

HMI? 2009 Consumer Report

Technical Appendix

Working Draft, Version 0.2

(This draft contains Radio only)

Methodology Notes

Listing of Data Sources

Global Information Industry Center

University of California, San Diego

Main report at http://hmi.ucsd.edu/howmuchinfo_research_report_consum.php

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1 INTRODUCTION

Data is for the U.S. 2008. We used mid-year estimates whenever possible. Different data sources use different age cutoffs. Where data was available, we included children under 12. For each media delivery category, we list primary data sources.

2 MEDIA SOURCE: RADIO

A. Data Notes

1. Our primary sources for radio listenership data are Arbitron, the FCC and the Council for Research Excellence.
2. Our data includes listening hours at work. Therefore, we may overstate consumer information by approximately 15%. Depending on the radio programming format, at work listener share ranges from 10% to 20% of average daily listening hours. The vast majority of daily listening hours, however, is during commute hours and on weekends. Weekend Radio listening is heavily centered around specialized radio programming, for example NPR's *Prairie Home Companion* or *Car Talk*, and sports radio.
3. We did not attempt to break out online Radio listenership (Radio streamed over the Internet), HD Radio or podcasting (audio programming on demand for playback on iPod®/MP3 players). These categories are not broken out in sufficient detail for us to reliably calculate estimates. Radio content downloaded to iPods is included, when it is played, in the "Recorded Music" category.
4. Arbitron reports in *The Infinite Dial 2008*, that people who use digital radio platforms for some percentage of their daily listening hours do not listen *less* to AM-FM radio in total. Average time spent listening to AM-FM radio was 2 hours and 48 minutes per person per day, versus 2 hours and 45 minutes per person per day among those who report listening to online radio at least once in the last month.

B. Sources

i. AM-FM

Arbitron

- Radio Today: How America Listens To Radio, 2009 Edition.
- Radio Today: How America Listens To Radio, 2008 Edition.
- Radio Today: How America Listens To Radio, 2007 Edition.
- Network Radio Today: Including Data from RADAR Studies, 2008 Edition.
- Network Radio Today: Including Data from RADAR Studies, 2007 Edition.
- Radio Nationwide Reference Guide, Spring 2008.

Federal Communications Commission

- Audio Division: AM & FM Radio Broadcasting
< <http://www.fcc.gov/mb/audio/>>
- Audio Division: Multiple Ownership of Radio Stations
<http://www.fcc.gov/mb/audio/multiple_ownership.html>
- Audio Division: Licensed Broadcast Station Totals (1990 to Present)
< <http://www.fcc.gov/mb/audio/totals/index.html>>

Middletown Media Studies (Ball State University)

- Robert A. Papper, Michael E. Holmes, and Mark N. Polovich, "Middletown Media Studies," *The International Digital Media & Arts Association Journal*, Vol 1 No 1, Spring 2004.
< <http://www.bsu.edu/communication/news/iDMAaJournal.pdf>>

Industry Reports

- National Association of Broadcasters, Industry Areas, Radio
<<http://www.nab.org>>

National Radio Systems Committee (Joint NAB, Consumer Electronics Association)

<<http://www.nrsstandards.org/>>

Radio Advertising Bureau, Radio Marketing Guide

<<http://www.rab.com/public/marketingGuide/rabRmg.html>>

Radio Advertising Bureau, “Key Learnings from the Radio Ad Lab,” 2007.

<<http://www.rab.com/public/rael/oneSheets/keyLearnings.pdf>>

ii. Online, Satellite, HD-Radio and Podcasting

Arbitron

The Infinite Dial: Radio’s Digital Platforms, Online, Satellite, HD Radio® and Podcasting 2009 Edition.

The Infinite Dial: Radio’s Digital Platforms, Online, Satellite, HD Radio® and Podcasting 2008 Edition.

The Infinite Dial: Radio’s Digital Platforms, Online, Satellite, HD Radio® and Podcasting 2007 Edition.

Industry Reports

National Association of Broadcasters, “NAB Applauds HD Radio News,” September 29, 2008.

National Association of Broadcasters, “NAB Statement on FCC Approval of XM-SIRIUS Monopoly,” July 25, 2008.

Satellite Industry Association, “State of the Satellite Industry Report,” June 2009.

Satellite Industry Association, “State of the Satellite Industry Report,” June 2008.

Satellite Industry Association, “State of the Satellite Industry Report,” June 2007.

iii. In Vehicle

Arbitron, The National In-Car Study, 2009 Edition.

Arbitron, The National In-Car Study, 2003 Edition.

iv. Other

Council for Research Excellence, Video Consumer Mapping Study, “How U.S. Adults Use Radio and Other Forms of Audio,” October 29, 2009.

Pew Research, Internet & American Life Project, “Trends in Internet use: How public radio fits in,” September 16, 2009.

Pew Research, Project for Excellence in Journalism, “The State of the News Media 2007: An Annual Report on American Journalism.”

< http://www.stateofthemediamedia.org/2007/narrative_radio_talk_radio.asp?cat=8&media=9>

Scarborough Research, “Understanding the Digital Savvy Consumer: An analysis of the country’s most high-tech consumers,” May, 2008.

<http://www.scarborough.com/press_releases/Digital%20Savvy%20Free%20Study%20FINAL%205.12.08.pdf>

Veronis Suhler Stevenson, *Communications Industry Forecast 2008-2012*, August 2008.

(restricted to publicly disclosed data reprinted in VSS Press Releases and other media sources)

Appendix B: Detail Table

ACTIVITY	Users	Throughput		Total per year (entire population)			Per User / Per Day			Per average American / per day			% of Total		
	# of Users (millions)	bits per sec. (bps) - comp.	Words per minute	Hours (billion) INFO _H	Exabytes INFO _C	Words (trillion) INFO _W	Hours	Megabytes	Words	Hours	Gigabytes	Words	% Hrs	% Bytes	% words
Cable TV - SD	95.7	4,000,000	153	163.0	293.0	1,493	4.66	8,380.0	42,740	1.51	2.71	13,843	12.8%	8.0%	13.8%
Cable TV - HD*	69.3	7,200,000	153	118.0	382.0	1,081	4.66	15,085.0	42,740	1.09	3.54	10,024	9.3%	10.5%	10.0%
Over air TV - SD	27.8	4,000,000	153	47.0	85.0	434	4.66	8,380.0	42,740	0.44	0.79	4,027	3.7%	2.3%	4.0%
Over air TV - HD *	20.2	7,200,000	153	34.0	111.0	314	4.66	15,085.0	42,740	0.32	1.03	2,916	2.7%	3.0%	2.9%
Satellite - SD	45.5	4,000,000	153	77.0	139.0	710	4.66	8,380.0	42,740	0.72	1.29	6,586	6.1%	3.8%	6.5%
Satellite - HD*	33.0	7,200,000	153	56.0	182.0	514	4.66	15,085.0	42,740	0.52	1.68	4,769	4.4%	5.0%	4.7%
DVD	253.8	5,500,000	153	28.0	70.0	258	0.30	751.0	2,787	0.26	0.65	2,394	2.2%	1.9%	2.4%
Other TV (delayed view)	50.0	3,000,000	153	3.9	5.3	36	0.21	289.0	1,966	0.036	0.05	333	0.31%	0.14%	0.33%
Mobile video	10.3	300,000	153	0.4	0.1	4.1	0.12	16.0	1,089	0.004	0.00	38	0.03%	0.002%	0.04%
Internet video	94.7	1,000,000	153	2.0	0.9	18	0.06	26.0	527	0.018	0.01	169	0.16%	0.024%	0.17%
Newspapers	51.2	18,235	240	9.0	0.4	124	0.46	3.8	6,628	0.080	0.00	1,149	0.68%	0.011%	1.14%
Magazines	250.0	18,000	240	29.0	0.2	421	0.32	2.6	4,616	0.27	0.00	3,906	2.3%	0.007%	3.9%
Books	250.0	1,330	240	27.0	0.0	389	0.30	0.2	4,261	0.25	0.00	3,605	2.1%	0.000%	3.6%
Satellite Radio	18.9	192,000	80	15.0	1.3	71	2.16	186.0	10,354	0.14	0.01	662	1.2%	0.035%	0.66%
AM & FM Radio	232.5	96,000	80	224.0	10.0	1,077	2.64	114.0	12,686	2.08	0.09	9,982	17.6%	0.27%	9.9%
Conventional Telephone (POTS)	154.0	64,000	120	41.0	1.2	299	0.74	21.0	5,311	0.38	0.01	2,768	3.3%	0.033%	2.8%
Cellular Voice	263.0	10,000	120	37.0	0.2	270	0.39	1.8	2,809	0.35	0.00	2,501	2.9%	0.005%	2.5%
High-end Computer gaming**	20.8	Varies	50	22.0	1,405.0	65	2.85	185,100.0	8,548	0.20	13.03	602	1.7%	38.6%	0.60%
Computer gaming**	123.7	Varies	50	27.0	194.0	80	0.59	4,299.0	1,777	0.25	1.80	744	2.1%	5.3%	0.74%
Console gaming**	88.8	Varies	50	32.0	368.0	97	0.99	11,349.0	2,980	0.30	3.41	896	2.5%	10.1%	0.89%
Handheld gaming**	128.9	Varies	20	20.0	24.0	23	0.41	500.0	497	0.18	0.22	217	1.5%	0.64%	0.22%
Internet text (email, web, etc.)	226.3	100,000	240	178.0	8.0	2,564	2.16	97.0	31,032	1.65	0.07	23,771	14.0%	0.22%	23.60%
Offline programs	226.3	50,000	200	30.0	0.7	361	0.36	8.0	4,375	0.28	0.01	3,352	2.4%	0.019%	3.3%
Movies	295.5	244,737,638	110	3.2	356.0	21	0.03	3,304.0	198	0.03	3.30	198	0.25%	9.8%	0.20%
Recorded Music inc. MP3	295.5	403,200	41	49.0	9.0	120	0.45	82.0	1,112	0.45	0.08	1,112	3.8%	0.24%	1.11%
MASTER SUM				1,273	3,645	10,845				11.80	33.80	100,564	100.0%	100.0%	100.0%

* HD numbers are a blend of High Definition and Standard Definition use in HD households.

**Computer gaming users and bandwidths are averages from more detailed calculations.

All our numbers are estimates - see the on-line appendix and the endnotes for more information about data sources and methods.

<http://hmi.ucsd.edu/howmuchinfo_research.php>