

# TV market is changing: Current trends in (not only) TV audience measurement

Tereza Šimečková



#### **University of Economics, Prague - May 23, 2019**

19th International Joint Conference: Central and Eastern Europe in the Changing Business **Environment** 









Vývoj software pro práci s mediálními daty



# TEREZA ŠIMEČKOVÁ



Tereza Šimečková
Chairwoman of the Board
Nielsen Admosphere

Company co-founder and co-owner.

Graduated from the Faculty of Mathematics and Physics at Charles University in Prague in the field of Informatics – Data Engineering.

Worked on different positions in companies specialized to market research, especially in the area of development and marketing of software for analysis of peoplemeter data and market research data.

In 2001 she established MEDIARESEARCH. She has been Director of the company – nowadays called Nielsen Admosphere – since its foundation.





#### **NIELSEN ADMOSPHERE COMPANY**



Establishment of MEDIARESEARCH, a.s.



Partnership formed with nielsen







Employees of the holding + external co-workers



We carry out technologically and methodologically extensive research projects.













#### **OUR PORTFOLIO OF ACTIVITIES**





Media audience measurement Research & Analysis

Advertising monitoring Ad Intel

Software development for media data processing





# TAM in the Czech Republic - "PEM"



In 1997, TV audience electronic measurement started



Association of Television Organisations runs a tender each 5 years



**Nielsen Admosphere** is the provider since 2002



**TAM panel** of 1.900 households



Establishment Survey of 12.000 households annually



Audiomatching technology, up to 100 channels measured



Time-Shifted viewing on TV sets measured since 2013



Adwind Kite analyses SW provided to the market

# 3-45

average daily TV viewing in 2017 (15+)





#### **TV CONSUMPTION - AGE CATEGORIES**







4-14 years old

15-24 years old

25-34 years old





# 25-34







#### **PCEM 2018–2022 SUMMARY**

#### PEM TV - TV part

Panel **1 900 HH** (4 500 individuals), Net **1 700** HH Measurement up to **100 channels** 

**Peoplemeter - Audiomatching** technology

**Live and Time-shifted viewing** (0-7 days)

"Continual Survey" 12 000 HHs per year

**LifeStyle Survey** (adults 15+ and kids 4-14)

**Data delivery** (TV day 6:00–6:00) until 8:00 (usually 7:15)

Data reported with second accuracy

Cloud based data analyses SW, Realtime data

#### PEM D - Digital part

Site-centric measurement
Nielsen SDK technology
Census data
Involved media

#### PC, Smartphones, Tablets

Video content

Programs, Commercials, Live streams

#### **HbbTV**

Video content & Static content

#### Data harmonization (PEM TV × PEM D)

coordinated labeling of both digital video content and TV content reporting of the viewing on all devices (TV, PC, Tablet, Smartphone, HbbTV) together in one software



### MEASURING TECHNOLOGY TV METR®, SIMEAR®



- Development and production in Czech Republic
- Measuring accurate to seconds
- GSM data transfer (SMS, data transfers)
- The possibility of online operation, implicitly on (Online data)
- Personal login and logout functions, definition of guests, reporting of departures, sending

messages





#### **MEASURING TECHNOLOGY – MAIN TASKS**



For every TV - 1 set of measuring technology





What does the measurement by the TV meter detect?

What is on TV?

Who is watching the TV?

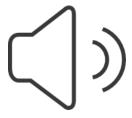
- TV meter automatically ensures, connected to TV and TV technology
- Using <u>non-invasive</u> technology detection of tracked content (audiomatching)
- The co-operation of households, individual members are logging in/logging out using the remote control
- The necessity of continuous control



#### MAIN PARAMETERS – AUDIOMATCHING



- 100% non-invasive technology
- Helps to solve the declining willingness of households (new modern TV...)
- Independence of the way of receiving TV signal (DVBT, cable...)
- Measurement of deferred audience (detection of played content)
- Possibility to use the same technology for measuring on computer (measuring application SimStream™)
- Necessity of making reference station sounds
  - (stable back-up system on the developer's side SimStorage™)



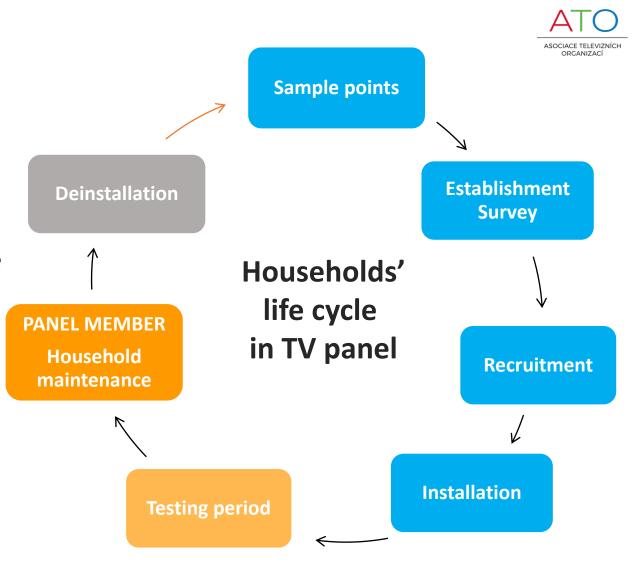


#### **TVMETER PANEL**

 Guaranteed yearly rotation: 25% (continuous)

Households recruited only from the sample of Establishment/Continual Survey

- Panel management
- Selection of households for elimination from the panel (numerous criteria)
- Representativeness of panel: norms and weighting





#### PANEL MANAGEMENT



- Daily automated control of technical status of measuring device
- Daily automated control of household cooperation quality detection of improper TV meter use (log-in and log-off)
- Motivation system for households (catalogue of material rewards)
- Telephone and written communication (toll-free 24 hours line)
- Actualization of data about household (several ways)
- Web application "On-line household"
- Motivational system for households (collecting points, catalogue of material rewards)







#### PANEL WEIGHTING

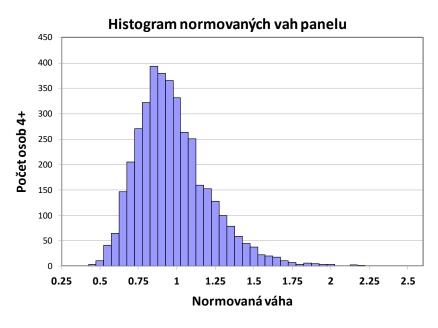


#### Goal: To reach perfect representativeness (above norms fulfilment)

- Done on daily basis on net panel individuals 4+
- Weighting method: So-called Iterative Proportional Fitting

#### **Set of weighting variables:**

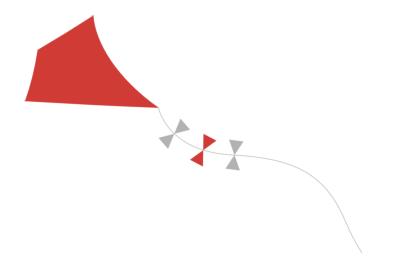
- Gender, Age, Gender x Age, Education, Economic activity
- Region, Household size, Residence size
- Number of TV sets, Cable/IPTV, Satellite



- Extent of weights max. 0.4 2.5, determinative deflection around 0.23
- The weight of 88% of panellists is in the interval [0.7, 1.4] = confirmation of good representativeness of panel







# We create analytical software to make it easy, even for us.

Adwind Software team



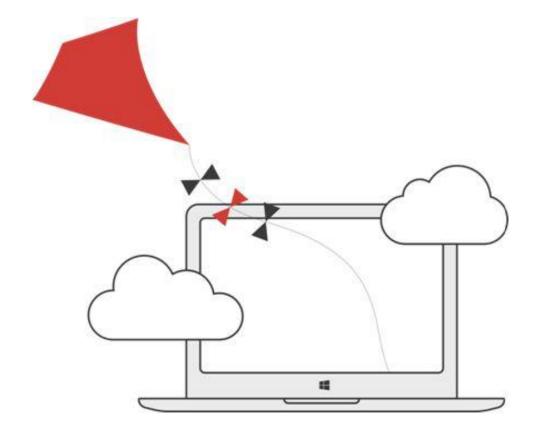
#### **ADWIND KITE**



Integrated solution for analysis of peoplemeter data and data from ad monitoring

Fast and effective evaluation of media measurement data

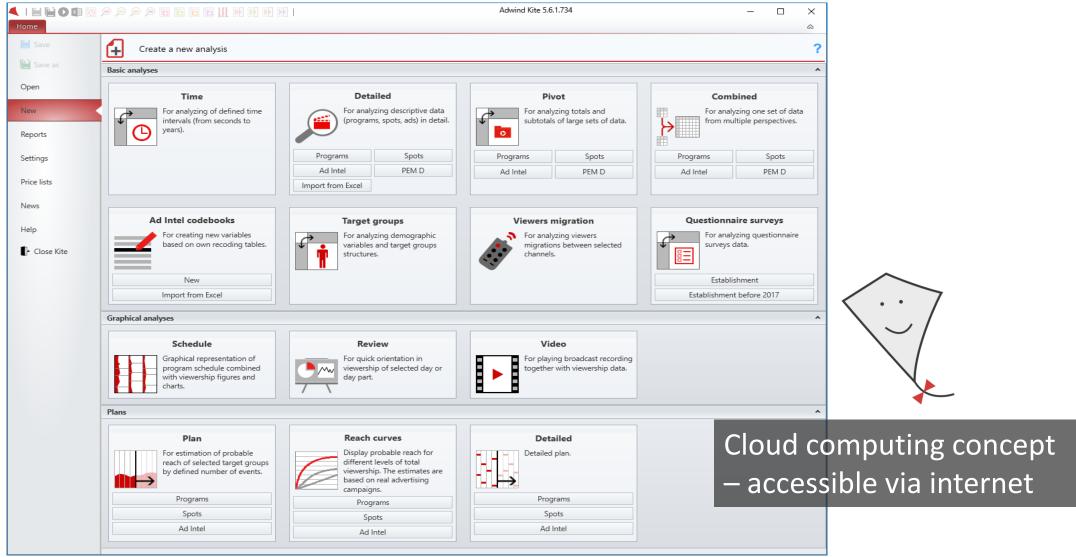
Since 2013 we have delivered Adwind Kite Lite as **primary software of peoplemeter research** 





#### **ADWIND KITE**

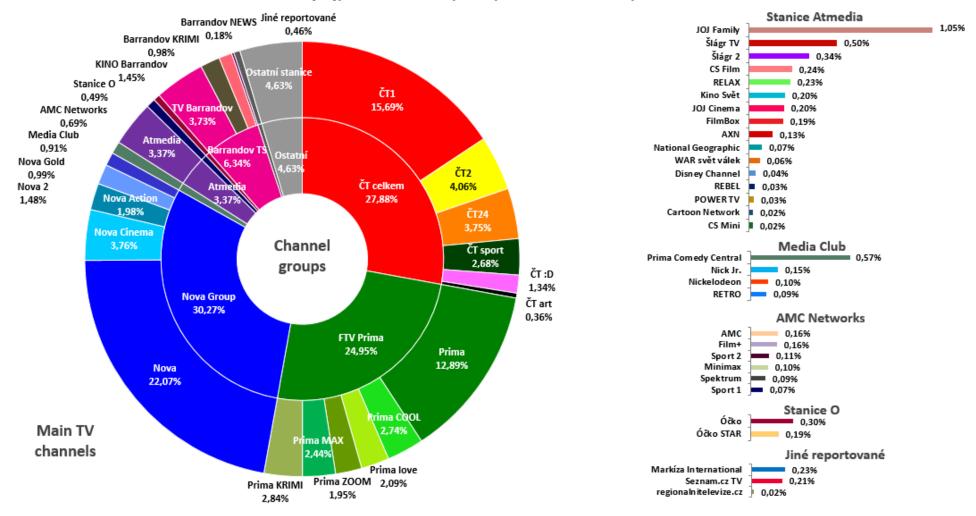






## SHARE (%), APRIL 2019, 15+, TV LIVE

Share (%), April 2019, 15+, TV live + TS0-3, 6:00 - 6:00





#### MAIN TV CHANNELS AND CHANNEL GROUPS

Main TV channels and channel groups April 2019, 15+, TV live + TSO-3, 6:00 - 6:00

	_			· .	, , , , , , , , ,							
Název stan	iice	ATS (hh:mm)		Share (%)		Denní re	each (%)	Týdenní i	reach (%)	Měsíční reach (%)		
ČT1	<b>C)</b> 1	0:34		15,69		36,9		69,6		84,2		
ČT2	()2	0:09		4,06		17,0		46,7		68,7		
ČT24	()24	0:08	1:00	3,75	27,88	14,9	48,8	35,1	77,9	53,4	89,0	
ČT sport	() sport	0:06	1.00	2,68	27,00	9,3	40,0	27,8	77,9	45,5	89,0	
ČT :D	():D	0:03		1,34		4,9		16,4		32,0		
ČT art	() art	0:01		0,36		2,2		10,5		24,4		
Prima	Prima	0:28		12,89		32,7		66,4		83,4		
Prima COOL	#COOL	0:06		2,74		10,9		34,6		57,5		
Prima love	<b>Alove</b>	0:04	0:53 2,09 1,95		24,95	7,0	47,2	21,3	78,4	38,8	89,9	
Prima ZOOM	ZO	0:04				8,5		27,2		47,6		
Prima MAX	ľΜΔΧ	0:05		2,44		9,3		33,3		56,1		
Prima KRIMI	KRIMI	0:06		2,84		6,4		16,3		27,3		
Nova	n⊗va	0:47		22,07		43,8		75,0		87,5		
Nova Cinema	CINEMA	0:08		3,76		12,8		42,3		67,7		
Nova Action	ACTION	0:04	1:05	1,98	30,27	7,2	51,4	20,6	80,2	36,0	90,5	
Nova 2	nova 2	0:03		1,48		5,0		14,7		27,9		
Nova Gold	GOLD	0:02		0,99		3,8		12,3		25,8		
Media Club	© mediaclub	0:02	0:02	0,91	0,91	3,7	3,7	13,4	13,4	26,9	26,9	
Atmedia	at <b>media</b>	0:07	0:07	3,37	3,37	11,9	11,9	32,4	32,4	51,3	51,3	
AMC Networks	AAC NETWORKS STEIN FOOL	0:01	0:01	0,69	0,69	2,7	2,7	9,1	9,1	16,8	16,8	
Stanice O	ÓČKO	0:01	0:01	0,49	0,49	1,8	1,8	7,4	7,4	17,5	17,5	
TV Barrandov	<b>☆tv</b>	0:08		3,73		11,0		29,0		47,3		
KINO Barrandov	kino	0:03	0:14	1,45	6.34	5,1	16,6	18,2	40.2	34,0	50.5	
Barrandov KRIMI	<b>☆</b> krimi	0:02	0:14	0,98	6,34	4,3	10,0	16,7	40,2	33,2	59,5	
Barrandov NEWS	news	0:00		0,18		1,0		4,2		9,3		
Ostatní stanice + Jiné		0:11	0:11	5,09	5,09	21,1	21,1	50,6	50,6	71,9	71,9	
Všechny TV		3:34	3:34	100	100	71,9	71,9	89,3	89,3	95,2	95,2	



#### **25 MOST WATCHED TV SHOWS**

25 most watched TV shows April 2019, 15+, 15-54, TV live + TS0-3, All channels

Pořadí	Titul	Ctanics	Počet	Průměrná	15	5+	15-54		
Poradi	litui	Stanice	uvedení	délka	Rating 000	Share (%)	Rating 000	Share (%)	
1	Živé terče	ČT1	1	1:06:55	1313	29,71	538	27,00	
2	Televizní noviny	Nova	30	0:39:38	1291	38,54	502	37,32	
3	Specialisté	Nova	5	1:00:48	1263	30,11	545	29,20	
4	Rapl II	ČT1	1	1:09:42	1217	28,26	595	30,93	
5	Vodník	ČT1	2	1:09:02	1190	27,03	531	26,71	
6	Ordinace v růžové zahradě 2	Nova	9	1:20:37	1128	29,75	413	25,46	
7	Černé vdovy	Prima	1	1:14:44	1123	25,39	511	24,85	
8	S čerty nejsou žerty	Nova	1	1:52:01	1086	32,37	526	35,14	
9	Sportovní noviny	Nova	30	0:06:00	1068	29,64	444	29,68	
10	Ulice	Nova	22	0:58:36	1046	35,04	441 37,98		
11	Čertoviny	Prima	1	2:00:58	991	29,06	485	32,78	
12	Všechnopárty	ČT1	4	0:52:03	967	30,45	288	20,64	
13	Výměna manželek	Nova	3	1:17:39	949	24,15	591	34,27	
14	Strážmistr Topinka	ČT1	1	0:53:07	942	25,22	314	20,37	
15	Zázraky přírody	ČT1	4	1:10:14	861	23,83	269	17,59	
16	Bajkeři	Prima	1	1:58:34	852	23,29	506 31,05		
17	Kameňák	Nova	2	1:14:47	838	22,08	381	23,43	
18	Modrý kód	Prima	8	1:16:33	804	19,96	280	15,92	
19	Holky pod zámkem 3	Nova	1	1:01:33	786	20,01	454	26,72	
20	Pravý rytíř	ČT1	1	1:19:38	765	18,16	389	19,86	
21	MasterChef Česko	Nova	4	1:15:54	725	24,49	449	33,63	
22	Princezna a písař	ČT1	1	1:20:46	710	18,96	282	17,85	
23	Černí baroni	ČT1	1	1:38:41	689	17,89	282	282 17,08	
24	13. komnata 2019	ČT1	3	0:26:04	677	18,94	195	12,64	
25	Toulavá kamera 2019	ČT1	4	0:29:01	671	40,32	242	31,38	



#### **TOP 25 MOST WATCHED TIMESHIFTED TV SHOWS**

TOP 25 most watched timeshifted TV shows G31(TV TS0-7), April 2019, 15+, 15-54

Pořadí	Titul	Stanice	Datum	Den	Začátek	Konec	Rating 000 15+	Rating 000 15-54
1	Černé vdovy	Prima	7.4.2019	neděle	20:20:41	21:35:25	191	118
2	Živé terče	ČT1	28.4.2019	neděle	20:05:38	21:12:33	190	119
3	Specialisté	Nova	1.4.2019	pondělí	20:21:10	21:17:50	185	121
4	Vodník	ČT1	7.4.2019	neděle	20:04:28	21:09:35	181	122
5	Ulice	Nova	15.4.2019	pondělí	18:27:19	19:25:36	169	121
6	Rapl II	ČT1	1.4.2019	pondělí	20:05:32	21:15:14	164	105
7	Specialisté	Nova	29.4.2019	pondělí	20:22:23	21:21:26	160	92
8	Ulice	Nova	26.4.2019	pátek	18:28:59	19:26:33	152	100
9	Ulice	Nova	12.4.2019	pátek	18:28:00	19:25:20	148	104
10	Ulice	Nova	30.4.2019	úterý	18:29:18	19:26:57	147	98
11	Vodník	ČT1	14.4.2019	neděle	20:08:01	21:20:58	145	77
12	Ulice	Nova	9.4.2019	úterý	18:25:15	19:24:54	144	106
13	Specialisté	Nova	15.4.2019	pondělí	20:20:15	21:23:40	141	85
14	Ulice	Nova	17.4.2019	středa	18:25:10	19:25:02	139	97
15	Specialisté	Nova	8.4.2019	pondělí	20:21:02	21:23:03	137	81
16	Ulice	Nova	2.4.2019	úterý	18:27:36	19:25:51	136	101
17	Specialisté	Nova	22.4.2019	pondělí	20:19:45	21:22:35	136	95
18	Ulice	Nova	11.4.2019	čtvrtek	18:25:11	19:24:36	133	90
19	Ulice	Nova	24.4.2019	středa	18:27:59	19:25:42	132	85
20	Ordinace v růžové zahradě 2	Nova	30.4.2019	úterý	20:22:10	21:41:06	128	61
21	TEMNÝ KRAJ	Prima	28.4.2019	neděle	20:19:58	21:40:08	126	66
22	Specialisté	Nova	29.4.2019	pondělí	21:21:39	22:28:21	124	67
23	Kameňák	Nova	5.4.2019	pátek	20:21:42	21:34:27	122	82
24	Ulice	Nova	18.4.2019	čtvrtek	18:27:19	19:25:33	122	80
25	Výměna manželek	Nova	3.4.2019	středa	20:21:07	21:38:08	121	102



#### LIFESTYLE SURVEY

ASOCIACE TELEVIZNÍCH ORGANIZACÍ

Adults 15+



Children 4-14



TV behavior
Internet and other media
Household equipment
Household income and
expenditures
Consumer behavior
Leisure activities
Interests, attitudes, values

Media equipment and media consumption
Children and TV
Children and IT
Values, Attitudes,
Activities, Interests
Family and school

LSS (LifeStyle Survey) = continuous quantitative lifestyle survey conducted with TV panel members

Extension of sociodemographic description of households and individuals (members of the TV panel) in daily TV viewing data.

Can be used also as a stand-alone continuous survey for analysis of socio-economical status, lifestyle, consumption and other phenomena.



#### **ABCDE SOCIO-ECONOMIC CLASSIFICATION**

Transparent and progressive method developed by Nielsen Admosphere

Universally used method of categorization of socio-economic score of households.

- Based on easily answerable questions
- Includes 8 categories A to E
- Categories are octiles of the socio-economic score of all households in Czech population
- Method based on research on a representative sample of Czech households
- Limits for socio-economic score are recalibrated annually, so that they reflect year-on-year changes in the structure of Czech population (according to data from the Czech Statistical Office and results of the CS PCEM)



- 3	Skóre	domác	nosti	***	Hlava domácnosti:									
ABCDE	Prûmêr Od		Do	% domácností v populaci	Ekonomicky aktivní	Podnikatel, vedoucí	Minimálně maturita	Minimálně bakalář						
A	1.63	1.38		12.5%	99.5%	71.7%	93.8%	70.5%						
В	1.27	1.19	1.38	12.5%	96.9%	45.2%	81.0%	35.7%						
С	1.02	0.86	1.19	37.5%	84.0%	14.4%	52.8%	15.0%						
D	0.73	0.63	0.86	25.0%	22.7%	0.8%	39.3%	5.4%						
E	0.57	7000	0.63	12.5%	0.3%	0.0%	5.9%	0.5%						

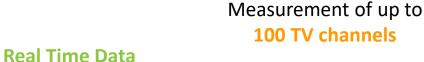
#### MAIN PARAMETERS OF MEASUREMENT IN CR













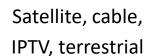


Analytical cloud SW



in households







**Audiomatching** 

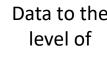


Panel of 1,900 households



1,700 net panel







seconds



Measurement of audience on digital devices

(PC, tablet, smartphone, smart TV, HbbTV)



Data available next day to 8:00



**Lifestyle Survey (LSS)** 

15+ and children 4-14 y. o.



Live and timeshifted

TV audience (0-7 days)



**Continual Survey** 

12 000 households/year

Regular **Quality Check** by Nielsen





#### **PCEM 2018–2022 SUMMARY**



#### PEM TV - TV part

Panel 1 900 HH (4 500 individuals), Net 1 700 HH
Measurement up to 100 channels
Peoplemeter - Audiomatching technology
Live and Time-shifted viewing (0-7 days)

"Continual Survey" **12 000 HHs per year LifeStyle Survey** (adults 15+ and kids 4-14)

**Data delivery** (TV day 6:00–6:00) until 8:00 (usually 7:15)

Data reported with second accuracy

Cloud based data analyses SW, Realtime data

#### PEM D - Digital part

Site-centric measurement
Nielsen SDK technology
Census data
Involved media

#### PC, Smartphones, Tablets

**Video content** 

Programs, Commercials, Live streams

#### **HbbTV**

Video content & Static content

#### Data harmonization (PEM TV × PEM D)

coordinated labeling of both digital video content and TV content reporting of the viewing on all devices (TV, PC, Tablet, Smartphone, HbbTV) together in one software

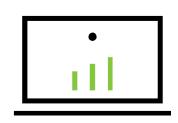
# Digital extension: "PEM D"





New part of the project since January 2018

Site centric measurement to deliver census results









**Devices** 

PC + Smartphone + Tablet + Smart TV (HbbTV)

**Platforms** 

Browser + Mobile + HbbTV

Measured

Programs + Ad spots + Static content (in HbbTV)

Viewing

VOD + Live

# Measurement description





Measurement technology:



Content identification: Descriptive tags (through clients' CMS)



#### Measured data flow:

- Data gathered on Nielsen servers
- Nielsen Admosphere receives daily data files and runs its processing



Data reported in Adwind Kite, using "contingency tables"

#### **Available metrics:**

- Views number of views
- TTS total time spent
- & derived





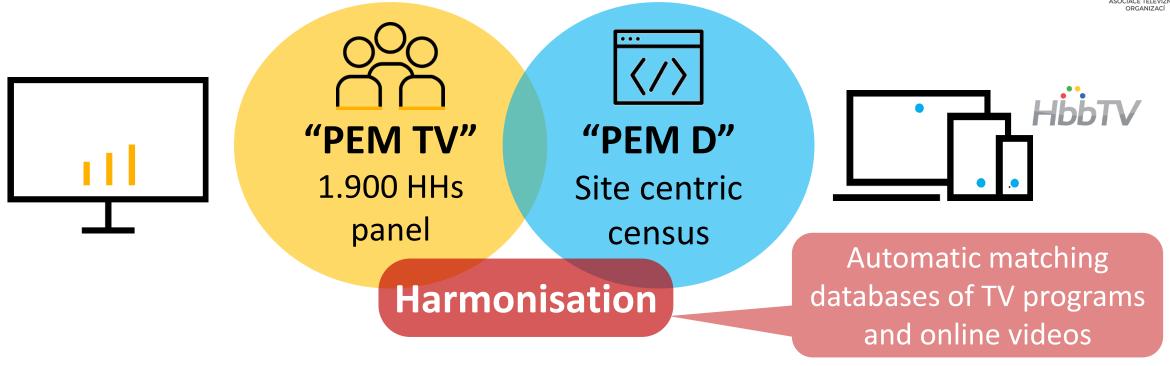


Dimensions: date, device type, medium, content type, content description...

# TV x Digital data "Harmonisation"







Thanks to harmonisation, PEM D data can be analysed with classical TV data in one analysis of user SW.

# **Online viewing - TOP titles**





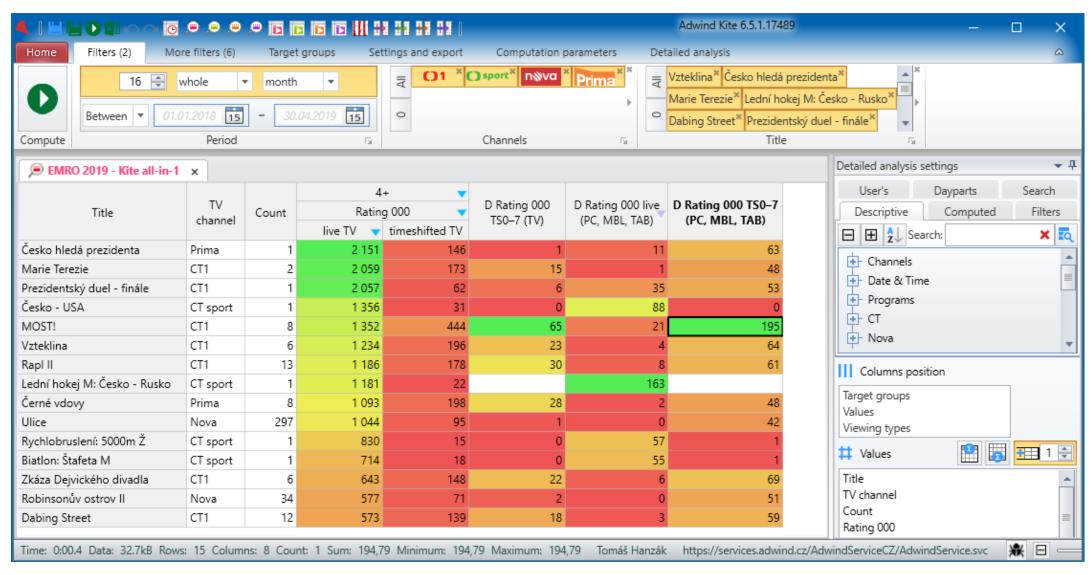


	PEM TV			PEM D: HbbTV				PEM D: PC + mobile + tablet									
Title	TV channel	Count	Rating 000 Live	1	Rating 000 D		D Rating 000 TS0-7		ating 000 S0-30	D Rating 000 live		D Rating 000 TS0-7		D Rating 000 TS0-30		Additional % to "Live TV"	
MOST!	ČT1	8	1 352		444		65		99	21		195		333		61.5%	
Dabing Street	ČT1	12	573		139		18		25		3		59		87	41.0%	
Zkáza Dejvického divadla	ČT1	6	643		148		22		29		6		69		99	40.4%	
Černé vdovy	Prima	8	1 093		198		28		35		2		48		66	25.0%	
Vzteklina	ČT1	6	1 234		196		23		30		4		64		90	24.0%	
Rapl II	ČT1	13	1 186		178		30		35		8		61		76	22.5%	
Robinsonův ostrov II	Nova	34	577		71		2		2	0		51			51	21.3%	
Lední hokej M: Česko - Rusko	ČT sport	1	1 181		22					163						15.6%	
Ulice	Nova	297	1 044		95		1	1			0		42		43	13.2%	
Marie Terezie	ČT1	2	2 059		173		15		18		1		48		59	11.4%	
Biatlon: Štafeta M	ČT sport	1	714		18		0		0		55		1		1	10.4%	
Česko hledá prezidenta	Prima	1	2 151		146		1		1		11		63		63	10.3%	
Rychlobruslení: 5000m Ž	ČT sport	1	830		15		0		0	57		1		1		8.9%	
Česko - USA	ČT sport	1	1 356		31		0		0	88		0		0		8.8%	
Prezidentský duel - finále	ČT1	1	2 057		62		6		6		35		53		53	7.3%	

## Example of data in Adwind Kite



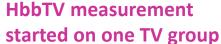


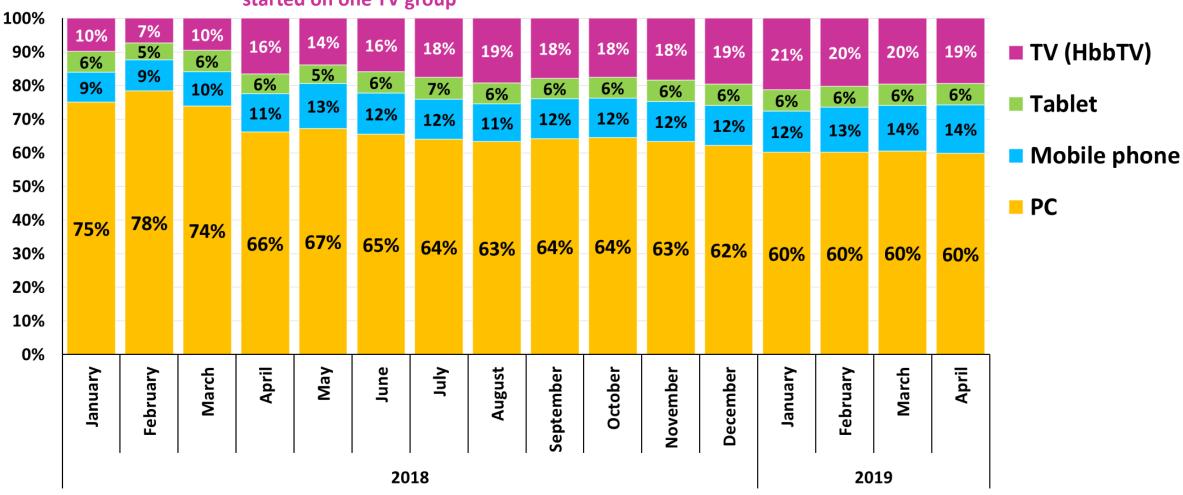


#### **Devices used to watch online TV**





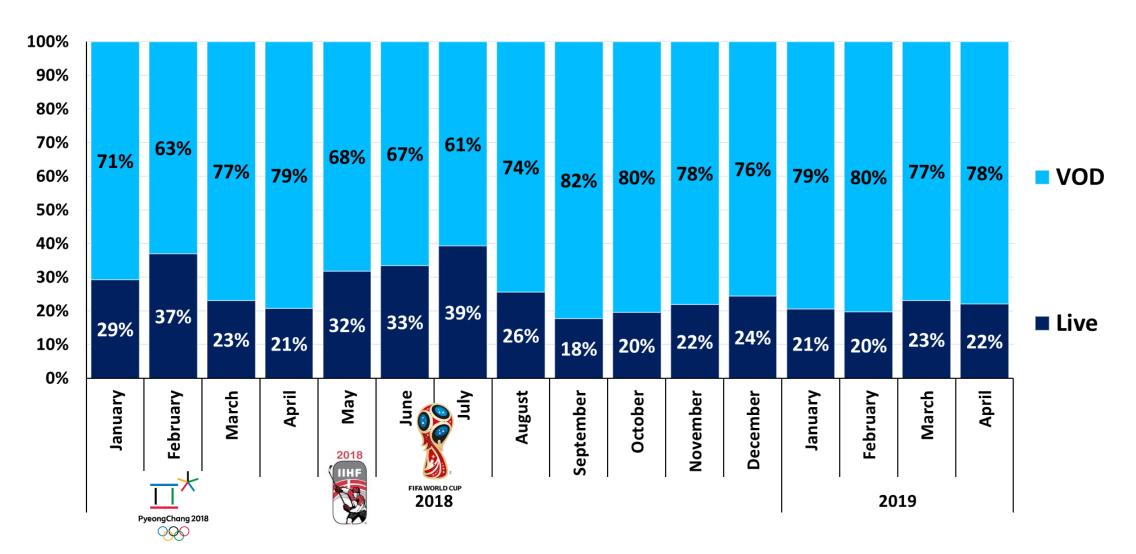




#### Online TV: VOD vs. Live



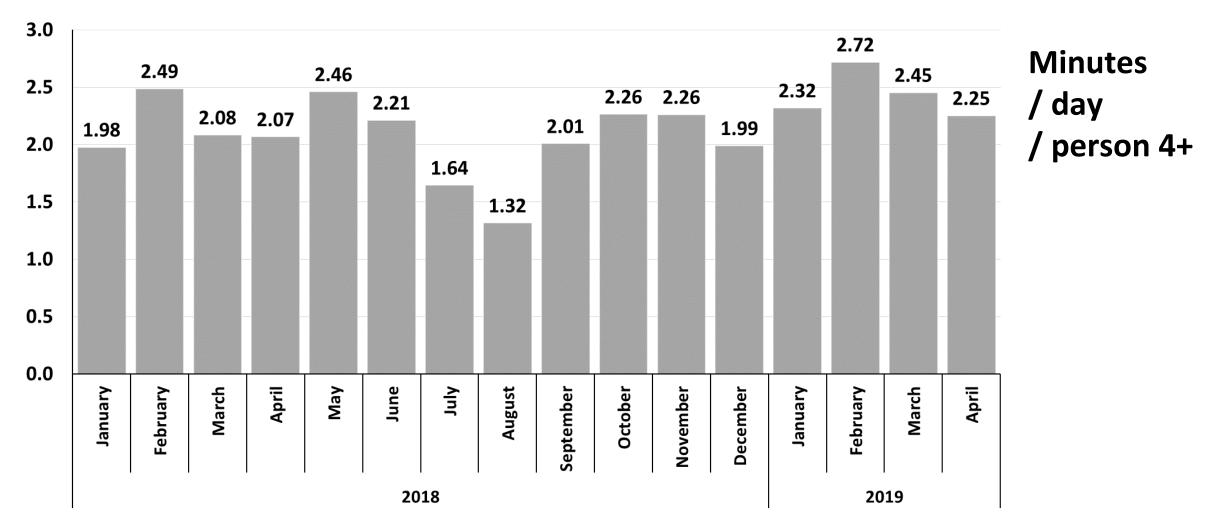




## Time watching online TV









# 3-45

average daily TV viewing in 2017 (15+)





WORLDWIDE - 2017





NORTH AMERICA

4h03

SOUTH AMERICA

3h50

MIDDLE EAST
4h00
AFRICA
3h23
OCEANIA
2h44

Countries AVT > 30mn

Countries AVT => 0-30 mn

Countries AVT <= 0-30mn

**Countries AVT < 30mn** 

**2017 Universe** 4.1 billion viewers



#### **HOW IS TV MEASURED IN OTHER COUNTRIES?**



In most European countries commissioned by JIC (association of TV channels)



The size of the panel is normaly between 1.000 and 2.000 households



Panel recruitment based on the Establisment Survey



Primary technology: audiomatching

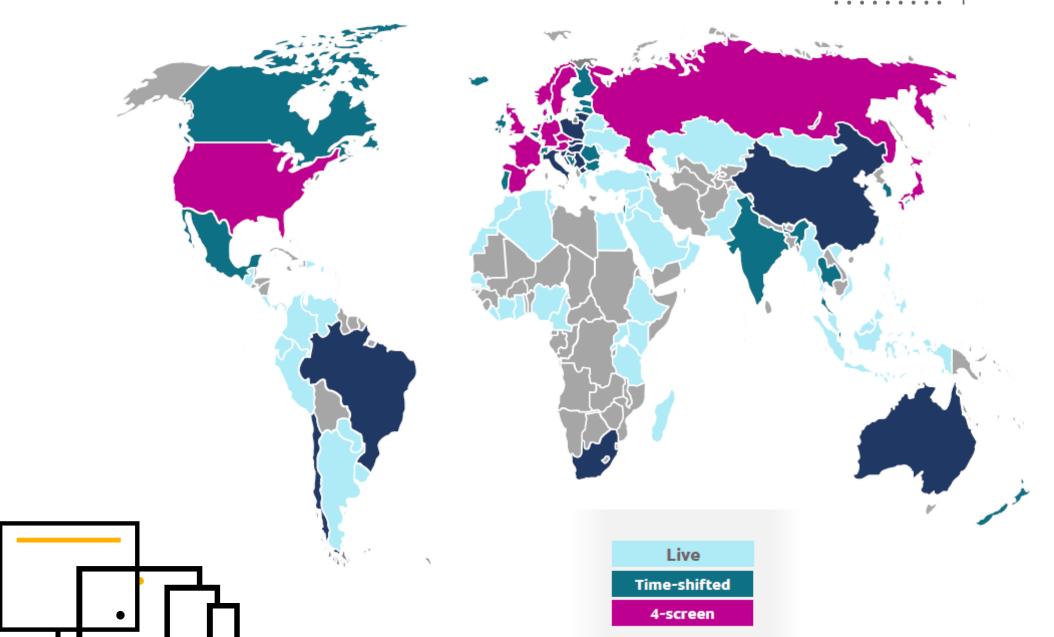


Timeshifted audience (Timeshift) is measured



Real-time data not a common part of the project

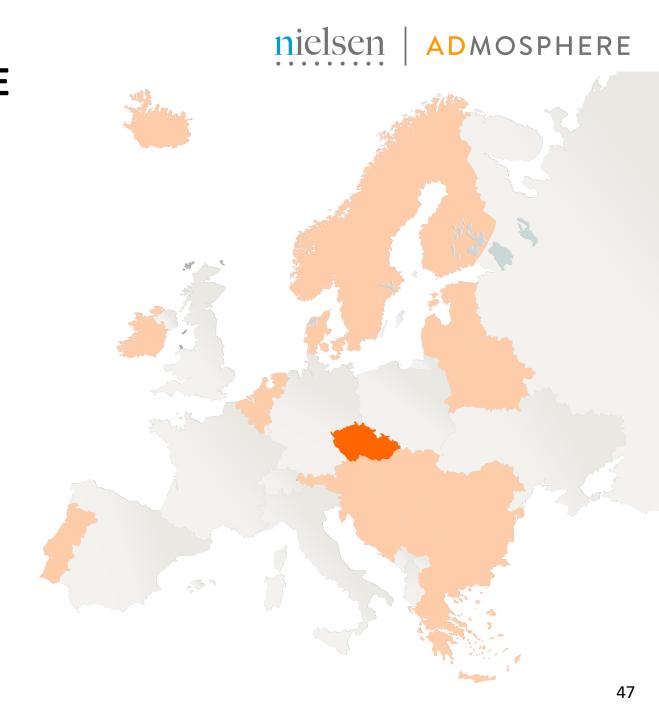
## nielsen | Admosphere





# THE CZECH PANEL WITH ITS SIZE EXCEEDS, FOR EXAMPLE:

- > Austria
- > Netherlands
- > Finland
- > Norway
- > Ireland
- > Belgium
- > Greece
- > Portugal



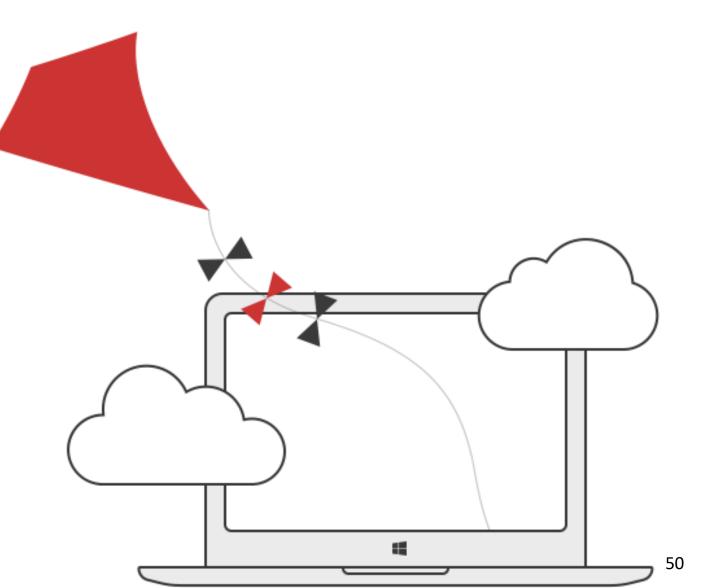
# Real-Time data







Cloud computation analytical software







#### **ADVERTISING JUNGLE**





In more than **500** print titles **539 thousand** adverts were placed.





On more than 70 radio stations

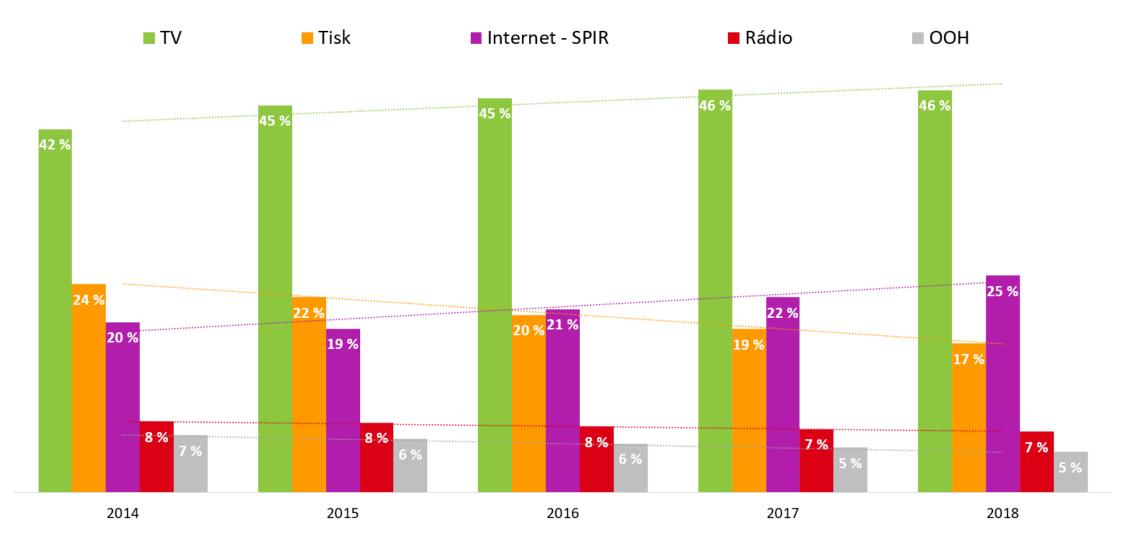
6.7 mil advertising spots aired.

If they were played together, it would take 4 years, 11 months and 8 days to play them.

Source: Nielsen Admosphere, Ad Intel, 2018

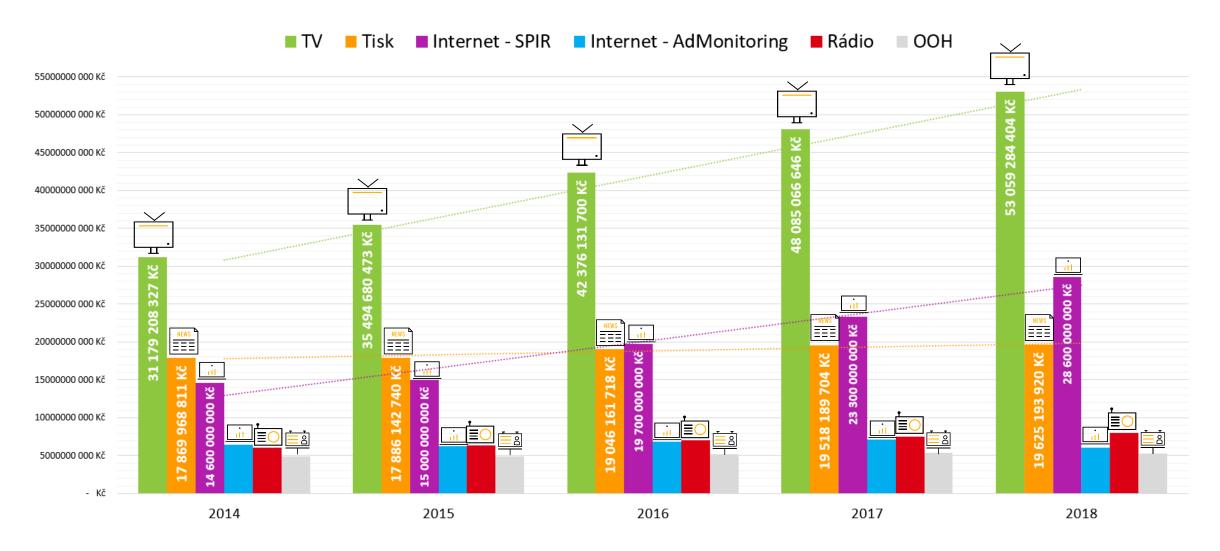


#### **MEDIA TYPES – SHARE ON CZECH MEDIA MARKET**





#### **AD INTEL MONITORING 2014–2018**







**Since 1993** 

#### Media projekt

Unie vydavatelů Median, Stem/Mark F2F, CAPI

25 thsnd. respondents yearly Population 12-79



Since 1993, separately since 2006

#### Radioprojekt

SKMO Median, Stem/Mark CATI

30 thsnd.
respondents
yearly
Population 12-79



**Since 1997** 

#### **TV Project**

ATO Nielsen Admosphere

electronic,
TV meters
4.470 people daily
Population 4+



**Since 2005** 

#### **NetMonitor**

SPIR Gemius

JavaScript codes
NetMonitor panel
30.000 people
Population 10+



**Since 2013** 

#### **IMPACT**

AMVR MGE data, Nielsen Admosphere

electronic-GPS 4.500 respondents Population 18+



**Since 1996** 

**MML-TGI** 

Market & Media & Lifestyle survey

Median, license by Kantar

F2F, CAWI 15 thsnd. respondents yearly Population 12-79 **Since 2010** 

**Ad Intel** 

Advertising monitoring – TV, print, radio, OOH, cinema, Internet

Nielsen Admosphere

**Since 2007** 

**AdMonitoring** 

Advertising monitoring

– Internet

SPIR, Nielsen Admosphere **Since 1993** 

**ABC** 

Print circulation and sales check

Unie vydavatelů, ABC ČR



#### **ASSOCIATIONS**

ATO (Association of Television Organizations)



www.ato.cz

Unie vydavatelů (Union of Publishers)



www.unievydavatelu.cz

SPIR (Association in the field of Internet advertising)



www.spir.cz

Asociace provozovatelů soukromého vysílání (Association of commercial broadcasters) www.apsv.cz

Asociace mediálních agentur (Association of Media Agencies)



www.aka.cz/clenove-aka/asmea/

