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
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 Imp-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)
Example 2 - XML

- see 0000003545-04-000021.nc
  - ftp sec.gov
  - cd edgar/Feed
- see 0000003545-04-000021.xml
- see process_edgar.php
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
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
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
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.

  Source: 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;
getElementsByTagName continued, and getAttribute

- $dom = new DomDocument;
- $dom->loadXML($xml);
- $params = $dom-
  >getElementsByTagName('param');
- foreach ($params as $param) {
  - echo $param ->
    getAttribute('name').'<br>';
- }
- ?>
PHP 5 DOM navigation

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