Immetrica personall®
Audience Omnimeasurement
System Features

Version 1.2, 11 December 2024

Change history

1.0	31 Oct. 2024	• Initial release, *App* section
1.1	10 Dec. 2024	• Release of entire document
1.2	11 Dec. 2024	• Added *Description* and *Purpose* section

Description

A panel-based audience measurement system for
- video and television with audible sound
- radio and online audio
- both in realtime and on-demand
- on any playout device
- on any platform
- anywhere

Technically advanced:
- Uses highly reliable audio acoustic ACR (automated content recognition)
- Collects data through panelist's smartphone app using the phone's microphone
- The smartphone is almost always on or near panelist
- The measurement is completely passive and person-level, for the greatest accuracy possible in person-level and demographic measurement

Purpose

- Cross-platform, cross-media audience measurement
  - Extend conventional television audience measurement to streaming video and VOD
  - Improve accuracy of conventional measurement by using passive technology, avoiding inaccuracy from incomplete panelist compliance (checking in, out and confirming viewing on people-meters, or carrying a watermarking-based device such as a PPM or RateOnAir, especially at home)
  - None of the high configuration burden or high costs of router-meters
- Configurable timeshifting (buckets and maximum interval)
- Coviewing can be calculated
- Deduplicated and incremental reach and incremental impressions that enable capping
- Person-level, demographic audience estimates
- Can be used standalone or to impart personalization and demographics to census-level data (from connected TVs, set-top boxes, and server-side on-demand measurement)
- Direct measurement of ads without need for as-ran logs (requires preingestion of ad creative)
- Responsive VOD measurement without need for cooperation of VOD service
- Fraud-resistant (reflects media use by real human beings, not bots)
- Can be used to adjust advertising campaigns in flight in near-realtime
- Very affordable, built from the ground up for maximum cost-effectiveness

App

- Highly reliable and precise acoustic audio ACR algorithm
- Self-launching on all versions of Android
  - after device restart
  - after measurement process failure (checked at configurable intervals; safe minimum per Android documentation = 9 minutes)
- Minimal battery consumption (depends on percentage of day the device is used interactively and percentage of day it is on charger; typically ~1%/day of 4500mAh battery, ~50–100mAh/day)
- Does not obstruct or prevent phone calls or any other uses of the microphone(s)
- The green microphone icon in Android 12+ is visible to the user in well under 10% of cases, and then for only one second
- Audio recording respects privacy according to Android scheme, and does not capture phone calls or microphone input into other software (such as voice assistants)
- Maximum frequency of measurement = each 2 seconds; minimum necessary to measure complete viewing/listening to ads = each 10 seconds (above battery expenditure is for one measurement per 10 seconds; it is higher if more frequent measurement is configured)
- Technically advanced: optimal use of multithreading
- Easy to integrate with other apps
- Configurable compute-intensive work scheduling. The default configuration is for once-daily publication, and uses minimal battery and mobile data (because WiFi is usually available when the device is on charger):
  - compute-intensive work (fingerprinting, transmission) occurs only when the device is on charger, or
  - for a short period (until completion of current backlog) after the charger is disconnected, or
  - daily at a configurable time (by default, 02:00 local time) regardless of power source, or
  - upon device restart (to ensure processing if device is unpowered at the daily configured time)
  - Optional: when device is interactively used (uses more mobile data)
- Copious telemetry sent through a separate transmission channel
- Demographic information and/or PII, if required
- Multiple identifiers, for easy login using existing panelist identifiers
- Device hardware and software information
- All data delivered through resilient queue; no data lost even in event of backend failure
- Each country/deployment version of the app is configurable individually and can use a separate backend
- All times corrected by NTP, obtained by default every 15 minutes (configurable)

Backend

- Purpose-built to process the nondeterministic data from our mobile app/library. Unlike server/CDN-side or connected-TV data, our universal solution must derive the identity of the playout channel in a more complex manner. Our multilayer processing of the raw data reduces false positives to negligible levels.
- High accuracy, with granularity configurable up to continuous (default: once per 10 sec.).
- Timeshifting with configurable buckets (that can overlap) and intervals configurable by channel or channel genre.
- Advertisement measurement of preingested ad creatives without need for as-ran logs (usually unavailable for content delivered online, or available server-side only, without adjustment for fraud, MFA, poor visibility, uncertain audibility). Precise person-level audience measurement of individual broadcasts of individual ads.
- Objective ad playout verification.
- Sample RIM weighting by demographics.
- Efficient, lossless intab algorithm.
- Integration of YouTube-delivered content.
- Integration of content from standalone OTT/VOD services, e.g. Netflix and Amazon Prime Video.
- Support for any analytics and campaign planning software, such as MarkData YUMIanalytics, Kantar/TechEdge AdvantEdge etc., or any other format
- Integration of programme schedule data
- Division of export into:
  - TV/video programme-based reports
  - TV/video time-based reports
  - TV/video ad audience reports
  - Radio/online audio programme-based reports
  - Radio/online audio time-based reports
  - Radio/online audio ad audience reports
- Panelist cooperation reports
- Instant engagement: viewers of specified content (such as an ad) can be sent a survey immediately or at a set delay

Other systems

- Web-based ad creative ingestor
- VOD/OTT ingestors
- YouTube ingestor

Options

- HTTPS logging on the measurement device
- App logging on the measurement device
- Geolocation
- Integration with cross-platform content recommender (large user bases exist in USA, Canada (anglophone), India, Italy, Latin America (hispanophone) for additional data (content search and usage) and reduced panel costs
- Census-level streaming measurement (requires cooperation of the streaming service)
- Cost-effective analytics software