



# WorldDMB Workshop in Collaboration with NAB and SABC Johannesburg

## DAB+ Data Services

Tuesday 16 July 2013

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# Overview

Purpose

DAB+ Data Content

Integration

# Purpose

Enhance the  
Stations Image

Engage with the  
listener



# DAB+ Data Content



Text Messages (DLS)

Slideshow

Electronic Programme Guide

# Text Labels

Simple and effective

128 characters per message

Almost all DAB+ receivers can display DLS

Good receivers display whole message so consumers can read these quickly

Text Labels are not synced with audio

DLS+ is a more advance version of DLS



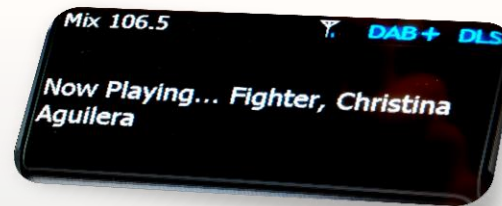
# Enhance Stations Image – Engage with listeners

Song Title and Artist

Current Program Information,  
Station slogans

Additional Information –  
Weather, Traffic, Racing  
results, News

Competitions, URLs



# More Advanced Labels DLplus

Able to store information on receivers

No need to wait for important information

User's pick what they want

# Electronic Program Guide

Useful tool for promotion of programs, talent, content

Currently only used by some broadcasters.





# Slideshow



Add visual element to radio adverts

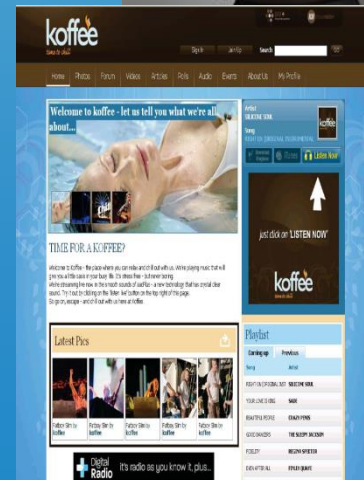
Standalone advertising during music or spoken content items

Station Branding

Information – eg Traffic and weather reports

Race / betting and stock market information

Local news, happenings, community events



# Enhance Station Image – Engage with listeners



**Now Playing On 2DayFM**

**Now Playing**  
**S&M**  
Rihanna



**Next Song**  
What Goes Around Comes Around  
Justin Timberlake

[2dayfm.com.au](http://2dayfm.com.au)



Latest Weather **THE EDGE**  
LIVE WEATHER



**13°**

Today's Forecast  
Wed, 1st Jan  
Sunny.

H: 19°

THU	FRI	SAT	SUN	MON
 19°	 17°	 15°	 15°	 13°

 It's radio as you know it, plus...



Select RADAR on your  
**Digital Radio**  
to hear the best new music now.

**NOW PLAYING**  
Beautiful In My Eyes  
By: Joshua Kadison



**koffee**  
time to chill.

**NEXT UP**  
Madworld  
By: Michael Andrews Feat. Gary Jules



**GOLD'S GONE MOBILE.**  
GET THE FREE APP FOR IPHONE,  
ANDROID & NOKIA.



# Animated Slideshow (APNG)

The DAB/DAB+ Slideshow specification supports JPEG, PNG and APNG images.

APNG is used to provide simple animations



Radarr Radio.  
Breaking new sound.



[radarradio.com.au](http://radarradio.com.au)

GET ON IT

# Carousels

Have a carousel of constantly rotating slides

Constant stream of information

In the example of the album cover, it becomes one of the slides inserted into that carousel.

Ensures repetition of “new” slides all the time including fillers and advertising content even when the updates stop



# Categorized Slideshow

Provides hierarchical storage of slides

Has alternate slide delivery to allow slides of increased resolution and quality to be delivered by internet

Background delivery

Provides URLs for internet website links

New functionality in the process of being standardised with ETSI in 2013

# Categorized Slideshow



Integration

Integration

# Station Content

Is always Dynamic, Always Changing

Themed

Presents a message



# Updating PAD Content

Relying on manual updates – not the best way to go – often gets forgotten

Content gets stale, user experience diminishes, technology gets rubbished



# Updating PAD Content

The process HAS to be automated

Ensure constant stream of PAD data

Keeps content fresh and ever changing – users know there will always be something new when they look at their screen

For this, some sort of automation / content management software is required

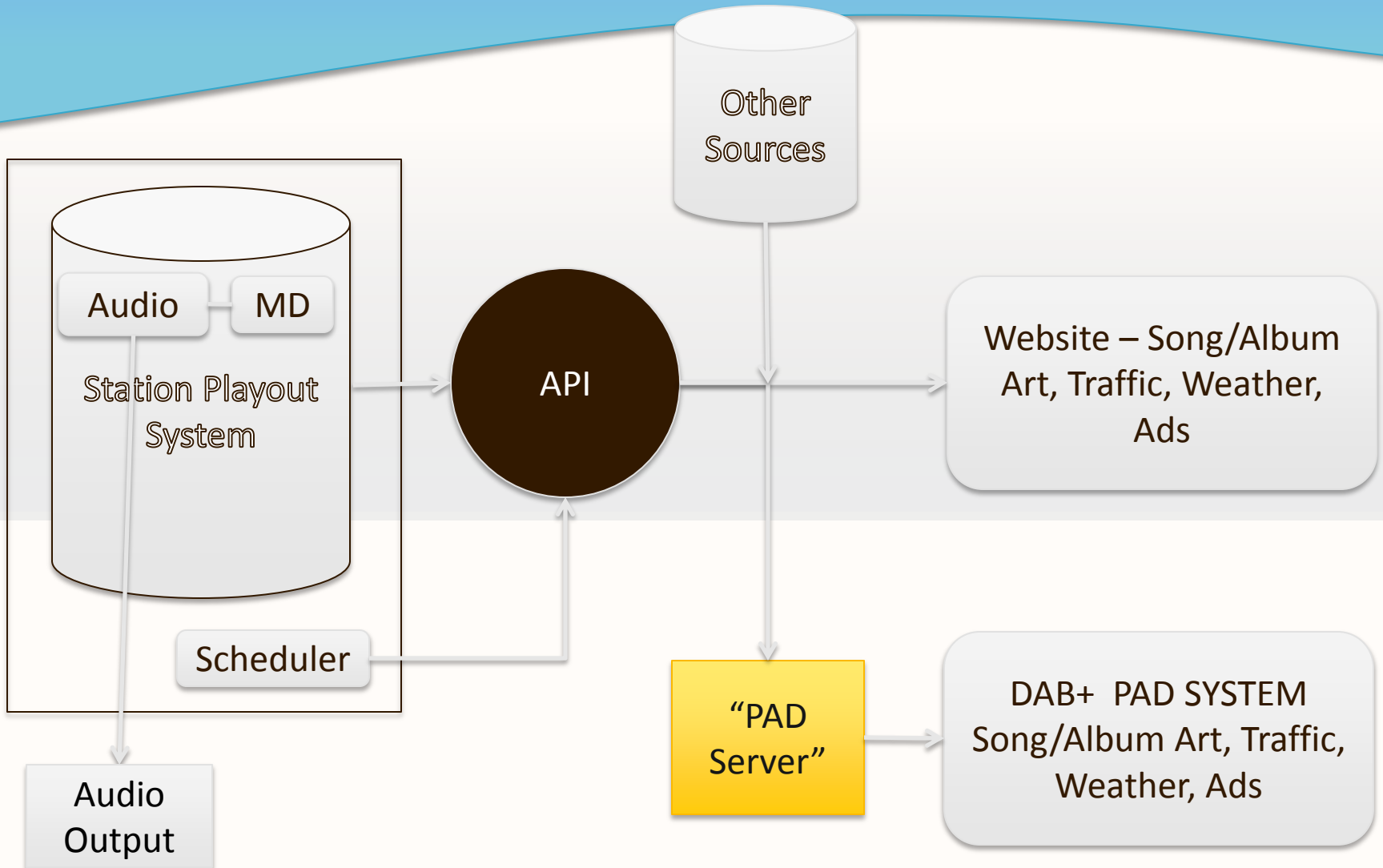
# Scheduler Considerations

Often no need to invest in new playout system

Multiplexer systems and playout systems vary in terms of data interfaces

There will need to be some sort of interfacing “PAD Server” software in the middle – take content and triggers from playout, send to DAB+ data servers

# Scheduler System Layout



# Studio Play-out System

Song Title

Artist Title

Album Art

Traffic (some)

“PAD Server”

DLS TEXT INFORMATION  
SLIDESHOW IMAGE

# Other Sources

Weather Information

Advertisement

News Items

Emergencies

PAD Server

DLS TEXT INFORMATION  
SLIDESHOW IMAGE

# Using Website content

The screenshot displays the Mix 106.5 website interface. At the top, there is a navigation bar with links for HOME, SHOWS, LISTEN, VIDEOS, PHOTOS, WIN, WHAT'S ON, MUSIC, ENTERTAINMENT & LIFESTYLE, and ABOUT US. The main content area features several promotional banners and widgets:

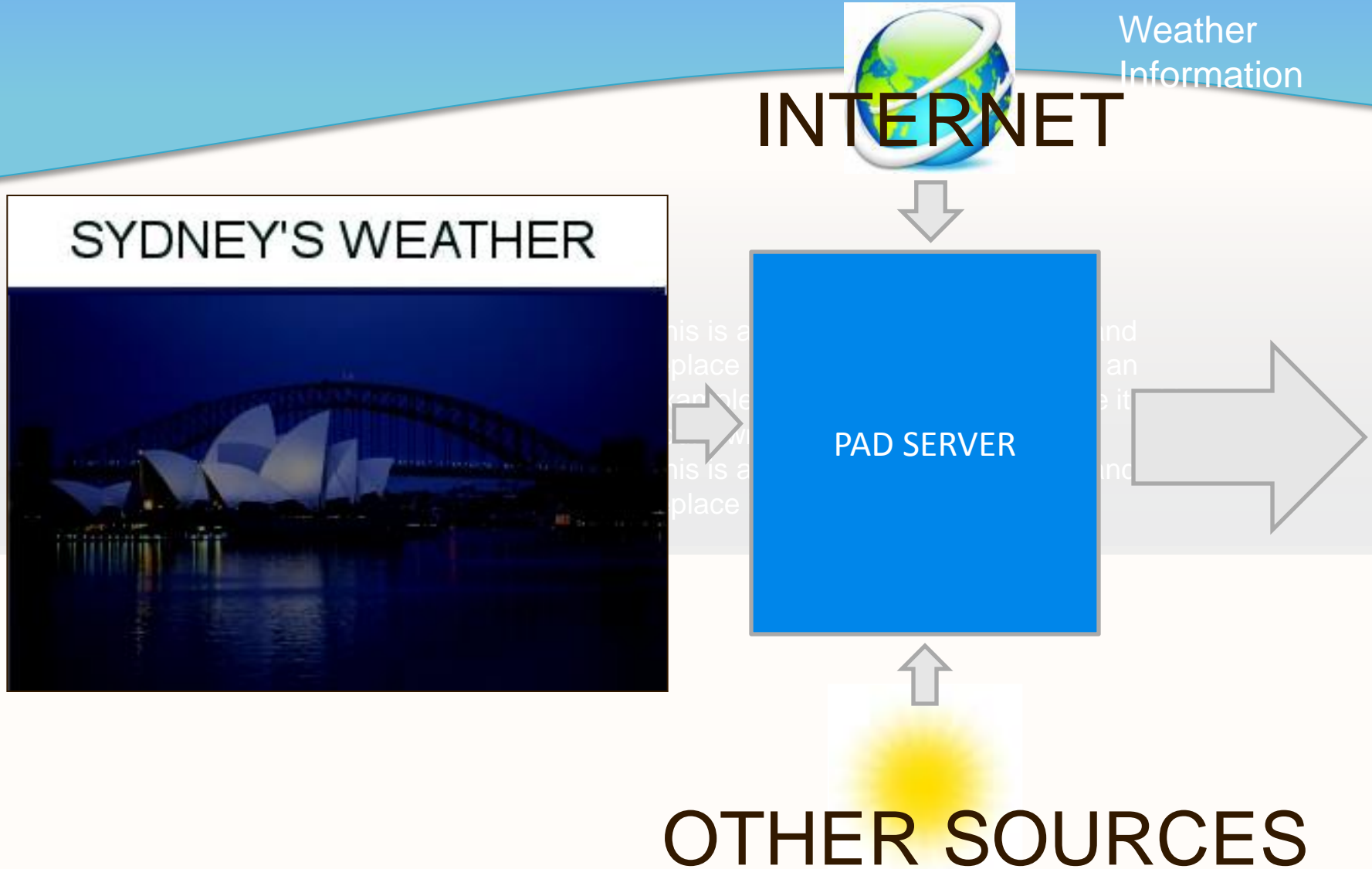
- Win**: A large banner with the word "Win" and a blue abstract graphic.
- WIN with Mix 106.5!**: A text-based promotion encouraging users to check out current competitions and enter for a chance to win.
- Forever Diamonds**: A banner featuring a couple in a car, with the text "Win A Necklace For Your Loved One!".
- Revesby Workers 50th Gold Party Week**: A banner for a contest where users can win \$5000 at the Revesby Workers Club.
- Mix 106.5's Travel Secrets!**: A banner for a contest where users can win travel secrets.
- Dreamworks Madagascar 3: Europe's Most Wanted**: A banner for a contest where users can win tickets to the movie.
- Makeup of the Year**: A banner for a contest where users can win makeup.
- Join the Mix Review Crew**: A banner for a contest where users can join the review crew.
- What Do You**: A banner for a contest where users can win prizes.

On the right side of the page, there are several widgets:

- ON DEMAND**: A section for catching up with shows on demand, including buttons for PODCASTS and VIDEOS.
- SITE SEARCH**: A search bar with a "Keyword" input field and a search button.
- CONNECT WITH US**: Social media icons for Facebook, Twitter, and YouTube.
- SYDNEY WEATHER**: A weather widget showing "19°C Wednesday Mostly sunny. H:23°" and a "More Weather" button.
- LATEST FROM MIX 106.5**: A section for the latest content, featuring a "The Latest Traffic" banner.

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# Sample: Generating Dynamic Slideshow





# Sample: Generating Dynamic Slideshow

2



SYDNEY'S WEATHER

fine, mostly sunny.



	NOW	MAX	HUM
CITY	24.4°C	27°C	53%
WEST	23.9°C	29°C	71%

Thu Apr 08 09:52:51 EST 2010 [www.bom.gov.au](http://www.bom.gov.au)

land  
is an  
ce it with  
land

# Examples

Australian Government  
Bureau of Meteorology

HOME | ABOUT | CONTACTS  Search

NSW | VIC | QLD | WA | SA | TAS | ACT | NT | AUSTRALIA | GLOBAL | ANTARCTICA

[Bureau Home](#) > [Radar Images](#) > 128 km Darwin (Berrimah) Radar Loop

## 128 km Darwin (Berrimah) Radar Loop

[Current weather warnings for Northern Territory](#)

Loops: 64 km, 128 km, 256 km, 512 km composite, National, Doppler wind

Copyright: Image by Bureau of Meteorology. For related Warnings, see [www.bom.gov.au](http://www.bom.gov.au)

**Frame: 1**  
15:05 CST  
21/9/2012

**Map Features**

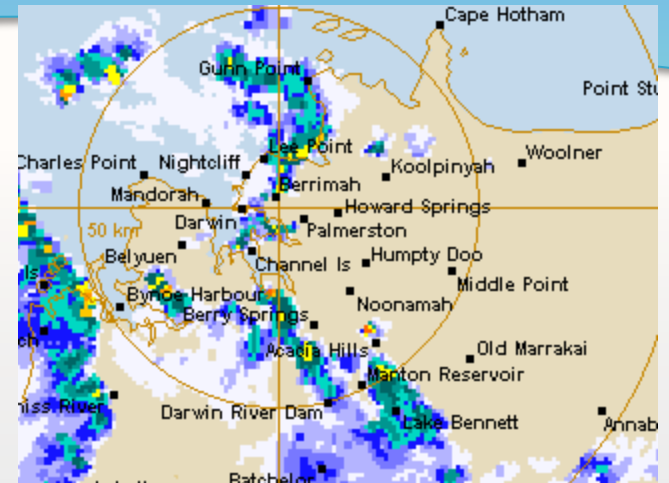
- Weather observations
- Locations
- Range
- Topography
- Lakes & major rivers
- River catchments
- Forecast districts
- Roads
- Railways

To display additional map features, select listed options

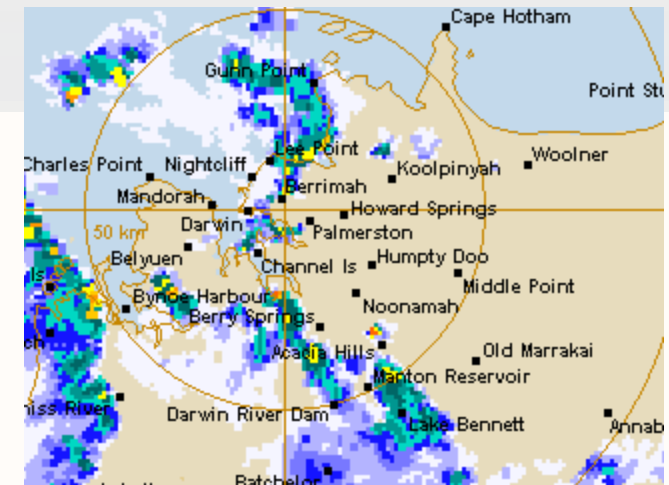
**Pointer data**

Pointer	Map Coordinates	Origin
125 km West	13 deg 34 min S	0 km East
122 km South	129 deg 46 min E	0 km North <input type="button" value="Rst."/>
175 km Away	<input checked="" type="radio"/> Degrees & Minutes	

Rain Rate: Light Moderate Heavy



APNG Animation



Single Frame

# Examples

The screenshot shows the 'Live Traffic NSW' website. At the top left is a logo with a truck and the text 'Live Traffic NSW' and 'Live updates and traveller information for NSW roads.' To the right is the 'Transport for NSW' logo. Below the header is a navigation bar with 'Map View', 'Text View', 'Traffic Cameras', 'Major Events', and 'Help'. A yellow banner at the top of the map area reads 'HAZARD REDUCTION BURN - HELENSBURGH Garawarra State Conservation Area - SMOKE IN THE AREA'. Below this is a 'Quick Find' search box. The main map area shows a map of Sydney with various traffic icons. A 'Live traffic camera' window is open, showing a video feed of the Sydney Harbour Bridge deck. The video feed has a timestamp '21.Sep 2012 16:54:22' and a 'REFRESH' button. Below the video feed, it says 'View: Sydney Harbour Bridge deck looking south towards the Sydney CBD.' and 'New images are available approximately every 60 seconds.' To the right of the map is a sidebar with several sections: 'My journey' with search boxes for start and end points; 'Traffic hazards' with a list of current hazards and major events including Incidents (10), Fire (1), Flood (5), Alpine conditions (1), Major events (2), and Roadworks (4); 'Other events and roadworks' with Other events (2) and Roadworks (106); 'Map options' with checkboxes for Traffic flow, Live Traffic Cameras, Travel times (F3 Freeway, M4 Motorway, M7 Motorway), Public transport (Train stations, Ferry wharves), Heavy vehicles (Heavy vehicle checking stations, Safe-T-Cams), and Auto refresh (checked, last refreshed at 4:57pm).



# The Future – Hybrid Radio

DL+ and CAT-SLS are examples of Hybrid Radio

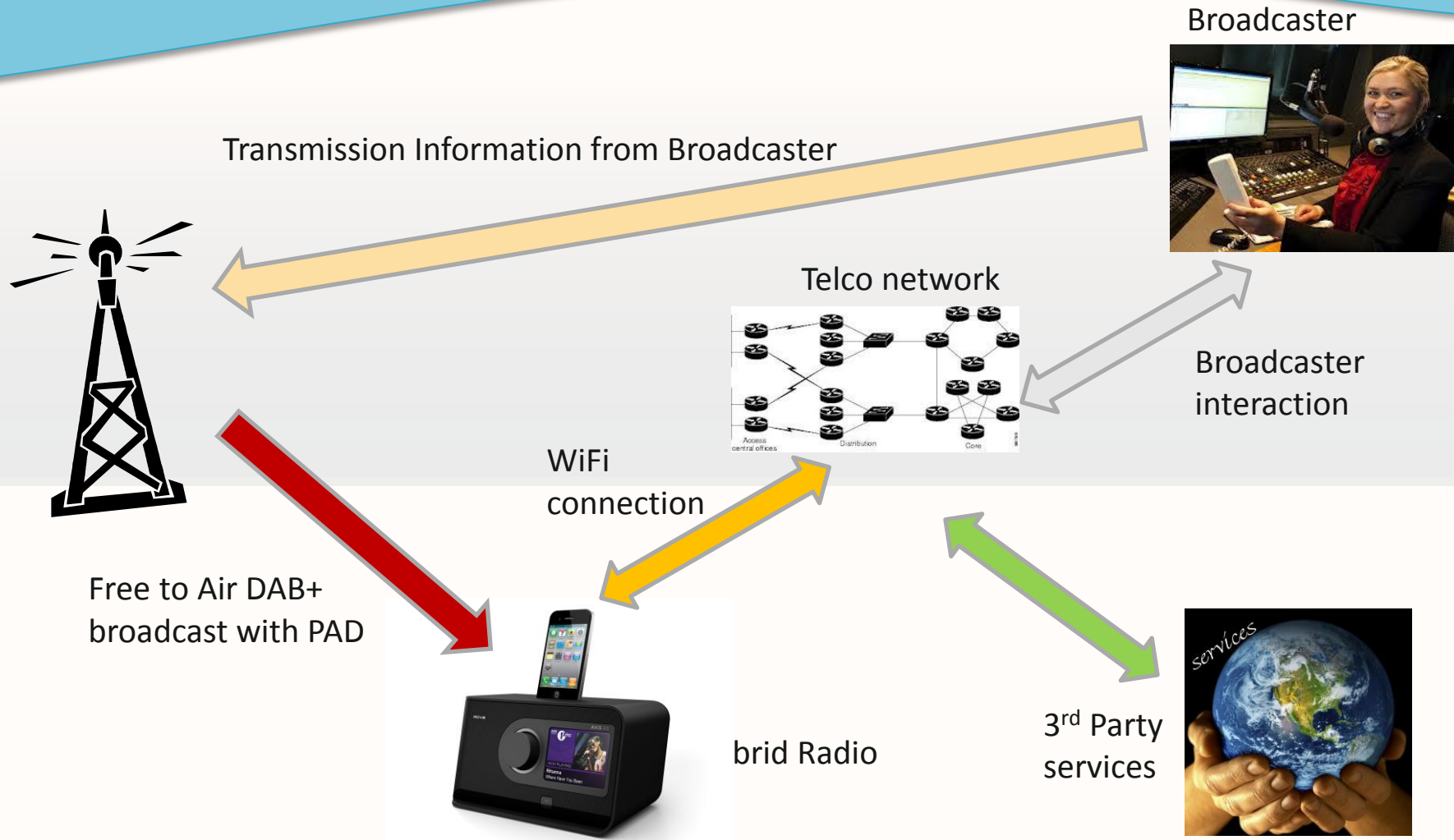
Providing More Information to listeners on demand

Tagging and reminders for later content use

The standards are being written now!

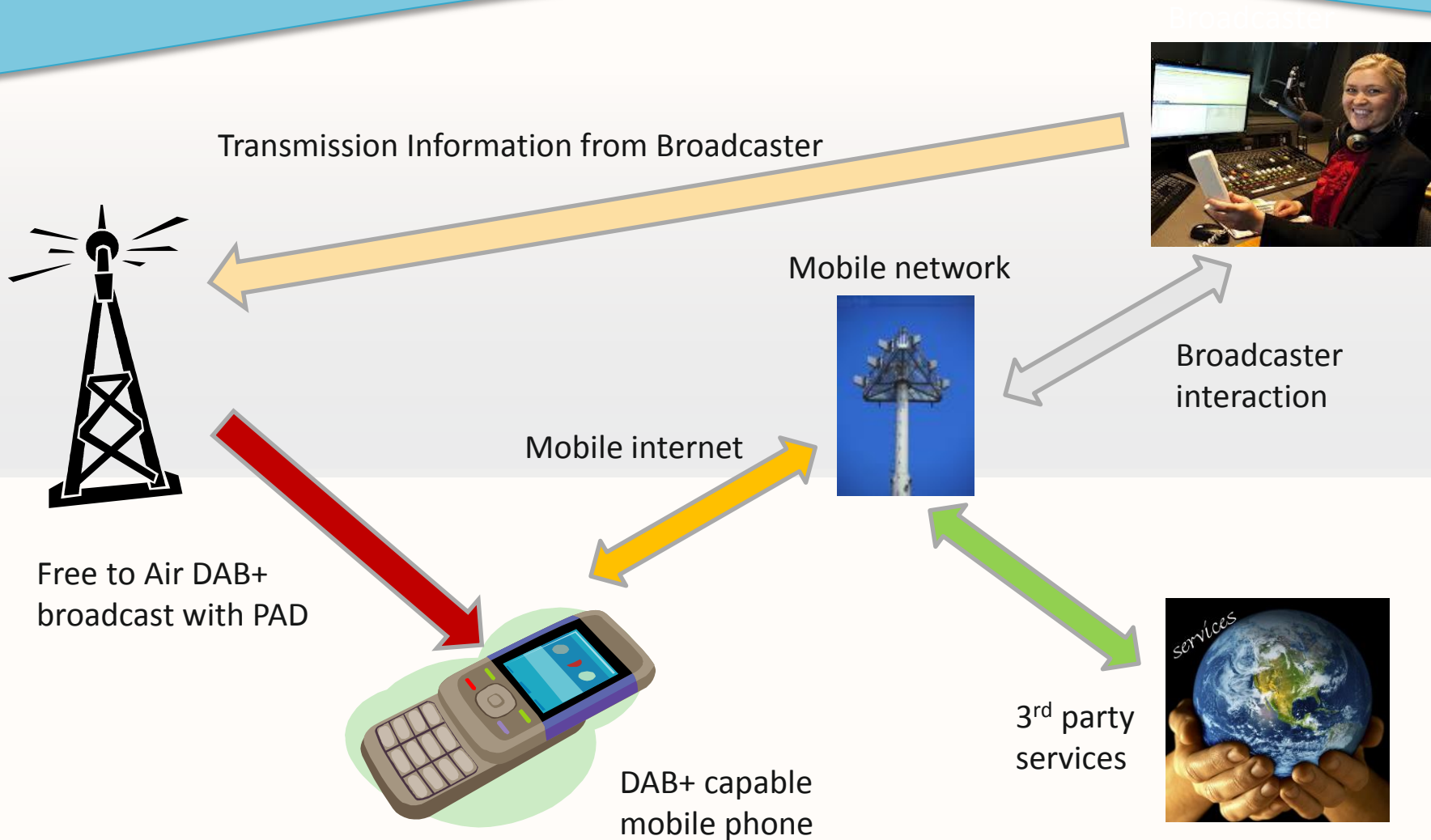
# What is Hybrid Radio

## Home operation



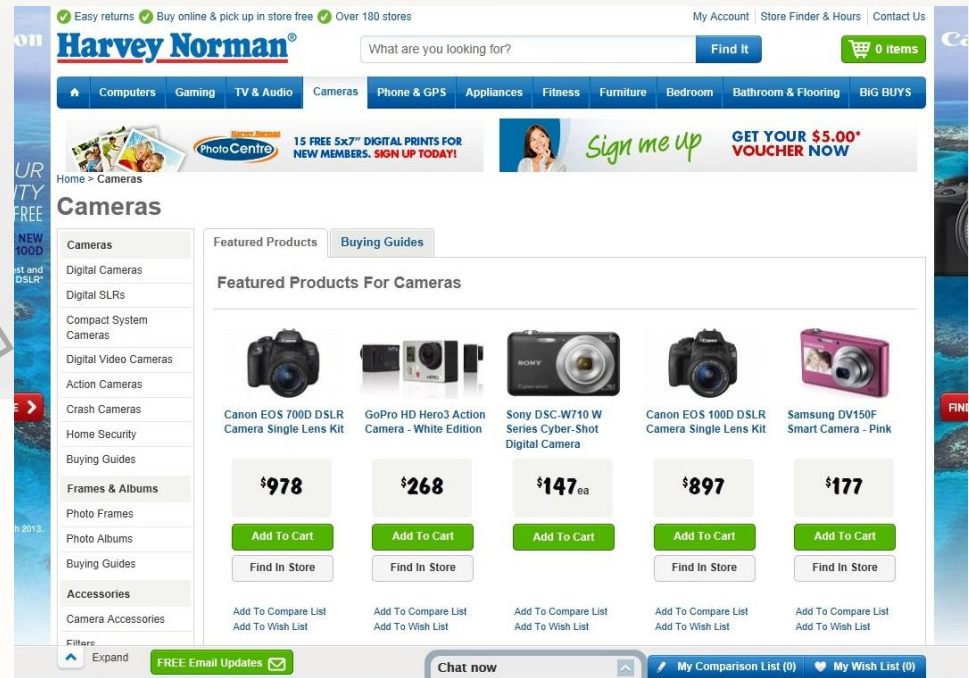
# What is Hybrid Radio

## Mobile operation



# Hybrid Radio Use Cases

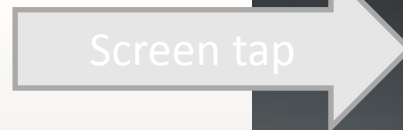
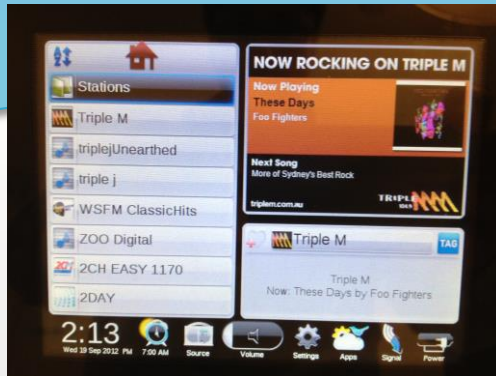
## More Information: Use Case Example 1 – connection to an advertiser



Accessing a website from a URL delivered associated with a product / service being advertised

# Hybrid Radio Use Cases

## More Information: Use Case example 2 – Artist information



Listeners can access more information about the current artist



# Hybrid Radio Use Cases

## More Information – Use Case Example 3 – public information

### SYDNEY'S WEATHER

Mostly fine.



	NOW	MAX	HUM
CITY	22.9°C	24°C	70%
WEST	22.7°C	26°C	65%

www.bom.gov.au

Button press


Bureau Home > Radar Images > 64 km Sydney (Terrey Hills) Radar Loop

### 64 km Sydney (Terrey Hills) Radar Loop

View the current warnings for New South Wales

Loops	Single images	Radar Site Information	Other Radars	Radar Help
Radar	64 km	128 km	256 km	512 km composite
Rainfall	6 min	1 hour	Since 9 am	24 hour

Image by Bureau of Meteorology. For related Warnings, see www.bom.gov.au



TerreyHills 19/06/13 07:36UTC 000.5e1 064km -1

Rain Rate: Light Moderate Heavy

Frame: 6  
17:36 EST  
19/6/2013

Map features:  
 Weather observations  
 Locations  
 Range  
 Topography  
 Lakes & major rivers  
 River catchments  
 Forecast districts  
 Roads  
 Railways

Accessing a website from a URL delivered associated with the information provided

# Hybrid Radio Use Cases

## More Information – Use Case Example 4 – sports results



Next to Jump **3 minutes** 6:07 PM  
QLD Greyhounds Albion Park Race 8 Surepick Form Ratings Best 8 395m

rentalcars.com CAR HIRE LONDON Book Today & Pay Later

Home Watch Radio **Racing** Sports Programs Guide Connect About

Home > Racing

**Race Details**

<<< Bendigo Harness R2 Shepparton Greyhounds R10 >>>

**8 BELMONT** BET NOW  
Twitter.Com/rwwa\_thor 0-68 Hcp

Start Time: 6:30PM 19 Jun 2013  
Distance: 1400m  
Track: GOOD3 T1  
Weather:   
Exotic Legs: DD2 Q4  
Live on:

Belmont Today: 1 2 3 4 5 6 7 **8** LIST

**Chef & Best**  
IT'S A GAME CHANGER  
Chicken & Camembert  
FROM \$8\* EACH PICK UP  
\*Limited time only. Conditions apply.

Drives listeners to use additional broadcaster facilities

What sport is on tonight, previous results, betting

# Glue Software Providers

## SOFTWARE PROVIDED BY MULTIPLEXER



## SPECIALISED

uniqueinteractive



ANY QUESTIONS?

