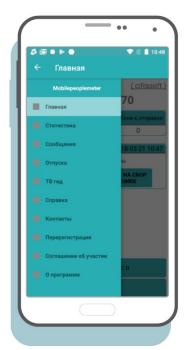


Mediameter SaaS-Platform

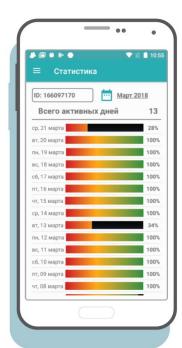
Affordable and flexible TV/radio/Internet/OTT audience research platform based on smartphones, tablets, or smart-watches.

Mediameter app can track

- Linear and time-shifted TV viewing
- VoD content viewing
- Geo-location (GPS+WiFi)
- On-device mobile app usage
- On-device mobile Internet usage in any mobile browsers
- Full telemetry information (battery state, screen on/off state, sensors, etc.)







How do we track media consumption?

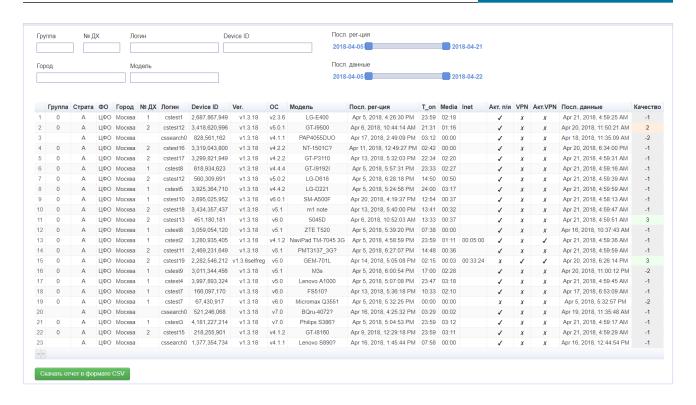
- Panelists install the Mediameter app on their smartphones
- The app tracks any media consumption of the panelist using automatic content recognition technologies, such as audio fingerprinting and audio watermarking
- The media consumption tracking works if the sound volume (e.g. sound from TV set) is sufficient to be recognized by the human ear
- In case of on-device listening, the media consumption tracking is possible even if the panelist uses earphones.

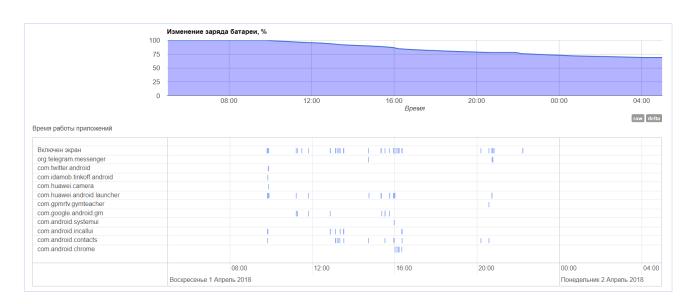
Key features

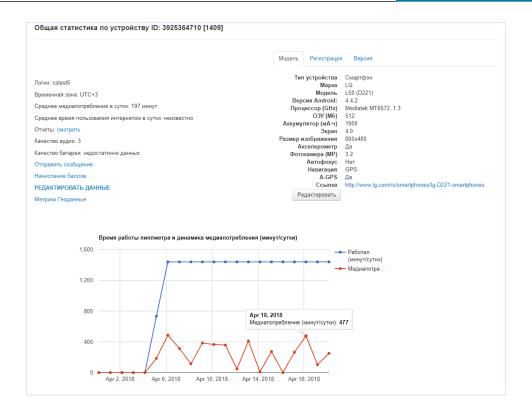
- Robust media content recognition in background acoustic noise
- No constant Internet connection needed
- Minimal effect on the smartphone battery life (the battery life is reduced by 3-8% in a typical smartphone usage scenario,)
- Adaptive "audio sampling profile" that follows the panelist media consumption patterns to trade-off the battery drain and recognition accuracy
- White-label app or SDK
- Android 4.0 or higher (iOS version is available by request)
- Clean and simple mobile app user interface
- A modular mobile app architecture for easy customization
- A tablet version with household members registration (similar to traditional peoplemeters)
- Internet traffic monitoring via local VPN
- Deep app usage analysis in the most popular mobile apps (YouTube, Instagram, VK, etc.)
- Additional all-data encryption for panelist privacy

Web-based admin panel

The Mediameter solution comes with a customizable web-based administration tool. The administration tool provides the complete and up-to-date information on all active panelists, the characteristics of their mobile devices (device model, OS version), application statistics, media consumption statistics, geo-location data and other important parameters that allow monitoring the panel health and current status.







Technologies

The Mediameter platform relies on two automatic content recognition technologies:

- Audio fingerprinting
- Audio watermarking

Use of audio fingerprinting requires the access to the reference multimedia content (e.g. TV broadcast or audio/video content database). As a reference source, Mediameter can use terrestrial TV broadcasting (DVB-T/T2), satellite broadcasting (DVB-S/S2), or IPTV streams.

In case of audio watermarks, the multimedia content should be watermarked before distribution. Audio watermarking brings additional benefits when used alongside audio fingerprinting, namely:

- Unambiguous content identification even in case of identical audiotracks
- Unambiguous source identification
- Cost-efficient time-shifted and VoD content identification

In Mediameter, both technologies can be used simultaneously to achieve the most reliable identification results.

Audio watermark embedders

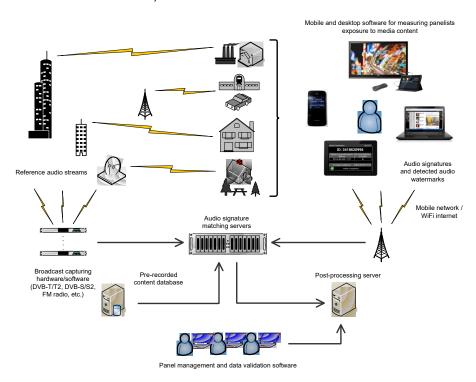
Cifrasoft offers file-based software embedders for pre-recorded audio/video content watermarking, and real-time software embedders for IPTV stream watermarking.

In addition, Cifrasoft offers field-proven hardware embedders SoundCode 3G-1.0 with SDI interface for injecting audio watermarks into TV broadcasting signals. The embedder is implemented as a openGear daughter board (www.opengear.tv) and supports 3G/HD/SD-SDI digital video interfaces and AES/EBU digital audio interfaces.



System Architecture

The Mediameter platform relies on flexible, geographically-distributed system architecture. Although the Mediameter is a SaaS-solution, we also offer the ability to install the server back-end (hardware and software) within a customer's own data centers.



Auxiliary features

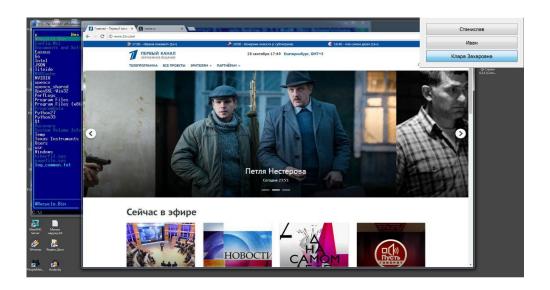
In addition to monitoring the media consumption of panelists, the Mediameter app also allows tracking the activity of the panelist on his/her device, namely:

- Mobile application usage
- Mobile application installation / de-installation statistics
- Mobile internet usage in all browsers (via local VPN)
- Device approximate location (GPS and Wi-Fi database)
- Additional device usage statistics (screen on/off, battery state, sensors and so on)

Desktop peoplemeter

Within the framework of the Mediameter, Cifrasoft offers a Desktop peoplemeter application for PCs and notebooks running Windows 7/10. Main desktop application features:

- "One click" installation on any PC as a regular desktop application
- Automatic recognition of audio signatures and audio watermarks in any multimedia content viewed on a PC
- Analysis of all internet traffic on the PC (including all browsers and all applications)
- The desktop peoplemeter service runs at PC boot and does not affect the normal PC operation.
- Collection of additional information, such as mouse movements, keystrokes, application launches, etc., that can be used to improve the statistical attribution process to automatically recognize which household member is using PC
- A simple household member registration interface (optional)



Desktop and mobile browser extensions

Cifrasoft also offers desktop and mobile browser extensions for

- Firefox (both desktop and mobile)
- Yandex.Browser (both desktop and mobile)
- Chrome, Opera, Vivaldi and other Chromium-based browsers (desktop only)

with the following features:

- Easy installation via Chrome Web Store or via web-link
- Clickstream collection (including SSL requests)
- Analysis of installed browser extensions (e.g. ad-blockers)
- Analysis of in-browser video-viewing behavior

About Cifrasoft

Cifrasoft is a technological company developing solutions for acoustic connectivity, acoustic watermarking, audio fingerprinting and audio/video classification. Cifrasoft's innovative solutions simplify user experience and bring interactivity to mobile advertisement, second screen and audience research applications.

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