HbbTV data fusion with TAM: Reducing Zero Rating and Improving Stability. 5 years experience review.

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FIFTY5 BLUE + **Konodrac**

Hybrid Measurement: HbbTV CTV linear viewing data adds more scale to the measurement toolkit
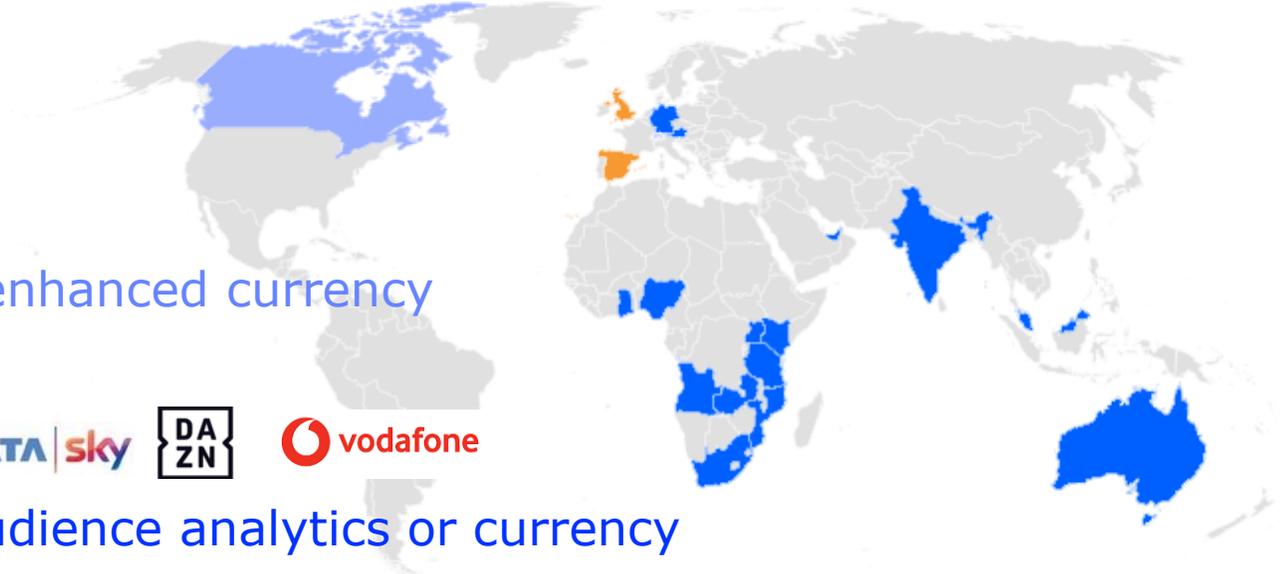

Fusion: TAM Panel with HbbTV Data

Fusion: TAM Panel with Operator data sets for enhanced currency

RPD and census data processing for bespoke audience analytics or currency
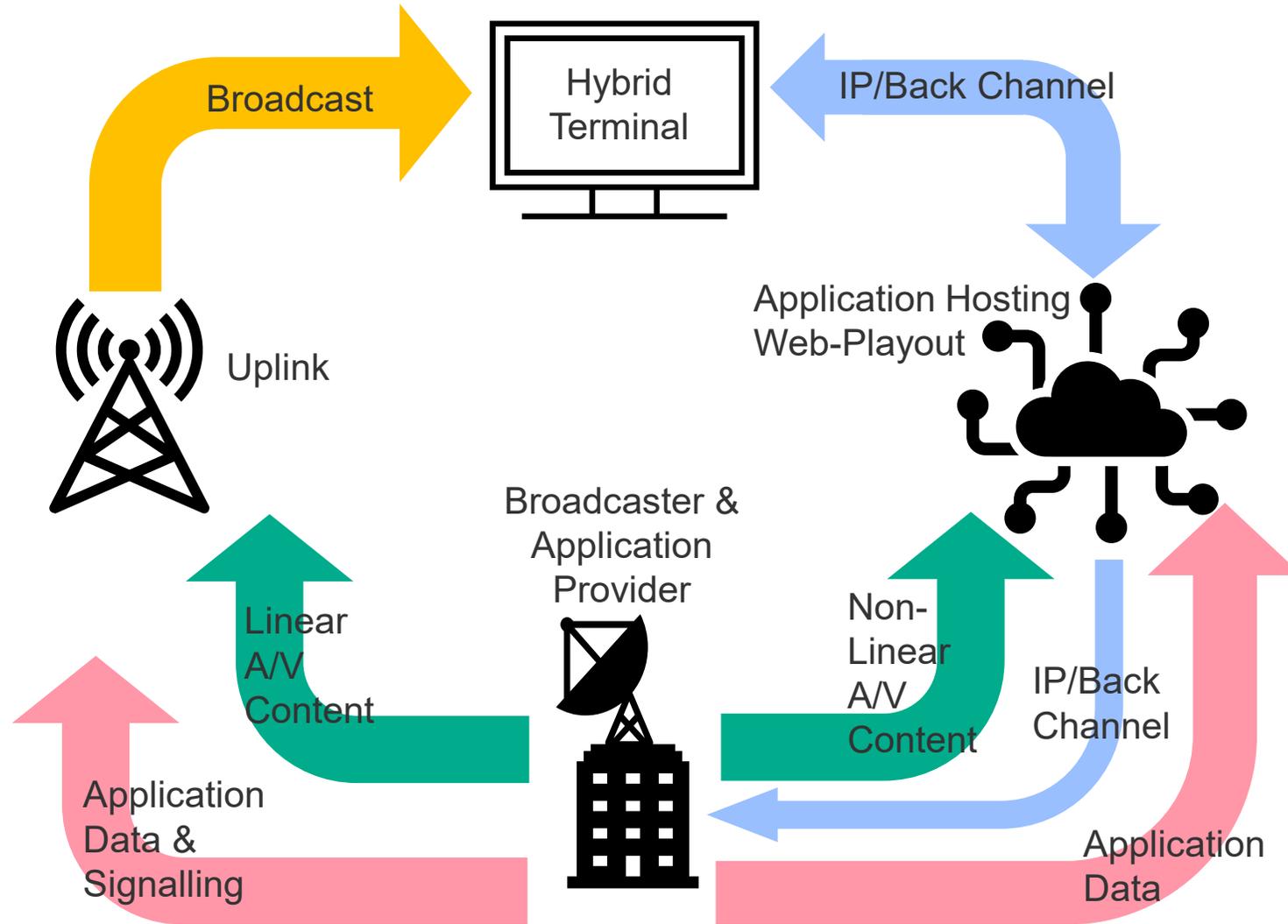
Markets Fifty5Blue services or partners projects that are live or trialling viewing data at scale solutions

★ Markets where HbbTV hybrid audience measurement projects are live or poc with other solutions

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The HbbTV measurement cycle

- Open System

- Not TV OS dependent

- Available in +35 markets and growing

Broadcast

Hybrid Terminal

IP/Back Channel

Uplink

Application Hosting Web-Playout

Broadcaster & Application Provider

Linear A/V Content

Non-Linear A/V Content

IP/Back Channel

Application Data & Signalling

Application Data
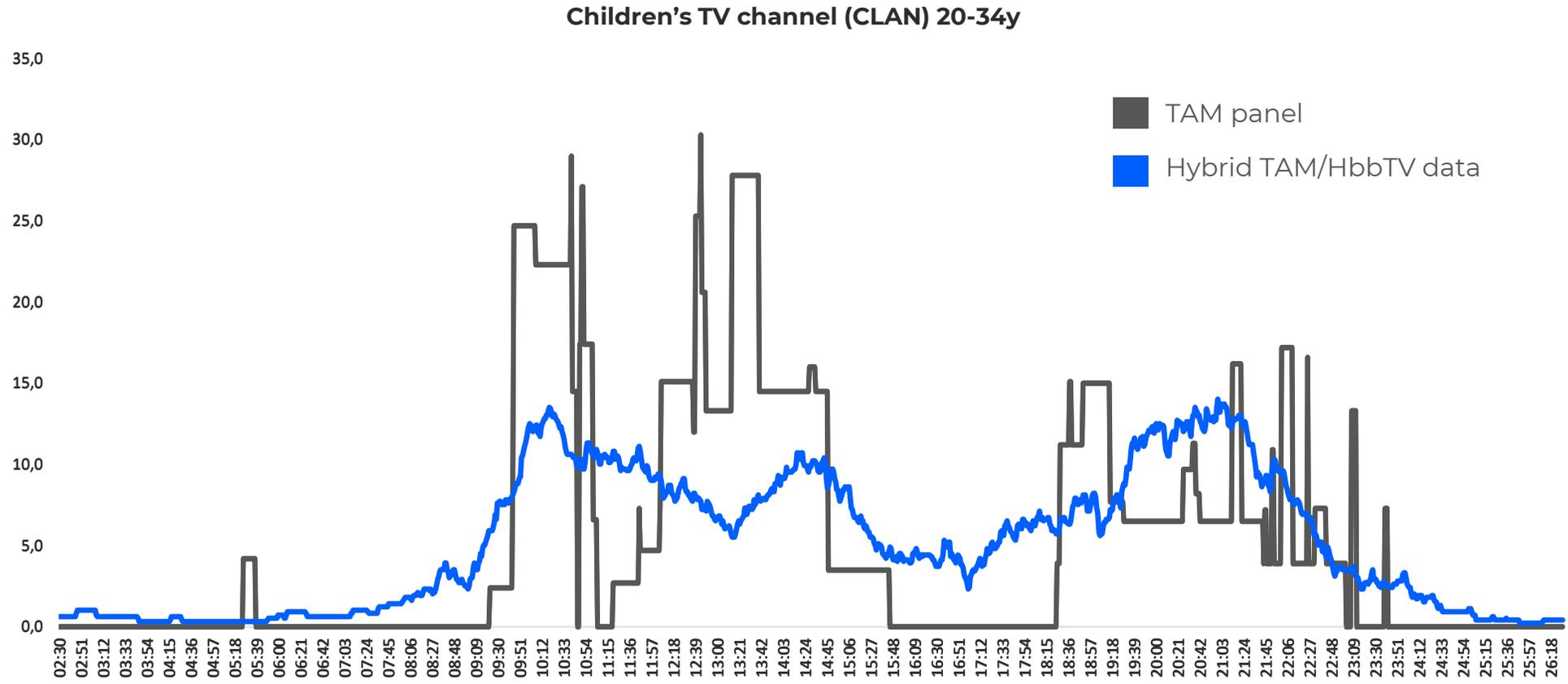
What we proved over 5 years

Zero Rating reductions Granularity Increase for Geos & Demographics

Technical Certification

What does HBBtv data add to the measurement?

- **Allowing Zero point rating reduction**

Children's TV channel (CLAN) 20-34y

Legend:
- TAM panel
- Hybrid TAM/HbbTV data

What does HBBtv data add to the measurement?

- **Allowing Zero point rating reduction**

- **% of Minutes with Zero Rating by Channel**

Ind.4+	TAM	Fusion
La1	2%	0%
La2	20%	0%
24H	16%	0%
CLAN	19%	0%
TELEDEPORTE	37%	2%

What does **KONODRAC** data add to the measurement?

DKISS Channel Spain: granularity and geo targeting

■ TAM panel

■ HbbTV data

AM (000)

HbbTV Devices

DKISS – October 13th 2023

Konodrac

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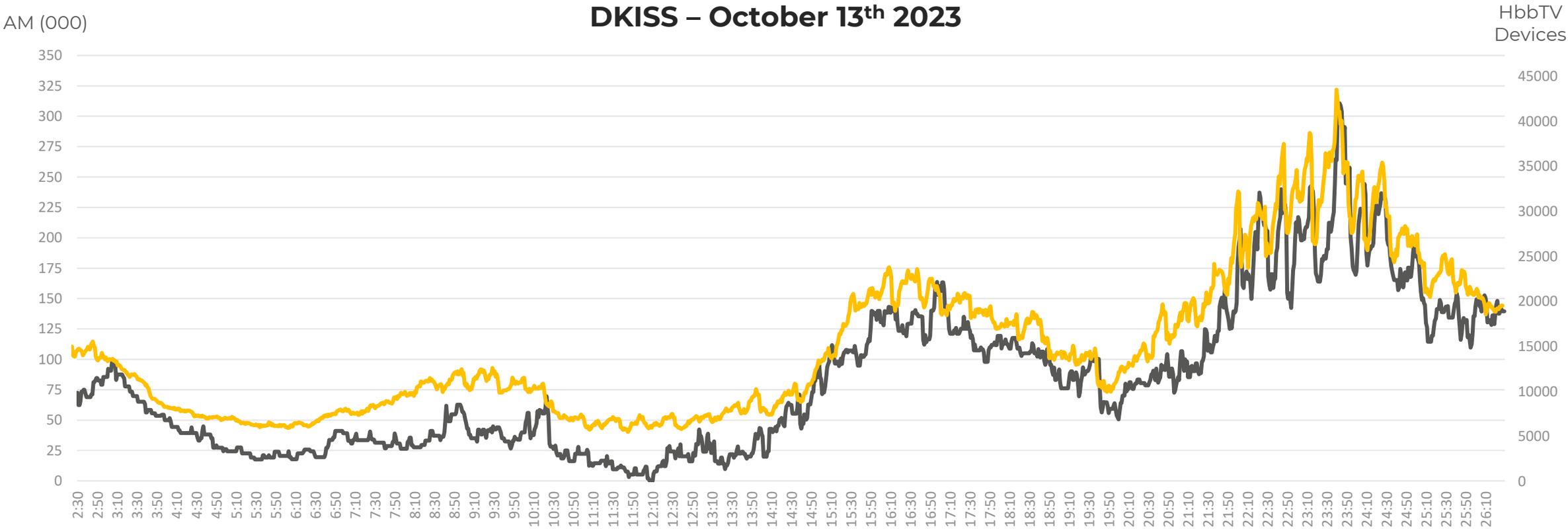
What we proved over 5 years

Zero Rating Reduction
Granularity Increase for Geos
& Demographics

Technical Certification

1 CONGRUENCE OF NOTES

No. of TV sets – AIMC CHECKED 10 (5 brands: LG, SONY, PHILLIPS, PANASONIC, SAMSUNG)

No. OF DIFFERENT AREAS: 5 (MADRID, CATALONIA, GALICIA, CASTILLA Y LEON and CANTABRIA)

No. DAYS UNDER CONTROL: 50 SETs/DAY – 29 DAYS

Nº HOURS MONITORED 125:48:00

NO. OF NOTES TAKEN 4,601

TOTAL NO. OF REGISTRATIONS: 847

No. POC RECORDS (25 channels): 683 (80.6%)

Nº FILES DOWNLOADED 50

NO. OF HOURS COUNTABLE 114:12:00

NO. OF VERIFIABLE RECORDS: 3,681

NO. OF RECORDS ZERO DURATION 20%.

% MICROCUTS: 7.3%.

    % MICROCUTS ≤ 50": 90%

    % MICROCUTS < 100": 100%: 100

3

ADJUSTMENTS MADE IN THE APPROVAL PROCESS TO AUDIMETRY

RESULT

DATA PRELIMINARY

TOTAL LEVEL OF AGREEMENT: 98.8%.

❑ IDENTIFIED LATENCIES AND/OR WIFI SIGNAL OUTAGES IN MONITORED SESSIONS

❑ VERIFIED CUTS IN HBBTV RECORDS BY QUERIES TO TV MENU

❑ VERIFIED THE NON-INCLUSION OF RECORDS THROUGH OTHER DISTRIBUTION SYSTEMS (PLATAFORMS, APPs, …)

❑ NO CHANGE OF CHANNEL NAME, BETWEEN CHANNELS, BETWEEN CHANNELS, BETWEEN CHANNELS, BETWEEN CHANNELS AND BETWEEN CHANNELS.

❑ VISUALISATION (notes) OF NON-PARTICIPATING CHAINS DID NOT RETURN ANY RECORDS

2 INALTERABILITY OF DATA

TOTAL LEVEL OF AGREEMENT: 100%.

- ❑ VERIFIED THE SAME NUMBER AND IDENTITY FOR EACH AND EVERY RECORD

- ❑ VERIFIED THE TRANSFORMATION OF DAY, HOUR, MINUTES AND SECONDS, START, END AND DURATION OF EACH OF THE NOTES

- ❑ IDENTIFIED THE ESTIMATED SCOPE OF EACH SET
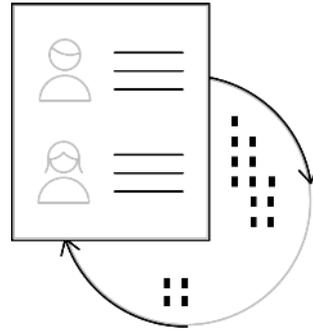
HbbTV fusion with TAM Panel

Methodology

AIMC Technical Evaluation

Reflections

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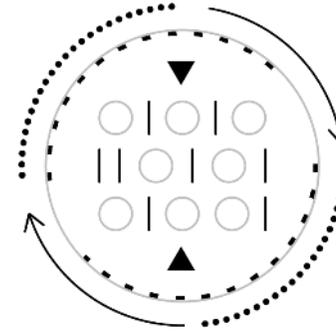# Methodology: Panel and HbbTV Census Data working together

Panel Data

**Large Scale
TV data**

Respondent level viewer behaviour data

Reach levels

Demographic profiles

Cross-platform behaviour

Comprehensive, exact accounts of all activity

Total minutage for all programmes and ads

Total usage by program, player etc

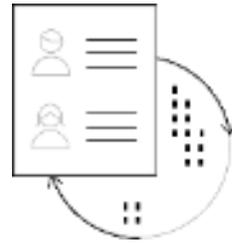Covers long tail

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Scaling TV Audience Measurement: enhanced granularity
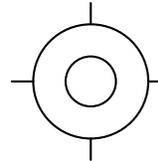
Fusing large scale TV data to TAM

Stage 1 Household / Device level fusion of viewing behaviour from census to virtually expanded panel

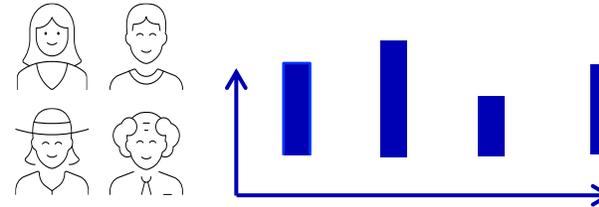**Stage 2** Household / Device level to individual level viewing assignment (PIV)

Panel Data

Census Data

FUSION

Panel data with census granularity

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AIMC Technical Evaluation

AIMC.ES

Spanish JIC / Auditor

Established 1988

Tripartite Organisation, representing Media, Agencies, Advertiser members

TECHNICAL EVALUATION
BY AIMC TV AUDIT DEPARTMENT
About: KANTAR - TAM@Scale

INTRODUCTION

Both the Technical Committee and the Control Board of Kantar asked the TV Audit Services at AIMC for an appraisal report on the KANTAR TAM@Scale project.

This project, broadly speaking, consists of the hybridization in the data of Kantar's audience measurement panel, of information from a "census" source (automated observational) from the universe of connected HbbTV SmartTVs (CTV's).

To make this possible, the TV operator must label its TV channel. Kantar collects the HbbTV census data generated after tagging, at which point KANTAR's data science teams merge the census information received with that from the audience measurement panel obtained by people meter methods.

The implementation of this project pursues three main direct objectives:

1. Provide the Kantar panel with greater granularity of the sample data.

2. The reduction of current sampling errors when using sample expansion factors.

3. The reduction of the so-called Zero-Ratings (time intervals, more or less large, in which sample-based estimators offer a zero audience for a channel/day or spot)

Currently, with all detailed technical documentation already available, AIMC's audit services are in a position to address in greater depth the technical evaluation requested by both organizations.

To make this possible, AIMC identified 3 main areas of action:

1. The Re-production of the processes and algorithms proposed and detailed in the technical documentation provided, on panel files and HbbTV data provided.

2. Analysis of the results after the application of the TAM@Scale process, its elevation to audience metrics, as well as its comparison with the current official estimators.

3. And finally, as a result of the two previous points, share the reflections and, where appropriate, the auditor's recommendation in relation to the project that you wish to launch.

These areas corresponds to the three main objectives, respectively, in their capacity as auditors/advisors on television audience measurement issues:

- Verification that the proposed hybridization processes are carried out appropriately according to the designed rules.

- The assessment of the project's contribution to current audience estimators, the detection and study of differences with official data (if any), their quantification and/or range...

- As well as the detection of improvements, mainly in the algorithms, that ensure their neutrality.

CONCLUSIONS

- The simulation tests carried out on the TAM@Scale 3 algorithm, on different data sets, demonstrate the absence of procedural deviations.

- The absence of biases, together with the reduction in the systematicity of the signs of the differences, derived from the cross-variable analyses, confirm the neutrality of the method used.

- The improvements adopted in the latest version of the algorithm show a better fit in the hybridization process, independently contributing to the pursued objectives:

  ✓ Greater adjustment to the official data, in line with the expectations expected in POC (Tam@Scale 0), and corrects those shown in previous versions V1 and V2.

  ✓ Also maintains the expectations generated regarding the elimination of Technical Zeros.

  ✓ Significantly reduces sampling errors, improving estimators based on purely sample information, providing greater stability and scalability of the system to the participating chains.

- The launch of versions V1 and V2 have been satisfactory, as well as the improved version TAM@Scale 3, although the commitments for daily dumping in real time could not be confirmed for the latter.

- It would be necessary to establish in detail the action protocols for incidents arising from the availability of census data.

- It would also be convenient to adjust the current sampling error formulas, which in any case significantly improve the current estimators.

- The auditor cannot ignore that the application of this methodology adds greater complexity to the system... but also recognizes that it significantly improves the sample audience estimators that are increasingly being affected by the evolution of the television market.

- The participation of ALL TV channels that broadcast under DTT in HbbTV format, under the same methodology, would provide even greater granularity of data to all of them.

- On the other hand, the incorporation of observational data into sample studies, in addition to being a trend in neighboring countries, provides the industry with a significant improvement.

Signed:

MIGUEL ÁNGEL FONTÁN.
Managing Director AIMC

AIMC Technical Evaluation

PROJECT SCOPE

1. Provide panel with greater granularity of the sample data.

2. **Reduction of current sampling errors** when using sample expansion factors.

3. **Reduction of Zero-Ratings** (time intervals, more or less large, in which sample-based estimators offer a zero audience for a channel/day or spot)

AUDIT SCOPE

1. **Re-production of processes and algorithms** proposed and detailed in the technical documentation provided, on panel files and HbbTV data provided.

2. Analysis of results after the application of the TAM@Scale process, its elevation to audience metrics, as well as its **comparison with the current official estimators.**

3. As a result of the two previous points, share reflections and, where appropriate, **auditor's recommendation** in relation to the project that you wish to launch.

AUDIT PURPOSE

- **Verification** that proposed hybridization processes are carried out appropriately according to the designed rules.

- The assessment of the project's contribution to current audience estimators, **detection and study of differences with official data** (if any), quantification and/or range...

- As well as the **detection of improvements**, mainly in the algorithms, that ensure their neutrality.

AIMC Technical Evaluation – selected highlights of conclusions

Absence of biases...derived from the cross-variable analyses.....confirm the **neutrality of the method** used

Significantly **reduces sampling errors**, improving estimations based on purely sample information, provides **greater stability and scalability** of the system to the participating channels.

The auditor cannot ignore that the application of this methodology adds **greater complexity** to the system... but also recognizes that it significantly **improves the sample audience estimators** that are increasingly being affected by the evolution of the television market.

The **participation of ALL TV** channels that broadcast under DTT in HbbTV format, under the same methodology, would **provide even greater granularity** of data to all of them.

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Reflections:

Hybrid unification of data – viewing volumes from census, people-level insights from panel.

Positive results with less zero ratings, adding stability

Better data – closer to the truth, not always bigger, and sometimes smaller.

Validation is very important

Industry agreement to adopt requires robust governance

Start the journey as it is long