PHP and XML

perfect together

-Bill Patterson

Agenda

- What is PHP?
- What is XML?
- PHP 4 approach
  - example 1
  - example 2
- PHP 5 approach
  - examples from www.php.net

What is PHP?

- PHP: Hypertext Preprocessor
- An object-oriented general purpose programming language
- A Web scripting language
- A platform for elaborate websites
- A quick way to do things
- and … a great tool for analyzing data in XML form

4/5/2005

What is XML?

- eXtensible Markup Language
- a language of languages
- shows hierarchies of information
- easily used in information sharing
- user friendly
- nodes have attributes and contents, which can include text and other nodes

PHP 4 approach

- create an object called a parser
- tell it to parse the XML
- work with the output

Example 1

- real time price data
  - electricity prices
  - obtained real time
  - used to inform plant managers and power traders

Example 1 - XML

- see lmp-20010505-1115.xml
- see process_price_data.php

Example 2

- insider trading data from US SEC
- as published in *Beginning XML 3rd Edition* (John Wiley and Sons, Publishers)

4/5/2005

Example 2 - XML

- see 0000003545-04-000021.nc
  - ftp sec.gov
  - cd edgar/Feed
- see 0000003545-04-000021.xml
- see process_edgar.php
  - http://www.wiley.com/WileyCDA/Wiley Ancillary/productCd-0764570773,typeCd-DOWNLOAD.html

4/5/2005

PHP 5 approach

– Almost everything regarding XML support was rewritten for PHP 5. All the XML extensions are now based on the excellent libxml2 library by the GNOME project.

– This allows for interoperability between the different extensions, so that the core developers only need to work with one underlying library.

❖ Source: Zend Corporation

4/5/2005

PHP 5 approach

- – In addition to the better-known SAX support inherited from PHP 4, PHP 5 supports DOM according to the W3C standard and XSLT with the very fast libxslt engine.
- – It also incorporates the new PHP-specific SimpleXML extension and a much improved, standards-compliant SOAP extension.
  - ❖ Source: Zend Corporation

4/5/2005

PHP 5 approach

– Given the increasing importance of XML, the PHP developers decided to enable more XML support by default.

– This means that you now get SAX, DOM and SimpleXML enabled out of the box, which ensures that they will be installed on many more servers in the future.

  ❖ Source: Zend Corporation

4/5/2005

PHP 5 approach

– XSLT and SOAP support, however, still need to be explicitly configured into a PHP build.

❖ Source: Zend Corporation

PHP 5 approach

- different kinds of objects
  - The DOM extension in PHP 5, in contrast, was written from scratch to comply fully with the DOM specifications.
    - Sourece: PHP Magazine article by Adam Trachtenberg

PHP 5 DOM navigation

- Get Elements by Tag Name
  - (examples from www.php.net)
    - <?php
    - $xml =<<<EOT
    - <?xml version="1.0"?>
    - <config>
    - <section id="section1">
    - <param name="param1">value1</param>
    - <param name="param2">value2</param>
    - </section>

PHP 5 DOM navigation

- getElementsByTagName continued
  - <section id="section2">
  - <param name="param3">value3</param>
  - </section>
  - </config>
  - EOT;

PHP 5 DOM navigation

- getElementsByTagName continued, and getAttribute
    - $dom = new DomDocument;
    - $dom->loadXML($xml);
    - $params = $dom->getElementsByTagName('param');
    - foreach ($params as $param) {
    -     echo $param -> getAttribute('name').'
';
    - }
    - ?>

PHP 5 DOM navigation

- getElementsByTagName and getAttribute concluded
  - expected results
    - param1
    - param2
    - param3

PHP 5 DOM navigation

- createElement
  - `<?php`
  - `$dom = new DOMDocument('1.0', 'iso-8859-1');`
  - `$element = $dom->createElement('test', 'This is the root element!');`
  - `// We insert the new element as root (child of the document)`
  - `$dom->appendChild($element);`
  - `echo $dom->saveXML();`
  - `?>`

PHP 5 DOM navigation

- createElement results
  - php c1.php
  - <?xml version="1.0" encoding="iso-8859-1"?>
  - <test>This is the root element!</test>

Summary

- PHP & XML

- PHP 4 - a fine choice

- PHP 5 - even better

- Thanks

4/5/2005