Radio Audience Measurement

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Radio Audio Measurements

• carried out either by
  – declarative means (day-after-recall or dairies)
  – using of electronic (passive) technology

• problems to solve
  – highly mobile medium, consumption can take place anywhere
    • at home
    • in the car on public transport
    • at work
    • in shopping malls
    • or elsewhere
  – transmitted through different platforms: FM, AM, DAB, IP service
Main Methodologies

2 primary means

• **declarative** – asking people to remember or record their listening behaviour
  – approx. 4/5 European countries
  – CATI (dominant technology), CAWI, CAPI, PAPI – day after recall
  – Dairies (paper or online)

• **passive** – using technology, that passively detects any audio in the vicinity of the measured individual
  – Portable People Meter
    • i.e. Switzerland, US, Canada, Iceland, Denmark, Sweden, Norway, France, Italy, Netherlands
  – smartphone software applications
    • i.e. Finland, UK, Czech Republic

• **hybrid methodologies**
  – combining of data collecting
  – combining of electronic systems and declarative data
    • Denmark, Norway, Iceland, Sweden, Canada, US
Technologies of Passive Measurement

• **Audio-matching**
  – comparison of compressed recorded audio samples with stored recordings of the original radio broadcast
  – independent, no need for inserting a signal into audio stream
  – no able to distinguish between two station playing the same content (i.e. syndicated chart shows), unable to identify the platform

• **Watermarking**
  – pick up inaudible signals that have been inserted into radio broadcast
  – able to identify station, platform
  – requires all stations to insert the watermarking – additional cost, may cause problems with specific types of station (i.e. classical music)
Pros and Cons of Diary

• Pros
  – same person during the week – more reliable picture
  – correct calculation cumulative weekly reach, frequency, Time Spend Length
  – more detailed picture of behaviour (first choice etc.)

• Cons
  – over-reporting favourite stations, less precise about others
  – depending on respondents’ discipline
  – more expensive then Recall studies
  – difficult to reach specific target audience (young people, people with higher income etc.)
Pros and Cons of Day-After Recall (CATI/CAWI/PAPI)

• Pros
  – higher control over standards and consistency of data collection
  – less expensive than Dairy
  – better reach of specific and narrow target audience
  – usually higher general reach figures compared to Diary
  – bigger sample size possible, can be reported more frequently
  – less work for respondent

• Cons
  – relative errors as different people provide data for different days of the week
  – memory errors
  – problems with number of station – only for CATI
  – usually lower reach figures for Average Quarter Hour (AQH) compared to Diary
Pros and Cons of Electronic/Passive Measurement

- **Pros**
  - brings common currency to TV and radio planning and buying
  - minute-by-minute (second-by-second) data
  - better optimisation of radio programme and campaign planning
  - frequent reporting – every day
  - with watermarking technology can report different platforms

- **Cons**
  - still not unified support among industry actors
  - measures proximity to radio signal (even when respondent is not aware of it)
  - higher costs, problems with panel recruiting and administration
  - problems with distinguishing between stations broadcasting the same content (audio matching)
  - problems with all occasion and high noise situations (watermarking)
  - lower TSL
  - difficulties with small stations reporting
Switching from Declaration to Electronic Measurement when using electronic measurement...

• Reach for individual stations tends to be higher

• Time Spend Length (TSL) is generally lower
  – reason for it is tendency of people overestimate the time they are listening to favourite station and may not report or underestimated alternative stations or stations they heard on public transport, in shopping malls etc.
Experiences with Electronic Measurement
Experiences with Electronic Measurement

- **US**
  - combination of PPM and declaration
  - Arbitron (Nielsen)
  - smaller stations increased their share
  - less popular day parts increased in importance
  - problems with some ethnic minority-owned broadcasters over under-reporting

- **Nordic region (Norway, Denmark, Sweden)**
  - switch to PPM – 2006 Norway, 2007 Denmark, 2013 Sweden
  - TNS under Arbitron (Nielsen) licence
  - increase in reach and decrease in TSL
  - shows importance of communication about the additional value of PPM data
Experiences with Electronic Measurement

- **France**
  - testing conducted in 2013, 2015
  - Médiamétrie’s RateOnAir
  - lower figures for morning and evening than CATI – might be caused by not caring the device
  - used for modelling long-term listening

- **Belgium**
  - since 2003
  - TNS under Arbitron (Nielsen) licence
  - not used on commercial basis, primarily for programming
  - radio measurement contract for GfK is now extended until the end of 2017
Experiences with Electronic Measurement

• UK
  – tested many forms of electronic measurement
  – 2011 – major review of the viability (technical and economic) of a variety of electronic measurement techniques, included multiple-meter trial
  – still issues to solve
    • i.e. measurement of the specific platform (AM/FM, DAB, etc.) or the costs of EM
  – 2012/2013 tests of Mediacell

  – Q1 2016 – focus on improving representation by adding a mobile version of the diary to the field in (offers the participant the choice to complete the diary by smartphone, tablet or both)
  – MIDAS
    • new layer of insight into emerging listening behaviour
Experiences with Electronic Measurement

- **Italy**
  - 2007 – first data
  - reach slightly different from currency data, but dramatically lower figures for TSL
  
  - 2012 – new radio measurement – combining CATI and panel of respondents that wear electronic meter and also fill-out the electronic dairy
  - problems with different figures from CATI vs. Panel
    - CATI – what was really listened to and what was only imagined
    - Panel – some exposures are remembered, but some are forgotten (unconscious)
  
  - 2014 – electronic meter stopped, now only CATI
  
  - For the future
    - Meters can be used together with other methods but it will measure different things
    - Therefore new standards need to define
Experiences with Electronic Measurement

- **Experiments in the Czech Republic**
  - Watermarking
    - GfK watch – testing 2005
      - Radio results: daily curves similar, for most stations higher figures – mainly in the evening
  - Audiomatching
    - Nielsen Admosphere – SimAir Mediaresearch - testing 2014
    - Nielsen Admosphere – MRL Izrael app smartphone - testing 2014
    - Nielsen Admosphere – SimMobile app smartphone - testing since 2015
    - Median – adMeter app smartphone - testing since 2014
      - main aim – cross media and cross platform measurement
      - Radio results: a bit lower values for Daily Reach and greatly for TSL, higher Weekly Reach

main task for the future – panel structure and panel management
SimMobile application (Nielsen Admosphere)

- Application for smartphones with Android
- Distinguishing of sounds based on audiomatching
- Works on many types of mobile devices
- Continuous optimisation of effectiveness of the application to extend the battery life
- Uses the infrastructure SimBios™, static and mobile measurement devices can function in one project
- Recognition of place of use based on information from wi-fi networks and GSM connection points
SimMobile application (Nielsen Admosphere)
Portable People meter (Nielsen)

- Experiments in the USA

PPM 360 v2
- Worldwide 3G support
- Design based on Internet of Things (IoT) components
- Faster processor, longer battery life

Smartphone meter
- Android trials and Proof Of Concept’s in 2015
- Based on Electronic Mobile Measurement platform
- Optimized audio algorithm to save battery life

Wearable and virtual meter research
- Bracelets, pins, smartwatches, etc.
- Interface with smartphone for data delivery
- Virtual meters, connected car, etc. for supplemental data

2014

2015

2016-17
Radio Measurement
Czech Republic
Radio Measurement in Czech Republic

• 1994 – first official media measurement MEDIA PROJECT
  – print, radio, TV
  – till 2005 - PAPI

• 1997 – TV electronic measurement (peopemeters)

• 2005 – discussion about dividing MEDIA PROJECT
  – print (and selected TV stations)
  – radio

• 2006 – 2 separated official projects
  – MEDIA PROJEKT – CAPI
  – RADIO PROJEKT – CATI
Switching to CATI
Czech Republic
Czech Experience when Switching to CATI

• Pros
  – better reach of specific and narrow target audience
  – higher control over data collection
  – possibility to spread interviews within week/day
  – less expensive then PAPI
  – higher general reach figures compared to PAPI

• Cons
  – identification of station within network
  – bigger difficulties with filling out quarter-hour profile of yesterday
  – necessity to eliminate/prioritize some target groups
  – necessity for additional quotas and different (continuous) approach toward quotas
## Test results – Radio Total

<table>
<thead>
<tr>
<th></th>
<th>test project CATI</th>
<th>Media Project (1.q + 2.q 2005)</th>
</tr>
</thead>
<tbody>
<tr>
<td>weekly reach radio total</td>
<td>92,80%</td>
<td>89,7%</td>
</tr>
<tr>
<td>average number of stations during last 7 days (per respondent)</td>
<td>1,94</td>
<td>1,29</td>
</tr>
<tr>
<td>average number of stations during last 7 days (per listener)</td>
<td>2,09</td>
<td>1,44</td>
</tr>
<tr>
<td>daily reach radio total</td>
<td>73,60%</td>
<td>72,6%</td>
</tr>
<tr>
<td>average number of stations yesterday (per respondent)</td>
<td>1,11</td>
<td>0,85</td>
</tr>
<tr>
<td>average number of stations yesterday (per listener)</td>
<td>1,51</td>
<td>1,17</td>
</tr>
<tr>
<td>ASL (Average Spent Length) (population)</td>
<td>240,1</td>
<td>169,1</td>
</tr>
<tr>
<td>ASL relative (listeners)</td>
<td>326,4</td>
<td>232,8</td>
</tr>
<tr>
<td>AQH in thousands</td>
<td>1 459</td>
<td>1 027</td>
</tr>
<tr>
<td>AQH in %</td>
<td>16,7%</td>
<td>11,7%</td>
</tr>
</tbody>
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Future of Radio Measurement
Main Tasks for the Future

Everything is changing – different approach toward media consumption

• How to measure Online Radio Stations
• How to measure Podcast listening
• How to measure Radio Apps
• How to measure personalised online audio (LastFM, Spotify)

• Further testing and evaluation of electronic measurement
• Combining of data
  – radio and online data
  – electronic and declarative methods of data collection
  – different declarative methods of data collection

Keep in mind – there is no unified and correct solution, we need specific one for every market.
Thank you for your attention!