
Faculty Presentations

7-29-2009

HD Radio: Lost in Transition

Michael Huntsberger
Linfield College

Alan G. Stavitsky
University of Oregon

Follow this and additional works at: https://digitalcommons.linfield.edu/mscmfac_pres



Part of the [Broadcast and Video Studies Commons](#), [Communication Technology and New Media Commons](#), and the [Mass Communication Commons](#)

Recommended Citation

Huntsberger, Michael and Stavitsky, Alan G., "HD Radio: Lost in Transition" (2009). *Faculty Presentations*. Presentation. Submission 1.

https://digitalcommons.linfield.edu/mscmfac_pres/1

This Presentation is protected by copyright and/or related rights. It is brought to you for free via open access, courtesy of DigitalCommons@Linfield, with permission from the rights-holder(s). Your use of this Presentation must comply with the [Terms of Use](#) for material posted in DigitalCommons@Linfield, or with other stated terms (such as a Creative Commons license) indicated in the record and/or on the work itself. For more information, or if you have questions about permitted uses, please contact digitalcommons@linfield.edu.

HD Radio: Lost in Transition

Michael Huntsberger, Ph.D.
Dept. of Mass Communication
Linfield College
Alan G. Stavitsky, Ph.D.
School of Journalism &
Communication
University of Oregon
Delivered at The Radio Conference
July 29, 2009

image:

<http://www.robodesign.ro/marius/my-projects/images/old-radio>

Radio in the analog age (before 1995):

- *Distinct delivery system - EM transmission, reception; free.*
- *Distinct social and cultural functions - mass communication; news, talk, sports, entertainment.*

image:

http://www.trekearth.com/gallery/North_America/Canada/photo851977.htm

Radio in the digital age (since 1995):

- Digital Audio Broadcasting (DAB+, Europe)
- Digital Radio Mondial (DRM+, Europe)
- Integrated Services Digital Broadcasting (ISDB, Japan)
- In Band On Channel (IBOC or HD Radio, U.S.)
- Satellite Digital Audio Radio Service (XM/Sirius, U.S.)
- Streaming audio services produced by broadcasters, webcasters, and distributed over wired and wireless Internet or proprietary services (worldwide).



image:

<http://blog.wired.com/music/2008/07/sweet-pandora-o.html>

2 views of radio in transition

- Challenged by demassification (the gradual fragmentation of traditional radio audiences) and convergence (radio-like services on other platforms), radio faces gradual extinction; OR
- Opportunities offered by the infiltration of radio-like services to new delivery platforms and viral marketing are reinvigorating and transforming “radio” into a vital, polymorphic medium.

Ala-Fossi et al, 2008

image: <http://www.hipshingelectronics.com/Prod.asp?ID=3>

The DRACE Group

- Digital Radio Cultures in Europe, launched in 2005 (10 year anniversary of DAB): A consortium of scholars from Denmark, Finland, Great Britain, Ireland.
- Assessing existing and emerging technologies for delivering audio.
- Analyzing the potential social and economic strengths and weaknesses of these technologies.
- Examining the future of radio, as seen by broadcasters, technology experts and others in the radio industry.

Research Questions

1. How will people receive radio in 2015?
2. What are the roles of terrestrial analog, terrestrial digital, satellite, and Internet radio?
3. What will be the dominant way of delivering radio content?
4. Which technologies will not be dominant, but will still be in use?
5. How will developments be influenced by forces of regulation, ownership, market penetration, economics, production practices, geography, functionality, and user practices?

Research Methods

- Semi-structured expert interviews
- Qualitative content analysis with a grounded approach
- Theoretical framework - diffusion of innovation, social shaping of technology.

Digital Radio Implementation: The World vs. the U.S.

<i>Other nations</i>	<i>United States</i>
policy driven	market driven
public service model	commercial service model
DAB+, DRM, etc.	HD Radio

image:

http://www.unearthedoutdoors.net/global_data/true_marble/download

The IBOC System

- Developed privately, licensed by Ibiquity Corp.
- Allows for digital transmission on existing analog spectrum; side bands carry additional program channels; no interactivity.
- No mandate for implementation.



image:

http://www.hdradioalliance.com/marketing_tool_kit.php

HD-R's Inherent Issues

- Using existing analog spectrum = preserving existing economic, social, and cultural relationships; hard limits on competition, innovation.
- Deliberate pace of development = increased competitive pressure from S-DARS, Internet and proprietary mobile services.
- Lack of mandate = lack of awareness, slow rate of adoption by industry, consumers.

Consequences of HD-R

- For broadcasters:
 - Incentive to experiment with non-broadcast platforms.
 - Incentive to experiment with building digital communities.
- For consumers:
 - Incentive to investigate other channels for audio media and services.

image:

<http://www.lockergnome.com/spokenword/files/2007/10/ipod-people2.gif>

Case study: WFMU

- East Orange NJ (New York City market).
- Streaming since 1997; now 7 streams, plus iPhone codec.
- 60% of audience under signal listens on line.



image:

<http://profile.myspace.com/index.cfm?fuseaction=user.viewprofile&friendID=56245>

Playlist for Irene Trudel - April 14, 2008

Mondays 3pm - 6pm on WFMU 91.1 fm 90.1 fm [wfmuplaylists.org](#)

Dream scapes for the day filled with strings, singers, and other musical sprites. Live performances frequently included. Gentle music to get you through the week.

[Visit the Irene Trudel homepage](#)

Listen live to WFMU:
[\[Realaudio\]](#) [\[Windows Media Player\]](#) [\[24k AAC+\]](#) [\[32k MP3\]](#) [\[128k MP3\]](#) [\[40k Ogg\]](#)
Visit our [audio streaming page](#) for help

[<-- Previous playlist](#) | [Back to Irene Trudel playlists](#) |

April 14, 2008: Sun so bright, songs so sweet, with Dave Deporis live.

Now playing:
"Walking" by Dave Deporis

Artist	Track	Album	Label	Format
Clear Light	Mr. Blue	Black Roses	Edsel	
The Strawbs	The life Auction	Ghosts	A&M	
Garland of Hours	My Young Man	The Soundest Serum	Noble Task Records`	
Black Fortress of Opium	Ari	Black Fortress of Opium		
Eric Carbonara	Naked Jade	Exodus Bulldornadius	Locust Music	
Arborea	Red Bird	Arborea	Fire Museum	
Nick Schillace	Dunes	Landscape and People	Burleytime	
Noe Venable	Ice Dragons	The Summer Storm Journals		
Ana Moura	Primera Vez	Para Alem da Saudade	World Village	
Jeremy Joyce	Norma Jean	Jeremy Joyce	(self released)	
Matt Baldwin	Eulogy and Dark	Paths of Ignition	American Dust	
Camphor	Deconstructed	Drawn to Dust		
Live performance & chat with Dave Deporis				
Bobby "Boris" Pickett	Monster Mash			CD
Dave Deporis				
Dave Deporis	Peace March			

Listener comments!

[Pause comment auto-update](#)

From: Dominick Mon Apr. 14, 2008 3:08pm
Mr. Blue, this song popped into my head this morning as I was shaving.

From: Sean Daily Mon Apr. 14, 2008 3:27pm
Second comment! Woo hoo!

From: Andreas Mon Apr. 14, 2008 3:50pm
like your tunes and enjoy them very much, here, at the very best time of evening in germany.

From: jojo Mon Apr. 14, 2008 4:00pm
i am bleeding to death, yes bleeding to death, inside, from something that i heard
great music just hit me hard this sleepy monday afternoon

Post your comment to this playlist!

Your name:

Email address (optional, only seen by WFMU DJ):

Your comment: (No HTML, please)

Preview your comment!

Digital ~~radio~~ audio

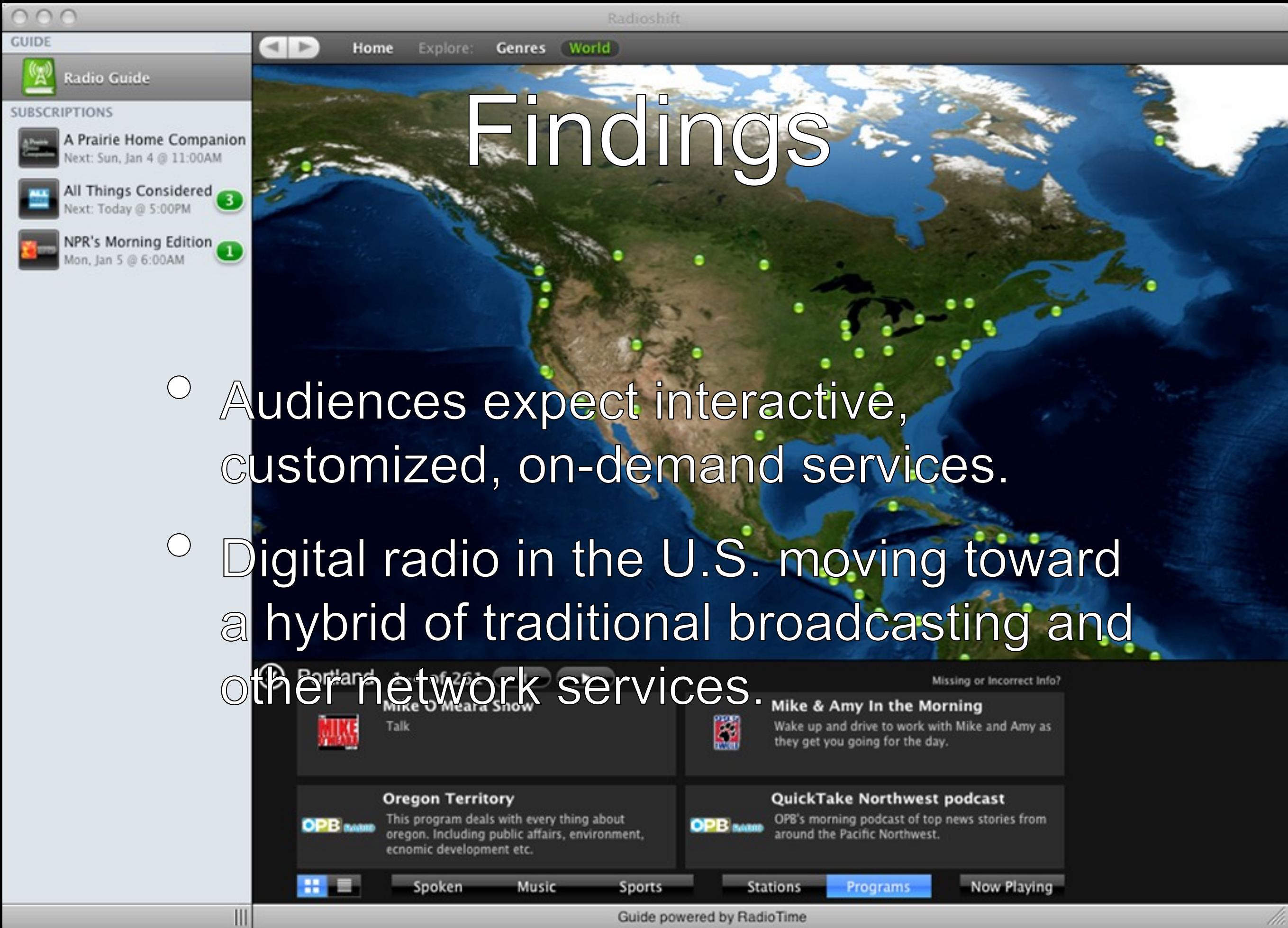
- Audience as contributors - producers of content (KYOU San Francisco); archivists of historic performances (WWOZ New Orleans).
- Audience as real community of shared values - KOPB Portland; KDHX St. Louis.
- Audience as inhabitants of shared social space (WFMU); radio becomes a social medium.

Findings

- Beyond the expansion of linear, one-to-many services, other capabilities of digital technology were not fully considered as part of the development of digital radio broadcasting in the U.S..
- The anti-competitive nature of HD Radio hampered innovation.

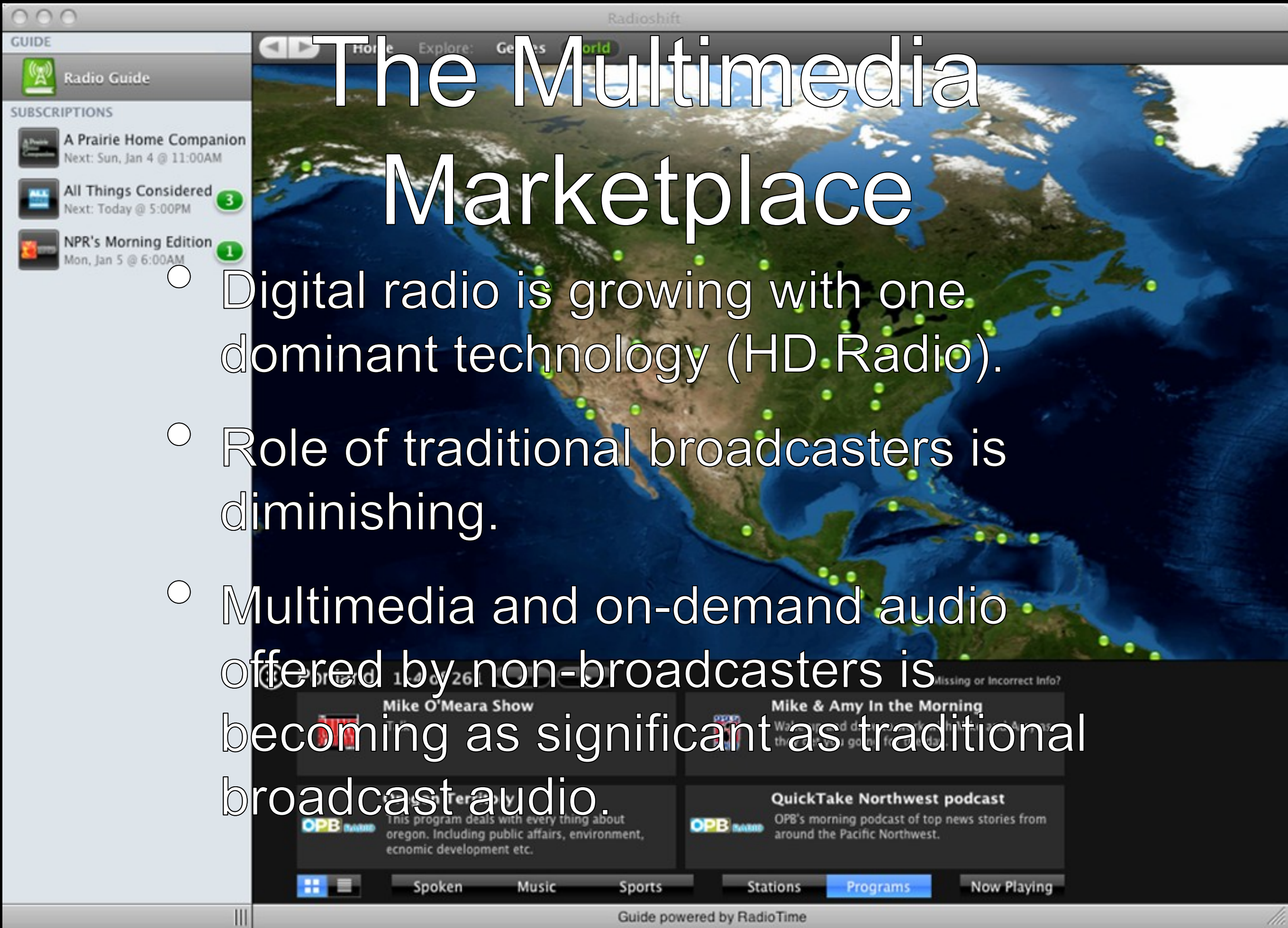
Findings

- Audiences expect interactive, customized, on-demand services.
- Digital radio in the U.S. moving toward a hybrid of traditional broadcasting and other network services.



The Multimedia Marketplace

- Digital radio is growing with one dominant technology (HD Radio).
- Role of traditional broadcasters is diminishing.
- Multimedia and on-demand audio offered by non-broadcasters is becoming as significant as traditional broadcast audio.





Radio Guide

SUBSCRIPTIONS

**A Prairie Home Companion**

Next: Sun, Jan 4 @ 11:00AM

**All Things Considered**

Next: Today @ 5:00PM

3

**NPR's Morning Edition**

Mon, Jan 5 @ 6:00AM

1



Home

Explore:

Genres

World



Portland

1-4 of 261



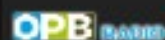
Missing or Incorrect Info?

**Mike O'Meara Show**

Talk

**Mike & Amy In the Morning**

Wake up and drive to work with Mike and Amy as they get you going for the day.

**Oregon Territory**

This program deals with every thing about oregon. Including public affairs, environment, economic development etc.

**QuickTake Northwest podcast**

OPB's morning podcast of top news stories from around the Pacific Northwest.



Spoken

Music

Sports

Stations

Programs

Now Playing

Recent Developments



- Insignia (Best Buy) NS-HD1 portable receiver released July 13.
- FM only, poor indoor reception, no iTunes tagging; according to WSJ, “little to offer.”

<http://blogs.wsj.com/digits/2009/07/13/reviewing-the-hd-radio-portable/>

Recent Developments



- PRX Public Radio Player 2.0 for iPhone 3GS released July 13.
- Live streaming of more than 150 stations and downloading of individual programs on demand
- “One of my all-time favorite apps. I freakin' love this.” (Broida, cnet News, 7.22.09).

image:

<http://wayneandwax.com/wp/images/pub-radio-tuner-icon.png>

Sources:

- Ala-Fossi, M., Lax, S., O'Neill, B., Jauert, P., & Shaw, H. (2008, May). The future of radio is still digital - but which one? Expert perspectives and future scenarios for radio media in 2015. *Journal of Radio and Audio Media*, 15(1), 5-25.
- Apple Ipod Logos Themes Created By CoolChaser Users. (n.d.). CoolChaser.com. Retrieved January 2, 2009, from <http://www.lockergnome.com/////people2.gif>
- Cook, E. (2007). Airline 1541 "Lone Ranger". In OldRadioCrazy.com. Retrieved January 1, 2009, from <http://www.olderadiocrazy.com/.HTM>
- Cook, E. (2007). Emerson Model 547. In OldRadioCrazy.com. Retrieved January 1, 2009, from <http://www.olderadiocrazy.com/.HTM>
- Cook, E. (2007). Zenith 15U270. In OldRadioCrazy.com. Retrieved January 1, 2009, from <http://www.olderadiocrazy.com/U270.HTM>
- Cook, E., 2007. (n.d.). Majestic "Charlie McCarthy". In OldRadioCrazy.com. Retrieved January 1, 2009, from <http://www.olderadiocrazy.com/.HTM>
- Hains, M. (1990). Radio antenna photo. In TrekEarth.com [Nature Photographers]. Retrieved January 1, 2009, from http://www.trekearth.com//_America//.htm
- HD Radio Brochures. (n.d.). HD Radio Alliance. Retrieved January 2, 2009, from http://www.hdradioalliance.com/_tool_kit.php
- HD Radio Logos. (n.d.). HD Radio Alliance. Retrieved January 2, 2009, from http://www.hdradioalliance.com/_tool_kit.php
- HD 608 tabletop HD radio. (2008). HipshingElectronics.com. Retrieved January 1, 2009, from <http://www.hipshingelectronics.com/.asp?ID=3>
- Marius. (2002, April 20). Old radio. In RoboDesign.ro. Retrieved January 1, 2009, from http://www.robodesign.ro/_projects/_radio
- Oldsmobile Alero. (n.d.). CarStereoHelp.com. Retrieved January 1, 2009, from <http://www.carstereohelp.com//.jpg>
- Pellegrini, M. (2004, March). Truetone Radio. In Wikimedia.org. Retrieved January 1, 2009, from <http://commons.wikimedia.org//:Truetone-Radio.jpg>
- True Marble download set. (2008). UnearthedOutdoors.net. Retrieved January 2, 2009, from http://www.unearthedoutdoors.net/_data/_marble/
- Van Buskirk, E. (2008, July 20). Sweet: Pandora's Streaming Radio App for iPhone. Message posted to <http://blog.wired.com/////pandora-o.html>
- WFMU logo. (2008). WFMU.org. Retrieved January 2, 2009, from http://profile.myspace.com/_cfm?fuseaction=user.viewprofile&friendID=56245