

Radio

EBU RadioHack 2012

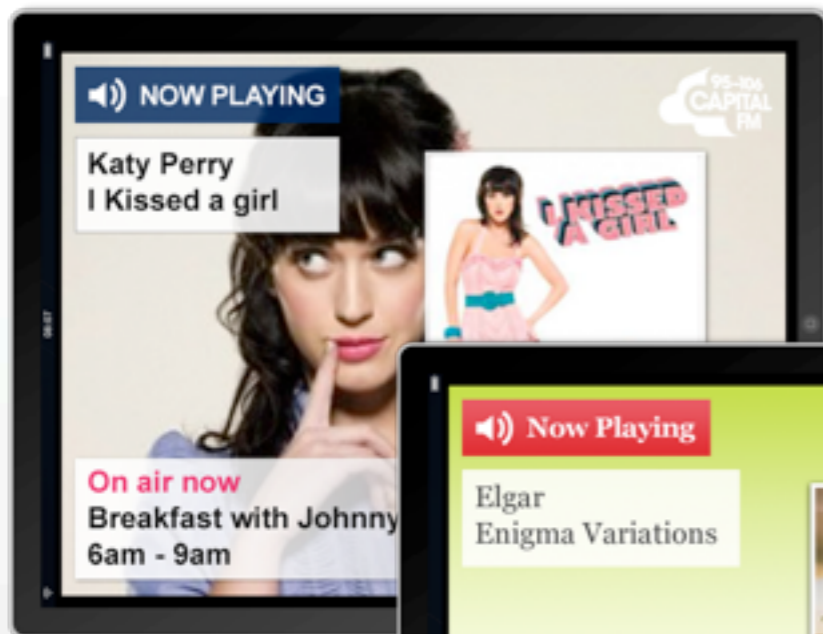
What we gonna do?

- What is RadioVIS?
- Generating a RadioVIS feed
- Content generation
- Relation to DAB Slideshow
- Better on-air synchronisation
- Upcoming Specification changes - the magical road to v1.1



What is RadioVIS?

“A methodology for enhancing broadcast services with glanceable visuals and text”



London's No.1 Hit Music Station - 95.8 Capital FM

Roberto brings you the latest music news along with the greatest hits. Join the conversation @capitalofficial on Twitter



Now: Ruler of the Spirits Overture by Carl Maria Von Weber

For more music details visit classicfm.com/playlist

Generating a RadioVIS feed



- Based on simple, open technologies: Stomp, HTTP
- Currently relies on broadcaster setting up a Stomp feed, and publishing RadioVIS data for each service
- Can seem to be fairly daunting to set up an entire RadioVIS service on your own

ITS NOT AS DIFFICULT AS YOU THINK!

Generating a RadioVIS feed



- Standalone packages exist:
 - EBU RadioVIS Server: <http://code.google.com/p/ebu-radiovis-server/>
 - Node RadioVIS Server: <http://code.google.com/p/node-radiovis/>
- Third party vendors can also help you set up your service

Generating a RadioVIS feed



- If you DO want to roll your own, you can write your own server in 20-30 lines of Python
- The technology is the easy bit, the trick is to properly implement:
 - ▶ Rotation of new content to keep it fresh - news, pictures, etc.
 - ▶ Synchronisation of onair content - current song, show change
 - ▶ Keeping it running! - coping with network transients, server problems,

AND MOST IMPORTANTLY...

Content Generation

- Having the technology is not enough - it is merely a transmission route - you still need good **CONTENT** and good **CONTENT PRODUCERS**
- **A Great Opportunity to showcase events and special activities**





Content Generation

- You can do lots of things through automated content collection:
 - RSS Feeds
 - Webservice APIs: Twitter, Facebook, Google+
 - Link to Playout System
 - Weather feeds over FTP
 - Link from Content Management System
 - Or if all else fails.....**SCREEN SCRAPING**

Slide Generation

- Once we have content, we need to make some slides...**BUT HOW?**
- Several **Strategies**:
 - Pre-generation
 - On-demand generation
- And **Methods**:
 - Programmatic construction - building up elements using code
 - Rendering - from SVG, HTML, or other renderable markup

Slide Generation Strategies



Pregeneration

- **Create each slide file as content arrives**
- **Upload to webserver ahead of user request**
- **Good for managing high load**

On-Demand

- **Create each slide on user request**
- **Can potentially use a lot of resources**
- **Good for tailoring the response to the user**

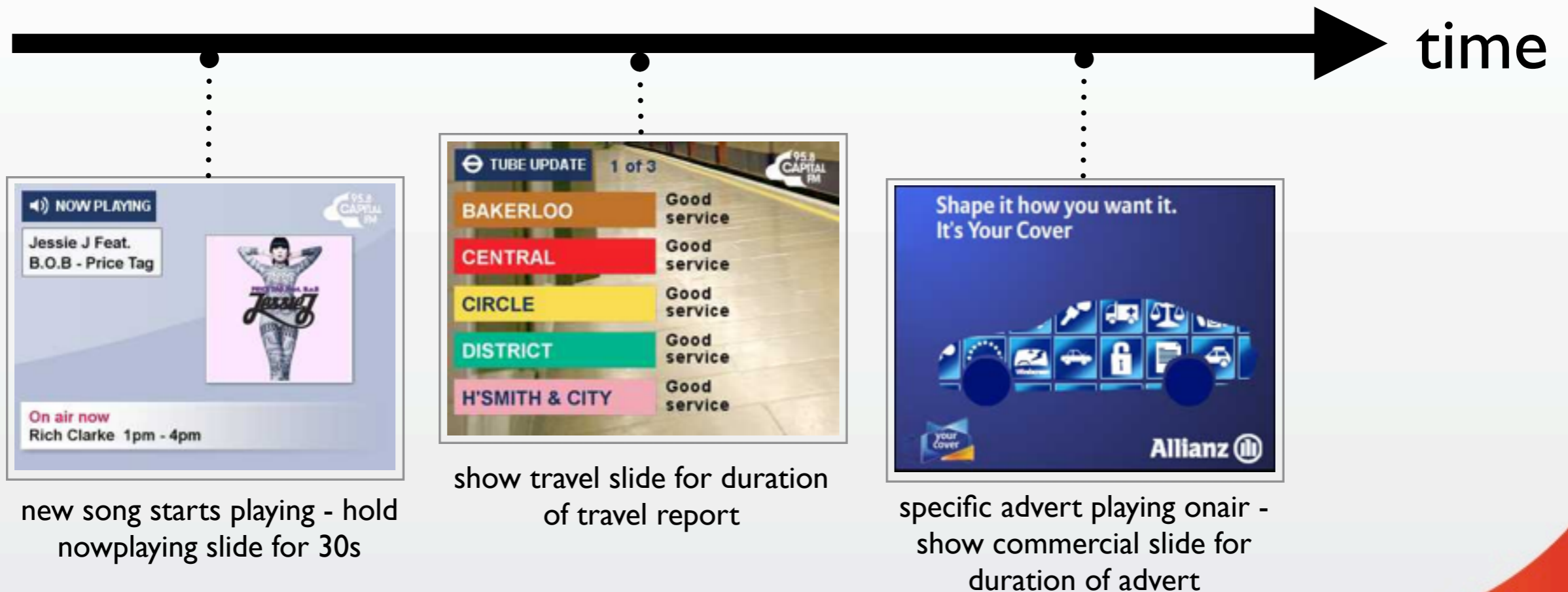
Relation to DAB Slideshow



- Can drive both DAB slideshow and RadioVIS images from the same source - *they both need slides of a certain size!*
- Similarities: size, triggering, formats, serial transmission, device profiles
- Differences: available bandwidth
 - ➔ Potentially the same source, but different rate of transmission

On-Air Synchronisation

- Tying slide display **on the device** to what the user is listening to
- Triggered slides based on specific important events
- Revert back to a 'normal' carousel outside of these events





The Future of RadioVIS

- The Version 1.1 specification is currently under consideration
- Hope to ratify this in **April 2012**
- Important new additions:
 - **Content Negotiation**
 - **HTTP Transport Rework**
 - **Method to support IP streaming**

Your feedback is required! Join the RadioVIS developers list to find out more



Content Negotiation

- The trend for devices is for higher resolution screens.
- Allow a client to supply the desired sizings (height and width in pixels) for a slide, by using HTTP request headers whilst requesting the slide.

```
X-RadioVIS-DeviceWidth: 1024
```

```
X-RadioVIS-DeviceHeight: 768
```

```
X-RadioVIS-DevicePPI: 120
```

- Allow the broadcaster to decide how best, if at all, to satisfy these desired screen parameters.



Content Negotiation

- **Broadcaster and Device follow rules on how to scale and center slide**
- Keep original slide aspect ratio
- Device can center/pad as required
- Broadcaster should send back HTTP error or Basic Profile slide if the request cannot be fulfilled
- Device should inspect returned image size

HTTP Transport



- Existing HTTP transport in v1.0 specification has a few issues with it - currently impossible to use with the security model in most browsers.
- Proposal to extend this to support JSON/JSONP in order to provide a usable method for transport of RadioVIS over HTTP
- Need to consider any implications on whether/how we transition from the existing method to JSON/JSONP - but we also want to make sure we are well positioned for the future.



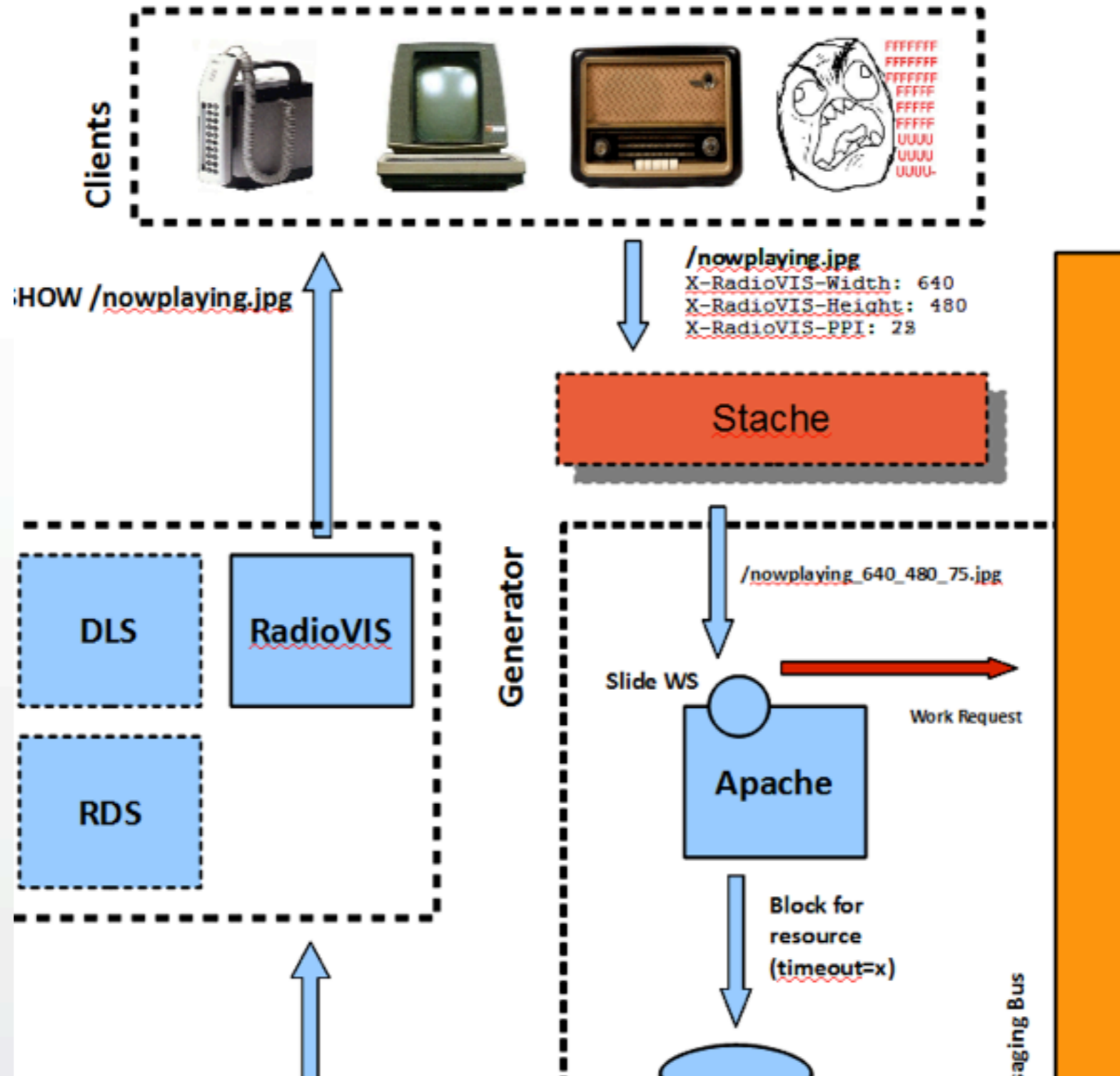
Using RadioVIS for IP Streams

- Proposed methods:
 - In-Band Metadata
 - IMDA Directory Definition
 - RadioEPG
- Device Manufacturers and Broadcasters can implement any or all of these methods to provide the parameters used to discover RadioDNS applications, including RadioVIS

New RadioDNS Specification (v1.0) being ratified at this event, including detail on using RadioDNS for IP streams

Demonstration content negotiation

Content Negotiation





¿QUESTIONS?