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## Introduction to Podcast Tagging

How Metadata Helps Your Podcast

**07 April 2006**

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### Introduction

This guide is intended to help the MIT community prepare their podcasts. The recommendations made here are not strictly applicable to educational podcasts at MIT, but should be viewed as sound advice for anyone interested in creating a podcast for general consumption.

There are many good introductions to podcasts. You should certainly start at MIT Information Services and Technology's "Make A Podcast" (<http://web.mit.edu/ist/podcasts/makepodcast.html>).

When first approaching the topic, it is helpful to think of a podcast as the internet version of a weekly television broadcast recorded on Tivo.

### *Podcasts and Metadata*

Many websites contain links to audio and video, but mere links do not a podcast make. Podcasts require metadata that describes and organizes the audio and video files. Librarians or other information professionals often supply this metadata for large-scale podcasting projects. But podcasts are not only for projects with massive resources. Individuals can podcast and are encouraged to do so. Individuals can and must become familiar with the idea of producing their own metadata, a process often called "tagging." Fortunately, tagging is easy to do. Tags are user-supplied labels that record certain pieces of information about the audio and video files—(librarians call these pieces of information "properties"). Librarians call the sum of all the tags about a video or audio file its metadata, since the file is a piece of data and its tags are data about it. Metadata means "data about data."

### Tagging

If you have already tagged digital content via sites like flickr and del.icio.us, then tagging your podcast will be familiar. If not, you should check out those great sites. Tagging is an activity we all do every day; applying labels to our stuff that help us find it later. In tagging your podcast you want to put yourself in the mind of your audience and apply those "tags" that they are most likely to use to access your podcast.

Why you must tag your podcasts and what properties you need to record is best understood by looking at what makes a podcast:

- Podcasts are audio and/or video: Podcasting strictly refers to a new way to disseminate your audio and video files. These audio and video files are not searchable by text-based search engines like Yahoo and Google. You'll want to provide good descriptions or descriptive words and phrases that search engines like Google and Yahoo can use to index your podcast.
- Podcasts are serial publications: Like TV and radio shows that have a new program each week, podcasts continually add audio or video files, at least semi-regularly. Subscribers need to know when new files have been added and the order in which files should be accessed. You'll want to provide a date for each podcast.
- Podcasts are an asynchronous publication: Unlike TV and Radio, all the interested listeners do not have to tune in at the same time. Each listener can choose when they want to access a podcast and download audio and video files. This means that your audio or video files have to be continuously available on a server and you need to be able to direct your audience to the appropriate file. Your podcast needs to contain valid, persistent links to all of your multimedia files.
- Podcasts are an internet publication: The delivery mechanism is the internet, which means that *any* device that can access the internet can access your podcast. This means that in addition to on your iPod you can also potentially watch podcasts on your phone, computer or TV. Watching a podcast involves communication between your particular device and the podcast in order to transform the audio or video to the appropriate format. You'll want to provide technical information that describes the format of your multimedia file and any requirements for its use, including copyright information.

## Feeds

Podcasts are sometimes called **feeds**, which should put you in mind of newswires or newsreels. Podcast feeds are strongly organized lists of content. It's this list that subscribers read to find your latest video or audio content, rather than having to find each audio or video file separately. The feed serializes the content, adding a new reference to a video or audio file each time one is created. Subscribers use a tool called an **RSS Aggregator** to access the feed. The aggregator periodically checks the feed for new content, informing the subscriber when something new has been added and downloading the new content to a playback device. A significant amount of metadata about the audio or video file is shared between these different tools in order to enable a subscriber to access the file with such a great degree of freedom.

## RSS

**RSS** is the language of feeds. RSS is a ready-made metadata structure for things like weblogs and podcasts. You can think of RSS as a list of all the tags you'll need to record. Remember that a complete list of tags is also called a metadata file. As a podcaster you would use a tool called an **RSS or Feed Generator** to create the RSS file for your podcast. This metadata is what the RSS aggregator reads to determine what's new and what the podcast consumer has already seen.

Like many other so-called "standards," no one can agree on the best way to implement RSS. RSS has branched off into three main development tracks, RSS 1.0, RSS 2.0 and Atom, each track choosing a different interpretation of what RSS stands for (Real Simple Syndication, or RDF Site Summary, or Rich Site Summary).

## XML

RSS files are written in a language called XML (eXtensible Markup Language). XML is very common way of recording the properties of almost any kind of object, physical or digital. In most cases, your RSS generator will do the work of writing XML, saving for you only the work of choosing which properties to record and the appropriate values for each property. In some cases you may have to encounter XML in order to ensure that the list of properties you can record meets your needs. This document will focus on explaining the tags that you'll capture without introducing too much XML. XML samples are included at the end of the document for those who want more information.

## Podcast Metadata Recommendations

The following are the recommended properties of each podcast, the files within the podcast.

### *Essential Tags*

#### **Identifier**

The most important piece of metadata that you can provide for any digital object is an identifier. You should apply a persistent, unique identifier for every file. This identifier is the best way to ensure that your audience will continue to have access to your material. Website structures and designs are not permanent. Since digital files may change their storage location, if you apply a formal identifier you increase the likelihood that your files multimedia objects will remain accessible to your audience no matter where they are eventually published.

#### **Copyright**

An appropriate copyright statement is the second most important piece of metadata that you can provide for your digital content. You need to protect your rights and explain to your users what rights they have to use your material. Creative Commons licenses are widely used at MIT to govern the distribution and sharing of content. These licenses come ready made for tagging your content.

#### **Title**

Always title your each individual audio or video file. Words in the title should follow the normal title case rules for capitalization.

#### **Contributor**

It is important to tag your file with the names of everyone who was involved in its preparation, including actors and producers, even those who may make small guest appearances. Your potential audience's interest in the file may well be the guest that made one small appearance. If a person's name is not associated with the file they'll never discover it.

#### **Description**

Provide a brief, informative statement of what your content is about. This description will help potential subscribers quickly decide whether it provides the information they seek.

#### **Subject**

Search engines are not yet capable of indexing video and audio content without accompanying text. This is one of the main reasons to create metadata for these objects. It is always a good idea to add some descriptive words and phrases to your RSS feed. Organizing your content into subject areas is often required when you submit it to aggregation services like iTunes or Google video. It is generally good practice to create an easily navigable index of your podcast content. Keywords are good, categories are better, a transcript is best.

#### **Language**

It is important to specify for your audience that primary language of your audio or video files.

## Date

The correct identification and serialization of your content is driven by the date on which the file was created or added to a publication like an RSS feed. Many content creation tools and RSS feed generators will capture this information automatically and add the appropriate tags.

## Link (URL/size/format)

When preparing publications of multimedia content like web pages or podcasts, you will eventually need to point your audience to where your audio and video files reside. Each publication mechanism accomplishes this differently. RSS 2.0 call this tag the “enclosure” tag. Other varieties call it the “content” or “link” tag.

There will always be important technical information, such as **size** and **format**, which is often required along with the url to the audio or video file. This information enables different systems to know better process your audio and video. Size and format help delivery systems decide which device to use to play the file and whether or not it can be streamed or should be downloaded.

## Duration

Many systems, like iTunes publish the length of audio or video files. This information helps your podcast consumers to judge when and how best to access your files.

# RSS Basics

## *How an RSS file is constructed from tags*

RSS feeds consist of a single **channel** tag that contains multiple **item** tags. The channel is the collection of all the audio or video files. A good example of a channel is a series of video lectures for a one course at MIT. The video for one lecture would comprise an item. You add the some of the recommended tags to the Channel and some to the Item.

## Channel Tags

It is important to tag a channel with:

- **Identifier**
- **Copyright**
- **Title** (Of the complete series of audio or video.)
- **Link** (To the website that hosts/creates the podcast.)
- **Contributor** (Both those who are responsible for the video content and those who are responsible for the RSS feed. Very often these are two different entities.)
- **Description**
- **Subject**
- **Language**

Date and Duration do not apply to Channels, often the Link tag is also use as the Identifier.

## Item Tags

It is important to tag an item with:

- **Identifier**
- **Copyright** (If different from the channel.)

- **Title** (Of the individual audio or video file.)
- **Contributor** (If different from the channel. Some podcasts have a single contributor, some have multiple.)
- **Description**
- **Subject** (If different from Channel.)
- **Language** (If different from Channel.)
- **Date**
- **Link** (To the audio or video file.)
- **Duration**

## ***Guidelines for Producing Tags***

### **Tagging for the MIT Audience**

It may be to your benefit to clearly identify your podcast as originating from MIT. If this is the case, clearly state that yours is an “MIT” podcast either in the podcast title, description, or category tags. Recognize that by identifying your content as MIT related, you may subject it to MIT guidelines for content.

### **Tagging for a Larger Audience**

Go read the RSS guides at iTunes, Google and Yahoo. Familiarize yourself with their expectations and requirements for RSS feeds. It is generally to your benefit to make your podcast available to as wide an audience as possible. **This may mean preparing multiple feeds, one for each aggregating service, satisfying each service’s idiosyncratic information demands.** You have a head start by thinking generally about the tags you want to prepare, now you just have to format the tags as appropriate for each audience.

### **Channels and Items**

In preparing your feed or feeds, you need to make good decisions about where to put certain tags like contributor. If you have common contributors for all items, you may want to list them in the channel and save yourself from listing them in every single item. You will have to balance this decision with an understanding of how a system like iTunes will process the tags in the field. If you want the contributors to show up in the artist field for each audio or video item, then you may want to also put the contributor tag at the item level.

### **Preparing Different Versions of Your RSS**

Each of the different varieties of RSS (RSS 2.0, Atom, iTunes, Media RSS) add their own custom tags to meet the specific needs of their systems. You will need to familiarize yourself with the differences between these varieties and be prepared to adjust the way you create your RSS to meet the requirements of the systems with which you want to share content (Google Video, iTunes).

### **Some Tags Have Strictly Controlled Values**

Tags like category, language and date will only accept values that are formatted the right way or conform to the acceptable list. Be sure to familiarize yourself with these restrictions and make sure to follow them. Fortunately, format restrictions are intended to standardize the way languages and dates are represented. You should find that each variety of RSS 2.0 uses the exact same restrictions for format and date. For controlled vocabularies like the category element, you will find that you need to consult each list and may need to change the category tag value depending upon the variety of RSS 2.0 you wish to publish.

## RSS Examples

WARNING: THE FOLLOWING SECTION VERY QUICKLY BECOMES HIGHLY TECHNICAL AND JARGON LADEN, YOU MAY WANT TO FIND AN INTERPRETER WHO SPEAKS MARKUP LANGUAGES

Now that you know which tags you want to capture the next step is to translate these tags into RSS XML. Producing the XML documents that make up an RSS feed can be a complicated process. Compounding the difficulty is the fact that, like many other technologies, every major RSS aggregation system is using RSS in a slightly different way. Needless to say, this makes the job of the producing an RSS feed a little more difficult. On the one hand, as an RSS provider you want to see your content in the iTunes podcast library and perhaps in Google and Yahoo Video. On the other hand, you don't want to have to create three different RSS feeds from scratch. Hopefully by following this document's guidelines you'll find it easier to translate from one RSS variety to another.

Here are example RSS feeds in some of the most popular varieties of RSS.

### ***RSS 2.0***

RSS 2.0 can be understood as the baseline variety of RSS for most of the other examples listed here. It is just one way to create RSS. In addition there is RSS 1.0 and Atom. The iTunes and Media RSS varieties explored in this guide will build upon the RSS 2.0 foundation, adding tags to meet more specific needs than can be anticipated in a generic specification like RSS 2.0.

```
<?xml version="1.0" encoding="UTF-8" ?>
<rss version="2.0" xmlns:dc="http://purl.org/dc/elements/1.1/">
  <channel>
    <title>6.013 Electromagnetics and Applications, Fall 2002 Video
Demonstrations</title>
    <link>http://ocw.mit.edu/OcwWeb/Electrical-Engineering-and-Computer-
Science/6-013Electromagnetics-and-
ApplicationsFall2002/CourseHome/index.htm</link>
    <description>This section contains the movies and demos that are related to the
course. These movies were developed with MATLAB®. The movie/demo files and
corresponding MATLAB® files are provided, along with the relevant lecture or
recitation session during which the topics are covered.</description>
    <dc:contributor>David Staelin</dc:contributor>
    <dc:contributor>Erich Ippen</dc:contributor>
    <dc:contributor>Jin Au Kong</dc:contributor>
    <dc:contributor>James Melcher</dc:contributor>
    <dc:contributor>Markus Zahn</dc:contributor>
    <language>en-US</language>
```

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**<category>Demonstrations</category>**

**<item>**

**Discussion Category**

The contributors of the example video are not editors or webmasters so I looked to a different tagging scheme to find a good substitute. This scheme is Dublin Core (hence the prefix “dc:”), a tagging scheme widely used for all kinds of content. The prefix “dc:” is used to let everyone know that this tag is not from RSS 2.0. This prefix is called a namespace prefix. The namespace itself is identified at the beginning of the RSS feed by this declaration, ‘xmlns:dc=”http://purl.org/dc/elements/1.1/”’. This is the address where you would go to look up the definitions of the tags within the dc: namespace. The use of namespaces allows an xml file like an RSS feed to contain tags from different schemas without conflict.

This channel and its items have multiple authors. In the example above all of the authors participated in creating all of the items. The RSS feed reflects this by recording the author contributions at the channel level instead of the item level.

### **link = enclosure**

RSS 2.0 calls that tag by which it links to the audio or video files **enclosure**. It contains URL size and format attributes where you put information about your audio and video file.

## *Itunes*

Apple has added new tags to the base RSS 2.0 list. They’ve done this because RSS 2.0 wasn’t designed specifically for Itunes, and Apple felt that it was necessary to extend the list to satisfy their functional requirements.

```
<?xml version="1.0" encoding="UTF-8" ?>
<rss version="2.0" xmlns:itunes="http://www.itunes.com/dtds/podcast-1.0.dtd">
  <channel>
    <title>6.013 Electromagnetics and Applications, Fall 2002 Video
Demonstrations</title>
    <link>http://ocw.mit.edu/OcwWeb/Electrical-Engineering-and-Computer-
Science/6-013Electromagnetics-and-
ApplicationsFall2002/CourseHome/index.htm</link>
    <itunes:subtitle>This section contains the movies and demos that are related to
the course. These movies were developed with MATLAB®. The movie/demo files and
corresponding MATLAB® files are provided, along with the relevant lecture or
recitation session during which the topics are covered.</itunes:subtitle>
    <itunes:author>David Staelin, Erich Ippen, Jin Au Kong, James Melcher, Markus
Zahn</itunes:author>
    <language>en-US</language>
    <copyright>This site (c) Massachusetts Institute of Technology 2003. Content
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bound by the terms of this license. The Licensor, the Massachusetts Institute of
Technology, grants You the rights contained here in consideration of Your
acceptance of such terms and conditions.</copyright>
    <itunes:category text="Education">
```



```

<itunes:category text="Higher Education" />
</itunes:category>
<itunes:owner>
  <itunes:name>MIT OpenCourseWare</itunes:name>
  <itunes:email>ocw@mit.edu</itunes:email>
</itunes:owner>
<item>
  <title>Wave Propagation in Free Space</title>
  <itunes:subtitle>Demo [1.1] Ref [Lecture 2] This movie demonstrates the
phase difference and the amplitude decay of the E and H field in
freespace.</itunes:subtitle>
  <itunes:author>David Staelin, Erich Ippen, Jin Au Kong, James Melcher, Markus
Zahn</itunes:author>
  <enclosure url="http://ocw.mit.edu/ans7870/6/6.013/f02/freespace.mpeg"
length="10870000" type="video/mpeg" />
  <guid>ASDM335ASE32ASDF345234AGFJ</guid>
  <pubDate>Wed, 25 Jan 2006 15:01:05 -0500</pubDate>
  <itunes:duration />
  <itunes:keywords />
</item>
<item>
  <title>Right-handed Elliptically Polarized Wave</title>
  <itunes:subtitle>Demo [1.2] Ref [Recitation 4] This movie demonstrates a
right-handed elliptically polarized wave.</itunes:subtitle>
  <itunes:author>David Staelin, Erich Ippen, Jin Au Kong, James Melcher, Markus
Zahn</itunes:author>
  <enclosure url="http://ocw.mit.edu/ans7870/6/6.013/f02/RHEP.mpeg"
length="10370000" type="video/mpeg" />
  <guid>http://ocw.mit.edu/ans7870/6/6.013/f02/RHEP.mpeg</guid>
  <pubDate>Wed, 01 Feb 2006 16:32:23 -0500</pubDate>
  <itunes:duration />
  <itunes:keywords />
</item>
</channel>
</rss>

```

#### contributor = itunes:author

The first extension Apple made, was to the available contributor tags. Just like the RSS 2.0 example, iTunes has introduced a new tag called “author” that is more generic than what was available in RSS 2.0. Unlike the dc:contributor tag, the itunes:author tag may not be repeated. The contents of itunes:author are displayed in the “artist” field in iTunes. There is only one artist field. So in this case, all of the authors have to be listed in one tag. Both podcasts and individual

items within the podcast can have authors. In an iTunes RSS feed, it is good practice to put all the author names in both places to ensure that they will show up in the artist field for both the podcast itself and each item within.

#### **description = itunes:subtitle**

iTunes has substituted the subtitle field for description. In the iTunes documentation, it is explained that the itunes:subtitle field should contain information that will be displayed in the description field in iTunes. It is not uncommon to find that different systems introduce this sort of idiosyncrasy into their RSS implementations. It is always important to read each new system's documentation to make sure that the feed you submit meets their expectations.

#### **category = itunes:category**

Apple created it's own category tag for iTunes RSS because it has a hierarchical list of categories. The RSS 2.0 category tag could not be "nested." This means that a category tag, could not contain another category tag. In the example above you can see that the iTunes podcast is part of the broad "Education" category, and more specifically, the sub-category "Higher Education." Here iTunes extended RSS 2.0 to meet it's need for organizing podcasts into categories. The iTunes list of categories is called a taxonomy or controlled vocabulary. Values for the category tag that do not conform to the approved list are not allowed.

#### **itunes:owner**

iTunes podcasts require an extra tag that does not occur in RSS 2.0. The "owner" tag is intended to record information about the person submitting the podcast to iTunes, who has rights and responsibilities for the content at iTunes. This is a tag used solely for administrative use at iTunes.

## **Media RSS**

Media RSS is a new variety of RSS 2.0 that was developed by Yahoo and Google for use in their audio and video podcast search services. It is a more robust version of 2.0 that anticipates a larger diversity of types of audio and video podcasts.

```
<?xml version="1.0" encoding="UTF-8" ?>
<rss version="2.0" xmlns:media="http://search.yahoo.com/mrss/"
xmlns:ocwlom="http://cwspace.mit.edu/docs/xsd/lomv1.0/ocwExtend/version10">
  <channel>
    <title>6.013 Electromagnetics and Applications, Fall 2002 Video
Demonstrations</title>
    <link>http://ocw.mit.edu/OcwWeb/Electrical-Engineering-and-Computer-
Science/6-013Electromagnetics-and-
ApplicationsFall2002/CourseHome/index.htm</link>
    <description>This section contains the movies and demos that are related to the
course. These movies were developed with MATLAB®. The movie/demo files and
corresponding MATLAB® files are provided, along with the relevant lecture or
recitation session during which the topics are covered.</description>
    <media:credit role="Contributor" scheme="ocwlom:roleValues">David
Staelin</media:credit>
    <media:credit role="Contributor" scheme="ocwlom:roleValues">Erich
Ippen</media:credit>
    <media:credit role="Contributor" scheme="ocwlom:roleValues">Jin Au
Kong</media:credit>
```

```

<media:credit role="Contributor" scheme="ocwlom:roleValues">James
Melcher</media:credit>

<media:credit role="Contributor" scheme="ocwlom:roleValues">Markus
Zahn</media:credit>

<language>en-US</language>

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rights to the Work provided here, You (as defined below) accept and agree to be
bound by the terms of this license. The Licensor, the Massachusetts Institute of
Technology, grants You the rights contained here in consideration of Your
acceptance of such terms and conditions.</copyright>

<category>Demonstrations</category>

<item>

  <title>Wave Propagation in Free Space</title>

  <description>Demo [1.1] Ref [Lecture 2] This movie demonstrates the phase
difference and the amplitude decay of the E and H field in freespace.</description>

  <media:group>

    <media:content
url="http://ocw.mit.edu/ans7870/6/6.013/f02/freespace.mpeg"
fileSize="10870000" type="video/mpeg" />

    </media:group>

    <guid>ASDM335ASE32ASDF345234AGFJ</guid>

    <pubDate>Wed, 25 Jan 2006 15:01:05 -0500</pubDate>

  </item>

  <item>

    <title>Right-handed Elliptically Polarized Wave</title>

    <description>Demo [1.2] Ref [Recitation 4] This movie demonstrates a right-
handed elliptically polarized wave.</description>

    <media:group>

      <media:content url="http://ocw.mit.edu/ans7870/6/6.013/f02/RHEP.mpeg"
fileSize="10370000" type="video/mpeg" />

      </media:group>

      <guid>http://ocw.mit.edu/ans7870/6/6.013/f02/RHEP.mpeg</guid>

      <pubDate>Wed, 01 Feb 2006 16:32:23 -0500</pubDate>

    </item>

  </channel>

</rss>

```

**contributor = media:credit**

Just like the other examples, Media RSS has defined its own tag to capture contributor information. In Media RSS, multiple tags are allowed, one for each contributor. Also in Media RSS, you are required to be more specific in defining the nature of each individual's contribution. The media:credit tag requires you to specify a role for the contributor. In the example above the authors used a generic value of contributor for each role, this value came from the author's own controlled vocabulary. Media RSS has defined its own vocabulary for describing roles to contributors.

#### **link = media:group and media:content**

In Media RSS there are two tags, group and content, to replace the enclosure tag. Media RSS recognizes that sometimes multiple files that are all versions of the same content may need to be published in one feed. The group element allows you to relate two files that may represent the same content recorded at different bit rates. The content element replaces the enclosure element in pointing to the appropriate file. In the example above, the author had only one file for each item. However, if the author wanted to create a smaller version of their video file, for users with lower download speeds, she would add another media:content tag in the same media:group.

### **Atom 1.0**

Atom is a rival format to RSS 2.0. Atom is well structured and more vigorously conforms to xml methodologies like validation.

```
<?xml version="1.0" encoding="UTF-8" ?>
<feed xmlns="http://www.w3.org/2005/Atom"
xmlns:dc="http://purl.org/dc/elements/1.1/">
  <id>http://ocw.mit.edu/OcwWeb/Electrical-Engineering-and-Computer-
Science/6-013Electromagnetics-and-
ApplicationsFall2002/MovieDemonstrations/index.htm</id>
  <title>6.013 Electromagnetics and Applications, Fall 2002 Video
Demonstrations</title>
  <subtitle>This section contains the movies and demos that are related to the
course. These movies were developed with MATLAB®. The movie/demo files and
corresponding MATLAB® files are provided, along with the relevant lecture or
recitation session during which the topics are covered.</subtitle>
  <link rel="alternate" href="http://ocw.mit.edu/OcwWeb/Electrical-Engineering-
and-Computer-Science/6-013Electromagnetics-and-
ApplicationsFall2002/CourseHome/index.htm" />
  <updated>2006-04-05T18:02:02</updated>
  <author>
    <name>David Staelin</name>
  </author>
  <author>
    <name>Erich Ippen</name>
  </author>
  <author>
    <name>Jin Au Kong</name>
```

```

</author>
<author>
  <name>James Melcher</name>
</author>
<author>
  <name>Markus Zahn</name>
</author>
<category term="Demonstrations" />
<rights type="text">This site (c) Massachusetts Institute of Technology 2003.
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noted. The Massachusetts Institute of Technology is providing this Work (as defined
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"license"). The Work is protected by copyright and/or other applicable law. Any use
of the work other than as authorized under this license is prohibited. By exercising
any of the rights to the Work provided here, You (as defined below) accept and
agree to be bound by the terms of this license. The Licensor, the Massachusetts
Institute of Technology, grants You the rights contained here in consideration of
Your acceptance of such terms and conditions.</rights>
<dc:language>en</dc:language>
<entry>
  <id>ASDM335ASE32ASDF345234AGFJ</id>
  <title>Wave Propagation in Free Space</title>
  <summary type="text">Demo [1.1] Ref [Lecture 2] This movie demonstrates the
phase difference and the amplitude decay of the E and H field in
freespace.</summary>
  <updated>2006-01-25T15:01:05</updated>
  <link rel="enclosure" type="video/mpeg" length="10870000"
href="http://ocw.mit.edu/ans7870/6/6.013/f02/freespace.mpeg" />
</entry>
<entry>
  <id>http://ocw.mit.edu/ans7870/6/6.013/f02/RHEP.mpeg</id>
  <title>Right-handed Elliptically Polarized Wave</title>
  <summary type="text">Demo [1.2] Ref [Recitation 4] This movie demonstrates a
right-handed elliptically polarized wave.</summary>
  <updated>2006-02-01T16:32:23</updated>
  <link rel="enclosure" type="video/mpeg" length="10370000"
href="http://ocw.mit.edu/ans7870/6/6.013/f02/RHEP.mpeg" />
</entry>
</feed>

```

channel = feed, item = entry

Atom uses the terms feed and entry where RSS 2.0 uses channel and item. The structure is exactly the same. There is only one “feed” per Atom file which contains multiple “entries”.

### **Atom tag mapping**

Atom 1.0 contains all the tags recommended by this guide. The mapping is very straightforward.

#### **Feed Tags**

- Identifier = <id>
- Copyright = <rights>
- Title = <title>
- Link = <link>
- Contributor = <author>
- Description = <subtitle>
- Subject = <category>
- Language = <dc:language>
- Date = <updated>

Atom does not contain a language tag, so we’ve used the Dublin core language tag. Atom requires that you provide a date tag to the whole field which records that last time that you edited the feed (usually when you last added a new entry).

#### **Entry Tags**

- Identifier = <id>
- Copyright = <rights> (see Feed)
- Title = <title>
- Contributor = <author> (see Feed)
- Description = <summary>
- Subject = <category> (see Feed)
- Language = <dc:language> (see Feed)
- Date = <updated>
- Link = <link>

Many of the values that you would apply to entries in the atom feed may be applied to all entries or the feed as a whole.

## More Information

### ***RSS 2.0 Specification***

<http://blogs.law.harvard.edu/tech/rss>

### ***Apple Podcasting Server***

<http://www.apple.com/education/solutions/podcasting/server.html#>

### ***Apple Podcasting Creation Guide***

<http://images.apple.com/education/solutions/podcasting/pdf/PodcastCreationGuide.pdf>

### ***Apple iTunes Podcasting FAQ***

<http://www.apple.com/itunes/podcasts/faq.html>

### ***Apple iTunes Podcasting Technical Specification***

<http://www.apple.com/itunes/podcasts/techspecs.html>

### ***Stanford iTunes***

<http://itunes.stanford.edu/>

### ***Education Podcasting Network***

<http://epnweb.org/index.php>

### ***Podcasts for Educators, Schools and Colleges***

<http://www.recap.ltd.uk/podcasting/index.php>

### ***Media RSS Module***

<http://search.yahoo.com/mrss>

***Dublin Core Metadata User Guide***

<http://dublincore.org/documents/usageguide/>

***Uniform Resource Identifier (Wikipedia Entry)***

[http://en.wikipedia.org/wiki/Uniform\\_resource\\_identifier](http://en.wikipedia.org/wiki/Uniform_resource_identifier)

***Language Encoding Scheme (ISO 3166-1 alpha-2, Wikipedia entry)***

[http://en.wikipedia.org/wiki/ISO\\_3166-1\\_alpha-2](http://en.wikipedia.org/wiki/ISO_3166-1_alpha-2)

***IANA MIME Media Types (Encoding Scheme)***

<http://www.iana.org/assignments/media-types/>

***Date and Time Encoding Scheme (ISO 8601, Wikipedia entry)***

[http://en.wikipedia.org/wiki/ISO\\_8601](http://en.wikipedia.org/wiki/ISO_8601)

***AtomEnabled***

<http://www.atomenabled.org/>