

**Before the Canadian Radio-television
and Telecommunications Commission**

Part VII Application by

**The Consumers' Association of Canada,
Canada Without Poverty,
the Canadian Association of Internet Providers,
Acanac Inc., Accelerated Connections Inc.,
Cybersurf Corp., eagle.ca, Execulink Telecom Inc.,
Managed Network Systems Inc.,
Skyway West Business Internet Services,
Start Communications, TekSavvy Solutions Inc.
Vianet Internet Solutions,
and Yak Communications Inc.
(the "Applicants")**

To Review and Vary

**Telecom Decision CRTC 2008-108,
*Canadian Association of Internet Providers - Application
requesting certain orders directing Bell Canada to cease and
desist from throttling its wholesale ADSL Access Services***

21 May 2009

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I. INTRODUCTION

1. This is an application (the “Application”) made by the Consumers’ Association of Canada and Canada Without Poverty (formally, the National Anti-Poverty Organization), by their counsel, the Public Interest Advocacy Centre (“PIAC”) (collectively, “The Consumer Groups”) as well as the Canadian Association of Internet Providers (“CAIP”) and several independent telecommunications service providers, including Acanac Inc., Accelerated Connections Inc., Cybersurf Corp., Execulink Telecom Inc., eagle.ca, Managed Network Systems Inc. (MNSi), Skyway West Business Internet Services, Start Communications, TekSavvy Solutions Inc., Vianet Internet Solutions and Yak Communications (the “Applicants”) pursuant to Part VII of the *CRTC Telecommunications Rules of Procedure* and section 62 of the Telecommunications Act (the “Act”), seeking to review and vary Telecom Decision 2008-108 – *Canadian Association of Internet Providers (CAIP) - Application requesting certain orders directing Bell Canada to cease and desist from throttling its wholesale ADSL Access Services*, dated 20 November 2008 (“Decision 2008-108”).
2. The Applicants represent a coalition of consumer groups and independent telecommunications service providers that have a direct interest in the regulatory treatment accorded to Bell Canada’s Gateway Access Service (“GAS”) which is a regulated telecommunications service that can be found in Item 5410 of Bell Canada’s General Tariff.
3. The Applicants submit that there is substantial doubt as to the correctness of the Decision as a result of a multitude of distinct errors of fact and law committed by the Commission. These errors are first summarised by way of overview in Section II of this Application and are then discussed in more fulsome detail in Sections III to IX of the Application.
4. The Applicants further submit that, over and above these errors, Decision 2008-108 suffers from an overarching defect that requires its immediate rescission. In particular,

the Applicants submit that it was manifestly unfair to all of the parties that participated in the proceeding that led to Decision 2008-108 (the “CAIP proceeding”) as well as to the parties that are now participating in the proceeding initiated by Review of the Internet traffic management practices of Internet service providers, Telecom Public Notice 2008-19 (“PN 2008-19”) for the Commission to have issued a final determination in Decision 2008-108, only to on the same day open a new proceeding examining the very same issues raised in the CAIP proceeding. The fact that the Commission did so leads to troubling questions regarding the Commission’s understanding of the factual and legal issues at play in the CAIP proceeding and the adequacy of the record in that proceeding and hence the fairness of the process that led to Decision 2008-108.

5. The PN 2008-19 proceeding encompasses a review of all traffic management practices for both wholesale and retail Internet services. In particular, the public notice asks “whether any measures are required to ensure that such practices are in accordance with the Act” and, then, it re-opens all of the central issues of fact and law raised in the CAIP proceeding and purportedly decided by the Commission in Decision 2008-108, such as,
- (i) The determinants of congestion in a telecommunications network;
 - (ii) Whether certain applications or content can be said to be more congestion inducing than others;
 - (iii) What means ISPs are using, at both the wholesale and retail level, to handle congestion;
 - (iv) Whether these measures, at both the wholesale and retail levels, violate subsection 27(2) of the Act;
 - (v) Whether these measures, at both the wholesale and retail levels, violate section 36 of the Act;
 - (vi) Whether network notification rules should be extended to wholesale customers and to retail customers by all ISPs; and

- (vii) Whether privacy rights preclude the use of Deep Packet Inspection (“DPI”) technology.
6. As a result of the questions posed in PN 2008-19, there is now significant evidence which gives rise to substantial doubt as to the correctness of Decision 2008-108 in relation to key issues of fact and law. Indeed, as discussed more fully below, there are numerous errors of fact and law now apparent in Decision 2008-108.
7. However, the broader point to be made here is that, in effect, the Commission has solicited and now obtained a great deal of evidence directly relevant to the issues raised in the CAIP proceeding. At the same time, in Decision 2008-108, the Commission qualified many of its findings in relation to the issues that the Commission considered relevant as being “based on the record of this proceeding.”
8. Having so qualified its findings in Decision 2008-108 and on the same day having reopened all of the very same issues raised by CAIP in its original application of 4 April 2008, it is apparent that, at least in the Commission’s own mind, the CAIP proceeding did not produce the kind of evidentiary record that was needed in order to fully consider all of the issues raised in that proceeding. In fact, given the nature of the questions posed by the Commission in PN 2008-19, it is reasonable to conclude that by the close of the CAIP proceeding, the Commission did not have a full understanding of the issues that were raised in the CAIP proceeding.
9. This is apparent from a CBC interview given by the CRTC’s Vice Chairman of Telecommunications on 21 November 2008 on the same day that Decision 2008-108 was rendered. In the interview, the Vice-Chairman makes it clear that the Commission issued PN 2008-19 in order to gain a fuller understanding of the issues at play in the CAIP proceeding.¹

¹ CBC Interview of Vice Chairman Leonard Katz, *We are not endorsing internet throttling: CRTC*, 21 November 2008 at: <http://www.cbc.ca/technology/story/2008/11/20/tech-crtcqna.html>, in which the Vice Chairman states: “We're saying, 'Let's have a public notice and take a look at all the issues, not just one company, but all

10. The Applicants submit that undertaking a broader proceeding in order to understand the complex issues raised in the CAIP application is a perfectly acceptable and responsible means of developing a thoughtful policy approach and decision on network management.
11. What is entirely unfair and unacceptable, however, is the fact that the Commission rendered Decision 2008-108 without the benefit of a comprehensive understanding of the factual, legal and policy issues at play. In particular, if the Commission did not believe that it had an adequate evidentiary record or did not have a full understanding of the factual and legal issues raised by Bell's throttling of wholesale GAS services to be able to determine in an unqualified and final manner the issues raised in the CAIP proceeding, then it was procedurally unfair for the Commission to have rendered a decision on CAIP's application. The Commission should have waited until it had a more complete understanding of the issues at hand before making such significant determinations. The Commission ought to have issued a Public Notice, similar to PN 2008-19, in response to the CAIP application, in order to gather a sufficient record to determine the issues raised by CAIP's application. Rendering decisions on the basis of an insufficient record or on the basis of an incomplete understanding of the issues at play represents a breach of the rules of procedural fairness.²
12. In addition, the Commission has fettered its discretion in relation to the appropriateness of content, application or protocol ("CAP")-based throttling. In effect, the Commission has pre-judged certain factual and legal issues raised in the PN 2008-19 proceeding, thereby narrowing the scope of the Commission's decision in the PN 2008-19 proceeding even before it is made. As long as Decision 2008-108 stands, the perception

the companies, and not just one group of customers but all customers, and see if there really is a need for us to define guidelines or not in this case."

² See: *Clarke v. Canada (Minister of Citizenship and Immigration)*, 2009 FC 357 ("an incomplete record may be a basis for a breach of procedural fairness," para. 17); *D'Souza v. Canada (Minister of Citizenship and Immigration)*, 2008 FC 57 ("The decision should be set aside on the ground that the decision was based on an incomplete record", para. 13); and *Dee v. Canada (Minister of Citizenship and Immigration)*, [2003] F.C. 345 (T.D) ("Not only was the applicant denied access to the documents and to challenge them, the record before the Minister was incomplete. In my opinion, this decision cannot stand", para. 14).

that the Commission has pre-judged the outcome of PN 2008-19 on the key issue of the legality of CAP-based throttling pursuant to subsection 27(2) and section 36 of the Act will persist.

13. Indeed, in the PN 2008-19 proceeding, the dominant ISPs (other than MTS Allstream Inc.) declare that throttling of wholesale telecommunications services does not violate subsection 27(2) or section 36, as long as they have applied “equivalent” traffic-shaping measures to retail customers. Bell Canada goes even further in declaring without qualification that the Commission determined in Decision 2008-108 “that Bell Canada’s traffic management practices, including the shaping of P2P file-sharing traffic do not constitute an unjust discrimination or confer an undue preference”³ and do not require approval under section 36.⁴ Cogeco,⁵ Eastlink⁶ and Rogers⁷ state that in Decision 2008-108, the Commission found that Bell Canada’s deployment of DPI does not violate section 36 and clearly imply that their own uses of DPI should also be considered non-violative of section 36. The decision in PN 2008-19 will be perceived as representing the Commission’s inclination to allow application-based throttling in Canada. Indeed, it will be a natural reflex for the Commission to be strongly disinclined to contradict its determinations in the Decision in the PN 2008-19 proceeding. This could profoundly affect the outcome in the PN 2008-19 proceeding and any further proceedings involving issues of network management.
14. For the reasons set out above and below, the Applicants respectfully request that the Commission review and vary Decision 2008-108, giving due regard to the freedom of expression concerns that are affected by Bell’s throttling of P2P applications, the

³ Bell, PN 2008-19, Initial Comments, para. 132.

⁴ Bell, PN 2008-19, Initial Comments, paras. 136-45.

⁵ Cogeco, PN 2008-19, Initial Comments, para. 44.

⁶ Eastlink, PN 2008-19, Initial Comments, para. 82.

⁷ Rogers Communications, PN 2008-19, Initial Comments, paras. 38-39.

Canadian telecommunications policy objectives at paragraph 7(a) and 7(f) of the Act and paragraphs 1(a)(ii) and 1(b) of the Policy Direction⁸ and issue orders determining that

- (i) Bell's throttling of GAS is in breach of Bell's GAS tariffs and sections 24 and 25 of the Act;
- (ii) Bell's throttling of GAS unjustly discriminates against GAS customers and represents an undue preference that Bell is granting to itself;
- (iii) Bell's throttling of GAS results in an undue disadvantage to P2P content and application providers;
- (iv) Bell's throttling of GAS results in an undue disadvantage to Internet end-users who choose to access legal P2P content on the Internet; and
- (v) Bell's throttling of GAS is otherwise contrary to section 36 of the Act.

II. SPECIFIC GROUNDS FOR REVIEW AND VARIANCE

15. Section 62 of the Act states:

62. The Commission may, on application or on its own motion, review and rescind or vary any decision made by it or re-hear a matter before rendering a decision.

16. In Telecom Public Notice CRTC 98-6, *Guidelines for review and vary applications*, 20 March 1998 ("PN 98-6"), the Commission stated that in order for the Commission to exercise its discretion pursuant to section 62 of the Act, an applicant must demonstrate that there is substantial doubt as to the correctness of the original decision. The Commission then went on to state that substantial doubt as to the correctness of the original decision may arise, for example, due to

- (i) An error in law or in fact;
- (ii) A fundamental change in circumstances or facts since the decision;

⁸ *Order Issuing a Direction to the CRTC on Implementing the Canadian Telecommunications Policy Objectives*, SOR/2006-355, 14 December 2006 (referred to herein as the "Policy Direction").

- (iii) A failure to consider a basic principle which had been raised in the original proceeding; or
- (iv) A new principle which has arisen as a result of the decision.

17. The Applicants submit that there is substantial doubt as to the original correctness of Decision 2008-108 as a result of the following specific errors of fact and law. The Commission

- (a) Erred in fact in deciding that P2P transmissions take up as much bandwidth as possible and are unique, among all other types of transmissions, in doing so;
- (b) Erred in fact in stating that in order to identify the application or protocol of telecommunications, Bell need only examine the “header information of the packet;”⁹
- (c) In relation to Bell’s GAS tariff and sections 24 and 25 of the Act, erred in fact and in law
 - (i) in allowing Bell to apply a different standard relating to fair and proportionate use of its network by the end-customers of ISPs than the standard that it has applied historically to both ILECs and to the cable companies;
 - (ii) in considering that Bell’s use of DPI to inspect and treat packets in P2P transmissions differently does not violate the GAS tariff, which defines GAS as a PPPoE or Layer 2 service; and
 - (iii) in concluding that at the time of the Decision, Bell had no other “practical option that is technologically and economically suitable” but to throttle GAS;
- (d) In relation to CAIP’s subsection 27(2) grounds for relief,
 - (i) Erred in law by narrowing the scope of the proceeding without notice to the parties, such that CAIP’s section 27 arguments were only considered in relation to Bell’s treatment of its own retail Internet access customers;

⁹ Decision 2008-108, para. 66.

- (ii) Erred in law in failing to consider whether Bell was subjecting GAS to different treatment as compared to all other high-bandwidth services that Bell offers to itself or to others using the same “shared” network referred to by Bell and the Commission;
- (iii) Applied the wrong legal test in determining that subsection 27(2) comports an element of subjective intention or bad faith;
- (iv) Erred in law and in fact in considering that the breaches of section 27(2) were justified given that
 - A. there is no evidence that P2P applications represent a threat to the integrity of wireline ILEC networks;
 - B. Bell’s throttling measure is at once under inclusive in that it only affects P2P applications and not other bandwidth-intensive applications and overinclusive in that it affects both heavy and “non-heavy” users equally; and
 - C. Bell’s throttling measure is not proportional and minimally intrusive since there were many other options for Bell to achieve its objective, whether it be the objective of relieving congestion or of controlling the usage of heavy users;
- (e) In relation to section 36 of the Act, erred in law and in fact by concluding that:
 - (i) Bell’s traffic shaping measures “does not involve blocking any telecommunications”;
 - (ii) file-sharing applications only involve transmissions of downloadable “files” which require “time for the file to be transmitted before an end-user can access it.”;
 - (iii) Bell is not controlling the content of the telecommunications that it carries for the public;
 - (iv) Bell is not influencing the meaning of the telecommunications that it carries for the public; and that
 - (v) Bell is not influencing the purpose of the telecommunications that it carries for the public;

- (f) Did not comply with the requirements of the Policy Direction to state which policy objectives were advanced by its decision and did not give sufficient justification for its decision thereunder;
- (g) Erred in law in failing to give due consideration to
 - (i) The freedom of expression of content providers, Canadian Internet users, and independent ISPs;
 - (ii) The Canadian telecommunications policy objective of protecting the privacy of telecommunications set out at paragraph 7(i) of the Act;¹⁰ and
 - (iii) The Canadian telecommunications policy objective of promoting maximum reliance on market forces and ensuring efficient and effective regulation as set out at paragraph 7(f) of the Act.

18. In addition to the foregoing errors, there is at least one changed circumstance relating to the options available to Bell to relieve congestion in its network that calls into doubt both the original and continuing correctness of Decision 2008-108. In particular, as described in Section IV below, it would appear that Bell has standardised Ethernet Layer 2 switches throughout its network in order to relieve congestion in certain areas of its network. This development calls into question the continuing necessity of Bell's network-wide throttling of P2P applications as well as raising the issue (if only in the alternative) of whether Bell's throttling of P2P applications should be time-limited or subject to any other restrictions.

III. ERRORS OF FACT

19. As noted above, the PN 2008-19 proceeding re-opens key questions of fact that had just been "decided" by the Commission in Decision 2008-108 relating to, among other things, (i) the effect of P2P applications (and the traffic generated by such applications) on telecommunications networks, (ii) the nature of deep packet inspection, (iii) the details of the traffic management measures currently in use by Canadian ISPs, and (iv)

¹⁰ Decision 2008-108, para. 66.

the availability of alternative traffic management measures to achieve the legitimate traffic management objectives of Canadian ISPs.

20. As indicated above, if the Commission re-opened these key questions because it truly believed that it did not have an adequate evidentiary record in order to determine these questions with any degree of certainty or finality in the CAIP proceeding, the Commission has erred in law in rendering a decision on the basis of an inadequate record.¹¹
21. In the alternative, if the Commission's decision to re-open the key questions of fact set out above was not borne out of a lack of information in the CAIP proceeding but rather, because the Commission chose to retrospectively narrow the scope of the proceeding (as discussed in greater detail in Section V below), then the Commission erred in failing to consider relevant information without notice and without justification.
22. In either case, there is substantial doubt as to the correctness of Decision 2008-108 arising from two key errors of fact. Although by no means representative of all of the errors of fact, some others of which are discussed in conjunction with the legal errors with which they are associated, the Applicants submit that the following constitute the key errors of fact that underpin the legal flaws in the Decision. Specifically, the Commission:
 - (a) Erred in fact in considering that in an ILEC's network, P2P applications use "up additional capacity in the network as it becomes available" and therefore makes a disproportionate contribution to congestion; and
 - (b) Erred in fact in stating that in order to identify the application or protocol of a telecommunications, Bell need only examine the "packet header" of the telecommunications.

¹¹ See *infra* para. 11 and case law cited at footnote 2.

A. The Commission Erred in Concluding that P2P Applications Use “Up Additional Capacity in the Network As It Becomes Available”

23. In Decision 2008-108, the Commission found that the selective, application-based throttling of P2P traffic was neither illegal nor undesirable. In coming to this conclusion, the Commission was clearly of the view, that P2P file-sharing applications, by their very nature, make disproportionate use of telecommunications networks. While the Commission’s reasons in this regard are sparse and the relationship between these conclusions and the Commission’s specific findings on the grounds raised by CAIP are not properly enunciated, in the Commission’s own words, the Decision states the following:

P2P file-sharing applications are designed to make the maximum use of downstream and upstream bandwidth and to use up additional capacity in the network as it becomes available.¹²

Bell Canada has established a need to implement traffic shaping of GAS ISP traffic during peak periods and that P2P file-sharing applications can make disproportionate use of the network.¹³

24. The Commission’s statements regarding P2P applications are, at once, under-inclusive on the one hand and, on the other, represent inaccurate generalisations.
25. First, the Applicants note that the Commission inexplicably limits itself to P2P “file-sharing” applications when the evidence from individual Internet end-users in the CAIP proceeding clearly demonstrated that Bell’s throttling of GAS affected much more than file sharing applications. In particular, the Commission appears to have accepted Bell’s statement that P2P file-sharing applications are not time sensitive and that because it does not throttle certain types of time-sensitive P2P applications such as Skype and Joost, it was not “blocking” this type of P2P traffic.¹⁴ However, it is clear from Bell’s own evidence that it has programmed the DPI equipment in its network to identify individual

¹² Decision 2008-108, para. 30.

¹³ Decision 2008-108, para. 43.

¹⁴ Bell, 2008-19, para. ES10, page 5, Initial Comments; Bell Canada (CRTC)15May08-7 CAIP Part VII Abridged, pages 1-4.

“signatures”¹⁵ associated with particular P2P protocols, such as BitTorrent. As discussed more fully in Section VI below, BitTorrent protocol is used not only for web-based file-sharing, but also for live audio and video streaming and other applications.¹⁶

26. Thus, all of these applications and not merely P2P “file-sharing” applications, are throttled by Bell, regardless of actual congestion at any given location in Bell’s network, regardless of whether the application is bandwidth-intensive, and regardless of whether the end-customer is an allegedly “heavy” user of P2P applications.
27. Moreover, having erred by being under-inclusive as to the scope of Bell’s throttling, the statement that P2P applications are designed “to use up additional capacity in the network as it becomes available” and that P2P file-sharing applications “can make disproportionate use of the network” belie the Commission’s failure to appreciate the dissimilarities between DOCSIS cable network topology on the one hand and wireline ILEC network topology on the other. In particular,
 - (a) The Commission’s statement that P2P file-sharing applications are designed to make the maximum use of downstream and upstream bandwidth is meaningless, since all TCP/IP based applications are designed to make maximum use of downstream and upstream bandwidth;¹⁷
 - (b) The Commission erred in failing to make a distinction between downstream and upstream P2P traffic flows. There is not a shred of evidence that P2P file-sharing applications make disproportionate use of network resources in the downstream

¹⁵ Bell Canada, CAIP proceeding, Answer to Request for Interim Relief, 15 April 2008, paras. 8, 41; Bell Canada, CAIP proceeding, Answer (Abridged), 11 July 2008, paras. ES6-7.

¹⁶ *Infra* Section VI.

¹⁷ Bell admits this in its responses to The Companies (CRTC)4Dec08-8 PN 2008-19 Abridged Pages 8-9 of 23: “TCP has congestion control algorithms that make sure packets are sent as fast as possible. All applications that utilize TCP for data transmission incorporate the use of a congestion detection and avoidance algorithm known as TCP Windowing. *The goal of TCP is to maximize throughput. Each individual TCP session will try to use as much bandwidth as the communication path can offer without dropping packets.* When TCP detects congestion it will scale back the transmission rate. Since each individual TCP session behaves and uses the same scale-back algorithm, each session will get a fair share of the bandwidth. This seems fair for applications that behave the same way on the network.” (emphasis added)

direction in either ILEC wireline or cable networks. In fact, there is compelling empirical evidence to the contrary given that no other ILEC in Canada, nor a single cable ISP in Canada,¹⁸ nor even Comcast¹⁹ in the United States felt it necessary to throttle downstream P2P traffic – only Bell systematically throttles both downstream and upstream P2P traffic streams; and

(c) With respect to upstream P2P traffic streams, the Commission erred by failing to recognise that there are important distinctions between the effect of P2P applications on DOCSIS-based cable network technology and DSL-based wireline ILEC network technologies.

28. Although the foregoing were pointed out to the Commission by CAIP on the record of the CAIP proceeding,²⁰ the Commission failed to appreciate the fact that all of Bell's claims regarding the allegedly nefarious effects of P2P applications were based on cable network topology and on upstream as opposed to downstream traffic flows.

29. The challenge of P2P applications is particular to the upstream capacity of cable networks as they are configured today. The Commission's own expert alludes to the general fact that because greater amounts of bandwidth are shared within cable networks, it is a greater priority for cable ISPs to manage their networks. The

¹⁸ Rogers has stated that it refrains from shaping downstream traffic. While downstream traffic may be slowed indirectly because some P2P applications such as BitTorrent restrict download speeds to match the maximum upload speed that is sensed by the transmitting computer, this effect does not arise as a result of any positive action taken by Rogers, but rather, as a result of "business decisions taken by a given P2P provider." See Rogers Communications, CAIP proceeding, Comments, 3 July 2008, para. 5.

¹⁹ Indeed, Comcast vehemently defended its P2P throttling practices on the basis that it does not manage its customers' downloads. Comcast went further by stating that "it does not manage P2P uploads when the user is simultaneously downloading. That is true as to those P2P protocols that utilize a single TCP flow for simultaneous uploading and downloading. When managing those protocols that are capable of (and actually are) simultaneously uploading and downloading, with a single TCP flow, we do not manage that upload. The reasons we do not manage that upload is that it would impact that customer's simultaneous download, which it is our policy not to do. With other P2P protocols that do not have this capability and, as such, are made up of separate and discrete unidirectional flows, these upstream flows are subject to management. It should be pointed out that in these cases, management does not affect the customer's download. So, *in all cases*, Comcast's current policy does not manage our customers' downloads" (emphasis in original). See Comcast, Letter dated 10 July 2008 to Ms Marlene H. Dortch, FCC, *In the Matter of Broadband Industry Practices*, WC Docket No. 07-52 – *Ex Parte Communication*, page 4-5 of 6.

²⁰ CAIP, CAIP proceeding, Final Reply, 23 July 2008, para. 78.

Commission's expert concludes, therefore, that there is a greater incentive for cable ISPs to control access to their bandwidth.²¹

30. This view is corroborated by cable ISPs in the PN 2008-19 proceeding. For example, Cogeco states that it must control the upstream flow of traffic because, otherwise, the DOCSIS cable network would permit an end-user engaging in file-sharing to consume a significant amount of bandwidth on the access facility shared by the end-user with each and every other end-user served on that cable node:

This is a technical constraint that cannot be ignored. Consequently, it is practically impossible to run the Internet access network embedded in the DOCSIS network without controlling the upstream side.²²

31. However, in a wireline ILEC network, each access is dedicated. There is no possibility that in the upstream direction, the running of a P2P application on the end-customer's equipment can affect the user experience of other end-customers that are served by separate access facilities. Thus, regardless of how many "sessions" are opened up on an end-user's customer premise equipment (CPE) by the P2P application with other peers,²³ it is impossible for this usage to affect the available bandwidth capacity of other users.
32. Furthermore, an end-customer running a P2P application cannot take up an unlimited amount of bandwidth since the end-customer's Internet access service has a cap or a service-defined maximum allocation of bandwidth that may be taken up by traffic sent or received by the end-customer. The asymmetric peak rate settings of ADSL technology works very well. These two unique factors combine to preclude the possibility, at least

²¹ Graeme Finnie, *ISP Traffic Management Technologies: The State of the Art*, prepared for CRTC PN 2008-19, January 2009, available online at: <http://www.crtc.gc.ca/PartVII/eng/2008/8646/isp-fsi.pdf>, p. 4

²² Cogeco(CRTC)4Dec08-4 PN 2008-19, 13 January 2009, p. 4.

²³ There is some controversy regarding the number of upstream transmit "sessions" that may be opened up by an end-customer's CPE that is running a P2P application. However, for purposes of this Application, this controversy is irrelevant, the point being that in a wireline ILEC's network, the fact that each access is dedicated and the effectiveness of the rate setting functionality in ADSL technology preclude the possibility of disproportionate use.

in respect of wireline ILEC networks, of the kind of disproportionate use that Bell claimed is characteristic of P2P file-sharing applications.

B. In Order to Determine Whether an Internet Transmission is Running a P2P Application, Bell Must Delve Into the Packet Payload of GAS Traffic

33. On the record of the proceeding that led to Decision 2008-108, Bell admitted that as of March 2008, it was routing its competitors' wholesale GAS traffic through "Deep Packet Inspection" devices installed "behind" the Broadband Access Server ("BAS") for the purpose of identifying transmissions that were running P2P file-sharing applications.²⁴ Bell Canada further submitted that its DPI devices examined the "application header"²⁵ of all of its GAS customers' packets, but that the devices did not examine the "contents" of the packets.
34. CAIP denied that such a thing as an "application header" existed and further submitted that in order to identify the application that was being run by a given Internet transmission, the carrier had to look at the payload of the packet. Other submissions on the record of the CAIP proceeding supported CAIP's position. Not a single submission supported Bell's characterization of how deeply DPI had to delve into telecommunications carried on its network in order to identify the application or protocol of such telecommunications.²⁶ For example, Rogers, which also used DPI at the time of the CAIP proceeding, was silent on the issue.²⁷
35. The Commission stated at paragraphs 64 and 66 of Decision 2008-108, the following:

64. Bell Canada submitted that its DPI technology examines the packet headers, not the contents of communication exchanges.

²⁴ See Bell Canada(CRTC)15May08-4 CAIP Part VII at page 2.

²⁵ Bell, CAIP proceeding, Answer, 11 July 2008, para. 185.

²⁶ See, for example, the following submissions: Vaxination Infomatique, 3 July 2008; and, the Canadian Internet Policy and Public Interest Clinic for the Campaign for Democratic Media, 3 July 2008.

²⁷ However, in the PN 2008-19 proceeding, Rogers stated as follows: "the technology used performs a complicated analysis of the data, looking at the header information, header information imbedded in the payload, and session establishment procedures to determine how to classify the data." See Rogers(CRTC)4Dec08-8 PN2008-19, p. 4.

...

66. The Commission notes that the DPI technology used by Bell Canada examines the header information of packets, which includes source and destination IP address information, in order to carry out traffic shaping.

36. The Applicants submit that the Commission erred in equating Bell's notion of a so-called "application header" with "the header information of packets." The Applicants agree with CAIP and others that there is no such thing as an "application header" in the TCP/IP or UDP/IP and that in order to determine the application software that is being run on CPE attached to Bell's local access facilities, Bell's DPI equipment must delve into the "packet payload" or more specifically, the Layer 7 (Application) Layer information of GAS customer packets.
37. To better frame this discussion and address the confusion surrounding Bell's so-called "application header" claim, it is useful to consider the Open Systems Interconnection Reference Model ("OSI Model"),²⁸ a conceptual model used to describe how communications can occur across different network operators. According to this model (which is described in Figure 1 below), in order to ensure the delivery of a given telecommunications packet from one network to another (not necessarily directly interconnected) network, the packet must contain networking and sequencing information, as well as the informational content that is intended to be conveyed. At a conceptual level, all of this "information" may be organised into different hierarchical "layers." In its original conception, the OSI Model proposed seven Layers, beginning with the Physical Layer (Layer 1) and ending with the Application Layer (Layer 7). However, Layer 5 and Layer 6 are not generally in use to today:

²⁸ The OSI model was developed by the International Standards Organization (ISO) in the 1980s.

Figure 1: OSI Model

Broadband Communications	OSI Layer
<i>e.g.</i> web-browsing, e-mail, VoIP, streaming media, database services	7 - Application
<i>Not generally in use</i>	6 - Presentation
<i>Not generally in use</i>	5 - Session
<i>e.g.</i> TCP/IP, UDP/IP	4 - Transport
<i>e.g.</i> source and destination IP addresses	3 - Network
<i>e.g.</i> TDM, ATM, token ring, Ethernet, DOCSIS, ADSL, PPPoE	2 - Data Link
Mechanical and Electrical Specifications	1 - Physical

38. According to the statement at paragraph 66 of Decision 2008-108, the Commission accepted Bell's "application header" claims. It also suggests that Layer 3 or the Network Layer information is as far as Bell goes in examining GAS traffic in order to identify the fact that an Internet end-user is running a P2P file-sharing application on his or her CPE.
39. As noted above, several parties supported CAIP's position that there is no such thing as an "application header" as distinct from the contents of the application layer itself. Since the record of the proceeding that led to the Decision closed, further evidence on the record of the PN 2008-19 proceeding has corroborated CAIP's evidence in relation to the extent to which Bell's use of DPI technology must unpack the payload of a packet in order to determine whether an Internet end-user has requested or is sharing a P2P file.²⁹
40. The extent of the debate surrounding the depth of Bell's DPI was unnecessary. The depth of Bell's inspection should not be a secret and there was absolutely no need to create a semantic debate around "application headers." Bell was intentionally vague in

²⁹ The following Initial Comments in the PN 2008-19 proceeding discuss the extent to which DPI equipment must unpack packets in order to identify the application used to deliver the informational content or message of a packet: Public Interest Advocacy Centre (PIAC) for Consumer Groups, February 23, 2009, pp. 65-68; the Canadian Internet Policy and Public Interest Clinic for the Campaign for Democratic Media, February 23, 2009, para. 231, which states that DPI "examines Layer 7, the deepest layer of the Open Systems Interconnection model of communications, in order to allow for better identification of underlying applications."; and Vaxination Infomatique, February 23, 2009, p. 5, para. 35: "All application protocols are contained wholly within the data payload of packets."

its submissions in the CAIP proceeding (which it merely repeated in the PN 2008-19 proceeding) as to exactly what Layers in the TCP/IP and UDP/IP stack it was unpacking in order to determine the applications being run on CPE equipment of Internet end-users. The Consumers Groups, one of the Applicants in the instant application, commented on this evasiveness as follows:

272. If The Companies meant to suggest that it looks at the transport layer header (such as a UDP header) this is already “spying” on IP packet data, which is the aggregate of (in this example) UDP header (which includes source and destination port) and UDP data. This data is intended only for the receiving computer, not the network layer. This may be thought of as “shallow packet inspection.”

...

274. If the Companies meant to suggest that it looks at the “Application” layer data (Layer 7, OSI model), which is what it actually appears to mean by “application signatures” the Consumer Groups submit that this inspection is too invasive of consumer privacy, as it is the deepest layer for inspection. This level of scrutiny reveals the actual data being transferred and even if it is not all read, it can be. [emphasis in original]

41. Fortunately, however, the independent expert report prepared on behalf of the Commission for the PN 2008-19 proceeding has settled this debate. The report from Heavy Reading confirms that DPI inspects the packet payload for such things as strings that would identify the protocol over which the application is being run, as well as other characteristics, such as the length of the packet payload:

DPI equipment inspects the contents of packets traveling across an IP network. It can more or less accurately identify the application or protocol in use by examining the source and destination IP address, the port number and packet payload. Port numbers are a basic means for identifying applications, for example, email using the Simple Message Transfer Protocol (SMTP) uses port 25. Packet headers include this information, along with source and destination address and other data including DiffServ class information where relevant. The packet payload itself (eg part of a Web page) may be examined to look for strings in the protocol that identify it (eg “kazaa”, which appears in one of the fields used to handle Kazaa requests). Equipment may also look for telltale

signs of an application, such as the length of the packet payload.³⁰

42. It is clear from the foregoing that DPI may unpack Layer 7 information and that therefore, all of the informational content that is intended to be conveyed is or may be searched at the carrier's instruction. For example, if the telecommunications in question is an e-mail, the Layer 7 information would include the name of the sender and receiver, the text of the e-mail, the names of any attached files being transferred. Unpacking Layer 7 gives access to all the informational content that the sender intends to convey.
43. This correction to the Commission's determinations is important to a proper analysis of the privacy aspects of Bell's use of DPI and throttling of P2P applications.
44. However, the fact that Bell looks at Layer 7 information in order to determine the application software running on the CPE misses a more fundamental point that relates to GAS specifically. GAS is a PPPoE or Layer 2 (Data Layer) service according to Bell GT Item 5410. As such, anything above Layer 2 (Layers 3-7) constitutes the PPPoE "payload" under GAS. While Bell must possess PPPoE header information in order to provide GAS, there is no need for Bell to examine even the source and destination IP address information of GAS traffic in order to deliver the tariffed service.
45. Bell quite simply has no business, under the OSI Model and the GAS tariff, to consider the Layer 3 (Network Layer) information, let alone the Layer 4 (Transport) and Layer 7 (Application) Layer information of its GAS customers' traffic in order to deliver GAS service. It is the independent ISP (the GAS customer), in communication with CPE located at its end-customer's premises, that is responsible for routing the end-user's traffic appropriately using port, domain name or the IP addressing information, as the case may be. All Bell is required and permitted to do once it takes the GAS traffic at the

³⁰ Graham Finnie, *ISP Traffic Management Technologies: The State of the Art*, Heavy Reading, January 2009, at page 8 ("State of the Art Report").

network interface point with the competitor is to deliver it to the end-customer premise located on Bell's access network or vice versa.

46. The Commission erred in failing to recognise that Bell's deployment of DPI on GAS traffic fundamentally alters Bell's role as a carrier. Bell has contracted with its GAS customers to provide a point-to-point service on their behalf. By deploying DPI on GAS, Bell has stepped, uninvited, into a role other than that of being a common carrier. As discussed below, this blurring of roles is relevant to and cuts across each of the errors alleged by the Applicants in the remainder of this Application.

IV. ERRORS IN THE INTERPRETATION OF BELL'S TARIFFS & NEW EVIDENCE

47. At paragraph 39 of Decision 2008-108, the Commission determined that, based on evidence filed largely in confidence by Bell, the use of file sharing applications by the end-users of GAS customers "would contribute to the network congestion that exists in Bell Canada's network" and that "some measures are required to prevent its customers from using, or permitting to be used, P2P file-sharing applications so as to prevent fair and proportionate use by others of its network." In particular, the Commission determined that:

...in the circumstances of this proceeding, Bell Canada has established that the use of P2P file-sharing applications by the end-users of GAS customers during peak periods would contribute to the network congestion that exists in Bell Canada's network. Accordingly, in the circumstances of this proceeding, Bell Canada has established that some measures are required to prevent its customers from using, or permitting to be used, P2P file-sharing applications so as to prevent fair and proportionate use by others of its network.³¹

48. Leaving aside the fact that Bell has never proven that GAS customers are the cause of any so-called "congestion" in its network, the Applicants note that these findings appear to be predicated, at least in part, on a determination by the Commission that section 8.3

³¹ Decision 2008-108, para. 32.

of Bell's Terms of Service permits Bell to carry out its chosen program of throttling in relation to GAS customers.

49. The Applicants note that this determination is a departure from the Commission's historical treatment of section 8.3 of Bell's Terms of Service, which was to permit suspension or disconnection of a specific end-user's service where that end-user was found to be preventing fair and proportionate use by others of a carrier's network.³² In particular, the Commission's general practice was to only permit carriers to take action in relation to Section 8.3 of the Terms of Service where a specifically identifiable end-user was preventing fair and proportionate use by others of the carrier's network.
50. In the instant case, the Commission has authorized Bell to carry out a network-wide program of throttling that is applied to thousands upon thousands of end-users even if these end-users do not engage in activities that "prevent fair and proportionate use by others" of Bell's network.
51. The Applicants notes that this finding is inconsistent with the rules established by the Commission in relation to the cable companies' TPIA service. These rules allow a cable company to suspend or terminate the service of a specific end-user – even if that end-user is a customer of an ISP – where the end-user is found to be making a disproportionate use of the service or uses the service contrary to law or regulation.³³
52. The Applicants submit that this approach represents the correct application of the "fair and proportionate use" principle reflected in Section 8.3 of Bell's Terms of Service and should have been applied by the Commission when evaluating the appropriateness of Bell's chosen method of dealing with alleged congestion in its network.
53. Instead, the Commission has established a rule or standard for Bell that deviates from the standards that it has prescribed for the cable companies. In fact, it is not just the cable companies that apply this standard. All of the other ILECs in Canada that are

³² See for example, Telecom Order CRTC 2003-378.

³³ See for example, Order CRTC 2000-789.

participating in the PN 2008-19 proceeding have stated that they rely on this tariff provision when dealing not only with instances of abuse by specific end-users, but also instances of network congestion.³⁴

54. Given the Commission's historical approach to the interpretation of Section 8.3 of Bell's Terms of Service and its directions to the cable companies to rely on this provision as a means of dealing with specific instances of abuse, it is not clear why the Commission established a different rule for Bell in Decision 2008-108. Indeed, based on the evidence that was filed by Bell in the CAIP proceeding, it was clear that Bell was not experiencing congestion on a network-wide basis or that its congestion problems were considered to be chronic or long-term problems warranting the permanent throttling of all GAS customer traffic.
55. To the contrary, Bell indicated that only some of the "links" in its network were congested and that it was taking active steps to address this problem.
56. In the face of this evidence, it would have been reasonable for the Commission to direct Bell to put together a list of end-users that are causing congestion in these portions of its network and to approach these individuals directly (in the case of its own end-customers) or through their service providers (in the case of end-customers of ISPs) as a means of addressing the congestion that it was experiencing in its network.
57. But this was not the approach that was adopted by Bell even though there is now evidence that Bell is addressing the congestion problems in its network, not through throttling, but through a Layer 2 Ethernet switch solution. Specifically, in the proceeding initiated as a follow-up to *Line-Sharing Service*, Telecom Regulatory Policy 2009-34 which now forms a part of the proceeding initiated by *Proceeding to consider the appropriateness of mandating certain wholesale high-speed access services*, Telecom Notice of Consultation 2009-261 ("TNC 2009-261"), Bell describes this solution as follows:

³⁴ See for example the Initial Comments of SaskTel and TELUS in the PN 2008-19 proceeding.

The Companies explained previously in their application to review and vary Decision 2008-17 in respect of ADSL-CO service, that implementing the ADSL-CO service would require dedicating a large amount of resources and investing in a platform they have determined is no longer efficient by installing new ATM switches to accommodate the ports required for wholesale customers. **Since the time of that application, Bell Canada standardized a new Ethernet Layer 2 switch that can connect ATM DSLAMs. The standardization of the new devices was initiated as part of a plan to relieve congestion in certain areas of the network. Bell Canada will be deploying these new switches in a limited number of COs and migrating the uplink connection of ATM-fed DSLAMs to the new Ethernet Layer 2 switches in order to reduce the amount of traffic on its ATM network.** The Companies expect that the proposed solutions for ADSL-CO could also use new Ethernet Layer 2 switches and would no longer require investing in legacy ATM switches as was originally expected. **The new switches will be available for deployment in the May 2009 timeframe.**³⁵ (emphasis added)

58. The foregoing extract from Bell's submission in the TNC 2009-261 proceeding makes it clear that congestion is only occurring in a limited number of instances in Bell's network and, even in these limited instances, Bell is deploying a Layer 2 Ethernet switch solution to address the congestion issue.
59. This extract further demonstrates that the appropriate solution to deal with network congestion problems, especially in the case of a competitor service such as GAS, is at the Layer 2 level. The Applicants note in this regard that GT Item 5410 defines GAS as a Point-to-Point Protocol over Ethernet ("PPPoE") service. This means that GAS is a Layer 2 service. In order to provide the service, Bell only needs to "read" or "unpack" the traffic of its GAS customers as far as Layer 2, with no regard to Layer 3 (source and destination IP addresses), or Layer 4 information (the transmission protocol being used) and most definitely, without regard to Layer 7 information (the application and informational content) of the packet.
60. As discussed above, the information required to provide a PPPoE service resides at Layer 2. To the carrier, anything above Layer 2 represents the payload of the packet.

³⁵ Submission of Bell, Bell Aliant and Télébec in Follow-up to Telecom Regulatory Policy CRTC 2009-34 regarding an unbundled ADSL access service, 12 March 2009, para. 109.

Accordingly, any attempt by Bell to look beyond Layer 2 of GAS customer traffic is in direct breach of the terms of the GAS tariff. There is no need and therefore, no justification for Bell's examination of the contents of wholesale traffic in a service that is defined as a Layer 2, PPPoE service.

61. However, even if it could be argued that Bell's tariffs permit it to look beyond this layer of GAS customer traffic (a matter that the Applicants do not concede), it is abundantly clear from the record of the TNC 2009-261 proceeding as well as the PN 2008-19 proceeding that Bell has numerous alternatives available to it as a means of addressing any real or perceived congestion problems caused by end-users in its network. Although some of these alternatives are not appropriate in the case of a wholesale service such as GAS, the sheer number of these alternatives casts doubt on Bell's chosen method of managing congestion on its networks (i.e., application-based throttling):
- (a) Upgrading network capacity or adopting other network solutions, including Bell's Layer 2 Ethernet switch solution;³⁶
 - (b) Traffic smoothing, early congestion notification, random early drops, additive increase/multiplicative decrease, Diffserv;³⁷
 - (c) Flow based routing;³⁸
 - (d) Peak period pricing;³⁹
 - (e) Peak period throttling on a content/application/protocol agnostic basis;⁴⁰
 - (f) Traffic policing and traffic management of specific end-users;⁴¹

³⁶ See PN 2008-19 Initial Comments of ITAC (para. 8), PIAC/CAC (paras. 132-133), Independent Film and Television Alliance (para. 9), CIPPIC (para. 123), Network BC (paras. 8 and 47), CFTPA (para. 106), CCD/ARCH (para. 45), Open Internet Coalition (paras. 17 and 50), Execulink (para. 9) and Participatory Culture Foundation (para. 16). See also MTS Allstream and Primus responses to interrogatories ____ (CRTC)4Dec08-8 and 9 and submission of Bell, Bell Aliant and Télébec in Follow-up to Telecom Regulatory Policy CRTC 2009-34 regarding an unbundled ADSL access service, 12 March 2009, para. 109.

³⁷ See PN 2008-19 Initial Comments of CIPPIC (para. 61) and Open Internet Coalition (para. 34).

³⁸ See PN 2008-19 Initial Comments of CISP (para. 86), and CIPPIC (para. 61).

³⁹ See PN 2008-19 Initial Comments of Sandvine (para. 76), CIPPIC (para. 129), Skype (para. 20), Open Internet Coalition (para. 42) and Juniper Networks (para.18).

⁴⁰ See PN 2008-19 Initial Comments of BC Civil Liberties Association (para. 42), CFTPA (para.78), Skype (paras. 9 and 20), Sandvine (para. 69), Open Internet Coalition (para. 42), Participatory Culture Foundation (para. 16) and Juniper Networks (para.19).

- (g) Allocation of bandwidth on a per user (and usage history) basis;⁴²
 - (h) Content caching;⁴³
 - (i) Usage caps;⁴⁴ and
 - (j) Usage based billing.⁴⁵
62. The Applicants note that a number of these solutions were cited by interested parties as possible alternatives to Bell's traffic shaping practices in the CAIP proceeding. However, at paragraph 33 of Decision 2008-108, the Commission stated that "there is no evidence on the record regarding the availability, feasibility, or utility of any such alternative solutions."
63. While this may be true in the case of some of the solutions identified above, as noted earlier, the Commission had already authorized the cable companies to suspend or terminate the service of any end-user customer of an ISP that prevents other users from making fair and proportionate use of the cable companies' networks. Moreover, this solution had been brought to the Commission's attention by CAIP and other interested parties in the proceeding that led to Decision 2008-108.
64. Given the fact that the Commission, itself, directed the cable companies to insert these provisions in their TPIA tariffs, it is an error for the Commission to conclude that there is no evidence "regarding the availability, feasibility, or utility of any such alternative solutions." The Commission had first-hand knowledge of at least one of these solutions.

⁴¹ See PN 2008-19 Initial Comments of Sandvine (para. 53), Skype (para. 20), Open Internet Coalition (para. 42) and Juniper Networks (para.19).

⁴² See PN 2008-19 Initial Comments of Open Internet Coalition, para. 49 and CCD/ARCH (para. 44).

⁴³ See PN 2008-19 Initial Comments of Skype (para. 20), Open Internet Coalition (para. 42) and Juniper Networks (para.19).

⁴⁴ See Shaw(CRTC)4Dec08-8 and 9 PN 2008-19, Skype, PN 2008-19, Initial Comments (para. 20), Open Internet Coalition (para. 42),and CCD/ARCH (para.37).

⁴⁵ See SaskTel, TELUS, Videotron response to interrogatories _____(CRTC)4Dec08-8 and 9 as well as PN 2008-19 Initial Comments of CCD/ARCH (para.38), CIPPIC (para. 129), CBC/Radio Canada (para. 15), Open Internet Coalition (para. 42), Juniper Networks (para.18), and Participatory Culture Foundation (para. 16).

65. One way or the other, it would appear from Decision 2008-108 that the Commission did not believe that it had sufficient evidence to form an opinion on possible alternatives to Bell's traffic shaping practices.
66. However, this is no longer the case. The record of the PN 2008-19 proceeding is replete with examples of content, application and protocol agnostic traffic management techniques that do not involve the unprecedented level of traffic inspection and interference inherent in Bell's DPI solution.
67. When this evidence is considered in conjunction with Bell's statements in the TNC 2009-261 proceeding that it is deploying Layer 2 Ethernet switches to address the limited instances of congestion in its network, it is clear that circumstances have changed and that the throttling of GAS customer traffic is no longer necessary .
68. In fact, this new evidence calls into question the ongoing correctness of the Commission's finding in Decision 2008-108 that Bell's use of DPI technology to throttle GAS customer traffic is the "only practical option that is technologically and economically suitable, at this time, for addressing congestion in its DSL network."⁴⁶ Bell's own evidence in the TNC 2009-261 proceeding indicates that it has identified a solution to resolve the limited instances of congestion in its network.
69. In light of these changed circumstances, it is incumbent upon the Commission to revisit its determinations in Decision 2008-108 in order to determine whether Bell should be permitted to continue with its massive, network-wide program of throttling when it is clear that this program is no longer needed on the scale and scope that was originally claimed as necessary by Bell and when there is evidence demonstrating that there are far less intrusive and far more competitively neutral options available to Bell to address any instances of real or perceived congestion on its network.

⁴⁶ Decision 2008-108, para. 33.

V. ERRORS IN THE INTERPRETATION AND APPLICATION OF SECTION 27(2) OF THE ACT

70. At paragraph 47 of Decision 2008-108, the Commission concluded that “Bell Canada's traffic-shaping practices with respect to GAS do not violate subsection 27(2) of the Act.”

In support of this conclusion, the Commission made the following findings:

44. The Commission notes that Bell Canada's traffic-shaping measures are applied such that there is equivalent treatment for both its retail Internet service end-users and the GAS ISPs' end-users.

45. There is no basis to conclude, based on the record of this proceeding, that the implementation by Bell Canada of traffic-shaping measures on GAS was intended, as alleged by CAIP, to secure sufficient bandwidth for its own services or to prevent ISPs from effectively competing against Bell Canada's introduction of usage-based charges for its retail service. Further, the Commission considers that there is no evidence on the record to establish that Bell Canada has benefited from the implementation of traffic-shaping measures with respect to GAS in the manner alleged by CAIP.

46. The Commission notes that Bell Canada provided data on the growth rate for GAS, which indicated that there was no substantive change in the growth rate after implementation of its traffic-shaping measures on GAS. The Commission further notes that there is no evidence on the record to demonstrate - or even to suggest - that competition has been reduced following the implementation of Bell Canada's traffic-shaping measures.

A. CRTC Narrowed the Scope of the Proceeding Without Notice to the Parties to Exclude CAIP's Section 27 Concerns in Relation to Content Providers and End-Users

71. The Commission erred at paragraphs 44 and 45 of the Decision by only considering whether Bell had granted to itself a preference or subjected competitors to a disadvantage in relation to downstream retail Internet access services that Bell itself provides. The Applicants submit that the Commission committed an error of law by narrowing the scope of the CAIP proceeding without notice to the parties.
72. In the CAIP proceeding, CAIP specifically alleged that Bell's throttling of P2P traffic violates subsection 27(2) in three distinct ways:⁴⁷
- (a) First, by throttling P2P traffic Bell has granted itself an undue preference vis-à-vis its independent ISP customers as well as in relation to P2P content providers;
 - (b) Second, Bell unjustly discriminates against providers of P2P applications;
 - (c) Finally, Bell discriminates against users of P2P applications.
73. CAIP was not the only party to the CAIP proceeding to point out that Bell's throttling of GAS raised subsection 27(2) concerns in relation to application and content providers as well as in relation to Internet end-users.⁴⁸
74. Inexplicably, the Commission fails to actually address CAIP's argument that Bell's throttling of wholesale GAS services adversely affected or benefited Bell in relation to application and content providers that use P2P protocols to distribute content over the Internet as well as Internet end-users who wish to access such Internet content.⁴⁹
75. Instead, the Commission's sole focus was on whether Bell subjected its own retail end-customers to P2P throttling and on this basis concluded that there was no discrimination, disadvantage or preference. That is, the only comparison that the

⁴⁷ CAIP Application, 3 April 2008, para. 11.

⁴⁸ See for example Canadian Internet Policy and Public Interest Clinic, CAIP proceeding, Comments, 3July08 Comments; Acanac Inc., Google Inc., Public Interest Advocacy Centre (PIAC) for Consumers Groups.

⁴⁹ Decision 2008-108, para. 35.

Commission considered relevant was the effect of P2P throttling on end-customers of Bell's retail services as compared to its effect on the end-customers of independent ISPs that subscribe to Bell's GAS service.

76. As will be discussed in further detail below, whether Bell's end-customers are being treated the same as those of independent ISPs should not be determinative of the question of whether GAS customers are being unjustly or unduly discriminated against or disadvantaged. However, independent of the Commission's consideration of this question, the Commission erred in law in refusing to address CAIP's subsection 27(2) arguments in relation to P2P users and P2P content or application providers. If it was the Commission's intention to narrow the scope of the issues raised by CAIP in its original application and by the parties, then this ought to have been done on proper notice with reasons to the parties and to CAIP in particular.
77. The assurance that the decision was limited in scope so as to address "only this one specific case, involving one particular wholesale service and one particular technology"⁵⁰ does not remedy the injustice to the parties of having the issues redefined in the final decision itself.
78. Had the Commission not narrowed the scope of the proceeding so as to exclude any consideration of the effect of Bell's throttling on P2P content providers and users, the Commission would have concluded that Bell's throttling of GAS disadvantages both of these groups on the basis of the nature of the Internet content being requested or transmitted.
79. It is clear on the basis of Commission precedent⁵¹ and the consensus view of the other parties to the PN 2008-19 proceeding that content, application or protocol-based

⁵⁰ Konrad von Finckenstein, Speech given to the Eighth Annual Conference of the International Institute of Communications, Canadian Chapter, Ottawa, Ontario on 1 December 2008.

⁵¹ Telecom Letter Decision CRTC 92-5, *976 Services – Billing and Collection*, 26 June 1992; Telecom Decision CRTC 2005-28, *Regulatory framework for voice communication services using Internet Protocol*, 12 May 2005, paras. 448-483, viz. para. 478.

measures inherently discriminate against or disadvantage P2P content or application providers and users of such content or applications.

80. Bell's shaping of P2P file-sharing discriminates against P2P file-sharing application providers and content providers that deliver content via P2P file-sharing protocols. Over and above the evidence in the CAIP proceeding to this effect, the Applicants note that the record of the PN 2008-19 proceeding strongly supports CAIP's view in this regard:

- (a) Bell concedes that shaping of P2P file-sharing discriminates against P2P file-sharing application providers and content providers that deliver content via P2P file-sharing protocols;⁵²
- (b) the Canadian Conference of the Arts stated that the CRTC must assure itself and Canadians that large ISPs with minority and majority interests in broadcasting services do not grant themselves unduly preferential treatment by throttling certain applications or protocols that are used by smaller, independent content producers and distributors;
- (c) the Canadian Film & TV Production Association stated that "the greatest concern to the CFTPA is the potential for ISPs to use discriminatory traffic throttling as a tool for conferring on either themselves, or on service or content providers with whom they are directly affiliated or have a commercial relationship, an undue or unreasonable preference, to the detriment of non-affiliated content providers, and as prohibited under section 27(2) of the Telecommunications Act;"⁵³
- (d) The Canadian Broadcasting Corporation identified and discussed three distinct types of discrimination/preferences of concern that arise from CAP-based

⁵² Bell, Initial Comments, para. ES11, page 5.

⁵³ CFTPA, PN 2008-19, Initial Comments, paras. 39-41.

measures: (i) in favour of the ISP's own content, (ii) in favour of the content of unaffiliated entities and (iii) in favour of non-Internet services;⁵⁴

- (e) The Documentary Organization of Canada and the Independent Film & TV Alliance specifically pointed out the disadvantage to which their members are exposed by CAP-based throttling, given that they do not have access to the distribution channels to which mainstream Canadian media (including media interests controlled by the dominant ISPs) have access;⁵⁵ and
 - (f) The Campaign for Democratic Media, PIAC/CAC and l'Union des consommateurs echoed the comments of the Canadian independent production and distribution industry.
81. It is relevant to note that the Federal Communications Commission (FCC) in the Comcast Decision⁵⁶ expressly found that Comcast discriminated against P2P application and content providers and moreover, had a clear incentive to do so. The FCC stated that “[p]eer-to-peer applications, including those relying on BitTorrent, have become a competitive threat to cable operators such as Comcast because Internet users have the opportunity to view high-quality video with BitTorrent that they might otherwise watch (and pay for) on ... television.”⁵⁷
82. Bell's throttling also discriminates against the many end-users that have come to rely on P2P applications for work and for entertainment. That P2P throttling discriminates against end-users of P2P applications is plain and obvious. It creates an arbitrary distinction between those users using P2P and those that do not, including users using

⁵⁴ CBC/Radio-Canada, PN 2008-19, Initial Comments, paras. 12-19.

⁵⁵ Documentary Organization of Canada, PN 2008-19, Initial Comments, pages 4-5 and Independent Film and Television Production Association, PN 2008-19, Initial Comments, para. 8.

⁵⁶ Federal Communications Commission, Memorandum Opinion and Order, In the Matters of Formal Complaint of Free Press and Public Knowledge Against Comcast Corporation for Secretly Degrading Peer-to-Peer Applications, Broadband Industry Practices Petition of Free Press et al. for Declaratory Ruling that Degrading an Internet Application violates the FCC's Internet Policy Statement and Does Not Meet and Exception for "Reasonable Network Management" (2008, August 20) WC Docket No. 07-52 (Appeal to U.S. Court of Appeals for the District of Columbia filed 4 September 2008).

⁵⁷ Comcast Decision, para. 5.

other applications, which may use as much or more bandwidth than P2P. All of this was put before the Commission by CAIP in its Application.⁵⁸

83. Had the Commission properly considered the three distinct grounds raised by CAIP in relation to subsection 27(2), the Commission might have concluded that Bell's throttling of GAS did indeed, at a minimum, disadvantage P2P content providers and P2P users. To have ignored these grounds is an error

B. Bell's Actions Constitute an Undue and Unreasonable Preference Granted to Itself and a Disadvantage Applied to Independent ISPs

84. As submitted above, the Commission failed to consider the submissions of CAIP and other parties in relation to the disadvantageous and discriminatory treatment of content and application providers and end-users.

85. Although the Commission did consider and determine CAIP's argument that Bell's throttling of GAS also discriminated against GAS customers, it erred in concluding that Bell's throttling of GAS does not represent a disadvantage to independent ISPs and a preference granted to itself in relation to independent ISPs.

86. Subsection 27(2) provides as follows:

No Canadian carrier shall, in relation to the provision of a telecommunications service or the charging of a rate for it, unjustly discriminate or give an undue or unreasonable preference toward any person, including itself, or subject any person to an undue or unreasonable disadvantage.

87. In a subsection 27(2) analysis, the Commission must determine whether there is any difference in treatment of the services provided to one group of customers as opposed to another customer or group of customers, including the carrier itself.

88. Bell's GAS service is defined in GT Item 5410 as a PPPoE Layer 2 service that provides an opaque pipe that connects the end-user's premise to the AHSSPI. Simply put, the ILEC in

⁵⁸ CAIP Final Reply, CAIP proceeding, 23 July 2008, para. 160.

this equation is simply required to ensure delivery to the competitor of an end-customer's ADSL traffic between these two points within the ILEC's network. The service is comprised of end-customer access, aggregation and network interconnection. GAS is nothing more than the provision of a virtual path or a "dumb pipe" between the end-customer's premises and the AHSSPI. Importantly, GAS is not a "white-label" Internet access service that is simply resold by independent ISPs. In fact, it is not capable of providing access to the Internet when purchased in its raw form from Bell. Consequently, the end-customer's traffic could be Internet-destined bound traffic or it could not.

89. It would appear from paragraphs 44 and 45 of Decision 2008-108 that the only customers and services that the Commission considered as the relevant comparison group to GAS were Bell's retail Internet access services. In addition, the Commission stated that "[t]here is no basis to conclude, based on the record of this proceeding, that the implementation by Bell Canada of traffic-shaping measures on GAS was intended... to secure sufficient bandwidth for its own services or to prevent ISPs from effectively competing against Bell Canada's introduction of usage-based charges for its retail service."
90. As noted above, GAS services are not retail Internet access services intended for rebilling by competitors. Therefore, the Commission must cast its net more widely in considering whether Bell was preferring other customers or itself in throttling GAS.
91. The Commission accepted Bell's submission that GAS traffic on Bell's network is routed over a shared⁵⁹ network. However, this network is shared not just by GAS and Bell Internet access traffic. It is shared by GAS, HSA, retail Internet, and other retail and wholesale services that have nothing to do with accessing the Internet. In an IP network, congestion is a function of all traffic on the network. Thus, it is relevant to

⁵⁹ The Applicants note that it is technically feasible for Bell not to throttle GAS even though it is throttling its own services, given that this is exactly what happened for approximately six months during which time Bell did not throttle wholesale GAS traffic.

consider whether Bell throttles other high-bandwidth services that it offers in the retail market as well as to competitors. For example, as noted by CAIP, Bell is currently rolling out IPTV services, which are very bandwidth-intensive. It is also offering higher speed 7, 10 and 16 Mbps Internet access services, but Bell has made it clear that it will not offer a GAS service at these speeds. There is evidence, therefore, that Bell is throttling GAS while at the same time not throttling bandwidth for current⁶⁰ and future services.

92. In CAIP's submission, the Commission ought to have considered all of the myriad access and transport services that are also carried over the portions of the Bell network that Bell claims are "shared". Furthermore, there is no requirement under subsection 27(2) that the complainant establish bad faith or negative intention on the part of the carrier. While intention may be a factor to consider under subsection 27(4), the test under subsection 27(2) is an objective one that does not depend on proof of malevolent intention.
93. In limiting the relevant comparison group to a subset of Bell's own retail Internet access customers and in imposing on CAIP a requirement that it prove that Bell's throttling of wholesale GAS was done with malevolent intention, the Commission erred in fact and applied the wrong legal test in its application of subsection 27(2).
94. Competitors are being subjected to an inherent disadvantage when Bell decides to constrain the bandwidth available to GAS services without similarly constraining all capacity on the portions of the ILEC network over which GAS services are being provided to an equal degree. To the extent that Bell is reducing the capacity allocated to competitors' GAS services, the question then becomes whether all other broadband services that Bell provides to itself over the same portions of the network that it uses to provide GAS services are being similarly squeezed. If it is not, then the conclusion must be that the measure in question results in a disadvantage to the competitor and a preference that Bell is granting to itself.

⁶⁰ Nor is it clear that Bell is throttling all its existing retail Internet access services, such as its business retail Internet service and its 7, 10 and 16 Mbps services.

C. Throttling P2P is Not a Justified Form of Discrimination, Disadvantage or Preference

95. Subsection 27(4) of the Act requires Bell to establish that the obvious discriminatory, disadvantageous and preferential effects of its throttling of wholesale GAS is justified, taking into consideration the public interest.
96. Unfortunately, in Decision 2008-108, having concluded that Bell's throttling did not discriminate, disadvantage or prefer any person, including Bell itself, the Commission did not delineate the factors that it considered relevant to the subsection 27(4) aspect of the prohibition in subsection 27(2).
97. However, sifting through the Decision, it is apparent that the Commission felt that Bell's throttling of P2P was "justified" in a broad sense⁶¹ because of its conclusions that P2P applications "can make disproportionate use of the network" and because it accepted without question that "the traffic-shaping approach which [Bell] has implemented is the only practical option that is technologically and economically suitable, at this time, for addressing congestion in its DSL network".⁶²
98. The Applicants note that several parties to the PN 2008-19 proceeding, including CAIP⁶³ and CDM⁶⁴ stated that the test under subsection 27(4) in relation to traffic management measures should be analogised to the so-called *Oakes* test derived from the Supreme Court of Canada's test for determining whether breaches of the Canadian Charter of Rights and Freedoms can be justified in a free and democratic society. The Applicants submit that, at the subsection 27(4) stage of the analysis, it would be appropriate to adopt a flexible framework that could be modelled on the *Oakes* test. As discussed below, loosely applying the elements of the *Oakes* analysis to Bell's justifications for its throttling of GAS, Bell would fail all three prongs of the *Oakes* test including the first element of an important objective.

⁶¹ Decision 2008-108, para. 43.

⁶² Decision 2008-108, para. 43.

⁶³ CAIP, PN 2008-19, Initial Comments, para. 101.

⁶⁴ CDM, PN 2008-19, Initial Comments, paras. 167-193.

(i) Taming P2P Traffic Flows Via the Throttling of GAS Is Not a Sufficiently Important Objective in an Wireline ILEC Network

99. Bell claims that there is a need to relieve alleged congestion in its network which is purportedly caused by heavy P2P users. While relief of congestion generally might be a sufficiently important objective, there is reason to doubt the veracity of Bell's representations in this regard. For example, the evidence on the record of the PN 2008-19 proceeding demonstrates that all ISPs are experiencing similar historical traffic growth patterns. While there may be differences between the architecture of cable networks and wireline ILEC networks, certainly, the ILECs' high-speed Internet access networks are largely identical. And yet, Bell is unique among the large wireline ILEC ISPs and cable carriers in undertaking systematic throttling of downstream and upstream P2P traffic flows.
100. In addition, and for the reasons set out above, the Applicants dispute that P2P represents the threat to wireline ILEC networks that Bell claims is the case. The finding that P2P applications "can make disproportionate use of the network" is a generalisation that is not applicable to wireline ILEC networks. At a minimum, the Commission should have further inquired into Bell's claims of the need to discriminate against P2P.

(ii) Bell's Throttling of GAS is Not Rationally Connected to the Perceived Threat of P2P Traffic Flows Generated on Behalf of Bell's GAS Customers

101. Even if one were to accept that P2P traffic flows generated by end-users who are making disproportionate use of the network represent a threat to the integrity of Bell's network (which is denied by the Applicants), the throttling of wholesale GAS services is not rationally connected to alleviating this threat.
102. If on the one hand, Bell's objective is to relieve congestion generally, then merely throttling P2P traffic is not rationally connected to this objective because it is underinclusive. Professor Jon H. Peha in his evidence submitted in the proceeding that led to the Comcast Decision, stated that targeting only P2P is akin to arguing that the

solution to highway congestion is simply to remove all blue cars from the road.⁶⁵ By way of analogy, if the objective is to relieve congestion and all applications contribute to network congestion, then the targeting of P2P file-sharing applications alone would not achieve the objective.

103. If on the other hand, Bell's objective is to control the behaviour of heavy users of P2P applications, then in order to be rationally connected, the measure should be targeted to only those customers who are making disproportionate use of the network (as measured by bandwidth consumption) or at those locations and at the times where such congestion exists.
104. In either case, Bell's throttling of wholesale GAS does not meet the requirement that the measure that it has chosen be rationally connected to an important objective, whatever that may be. It is relevant to note in this regard that there was no evidence whatsoever that throttling of GAS actually did relieve congestion on Bell's network.
105. Furthermore, the Applicants note that the "contribution" or proportionate share of network traffic that competitors represent is fully recovered, in addition to a hefty mark-up, through the GAS tariff. Access costs are largely fixed and are in any event not shared, so they do not figure into the congestion equation. If there is not adequate capacity in the shared portions of the network to carry this traffic from point to point, then this will most likely be due to incorrect statistical assumptions made by Bell in its network planning and provisioning processes. The corollary to this is that if current prices for competitors' use of the shared portion of the dominant ISP's networks do not fully recover all costs associated with the provision of such services, then the solution that is rationally connected to addressing the reason for the capacity shortfall would be a tariff amendment application fully supported by an updated cost study explaining the increased costs faced by the ILEC in the provision of wholesale services. As far as

⁶⁵ Comcast Decision, p. 30, footnote 226.

wholesale GAS is concerned, the threat of congestion cannot justify the taking of unilateral application-based throttling by Bell in relation to GAS.

(iii) Bell's Throttling of GAS and Retail Internet Access Services is Not Proportional to the Objectives Sought

106. Bell's throttling of P2P is over-inclusive for at least three independent reasons. First, it can affect customers who are using little bandwidth simply because they are using an application that Bell does not favour. Second, Bell's practices are engaged automatically for a set ten and a half hour period every day, regardless of the level of network congestion at any given point in time. Third, the equipment is turned on regardless of whether nodes in a given neighbourhood are congested. Thus, the effect of Bell's measures is that customers who are not in fact heavy users are affected when there is in fact no congestion and therefore no need to alter traffic patterns resulting from their particular usage.
107. The Applicants also submit that Bell's practice was not minimally intrusive in that content was unavailable for periods of much longer than was necessary to actually relieve congestion. In fact, many individual users expressed that the throttling practices affect their user experiences so profoundly that they have been forced to change their usage habits, even giving up using services. Such views were expressed by Canadians in the CAIP Proceeding who have now stopped using or reduced their usage of the internet for gaming⁶⁶, VoIP⁶⁷, and utilizing technologies that in theory, would have allowed them

⁶⁶ Yves Chauvin, CAIP proceeding, Comment, 11 June 2008 ("Bell's actions interrupted my game play by slowing down my patching (cannot play the game unless the patches are up to date). I paid for this service and cannot use it when I want to as a result of Bell's actions. I found myself waiting too long and could not stand it anymore."); T. Tadashore, CAIP proceeding, Comment, 6 July 2008 ("Bell/Sympatico's throttling practices are adversely affecting the enjoyment of my playing Xbox360 and wirelessly streaming from my Apple Airport/iTunes to my stereo, both which rely on an internet connection.").

⁶⁷ Filippo Grego, CAIP proceeding, Comment, 22 April 2008 ("But since, Bell started throttling, (the throttling usually starts at 18:00 up to 01:00, I can't get a decent call. The communication always cuts, but only during the throttling period. Even though Bell pretends they throttle only P2P, it is affecting my Voip communications."); Shawn ORielly, CAIP proceeding, Comment, 1 May 2008 ("Since Bell Canada has begun throttling of my TekSavvy internet service, my VoIP phone line has become unreliable due to packet loss, this has been evaluated and cannot be attributed to any equipment malfunction or misconfiguration (proper "line sync" is being stably maintained)."); Cameron Stiles, CAIP proceeding, Comment, 11 April 2008 ("Lastly I am a

to work from home.⁶⁸ Canadians have also expressed such views in PN 2008-19 and have complained that it has affected their ability to download their purchased music or video⁶⁹ or make calls over VoIP.⁷⁰ Delays of this kind will discourage end-customers from accessing content from content providers who use P2P-based applications.

108. As discussed in the preceding section, even if the Commission's conclusion that network management is necessary can be accepted,⁷¹ there were and are other options available to Bell that would be less intrusive, less arbitrary, and non-discriminatory. Perhaps the most salient option comes from Bell's own submissions in the TNC 2009-261 proceeding, in which Bell makes it clear that congestion is only occurring in a limited number of instances in Bell's network and, even in these limited instances, Bell is deploying a Layer 2 Ethernet switch solution to address the congestion issue.

VoIP user and have a dry DSL loop installed. This is essentially a peer to peer service and depending on what else I am using my connection for, can become throttled by Bell. Calls become choppy and unusable.”).

⁶⁸ Ronan Brunner, CAIP proceeding, Comment, 2 May, 2008 (“Since they have implemented these changes, my quality of life has been impacted. I now have to go into work more often, and work longer hours away from my family.”); Guillaume Caumartin-Plante, CAIP proceeding, Comment, 25 June 2008 (“My VPN connection to my university is being slowed down by Bell (even if I am using Radioactif.com, an independent ISP) and it prevents me from being [sic] able to work at home on the huge data files I have on those remote harddrives.”); Dan Saddy, CAIP proceeding, Comment, 24 April, 2008 (“My employer gives me the opportunity to telecommute and I take full advantage of it however this type of ‘management’ removes my ability to take advantage. This is directly affecting my ability to work in a timely manner, increasing my daily commute by hours and devouring time that should be spent with my family.”).

⁶⁹ Tomas Vally, PN 2008-19, Comment, 23 February 2009 (“Yet when I download a podcast or audiobook or song from iTunes, within seconds, Rogers throttles my connection to less than 500 Kb/s. This often makes the download time-out. Many people have lost their purchases this way.”).

⁷⁰ Richard Boon, PN 2008-19, Comment, 3 December 2008 (“I wish to add that Bell's network management solutions for their internet and wholesale practices affects me the end user who subscribes [sic] to a VOIP provider who in contrast is a competitor against Bell's own home phone service, in their actions in managing [sic] the network it disrupts my service daily. Should there be an emergency call, my calls would get dropped as it is totally dependant on the internet traffic.”).

⁷¹ Decision 2008-108, para. 43

VI. ERRORS IN THE INTERPRETATION AND APPLICATION OF SECTION 36

109. In Decision 2008-108, the Commission determined that “the traffic shaping carried out by Bell Canada does not, in the circumstances of this case, engage section 36 of the Act.”⁷² In particular, the Commission made the following determinations:

“...the traffic shaping carried out by Bell Canada does not involve any editorial control over the content of the telecommunications and does not involve blocking any telecommunications.”⁷³

“...Bell Canada is only applying traffic shaping to file-sharing applications, which, even without traffic shaping, require time for the complete file to be transmitted before an end-user can access it.”⁷⁴

“...while the traffic shaping carried out by Bell Canada of telecommunications sent by P2P file-sharing applications involves controlling the speed of telecommunications, it does not involve controlling the content.”⁷⁵

“...in the circumstances of this case, the Commission considers that the traffic shaping carried out by Bell Canada does not influence the meaning or purpose of telecommunications. The Commission considers that, in the context of a P2P file-sharing application, the fact that the transmission of a file is delayed does not alter its meaning or its purpose.”⁷⁶

110. In the view of the Applicants, there is substantial doubt as to the correctness of the Commission’s interpretation of section 36 of the Act as well as its findings and conclusions in relation to the application of section 36 to Bell’s traffic shaping practices. Specifically, the Applicants submit that:

- (a) The Commission erred in concluding that Bell’s traffic shaping measures “does not involve blocking any telecommunications”;
- (b) The Commission erred in concluding that file-sharing applications only involve transmissions of downloadable “files” which require “time for the file to be transmitted before an end-user can access it.”

⁷² Decision 2008-108, para. 59.

⁷³ Decision 2008-108, para. 55.

⁷⁴ Decision 2008-108, para. 56.

⁷⁵ Decision 2008-108, para. 57.

⁷⁶ Decision 2008-108, para. 58.

- (c) The Commission erred in concluding that Bell is not controlling the content of the telecommunications that it carries for the public;
- (d) The Commission erred in concluding that Bell is not influencing the meaning of the telecommunications that it carries for the public; and
- (e) The Commission erred in concluding that Bell is not influencing the purpose of the telecommunications that it carries for the public.

A. The Commission Erred in Concluding that Bell was not Blocking GAS Customer Traffic

111. It remains uncontested throughout these proceedings that Bell is effectively doing two things with regard to its traffic shaping practices. Firstly, Bell is using DPI technology to examine the contents of packets in order to single out Internet traffic involving P2P applications. Secondly, based on this information, Bell takes some sort of action to then slow down P2P traffic that is carried on its network.
112. Bell has described its DPI technology as identifying and targeting P2P applications.⁷⁷ However, Bell did not file any information on the record of the CAIP proceeding that explains exactly how it is throttling GAS customer traffic. At the same time, the CRTC did not mandate that Bell provide such an explanation in the course of those proceedings before ruling on the issues raised in CAIP's application.
113. As noted earlier, the FCC in the United States recently heard a complaint very similar to the facts at issue here. However, one of the main differences between the CAIP proceeding and the FCC proceeding was that the FCC made reference to a wide body of evidence relating not only to how the identification of P2P traffic is accomplished, but also to the single method used to shape this traffic. The company against which the FCC complaint was launched, Comcast Corporation, disclosed the functioning of both its DPI and RST injection technologies.⁷⁸

⁷⁷ Bell, CAIP proceeding, Answer to Request for Interim Relief, 15 April 2008.

⁷⁸ Comcast Decision, para. 41.

114. No similar evidence was forthcoming or compelled by the Commission in the proceeding leading to Decision 2008-108. In fact, even in the PN 2008-19 proceeding, several parties have pointed out that the Commission has yet again failed to compel Bell and other parties engaging in application-based throttling to explain exactly how they are slowing down P2P traffic streams.
115. As indicated above, the record of the CAIP proceeding was not clear on how Bell slows down traffic on its networks. As an example, Bell refers in its submissions only to a “selective traffic shaping function” being applied once the identification of a targeted application is made.⁷⁹ Bell was asked to identify other aspects of its traffic management system, but its responses were very cursory and suggested only “better balancing” of traffic.⁸⁰
116. It could very well be possible that Bell engages in precisely the same form of RST injection employed by Comcast which was found by the FCC to effectively block Internet content.⁸¹ This is especially likely given Comcast’s assertion that reset packets are the only information computers are able to understand that would have an effect in slowing Internet transmissions.⁸² Given the numerous unknowns surrounding how Bell achieves the slowing of P2P traffic on its networks, the Commission ought to have clarified this issue by establishing a complete evidentiary record of all mechanisms at work in Bell’s DPI technology before rendering a decision on the legality of Bell’s traffic shaping practices under section 36 of the Act.
117. However, this did not happen. Instead, the Commission simply asserts in Decision 2008-108 that Bell is “not blocking” GAS customer traffic.⁸³

⁷⁹ Bell, CAIP proceeding, Appendix to Answer to Request for Interim Relief, 15 April 2008, p. 4; Bell(CRTC)15May08-06, p. 3.

⁸⁰ Bell(CRTC)15 May08-05.

⁸¹ Comcast Decision , paras. 44-45.

⁸² Comcast Technical *Ex Parte* Submission, 10 July 2008 at pp. 4-5; Comcast Submission 12 February 2008 at pp. 27-28.

⁸³ Decision 2008-108, para. 55.

118. Since there was no evidence on the record of the CAIP proceeding to support this finding, it is not clear how the Commission was able to come to this conclusion. The Applicants note, however, that shortly after Decision 2008-108 was released, the Commission's Vice-Chairman of Telecommunications granted an interview with the CBC. In the course of the interview, the Vice Chairman stated unequivocally that Bell was not engaging in the same shaping activity as Comcast.⁸⁴
119. Once again, it is not clear how it was possible to draw this conclusion based on the evidentiary record of the CAIP proceeding. It is possible that the Commission simply jumped to a foregone conclusion in finding that Bell does not control the content of data. Alternatively, it is an open question whether the CRTC was holding information received from Bell or other parties which it did not examine or highlight on the application record. In either case, there was clearly a deficiency in the process by which the Commission reached its Decision.
120. Even to this day, it is not known whether Bell's throttling of P2P traffic is achieved through the use of RST injection (as in the case of Comcast), the diversion of traffic, the targeted deletion of packets contained in P2P traffic streams, the addition of packets, or some other means. Since TCP protocols (of which P2P is but one example) are designed to restart a transmission if the original transmission is stopped, it is important to know exactly how Bell is interfering, affecting or touching P2P traffic streams in order to "slow them down." Without this information it is impossible to state that there is no blocking of telecommunications.
121. In the view of the Applicants, the technical process by which Bell actually throttles P2P traffic is more than just a mere detail. Indeed, a fully informed understanding of this process is fundamental to a complete and fair analysis of Bell's actions. In the absence of such an understanding, it was unreasonable for the Commission to have concluded that Bell's actions did not constitute "blocking".

⁸⁴ *We're not endorsing internet throttling: CRTC*, Peter Nowak, CBC News, 21 November 2008, available online at: <http://www.cbc.ca/technology/story/2008/11/20/tech-crtcqna.html>

122. Furthermore, it is not sufficient for the Commission to simply consider whether Bell's throttling blocks the "editorial" content of a given telecommunications in order to determine whether a violation of section 36 has occurred.

123. Section 36 of the Act provides as follows

Except where the Commission approves otherwise, a Canadian carrier shall not control the content or influence the meaning or purpose of **telecommunications** carried by it for the public [emphasis added].

124. As discussed more fully below, section 36 of the Act is not based on concepts of "editorial control". Section 36 is based on the duties and obligations of carriers at common law which apply to the entirety of the "telecommunications" that they carry for the public. As such, the legal analysis under the section requires the Commission to consider the all of the "telecommunications" that are carried by Bell for the public and not just some smaller subset of the content within the telecommunications.

125. The Applicants note in this regard that even though it is not known precisely what Bell's DPI technology does in order to throttle GAS customer traffic, there is a very high likelihood that it is employing one of the techniques discussed above, and if this is the case, then Bell is actually altering some portion of the "telecommunications" content that it carries for the public, such as packet headers or packet payloads. And since this content forms a part of the "telecommunications" that Bell carries for the public, any alteration of this content constitutes a violation of section 36 of the Act absent the Commission's prior approval.

B. The Commission Erred in Concluding that File-Sharing Applications Require “Time for the File to Be Transmitted Before an End-User Can Access It”

126. At paragraph 56 of Decision 2008-108, the Commission stated “that Bell Canada is only applying traffic shaping to file-sharing applications, which, even without traffic shaping, require time for the complete file to be transmitted before an end-user can access it.”⁸⁵ The Commission further stated that “in the context of a P2P file-sharing application, the fact that the transmission of a file is delayed does not alter its meaning or its purpose.”⁸⁶
127. These findings suggest that the only type of file-sharing applications that were considered by the Commission when carrying out its section 36 analysis were applications involving files that must be fully and completely downloaded to a user’s computer before they can be opened. This is evident from the Commission’s statement that Bell only applies traffic shaping to file-sharing applications which “require time for the complete file to be transmitted” before they can be accessed by an end-user. It is also evident from the Commission’s statement that delays in the transmission of a “file” do not alter its meaning or purpose.
128. The Applicants note that P2P software supports many types of services and applications, not all of which involve simple downloads of discrete data files, such as a music video. This is clear from the evidence that was filed in the CAIP proceeding⁸⁷ which demonstrates that P2P file-sharing software is used to support a wide variety of live or real-time content streaming services, including live streaming television services (sometimes called “P2PTV”)⁸⁸ which make use of the very same P2P protocol (*i.e.*, BitTorrent) that Bell targets as part of its network-wide throttling program.⁸⁹

⁸⁵ Decision 2008-108, para. 56 (emphasis added).

⁸⁶ Decision 2008-108, para. 56 (emphasis added).

⁸⁷ See, for example, CIPPIC/Campaign for Democratic Media, CAIP proceeding, Appendix 1 of Comments, 3 July 2008.

The following is a sample list of P2PTV services: Alluvium Babelgum, CDNetworks, CoolStreaming, Cybersky-TV, Feidian, LiveStation, Miro, Octoshape, Pando, PeerCast, PPLive, PPStream, Rawflow, ReelTime.com, TVants, TVUnetworks, Zattoo.

⁸⁹ In a letter to the Commission dated 9 January 2009, Bell Canada stated that it throttles the following P2P applications: BitTorrent, Gnutella, Limewire, Kazaa, eMule, eDonkey, and WinMX. Since many P2PTV services

129. It is not clear why there is no reference to this evidence in Decision 2008-108. One way or the other, the Applicants submit that it is not possible to conduct a proper analysis of Bell Canada's throttling practices under section 36 of the Act without first understanding what type of content is actually being throttled.
130. As noted above, the Commission appears to be of the view that the only type of P2P content that is being throttled by Bell is content consisting of downloadable "files" which are only "accessed" by users once the "complete file" has been fully transmitted. This fundamentally misunderstands the evidence that was filed in the CAIP proceeding. It is clear from this evidence that P2P protocols and software are used to support an entire range of real-time services and applications which were - and still are - heavily impacted by Bell's throttling practices.

C. The Commission Erred in Its Interpretation of 36 of the Act

131. It is a basic principle of statutory interpretation that each word in a sentence must be given meaning when interpreting the statutory provisions in question.⁹⁰
132. As noted above, section 36 provides that "[E]xcept where the Commission approves otherwise, a Canadian carrier shall not control the content or influence the meaning or purpose of telecommunications carried by it for the public."
133. In order to give effect to the principle that each word in a sentence must be given meaning when interpreting a statutory provision, section 36 must be analyzed carefully in order to determine what types of activities or conduct are specifically proscribed by this provision. A review of section 36 indicates that Parliament intended that a violation of this provision could be made out in at least one of three different ways. These are:

(as well as other live or streaming P2P services) are based on the BitTorrent protocol, all such services are affected by Bell's throttling program.

⁹⁰ *Winters v. Legal Services Society*, [1999] S.C.J. No. 49, para. 48; *Communities Economic Development Fund v. Canadian Pickles Corp.*, [1991] S.C.J. No. 89 at p. 209. See also *Rizzo and Rizzo Shoes Ltd. (Re)*, [1998] 1 S.C.R. 27, which is the leading case on statutory interpretation with the phrase: "Today there is only one principle or approach, namely, the words of an Act are to be read in their entire context and in their grammatical and ordinary sense harmoniously with the scheme of the Act, the object of the Act, and the intention of Parliament."

- (a) controlling the content of telecommunications;
- (b) influencing the meaning of telecommunications; and/or
- (c) influencing the purpose of telecommunications.

134. The fact that Parliament intended that there be more than one possible way in which section 36 could be violated is evident from the use of the disjunctive “or” throughout this provision. Thus, an infringement with respect to any one of the three proscribed modes of conduct will result in a violation of the provision.

135. As discussed in greater detail below, the Commission erred in its interpretation of each of these three elements of section 36.

(i) The Commission Erred in Concluding that Bell Was Not Controlling the Content of Telecommunications

136. A review of the section 36 analysis contained in Decision 2008-108 indicates that the Commission focused primarily on Bell’s control over telecommunications content. In particular, the Commission appears to have concluded that unless Bell is actually blocking traffic or somehow exercising “editorial control” over that traffic, it is not “controlling the content” of the telecommunications that it carries for the public.

137. The Applicants note that the term “control” is a very broadly defined term, meaning “[t]o regulate; restrain; dominate; curb; to hold from action; overpower; counteract; govern”.⁹¹

138. This definition is far more robust than the definition or test that the Commission appears to have applied in Decision 2008-108, namely that of “editorial control”. This latter test is based on concepts that derive from the Broadcasting Act, and not on the common law duties and obligations of common carriers which are codified in and, indeed, serve as the foundational principles for the interpretation of section 36 Act.

⁹¹ *Black’s Law Dictionary*, 6th ed., St. Paul: West Publishing Co., 1990, p. 329.

139. It is not clear why the Commission applied a broadcasting test to its analysis of a telecommunications service (i.e., GAS) under section 36 of the Act. Section 36 does not distinguish between editorial content on the one hand and all of the other content that is inherent in the telecommunications transmissions of users on the other.
140. Whatever the reasons may be, the Applicants submit that it is a misunderstanding and, indeed, a misapplication of section 36 of the Act to apply an “editorial control” test when interpreting this particular provision of the Act. Although the Commission is certainly free to consider whether Bell’s throttling results in “editorial control”, it should have also considered whether Bell’s throttling “regulates”, “restrains”, or “curbs” the content of the telecommunications that it carries for the public. Had it done so, the Commission would have come to the inescapable conclusion that Bell’s throttling does regulate, restrain and curb a specific type of telecommunications content on its network, namely P2P content.
141. The fact that the Commission did not give full meaning to the word “control” test set out in section 36 of the Act is also evident from paragraph 57 of Decision 2008-108, wherein the Commission states that “while the traffic shaping carried out by Bell Canada of telecommunications sent by P2P file-sharing applications involves controlling the speed of telecommunications, it does not involve controlling the content.”
142. Once again, this confuses the test under section 36 of the Act regarding the control of content. First of all, the record of the CAIP proceeding does not disclose what Bell is doing with its DPI equipment, so it was not possible for the Commission to conclude, as definitively as it did, that Bell’s DPI equipment “controls the speed of telecommunications”.
143. However, even if it were shown that this is precisely what Bell’s DPI equipment does, this is still a form of “control” over content. The Applicants note in this regard that section 36 of the Act does not distinguish between “editorial control” and other types of control over the content of telecommunications. Yet, the Commission appears to be

under the mistaken impression that editorial control (or outright blocking) is the only type of control that meets the “control” criterion in Section 36 of the Act.

144. This is simply incorrect. As noted above, the definition of control easily captures conduct or actions that determine when and how traffic will be delivered or conveyed. As noted by the Consumer Groups in their Reply submission in the PN 2008-19 proceeding: “‘control’ in this section [of the Act] requires only knowledge of the content and that some action be taken based on that knowledge.”⁹²
145. Bell has knowledge of and is intentionally interfering with, and likely altering, a specific type of telecommunications traffic (i.e., P2P traffic) that it carries on its network through RST injection, packet forging or some other traffic shaping technique. This level of interference with the content of telecommunications constitutes a conscious and deliberate decision on the part of Bell to control the content of a specific type of telecommunications that it carries for the public.

(ii) The Commission Erred in Concluding that Bell Was Not Influencing the Meaning or the Purpose of Telecommunications

146. In Decision 2008-108, the Commission concluded that “in the circumstances of this case, the Commission considers that the traffic shaping carried out by Bell Canada does not influence the meaning or purpose of telecommunications.”⁹³ In support of this conclusion, the Commission stated that “the fact that the transmission of a file is delayed does not alter its meaning or its purpose.”⁹⁴
147. As noted above, section 36 contains three different proscribed grounds of conduct: (i) controlling the content of telecommunications, (ii) influencing the meaning of telecommunications, and (iii) influencing the purpose of telecommunications.

⁹² Reply Comments of the Consumer Groups, PN 2008-19, para. 53.

⁹³ Decision 2008-108, para. 58.

⁹⁴ Decision 2008-108, para. 58.

148. The Applicants note that the Commission does not deal separately in its decision with these latter two grounds of conduct. Instead, the Commission treats these two matters as interchangeable. Thus, if a certain form of conduct does not influence the meaning of telecommunications, then under the Commission's analysis, it can be safely assumed that the conduct in question does not influence the purpose of the telecommunications.
149. Of course, this is not how section 36 is actually written, nor how it should be interpreted based on the basic principles of statutory interpretation. As noted above, these principles require that each word within a statute be given meaning. Therefore, the Commission should have separately considered whether Bell's traffic shaping practices influence the "meaning" of telecommunications carried by it for the public and whether they influence the "purpose" of telecommunications carried by it for the public.
150. However, this is not what the Commission did in Decision 2008-108. The Commission appears to have assumed that if Bell's traffic shaping practices do not influence the meaning of the telecommunications carried by it for the public, then they also do not influence the purpose of these telecommunications. This alone constitutes an error of law.⁹⁵
151. But this was not the only error committed by the Commission in applying and interpreting these particular portions of section 36. The Commission also failed to consider the actual meaning of these portions of section 36.
152. The Applicants note in this regard that the sole sum of the Commission's analysis in relation to both the "meaning" and "purpose" tests contained in section 36 is a single line in which the Commission states that "the fact that the transmission of a file is delayed does not alter its meaning or its purpose."

⁹⁵ If meaning and purpose are to be interpreted as one, this would be "interpreting one as mere surplusage". As noted by Ruth Sullivan in *Statutory Interpretation*, 2nd ed (Toronto: Irwin Law 2007): "It is presumed that every feature of a legislative text has been deliberately chosen and has a particular role to play in the legislative design. The legislature does not include unnecessary or meaningless language in its statutes; it does not use words solely for rhetorical or aesthetic effect; it does not make the same point twice. This is what is meant when it is said that the legislature "does not speak in vain." (p. 167)

153. The Applicants submit that this analysis is wholly deficient and, in fact, represents a failure on the part of the Commission to exercise its duty to properly interpret section 36 and to actually imbue this section with meaning.
154. In conducting an analysis under the “meaning” and “purpose” portions of section 36, the Commission must first consider what it actually means to “influence” the meaning or purpose of telecommunications. The legal definition of the term “influence” means “Power exerted over others. To affect, modify or act upon by physical, mental or moral power, especially in some gentle, subtle and gradual way”.⁹⁶
155. In Decision 2008-108, the Commission made no attempt to consider whether Bell’s traffic shaping practices “affect”, “modify” or “act upon” GAS customer traffic by some form of physical means (especially in a “gentle, subtle and gradual way”). Had the Commission done so, it would have been forced to conclude that Bell’s traffic shaping practices do affect GAS customer traffic. The very fact that the Commission states that traffic shaping delays downloadable P2P “files” is an acknowledgement that the traffic shaping practices of Bell is “affecting” GAS customer traffic and therefore is “influencing” it.
156. As to whether the influence exerted by Bell goes to the “meaning” and/or the “purpose” of the telecommunications traffic that it carries is a separate issue that must also be considered separately by the Commission as part of a proper section 36 analysis.
157. Once again, however, the Commission fails to truly turn its mind to these questions. Instead, the Commission simply states that “the fact that the transmission of a file is delayed does not alter its meaning or its purpose.”
158. As noted above, this finding completely ignores the fact that file-sharing protocols and applications are not simply limited to downloads of discrete data files, but also include numerous real time audio and video services and applications, such as P2P television

⁹⁶ *Black’s Law Dictionary*, 6th ed., St. Paul: West Publishing Co., 1990, p. 779, emphasis added.

and on-line gaming. Therefore, whenever Bell throttles this latter type of traffic, it is influencing the “meaning” of the telecommunications because the meaning of the telecommunications is being physically interrupted by Bell.

159. Moreover, whenever Bell throttles P2P traffic it is also influencing the “purpose” of these telecommunications because these telecommunications are intended to be transmitted and received in real time.
160. In fact, even when Bell throttles discrete downloadable P2P files, it is also influencing both the meaning and the purpose of these types of telecommunications.
161. The Applicants note in this regard that the word “meaning” is defined as “that which is, or is intended to be, signified or denoted by act or language; signification; sense; import”.⁹⁷
162. Fundamentally, therefore, meaning is derived from the whole of a communication, including both the information that is contained within a message, as well as the context in which that message is transmitted (i.e., the “where”, “when”, “how” and “why” of message delivery). Certain messages contain inherently time-sensitive information. This may be because they are communications of an urgent or emergency nature, or simply because the information will only be relevant for a finite period of time. With respect to downloads of P2P files, the fact that users can determine when their file downloads are to occur means that interference with the timing of these downloads can alter the meaning of telecommunications. When a P2P download file is delivered at a time other than when a user desires or requires it, its meaning may be lost or simply no longer relevant for that user. Indeed, to delay telecommunications is to remove certain aspects of the message that is intended to be conveyed which could be one of immediacy. In this way, Bell’s traffic shaping influences the meaning of telecommunications, and constitutes a violation of section 36 of the Act.

⁹⁷ *Black’s Law Dictionary*, 6th ed., St. Paul: West Publishing Co., 1990, p. 980.

163. Throttling also significantly alters the meaning of the communications by forcing Internet users to choose different mediums to transmit their communications. As Marshall McLuhan famously observed “the medium is often the message”.⁹⁸ The very choice of the user to use P2P over other types of distribution can seek to communicate a message to the end user. For example, a grassroots film documentary director may choose P2P as her chosen distribution method in order to show support for free distribution over the Internet versus subscription-based alternatives. Likewise, an individual may deliberately choose to communicate with his or her friends via a real time P2P home video as opposed to other methods in order to convey dissatisfaction with how impersonal e-mail is. When throttling is permitted, users lose their ability to convey expression through their choice of medium and its meaning is clearly influenced.
164. With respect to that portion of section 36 which deals with the purpose of telecommunications, the Applicants note that the term “purpose” is broadly defined to include “[t]hat which one sets before him to accomplish or attain; an end, intention, or aim, object, plan project”. The idea is “synonymous with ends sought, an object to be attained, an intention, etc.”⁹⁹
165. This definition makes clear that the purpose of a given telecommunications is a subjective matter that cannot be determined by Bell or, for that matter, the Commission. It can only be determined in the minds of the senders and receivers of messages.
166. Bell’s traffic shaping practices reduce the speeds at which P2P traffic travels over its network which directly interferes with the intended purposes of the senders and receivers of this traffic. This is true in the case of both downloadable P2P files (such as audio or video files which are accessed only when a user wishes to receive them), as well as live P2P transmissions, including those involving two or more users communicating in real-time. This latter type of content is accessed according to the

⁹⁸ Marshall McLuhan, *Understanding Media* (London: Taylor & Francis, 2001) at 7.

⁹⁹ *Black’s Law Dictionary*, 6th ed., St. Paul: West Publishing Co., 1990, p. 1236.

mutual intent of the parties to the communication who wish to both send and receive content at a given time, regardless of geographic distances. However, delays or speed reductions placed upon traffic affects and even frustrates the ability of the users to communicate because their communications are entirely dependent on a constant uninterrupted flow of data to make real-time interaction possible. In other words, when these transmissions are delayed, the intended purpose of the telecommunications, namely instantaneous communication, is entirely frustrated.

VII. ERRORS IN THE INTERPRETATION OF PARAGRAPH 7(i) OF THE ACT

167. At paragraph 66 of Decision 2008-108, the Commission states that paragraph 7(i) of the Telecommunications Act does not “impose an enforceable obligation on Bell.”

168. Paragraph 7(i) of the Telecommunications Act provides as follows:

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

...

(i) to contribute to the protection of the privacy of persons.

169. It was not sufficient for the Commission to attempt to sidestep paragraph 7(i) by stating that it is not the source of an enforceable obligation on Bell. Under subsection 47 of the Act, the Commission is required to “exercise its powers and perform its duties under this Act... with a view to implementing the Canadian telecommunications policy objectives.” This means that in determining CAIP’s Part VII application against Bell, the Commission was required to consider the potential privacy interests of the end-customers of GAS subscribers in rendering its decision.

170. The Applicants submit that the Commission erred in failing to expressly consider the privacy interests of individual Canadians in rendering Decision 2008-108.

171. It is clear that Canadians have a reasonable expectation of privacy in their telecommunications and in particular, the Internet communications in which they engage. Thus, for example, law enforcement officials may not eavesdrop on private telecommunications without a judicial warrant in Canada.
172. In addition, the Commission has itself relied upon paragraph 7(i) of the Act to establish privacy obligations for all local exchange carriers through mandated Terms of Service in Telecom Decision 97-8. More recently, in Telecom Decision 2005-28, the Commission established privacy obligations on VoIP providers again based on paragraph 7(i) of the Act.
173. Another example of the seriousness with which the Canadian government has dealt with privacy interests of Canadians in the telecommunications context is in Order in Council P.C. 1996-1001, 25 June 1996, in which the Governor in Council varied Decision 95-14 by substituting for the majority decision the minority decision included therein. In doing so, the Governor in Council confirmed that the privacy principles established by Industry Canada provided an appropriate framework for the consideration of privacy interests in relation to the provision, use and regulation of telecommunications services. Included in these Industry Canada principles are the following relevant to this Application:

(1) Canadians value their privacy. Personal privacy considerations must be addressed explicitly in the provision, use and regulation of telecommunications services.

(2) Canadians need to know the implications of the use of telecommunications services for their personal privacy. All providers of telecommunications services and government have a responsibility to communicate this information in an understandable and accessible form.

...

(6) Privacy expectations of Canadians may change over time. Methods of protecting telecommunications privacy must be reviewed from time to time to meet these changing expectations and to respond to changing technologies and services.

174. The use of DPI on Internet traffic streams raises privacy concerns irrespective of whether or not Bell is collecting, storing or using information that it gleans from DPI and correlating it to personal information concerning the end-customer. More importantly, given the fact that there is no privity of contract between Bell and the end-customers of independent ISPs that subscribe to GAS, it was especially important for the Commission to have specifically addressed and taken into consideration the fact that end-customers of independent ISPs may have limited recourses against Bell for breaches of their right to privacy of their Internet communications.

VIII. THE COMMISSION FAILED TO GIVE DUE REGARD TO FREEDOM OF EXPRESSION

175. The Applicants note that the potential threat posed by content, application or protocol-based throttling of wholesale GAS services to the freedom of expression of Internet content providers and of Canadian Internet end-users has been raised by at least one party.¹⁰⁰ Unfortunately, Decision 2008-108 is silent on the issue. The Commission's failure to consider this argument and to give due regard to the ramifications of Bell's throttling of GAS services on freedom of expression constitute errors of law that raise substantial doubt as to the correctness of Decision 2008-108.

176. Bell's throttling renders content inaccessible for much more than a few seconds or minutes. Bell's throttling practices frustrate the ability of Canadian Internet users to download or upload P2P content for over ten and a half hours a day. Although it is not known exactly how Bell is interfering with P2P traffic streams once such a stream has been positively identified by the DPI equipment in Bell's network, it is clear that the practices under consideration interfere with both the right of P2P content providers to make their expression and that of the end-customer to transmit or receive the expression.

177. Given the obvious impact that P2P throttling has on freedom of expression, the Commission should have given some regard to the potential impact of throttling on

¹⁰⁰ British Columbia Civil Liberties Association, Part VII Application, 12 June 2008, para. 24.

freedom of expression. The Commission's own statutory framework and policy role and the Charter demand that it consider freedom of expression and the potential impact of the CRTC's decisions on freedom of expression.

178. Certainly, the Commission's obligation to give due regard to freedom of expression where this right could potentially be affected has been acknowledged in Commission precedents. One such example is when the Commission is considering limitations on unsolicited telecommunications.¹⁰¹ Likewise, the Commission has considered freedom of expression and the appropriate balance between the rights of consumers and the rights of service providers in various contexts including in relation to the ILECs' 900 services¹⁰² and with respect to the winback rules.¹⁰³ Finally, giving due regard to freedom of expression is consonant with the policy objective under paragraph 7(a) of the Act "to enrich and strengthen the social . . . fabric of Canada and its regions."
179. Freedom of expression is a value fundamental to Canada as a democratic society¹⁰⁴ and merits the high importance the Commission has placed on it in past decisions. Given that the largest telecommunications carrier in Canada, namely Bell Canada, has undertaken a measure that subjects P2P traffic flows to differential treatment precisely because of the protocol, application and content contained in such flows, the potential infringement of freedom of expression seems obvious.
180. Aside from the fundamental value of freedom of expression, it may be that the Charter itself, including the guarantee under subsection 2(b) to freedom of expression,¹⁰⁵ is applicable to Bell and to the Commission in the circumstances.

¹⁰¹ *Telecommunications Act*, R.S.C. 1993, c.38, s. 41.

¹⁰² Telecom Decision CRTC 94-4, *Revision to 900 Service*, 25 February 1994.

¹⁰³ Telecom Decision CRTC 2006-16, Bell Canada and Saskatchewan Telecommunications' request that the Commission stop applying the local exchange service winback restrictions on the basis that they unjustifiably infringe the right to freedom of expression in section 2(b) of the Canadian Charter of Rights and Freedoms, 6 April 2006.

¹⁰⁴ See e.g. *Edmonton Journal v Alberta (Attorney General)*, [1989] 2 S.C.R. 1326, para. 3.

¹⁰⁵ *Canadian Charter of Rights and Freedoms*, Part I of the *Constitution Act, 1982*, being Schedule B to the *Canada Act 1982* (U.K.), 1982, c. 11, s.2(b).

181. As a delegate of Parliament, any decision made by the Commission is an exercise of the discretion conferred on it by statute.¹⁰⁶ If, as an administrative body, the Commission makes a decision which either expressly or impliedly limits the rights and freedoms guaranteed by the Charter, it will have to be justified under section 1 of the Charter as a reasonable limitation on that right.¹⁰⁷ In the case of Bell Canada, particularly when it comes to the provision of wholesale GAS services, it can be said to be implementing government policy in relation to traffic management practices generally speaking and in relation to Bell's approved tariffs specifically. This may bring not only the Commission but Bell Canada itself within the scope of the Charter.¹⁰⁸
182. The Commission failed to consider, let alone give due regard, to the guarantee of freedom of expression and to the potential impact that Bell's throttling of GAS has on freedom of expression. The Commission's inaction in relation to a practice that so clearly infringes on the expressive rights of content providers and Canadian Internet users, amounts to a denial that these practices raise any concerns.
183. The Applicants submit that the Commission erred in law in failing to consider the legitimate concerns of Canadians in guarding against unwarranted incursions against freedom of expression. Given the obvious threat posed to freedom of expression by protocol, application or content-based throttling, the Commission should have undertaken a balancing exercise to determine whether or not the actions of Bell were justified. In this regard, the Applicants note that the obvious threat to freedom of expression posed by the throttling practices at issue in the CAIP proceeding lends further support to an approach that requires Bell to justify its measure under the Oakes test or at least a test that is closely modelled on that test.

IX. FAILURE TO CONSIDER THE CANADIAN TELECOMMUNICATIONS POLICY OBJECTIVE OF EFFICIENT AND EFFECTIVE REGULATION

¹⁰⁶ *Genex Communications*, [2006] F.C.R. 199 (F.C.A.) (leave to appeal to S.C.C. refused 14 June 2007), para. 60.

¹⁰⁷ *Multani v. Commission scolaire Marguerite-Bourgeoys*, [2006] S.C.R. 256.

¹⁰⁸ *Eldridge v. British Columbia*, [1997] 3 S.C.R. 624, para. 42. See also *Adbusters Media Foundation v. Canadian Broadcasting Corporation*, [2009] B.C.J. No. 658 (C.A.) (QL).

184. In Decision 2008-108, the Commission fails to make any mention of the Policy Direction and did not comply with the requirement that the Commission state which policy objectives were advanced by the decision. As a result, the Commission provided no justification for the decision based on the Policy Direction or the Canadian telecommunications policy objectives.
185. The Applicants submit that Bell's interference with a tariffed wholesale telecommunications service is likely to have profound implications for the efficiency and effectiveness of the Commission's regulation of wholesale services and the extent to which the Commission may continue to rely on market forces alone in the retail market for Internet access services. The Commission failed to give due regard to the Canadian telecommunications policy objective at paragraph 7(f) of the Act and the direction at paragraphs 1(a)(ii) and 1(b) of the Policy Direction.
186. Had the Commission considered the relevant Canadian telecommunications policy objectives in rendering its decision on CAIP's application, it would have found that to reject CAIP's application is inconsistent with the Canadian telecommunications policy objective of efficient and effective regulation.
187. In this regard, the Applicants note that in the PN 2008-19 proceeding, almost all of the dominant ISPs argued that in relation to retail traffic management practices, under subsection 27(2) and pursuant to the Canadian telecommunications policy objectives, any discrimination or preference should be considered justified first, because there is vibrant competition in downstream retail markets and second, because in a competitive market, end-customers have an interest in choosing between different ISPs that employ different traffic management practices and service packages.¹⁰⁹
188. The Applicants note the inherent contradiction in the justificatory basis that the dominant ISPs use to defend their retail traffic management practices and the frankly

¹⁰⁹ See, for instance, Initial Comments, 23 February 2009, as follows: Bell, para 134; TELUS, paras. 15, 58; Cogeco, para 33; EastLink, paras 3, 5 and 6; QMI, para 20; Shaw, para 12.

inconsistent position that they take in insisting that their competitors should automatically have foisted upon them any retail traffic management measures that they may choose to implement.

189. The question is whether the Commission is prepared to accept the second contention of the dominant ISPs, namely that it is in the public interest to not regulate “sameness” in retail Internet access markets. If so, and subject to the limitations on the freedom of dominant and competitor ISPs to engage in traffic management practices found in subsection 27 and 36 of the Act, the Commission’s decision to reject CAIP’s application is inconsistent with the public interest in vibrant competition in retail Internet access markets.
190. Subject to section 27 and 36 of the Act, the dominant ISPs’ own words necessarily imply that independent ISPs should have the same flexibility as the dominant ISPs to offer differentiated service offerings and to offer up the possibility of supplier responsiveness and competitive choice. Thus, the attempts of dominant ISPs to foist a version of their retail traffic management measures on wholesale customers are not only anti-competitive and preferential (as discussed above), they are hypocritical when compared to the dominant ISPs’ self-serving justification for retail flexibility.
191. ILECs and cable carriers should not be permitted, through mandated wholesale broadband access services, to deprive competitors of the very flexibility that the ILECs and carriers seek at the retail level. To hold otherwise is directly contrary to the Canadian telecommunications policy objectives of efficiency and efficacy of wholesale regulation and would undermine the objective of promoting maximum reliance on market forces.

X. CONCLUSION AND RELIEF REQUESTED

192. In light of the foregoing, the Applicants submit that there is a substantial doubt as to the correctness of the Decision with respect to each of the errors listed in Section II of this Application.

193. The significance of CAIP's Application was substantial, not only in respect of the questionable throttling practices engaged in by Bell, but also in respect of the broader public interest in ensuring the openness and neutrality of Internet services for all users. The Act is intended to protect against discrimination in the provision of telecommunications services and to serve as a bulwark against unnecessary interference with telecommunications carried on behalf of the public. As described herein, the Commission in its Decision made several errors of fact and law that are inconsistent with the statutory scheme of the Act.
194. Aside from the duty to ensure that its decisions are correct, the CRTC has a parallel duty to ensure that its decisions are fair. In resolving CAIP's application, the Commission made numerous findings based on information that it believed was imperfect. Furthermore, it narrowed the scope of CAIP's application only to re-open many of the same issues through the PN 2008-19 proceeding. If Decision 2008-108 is permitted to stand, the Commission will have fettered its discretion on issues central to the PN 2008-19.
195. As such, the Applicants respectfully request that the Commission review and vary Decision 2008-108, giving due regard to the freedom of expression concerns that are affected by Bell's throttling of P2P applications, the Canadian telecommunications policy objectives at paragraph 7(a) and 7(f) of the Act and paragraphs 1(a)(ii) and 1(b) of the Policy Direction¹¹⁰ and issue orders determining that
- (vi) Bell's throttling of GAS is in breach of Bell's GAS tariffs and sections 24 and 25 of the Act;
 - (vii) Bell's throttling of GAS unjustly discriminates against GAS customers and represents an undue preference that Bell is granting to itself;
 - (viii) Bell's throttling of GAS results in an undue disadvantage to P2P content and application providers;

¹¹⁰ *Order Issuing a Direction to the CRTC on Implementing the Canadian Telecommunications Policy Objectives*, SOR/2006-355, 14 December 2006 (referred to herein as the "Policy Direction").

- (ix) Bell's throttling of GAS results in an undue disadvantage to Internet end-users who choose to access legal P2P content on the Internet; and
- (x) Bell's throttling of GAS is otherwise contrary to section 36 of the Act.

NOTICE

This Application is made by the Consumers' Association of Canada and Canada Without Poverty (formally, the National Anti-Poverty Organization), by their counsel, the Public Interest Advocacy Centre, as well as the Canadian Association of Internet Providers and several independent telecommunications service providers, including Acanac Inc., Accelerated Connections Inc., Cybersurf Corp., Execulink Telecom Inc., eagle.ca, Managed Network Systems Inc., Skyway West Business Internet Services, Start Communications, TekSavvy Solutions Inc., Vianet Internet Solutions, and Yak Communications (the "Applicants") by their representatives John Lawford of the Public Interest Advocacy Centre (lawford@piac.ca) and Tom Copeland of the Canadian Association of Internet Providers (tom.copeland@caip.ca).

TAKE NOTICE that pursuant to section 59 and subsection of the *CRTC Telecommunications Rules of Procedure*, the Respondents are required to mail or deliver or transmit by electronic mail their Answers to this Application to the Secretary General of the Canadian Radio-television and Telecommunications Commission, Central Building, 1 Promenade du Portage, Gatineau (Québec) J8X 4B1, and to serve a copy of their Answer on the Applicants by 20 June 2009.

Service of a copy of the Answers on the Applicants may be effected by personal delivery, by electronic mail, or by ordinary mail. In the case of service by personal delivery, it may be effected at the address set out above.

If the Respondents do not file or serve their Answers within the time limit prescribed, the Application may be disposed of without further notice to them.