

CRTC Question #11

The question below deals with the interests characteristic which is derived from the URLs visited by a subscriber.

Q. In paragraphs 16 and 30 of its Answer, Bell indicated that nothing new is being collected for the purposes of RAP. Was Bell deriving interest categories for subscribers from the websites visited by subscribers before the development and implementation of RAP, and if yes, for what purposes?

Bell's Reply:

A. *The information used for the RAP has always been collected historically by us and used to provision Internet and wireless telecommunications services, bill for services and manage our network. Prior to implementing the RAP we derived broad categories of Internet usage trends to ensure proper network planning and provisioning. The RAP represents a new use for information we have historically collected, the RAP does not involve new or additional collection of information.*

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Reply to CRTC Question #11

1. The RAP is not anything new, nor is there any "new use". The only thing new is the open selling of people's private communications information and account details. There is no "new use" since Bell has been using this data for marketing for a long time.
2. However, let us look at the history of this and Bell's words and see if it is all accurate, and if Bell always needed to collect the hobby category of "beadwork" (as shown in the Bell attachment to question 7) to "*provision Internet and wireless telecommunications services, bill for services and manage our network*".
3. In 2007, Bell and Rogers (among others) founded Montreal-based Neuralitic Systems Inc.¹ The initial product, SevenFlow, is used to:

"capture 100 percent of data on 100 percent of subscribers".
4. The Deep Packet Inspected data was used to determine:

"what type of network consumption is occurring, where the traffic is coming from".
5. In other words, 100% of people's communications was 100% DPI'd and harvested to look at trends, behaviour, habits, and to capitalise on that while also performing some network traffic management routines (traffic flow and traffic trends for network and traffic planning and engineering). Thus, since the very beginning, Bell has not been in line with the ITMP ruling. Apparently, even back then, they were using people's private information for other uses, which was contrary to any ITMP ruling (prior, during and after).

¹ 2007, Neuralitic Systems - mobile data - wireless startups, <http://www.fiercewireless.com/special-reports/neuralitic-systems-mobile-data-wireless-startups-fiercewireless-fierce-15-2011>

6. So while there was perhaps some traffic analysis for the purpose of planning, and provisioning, associated with the Neuralitic "DPI probes", that was not its strong point or reason to exist. The strong point with this DPI product was to harvest information for marketing², profit from their customers' (and roamers) data, which again runs afoul the ITMP framework.

Neuralitic-s SevenFlow solution is a powerful Mobile Data Intelligence tool that gives marketing professionals and other decision-makers the critical insights they need to improve marketing ROI based on actual subscriber usage characteristics. It transparently extracts and analyzes 100% of data usage, from all mobile data subscribers on a wireless network, to provide a 360-degree view of subscribers- and roamers- mobile journeys.

7. In 2010 the program gets an update to include the fingerprinting of encrypted data. Refer to appendix L.
8. In 2012, the program is updated to allow the, "[a]dvanced application identification for Apple and Android devices³".
9. In 2012, Neuralitic brought its Profiling Engine (I suppose that is the Profile Delivery Engine, PDE) to market⁴:

The company says the SevenFlow Profiling Engine can create new revenue streams for Communication Service Providers (CSPs) by enabling the delivery of highly targeted and relevant content, including advertising, to mobile subscribers.

10. About this time, the OPC comes out with its OBA guidelines, for what its worth.
11. In December, 2012, Neuralitic was acquired by Guavus⁵, and a press release was made in January 2013 about the acquisition. This is how Guavus apparently ended up in Bell⁶:

2 2011, Leading Analyst Firm Cites Neuralitic as a Sample Vendor in Mobile Data Intelligence , <http://www.88finance.com/leading-analyst-firm-cites-neuralitic-as-a-sample-vendor-in-mobile-data-intelligence-60079.html>

3 Neuralitic Completes Deployment of SevenFlow on an LTE Network, <http://iteworld.org/press-release/neuralitic-completes-deployment-sevenflow-lte-network>

4 Neuralitic Launches SevenFlow Profiling Engine , <http://mobilemarketingmagazine.com/neuralitic-launches-sevenflow-profiling-engine/>

5 Guavus Acquires Neuralitic Systems, <http://www.guavus.com/releases/guavus-acquires-neuralitic-systems/>

6 Part II of The Big Data Summit organized by TM Forum in Amsterdam, <http://www.ctoic.net/blog/part-ii-of-the-big-data-summit-organized-by-tm-forum-in-amsterdam-the-demos>

Guavus now works with 2 of the big US Telcos as well as Bell Canada through the recent acquisition of Neuralitic.

12. In 2013 Bell announces the RAP program and acknowledges its' use of DPI on mobile customers for marketing purposes, 6 years after the fact.
13. It does not seem so "new" anymore, does it. The only issue really is being able to use this in order to obtain maximum monetization.
14. Where was the knowledge and consent going back to around 2007? Where was the opt-out? Everyone was opted-in by default, just like it is today, and data is collected on everyone just as it was in ~2007. "Capture 100 percent of data on 100 percent of subscribers" is still true today as it was in 2007.
15. In addition, what about that very necessary hobby category of "beadwork" or the medical issue of "Incontinence" that has always been captured for network management purposes (per bell)? This is where we all laugh again after knowing full well Bell was collecting "100 percent of data on 100 percent of subscribers" for more than network management going backs years for marketing purposes.
16. There is nothing new here, customer "behavior" and "habits" were targeted and captured going back a number of years, and none of it for network management or provisioning as Bell states above. From the very beginning, this was contrary to the ITMP framework.
17. Who was Bell sharing all this private information with over the years? Only its affiliates? Others? Who knows. Even now, for opted-out people Bell is being cryptic in its replies, because as we all know, Bell may need to know about subscribers "Incontinence" issue in case of a catastrophic network emergencies and may need to dig this info up. Or, Bell may have to provision enough network resources for national "Incontinence" day traffic spikes.
18. Makes one wonder if the same info is collected on landline internet and landline phones already like it has for years on mobile. Since this has been going on for so long, I have no doubts it is, and always has been occurring on the other services. Wholesale customers included, just like the "roamers" mentioned above.
19. So has the information always been collected? Yes, even the history on all of it shows this.
20. Was it for traffic management? Perhaps, flows and trends were used and Bell stated in its reply that the information is used for network management.
21. Was all this data used for "traffic and network management? Traffic trends and flows could be used; other appliances could utilize the data itself such as the SevOne appliance referenced in question #1. However, I would say, no. This went

beyond network management and traffic management and **specifically** for “**other uses**” (marketing) which the ITMP framework prohibited.

22. So to answer the CRTC's question of:

Was Bell deriving interest categories for subscribers from the websites visited by subscribers before the development and implementation of RAP, and if yes, for what purposes?

23. The history shows it was primarily for marketing and capitalizing on the use of “Big-Data” (people's private communications) going back to 2007. All of its literature states the **purpose** is for: *analyzing 100% of data usage from 100% of all mobile subscribers, network Intelligence, generating new revenue streams, enabling the delivery of highly targeted and relevant advertising to mobile subscribers, improving marketing ROI, and to generate subscriber profiles based on behaviors and react to those behaviors in real-time.*

24. In addition, the above is also repeated in all of its patents (note this patent list is not exhaustive, there are some missing) going back years, as shown here:

NEURALITIC SYSTEMS Patent applications
<http://www.faqs.org/patents/assignee/neuralitic-systems/>

25. The ultimate use of all this is as one of its patents states, “to capture the subscriber's journey”. Or, “analyzing journeys of at least one subscriber consuming a plurality of Internet services, using at least one device over multiple access technologies” (patent 20130019009), which is thus the balance of the RAP across all of its platforms.

26. Was Bell collecting the same data in all its glory as Bell indicated above to the CRTC? Not all of it, no. Such as app names derived from encrypted streams, this *appears* to have come later on, as well as advanced apple and google app identifications, Mobile-TV usage and more. So no, not all was captured as Bell states above. It was added gradually over time to monetize on people's private communications.

27. This appliance/product is not intended for network management, at all, and its' documentations even stated so. However, I suppose trends can be used from it, but Bell apparently uses the SevOne appliance for management and trends since 2012., though Guavus also generates similar reports.

28. How was all this data used? Was it used internally and/or with affiliates, and with whom else was it shared? All this is up in the air. Was all this data exported for further analysis or did it remain in Canada? That is a lot of information, and sensitive information. However, it also makes me wonder how landline services were captured and used and what words will be used to justify that. It appears Bell

does not recognise the ITMP framework when it comes to this massive data collection, thus it stands to reason that the exact same has been going on for wireline services. Instead of "roamers" there are the "wholesalers". Perhaps Bell just truncates wholesale customers' data as well. All this raises a lot of questions and concerns.

29. As the Internet of Things (IoT) goes mainstream, in addition to wearables, will there be new categories characteristics? Of course there will, more and more categories. Bell will be able to tell and profile when someone starts their sprinkler system or air-conditioning remotely. Then 4 years from now Bell will claim it has always been historically collecting this info and claim the category of "grass watering" is required for network security and planning.
30. It is nothing short of an exploitation of people's ignorance and innocence to it all as Bell captures, sells and profits from "*100% of data usage, from all mobile data subscribers on a wireless network, to provide a 360-degree view of subscribers- and roamers- mobile journeys*". The CRTC is and was aware of this. This exact thing came up during the Talk-TV hearings.

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