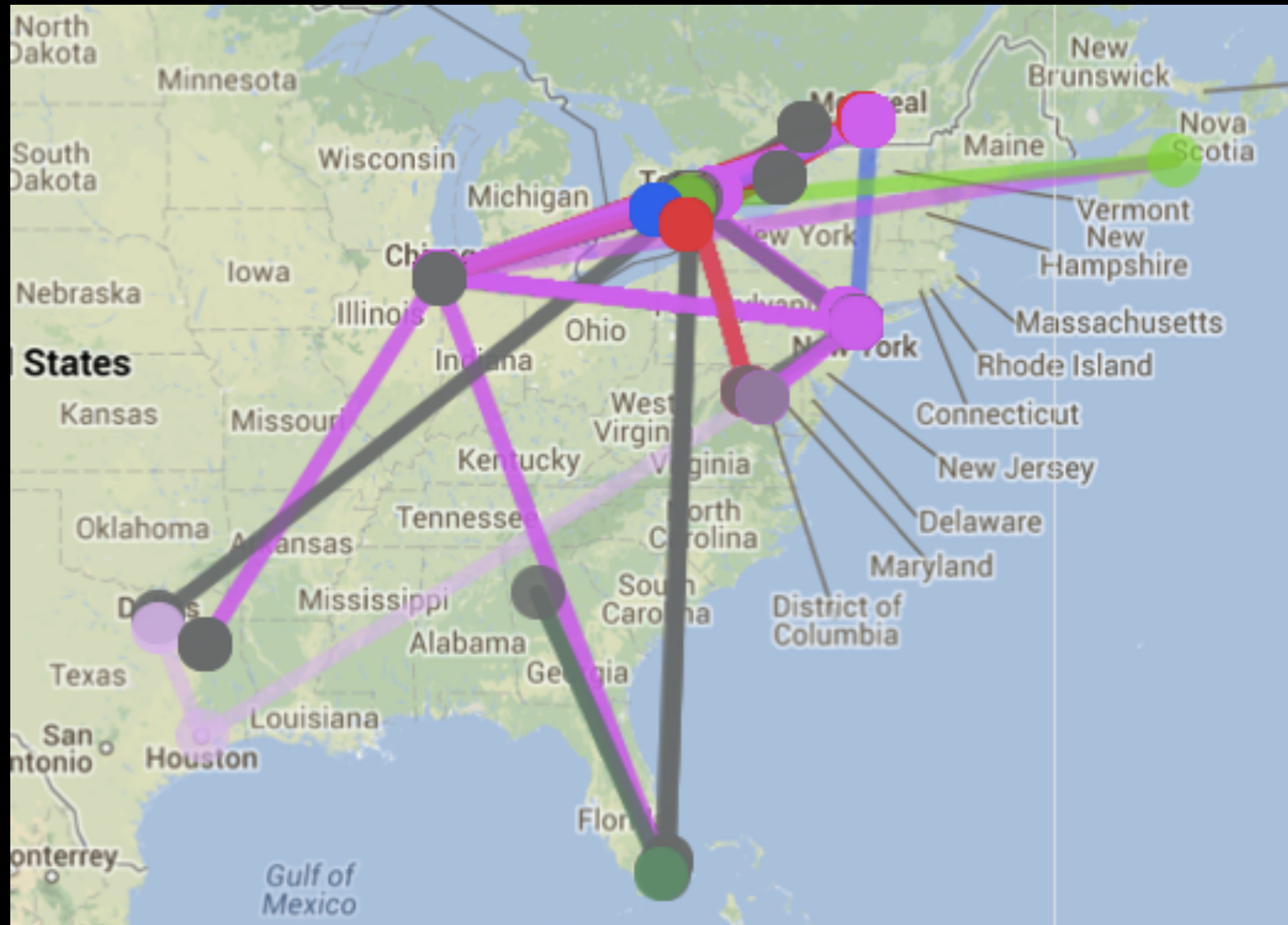
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Cogent Acceptable Use Policy

<http://www.cogentco.com/en/acceptable-use-policy>



# Toronto > Toronto boomerangs (205 routes)



# Better data privacy in Canada

[Français](#)[bell.ca/enterprise](http://bell.ca/enterprise)

Bell keeps your data safe,  
secure and stored in Canada.

When it comes to data security, location matters. The laws governing data centres outside of Canada can be different – and less protective – than those here at home.

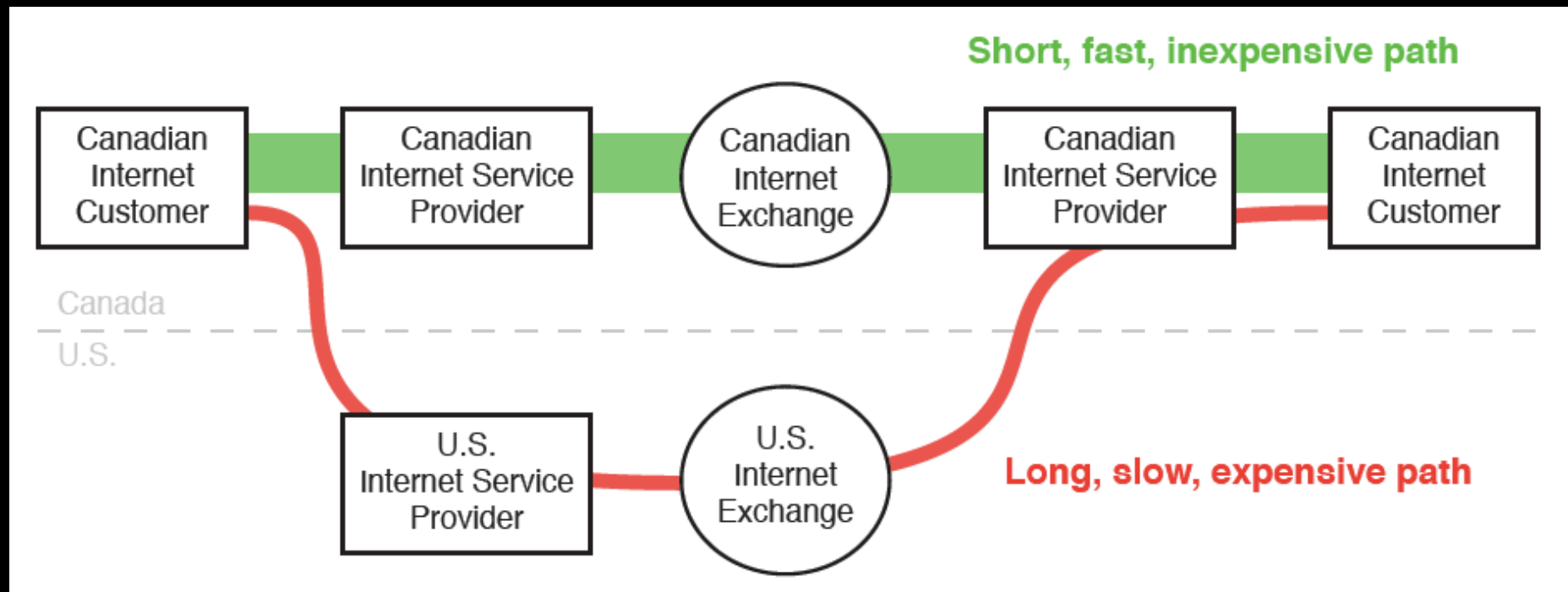
Bell data centres are 100% Canadian owned and operated. We keep your data secure, under the protection of Canadian government regulations, and hosted in facilities that meet top industry certifications.

Trust Bell to keep your information safe. To see how first-hand, request a tour of one of our data centres today.

[Request a tour](#)

[http://www.bell.ca/web/enterprise/bbm/secure-canadian-data-centres-mpls.html?  
ETCID=Print\\_07052013\\_en\\_DataResidency\\_emk](http://www.bell.ca/web/enterprise/bbm/secure-canadian-data-centres-mpls.html?ETCID=Print_07052013_en_DataResidency_emk)

# Economic efficiencies too! - CIRA

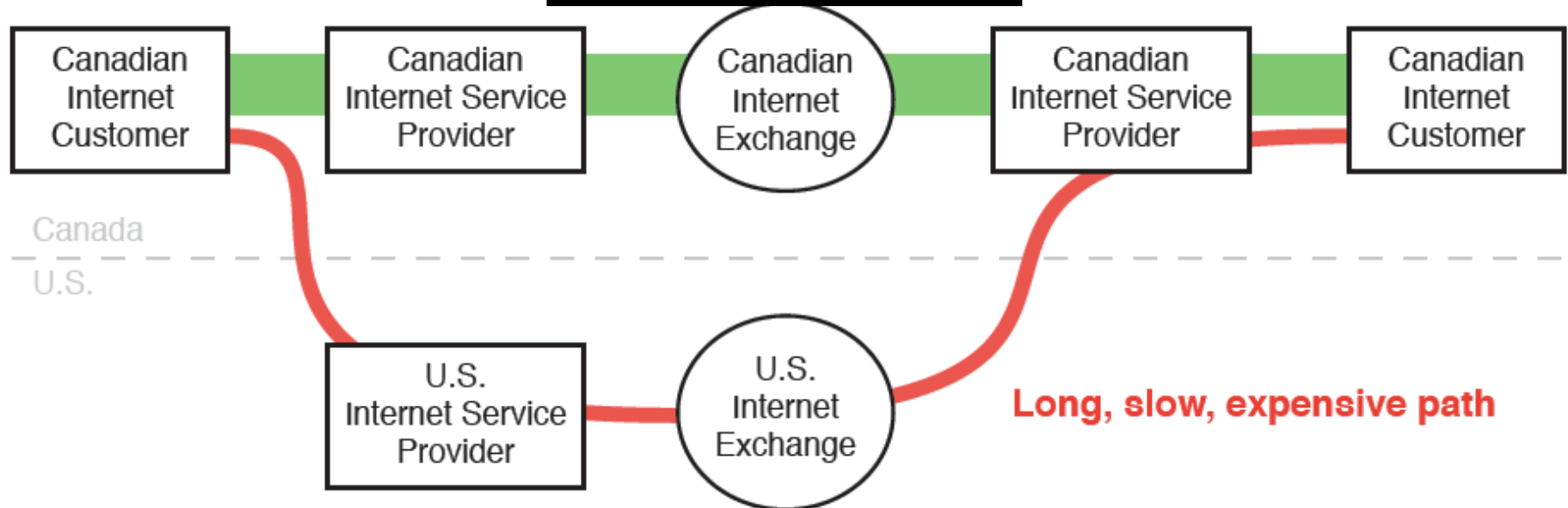


*Toward Efficiencies in Canadian Internet Traffic Exchange, Clearing House for the Canadian Internet Registration Authority, by Bill Woodcock & Benjamin Edelman, Sept. 2012*

# Economic efficiencies too! - CIRA

e.g. TorIX  
151 Front Street

Short, fast, inexpensive path



*Toward Efficiencies in Canadian Internet Traffic Exchange, Clearing House for the Canadian Internet Registration Authority, by Bill Woodcock & Benjamin Edelman, Sept. 2012*



# Data Privacy Transparency Ratings

	Canadian ISP Transparency Ratings									
	1	2	3	4	5	6	7	8	9	10
Carrier/ISP	Public Commitment to PIPEDA	Commitment to inform users about data requests	Transparent about data requests and transfers	Transparent about conditions for data transfers	Inclusive definition of 'personal info'	States data retention periods	States where data is stored	States where data is routed	Avoids US routing of Canadian data	Open advocacy for user privacy rights
AboveNet	★	★	★	★	★	★	★	★	★	★
at&t	★	★	★	★½	★	★	★½	★	★	★
Bell	★½	★	★	★½	★	★	★½	★	★	★
BellAliant	★½	★	★	★½	★	★	★½	★	★½	★
cogent COMMUNICATIONS	★	★	★	★	★	★	★	★	★	★
DISTRIBUTEL	★½	★	★	★	★	★	★	★	★½	★½
EASTLINK	★½	★	★	★½	★	★	★	★	★½	★
HURRICANE ELECTRIC INTERNET SERVICES	★	★	★	★½	★	★	★	★½	★½	★



# IXmaps

see where your data packets go

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*This beta version is being upgraded. We welcome your [feedback](#)*



## What are 'boomerang' routes?

A boomerang route is a data packet path that starts and ends in Canada, but travels through the USA for part of the journey. We've found that a lot of Canadian internet traffic is routed this way, even when starting and ending in the same city. What's more, much of this boomerang traffic passes through suspected U.S. National Security Agency (NSA) surveillance sites. Canadians who value their privacy may be concerned about boomerang routing because it means our personal data to the USA PATRIOT Act. [Learn more about boomerang routes...](#)



**NEW:** *Keeping Internet Users in the Know or in the Dark 2013*  
A Report on the Data Privacy Transparency of the Canadian Internet Service Providers

**See where your packets go!**  
**(and contribute to the database)**



Try it out and get more information at:  
<http://IXmaps.ca>