



March 5, 2021

Filed via GC Key

Mr. Claude Doucet
Secretary General
Canadian Radio-television and
Telecommunications Commission
Ottawa, ON
K1A 0N2

Dear Mr. Doucet:

Re: Set-Top Box (STB) Industry Working Group – Progress Report

Introduction

1. The STB Working Group provides this report in which we confirm significant progress toward implementation of a national STB-based audience measurement system – Numeris' enhanced electronic television audience measurement (**ETAM**). Numeris currently estimates that ETAM data will be made available to the industry at the end of the 3rd quarter in 2021 (i.e. by the end of September, 2021). Consistent with the

requirements set out in BRP 2015-86, this report outlines: data collection; governance; privacy; and, funding and cost recovery.¹

Background

2. In BRP CRTC 2015-86, the Commission determined that “a set-top box-based audience measurement system would contribute to the fulfilment of certain objectives set out in the Act ... [and] would be developed by and for the benefit of the broadcasting industry.”² After its formation in April 2015, the STB Working Group worked cooperatively to develop a national audience measurement system based on STB data. In partnership with Numeris, a technical test was completed in December 2017, which confirmed that multiple BDUs’ STB data can be merged to produce tuning data. Next, the Working Group asked Numeris to provide a proof-of-concept (**POC**) to assess the feasibility of a national audience measurement system based on BDUs’ return-path data (**RPD**) derived from STBs capable of collecting this information. The POC was undertaken by Numeris and certain Working Group BDUs³ in 2018.
3. In Broadcasting Decision 2018-263,⁴ the Commission imposed conditions of licence requiring “vertically integrated BDUs to provide STB data to a national STB-based audience measurement system by no later than 30 September 2019”⁵ (the **STB COLs**). Consistent with BRP 2015-86, the Commission also encouraged “all BDUs not subject to those conditions of licence to continue to participate in support of the development of a national STB audience measurement system, and to make data available to such a system.”⁶
4. In a progress report dated December 11, 2018, the STB Working Group advised the Commission that:
 - Numeris had received all required STB data from participating BDUs pursuant to the POC;
 - in consultation with Kantar Media, Numeris was processing the data to validate service design, methodology, and costs;
 - pursuant to a revised timeline, Numeris would present its results to the STB Working Group, which would be followed by the STB Working Group submitting a final report; and,
 - implementation by September 30, 2019 remained achievable.

¹ Broadcasting Regulatory Policy CRTC 2015-86 – *Let’s Talk TV - The way forward - Creating compelling and diverse Canadian programming* (12 Mar 2015) [**BRP 2015-86**], para. 161.

² BRP 2015-86, paras. 154 and 158.

³ Shaw (terrestrial-only), Bell (terrestrial-only), Rogers, Videotron and Cogeco.

⁴ *Renewal of licences for various terrestrial broadcasting distribution undertakings that will expire in August 2018 – Introductory decision* (2 Aug 2018) (**BD 2018-263**).

⁵ BD 2018-263, para. 114.

⁶ BD 2018-263, para. 127.

5. Consistent with these timelines, on March 1, 2019, Numeris presented the STB Working Group with the results of the POC as well as a proposed business plan.
6. Implementation was delayed when Videotron withdrew from the STB Working Group on April 4, 2019. Shortly thereafter, Videotron filed an application to replace the STB COLs with a requirement to provide STB data to independent services “under the terms of a negotiated agreement.” In Broadcasting Decision 2019-231,⁷ the Commission denied Videotron’s application and extended the implementation deadline to January 15, 2020. The Commission invited any BDU subject to the same COLs to file an application requesting that its deadline be amended accordingly.⁸
7. On August 9, 2019, Shaw, Bell, and Rogers filed a joint Part 1 application to amend their respective STB COLs pursuant to an expedited process (**Joint Application**).⁹ The Joint Application explained that the previous plans and timelines for the project had to be reconsidered and potentially recalibrated or re-designed. Certain members of the STB Working Group filed comments regarding the Joint Application.
8. We can now confirm that:
 - pursuant to Broadcasting Decision 2019-231, Videotron has rejoined the STB Working Group and is a full participant; and,
 - Telus has reached an agreement with Numeris to provide RPD.
9. Despite the additional uncertainty caused by COVID-19, the BDUs demonstrated their commitment to completing the work of the STB Working Group by: negotiating individual data license agreements (**Licensing Agreements**) with Numeris; developing the technical capability to provide Numeris with STB data and supplying this data to Numeris; and, discussing the BDUs’ approach to protecting the privacy of their subscribers’ personal information (**PI**) with the Office of the Privacy Commissioner (**OPC**).
10. These developments are significant. The participation of five BDUs (Shaw, Rogers, Bell, Videotron and Telus) provides the geographic coverage and audience that are a necessary foundation for a national STB-based audience measurement system. Accordingly, participation by these BDUs responds to the Commission’s determinations in BRP CRTC 2015-86, in which industry participants were required to “develop a set-top box-based audience measurement system, which will include technical standards, privacy protections, governance structure and cost sharing.”

⁷ *Various services – Licence amendments related to the national set-top box audience measurement system* (28 Jun 2019).

⁸ BD 2019-231, para. 12.

⁹ CRTC File Numbers: 2019-0669-5, 2019-0690-1 and 2019-0681-9 – *Amendment to conditions of licence related to the licences of the terrestrial broadcasting distribution undertakings serving various locations in Canada*. The CRTC has not reached a determination regarding the Joint Application.

Data to Be Collected

11. Currently, Numeris' television audience measurement (**TAM**) system relies on data from a panel of approximately 11,500 individuals. BDUs' RPD will be integrated with TAM data to generate the ETAM dataset, which is expected to eventually replace the existing TAM currency dataset. With the addition of RPD from the five participating terrestrial BDUs, Numeris will significantly increase the reported sample in their data.
12. Pursuant to individual Licensing Agreements between each participating BDU and Numeris, BDUs will continue to provide Numeris with aggregated and anonymized daily viewing information for individual channels, utilizing a highly secure process. The method of delivery by individual BDUs may vary; however, no PI of BDUs' subscribers will be disclosed to Numeris.
13. BDUs' RPD will be cleansed, processed, and fused with the TAM data to create ETAM data. Numeris will also collect and use the following auxiliary data in order to process BDUs' RPD and/or fuse RPD with TAM data:
 - channel maps for each BDU (identifying which station should be referenced by channel ID within the file);
 - simultaneous substitution data and genre data to assign program viewing to the appropriate channel/date/time; and,
 - genre classifications for all programs to support data processing.
14. An audience estimate database will be made available to Numeris members. This database will only include aggregated audience estimates for individual channels and programs. The database will not show any raw RPD viewing data. All estimates will be based on RPD fused with TAM data (which will inform demographics). The lowest level of disaggregation will be existing TAM central markets (Vancouver, Calgary, Edmonton, Toronto and Montreal Anglo/Franco). Estimates will also be available on a regional, provincial and national basis.

Governance

15. As noted above, BDUs will govern the use of RPD pursuant to individual, non-exclusive Licensing Agreements, while ownership and governance of the ETAM system will remain with Numeris. There are no proposed changes to the overall structure/organization of Numeris. The Licensing Agreements are confidential to the parties and have not been shared with the Working Group. It is to be understood, therefore, that any restrictions in those Licensing Agreements on the use of RPD data in connection with ETAM (such as limitations on the use of RPD viewing data) should be interpreted as agreement between Numeris and the BDUs rather than the Working Group, as a whole.

16. BDUs' individual Licensing Agreements address terms related to Numeris' use of anonymized RPD, including:

- cost recovery payments by Numeris;
- ownership of the RPD (as between Numeris and BDUs, BDUs will retain ownership of the RPD provided to Numeris; Numeris will not be permitted to use BDUs' RPD for any purposes other than those set out in the Licensing Agreements);
- scope of audience measurement (limitations of the database and reports made available to broadcasters; for example, no RPD or audience estimates of individual BDUs will be made available); and
- privacy, confidentiality, and data security protections (e.g. to prevent reverse engineering of the anonymized and aggregated datasets; to ensure compliance with privacy laws; etc.).

17. The ETAM product will be made available to all of Numeris' current and future TAM members/licensees as part of the nationally syndicated service, through updated member agreements. Parties that are not full or current Numeris members/licensees will be able to access reports. Numeris is developing the framework of these reports and associated cost model to ensure that non-members can obtain significant value from ETAM. Non-members will also have the opportunity to become members/licensees of Numeris.

Privacy

18. The Commission has stated its expectation that privacy issues remain paramount and that BDUs ensure that the privacy of individuals is protected. Indeed, for BDUs, ensuring the protection of their subscribers' privacy interests is more important than any objective related to the audience measurement system under development.

19. In accordance with these objectives, the participating BDUs and Numeris confirm that:

- no PI was disclosed by BDUs to Numeris in the POC; and
- no PI will be disclosed by BDUs to Numeris in the implementation and operation of the ETAM system.

20. Each BDU has employed – and will continue to employ – various tools to aggregate and anonymize RPD before it is delivered to Numeris and will take reasonable measures to prevent the possibility of the re-identification of any personal data. For greater certainty, as noted above, the Licensing Agreements will expressly prohibit the reverse engineering of RPD.

21. On April 26, 2018, the STB Working Group met with the OPC to discuss the Working Group's development activities, and we have provided periodic progress updates since that meeting, including during a virtual meeting on July 8, 2020. BDUs and Numeris confirmed the following:

- each BDU has undertaken a privacy impact assessment and no privacy or security risks were identified; and
- all STB data transferred to Numeris would be de-identified and, as a result, there would be no need to seek express consent.

22. Consistent with the OPC's recommendation, BDUs will be further reducing any perceived risk of re-identification through a procedure known as "salting the hash".

23. The OPC understands that encryption, as well as legal and technical measures, will be employed by BDUs and Numeris to safeguard PI. The OPC encouraged ongoing review of these measures to assess their adequacy in mitigating potential risks.

24. Going forward, the BDUs and Numeris will follow developments in Canadian privacy law as well as ongoing guidance from the OPC, including the OPC's Interpretation Bulletins.¹⁰

Cost Recovery

25. Numeris and individual BDUs have established cost recovery as part of the individual Licensing Agreements. Numeris, while operating as a non-profit, will be responsible for the initial and ongoing costs.

Next Steps

26. Numeris is currently immersed in development of ETAM, which has been facilitated by the RPD provided by participating BDUs. Numeris and various BDU technical teams are actively working through the following stages of development:

- establishing delivery of complete datasets from each of the five BDUs;
- creating unique data editing parameters for each dataset;
- aggregating the sample for selection;
- integrating the data with the current TV Panel data; and
- preparing software and reporting.

¹⁰ For example, Interpretation Bulletin: Personal Information (October 2013), online: https://www.priv.gc.ca/en/privacy-topics/privacy-laws-in-canada/the-personal-information-protection-and-electronic-documents-act-pipeda/pipeda-compliance-help/pipeda-interpretation-bulletins/interpretations_02/ .

27. Numeris is currently “onboarding” the final BDU dataset and has initiated work on the process of data editing, which is the portion of the development that requires the most effort from all parties.

Conclusion

28. The STB Working Group is pleased to provide the Commission with this progress report, in which we set out the above conclusions regarding the development of ETAM in cooperation with Numeris.

29. While development of ETAM has encountered several delays, we cannot understate either its complexity or the significance of multiple parties’ efforts to develop a potentially world-leading STB-based audience measurement system.

30. We look forward to the full implementation of ETAM in 2021. If there are any further questions, please contact the undersigned.

Best regards,

A handwritten signature in blue ink, appearing to read "Dean Shaikh".

Dean Shaikh
On behalf of the STB Working Group

cc: Scott Shortliffe, Executive Director, Broadcasting, CRTC
Neil McEneaney, President and CEO, Numeris
Rob Fullerton, Vice-President, Product and Platforms, Numeris