


Coming up...

The Realtime Podcast

Musaphonic



GENERAL ELECTRIC

A vintage car stereo with a cassette tape inserted. The stereo has several knobs and buttons, and the cassette tape is visible with its label. The background is dark and slightly blurred.

Welcome to

The Realtime Podcast

wherein is explained absolutely
everything worth knowing about

Podcasting

hosted by

Tim Pritlove

Tune In!

- This is not a only lecture
- This is a podcast
- And it's live
- And we're all in it together
- So let's have some serious fun with Podcasting

Introduction

- There is only one topic on our agenda today and it is: Podcasting
- So i am telling you about the history and technology, present a couple of existing shows and thinking about what's next
- I am also going to present the equipment necessary to produce it and of course doing this production live to show what it can be like

Part One: Podcasting Overview

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AM	FM
160	108
140	107
120	106
100	104
90	102
80	100
70	98
65	96
60	94
55	92
	90
	88

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History

A close-up, slightly blurred image of a vintage-style analog clock face. The clock has a metal bezel with a serrated edge and a wooden background. The clock face is visible through the center, showing numbers from 10 to 12 and some smaller markings. The overall tone is warm and nostalgic.

- So where is this all coming from?
- Podcasting itself is both brand-new and also quite a thing of the past
- Radio recordings on the net have been here forever but they never really made it to the masses
- The problem was distribution and this is what Podcasting is about to solve.

Podcasting vs. Podcasts

- The terms Podcasting and Podcasts generate confusion
- Podcasting describes a way of how to distribute files on the internet in a simple yet effective way
- Podcasts are a new kind of radio shows that borrow from the traditional format but gain a lot from the new flexibility provided by Podcasting

Podcasting Technology

- Podcasting is a combination of tools, protocols and formats that have been here for a while.
 - HTTP
 - RSS
 - MP3
- We just need to get these glued together in a special way to make things fly

HTTP

- HTTP is the primary transport protocol of the Internet and the main building block of the Web
- Implemented everywhere
- Deployed everywhere
- Gets everywhere
- HTTP is the choice of a new generation

RSS

- RSS has many names and many fathers
- Dave Winer brought RSS to the masses driving the growth of the Blogosphere and generally made web sites more trackable
- RSS v2.0 became the de-facto standard despite other activities of the semantic web crowd which eventually failed due to a lack of focus of the effective problem
- Atom might eventually take over

RSS Enclosures

- Adam Curry, former TV and radio star looked for a way to make delivery of big files easy by “background delivery”
- Talked to Dave Winer which introduced RSS enclosures to RSS 2.0
- Early recordings didn't really catch on as people obviously didn't want to listen on their computer

MP3

- MP3 is the master of audio formats as it was the first of its kind to be considered “good enough” by a critical mass of people
- ID3 Tags allow for some serious meta-tagging making tracking and organising digital recordings a snap
- Quality can be scaled as needed
- MPEG-4 AAC is a close contender

Enhanced Podcasts

- As this is a lecture it has slides which you apparently can't see just by listening to it
- But thanks to chapter marks you'll find the slides attached to this recording as this is in MPEG-4 AAC format.
- Chapter frames will soon find its way to MP3 (and maybe OGG too) but we're not here yet.
- But enough tech speak for now. More on this later.

The iPod

- The iPod changed the way people listened to digital content in a radical way
- iTunes' automated syncing showed the way how to couple machine and portable players
- “Podcasting” was the vision of getting automatically delivered audio automatically synced as well
- “Broadcasting via the Pod”
- But there was no app doing it

iPodder

- Adam Curry went ahead in 2004 and created a small AppleScript dubbed iPodder
- The script was extended to a real application by other programmers soon after.
- Renamed to “Juice” because of TM issues
- The “Daily Source Code” provided motivation to the developer scene

Podcatchers

- Basically Pimped-up RSS Readers
- NetNewsWire has only rough support
- Juice is the slightly more flexible tool
- Almost all MP3 players now integrate podcasting support
- iTunes 4.9 shines with integration
- Squeezebox and other devices have podcasting built-in

Video Podcatchers

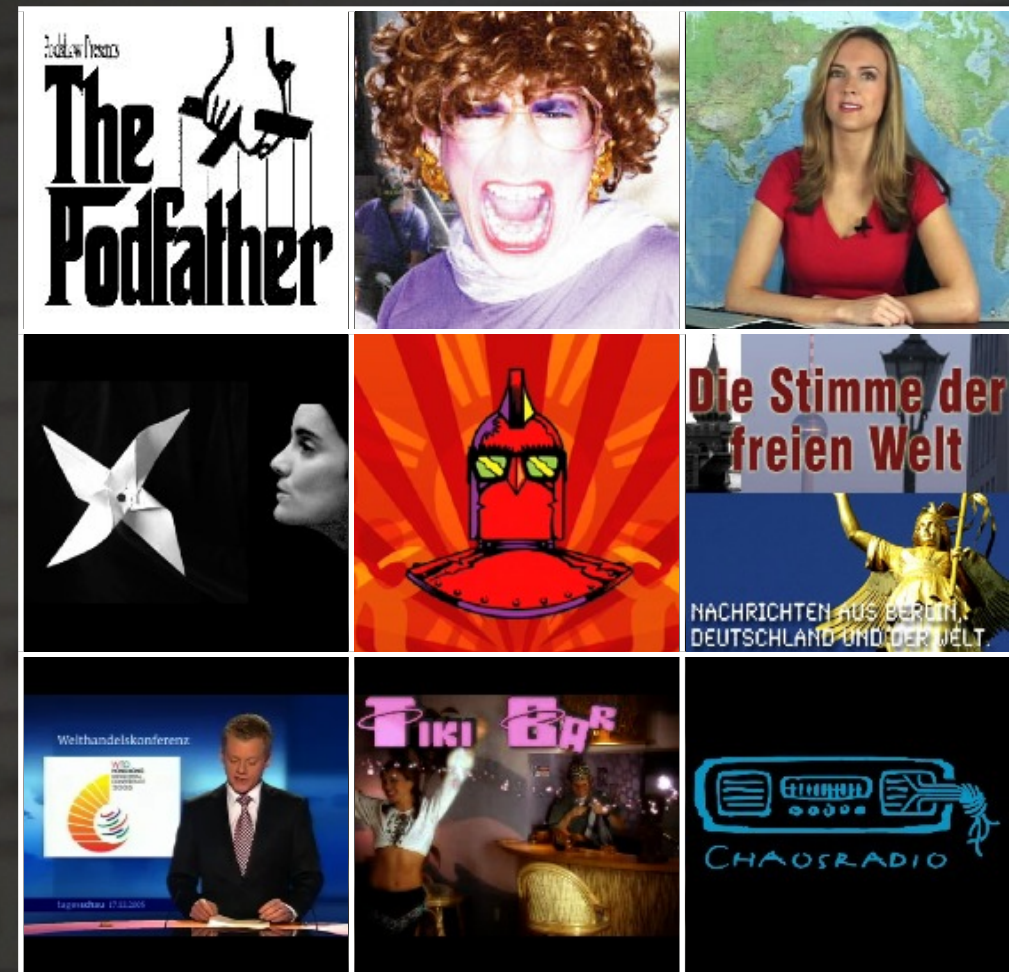
- Video Podcasting is the next big thing and already running well
- iTunes does videos since a long time
- DTV focuses on easy viewing, brings its own (badly documented) namespace
- FireAnt is the scene's tool
- Tivo tries to take advantage of the iPod now

Podcasts Evolution

- The new delivery method became immediately attractive to a growing audience of both showmakers and listeners
- Maximum flexibility in quality, length, focus, free speech, listener interaction
- ASCAP/BMI, GEMA and others prevent current commercial music from being played
- Free speech and free music now play a big role

Podcast formats

- Audioblogs
- Radio shows
- Music shows
- Interviews
- Cartoons
- TV News



Part Two: Producing a Podcast

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How to podcast

- First you do your recording
- Then you convert your recording to MP3
- Add meta data
- Drop your file in the podcast feed
- Sit back and relax

Recording a Podcast I

- Everything starts with a good microphone
- Pre-Amp is needed for proper quality
 - This is provided by audio interfaces or mixers
- Use a compressor to raise the quality
- Take your time to optimize your settings

Recording a Podcast II

- Use a good (and closed) headphone for monitoring
- Mix in high quality music recordings only
- Use a MIDI controller for interactive control during recording. Best for realtime!
- Make it comfortable, warm and pleasing

Music

- Add music to your podcast to make it more enjoyable
- Make breaks or use background music depending on taste
- Keep licenses in mind and choose wisely
- Creative Commons is the best way to go
- Podsafe Music network is a bridge between traditional and “modern” licensing deals

Free Music

- Think about what you want to do with your recordings in the future
- You are listening to a mix of DJ L'embrouille, a vivid promoter of netlabel music
- The mix is licensed under a Creative Commons license
- So you can download and listen to it at the Internet Archive
- No real obligations but do give credit!

Arranging your Podcast

- Find the right speed to talk and how you put everything together
- Bring in feedback if available to make your listeners a part of the show
- Do it live if you can to make it even more natural
- Podcast is both about delivering information and providing entertainment

Recording Tools I

- Audacity is free and popular. The latest version adds quite a few podcasting features
- Commercial tools provide much more sophisticated interfaces
- Garageband, Cubase, Logic, Logic Express and Live all do a good job
- Multitrack live recording opens the door to streaming podcasts but needs experience

Recording Tools II

Free	Cheap	Pricey
Audacity (LWM, free)	CastBlaster (Win, 50\$)	Adobe Audition
MixCast Win \$12	Garageband Mac 79	Logic Express Mac 149
CakeWalk	SoundForge	Ableton Live 499

Recording Hardware

- External audio interfaces via USB or FireWire usually provide much better sound quality
- Beware of driver issues and test the performance upfront
- Latency can be a killer
- Telephone hybrids allow attaching your phone to your mixer. You can use Skype too, yes.

Encoding Tools

- LAME comes in many flavours and produces reasonable quality
- Try various encodings on your podcast and take care not to distort your signal
- Audio quality is very important for the listening experience
- Choose audio quality over bandwidth considerations (we'll see later how this goes)

Encoding Formats

- MP3 does the job well
- AAC has some nifty features and may be better audio quality
- OGG is a contender but lacks distribution. Make it an option
- Consider metadata to be very important. Don't forget to put them in
- Include your license in your podcast

Add metadata

- Make sure your MP3 contains all the necessary information as ID3 tags
- Always include show title (name), show host (artist) and show name (album) and year.
- Make use of track numbers, comments and especially the lyrics section to provide even more stuff to search for.
- Choose clever naming for your files too!

Part Three: Podcast Publishing

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Publishing Podcasts

- Weblog software usually allows easy posting of enclosures via plug-ins (e.g. WordPress)
- Dedicated podcast publishing software has more attention on metadata (e.g. Loudblog)
- Podcast hosts optimize the process with specialized user interfaces (podhost.de, libsyn.com)



The Feed

- The feed is very important as it is your interface to your listeners
- Provide it with all the basic information and keep it both elaborate and concise
- Honor the format's specification and make use of options
- iTunes' name space provides some important features that lack in RSS 2.0
- Yahoo's Media Feed is the other contender

Feed Syntax Example

```
<rss version="2.0">
  <channel>
    <title>The Lunatic Fringe</title>
    <description>
      The Lunatic Fringe brings you all the background
      information you need to deal with all kinds of
      reality-related issues in your daily life.
    </description>
    <language>en</language>

    <item>
      <title>TFL001 The 22C3 realtime show</title>
      <description>
        This is the first TFL show recorded live
        on stage at the 22nd Chaos Communication Congress
        in Berlin hosted by the Chaos Computer Club
      </description>
      <link>http://fringe.prinz.org/episode/1</link>
      <enclosure type="audio/mpeg" length="25045103"
        url="http://fringe.prinz.org/archive/tfl001.mp3" />
    </item>
  </channel>
</rss>
```


iTunes Name Space

- Introduction of Podcasts in iTunes 4.9 brought extra flexibility
- iTunes name space addresses lacking or ambiguously specified elements
- Ownership, contact information, ITMS categories, square icons and duration
- Makes sense but slightly more work
- Beware: iTunes copies information from the feed to the file by default

Yahoo Media RSS

- Extension for Yahoo Video Search
- Form media groups. Describe AV metadata. Include credits, ratings, subtitles
- Support is currently unclear but never ignore Yahoo as they are one of the three companies that know what has to be done.
- <http://search.yahoo.com/mrss>

Advertise your podcast

- <http://indiepodder.org> provides a OPML-based, distributed directory
- <http://podcastalley.com> is a popular and well-organized directory
- iTunes Music Store Podcast Directory
- <http://podcasts.yahoo.com/>
- Produce promotions to be used in other podcasts

Part Three: Advanced Podcasting

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Making use of podcasts

- Podcasts are an easy and natural way to keep your audience informed
- Length and periodicity determine who you can address at all
- Keeping the personal touch alive can shrink distance and make things easier to explain
- Regular podcasting makes people stick to your channel

Enrich your feed

- A podcast is a media channel and can accommodate many formats
- Video formats (MPEG-4) and Text Formats (PDF) complement the audio show
- A true video podcast might use audio in case of emergency
- Smooth way of pushing media to your audience

Stimulate feedback

- Make it easy for people to respond by opening up many channels
- Have a weblog for announcing new podcasts
- Feed might be generated by weblog system
- Provide extra content on the show and make your show more trackable
- Allow for audio feedback via phone or e-mail

The Podcast Phenomenon

- Podcasts seem to catch on pretty fast and the media and companies are on the fast lane now
- Podcasts allow for more freedom of speech (as of now), more flexible formats and much interaction
- Production costs are superlow
- Subscribing and listening is cheap and easy

Podcast formats and applications I

- Audioblogs, Videoblogs (Vlogs, Vodcasts)
- Talk radio, interviews, discussion
- Media Feeds
- Netlabels
- Daily Soaps, Series
- Automatically generated podcats (del.icio.us)

Podcast formats and applications II

- Education (Teaching languages etc.)
- Business talk
- Event recordings (IT Conversations, 22C3)
- Artist's Backstage (Please your customer)
- Insider gossip (Fly With Me)
- TV recordings (Tivo, Crooks & Liars)

Podcast formats and applications II

- Developer talk (Community building)
- Screencasting (Teaching software and sites)
- Event reporting (media art expos)
- Independent news (Democracy Now!)
- Public Radio (dradio etc.)
- Entertainment and music

Why Podcasts work I

- Many people prefer talking in listening or reading and writing. For those, the textual web isn't that attractive.
- Judging a voice is easier than to judge text
- Voice much more personalizes content and makes it much more appealing to many
- Spoken language can much aggregate, focus and work out aspects of complex topics

Why Podcasts work II

- Podcasting is easy to setup and doesn't need much attention
- Portable music players are affordable and provide easy to use interfaces and high quality sound
- The listener determines what to listen to and when to listen.
- Podcasts can be stopped, rewound, repeated

Why Podcasts work III

- Time delayed listening is ideal for commuters and for unplanned breaks
- Podcasts make it easy to construct a personal playlist of content and music
- Podcasting is radio on-demand
- Free speech attracts lost listeners

Web/Podcast integration

- Early speech-to-text systems are in operation but have yet to prove they work
- Metadata is increasingly searchable
- Weblogs and podcasts are a good match already
- Trackback pings might signal audible references on the web

Instant Podcasting

- Podcasting via Telephone is easy to do
 - Sound quality is problematic
- Portable recording devices will help
 - USB/Flash Memory Microphone
 - iRiver, Archos, iPod
- Web-based Audio recording (odeo.com)

Problems

- Podcast Feed Hijacking might endanger your source. Be aware of it. Use your domain.
- Stable server operation is important for both you and your audience
- Popularity brings bandwidth
- Hidden costs or danglind server blackage because of bandwidth limits

Part Five: Tools and Resources

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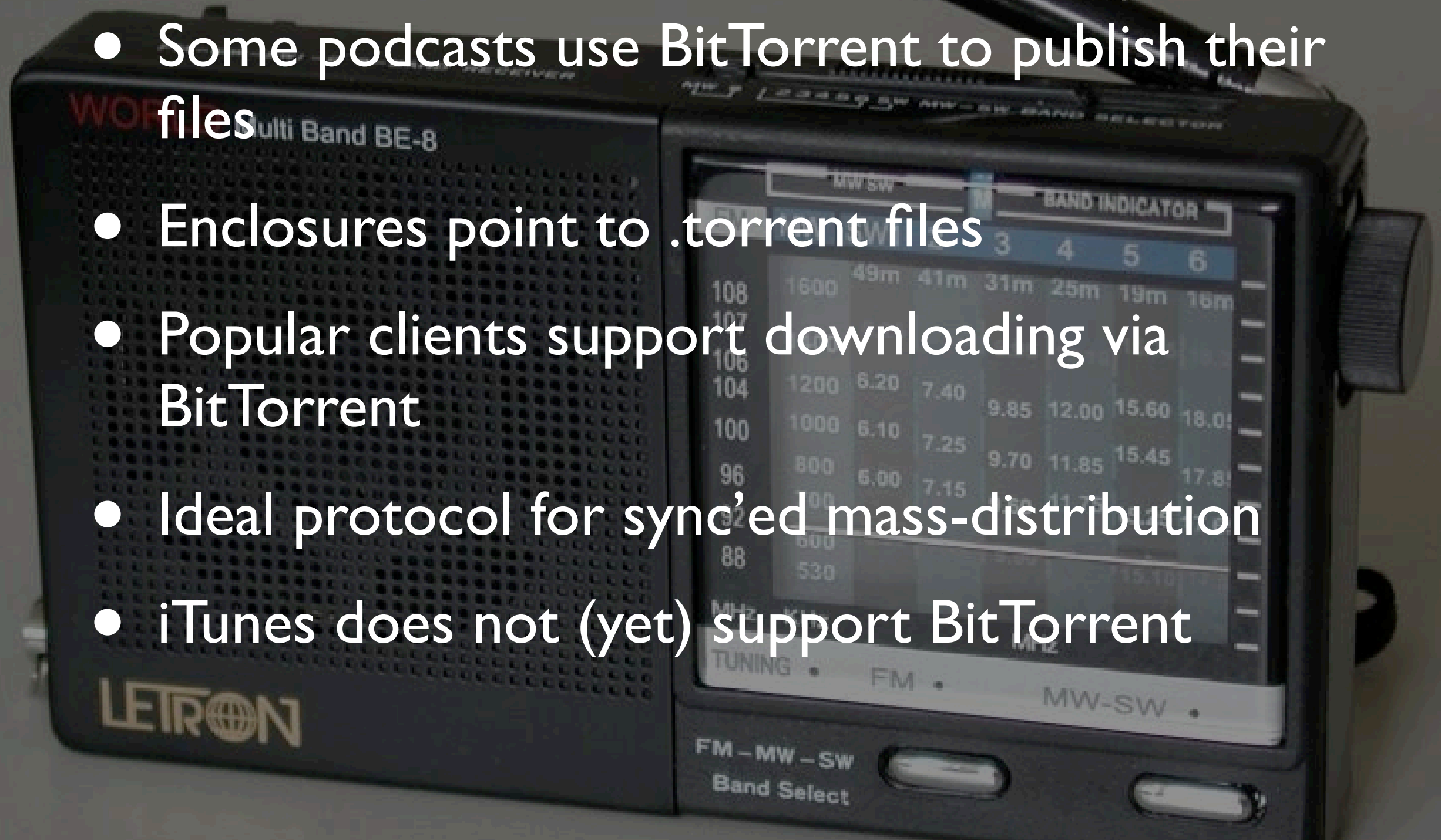
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Coral CDN

- Coral Content Distribution Network
- 260 independent servers working collaboratively offering bandwidth for all
- P2P/DHST-based protocol allows for request-origin-based server location
- Can heavily reduce your bandwidth
- Can deny requests due to quota limitations

BitTorrent & Podcasts

- Some podcasts use BitTorrent to publish their files
- Enclosures point to .torrent files
- Popular clients support downloading via BitTorrent
- Ideal protocol for sync'd mass-distribution
- iTunes does not (yet) support BitTorrent



Roundup

- Podcast are a very personal thing
- Podcasts are both convenient and flexible
- Podcasts are fun

Resources

- <http://podcastingnews.com/>
- <http://en.wikipedia.org/wiki/Podcasting>
- <http://wiki.podcast.de/>
- <http://ourmedia.org/>
- <http://archive.org/>

Goodbye

- Thanks for listening to my show today
- Tune in again when the next recording is heading your way
- Just hit subscribe and you'll be with us all the time
- Please note that I am not under the authority of the authority so have a fucking nice evening.
- And yes, you get this without the beep!