

Before the
Federal Communications Commission
Washington, D.C. 20554

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FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF THE SECRETARY

In the Matter of

GTE Telephone Operating Companies)
GTOC FCC Tariff No. 1)
GTOC Transmittal No. 1148)

CC Docket No. 98-79

MOTION TO STRIKE

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affiliated domestic telephone operating
companies

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SUMMARY

GTE Service Corporation and its affiliated domestic telephone operating companies ("GTE") hereby file this Motion to Strike the reply comments and attached survey of Hyperion as untimely and otherwise procedurally defective, irrelevant to the reconsideration issues and the GTE ADSL tariff under investigation in this proceeding, fundamentally and irremediably flawed, and completely unreliable.

On October 30, 1998, the Commission issued an order concluding that GTE's ADSL service is an interstate service and is properly tariffed at the federal level. *GTE Telephone Operating Companies, GTOC Tariff FCC No. 1, GTOC Transmittal No. 1148, FCC 98-292 (Memorandum Opinion and Order) (October 30, 1998)*. On November 30, MCI and the National Association of Regulatory Utility Commissioners filed petitions for reconsideration and/or clarification of the Commission's decision. Parties filed comments on issues raised by the petitions on January 5, 1999, and reply comments on January 19, 1999. GTE objects to Hyperion's submission made at this last stage of the proceeding.

As set forth herein, Hyperion's attempt to introduce new evidence in the reply round of this proceeding contravenes the Commission's rules. Indeed, such a submission would be questionable even if contained in a reconsideration petition. Here, however, Hyperion did not even file a petition, instead lying in wait until the final pleading cycle and thus unfairly preventing other parties from commenting on its purported "new evidence." The Commission allows the parties actually petitioning for reconsideration to submit new facts only in extremely limited circumstances and upon a showing that: the facts relate to changed circumstances; could not reasonably have

been discovered sooner; or if Commission consideration of the facts is necessary in the public interest. Hyperion did not even attempt to make a case that these criteria could apply here, nor could it reasonably do so.

Hyperion's comments and survey are not only entirely irrelevant to the issues presented on reconsideration, they do not relate in any material way to the jurisdictional classification of GTE's ADSL service. In categorizing services under its traditional "ten-percent" rule, the Commission has long held that it is customer certification and the nature of the particular system design and function that form the basis for the jurisdictional classification of a special access service. Hyperion's survey of various University of Pittsburgh students and their recruited friends, using different access arrangements from the service under investigation, forms no basis for reversing the Commission's conclusion that GTE's ADSL service is properly tariffed at the federal level.

Even if otherwise procedurally proper (which it is not), Hyperion's survey itself is fatally flawed. The survey's central logical defect is that it calculates interstate traffic by comparing the transmission time for interstate messages to total user holding time -- a nonsensical approach under which a long session comprised exclusively of interstate e-mailing could somehow be classified as intrastate. The survey also fails to reveal its underlying data, is riddled with methodological errors, uses a blatantly unrepresentative sample, and makes absolutely no effort to assess and correct for readily-identifiable sources of bias that infect the results.

For these reasons, GTE requests that Hyperion's reply comments and its survey be stricken from the record of this proceeding or, at a minimum, be accorded no evidentiary weight.

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MOTION TO STRIKE

GTE Service Corporation and its affiliated domestic telephone operating companies (collectively, "GTE"),¹ pursuant to Section 1.41 of the Commission's rules, hereby file their Motion to Strike the reply comments and attached survey of Hyperion.²

As set forth below, Hyperion's reply comments and attached survey should be stricken for three reasons. First, Hyperion's belated attempt to introduce new evidence in these reconsideration proceedings is contrary to the Commission's rules. Second, Hyperion's survey of selected Internet users connected with the University of Pittsburgh and utilizing a combination of switched and non-ADSL dedicated access lines has no relevance to the jurisdictional status of GTE's ADSL tariff at issue here. Third,

¹ GTE Alaska Inc., GTE Arkansas Inc., GTE California Inc., GTE Florida Inc., GTE Hawaiian Telephone Company Inc., The Micronesian Telecommunications Corporation, GTE Midwest Inc., GTE North Inc., GTE Northwest Inc., GTE South Inc., GTE Southwest Inc., Contel of Minnesota, Inc., and Contel of the South, Inc.

² Reply Comments of Hyperion Telecommunications, Inc., CC Docket No. 98-79 (filed Jan. 19, 1999) ("Hyperion"); Investigation of ISP Interstate Traffic For Selected Internet Applications, Attachment A to Hyperion, CC Docket No. 98-79, (filed Jan. 19, 1999) ("Survey").

Hyperion's Survey not only is based upon a patently incorrect methodology in purporting to measure interstate traffic in a packet-switched ADSL environment, it is so replete with errors and information gaps that it is manifestly unreliable and scientifically useless. Accordingly, the Commission should strike Hyperion's reply comments and the Survey or, alternatively, accord them no evidentiary weight in this proceeding.³

I. BACKGROUND.

On August 20, 1998, the Commission designated for investigation two issues related to GTE's FCC Tariff No. 1, Transmittal No. 1148: "whether GTE's DSL service offering is a jurisdictionally interstate service" and "whether the Commission should defer to the states the tariffing of retail DSL services in order to lessen the possibility of a price squeeze."⁴

After extensive pleadings by all parties, the Commission determined that GTE's ADSL service "is an interstate service and is properly tariffed at the federal level."⁵ As for claims of a price squeeze, the Commission held that deferring to the states was

³ Two GTE experts on these issues have prepared Declarations responding to Hyperion's Survey. For a detailed analysis of the methodological shortcomings of Hyperion's submission, see Declaration of Carl Holmberg appended to this pleading as Attachment A ("Holmberg Declaration"). For a detailed discussion of issues related to holding and transmission time, see Declaration of Rita Vachani, Attachment B ("Vachani Declaration").

⁴ *GTE Telephone Operating Companies, GTOC Tariff FCC No. 1, GTOC Transmittal No. 1148*, DA 98-1667, at ¶ 12 (Order Designating Issues for Investigation) (Aug. 20, 1998).

⁵ *GTE Telephone Operating Companies, GTOC Tariff FCC No. 1, GTOC Transmittal No. 1148*, FCC 98-292, at ¶ 1 (Memorandum Opinion and Order) (Oct. 30, 1998) ("Decision").

"neither necessary nor contemplated by the Act."⁶ On November 30, 1998, two parties filed Petitions for Reconsideration/Clarification of the Commission's decision.⁷ Those Petitions raised five issues: (1) reconsideration of the two-call theory; (2) reconsideration of the scope of the Commission's decision; (3) clarification of the respective roles of state and federal regulators with respect to ADSL service; (4) clarification of the separations treatment of ADSL; and (5) clarification of the precedential impact of the Order at issue. Hyperion did not file a Petition.

On January 5, 1999, parties filed comments on the issues raised by the petitions. In its Comments, Hyperion referenced the "preliminary results" of an "ongoing Internet traffic study," which, it claimed, would refute the widely-held belief that Internet access traffic is overwhelmingly interstate and international in nature.⁸ Hyperion failed to offer a single detail about the methodology used in this survey or the nature of the preliminary findings and did not disclose when (or if) the results would ever be published. In its Reply Comments filed January 19, 1999 GTE urged the Commission to disregard Hyperion's allusions to its mysterious survey, noting that the submission was untimely and did not contain actual survey results. In Hyperion's Reply, also

⁶ *Id.* at ¶ 31.

⁷ MCI WorldCom Petition for Reconsideration, CC Docket No. 98-79 (filed Nov. 30, 1998) ("MCI Petition"); Request for Clarification and/or Reconsideration of the National Association of Regulatory Utility Commissioners, CC Docket No. 98-79 (filed Nov. 30, 1998) ("NARUC Petition").

⁸ Hyperion Comments at 2 (claiming to have obtained "results . . . indicat[ing] that, as a percentage of total connect time, interstate transmissions fall well below ten percent of total telecommunications traffic").

submitted January 19, Hyperion finally provided a summary of the Survey's purported findings. It is this January 19 Reply and the attached Survey which should be stricken as procedurally and substantively defective.

II. THE COMMISSION SHOULD STRIKE HYPERION'S PLEADING AS PROCEDURALLY DEFECTIVE.

Hyperion's attempt to introduce new evidence in the final pleading round of this reconsideration proceeding is procedurally defective and contrary to the Commission's Rules. There simply is no basis in those rules for permitting Hyperion's Survey, submitted as an unsworn appendage to its putative "Reply Comments," to be placed in the record at this late date. Indeed, under Section 1.106 (c) of the Commission's rules, even "[a] petition for reconsideration which relies on facts not previously presented to the Commission . . . may be granted only under" narrowly defined circumstances,⁹ none of which apply here. *A fortiori*, comments (and, particularly, *reply* comments) on a petition containing new factual allegations may not be credited.

As an initial matter, it bears emphasis that Hyperion *did not file a petition for reconsideration*. Nor did either of the two parties who did file petitions for reconsideration rely on the Hyperion Survey, or even indicate any awareness of it. Thus, Hyperion's submission goes far beyond this rule — it is a reply comment to petitions for reconsideration that raises new factual evidence not even referenced by the parties seeking reconsideration. Moreover, by waiting until the reply comment stage to submit its new "evidence," Hyperion ensures that parties to this proceeding will

⁹ See 47 C.F.R. § 1.106(c).

be unable to respond to its Survey in the normal public filing rounds and are thereby prejudiced. Such gamesmanship and flagrant disregard for the Commission's rules should not be countenanced.

Perhaps in anticipation of these concerns, Hyperion argues that MCI's Petition "raised this point."¹⁰ In fact, Hyperion overstates the facts. Certainly MCI did not submit the Hyperion Survey, refer to it, or offer into evidence anything like it. And a closer examination of MCI's Petition reveals that its argument was far narrower than the broad assertions of Hyperion. MCI only sought clarification regarding the Commission's allegedly blanket conclusion that all ADSL services are "inherently interstate."¹¹ "The Commission should also clarify that xDSL services are not inherently interstate access services."¹² It did not seek reconsideration of the Commission's determination regarding GTE's particular ADSL offering. In contrast, Hyperion's argument is specific to GTE's proposed service: "the Commission cannot claim jurisdiction over the service using the 'ten percent rule.'"¹³ Thus, Hyperion seeks to submit "evidence" on an issue that was not even directly raised by the pending MCI reconsideration petition.

Even assuming, *arguendo*, that Hyperion's comments somehow can be construed to fall within the scope of the specific issues raised by the petitioners, it has

¹⁰ Hyperion at 2 (Hyperion conveniently fails to cite or quote to the section of MCI's actual pleading that allegedly raises this point).

¹¹ MCI at 8-10.

¹² *Id.* at 10.

¹³ Hyperion at 2.

failed even to attempt to make the requisite showing for the introduction of new evidence on reconsideration. The Commission's rules permit consideration of new information in a reconsideration *petition* only when "the facts fall within one or more" of the following categories: (1) the facts relate to "events which have occurred or circumstances which have changed since the last opportunity to present such matters;" (2) the facts were unknown to the petitioner until after its "last opportunity to present such matters [and] could not, through the exercise of ordinary diligence, have been learned prior to such opportunity;" or (3) the Commission determines that consideration of the facts is necessary in the public interest.¹⁴ Hyperion remarkably fails to even acknowledge its obligation to make such a showing under 47 C.F.R. § 1.106. GTE suspects that this is because there is no readily identifiable explanation for its sandbagging. Hyperion has pointed to no changed circumstances since the original round of comments. Nor has Hyperion suggested any reason that its survey could not have been completed, through the exercise of ordinary diligence, during the original investigation phase of this proceeding.¹⁵ Any post-hoc rationalization of its tardiness would be, at the very least, suspect.

¹⁴ See 47 C.F.R. § 1.106 (b)(2) and (c); the rule applies expressly to petitions for reconsideration. However, the Commission should enforce the rules particularly aggressively here. Hyperion did not even file a petition for reconsideration, instead waiting to drop the "evidence" in the final reply round. If the Commission permits such a "strategy" it will encourage other parties to sit back while others file petitions and comments and then wait until the final round of pleadings in order to evade application of the rule.

¹⁵ Indeed, much of Hyperion's submission relies on secondary sources that were readily available at the time of the initial tariff proceeding. For example, Hyperion makes sweeping claims based on a third party survey conducted in *October 1996*, and
(Continued...)

Nor can Hyperion plausibly argue that its Survey should be considered by the Commission because such consideration is "in the public interest" under 47 C.F.R. § 1.106(c)(2). Three obvious factors would clearly undermine any such assertion (even if it had been made). First, the "public interest" standard, under the rule, applies to petitions for reconsideration, not reply comments to a third party's petition. In the usual case, the petitioner's evidence can be considered and commented upon by all interested parties. Here, however, Hyperion's delay prevents a timely dialogue about this new found "evidence." Such evasive tactics undermine the conduct of "orderly adjudicative processes and administrative finality" which, the Commission has previously held, the rule restricting the presentation of new facts in reconsideration proceedings is designed to promote.¹⁶ Second, Hyperion's complete failure to even acknowledge that the rule applies, much less present a case why the presumption against acceptance of new information should not be applied, must not be rewarded as consistent with the public interest. Third, as set out below, the Survey itself is irrelevant to this proceeding. Based on these three factors, consideration of the Survey cannot be in the public interest.

(...Continued)

data from **another** survey that was collected in 1996 and 1997. See Survey at 11. Moreover, **Hyperion** does not disclose when its own Survey was initiated or completed, thus raising **even** more serious doubts about its diligence in filing this document.

¹⁶ See *Payne of Virginia, Inc.*, 66 F.C.C.2d 633, 637 (1977); *Colorado Radio Corp. v. FCC*, 118 F.2d 24, 26 (D.C. Cir. 1941) ("We cannot allow the [applicant] to sit back and hope that a decision will be in its favor and then, when it isn't, to parry with an offer of more evidence. No judging process in any branch of government could operate efficiently or accurately if such a procedure were allowed").

III. HYPERION'S COMMENTS AND SURVEY ARE WHOLLY IRRELEVANT BOTH TO THE ISSUES PRESENTED ON RECONSIDERATION AND TO THE JURISDICTIONAL CLASSIFICATION OF GTE'S ADSL SERVICE.

GTE has explained above that Hyperion's survey is procedurally defective in part because the issue it seeks to address was not presented in a petition for reconsideration and, therefore, is not appropriately raised in this proceeding. For the same and additional reasons, Hyperion's pleading should be disregarded as wholly irrelevant to the Commission's analysis of whether GTE's ADSL service should be tariffed at the federal level. The agency determined that "federal tariffing of ADSL service is appropriate where the service will carry more than a *de minimis* amount of inseparable interstate traffic."¹⁷ In categorizing services under this so-called "ten percent" rule, the Commission has long held that it is customer certification and the nature of the system design and function that form the basis for classification,¹⁸ not generalizations extrapolated from a single survey of traffic for an unrepresentative group of selected users that does not even utilize the tariffed service at issue.¹⁹

GTE has stated from the beginning that, to the extent a given ADSL customer cannot certify that its usage exceeds the ten percent threshold for federal tariffing as assessed by the Commission's precedent, a given user's service would have to be

¹⁷ Decision at ¶ 27.

¹⁸ See *MTS and WATS Market Structure*, 4 FCC Rcd 5660 (1989) (adopting the Joint Board's proposal for a 10% interstate traffic threshold, customer certification, and general information on system designs and functions for verification of the jurisdictional classification of dedicated circuits).

¹⁹ It is not clear that any of the Survey participants utilized GTE's ADSL service.

regulated in the intrastate jurisdiction. Thus, even if Hyperion's Survey is taken at face value – a misguided step, as outlined herein – the very most it demonstrates is that there may be some customers that would fail to qualify for the instant federal tariff.²⁰

The ADSL Order concluded only that a federal tariff is appropriate for GTE's ADSL offering "which permits Internet Service Providers (ISPs) to provide their end user customers with high speed access to the Internet."²¹ Neither that Order nor GTE's tariff eliminated the possibility that some customers may be ineligible to take service under GTE's federal tariff because they would be unable to certify the requisite level of interstate traffic. In sum, nothing in Hyperion's late-filed evidence could possibly warrant revisiting the Commission's Order.

IV. HYPERION'S SURVEY IS FATALLY FLAWED AND, THUS, COMPLETELY UNRELIABLE.

Not only is Hyperion's submission procedurally flawed and completely irrelevant to the issues in this proceeding, the "evidence" itself cannot withstand scrutiny. GTE has demonstrated elsewhere that Internet traffic cannot be subdivided into jurisdictional categories because (1) the nature of the traffic cannot be discerned, (2) single sessions involve visits to a potential multitude of sites, (3) locations of servers are extremely difficult to determine, and (4) there is no way for the carrier to monitor the jurisdictional nature of this traffic.²² These factors have not changed. There simply is no basis for

²⁰ In that case, GTE would tariff the service at the state level. See Rebuttal of GTE, CC Docket No. 98-79, at 15-16 (filed Sept. 23, 1998) ("Rebuttal").

²¹ Decision at ¶ 1.

²² See, e.g., Direct Case of GTE, CC Docket No. 98-79, at 15-18 (filed Sept. 8, 1998) (Continued...)

concluding that a reliable jurisdictional separation of this traffic is possible. If anything, the sophistic gymnastics to which Hyperion resorts in its submission only reinforce this point. Nonetheless, GTE will here address at least a few of the many major shortcomings of Hyperion's Survey in the event the Commission declines to strike that filing in its entirety.

A. The Fundamental Defect of the Hyperion Survey is the Logical, Technical and Legal Disconnect Between Holding Time and Transmission Time in a Packet-Switched Environment.

The central flaw incorporated in Hyperion's Survey – which, probably not coincidentally, enables it to drive down its calculated percentage of interstate communication time – is that it compares the amount of time a user is on line (for example, how long an e-mail application is open) to the *transmission* time for interstate messages in a switched-packet environment. A simple example vividly illustrates the speciousness of such a comparison. First, assume that a user opened their e-mail at 10 AM and closed e-mail at 2 PM. According to Hyperion, the holding time would then be four hours. Further, assume that during that session the user sent one hundred e-mails to friends out of state, each with an average transmission time of 275 milliseconds.²³ Hyperion would conclude, notwithstanding the fact that each and every one of the communications in which the subject engaged during the session was

(...Continued)

1998) ("Direct Case"); Rebuttal at 12-13.

²³ Only for the purpose of this example, GTE utilizes Hyperion's estimation of transmission time. In reality, Hyperion's transmission time estimates fail to account for significant transmission activity, including packet overhead and round-trip communications. See Holmberg Declaration at ¶ 29.

transmitted to another state, that the service usage would be only 0.19% interstate and, thus, would not be appropriate for federal tariffing.²⁴ Such an approach is nonsensical and flatly inconsistent with Commission principles underlying the 10% rule. It should therefore be rejected out of hand.

Hyperion nonetheless claims to derive its metric from the Commission's rules;²⁵ but Hyperion invokes 47 C.F.R. § 36.154(e) Subcategory 1.3, which addresses the allocation for separations purposes of *circuit-switched* facilities, instead of the separate and wholly distinct provisions regarding special access facilities. Subcategory 1.3 only applies to common lines used for *circuit-switched* traffic.²⁶ Because GTE's ADSL service is a special access service, the analogy to Subcategory 1.3 is inappropriate.²⁷

In contrast, Subcategory 1.2 regarding "Interstate private lines" allocates such a line to the interstate jurisdiction "if the interstate traffic on the line involved constitutes more than ten percent of the total traffic on the line."²⁸ As the Commission concluded in its ADSL Order, the correct analysis under the 10% rule is to compare the amount of interstate traffic to total traffic, not to total holding time. This assessment is based on

²⁴ 27,500 milliseconds (27.5 seconds) divided by four hours (14,400 seconds) equals 0.0019.

²⁵ Hyperion at 7-9.

²⁶ Although not at issue in this proceeding, the Hyperion Survey's research design and assumptions would be equally inapplicable in the switched context.

²⁷ Indeed the "holding time" construct cited by Hyperion by its very terms is a "transitional" rule and no longer applies even to switched traffic. See 47 C.F.R. § 36.154(e).

²⁸ 47 C.F.R. § 36.154 (a).

customer certification, and confirmed through "general information on system design and functions."²⁹ As clearly demonstrated in the record, ADSL, as used in the Internet application for which it is designed, is inherently interstate.

As set forth in the Declaration of Rita Vachani, the use of holding time as a measure of network use in the ADSL context is invalid.³⁰ Ms. Vachani points out that during the "holding time" (as defined by Hyperion) on an ADSL circuit, "no network resources, interstate or intrastate, are being utilized and, therefore, should not be counted in terms of determining what portion of the overall time that the network is used involve interstate communications"³¹ Thus, any assessment of percentage of interstate traffic would need to compare interstate transmission time with total transmission time.³² As demonstrated throughout this proceeding, conducting such a legitimate assessment would pose difficult if not impossible methodological challenges, challenges that Hyperion clearly has not met. The bottom line is that the dial up holding time metric used by Hyperion is completely inapplicable in a packet-switched Internet environment – particularly one in which at least one of the "end points" of the transmission is virtually impossible to discern – and the reconsideration stage of this tariff proceeding is no place for the Commission to begin experimenting with such speculative constructs in any event.³²

²⁹ MTS and WATS Market Structure, 4 FCC Rcd 5660, 5661 n.5 (1989).

³⁰ See Vachani Declaration.

³¹ *Id.* at ¶ 4.

³² Hyperion states that it has excluded "individuals that keep an e-mail session
(Continued...)

B. The Survey is Replete with Methodological Errors and Omissions Rendering Its Purported Findings Useless.

The Hyperion survey is so riddled with methodological errors and unknowns and so shrouded in mystery that it is useless as an evidentiary document in this proceeding. The complete lack of underlying data, flawed sampling, and bevy of systemic errors render the survey meaningless. Indeed, these shortcomings sentence the Survey to a statistical death row for the fatally flawed.

The initial and most obvious problem with the Survey is the absence of any underlying data. The complete omission of such data from the Survey report makes any type of rigorous analysis exceedingly difficult. Certainly, the absence of the underlying data casts serious doubts on the conclusions drawn by Hyperion. Essentially, Hyperion asks the Commission to throw out its well-reasoned decision based on partial information in an unsworn survey and grandiose representations by counsel. Hyperion asks too much.³³

(...Continued)

open all day." Survey at 13. The mere need for this control illustrates that it is ridiculous to compare interstate packet switched transmission time with total holding time. Moreover, there may be a systemic bias that is produced from excluding those users that utilize the Internet most. Finally, there is no definition of what "open all day" means. Is it eight hours? Twelve? Six? We have no idea; nor do we know how the survey's authors draw that line or whether they had any precise rule at all. As set forth below, this is just another example of the "black box" nature of this Survey. The Commission and other commenters have no ability to evaluate substantial parts of the Survey because insufficient facts are disclosed.

³³ Hyperion also fails to provide any information regarding variances, or other statistical measures to demonstrate the meaningfulness or validity of their data.

Another egregious flaw in Hyperion's submission is the nature of the sample used. In support of its conclusion that all ADSL service should be state tariffed, Hyperion assembled a sample of 114 Internet users, drawn almost entirely from a single graduate studies program at the University of Pittsburgh and a handful of friends and family the students solicited to participate.³⁴ There is nothing remotely random about this sample.

For example, presumably most of the participants know and work with each other and therefore use the Internet to communicate with one another. There is nothing in the Survey that addresses how these internal communications were characterized, or even if they were included in the Survey. Similarly, there was apparently no effort to examine users from different geographic regions, professions, age groups, or the sundry of other variables that would be necessary to create a representative national sample. As set out above, the most that could be shown from Hyperion's sample is that there may be some customers eligible for regulation in the intrastate jurisdiction.³⁵

³⁴ The Survey also fails to tackle any of the diverse issues associated with inter-coder reliability for this data. That is, it is not clear that two students coding the same Internet session would have recorded the data for the session in the same way. For a more detailed discussion of this variability issue see Holmberg Declaration ¶¶ 32-33.

³⁵ It also seems clear that a much larger sample would be necessary to create any generalized conclusions about national Internet traffic. Similarly, any statistical data – in order to have meaning – would need to utilize statistical tests such as confidence intervals. See Holmberg Declaration ¶ 31.

Other systemic errors in the Survey abound:

- **Unreliable Data Points:** According to Hyperion, "participants recorded information related to their Internet usage on forms designed to collect data regarding . . . the geographic locations of the web sites visited."³⁶ As previously demonstrated by GTE, and according to most experts in the field, it is extremely difficult to identify the location of such web servers.³⁷ The notion that the University of Pittsburgh students (let alone the non-students in the sample) could correctly identify these locales is fanciful, particularly based on the sum total of 30 minutes of training they apparently received.³⁸ Moreover, even if the location of a particular WWW page itself could be identified, many WWW pages use links that draw in images and other data located on other server sites. The survey contains no analysis of this likely scenario.³⁹

- **Potentially Biased Exclusion of Data Points:** The Survey apparently "discarded" sites "when no physical address could be determined."⁴⁰ It certainly seems possible, if not likely, that many of these undetermined sites were located out-of-state. The Survey also does not identify how many of these undetermined sites

³⁶ Hyperion at 5.

³⁷ For a discussion of these issues, see Direct Case at 15-18; Rebuttal at 12-13.

³⁸ Survey at 14.

³⁹ Indeed even the information within the Survey is not consistent. Based on the submission, 172 web browsing sessions were analyzed with 356 pingable sites, yielding 2.07 sites per session. Survey at 20. Oddly, the corresponding data table indicates 4.97 long distance and 2.63 local sites per session. *Id.* Once again, without the underlying data, it is extremely difficult to figure out what is going on here.

⁴⁰ Survey at 14.

there were, so we have no way of assessing the impact of this particular methodological decision on the overall data and conclusions.

The biased exclusion of data points was not limited to the undetermined sites. Also "discarded from consideration" were "interstate sites" that were "not PINGable."⁴¹ However, the Survey fails to acknowledge that the pingable location may be completely different from the location of the data's host server and that "pingability" is discretionary. Thus, there may be a systematic bias introduced because certain types of sites, perhaps disproportionately interstate, may have opted not to respond to pings.⁴² Here too we have no idea how many interstate sites were excluded on this basis. Even more significant, under this policy *only* interstate sites would be excluded,⁴³ thus invariably driving down the interstate number.

Finally, there is no recognition of the increasingly prevalent use of "push" technologies. That is, Hyperion's submission incorrectly assumes that all Internet data is delivered in direct response to an end user's query. In reality, push technology may deliver a variety of data to the user at any time during an Internet session. The geographic origin of this push data may be extremely difficult to identify. The Hyperion submission simply ignores these communications altogether.

- **Biased Recording of Data:** Participants were required to record data regarding their Internet sessions on paper forms.⁴³ This process may also have

⁴¹ Survey at 14.

⁴² Holmberg Declaration ¶ 28.

⁴³ A copy of the form was attached to the Survey as Appendix A.

skewed the results. First, it is entirely possible, if not probable, that some of the graduate students participating in the Survey were aware of the hypothesis that their professors were attempting to prove. An awareness of their professors' goal and the fact that their Internet use was being studied may create a "Hawthorne effect"⁴⁴ – the subjects may be influenced to modify their behavior simply because they are being monitored. More specifically, at the margins, the students may be inclined to record their data in a way that would please their supervising professors by proving the hypothesis.⁴⁵ Once again, we simply do not know what the students knew – that information was not included in Hyperion's submission.

Second, subjects were told to "discard the session" when they "forgot to record" key times.⁴⁶ Once again, we have no idea how many sessions were discarded for this reason. Also, it is likely that this rule may have biased the sample by allowing participants to exclude particularly long or complicated Internet sessions. Each of these phenomena may have resulted in the biased recording of data.

- **Questionable Assumptions:** The Hyperion survey is replete with additional questionable assumptions. For example, the survey calculates a "weighted average" based on the calculation that "e-mail is used 1.5 times as much as WWW searching

⁴⁴ Commonly understood as any impact of the research itself on the subject of the study.

⁴⁵ It is also entirely possible that the students were not entirely honest about their use of the Internet or the sites that they "visited," for privacy or other reasons, knowing that their professors were monitoring their usage.

⁴⁶ Survey at 14.

and surfing according to several Internet surveys."⁴⁷ Those "surveys" are not identified, and we have no way of assessing the accuracy of the 1.5 ratio presumption. Nor is it logical to apply a supposedly national presumption to data obtained in this local assessment. The Survey also assumes a 31.25% caching rate and states that this presumption was based on "averaging the cache hit-rate data from web sites."⁴⁸ Yet, once again, Hyperion fails to show its work, and the reader is left to wonder which numbers were averaged and from what sources that data was derived. Nor is there any recognition that not all content may be locally cacheable. Moreover, those general cache numbers say nothing about the sample here, nor would those numbers be compelling regarding GTE's service.

- **Outdated Information:** Many of the assumptions in the Survey also appear to be based on outdated and/or untraceable information. For example, Hyperion relies on an e-mail survey from 1996.⁴⁹ Needless to say, the Internet is developing and evolving so quickly that this data is woefully anachronistic. Similar propositions, such as estimates of the number of e-mail messages delivered daily and average access speeds, are simply asserted without citation or other reference.⁵⁰ The Commission has no idea when, where or how this purported data was gathered. Consequently, the

⁴⁷ *Id.* at 23.

⁴⁸ *Id.* at 15-16.

⁴⁹ *Id.* at 11.

⁵⁰ *Id.* at 11.

information is impossible to verify or rely on and it certainly cannot support a reversal of the Commission's decision here.⁵¹

⁵¹ In another odd twist, Hyperion includes vast amounts of text that appear to serve no practical purpose whatsoever. For example, the Survey discusses mirroring extensively (at 6-9), but then ignores any possible impact of this process (at 16).

V. CONCLUSION.

For the foregoing reasons, the Reply Comments of Hyperion and its attached Survey should be stricken from the record, or, in the alternative, given no evidentiary weight whatsoever.

Respectfully submitted,

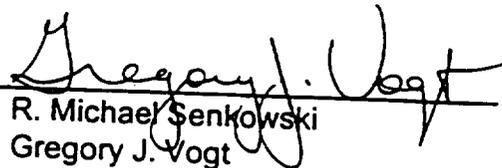
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