

Appendix B: Viewer Data Collection

Devices and Return Paths

Mobile DTV devices can be placed into one of four categories for the purpose of viewer data collection and monetization. (NOTE: Only categories 1-3 will be pertinent to this document.)

- A. Always Connected
Most likely device: Phone / Smartphone
Return path: Cellular Network; Internet (Wi-Fi, WiMAX)
Viewer data can be sent in real-time across the cellular network.
- B. Occasionally Connected
Most likely device: Laptop, Netbook
Return path: Internet (Wi-Fi, WiMAX)
Viewer data can be sent in batches whenever the device is within range of an Internet connection.
- C. PC/Laptop Synch
Most likely device: Stand-alone DVD player
Return path: USB/Internet
Viewer data is batched together and sent over a USB connection to a laptop that is Internet connected. Users will likely plug into the laptop to charge the battery in the device.
- D. Never Connected
Most likely device: Stand-alone DVD player
Return channel: None
Viewer data cannot be collected from one-way devices.

Proposed Tech Roadmap

- A. Terms of Service – A user will be given an option to agree to a broadcaster's Terms of Service (TOS). By agreeing to the TOS the user is allowing the broadcaster to collect viewer data.

If the user does not agree to the TOS the broadcaster will not be allowed to collect viewer data. Additionally, the broadcaster may choose from a number of actions that result:

- The user may still access the TV programming.
- The user may not access the TV programming if it is protected content that is only accessible to users who accept the TOS.
- The user may only access base TV programming if enhanced features (ex. higher video quality or interactive content) are only accessible to users who accept the TOS.

[The technical details of how to enforce these options in the receiver must be discussed.]

- B. Unique ID – Each user must be assigned a unique ID in order to measure viewer data. The unique ID will also indicate how many devices are assigned to the user. Each individual user will determine how much personal data is attached to the user ID.

Questions:

- What should be the unique ID of each device?

- How will the unique ID integrate with other SSO web interfaces (ex. across NBCU properties)?
 - How will the unique ID work with cable operator entitlement?
- C. TV Profile – Users will be given the option to create a TV profile. This profile can be created and managed in a web application either from the mobile device or from a computer connected to the Internet. There will be a single web registration site for all broadcasters (potentially managed by OMVC). This site will provide a singular experience for all users and prevent users from multiple registration sites for each broadcaster.

Each broadcaster can determine what types of information to collect. Information can include: primary viewing geographic location (ex. zip code), gender, age range, household income range, etc. By creating and maintaining a profile the user must also opt-in to the TOS that provides the broadcaster with permission to store and collect the user’s personal data.

Creating a profile is optional so users may need incentives to encourage them to create profiles for data collection. Incentives could include more relevant ads and/or additional features to enhance the viewing experience.

Detailed Measurement Tech Roadmap

The following viewing timestamps will be collected when a user tunes to a channel:

- | | | |
|-----------|---|--|
| Version 1 | { | <ul style="list-style-type: none"> D. Time in – When the user begins watching a channel E. Time out – When the user stops watching a channel |
| Version 2 | { | <ul style="list-style-type: none"> F. Mute – When a user mutes a channel to enter into video only mode (if closed captioning is on, the broadcaster should receive credit for the user viewing the program/ad) G. Un-mute – When a user un-mutes a channel for full capability viewing H. Pause – When a user pauses a program to stop watching I. Un-pause – When a user begins watching a program after pausing it |

Example: A user presses the pause button at 9:05am. If an ad runs at 9:10am during a morning program and the user un-pauses the program and resumes watching where he left off, the user will view the ad even though it is really 9:15am. [Note: Technical details must be sorted out – mute may require current time and frame count.]

Versioning allows broadcasters to get a basic approach in place (V1) before adding additional features (V2, etc.).

Proposed Data Reporting and Aggregation Approach

This process needs industry agreement, but it may be similar to the overnights and updates for DVR views.

Data will be pushed from the device to the repository. There are potentially 6-10 push mode methods.

Open Issues:

- Is there freedom of data?
Broadcasters will be able to choose whether they want the data directly or if they want to send it to a 3rd party clearinghouse. Agreements with Networks & Affiliates are needed.

- How does the device know when and where to send data?
Application Framework; Data will be sent to a specific URL as specified by the Application Framework code

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