News from PEAR

What's new in PEAR (in some way related to PHP5)?

Slides at: http://pear.php.net/support/slides.php

POWERED

Tobias Schlitt <toby@php.net>

Welcome

- Welcome to the PEAR News session.

- I hope you will enjoy the session and see some interesting stuff.

- If questions occur, please do not hesitate to ask directly!

POWERED

Who am I?

Tobias Schlitt

toby@php.net

http://pear.php.net/user/toby

Student of Computer Science (University of Dortmund)

    Freelancing IT Consultant / Trainer

    Former Software Architect at Deutsche Bank

Member of the PEAR project since 2002

    Package maintainer

    Member of the Core QA Team

    Working on the website

Zend certified engineer

Agenda

- PEAR Introduction (short!)
- PEAR 1.4
- PEAR Channel_Server
- PEAR Exception
- New PEAR packages
- Future outlook

Agenda: PEAR Introduction

- PEAR Introduction
  - What is PEAR?
  - How to obtain PEAR?
  - The PEAR Installer
  - Getting help
- ...

POWERED

What is PEAR?

- Collection of high quality PHP components
- Nearly 300 packages and growing fast
- Almost 200 package maintainers, 500 developers
- 100% open source (PHP, Apache, BSD, LGPL license)
- Standardization institution
- Founded by Stig S. Bakken in 1999

POWERED

How to obtain PEAR?

- PEAR installer shipped with PHP since 4.3.0

- Automatically installed on Windows

- Per default activated when compiling on *nix
  (do not use "--without-pear")

- For earlier PHP versions bootstrap from http://go-pear.org
  - On *nix try
    `lynx -source http://pear.php.net/go-pear | php -q`
  - On Windows, save source and call PHP manually

- Tip: Ensure, that your PEAR path is added to the include_path directive in php.ini!

The PEAR Installer

- Unified installation environment for installation of PHP code (PEAR) and C extensions (PECL, http://pecl.php.net)

- Available for all major operating systems like

  - Windows
  - Linux
  - Unix
  - Mac OS

- Different GUIs available:

  - Console (built in)

  - Web

  - GTK

- Handles dependencies between packages

- Provides tools for developers

POWERED

The PEAR Installer

Live demo

Getting help

1. The PEAR Website
   - http://pear.php.net/package/<package_name>
   - http://pear.php.net/manual/en/
2. Google! (http://www.google.com)
3. Support Mailinglist <pear-general@lists.php.net>
4. IRC channel: #pear@EFNet
5. Direct maintainer contact (see package website!)
6. PEAR QA <pear-qa@lists.php.net>

- Emergency: PEAR Group <pear-group@lists.php.net>
- Website problems <pear-webmaster@lists.php.net>

Agenda: PEAR 1.4

- PEAR Introduction
- PEAR 1.4
  - New feature overview
  - Channels
  - Dependencies
  - Post install scripts
  - ReST
- ...

POWERED

New feature overview

- Channels
  - Open your own package repository
- Automatic dependency resolving
  - --onlyreqdeps / -o
  - --alldeps / -a
- Dependency group support
- Dependencies to external packages
  - Refer to packages through URLs
- Post install scripts, like
  - Setting up databases
  - Moving files to the web root

New feature overview -2-

- PHAR support
  - Running PEAR from a single file
- Remote installation
  - Install PEAR without shell access
- New package.xml format
  - More flexibility for your own packages
- Install binary PECL packages
  - Finally install PECL packages on Windows
- Mirroring
  - Wanna keep multiple servers up2date?
- Multiple modules in one package

Channels

- Set up your own package repository
  - Will be covered later -> Channel Server
- Receive packages from multiple sources
- Cross channel dependencies
- New commands for channels:
  - `$> pear channel-discover http://example.com/channel.xml`
  - `$> pear channel-alias channel://... example`
  - `$> pear update-channels`
  - `...`
- Channels described in a channel.xml

Dependencies

- Dependencies in PEAR 1.3:

  - Package has to be downloaded to determine dependencies

  - No automatic resolving of dependencies

  - Installation fails if dependencies are not met

  - Only support for simple required/optional definition

  - Dependencies not possible to external packages

  - Unflexible / wired describtion of dependencies in package.xml

Dependencies -2-

- Dependencies in PEAR 1.4:
  - Dependency information available before downloading
  - Dependencies automatically resolved (if wished):
    - `$ pear install –req-deps My_Package`
    - `$ pear install –all-deps My_Package`
  - New package2.xml allows much more flexible and sensefull definition
  - Create dependency groups

POWERED

Dependencies -3-

Let's take a quick look at package.xml and package2.xml...

Post install scripts

- Allows you to perform very powerfull actions after package installation

- Extremly flexible API, scripts are defined as tasks

- Tasks can be bound to specific files

- Use of predefined or self created tasks

- Own tasks are implemented as PHP scripts

Post install scripts -2-

Let's take a quick look at a some post install scripts...

ReST

- PEAR 1.3 communicated with the repository using XML-RPC
- PEAR 1.4 will use ReST for this
  - Less traffic
  - Faster responses
  - Easier to use API
  - More flexible
- Lear more on ReST: http://www.xfront.com/REST-Web-Services.html

Agenda

- ...
- PEAR 1.4
- PEAR_Server
  - What it can do for you
  - How to set it up
  - How to use it
- ...

PEAR_Server - Why?

- What you can do with PEAR_Server
  - Provide your own PEAR based packages to the public
  - Create your own module repository for internal use
  - Provide a comfortable and secure way for your customers to update to new versions of your applications

PEAR_Server - Setup

- Current Preconditions:
  - PHP 5 + PEAR >= 1.4.0a11
  - A domainname dedicated for your PEAR_Server
  - A clean doc root directory
  - A MySQL database

- Installation process:

```
$ pear channel-discover pear.chiaraquartet.net
$ pear install -a chiara/PEAR_Server
$ pear run-scripts chiara/PEAR_Server
```

POWERED

PEAR_Server – Setup -2-

A short excursion into a PEAR_Server installation log...

PEAR_Server – Usage

- Integrated web interface for maintainance

- Simply discover your new channel by
  ```
  $ pear channel-discover pear.example.com
  ```

- Install the packages using
  ```
  $ pear install pear.example.com/Your_Package
  ```

- Upgrade packages using
  ```
  $ pear upgrade pear.example.com/Your_Package
  or
  $ pear upgrade-all -c pear.example.com
  ```

POWERED

PEAR_Server – Usage -2-

Let's see, if it works...

Agenda

- ...
- PEAR_Server
- PEAR Exception
  - Exceptions in PHP5
  - The PEAR Exception class
- ...

Exceptions in PHP5

- Beside many other cool features since version 5 PHP offers exceptions

- Exceptions are modelled like in Java

- Example:

```
try {
    throw new Exception('Test');
} catch ($e) {
    echo $e;
}
```

PEAR_Exception

- PEAR_Exception derives from Exception (PHP buildin class)

- Shipped with the PEAR Installer since version 1.3.2

- Use: `require_once 'PEAR/Exception.php';`

- Implements some cool advanced features:

  - Much prettier error output (web & shell)

  - More context information on error output

  - Support for nested exceptions

  - Allows triggering of callbacks when exceptions are thrown (observer pattern)

PEAR_Exception -2-

Let's take a look at a little example...

Agenda

- ...
- PEAR Exception
- PEAR packages
  - Overview on PHP5 only packages
  - PEAR_Delegator
  - PHP_Archive
- ...

PHP5 only packages

- A little overview:
  - PEAR_Delegator
    - More on that later...
  - Service_Ebay
    - Very comfortable access to the eBay web services
    - Currently supports more the 75% of the web services API
    - Makes extensive use of overloading, iterators, exceptions,....

PHP5 only packages -2-

- A little overview -2-:
  - Services_Yahoo
    - Access to the Yahoo! web service API
    - Makes extensive use of iterators and overloading
  - PHPUnit2
    - Second version of the famous testing framework
    - Uses all kinds of PHP5 features
  - XML_MXML
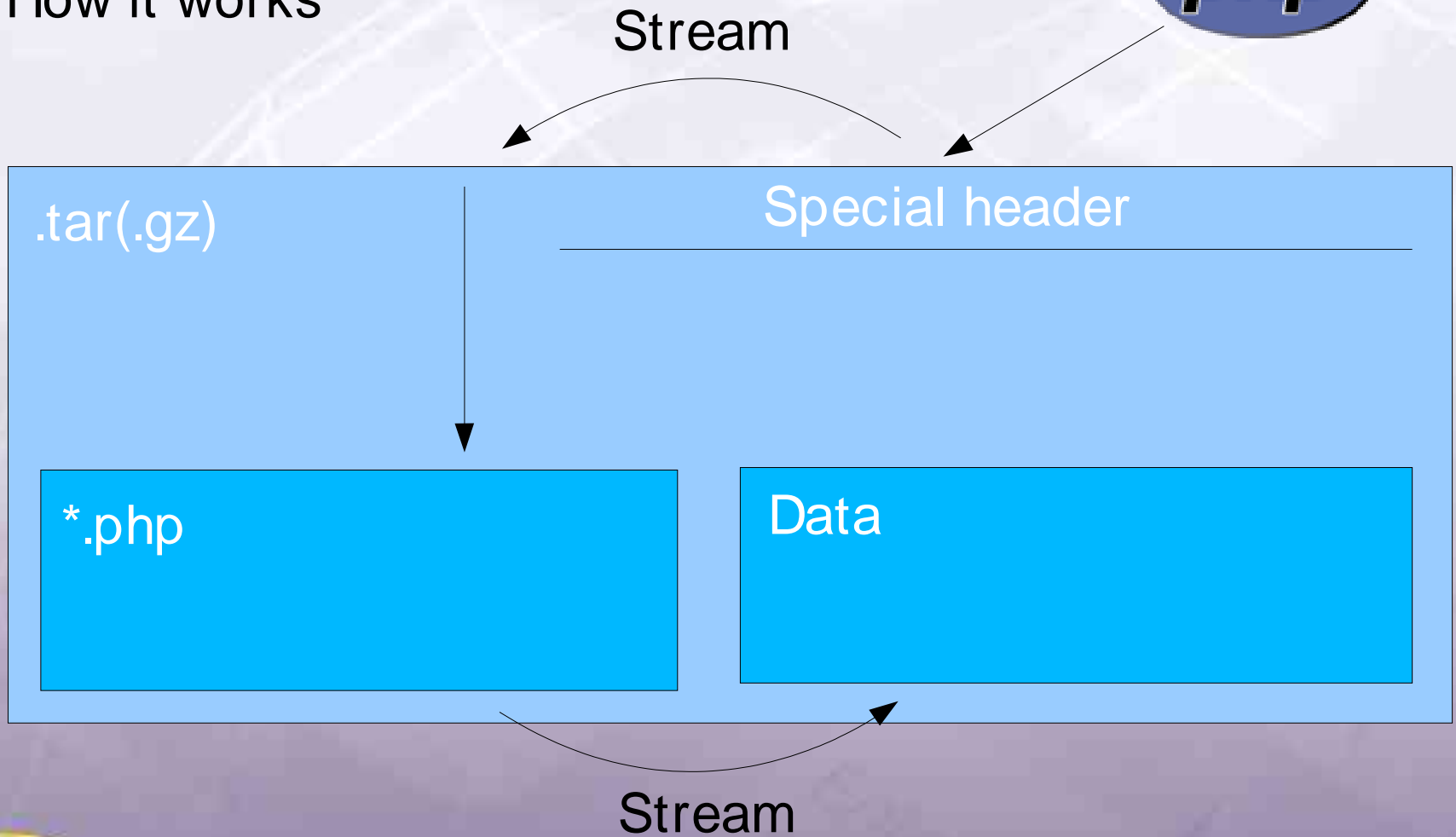   - Allows the creation of flex (some macromedia stuff) documents

PEAR_Delegator

- Implements the delegator pattern for PHP as known from C# or similar
- Allows emulation "pseudo multiple inheritance"
- Let's simply look at some code...

PHP_Archive

- `$ php PEAR.phar`
  Run the PEAR installer out of 1 file!

- `require_once 'phar://inc/myfile.php';`
  Require PHP sources directly from PHARs

- "New" file format PHAR

- Allows packaging entire PHP applications into one file and run this directly

- Completly implemented in PHP (not the best performance)

- Runs with PHP >= 4.3.0 (5.0 increases speed)

PHP_Archive

How it works

Stream

Special header

.tar(.gz)

*.php

Data

Stream

POWERED

Agenda

- ...
- PHP5 only packages
- Future outlook
  - What should come?

Future outlook

- PEAR 1.4 is currently available in version 1.4.0a11

- A beta version should occur during the next weeks

- PEAR 1.4 might propably be stable by the end of June

The bitter end...

- Questions?
- Feedback?

- Thanks for listening!
- I hope you enjoyed the session!

- For later questions: <toby@php.net>

Usefull links

- The PEAR Website
  http://pear.php.net

- Gregs PEAR channel:
  http://pear.chiaraquartet.net

- PEAR 1.4:
  http://pear.php.net/package/PEAR

- PHP_Archive:
  http://pear.php.net/package/PHP_Archive

- PEAR_Delegator
  http://pear.php.net/package/PEAR_Delegator

PLANET PHP
http://planet-php.net

international
PHP2005
conference
- spring edition -

POWERED

Tobias Schlitt <toby@php.net>