RSS and Ajax

(Additional Parts – applications of xml)

What is RSS ?

- RSS stands for **R**eally **S**imple **S**yndication
- RSS allows you to syndicate your site content
- RSS defines an easy way to share and view headlines and content
- RSS files can be automatically updated
- RSS allows personalized views for different sites
- RSS is written in XML

- RSS is a method that uses XML to distribute web content on one web site, to many other web sites. RSS allows fast browsing for news and updates.

Why use RSS?

- Without RSS, users will have to check your site daily for new updates.
- Since RSS data is small and fast-loading, it can easily be used with services like cell phones or PDA's.
- Web-rings with similar information can easily share data on their web sites to make them better and more useful.

Who Should use RSS?

- RSS is useful for web sites that are updated frequently, like:

  (1) News sites - Lists news with title, date and descriptions

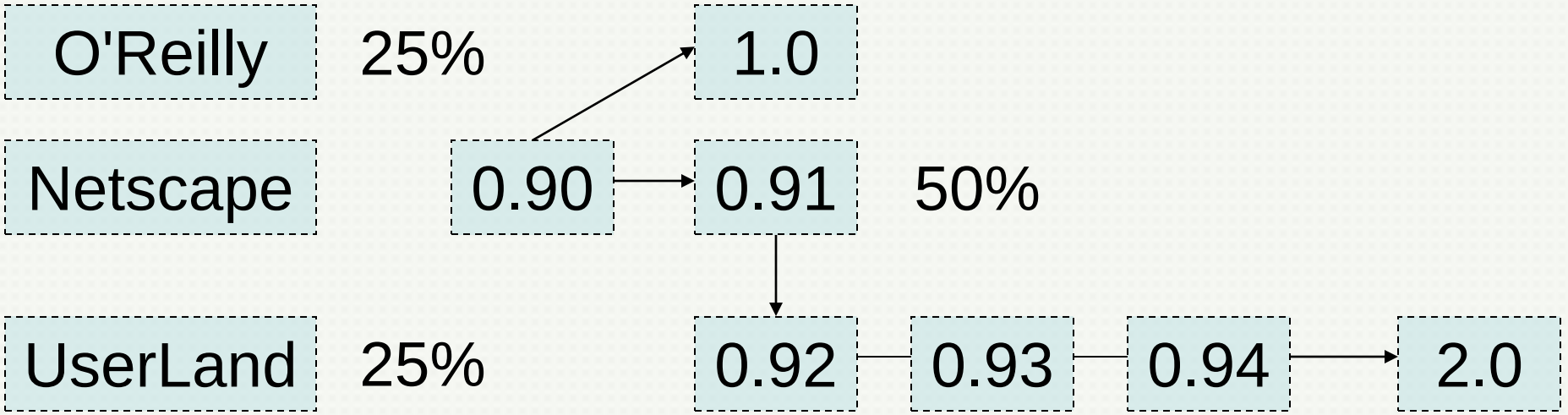
  (2) Companies - Lists news and new products

  (3) Calendars - Lists upcoming events and important days

  (4) Site changes - Lists changed pages or new pages

Is There an RSS Web Standard?

- The History of RSS



- There is no official standard for RSS.
- RSS 0.91, RSS 0.9x/2.0 and RSS 1.0

RSS Syntax

- The syntax rules of RSS 2.0 are very simple and very strict. The rules are very easy to learn, and very easy to use.
- RSS documents use a self-describing and simple syntax.
- Because RSS is XML, keep in mind XML Syntax Rules

```
<!-- This is an BBC RSS -->
<?xml version="1.0" encoding="ISO-8859-1" ?>
<rss version="2.0">
<channel>
  <title>BBC Home Page</title>
  <link>http://www.bbc.com</link>
  <description>Free web news</description>
  <item>
    <title>Sports News</title>
    <link>http://www.bbc.com/sports</link>
    <description>New Sports News</description>
  </item>
</channel>
</rss>
```

RSS <channel> Element

- the <channel> element describes the RSS feed, and has three required child elements:
  <title> <link> <description>

```
<category>Web development</category>
<language>us-en</language>
<image>
   <url>http://www.w3c.com/images/logo.gif</url>
   <title>W3C.com</title>
   <link>http://www.w3c.com</link>
</image>
<copyright>All rights reserved.</copyright>
```

RSS <item> Element

- the <item> element defines an article or "story" , and has three required child elements:

  <title> <link> <description>

```
<author>abc@mail.com</author>
<comments>http://www.w3c.com/comments</comments>
<enclosure url="http://www.w3c.com/rss/rss.mp3 length="5000" type="audio/mpeg" />
```

RSS Publish Your Feed

1. Name your RSS file. Notice that the file must have an .xml extension.
2. Validate your RSS file (http://www.feedvalidator.org)
3. Upload the RSS file to your web directory on your web server.
4. Copy the little orange RSS or XML button to your web directory. Put the button on your pages.

```
<a href="www.w3c.com/rss/myfirstrss.xml">
<img src="www.w3c.com/rss/rss.gif" width="36">
</a>
```

RSS Publish Your Feed

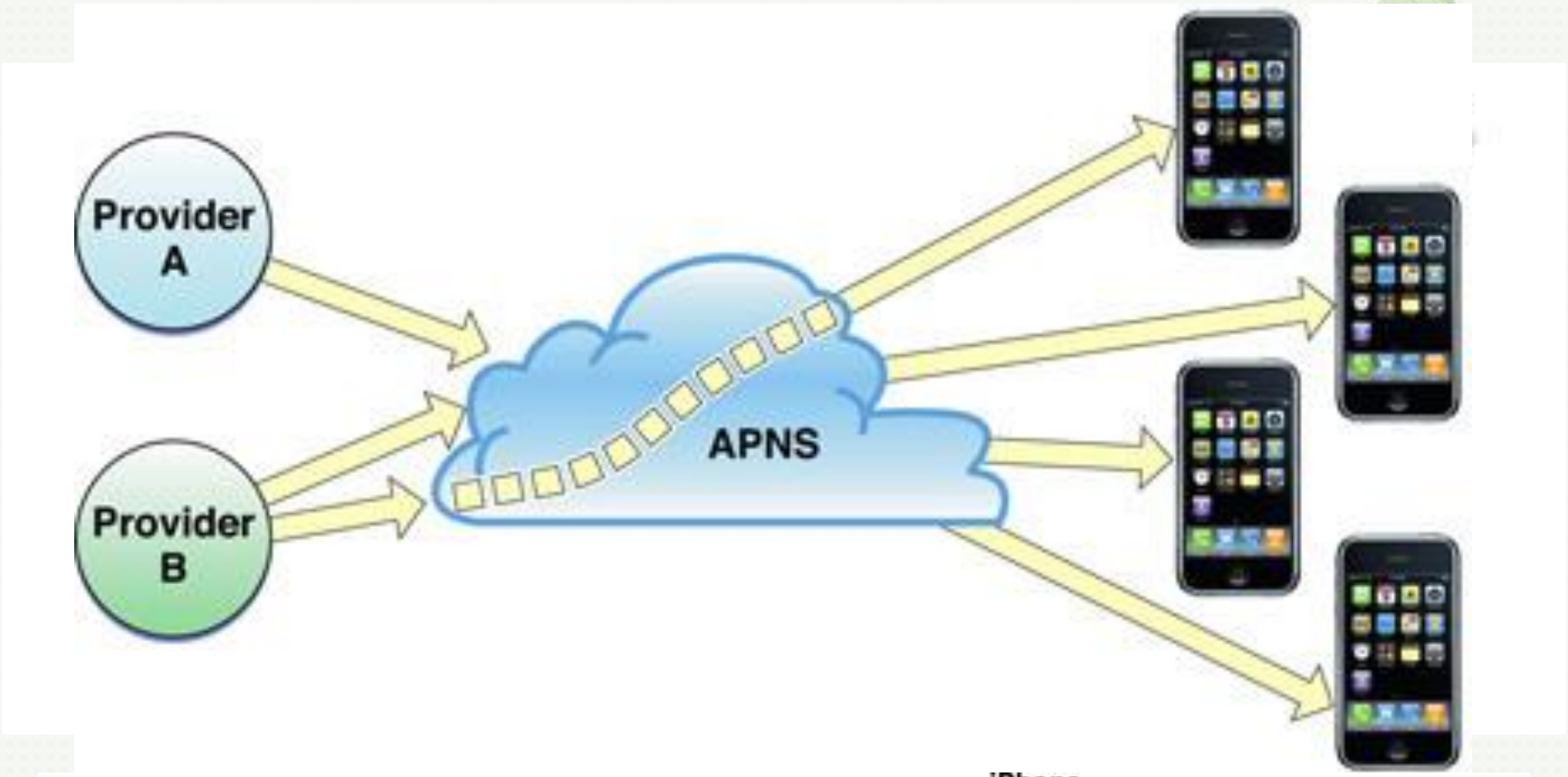
5. Submit your RSS feed to the RSS Feed Directories (Syndic8/Daypop/Newsisfree)
6. Register your feed with the major search engines:

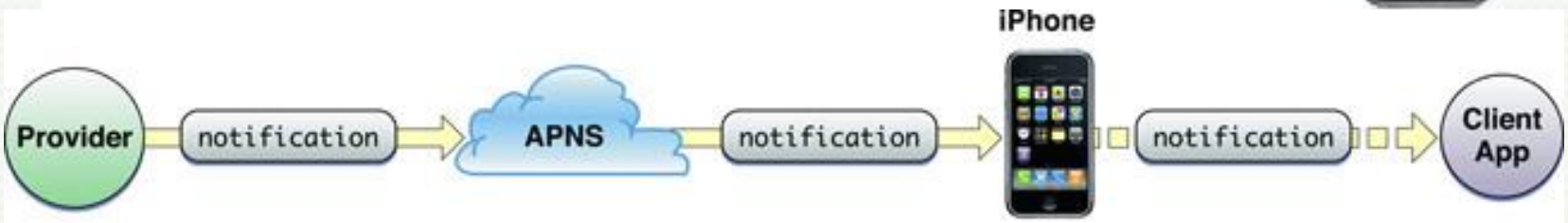
Yahoo - http://publisher.yahoo.com/promote.php
Google -http://www.google.com/intl/zh-cn/webmasters/addfeed.html
MSN - http://rss.msn.com/publisher.armx

7. Update your feed

Note: If you don't want to update your RSS feed yourself, there are tools and services that can do it automatically for you, such as: MyRSSCreator/ FeedFire / blog

RSS VS. Message Push





What is Ajax?

- AJAX is an acronym for **A**synchronous **J**avaScript **A**nd **X**ML.
- AJAX is not a new programming language, but simply a new technique for creating better, faster, and more interactive web applications.
- AJAX uses JavaScript to send and receive data between a web browser and a web server.
- The AJAX technique makes web pages more responsive by exchanging data with the web server behind the scenes, instead of reloading an entire web page each time a user makes a change.

AJAX Is A Browser Technology

- AJAX is a technology that runs in your browser. It uses asynchronous data transfer (HTTP requests) between the browser and the web server, allowing web pages to request small bits of information from the server instead of whole pages.
- The technology makes Internet applications smaller, faster and more user friendly.
- AJAX is a web browser technology independent of web server software.

AJAX Is Based On Open Standards

- AJAX is based on the following open standards:
  - JavaScript
  - XML
  - HTML/XHTML
  - CSS
- The open standards used in AJAX are well defined, and supported by all major browsers. AJAX applications are browser and platform independent. (Cross-Platform, Cross-Browser technology)

AJAX XMLHttpRequest

- The XMLHttpRequest object makes AJAX possible. To create AJAX web applications you have to become familiar with the JavaScript object called the XMLHttpRequest. The XMLHttpRequest object is the key to AJAX. It has been available ever since Internet Explorer 5.5 was released in July 2000, but not fully discovered before people started to talk about AJAX and Web 2.0 in 2005.

Creating An XMLHttpRequest Object

- Different browsers use different methods to create an XMLHttpRequest object.
- Internet Explorer uses an **ActiveXObject**.
- Other browsers uses a built in JavaScript object called **XMLHttpRequest**.

```
var XMLHttp=null
if (window.XMLHttpRequest)
{XMLHttp=new XMLHttpRequest()}
else if (window.ActiveXObject)
{XMLHttp=new ActiveXObject("Microsoft.XMLHTTP")}
```

XMLHttpRequest Methods

- The open() method.

  The open() method sets up a request to a web server.
- The send() method.

  The send() method sends a request to the server.
- The abort() method.

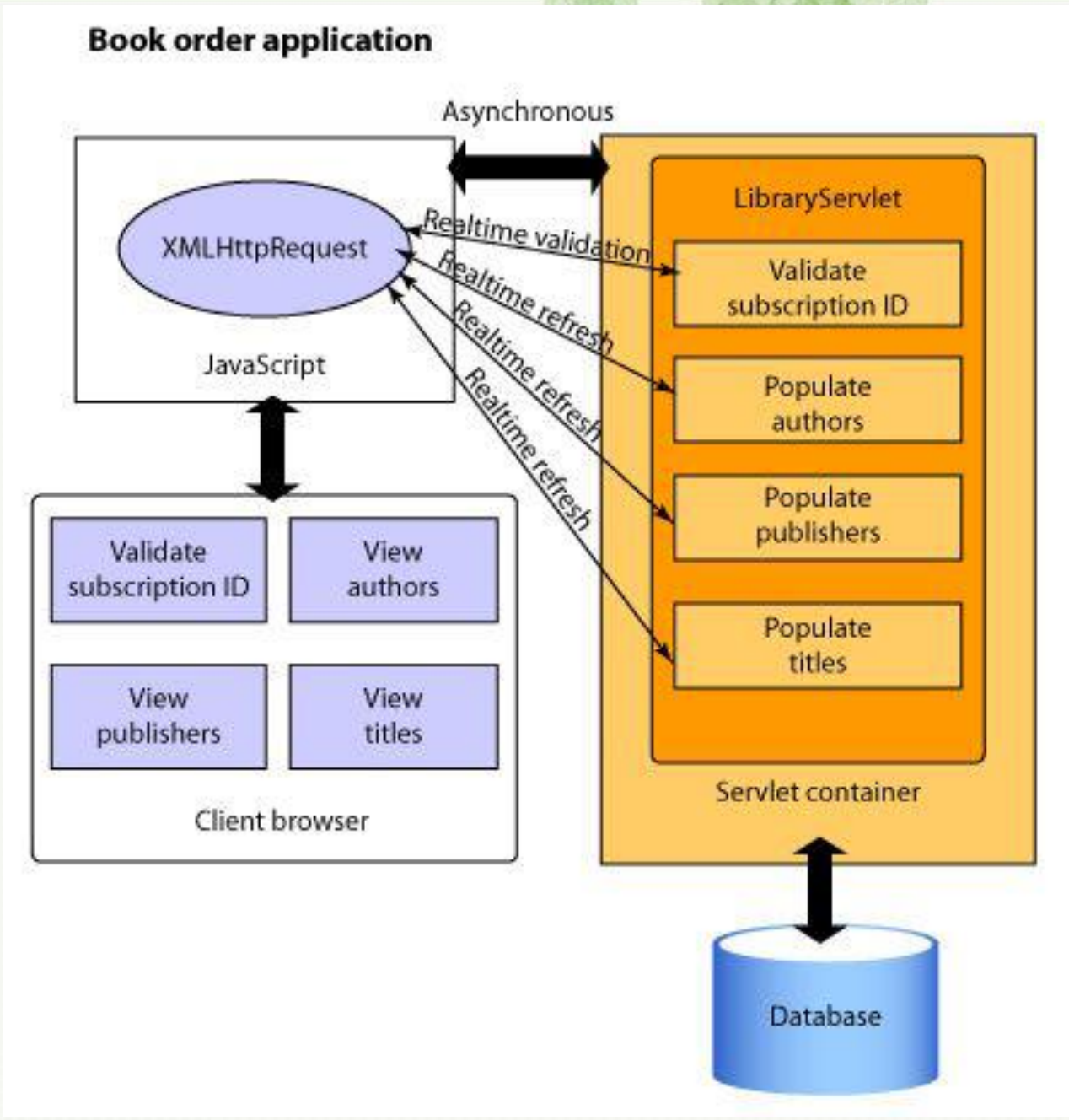
  The abort() method aborts the current server request.

XMLHttpRequest readyState Property

State	Description
0	The request is not initialized
1	The request has been set up
2	The request has been sent
3	The request is in process
4	The request is completed

Different browsers treat the ready state differently. For Your AJAX applications you will actually only be interested state 4.

Book order


Book order application
Asynchronous
XMLHttpRequest
JavaScript
Realtime validation
Realtime refresh
Realtime refresh
Realtime refresh
LibraryServlet
Validate subscription ID
Populate authors
Populate publishers
Populate titles
Servlet container
Validate subscription ID
View authors
View publishers
View titles
Client browser
Database

Homework 4

- 1.what is JS?
- 2.what is XML?
- 3.what is RSS or AJAX?

- Translate:

- iTunes and TiVo also demonstrate many of the other core principles of Web 2.0. They are not web applications per se, but they leverage the power of the web platform, making it a seamless, almost invisible part of their infrastructure. Data management is most clearly the heart of their offering. They are services, not packaged applications (although in the case of iTunes, it can be used as a packaged application, managing only the user's local data.) What's more, both TiVo and iTunes show some budding use of collective intelligence, although in each case, their experiments are at war with the IP lobby's. There's only a limited architecture of participation in iTunes, though the recent addition of podcasting changes that equation substantially.

The End