

CIM RADIO STREAM MONITOR

A new server-side online radio measurement

A newborn in the CIM Audio measurement framework

= All Audio	CIM RAM GfK CURRENCY	CIM Internet Gemius	NEW CIM Radio Stream Monitor Neuromedia
Live Radio FM/DAB Over IP (internet protocol)	✓ included ✓ included	- ✓ <i>Included*</i>	- ✓ included
Audio on demand Podcast/Time shifted Other Audio over IP	- -	✓ <i>Included*</i> -	- -
Method	Radio diaries Sample based	User-side log analysis Traffic on census level Profile panel based	Server-side log analysis Traffic on census level
Limit	Declared behaviour	*Only scripted players	Distribution of audio files (not listening)

Server-side measurement principles

1. This study identifies **traffic volumes**, based on combinations of IP address and user agent, **NOT individuals**.
2. The data sources are **logfiles from streaming servers** that list the number of audio streams distributed (but not necessarily listened to).
3. This measurement of Radio-over-IP is **exhaustive**, as it involves:
 - All channels (from broadcasters that allow access to their server logfiles)
 - All events (streams requested and distributed over IP)
 - On all listening platforms (see next slide...)

The study is done by **NeuroMedia**, a Belgian specialist in streaming measurement.

Scope of server-side measurement

Currently measured (for participating stations)

Live Radio listening (over IP)

- Audio via station player or app
- Video* (same audio content) via station player or app
- Audio via aggregators
- Audio via other players (WiFi radios, stand alone players, ...)
- Audio or video via Smart TV browser or apps

Not measured

Audio on demand (TSL, podcasts, ...)

Other audio over IP

- Streaming services (Spotify, Deezer)
- Youtube

Live radio

- Via TV channels
- AM/FM/DAB+

*Except DPG.

The split audio/video is available in the dashboard.

Data collection

Each day, Neuromedia collects the logfiles directly from the stream servers. The logfiles are like text files, where every stream sent is stored as a statement.

An example of a logfile statement:

User IP adress	Time stamp	Publishing point	Bytes transferred
123.123.12.123	-- [02/Oct/2010:11:16:17 -0600]	"GET/ Stationname_be_live_64.aac HTTP/1.1"	200 213036
Referrer	Player Identifier	Duration	
"Referrer"	"NPRRadio/2.2 CFNetwork/485.10.2 Darwin/10.3.1"	103	

Data Processing

Analysis of the logfiles allows to create additional metrics:

- Device classification
- Player type identification
- Location (based on the IP address)

Subsequently, editing rules are applied:

- Filtering of very short connections (<2 sec.)
- Filtering of very long connection (>24h)
- Filtering of non-human traffic
- Sessions fusion (= merging of connections with short gaps in between)

Measurement limitations

- The collected data are by nature sensitive to technical measurement issues, such as occasional missing or incomplete logs, log errors...

Users of the reported results are therefore invited to check the **data status** that is available in the dashboard before using the data.

- The methodology measures technical deliveries of audio streams from servers to browsers/players and is not able to detect specific situations such as muted sessions, auto-plays, buffering moments that can create differences with e.g. client-side measurements.
- This survey is limited to counting online radio streams only .
The results are not an indication of actual total radio listening to stations.

CIM RAM stays the only reliable source for total radio (FM, DAB+ and digital).

Publication

Processed data are stored and published at day +5

e.g. the data of Jun. 22 will be available from Jun. 27 in the dashboard.

The delay of 5 days allows to correct technical errors and retrieve eventually missing logs.

Data are accessible for subscribers via the web dashboard cim.casterstats.net.

The following screenshots illustrate the main menu options.

Dashboard content : examples (1)

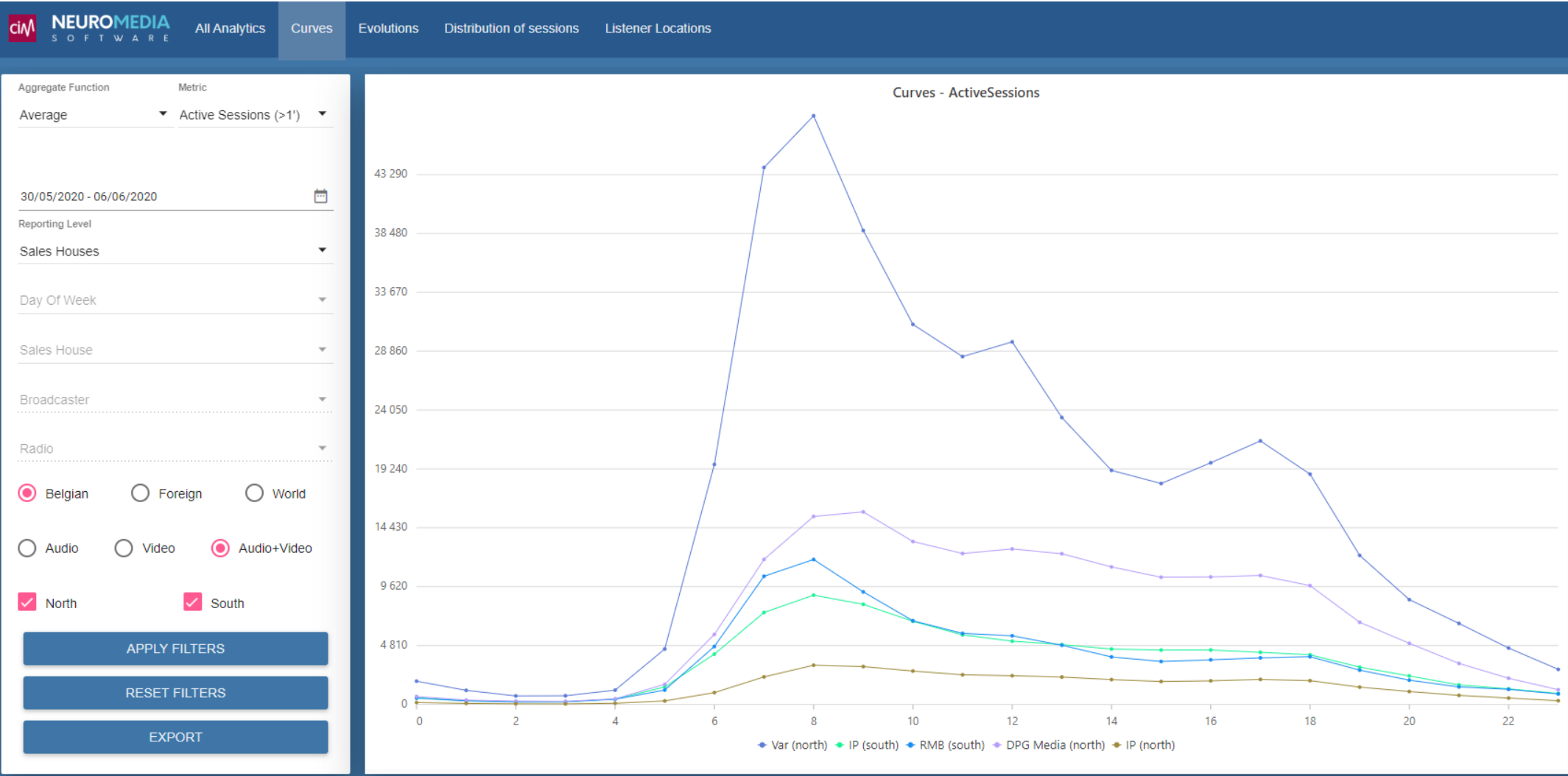
All analytics : overview of all metrics

The screenshot displays the 'All Analytics' dashboard in the ciM NeuroMedia Software. The interface includes a navigation bar with tabs for 'Curves', 'Evolutions', 'Distribution of sessions', and 'Listener Locations'. A left sidebar contains filter controls for 'Aggregate Function' (set to 'Sum'), 'Reporting Level' (set to 'Sales Houses'), 'Radio' (with radio buttons for 'Belgian', 'Foreign', 'World'), and 'Sales House' (with checkboxes for 'North' and 'South'). The main area features a data table with columns for 'Sales Houses', 'Radio', 'Active Sessions', 'Sessions', 'Connections', 'AQH 1'', 'AQH 10'', 'Average Time Spent', and 'Total Ti...'. The table lists data for various sales houses like 'DPG Media (north)', 'IP (south)', and 'RMB (south)'. A pagination bar at the bottom of the table shows '1 of 1 pages (5 items)'.

Sales Houses	Radio	Active Sessions	Sessions	Connections	AQH 1'	AQH 10'	Average Time Spent	Total Ti...
DPG Media (north)		1 388 125	1 056 362	1 829 998	24 148,37	7 158,57	854,36	147 391 7...
IP (south)		681 537	493 657	923 576	11 755,73	3 538,05	710,33	60 711 46...
IP (north)		269 634	214 341	352 697	4 762,44	1 467,88	996,24	33 336 59...
RMB (south)		712 541	503 792	902 071	12 162,36	3 606,97	628,87	56 540 56...
Var (north)		3 239 825	2 547 796	4 178 698	56 978,17	17 539,68	783,75	318 690 1...

Dashboard content : examples (2)

Curves : hour by hour curves for the selected metric



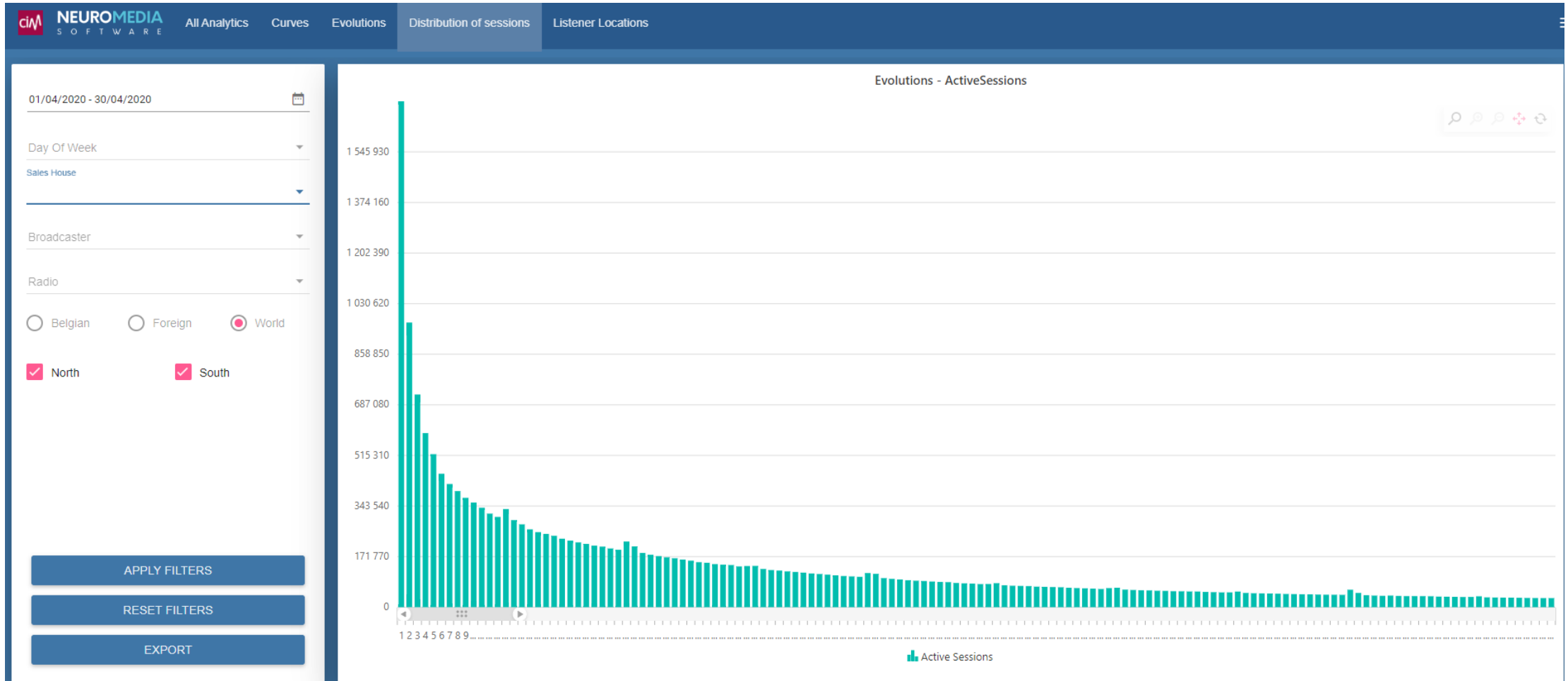
Dashboard content : examples (3)

Evolutions : Graphic overview of results day by day



Dashboard content : examples (4)

Distribution of sessions : breakdown of active session by duration



Dashboard content : examples (5)

Listener location : breakdown of sessions by location

The screenshot displays the Neuromedia software interface for analyzing listener locations. The top navigation bar includes the logo and menu items: All Analytics, Curves, Evolutions, Distribution of sessions, and Listener Locations. The left sidebar contains filters for the date range (01/04/2020 - 30/04/2020), Day Of Week, Sales House, Broadcaster, and Radio. It also features radio buttons for 'Belgian', 'Foreign', and 'World', and checked checkboxes for 'North' and 'South'. Action buttons for 'APPLY FILTERS', 'RESET FILTERS', and 'EXPORT' are located at the bottom of the sidebar. The main content area shows a table with columns for 'Active sessions' and 'Sessions'. The table is filtered by 'Continent' (Europe) and 'Country' (Belgium). The data is broken down by region: Brussels Capital, Flanders, Unknown, and Wallonia. A 'Grand Total' row is also present.

	Active sessions	Sessions
Europe		
Belgium	21 979 362	16 823 772
Brussels Capital	2 334 217	1 684 129
Flanders	15 901 064	12 418 074
Unknown	172 745	126 161
Wallonia	3 571 336	2 595 408
Grand Total	21 979 362	16 823 772

Output metrics definition (1)

- **Active sessions** started sessions of **min. 60 sec** in the chosen period.
- **Connections** started sessions of **min. 2 seconds** in the chosen period.
- **Sessions** started sessions of **min. 10 minutes** in the chosen period.
- **Total time spent** sum of the duration in minutes of active sessions ($\geq 60''$), in the chosen period.

Output metrics definition (2)

- **Average daily unique users**
deduplicated number of unique users (IP * Browser/Player ID), with sessions $\geq 60''$, calculated for a chosen period of max. 24h
- **Average time spent**
avg. duration in min. of an active session ($\geq 60''$) by day
- **Average quarter hour 1' (AQH 1')**
avg. number of running active sessions ($\geq 60''$) within an avg. quarter hour
- **Average quarter hour 10' (AQH 10')**
avg. number of running sessions ($\geq 10'$) within an avg. quarter hour

SERVER-SIDE VS CLIENT-SIDE MEASUREMENT



Client-side : general principles

CIM launched in 2016 already a **client-side** measurement of **users** of digital audio.

1. This study identifies **traffic volumes** for scripted players that allow identification of user cookies.
2. The study also identifies **listeners and their profile**, based on a cookie panel.
3. The data source are **user logfiles** that track the number of audio streams opened in scripted players.
4. This measurement of Radio-over-IP is **NOT exhaustive**:
 - It only measures the audiences on the Belgian territory.
 - It only measures scripted audio players from CIM Internet subscribers.
 - It does not measure aggregators, stand alone players or other players.

The study is done by **Gemius**, a specialist in digital research.

Differences

Each method has its own strengths and weaknesses.

	Client-Side Gemius	Server-Side NeuroMedia
Scope	Limited Only tagged (proprietary) players	Exhaustive owned players & external players (aggregators, Wi-Fi radios...)
Measured data	Streams received by a device	Distributed streams
User behaviour	Rich Actions, audio status (mute/non-mute)	Limited Distributed data chunks only
User information	Profiled audience via cookie panel	Not profiled. Traffic data based on user agent x IP address (user agent = identifier of browser or player)

The differences in method and scope do not allow a direct comparison between the two results.

SERVER SIDE OR CLIENT-SIDE ?

DIFFERENCES AND USE CASES

Server-side data

Subscribers can use the NeuroMedia dashboard to analyse :

Listening patterns

- Evolution of different metrics (# sessions, duration, ...) per stations
- Relation between metrics (e.g. # sessions by user, time spent by sessions)
- Listening curves hour by hour
- Distribution of sessions by duration

Contacts potential

- Number of “active sessions”
- On all listening platforms (owned and not owned)

Client-side data

Subscribers to the CIM Internet study can use **Gemius audience** data, as available in certified software, to analyse :

Station players (owned and scripted) potential reach and profile

- Profile of streaming players users
- Net reach of the players
- Including duplication with other players, sites, ...
- With campaign specific parameters : SOV, capping, ...

Competitive analyses

Competitive analyses can be performed both on server-side data and client-side logs.

- Server-Side data allow the comparison
 - of **traffic volumes** for all available stations, broadcasters, sales houses
 - on all available metrics (sessions, time spent...)
- Client-Side data allow the comparison
 - of **audiences** on different players and stations
 - for specific **target groups** (selectivity...)

All details of the survey are available in the methodology

<https://www.cim.be/nl/radio/methodologie>

<https://www.cim.be/fr/radio/methodologie>



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