Airtime: Scheduled Audio Playout for Radio

Linux Audio Conference, 2011
Dublin, Ireland

Paul Baranowski, Toronto
CTO, Sourcefabric
Outline

- Sourcefabric
- Airtime
  - Overview
  - Demo
  - Backend
- History of Project
- Roadmap
- Resources
Sourcefabric

- Non-profit
- Incorporated May 2010 (Happy 1st anniversary!)
- Funded by private & public grants
- Born out of another non-profit called the "Media Development Loan Fund"
Sourcefabric: Purpose

Promote freedom of speech and open transparent society
Sourcefabric: Method

Provide media organizations with the open source software and support to produce quality, independent journalism
Products

**Airtime**
Remote controlled automated radio broadcasting

**Newscoop**
Online news publishing for enterprise news orgs
Airtime Overview

Long Term Goal

Run the audio of a radio station over the web
Airtime Overview

Short Term Goal

Automation & Collaboration first
Airtime Workflow

- Program manager
  - creates "shows" (time slots) for DJs
  - record a live show, upload to Soundcloud, rebroadcast
- DJs fill their shows with audio
- Anyone can monitor what is happening
Airtime Demo
Multi-file Upload
Playlists:

Drag & Drop Reordering

Automatic Saving

Sub-second precision

Cue in & out -- Fade in & out
Shows

One-off / Repeating Shows

Record

Rebroadcast

User Rights

Playlists are copied
Airtime Backend
REST/JSON API

Example REST URL:
http://localhost:80/api/schedule/api_key/YW8WDVV74923EAJGVL2Y

JSON Result:
{"2011-05-06-14-45-00": {"user_id": 0, "played": "0", "timestamp": 1304689500, "show_name": "Test Show 3", "medias": [{"fade_out": 1000, "fade_cross": 0, "export_source": "scheduler", "uri": "http://localhost:80/api/get-media/file/451517be004a53c0dca7d76d1825e241.ogg", "cue_in": 0, "row_id": "119", "cue_out": "0", "id": "451517be004a53c0dca7d76d1825e241", "fade_in": 1000}], "start": "2011-05-06-14-45-00", "id": "12", "x_ident": "12", "source": "PLAYLIST", "schedule_id": "12", "show_start": "2011-05-06-14-45-00", "subtype": "1", "duration": "00:05:07.48", "end": "2011-05-06-14-50-07", "show_end": "2011-05-06-15-45-00"}
Show Recorder
Media Monitor
History of Airtime
Ancient History of Airtime

- Grant into 2003 from OSI
- Versions 1.0-1.3 developed 2004-2005
- Started life as "LiveSupport", then "Campcaster".
- Some features included:
  - Desktop app
  - Web App
  - P2P file & playlist sharing
  - Import/Export playlists
- Development halted in 2005 with demo version available
What went wrong way back then?

- Two products that did the *same* thing: a desktop app and a web app. *Implemented everything twice!* Very difficult to change things.
- Built their own playout engine
- Overengineered
- Waterfall model of development
- Used C++ for GUI
- Long release cycles
How did we fix it?

- Restarted development in August 2010
- Business
  - Dropped the desktop app
  - Focused on a minimal viable product
  - Focused on the unique value-add areas
- Process
  - Short iterations: 2-6 weeks
  - Listened to customers and users
  - Focused on developing a community
- Tech
  - Moved to Zend Framework, JQuery
  - Loosely coupled components
  - Replaced custom audio player with Liquidsoap
  - Dynamic languages (Python)
The Future of Airtime
Roadmap - Short Term (1-3 months)

- Access to files through the filesystem (1.9)
- Doctrine ORM instead of Propel (2.0)
- Internationalization (2.0)
- Webstream rebroadcasting (2.1)
- More complete RESTful API (2.0-2.1) -- allows 3rd party addons
Roadmap - Medium Term (3-9 months)

- UI Improvements
- Ad management
- Better media metadata
- Advanced Search (Genre, BPM, etc)
- Better Soundcloud integration
Roadmap - Long Term (9 months+)

- Live Shows
- Video
Airtime Resources
Naomi Aro
Martin Konecny
James Moon

Developer Team
What is Airtime?

Airtime is the open broadcast software for scheduling and remote station management. Web browser access to the station's media archive, multi-file upload and automatic metadata verification features are coupled with a collaborative on-line scheduling calendar and playlist management. The scheduling calendar is managed through an easy-to-use interface and triggers playout with sub-second precision.

Airtime has been intended to provide a solution for a wide range of broadcast projects, from community to public and commercial stations. The scalability of Airtime allows implementation in a number of scenarios, ranging from an unmanned broadcast unit accessed remotely through the Internet, to a local network of machines accessing a central Airtime storage system. Airtime supports the playout of files in both the commonly used MP3 format and the open, royalty-free equivalent Ogg Vorbis.

http://new.flossmanuals.net/airtime/
<table>
<thead>
<tr>
<th>Forum Title</th>
<th>Description</th>
<th>Posts</th>
<th>Views</th>
<th>Date</th>
<th>By:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Airtime Support</td>
<td>Technical support forum for Airtime issues. Posts here will also appear on the mailing list <code>airtime-support@lists.sourcefabric.org</code></td>
<td>1753</td>
<td>569</td>
<td>Fri, 06 May 2011</td>
<td>Paul Baranowski</td>
</tr>
<tr>
<td>Airtime Development</td>
<td>Airtime feature requests and developer discussions. Posts here will also appear on the mailing list <code>airtime-dev@lists.sourcefabric.org</code></td>
<td>2398</td>
<td>842</td>
<td>Tue, 03 May 2011</td>
<td>Adam Thomas</td>
</tr>
<tr>
<td>Airtime Français</td>
<td>Échanger avec d'autres Airtime utilisateurs en Français.</td>
<td>12</td>
<td>3</td>
<td>Tue, 26 April 2011</td>
<td>Francois</td>
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<tr>
<td>Airtime Documentation</td>
<td>This forum is dedicated to improving the manual and documentation for Airtime. Please post ideas and requests here.</td>
<td>1</td>
<td>1</td>
<td>Fri, 11 February 2011</td>
<td>Micz Flor</td>
</tr>
<tr>
<td>Airtime Projects</td>
<td>Highlight or discuss projects currently using Airtime.</td>
<td>2</td>
<td>3</td>
<td>Mon, 07 March 2011</td>
<td>Adam Thomas</td>
</tr>
<tr>
<td>Airtime Security</td>
<td>Important security announcements and patches for Airtime.</td>
<td>1</td>
<td>1</td>
<td>Mon, 28 February 2011</td>
<td>Adam Thomas</td>
</tr>
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</table>

http://forum.sourcefabric.org/
Airtime

The open radio software for scheduling and remote station management.

Download & Install

Airtime is for Linux platforms, but once installed can be controlled from anywhere using a modern browser. We recommend installing on Ubuntu 10.04 LTS or higher, on a computer with at least a 1 GHz processor and 512 MB of RAM.

http://airtime.sourceforge.org
Summary

- Airtime is a web app for radio stations that:
  - automates audio playout
  - allows DJ collaboration
- Lots of resources available to help you out
- Evolving quickly
- Paid support options available
Contact:

paul.baranowski@sourcefabric.org