



AtomPub: testing your server implementation

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I'M

vanity slide

- ▶ software architect, 11870.com
- ▶ open source “aholic”: Hudson, Netbeans...
- ▶ apache abdera committer

Agenda

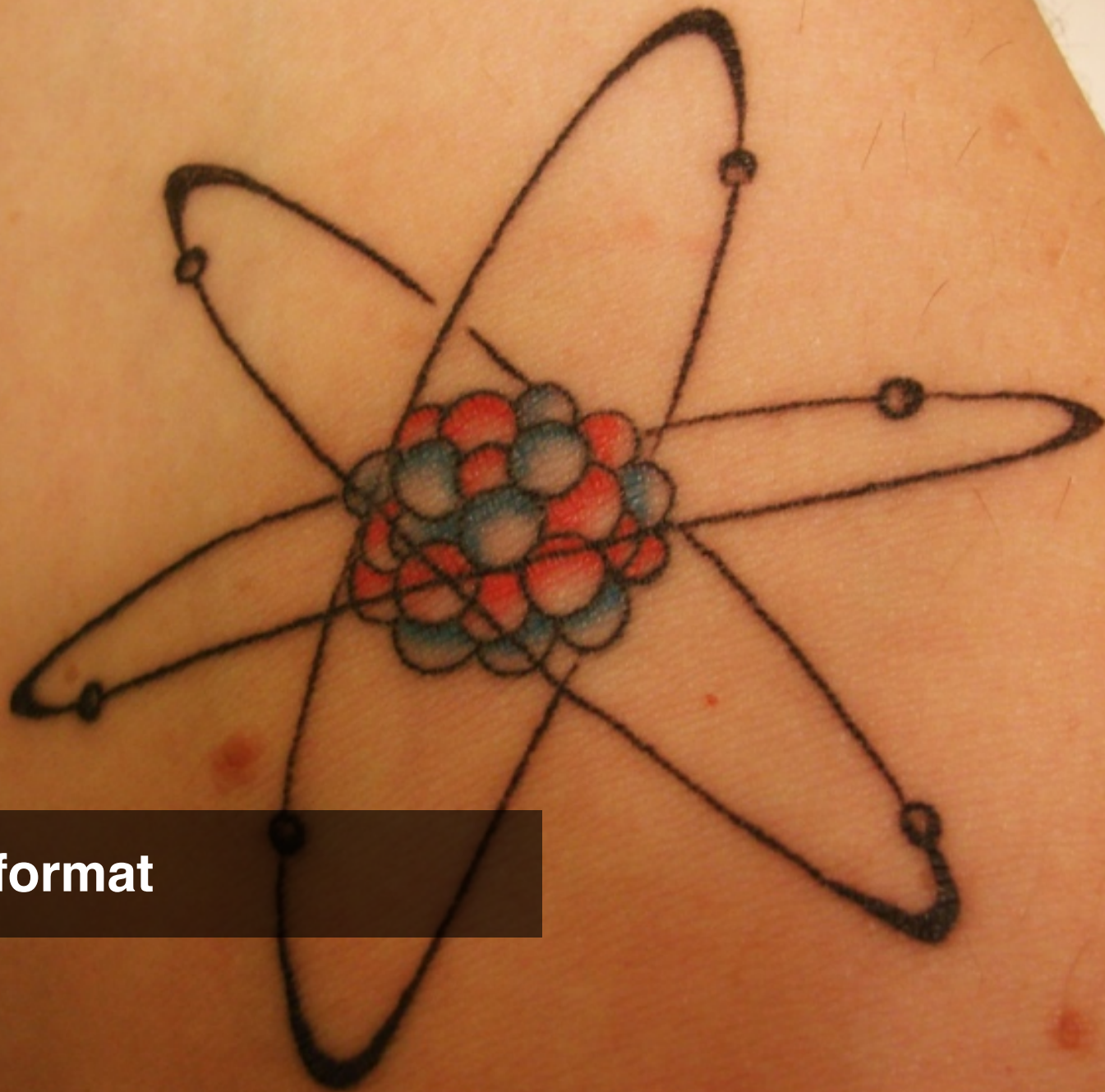
- ▶ atom publishing protocol, introduction
- ▶ testing the specification
- ▶ useful tools, putting it all together



atom publishing protocol

Atom publishing protocol

“an application-level protocol
for publishing and editing web
resources”



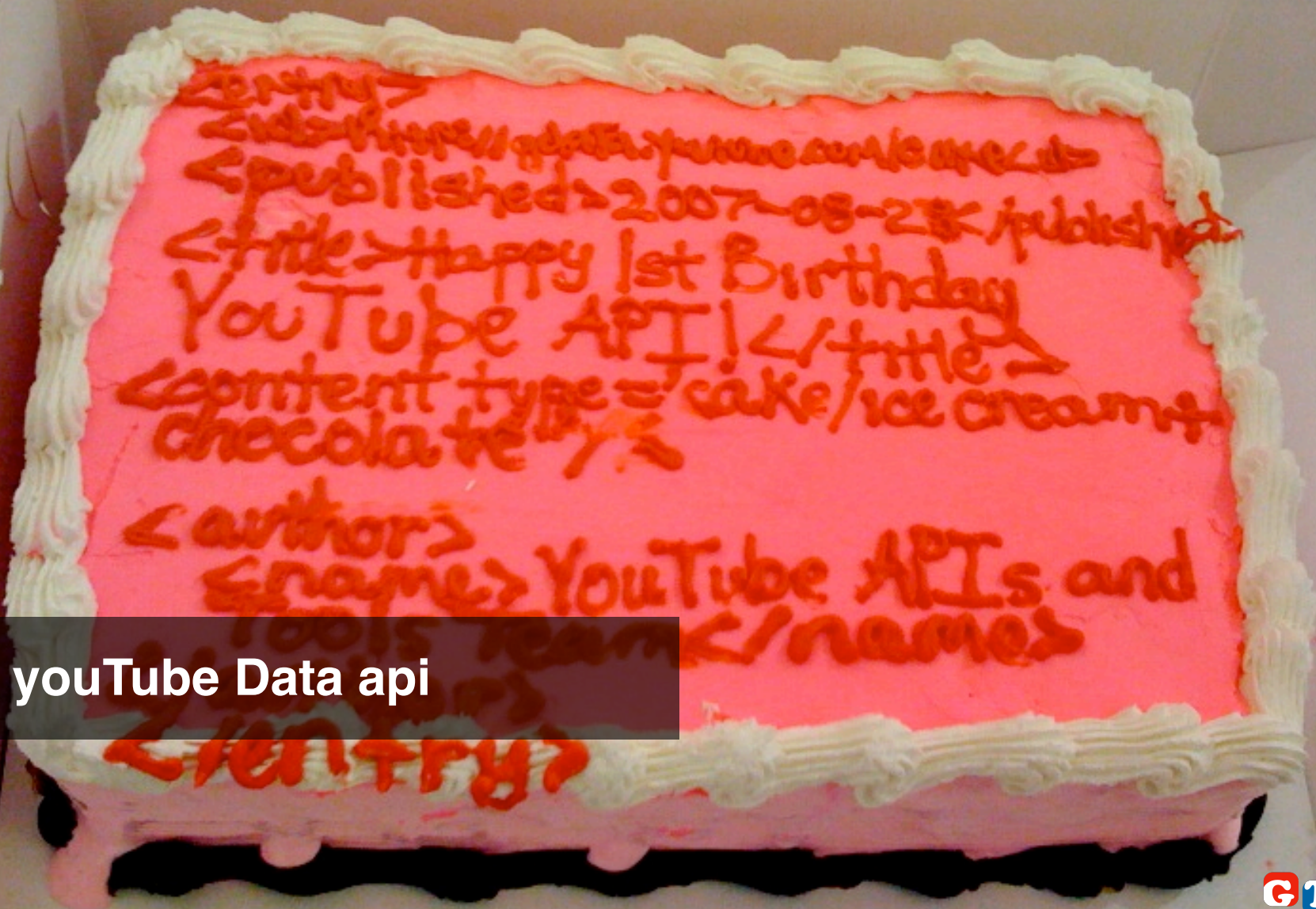
atom format

Wordpress api

```
<?xml version="1.0" encoding="utf-8"?>
<feed xmlns="http://www.w3.org/2005/Atom"
      xmlns:app="http://www.w3.org/2007/app" xml:lang="en">
  <id>http://www.verbosemode.com/wp-app.php/posts</id>
  <updated>2007-11-13T22:07:43Z</updated>
  <title type="text">Verbose mode</title>
  <entry xmlns="http://www.w3.org/2005/Atom"
        xmlns:app="http://www.w3.org/2007/app" xml:lang="en">
    <id>http://www.verbosemode.com/?p=3</id>
    <title type="text">Google Test Automation Conference 08</title>
    <updated>2007-11-13T22:07:43Z</updated>
    <published>2007-11-04T11:38:28Z</published>
    <app:edited>2007-11-13T22:07:43Z</app:edited>
    <link rel="edit"
          href="http://www.verbosemode.com/wp-app.php/post/3" />
    ...
```


Mule Galaxy api

```
<entry xmlns="http://www.w3.org/2005/Atom">
  <link rel="edit"
    href="/api/registry/Workspace/hello_world.wsdl;atom"/>
  <id>urn:galaxy:artifact:5a7dc836-32f1-4d97-b593-8f510bfb28c4</id>
  <title type="text">hello_world.wsdl</title>
  <updated>2008-02-21T20:04:17.481Z</updated>
  <author><name>Galaxy</name></author>
  <summary type="xhtml" />
  <content type="application/xml"
    src="/api/registry/Workspace/hello_world.wsdl" />
  <link href="/api/registry/Workspace/hello_world.wsdl"
    rel="edit-media" />
  <metadata xmlns="http://galaxy.mule.org/1.0">
    <property name="wsdl.service" locked="true">
      <value>HelloWorldService</value>
    </property>
    ...
  </metadata>
</entry>
```



youTube Data api



http methods

POST

GET

PUT

DELETE



extensible protocol

atom extensions

► open search

```
<?xml version='1.0'
<feed xmlns="http://www.w3.org
      xmlns:os="http://a9.com/-/
spec/opensearch"
  <os:itemsPerPage>10
  <os:totalResults>10
</feed>
```

► geoRSS

```
<?xml version='1.0' encoding='UTF8'?>
<entry xmlns="http://www.w3.org
      xmlns:geo="http://www.georss.org
  <geo:point>36.331445 -119.64592
</entry>
```

► AtomPub multipart media creation

```
<?xml version='1.0' encoding='UTF8'?>
<service xmlns="http://www.w3.org/2007/app"
  xmlns:atom="http://www.w3.org/2005/Atom" >
  <workspace>
    <collection href="/images">
      <accept alternate="multipart-created" >image/*</accept>
```



atom publishing protocol

how does it work?



introspective protocol



introspective protocol

```
<?xml version='1.0' encoding='UTF8'?>
<service xmlns="http://www.w3.org/2007/app"
  xmlns:atom="http://www.w3.org/2005/Atom" >
  <workspace>
    <atom:title type="text">
      AtomPub in the GTAC
    </atom:title>
    <collection href="/sessions">
      <atom:title type="text">
        Gtac sessions
      </atom:title>
      <accept>application/atom+xml;type=entry</accept>
      <categories fixed="yes" scheme="http://gtac.com/scheme" >
        <atom:category term="testing"/>
        <atom:category term="gtac"/>
      </categories>
    </collection>
  </workspace>
</service>
```

introspective protocol

```
<?xml version='1.0' encoding='UTF8'?>
<service xmlns="http://www.w3.org/2007/app"
  xmlns:atom="http://www.w3.org/2005/Atom" >
  <workspace>
    <atom:title type="text">
      AtomPub in the GTAC
    </atom:title>
    <collection href="/sessions">
      <atom:title type="text">
        Gtac sessions
      </atom:title>
      <accept>application/atom+xml;type=entry</accept>
      <categories fixed="yes" scheme="http://gtac.com/scheme" >
        <atom:category term="testing"/>
        <atom:category term="gtac"/>
      </categories>
    </collection>
  </workspace>
</service>
```

introspective protocol

```
<?xml version='1.0' encoding='UTF8'?>
<service xmlns="http://www.w3.org/2007/app"
  xmlns:atom="http://www.w3.org/2005/Atom" >
  <workspace>
    <atom:title type="text">
      AtomPub in the GTAC
    </atom:title>
    <collection href="/sessions">
      <atom:title type="text">
        Gtac sessions
      </atom:title>
      <accept>application/atom+xml;type=entry</accept>
      <categories fixed="yes" scheme="http://gtac.com/scheme" >
        <atom:category term="testing"/>
        <atom:category term="gtac"/>
      </categories>
    </collection>
  </workspace>
</service>
```

introspective protocol

```
<?xml version='1.0' encoding='UTF8'?>
<service xmlns="http://www.w3.org/2007/app"
  xmlns:atom="http://www.w3.org/2005/Atom" >
  <workspace>
    <atom:title type="text">
      AtomPub in the GTAC
    </atom:title>
    <collection href="/sessions">
      <atom:title type="text">
        Gtac sessions
      </atom:title>
      <accept>application/atom+xml;type=entry</accept>
      <categories fixed="yes" scheme="http://gtac.com/scheme" >
        <atom:category term="testing"/>
        <atom:category term="gtac"/>
      </categories>
    </collection>
  </workspace>
</service>
```


CREATE

POST /sessions

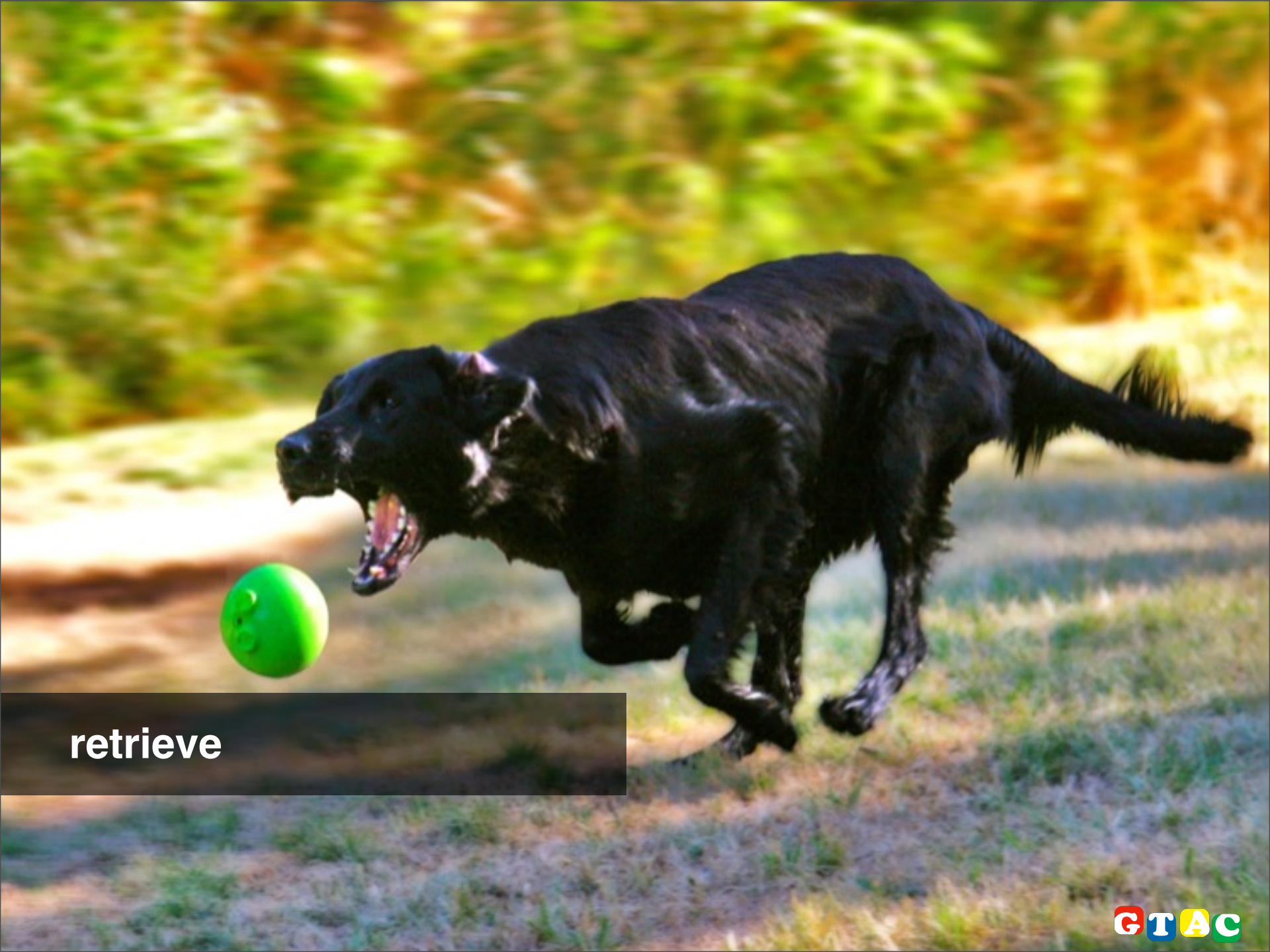
```
<?xml version='1.0' encoding='UTF8'?>
<entry xmlns="http://www.w3.org/2005/Atom"
  xmlns:app="http://www.w3.org/2007/app">
  <title>AtomPub testing session</title>
  <link rel="edit"
    href="http://gtac.com/sessions/atomPub-testing"/>
  <id>urn:uuid:1225c695-cfb8-4ebb-aaaa-80da344efa6a</id>
  <updated>2007-12-13T18:30:02Z</updated>
  <app:edited>2007-12-13T18:30:02Z</app:edited>
  <content>
    testing atomPub servers
  </content>
</entry>
```


POST /sessions

```
<?xml version='1.0' encoding='UTF8'?>
<entry xmlns="http://www.w3.org/2005/Atom"
  xmlns:app="http://www.w3.org/2007/app">
  <title>AtomPub testing session</title>
  <link rel="edit"
    href="http://gtac.com/sessions/atomPub-testing"/>
  <id>urn:uuid:1225c695-cfb8-4ebb-aaaa-80da344efa6a</id>
  <updated>2007-12-13T18:30:02Z</updated>
  <app:edited>2007-12-13T18:30:02Z</app:edited>
  <content>
    testing atomPub servers
  </content>
</entry>
```



```
response.code == 201
response['Location'] == 'http://gtac.com/sessions/atomPub-testing'
```



retrieve

GET /sessions/atomPub-testing

```
uri = Uri.parse response['Location']
```

```
Net::HTTP.start(uri.host, uri.port) do |http|  
  @entry = http.request_get uri.path  
end
```

or

```
@doc = REXML::Document.new @feed  
link = REXML::XPath.first doc.root, 'entry/link[@rel="edit"]'  
uri = Uri.parse link
```

```
Net::HTTP.start(uri.host, uri.port) do |http|  
  @entry = http.request_get uri.path  
end
```

or

```
if response['Location'] == response['Content-Location']  
  @entry = response.body  
end
```

GET /sessions/atomPub-testing

```
@doc = REXML::Document.new @feed  
@entry = REXML::XPath.first  
doc.root.add_entry'
```




modify

PUT /sessions/atom-pub

```
<?xml version='1.0' encoding='UTF8'?>
<entry xmlns="http://www.w3.org/2005/Atom"
  xmlns:app="http://www.w3.org/2007/app">
  <title>AtomPub testing session</title>
  <link rel="edit"
    href="http://localhost/sessions/atomPub-testing"/>
  <id>urn:uuid:1225c695-cfb8-4ebb-aaaa-80da344efa6a</id>
  <updated>2007-12-13T18:30:02Z</updated>
  <app:edited>2007-12-13T18:30:02Z</app:edited>
  <content type="html">
    <div>
      testing
      <a href="http://tools.ietf.org/html/rfc5023">atomPub</a> servers
    </div>
  </content>
</entry>
```



`response.code == 204`

delete

DELETE /sessions/atom-pub

```
uri = Uri.parse response['Location']  
  
Net::HTTP.start(uri.host, uri.port) do |http|  
  http.request Net::HTTP::Delete.new(uri.path)  
end
```



```
response.code == 200
```



SENTINEL SPECIAL

Extending shuttle program too risky, lawmakers told

By MARK K. MATTHEWS and ROBERT BLOCK
SENTINEL STAFF WRITERS

0152

STS-122

WILLIAM COUCH
ORLANDO SENTINEL

MEDIA

National Aeronautics and Space Administration
Kennedy Space Center

KSC FORM 42-64 NS (REV. 10/07)

ONLINE

Orlando Sentinel has the 431st NASA's Griffin retirement

Flight are by seven to 010, when to make of manned

TLE, A

Bre

what would happend with media?

Media



```
response.code == 201
response['Location'] == 'http://gtac.com/sessions/media.atom'
```

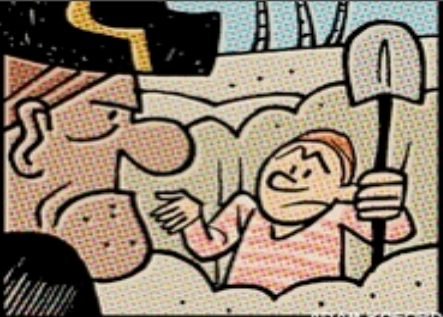


```
<?xml version='1.0' encoding='UTF8'?>
<entry xmlns="http://www.w3.org/2005/Atom"
  xmlns:app="http://www.w3.org/2007/app">
  <title>AtomPub testing session</title>
  <link rel="edit" href="http://gtac.com/sessions/media.atom"/>
  <link rel="edit-media" href="http://gtac.com/sessions/media"/>
```



testing the specification

testing and best practices



ADAM KOFORD

404 Not Found



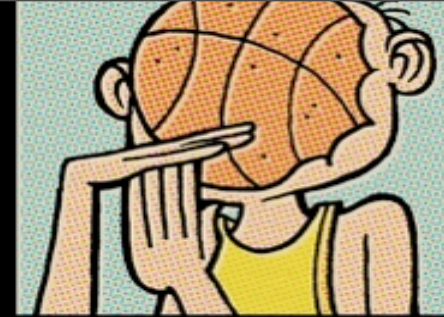
ADAM KOFORD

405 Method Not Allowed



ADAM KOFORD

406 Not Acceptable



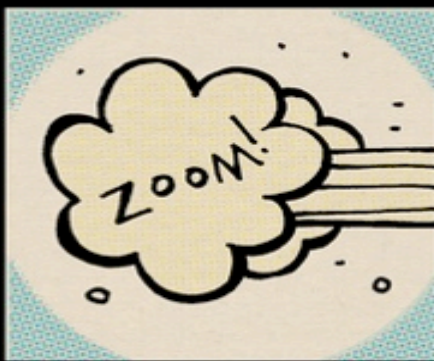
ADAM KOFORD

408 Request Timeout



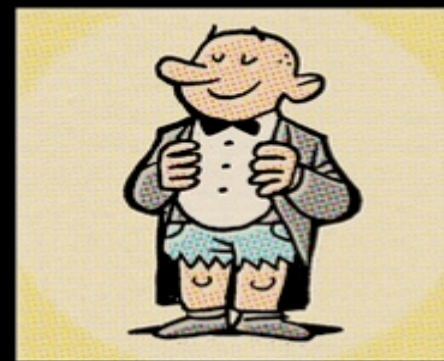
ADAM KOFORD

409 Conflict



ADAM KOFORD

410 Gone



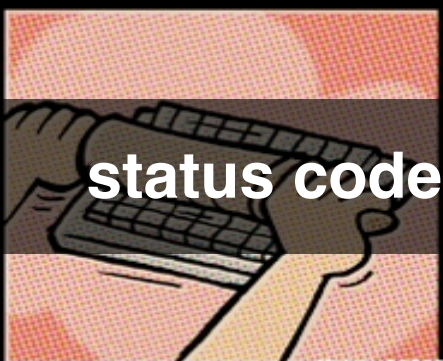
ADAM KOFORD

411 Length Required



ADAM KOFORD

413 Request Entity Too Large



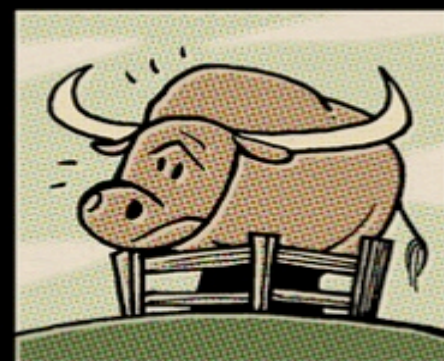
ADAM KOFORD

414 Requested URL Too Long



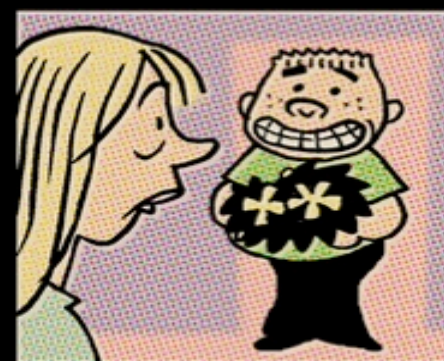
ADAM KOFORD

415 Unsupported Media Type



ADAM KOFORD

416 Requested Range Not Satisfied



ADAM KOFORD

417 Expectation Failed



405 Method not allowed



415 Unsupported media type



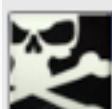

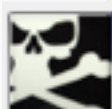

other interesting codes

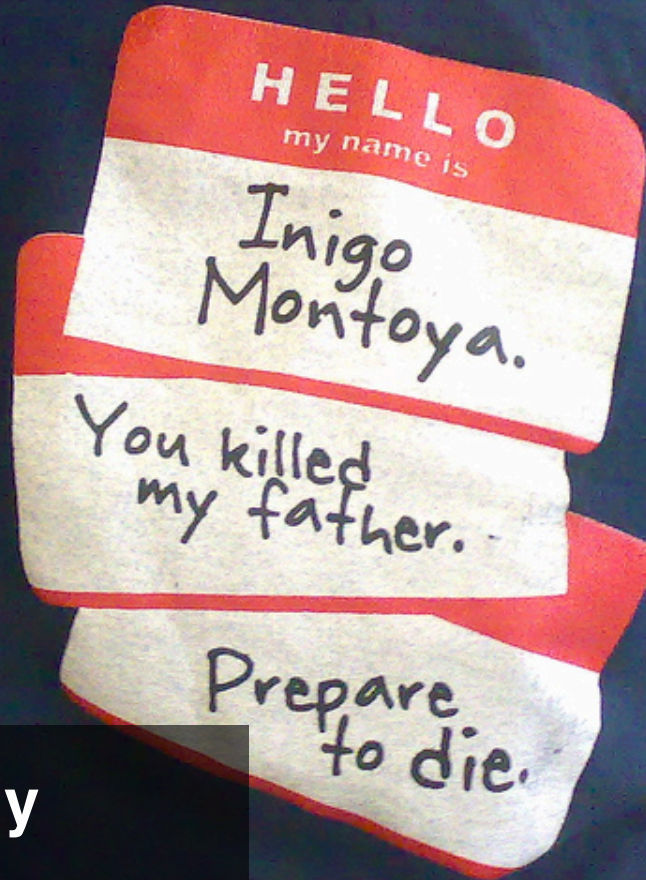
200 201 204 301

400 401 403 404

405 409 415 500

cache control

	David Calavera	11:03
	Where is the party?	
	AtomPub sever	11:03
	in the Seattle Google's office	
	David Calavera	11:03
	Where is the party?	
	AtomPub sever	11:03
	304, Not Modified	
	David Skull	11:04
	we are moving the party to the 11870.com office	
	David Calavera	11:05
	we are moving the party to the hotel	
	AtomPub sever	11:05
	412, Precondition Failed	



building ids properly

building ids properly

- ▶ valid URI, rfc 2693
- ▶ globally unique
- ▶ never change

building ids properly

`<id>http://gtac.com/sessions/atomPub</id>`

building ids properly

“If you think that there's a good chance your URIs will change, you shouldn't use them for IDs. But, if you think that, you should also bloody well be looking for better software or hosting or whatever.”

-- *Tim Bray*

building ids properly

“never mind the URI here’s my UUID”

-- *Bill de hÓra*

building ids properly

`<id>urn:uuid:1225c695-cfb8-4ebb-aaaa-80da344efa6a</id>`

building ids properly

assert

```
/^(?: ([^:/?#]+) :)?(?: // ([^/?#]*) )? ([^?#]*)  
(?: \? ([^#]*) )? (?: # (.*) )? /.match(id)[0]
```



managing dates and sorting

managing dates and sorting

```
<?xml version='1.0' encoding='UTF8'?>
<entry xmlns="http://www.w3.org/2005/Atom"
  xmlns:app="http://www.w3.org/2007/app">
  <title>AtomPub testing session</title>
  <link rel="edit"
    href="http://gtac.com/sessions/atomPub-testing"/>
  <id>urn:uuid:1225c695-cfb8-4ebb-aaaa-80da344efa6a</id>
  <created>2007-12-10T18:30:02Z</created>
  <updated>2007-12-13T18:30:02Z</updated>
  <published>2007-12-13T18:55:02Z</published>

</entry>
```

managing dates and sorting

```
<?xml version='1.0' encoding='UTF8'?>
<entry xmlns="http://www.w3.org/2005/Atom"
  xmlns:app="http://www.w3.org/2007/app">
  <title>AtomPub testing session</title>
  <link rel="edit"
    href="http://gtac.com/sessions/atomPub-testing"/>
  <id>urn:uuid:1225c695-cfb8-4ebb-aaaa-80da344efa6a</id>
  <created>2007-12-10T18:30:02Z</created>
  <updated>2007-12-13T18:30:02Z</updated>
  <published>2007-12-13T18:55:02Z</published>
  <app:edited>2007-12-13T18:40:02Z</app:edited>
</entry>
```


managing dates and sorting

```
<?xml version="1.0" encoding="utf-8"?>
<feed xmlns="http://www.w3.org/2005/Atom"
      xmlns:app="http://www.w3.org/2007/app" xml:lang="en">
  <id>http://www.verbosemode.com/wp-app.php/posts</id>
  <updated>2007-11-13T22:07:43Z</updated>
  <entry>
    <updated>2008-06-04T22:07:43Z</updated>
    <published>2008-06-08T11:38:28Z</published>
    <app:edited>2008-07-13T22:07:43Z</app:edited>
    ...
  </entry>
  <entry>
    <updated>2007-11-13T22:07:43Z</updated>
    <published>2007-11-04T11:38:28Z</published>
    <app:edited>2007-11-13T22:07:43Z</app:edited>
    ...
  </entry>
```

managing dates and sorting

assert

```
/(\d{4}) (?:(- (\d{2})) ? (?:(- (\d{2})) ? (?:(  
([Tt]) ? (?:(\d{2})) ? (?:: (\d{2})) ? (?::  
(\d{2})) ? (?:\. (\d{3})) ?) ? ([Zz]) ? (?:( [+ - ] )  
(\d{2}) : (\d{2})) ?) / .match(date) [0]
```

managing dates and sorting

<updated>2007-12-13T18:30:02Z</updated>
<updated>2007-12-13T18:30:02Z</updated>
<updated>2007-12-13T18:30:02.25Z</updated>
<updated>2007-12-13T18:30:02+01:00</updated>
<updated>2007-12-13T18:30:02.25+01:00</updated>



checking valid content

checking valid content

```
def assert_valid_entry(entry)
  assert entry.id.absolute?
  assert_not_nil entry.title
  assert_not_nil entry.updated
  assert_not_nil entry.edited

  unless entry.content
    alternate = REXML::XPath.first entry, 'link[@rel="alternate"]'
    assert_not_nil alternate
  else
    assert !entry.content.src.nil? or
      (Base64.decode64(entry.content.text) and !entry.summary.nil?)
  end
end
```

checking valid content

```
<entry xmlns="http://www.w3.org/2005/Atom">
  <title type="text">unclean!</title>
  <summary type='xhtml'>
    <div xmlns='http://www.w3.org/1999/xhtml'>
      <p>hey</p>
      <script src='http://www.example.com/xxx' />
      <script>alert('XXX')</script>
      <p id='x1' background="javascript:alert('XSS')">Hey</p>
    </div>
  </summary>
  <content type='xhtml'>
    <div xmlns='http://www.w3.org/1999/xhtml'>
      <p id='x2' style='whatever'>OK</p><object>No No No</object>
      <a href='/no-problemo'>aah</a>
      <a href='javascript:evil'>ouch</a>
    </div>
  </content>
```



managing media

managing media



```
<?xml version='1.0' encoding='UTF8'?>
<entry xmlns="http://www.w3.org/2005/Atom"
  xmlns:app="http://www.w3.org/2007/app">
  <title>????</title>
  <summary>????</summary>
  <link rel="edit"
    href="http://gtac.com/sessions/atomPub-testing.atom"/>
  <link rel="edit-media"
    href="http://gtac.com/sessions/atomPub-testing"/>
  <id>urn:uuid:1225c695-cfb8-4ebb-aaaa-80da344efa6a</id>
  <updated>2007-12-13T18:30:02Z</updated>
  <app:edited>2007-12-13T18:30:02Z</app:edited>
  <content src="http://gtac.com/managing-media.png"/>
</entry>
```



managing media



```
request['Slug'] == 'nice picture'
```



```
<?xml version='1.0' encoding='UTF8'?>
<entry xmlns="http://www.w3.org/2005/Atom"
  xmlns:app="http://www.w3.org/2007/app">
  <title>nice picture</title>
  <summary>nice picture</summary>
  <link rel="edit"
    href="http://gtac.com/sessions/atomPub-testing.atom"/>
  <link rel="edit-media"
    href="http://gtac.com/sessions/atomPub-testing"/>
  <id>urn:uuid:1225c695-cfb8-4ebb-aaaa-80da344efa6a</id>
  <updated>2007-12-13T18:30:02Z</updated>
  <app:edited>2007-12-13T18:30:02Z</app:edited>
  <content src="http://gtac.com/managing-media.png"/>
</entry>
```



MISCELLANEOUS

FISH

categorizing resources

BIRDS

DOGS

categorizing resources

```
<collection href="/sessions">
  <atom:title type="text">Gtac sessions</atom:title>
  <accept>application/atom+xml;type=entry</accept>
  <categories fixed="yes" scheme="http://gtac.com/scheme/privacy">
    <atom:category term="public"/>
    <atom:category term="private"/>
    <atom:category term="friends"/>
    <atom:category term="family"/>
  </categories>
  <categories scheme="http://gtac.com/scheme/tags">
    <atom:category term="testing"/>
    <atom:category term="gtac"/>
    <atom:category term="gtac08"/>
    <atom:category term="atom"/>
    <atom:category term="calavera"/>
  </categories>
</collection>
```

categorizing resources

```
<?xml version='1.0' encoding='UTF8'?>
<entry xmlns="http://www.w3.org/2005/Atom"
  xmlns:app="http://www.w3.org/2007/app">
  <title>AtomPub testing session</title>
  <link rel="edit"
    href="http://gtac.com/sessions/atomPub-testing"/>
  <id>urn:uuid:1225c695-cfb8-4ebb-aaaa-80da344efa6a</id>
  <created>2007-12-10T18:30:02Z</created>
  <updated>2007-12-13T18:30:02Z</updated>
  <published>2007-12-13T18:55:02Z</published>
  <category scheme="http://gtac.com/scheme/privacy"
    term="TRYING TO ADD AN UNEXPECTED CATEGORY"/>
</entry>
```



`response.code == 409`

categorizing resources

```
<collection href="/sessions">
  <atom:title type="text">Gtac sessions</atom:title>
  <accept>application/atom+xml;type=entry</accept>
  <categories fixed="yes" scheme="http://gtac.com/scheme/privacy">
    <atom:category term="public"/>
    <atom:category term="private"/>
    <atom:category term="friends"/>
    <atom:category term="family"/>
  </categories>
  <categories scheme="http://gtac.com/scheme/tags">
    <atom:category term="testing"/>
    <atom:category term="gtac"/>
    <atom:category term="gtac08"/>
    <atom:category term="atom"/>
    <atom:category term="calavera"/>
  </categories>
</collection>
```



extending atomPub

extending atomPub

my document is not valid!!!

```
<?xml version='1.0' encoding='UTF8'?>
<entry xmlns="http://www.w3.org/2005/Atom"
  xmlns:app="http://www.w3.org/2007/app">
  <title>AtomPub testing session</title>
  <link rel="edit"
    href="http://gtac.com/sessions/atomPub-testing"/>
  <id>urn:uuid:1225c695-cfb8-4ebb-aaaa-80da344efa6a</id>
  <updated>2007-12-13T18:30:02Z</updated>
  <georss:point>36.331445 -119.64592</georss:point>
</entry>
```

extending atomPub

my document is not valid!!!

```
def rnc_validate(schema, document)
  schemaError = StringWriter.new
  errorHandler = ErrorHandlerImpl.new(schemaError)
  properties = PropertyMapBuilder.new
  properties.put(ValidateProperty::ERROR_HANDLER, errorHandler)
  driver = ValidationDriver.new(properties.toPropertyMap,
    CompactSchemaReader.getInstance)
  driver.loadSchema(DataSource.new(StringReader.new(schema)))
  begin
    input = DataSource.new(StringReader.new(document))
    error = schemaError.toString unless driver.validate(input)
  rescue org.xml.sax.SAXParseException
    error = $!.to_s.sub(/\n.*$/, ' ')
  end
  error
end
```




putting it all together

VALIDATOR
STAMP 10-RIDE
TICKETS BELOW



THIS MACHINE'S
FUCK UP

feed validator

feed validator

- ▶ Atom, RSS, KML, OMPL...
- ▶ recognizes most standard namespaces
- ▶ runs locally as well:

```
$ svn co http://feedvalidator.googlecode.com/svn/trunk/feedvalidator
```

```
$ python src/demo.py http://code.google.com/p/feedvalidator/w/list
```

feed validator

FEED Validator

FOR ATOM AND RSS AND KML

<http://code.google.com/feeds/p/feedvalidator/svnchanges/basic?path=>

Validate

Congratulations!



This is a valid Atom 1.0 feed.

Recommendations

This feed is valid, but interoperability with the widest range of feed readers could be improved by implementing the following recommendations.

- [line 7](#), column 126: "self" link references a non-Atom representation: `application/atom+xml;type=feed` [\[help\]](#)

```
... eeds/p/feedvalidator/svnchanges/basic"/>
```

- [line 7](#), column 126: Self reference doesn't match document location [\[help\]](#)

```
... eeds/p/feedvalidator/svnchanges/basic"/>
```

Source: <http://code.google.com/feeds/p/feedvalidator/svnchanges/basic?path=/wiki/>

```
01.    <?xml version="1.0"?>
02.
03.    <feed xmlns="http://www.w3.org/2005/Atom">
04.      <updated>2008-10-01T17:40:40Z</updated>
```


AppClientTest

tests basic aspects of atomPub

```
$ svn co http://feedvalidator.googlecode.com/svn/trunk/apptestsuite/client/  
validator/ validator
```

```
$ python validator/appclienttest.py --output=results.html  
    "http://bitworking.org/projects/apptestsite/app.cgi/  
service/service_document"
```

```
$ firefox results.html
```

AppClientTest

record and play it back!!

```
$ python validator/appclienttest.py  
--record=./validator/rawtestdata/complete/ --html  
--output=test.html
```

```
$ python validator/appclienttest.py  
--playback=./validator/rawtestdata/complete/ --html  
--output=test.html
```

AppClientTest

record and play it back!!

```
$ tree validator/rawtestdata/complete/
validator/rawtestdata/complete/
|-- GET
|   |-- projects
|       |-- apptestsite
|           |-- app.cgi
|               |-- service
|                   |-- entry
|                       |-- 1.file
|                       |-- 1.file.2
|                       |-- 2.file
|                       |-- 2.file.2
|                       |-- 2.file.3
```

AppClientTest

html output with links to the specification





Test Report

Date

Fri Mar 21 21:44:11 2008






Entry Collection

Find the first entry collection listed in an Introspection document and run the Entry collection tests against it.

1.  Request [Show](#)
2.  Response [Show](#)
3.  [RFC2616] Section 13.3.4 No ETag: header was sent with the response.
4.  [RFC2616] Section 13.3.4 No Last-Modified: header was sent with the response.

Basic Entry Manipulation

Add and remove three entries to the collection

1.  Service Document: <http://bitworking.org/projects/apptestsite/app.cgi/service/entry/>
2.  Request [Show](#)
3.  Response [Show](#)
4.  Create new entry #1
5.  Request [Show](#)

Legend



Informational

Information on what was



Warning

Warnings indicate behavior that is either performance or interoperability related.



Error

Errors are violations of either performance or HTTP specifications.



Log

Detailed information on the test results to help you debug your service.

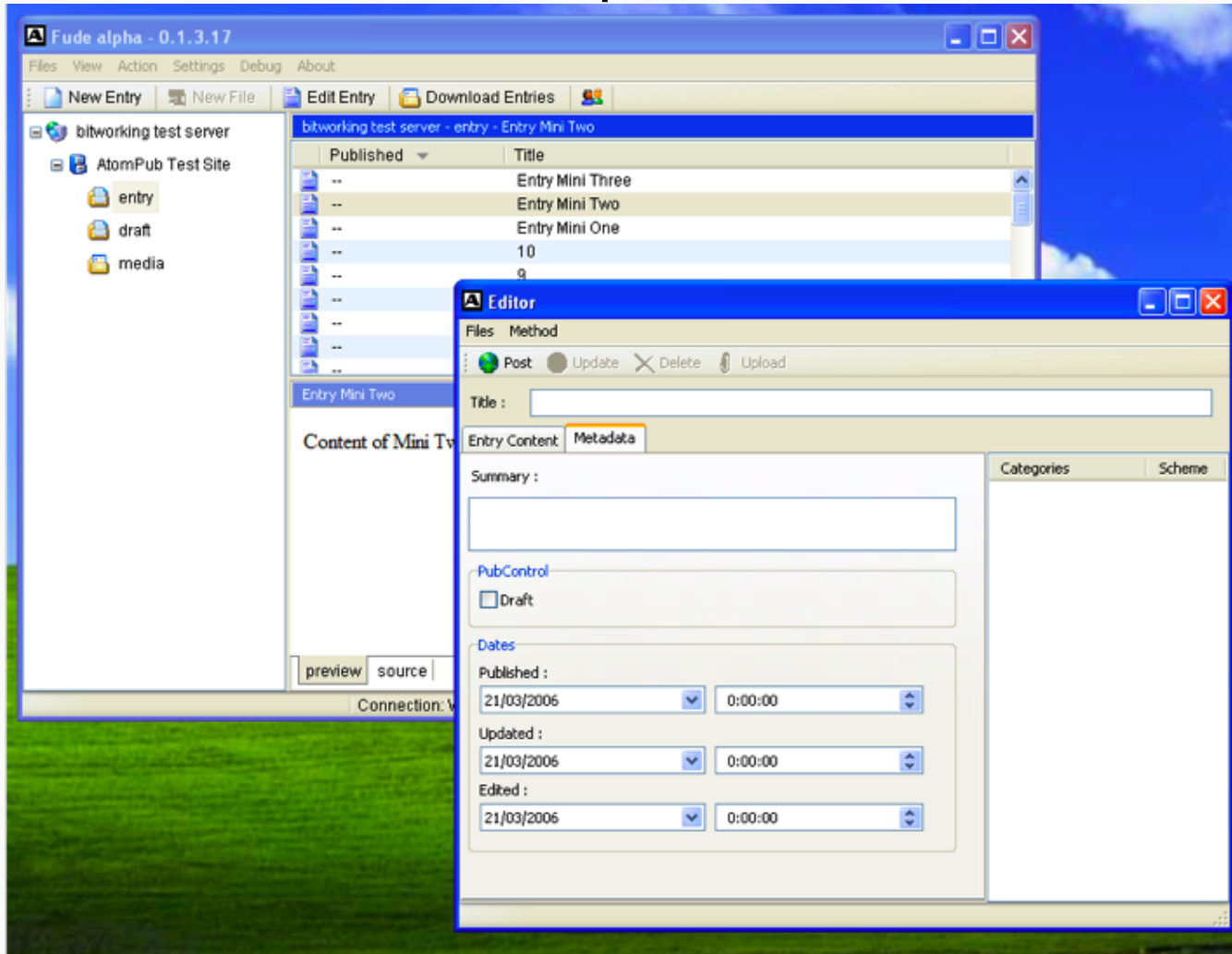


Success

A specific sub-test has been successful.

AtomPub Test Client

ms windows desktop client



A white gorilla is the central focus, sitting on a grey rock and eating a long green plant. It has a pink face and is holding the plant with its hands. In the background, there are other gorillas: one is perched on a rock to the left, and another is lying down in a dark cave-like opening to the right. The enclosure is made of large grey rocks and has several thick ropes strung across it. The overall scene is a naturalistic habitat.

The Atom Publishing Exerciser

The Atom Protocol Excerciser

rubygem library with more than 50 test cases

```
$ svn co http://ape.rubyforge.org/svn/trunk ape
```

```
$ gem install ape
```

command line tasks

```
$ rake -T
```

```
rake ape:go:atom[uri,username,password]
```

```
rake ape:go:html[uri,username,password]
```

```
rake ape:go:text[uri,username,password]
```


The Atom Protocol Exerciser

inbuilt web server

Atom Protocol Exerciser

(Only the URI argument is required)

URI:

Username:

Password:

Exercise!

The Ape source code may be found at ape.rubyforge.org.

Ape Logo by [Greg Borenstein](#).



The Atom Protocol Exerciser

completely extensible!!

- ▶ authentication: basic_auth, wsse, googleLogin
- ▶ formats: text, html, atom
- ▶ validators



demo!!!

questions?

- ▶ Blog: <http://thinkincode.net>
- ▶ Email: calavera@apache.org
- ▶ Resources:
 - ▶ RFC 5023: <http://www.ietf.org/rfc/rfc5023.txt>
 - ▶ RFC 4287: <http://www.ietf.org/rfc/rfc4287.txt>
 - ▶ RFC 2616: <http://www.ietf.org/rfc/rfc2616.txt>
 - ▶ RFC 2693: <http://www.ietf.org/rfc/rfc2693.txt>
 - ▶ Apache Abdera: <http://incubator.apache.org/abdera>
 - ▶ Feed validator: <http://feedvalidator.org>
 - ▶ AppClientTest: <http://code.google.com/p/feedvalidator/wiki/AppClientTest>
 - ▶ AtomPub test client: <http://www.witha.jp/eXseries/software/>
 - ▶ The APE: <http://rubyforge.org/projects/ape>

photos

- ▶ <http://flickr.com/photos/visualpanic/2240763525/>
- ▶ <http://flickr.com/photos/edgeplot/1529475806/>
- ▶ <http://flickr.com/photos/perstephanie/2806654855/>
- ▶ <http://flickr.com/photos/giornaletecnologico/1566587705/>
- ▶ <http://flickr.com/photos/visualpanic/1474644715/>
- ▶ http://flickr.com/photos/javi_co/2516310892/
- ▶ <http://flickr.com/photos/suttonhoo22/2512983749/>
- ▶ <http://flickr.com/photos/xanboozled/784164182/>
- ▶ <http://flickr.com/photos/balconcestorrelavega/2736961248/>
- ▶ <http://flickr.com/photos/jork85/1776795805/>
- ▶ <http://flickr.com/photos/jessefriedman/1435220149/>
- ▶ <http://flickr.com/photos/apelad/304197126/>
- ▶ <http://flickr.com/photos/apelad/304194299/>
- ▶ <http://flickr.com/photos/dw/827997520/>
- ▶ <http://flickr.com/photos/lapidim/59044209/>
- ▶ <http://flickr.com/photos/visualpanic/365605949/>
- ▶ <http://flickr.com/photos/visualpanic/2261768075/>
- ▶ <http://flickr.com/photos/drift-words/99645/>
- ▶ <http://flickr.com/photos/prawnpie/369727578/>
- ▶ <http://flickr.com/photos/laydros/2877137537/>
- ▶ <http://flickr.com/photos/bretarnett/75243850/>
- ▶ <http://flickr.com/photos/wcouch/2091338695/>