

BEFORE THE CANADIAN RADIO-TELEVISION AND  
TELECOMMUNICATIONS COMMISSION

In The Matter of an Application by  
The **Canadian Association Of Internet Providers** (“CAIP”)  
(Applicant)

Pursuant To Part VII Of The CRTC *Telecommunications Rules of  
Procedure* and Sections 7, 24, 25, 27, 32, 36, And 62 of the  
*Telecommunications Act* directed to  
**Bell Canada**  
(Respondent)

Requesting Certain Orders Directing Bell Canada to Cease and  
Desist From “Throttling” Its Wholesale ADSL Access Services

**Comments  
of the  
Campaign for Democratic Media (“CDM”)**

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## I. Introduction

1. CIPPIC submits the following comments on behalf of the Campaign for Democratic Media<sup>1</sup> (“CDM”) and in support of the “SaveOurNet.ca” coalition that is currently forming around issues including that raised by CAIP in this proceeding. CDM is a national, non-profit and non-partisan media reform organization, comprised of a network of civil society organizations, consumer organizations, labour groups, media advocacy groups, academics, grassroots media activists and other Canadians that are interested in helping to create the conditions for diverse, accountable and quality Canadian media to thrive. CDM’s primary goal is to increase public awareness and informed participation in Canadian media policy formation.
  
2. CDM is intervening in this proceeding because of the danger that Bell Canada’s (“Bell”) traffic-shaping poses to Canada’s public interest in maintaining our internet as an open vehicle for free expression and technical innovation. The internet’s power to facilitate social, democratic and economic progress is inseparable from its equal treatment of all content that travels over its pathways. Bell’s traffic-shaping policy threatens this fundamental quality and risks setting a dangerous precedent for how technical challenges will be managed in the future.

## II. Overview

3. CDM submits that the CRTC should order Bell to cease and desist from shaping CAIP member (and other) traffic because Bell’s policy is a violation of law on five independent grounds:
  - a) it subjects P2P users to unjust discrimination and an undue disadvantage, contrary to s.27(2) of the *Telecommunications Act*;<sup>2</sup>
  - b) it subjects content providers who distribute their product via P2P protocols to an undue disadvantage contrary to s. 27(2) of the *Act*;
  - c) it undermines the objective, enshrined in s. 7(g) of the *Act*, that Canadian policy encourage innovation in the provision of telecommunications services;
  - d) it constitutes a violation of the principle of common carriage and s. 36 of the *Act*; and finally,

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<sup>1</sup> See <[www.democraticmedia.ca](http://www.democraticmedia.ca)> for more information.

<sup>2</sup> 1993, c. 38.

e) it raises deep privacy issues that attract the Commission's jurisdiction under s. 7(i) of the *Act* to ensure that Canadians' privacy is protected in the use of telecommunications services.

4. This proceeding focuses on the legality of Bell's throttling of CAIP member traffic. The same arguments that will be set out below apply equally to Bell's throttling of its own retail subscribers. Moreover, they apply to the throttling by other ISPs of P2P traffic for the same purpose. CDM therefore requests that the Commission initiate a public proceeding to examine the legality of all admitted and alleged throttling activity by Canadian ISPs.

### **III. Bell's Throttling Is Contrary to s. 27(2) of the *Telecommunications Act***

5. Bell's throttling of internet traffic violates s. 27(2) on two separate grounds. First, it results in unjust discrimination and undue disadvantage against users of peer to peer ("P2P") applications. Second, it is an undue disadvantage applied against content providers that use P2P applications to distribute their product. This latter undue disadvantage is mirrored by a preference granted to Bell's own content which is not subject to throttling.

6. CDM notes that the Commission has already acknowledged that degradation of traffic is anti-competitive behaviour that attracts its jurisdiction under s. 27(2). In Telecom Decision 2005-28, the Commission stated in response to concerns of possible traffic degradation: "... [e]ven if such an issue were to arise, the Commission considers that it can rely on subsection 27(2) of the Act, where appropriate, to prohibit Canadian carriers from intentionally degrading traffic. In the Commission's view, the existing regulatory framework is sufficient for dealing with such anti-competitive behaviour by a broadband service provider."<sup>3</sup>

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<sup>3</sup> At para. 478.

### ***Bell's Traffic-Shaping Subjects P2P Users to Unjust Discrimination and an Undue Disadvantage***

7. Bell's traffic-shaping practice satisfies the requirements of a s. 27(2) claim as set out by the Commission in Telecom Decision 2006-61: first, Bell is discriminating against and subjecting to a disadvantage P2P users by interfering with their use of a legal and legitimate application.
8. Second, this discrimination is unjust and undue for the following reasons:
  - a) to the extent that Bell has overstated its network congestion problem, it is not necessary that Bell throttle P2P traffic;
  - b) there are other non-discriminatory methods of dealing with the alleged capacity problem available. Such methods include:
    - i) expanding capacity to meet demand;
    - ii) educating, empowering and encouraging internet users to limit bandwidth demand during peak periods;
    - iii) working with protocol and application developers to manage network congestion; and
    - iv) pricing bandwidth use so as to discourage heavy use during peak periods;
  - c) if, as a result of Bell's poor network planning and overselling of capacity, some form of traffic shaping is required to deal with network congestion, Bell's approach of differentiating between users on the basis of application use rather than high bandwidth consumption results in unjust discrimination and undue disadvantage against P2P users.

#### *Differential Treatment of P2P Users*

9. P2P users of Bell's access network are being discriminated against by Bell's traffic-shaping policy. These users have suffered, without any type of notice, a marked and extreme degradation in their internet service when using an application that is a legal and legitimate means of accessing internet content.
10. The discrimination created by traffic-shaping is not, as Bell implies at paragraph 39 of its Reply, only between CAIP members and Bell. Rather, as Bell admits in the following paragraph, P2P users suffer the concrete and direct discriminatory effects of Bell's throttling. Like s.15 of the *Charter of Rights and Freedoms*, s. 27(2) of the *Act* protects Canadians from discriminatory

conduct that is unjustifiable in its purpose or its effect. As the Supreme Court of Canada stated in *Auton v. British Columbia*:

A statutory scheme may discriminate either directly, by adopting a discriminatory policy or purpose, or indirectly, by effect...[i]f a benefit program excludes a particular group in a way that undercuts the overall purpose of the program, then it is likely to be discriminatory...<sup>4</sup>

11. Bell's stated purpose for shaping is to "allow for a better allocation of bandwidth for *all users* that share a common network and is aimed at delivering a more positive and better experience on the network *for all users* during peak Internet usage periods"<sup>5</sup> (emphasis added). However, a minority of users - those who use P2P - have been consciously excluded from the alleged benefits offered by Bell's ameliorative program. The current facts therefore make out the description of "adverse effects" set out by the Supreme Court in *Auton*: by excluding users of P2P from a benefit Bell claims to offer all customers, Bell undercuts the overall purpose of its program, which is to deliver a better network experience to *all users*.

*Capacity Problems Should Be Managed Via Capacity Expansion and/or Demand Management, not Traffic-Shaping*

12. Under s. 27(4) of the *Telecommunications Act*, Bell has the burden of proof to convince the Commission that its discrimination between P2P users and non-P2P users is not unjust. Bell claims that its discrimination is justified on the grounds of the relatively larger share of bandwidth that users of P2P applications occupy. It insists that its traffic-shaping measures are required to cope with the congestion levels at certain links in the network and that they are taken for the good of all users.
13. However, Bell has refused to place convincing evidence of network congestion on the public record and instead asks all of its customers, both retail and wholesale, to take its allegations on faith. CDM notes that there is absolutely no evidence that users' qualitative experience of the internet has been so noticeably degraded by congestion that traffic management of this type is necessary. This coincides with a more general failure of Bell to publicly disclose satisfactory evidence of an actual congestion problem.

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<sup>4</sup> [2004] 3 S.C.R. 657 at para. 42.

<sup>5</sup> Bell, Answer to Request for Interim Relief at para. 16.

14. The data on congested links that Bell has provided to the public<sup>6</sup> only after an application by CAIP to have it disclosed, deepens rather than alleviates CDM's doubts about the necessity of Bell's traffic-shaping measures. Nothing provided by Bell indicates that its traffic-shaping policy has resulted in better internet performance for end users, or more "efficient capital spending"<sup>7</sup> for Bell. In short, no concrete benefits in terms of overall congestion have been shown to result from Bell's discriminatory practices.
15. Moreover, Bell has ignored other available, non-discriminatory mechanisms for dealing with excessive demand. The normal response to an excess of demand over supply in a properly functioning market is for suppliers to increase supply to meet demand or to lower demand by raising prices (or a combination of both). The fact that Bell has chosen to throttle its customers rather than to expand supply or alter its pricing scheme in order to limit demand clearly suggests that this market is not adequately competitive to justify reliance on market forces alone.
16. In any case, when a non-discriminatory approach to solving a network problem exists, the disadvantage caused by selecting an alternative discriminatory approach is undue. This is the case here, for the reasons set out below.

*Failure to Expand Capacity in Response to Demand*

17. As Bell itself admits, there are other ways to deal with the capacity problem. The first prong of Bell's strategy, and arguably the key to long-term viability of many Canadians' internet access, is capital investment. Bell in fact refers to physical network expansion as "the *most logical solution* to the congestion problem"<sup>8</sup> (emphasis added). If there is a capacity problem on Bell's PPPoE network, and if the market for internet access is indeed competitive, market forces should have compelled Bell to invest more heavily in the expansion of its network to meet expanding demand. It is not clear why Bell has failed to build sufficient capacity to meet demand, but regardless of the reason, such failure does not justify Bell's traffic-shaping practices.

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<sup>6</sup> Bell Canada(CRTC) 19Jun08-1 at 2.

<sup>7</sup> Bell Canada(CRTC) 15May08-2 Supplemental at 10.

<sup>8</sup> Bell Canada(CRTC) 15May08-4 at 9.

*Education and Empowerment of Internet Users Has Not Been Attempted*

18. Working cooperatively with internet users to limit demand in peak periods is a just, non-discriminatory, and logical approach to demand management that Bell has apparently not even attempted. For example, Bell has done little to educate users about bandwidth use. It has not, to our knowledge, asked its users to voluntarily limit their use during peak periods. Nor has it provided users with software tools that would help them avoid over-burdening the network at busy times. Yet, it is possible that this approach, especially if combined with non-discriminatory pricing incentives and capacity expansion, would resolve the alleged capacity problem without any need to throttle traffic.
19. Rather than appealing to its user community to help manage the collective problem, Bell has chosen, unilaterally and without notice, to impose a discriminatory traffic-shaping policy on P2P users.

*Failure to Work with Protocol and Application Developers to Manage Congestion*

20. Bell could also work with protocol and application developers to create efficient network-level congestion management mechanisms. In the United States, a broad coalition<sup>9</sup> of universities, internet service providers, and P2P service and application developers called “P4P Working Group” has begun work on a framework which permits, *inter alia*, better P2P performance and more efficient network resource usage.<sup>10</sup> Recent tests resulted in a 200% increase in P2P download performance, a dramatic drop in data delivery complexity, 30-40% reduction in peering link loads, and an average 71% decline of internal backbone load.<sup>11</sup>
21. Had Bell sought solutions by cooperating with other stakeholders to identify and implement alternative, less discriminatory options (as being done by the P4P working group), it could have resolved the alleged problem without throttling users, and would have been able to achieve its goal of better network performance for *all* end users.

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<sup>9</sup> Distributed Computing Industry Association, <[http://www.dcia.info/about/resources.php#MEMBER\\_SERVICES](http://www.dcia.info/about/resources.php#MEMBER_SERVICES)>.

<sup>10</sup> P4P: Explicit Communications for Cooperative Control Between P2P and Network Providers, <[http://www.dcia.info/documents/P4P\\_Overview.pdf](http://www.dcia.info/documents/P4P_Overview.pdf)>.

<sup>11</sup> Summary of Field Test Results, <<http://www.openp4p.net/front/fieldtests>>.

*Price-Based Incentives Should Have Been Implemented Long Ago*

22. If Bell was responding to competitive market forces as economic theory suggests it should, it would manage demand through pricing schemes that have the effect of shifting traffic from peak hours to non-peak hours, not by throttling customer traffic. Appropriate pricing incentives at the retail and wholesale levels would reduce bandwidth use during high traffic periods and thus address the alleged congestion problem without having to throttle CAIP members' (or any other) traffic. Pricing changes could also serve the purpose of raising revenues for network expansion. Instead, Bell has adopted the anti-market, anti-competitive, unjust and undue practice of throttling the internet access of P2P users to address a congestion problem that is only occurring at certain times of the day.
23. Moreover, price-based mechanisms rely on market forces to adjust demand levels and thus should be favoured by the Commission in light of the *Policy Direction*. In contrast, Bell's traffic-shaping is a heavy-handed solution imposed unilaterally by a company able to leverage its ownership of the telecommunications facilities.

*Unjust Focus of the Discrimination*

24. As noted above, CDM submits that Bell's traffic-shaping practices are unjust and undue because they were not and are not necessary. However, if the Commission finds nevertheless that some form of hands-on traffic management was necessary in this case, Bell's approach is unjust insofar as it focuses on a particular type of traffic rather than the user's total traffic use. Bell's traffic-shaping policy incorrectly and unjustly treats as one and the same two distinct categories of users: those that consume a large amount of bandwidth and those that use their internet service for P2P applications.
25. Bell justifies its current distinction on the grounds that throttling content carried via P2P in favour of so-called "interactive" and "time-sensitive" applications has improved the customer online experience.<sup>12</sup> However, the alleged congestion problem is not caused by the mere existence of P2P applications on Bell's network. Rather, high levels of latency are caused by a

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<sup>12</sup> Bell's Answer at para. 58. Again, no evidence of the link between traffic shaping and the quality of internet service as actually experienced by the end user has been offered by Bell.

network which cannot cope with surging traffic requests. From a traffic-usage perspective, there is no difference between a heavy P2P user, and a heavy YouTube user (for example). Both users are capable of maximizing their connection and taxing the total bandwidth available to others. Despite this reality, Bell's current throttling policy differentiates among traffic on the grounds of a user's application profile rather than the user's usage profile. If there is a congestion problem, the just basis for discrimination is the level of a user's traffic use, not their choice of applications.

26. As Bell admits in its Reply, a non-discriminatory approach to reducing congestion is available.<sup>13</sup> Comcast, an American telecommunications giant, has recently adopted a "protocol agnostic"<sup>14</sup> management policy:

This new architecture would enable many new and emerging applications and will be based upon an open, non-discriminatory framework that could interface with or support multiple technologies. We believe that P2P technology has matured as an enabler for legal content distribution, so we need to have an architecture that can support it with techniques that work over all networks...<sup>15</sup>

27. Discriminating between users on the grounds of their application choice is unjust and undue when a solution which targets the actual problem - heavy bandwidth usage - is available. Bell could have undertaken a number of different traffic management options that are not premised on discriminating among applications or protocols. For example, limits could be set on the amount of data per second that any user can transmit on the network. Alternatively, Bell could set dynamic data limits that relax when congestion is low and increase when congestion is high.

### ***Throttling Subjects P2P Content Providers to an Undue Disadvantage***

28. Bell's traffic-shaping infringes s. 27(2) also by subjecting content providers that distribute their product through P2P protocols to an undue and unreasonable disadvantage. Services such as

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<sup>13</sup> *Ibid.* at para 59 (Bell identifies Comcast's traffic management policy as "application agnostic," and that it does not discriminate against the BitTorrent protocol).

<sup>14</sup> "Comcast and BitTorrent Form Collaboration to Address Network Management, Network Architecture and Content Distribution,"

<<http://www.comcast.com/About/PressRelease/PressReleaseDetail.ashx?PRID=740>>.

<sup>15</sup> *Ibid.*

Joost,<sup>16</sup> Babelgum,<sup>17</sup> Miro,<sup>18</sup> Reeltime<sup>19</sup> and Vuze<sup>20</sup> distribute audio-visual content using various P2P protocols all of which, according to Bell's interrogatory responses, are subjected to a slower "flow rate" during peak internet use hours.<sup>21</sup>

29. Bell argues that its conduct does not amount to a disadvantage because the content traveling over P2P "flows" is not time-sensitive. CDM submits that Bell is in no position to decide whether another company's or person's content is time-sensitive or not. Its assertions in this regard appear to be based on an erroneous and biased assumption that all content traveling via P2P protocols is illegitimate or pirated and therefore not time-sensitive.
  
30. Bell's argument that throttling these applications is just and reasonable due to their bandwidth-intensive nature is also undermined by its recent release of the Bell Video Store. The store is designed to distribute high quality, bandwidth intensive audio-visual files to users over the internet via non-P2P protocols. Bell's claims that its network is so overburdened that traffic throttling is a necessity cannot be reconciled with its practice of offering its customers timely<sup>22</sup> access to extremely large media files.

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<sup>16</sup> Joost distributes TV and other video shows for free over the web using P2P and has major contracts with Viacom (which includes MTV, BET, and Paramount Pictures), Fox, Warner Music, Indianapolis Speedway Productions, Ministry of Sound TV, Aardman Animation, Warner Music, CBS, CNN, Sony Pictures, and even has signed a deal to redistribute NHL content such as the 2007 Stanley Cup Finals. Joost is an advertising supported business. <<http://www.joost.com>>.

<sup>17</sup> Babelgum is similar to Joost, but uses a proprietary P2P protocol with an encrypted data stream to prevent piracy. This free service only airs professionally produced content but will cater to independent producers. Babelgum will offer Independents compensation for uploading their content, and promise a world-wide audience with a safe and efficient content delivery scheme. Like Joost, Babelgum is supported by advertising. <<http://www.babelgum.com>>.

<sup>18</sup> Miro's tagline is "Turn your computer into an Internet TV" and it accomplishes this as a Bittorrent client. Focusing on the "video podcasting" market, Miro employs RSS (Really Simple Syndication) technology to keep users up-to-date on their favourite video casts. <http://www.getmiro.com>

<sup>19</sup> ReelTime Rentals is a low cost TV and movie content distribution company providing the most efficient, secure and economic delivery of high bit-rate content, P2P powered by GridNetworks. <<http://www.reeltime.com/>>.

<sup>20</sup> Much like Miro, Vuze is a media hub which compartmentalizes content into "channels" much like traditional television broadcasting. BitTorrent makes it possible for Vuze to offer high quality HD content. Without distributing the bandwidth requests amongst its peer users, Vuze would be unable to offer these large files (typically exceeding one gigabyte). <<http://www.vuze.com>>.

<sup>21</sup> Bell Canada(CRTC) 15May08-7 at 3-5.

<sup>22</sup> One can assume, by the fact that Bell's Video Store offers 24-hour movie rentals as one of its services, that these files are meant to be delivered in a relatively short period of time.

31. Moreover, Bell's new Video Store initiative brings it into direct competition with some of the companies mentioned above who distribute similar content via P2P. By degrading the distribution channels of competing audio-visual content providers, Bell has subjected these providers to an undue disadvantage and provided itself with a corresponding undue preference in the content distribution market, contrary to s. 27(2) of the *Act*.

#### ***Conclusions on s. 27(2)***

32. For all the reasons set out above, Bell's throttling of P2P traffic is unjustly discriminatory against P2P users and places content providers using the P2P protocol to distribute their content at an undue disadvantage vis-à-vis Bell's competing services. The Commission should therefore grant CAIP's request for a final order directing Bell Canada to cease using any technology to "shape", "throttle" and/or "choke" its wholesale ADSL services.

#### **IV. Throttling P2P Traffic Undermines the Telecom Policy Objective of Encouraging Innovation in the Provision of Telecom Services – s. 7(g)**

33. Selecting one type of traffic for throttling based on unsubstantiated allegations that its bandwidth use is out of proportion to its value is contrary to the statutory policy objective set out in s. 7(g) of the *Act*:

7. It is hereby affirmed that telecommunications performs an essential role in the maintenance of Canada's identity and sovereignty and that the Canadian telecommunications policy has as its objectives:

(g) to stimulate research and development in Canada in the field of telecommunications and to encourage innovation in the provision of telecommunications services;

34. P2P applications are an emerging and important form of telecommunications. In fact, their efficiency and adaptability mean that they may become the *dominant means of communication* in the future. CDM has attached as Appendix 1 a document entitled "Emerging Applications of P2P Technologies" that describes the diverse range of legitimate and licensed content that is distributed via the P2P protocol and which Bell is controlling through its Deep Packet Inspection ("DPI") devices.

35. As a technology still in its relative infancy, it is unclear what innovative and essential applications P2P protocols may eventually facilitate. Should the Commission countenance Bell's current approach to traffic-shaping, it will effectively place Bell and other incumbent carriers in a position to decide which of the innovative and constantly emerging applications will receive widespread uptake. CDM notes that Bell, in its responses to the Commission's interrogatories, is careful to refer to its "*current* shaping rules"<sup>23</sup> (emphasis added), reserving its prerogative to unilaterally alter once again the flows of internet traffic. Ceding such control to Bell would undermine the unique innovation environment on the internet, a result that is clearly contrary to the statutory policy objective of encouraging innovation in the provision of telecommunications services.

#### **V. Bell's Traffic-Shaping Violates s. 36 and the Principle of Common Carriage**

36. CDM submits that traffic-shaping of data transferred by P2P applications constitutes control of content and influences the meaning and purpose of telecommunications, contrary to s. 36 of the *Act*.
37. Contrary to what Bell would have the Commission believe, P2P applications are not merely a mechanism for transferring discrete files whose meaning is totally dissociated from transfer time. Content transferred via P2P applications cannot necessarily be understood as intended if consumed much later than intended. The BBC iPlayer, although not available in Canada, demonstrates the point. Using a form of P2P protocol<sup>24</sup> the iPlayer distributes news programs and updates to thousands of viewers daily. Slowing down the delivery of news necessarily influences and alters its meaning and purpose, both of which are inescapably embedded in time and place. Throttling traffic from one source while letting content from other sources flow on a best-efforts basis therefore violates s. 36 and the principle of common carriage.

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<sup>23</sup> Bell Canada(CRTC) 15May08-6 at 3.

<sup>24</sup> See Appendix #1.

38. As another example, streaming P2P applications such as Freecast<sup>25</sup> rely on the shared bandwidth capabilities of a network of peers in order to allow users to distribute real-time audio programming. Slowing P2P traffic could cause the audio distributed by Freecast to be disrupted to the point where it becomes unintelligible and the user gives up listening to a live program. Regardless of Bell's insistence that it is not actively targeting specific content, its traffic-shaping measures have the consequence of preventing effective access to a wide range of independent media sources.
39. Bell insists that it does not know what content is being transferred by P2P applications because it is currently "operationally impractical" to configure its DPI devices to extract this information.<sup>26</sup> Bell's claims that it neither controls this content nor influences its meaning and purpose are therefore made in complete ignorance of the nature of the content that is actually traveling via these applications. Bell cannot on the one hand assert that it does not know what a packet contains while on the other hand assure the CRTC that the purpose and meaning of this content remain undisturbed by its invasive actions.
40. Section 36 is not limited to prohibiting the outright blocking of content. The principle of common carriage underlying this provision prohibits network access providers from manipulating telecommunications in a manner that goes beyond what is required to deliver the information or to maintain the safety and security of the network. By interfering with the speed at which certain content is delivered over its network, Bell's traffic-shaping policy violates the rule that it neither control content nor influence the meaning or purpose of the information flowing through its facilities.

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<sup>25</sup> Freecast is different from traditional consumer-host models of streaming because it makes use of a home connection's upload capabilities. Instead of merely downloading the content for their own consumption, users of Freecast relay the stream to other peers on the network. Under the old model, a user with "lite" DSL—under perfect conditions—is only capable of streaming audio simultaneously to three other computers. A user with the fastest residential DSL connection available in Canada can only sustain seven concurrent streams. □ But under a Freecast P2P model, there is no limit to the number of peers a user can stream to since each peer relays the stream and is typically capable of sending to a minimum of two others. Thus, the supply of bandwidth scales perfectly with demand for the content, despite the fact its originator uses a relatively low cost and low bandwidth DSL connection. <<http://www.freecast.org/>>. For further details see Appendix #1.

<sup>26</sup> Bell Canada(CRTC) 15May08-7 at 3.

41. CDM therefore requests that the Commission grant CAIP's request for a declaration that Bell has acted unlawfully and in violation of its obligations under s. 36 of the *Act*.

**VI. Bell's Use of Deep Packet Inspection ("DPI") Technology Undermines the Telecom Policy Objective of Protecting the Privacy of Persons – s.7(i)**

42. The privacy issues raised by the use and admitted capabilities of DPI attract the jurisdiction of the Commission under s. 7(i) of the *Telecommunications Act*, which establishes the policy objective of ensuring that Canada's telecommunications system protects the privacy of its users. Alongside the serious ss. 27(2) and 36 infringements set out above, Bell's use of DPI to traffic-shape is an independent basis upon which the Commission should grant CAIP's application to have Bell cease and desist from all throttling.
43. CDM notes that CIPPIC has already filed a complaint with the Privacy Commissioner raising its concerns about Bell's possible collection and use of subscribers' (both those of CAIP and of Bell) personal information. Among the many disturbing aspects of this technology raised by CIPPIC's complaint is the extent of "granular network visibility" that DPI technologies are capable of providing and the monitoring of content on a "per subscriber basis." CIPPIC's Complaint under PIPEDA is attached hereto as Appendix 2, and is posted on the CIPPIC website.<sup>27</sup>
44. As opposed to allaying the privacy concerns already raised by CIPPIC, Bell's interrogatory responses emphasize the urgent need for public knowledge about how DPI technology is being used. For example, while Bell claims several times that "no content is stored or cached"<sup>28</sup> by the DPI technology, it elsewhere states that it cannot provide the Commission with data on P2P use at time period #1 because "the DPI database is designed to automatically refresh the amount of data it retains after a period of 90 days."<sup>29</sup> Internet users, CAIP members, the Commission and the Canadian public should know what kind of data the DPI database is storing.

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<sup>27</sup> <[http://www.cippic.ca/uploads/Bell-DPI-PIPEDAcomplaint\\_09May08.pdf](http://www.cippic.ca/uploads/Bell-DPI-PIPEDAcomplaint_09May08.pdf)>.

<sup>28</sup> For example at Bell Canada(CRTC) 15May08-7 at 3.

<sup>29</sup> Bell Canada(CRTC) 15May08-6 at 5.

45. Moreover, CDM is extremely disturbed that the DPI technology “does maintain and store”<sup>30</sup> the User Identifier that authenticates an internet user each time they re-establish their connection to the internet. As Bell admits, this number attaches to a device *inside the user’s home*. Contrary to what Bell claims, this number allows for other information collected by the DPI devices, which includes source IP address, destination IP address, application headers, URLs, and, potentially, content identity, to be attached to identifiable individuals. This is especially, though not exclusively, true in the case of a single user household.
46. The Commission should undertake a full investigation into the privacy implications of the current and potential future uses of DPI technology. CDM asks that the CRTC, in carrying out this obligation, work with the Privacy Commissioner to ensure that binding and enforceable regulations are created to guarantee that the use of DPI technology, if it is permitted at all, is undertaken in a transparent and safe manner that protects the privacy of all Canadians.

## **VII. Throttling of Non-CAIP-Subscribed Internet Users**

47. This proceeding focuses on the legality of Bell’s throttling of CAIP member traffic. The same arguments set out above apply equally to Bell’s throttling of its own retail subscribers. Moreover, they apply to the throttling by other ISPs of P2P traffic for the same purpose. CDM therefore requests that the Commission initiate a public proceeding to examine the legality of all admitted and alleged throttling activity by Canadian ISPs.

## **VIII. Conclusions**

48. For all the reasons set out above, CDM submits that Bell should be ordered to cease and desist from throttling CAIP member internet traffic on any of the following grounds:
- a) such throttling subjects P2P users to unjust discrimination and an undue disadvantage, contrary to s.27(2) of the *Telecommunications Act*;
  - b) throttling P2P traffic subjects content providers who distribute their product via P2P protocols to an undue disadvantage contrary to s. 27(2) of the *Act*;

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<sup>30</sup> *Ibid.* at 7.

- c) Bell's throttling of P2P traffic undermines the objective, enshrined in s. 7(g) of the *Act*, that Canadian policy encourage innovation in the provision of telecommunications services;
- d) such throttling constitutes a violation of the principle of common carriage and of s. 36 of the *Act*; and
- e) Bell's use of deep packet inspection to engage in such throttling raises deep privacy issues that attract the Commission's jurisdiction under s. 7(i) of the *Act* to ensure that Canadians' privacy is protected in the use of telecommunications services.

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