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To: Digital Measurement Vendors Subject to MRC Audit

From: George Ivie, David Gunzerath and Ron Pinelli

Re: "IVT Sampling" or not applying IVT techniques on a census impression basis

Abstract: Measurement organizations applying IVT sampling must:

- ***Support and demonstrate the effectiveness of IVT sampling;***
- ***Make efforts to obfuscate the sampling approach with regard to reverse engineering;***
- ***Apply enhanced quality control and monitoring;***
- ***Disclose and quantify IVT sampling methodology to users;***
- ***Disclose an IVT measured rate reflecting sampling;***
- ***Comply with certain sample-based provisions of the MRC Minimum Standards; and***
- ***Include IVT sampling in the scope of an MRC audit.***

Background:

On October 27, 2015 the Media Rating Council (MRC) issued the final *Invalid Traffic (IVT) Detection and Filtration Guidelines, Version 1.0*. The guidelines can be found here:

http://mediaratingcouncil.org/101515_IVT%20Addendum%20FINAL%20(Version%201.0).pdf

Section 6 of these guidelines states impression level granularity is preferred in determining the validity of traffic. The MRC is aware of the use of sampling or selective application of IVT decisioning whereby measurement vendors may expend differential effort in determining the validity of certain impressions and may not apply some or any of their IVT measurement techniques to portions of measured and reported traffic. While the *IVT Guidelines* do not expressly disallow sampling of IVT measurement, such approaches are not in accordance with the impression-level premise, which is stated as the preferred granularity of measurement. Further, the *IVT Guidelines* contain several sections addressing the concerns of reverse engineering of IVT techniques and contain strong requirements of a measurement vendor to take care in obfuscating sophisticated techniques so that they may prevent defeat of such techniques. Sampling or selective application of IVT decisioning of transactions may not only inhibit a measurement vendor's ability to comply with these requirements, but also presents a potential weakness in IVT detection and filtration techniques that may allow an IVT perpetrator to infiltrate portions of traffic with less robust measurement and detection capabilities applied.

Due to these concerns, additional rigor and consideration of IVT sampling techniques is required including significant unique disclosures. First and foremost, a measurement vendor must be able to support and demonstrate that a sampling approach to IVT measurement is as effective and as obfuscated as a census approach with regard to reverse engineering. Further, a measurement

vendor employing IVT sampling should apply enhanced quality control and monitoring over sampled measurement on an ongoing basis.

Additionally, a measurement vendor applying IVT detection and filtration to less than all measured traffic should disclose and quantify its specific methodology to users. Specifically, the *MRC Viewability Guidelines* introduce the concept of a "measured rate" which requires measurement vendors to quantify and disclose the portion of traffic for which they measure viewability as a required metric in viewability reporting. Likewise, measurement vendors employing an IVT sampling approach must disclose an IVT measured rate reflecting sampling, essentially representing the portion of measured traffic by level of IVT telemetry actually applied (full, partial or none). Additionally, to the extent measurement vendors already report a measured rate for viewability, but the true measured rate for IVT is less than this rate due to sampling, both metrics must be disclosed. The *MRC Viewability Guidelines* may be found here:

http://mediaratingcouncil.org/081815%20Viewable%20Ad%20Impression%20Guideline_v2.0_Final.pdf

Further, evaluation and examination of digital measurement in conjunction with *IAB Measurement Guidelines* includes application and evaluation of *MRC Minimum Standards* as part of the MRC examination process, however, due to the census nature of most digital measurement, many sample-based requirements of the *MRC Minimum Standar*ds may not be completely applicable. However, a sample-based IVT approach does not constitute census measurement of IVT. As such, measurement organizations should consider, apply and comply with certain sample-based provisions of the *MRC Minimum Standards*. Specifically, the following are presented for application to IVT sampling along with a description of their relevance to the approach:

-*MRC Minimum Standards* A.1 and B.1: IVT sampling approaches (the specific differential IVT decisioning applied) should be designed to reduce the effects of bias and distortion and known biases should be disclosed and quantified.

-*MRC Minimum Standard* A.3: IVT sampling should be designed to reflect the population of traffic measured. Moreover, such sample design should consider material differences in site content and design, environment (desktop, mobile, etc.) and placement type as well as inventory sources (purchased, exchange, programmatic) among other aspects of traffic and reflect the relevant portions of the measured traffic population. Such aspects should be defined and disclosed along with any sample exclusions.

-*MRC Minimum Standard* A.13: Algorithms or models used in IVT sampling should be empirically supported and based on systematic, logical procedures. Such support should be periodically updated and auditable by design. Arbitrary decisioning (such as application of IVT decisioning to every k^{th} impression) is likely not supported and is discouraged.

-*MRC Minimum Standard B.7*: Each report where IVT sampling is applied should state that the data obtained from the samples used in measurement are subject to sampling errors.

-*MRC Minimum Standard B.8*: With respect to sampling error:

-Each report where IVT sampling is applied should contain standard error data relevant to the metrics contained therein. The report shall also contain a non-technical explanation of the meaning and use of standard error as well as a clear guide to how the data may be applied to any given metric contained in the report.

-The method used to develop standard error estimates as well as the formulas used to compute the standard errors should be fully disclosed.

The MRC Minimum Standards can be found here:

http://mediaratingcouncil.org/MRC%20Minimum%20Standards%20-%20December%202011.pdf

Finally, if a measurement vendor uses IVT sampling in any material way or for any material portion of traffic, such sampling must be included in the scope of the audit due to potential confusion issues within the marketplace.

The MRC has produced this interim guidance based on input from an IVT Update working group and until such time as there is a formal standards update that incorporates it, this interim guidance is considered authoritative and should be applied by measurement services in the MRC accreditation process.

Please contact Ron Pinelli at MRC (rpinelli@mediaratingcouncil.org) with any questions.