

# STREAMLINING BOH WITH PHP



Recently, a hotel/casino client of ours challenged us to come up with a less expensive way for solving their time and attendance IT issues, rather than trying to shoehorn one of the solutions currently available in the marketplace into their systems. It's the kind of assignment that can turn out to be a dream...or a nightmare. In the end, it led us on an interesting journey through the world of PHP – and the development of a new, customizable time and attendance system.



well suited for Web development and can be embedded into HTML.

PHP was originally written as a set of Common Gateway Interface (CGI) binaries in the C programming language by a Danish programmer in 1994 to replace a small set of Perl scripts he'd been using to maintain his personal homepage. At a time before the Internet was THE Internet, Rasmus Lerdorf created PHP to display his resume and collect data on the amount of Web traffic his page was receiving. Personal Home Page Tools (i.e., PHP) was publicly released in 1995. Four years later, a couple of Israeli developers rewrote PHP's core to produce the Zend Engine in 1999. They also founded Zend Technologies, which actively manages the ongoing development of PHP.

Currently, two major versions of PHP are being actively developed: 5.x and 4.4.x. The latest stable version, PHP 5.2.4, was released on August 30, 2007. PHP version 6 is currently under development and scheduled to be released in conjunction with the decommissioning of PHP 4. There you have it – consider yourself fully up-to-speed on PHP.

## Light the LAMP

PHP generally runs on a Web server, taking PHP code as input and creating Web pages as output. It acts a lot like a filter: the PHP program takes input from a file or stream containing text and special PHP instructions and outputs another stream of data for display. While running the PHP parser with a web server and web browser, the PHP model can be compared to other server-side scripting languages such as Microsoft's ASP.NET system, Sun's JavaServer Pages, and mod\_perl, as they all provide dynamic content to the client from a Web server. PHP can also be used for command line scripting and client-side GUI applications as well.

The Web industry has embraced LAMP architecture as a way of deploying inexpensive, reliable, scalable, secure Web apps. PHP is commonly used as the "P" in this bundle alongside Linux, Apache and MySQL – it was this solution that got my partner and I thinking about an innovative solution for our client's time and attendance challenge.

PHP can be used with a large number of relational database management systems – it can also be deployed on most Web servers and on almost every operating system and platform as

## The ABC's of PHP

Most of you reading This Space probably know that PHP is not a performance-enhancing human growth hormone, a newly discovered element on the Periodic Table, nor a text messaging acronym intelligible only to 13 year olds. In fact, PHP is a widely-used general-purpose programming language that is especially

## PHP 5.2.5 Released

*The PHP development team would like to announce the immediate availability of PHP 5.2.5. This release focuses on improving the stability of the PHP 5.2.x branch with over 60 bug fixes, several of which are security related. All users of PHP are encouraged to upgrade to this release. Security Enhancements and Fixes in PHP 5.2.5:*

- Fixed `dl()` to only accept filenames. Reported by Laurent Gaffie.
- Fixed `dl()` to limit argument size to `MAXPATHLEN` (CVE-2007-4887). Reported by Laurent Gaffie.
- Fixed `btmentities/btmlspecialchars` not to accept partial multibyte sequences. Reported by Rasmus Lerdorf.

- Fixed possible triggering of buffer overflows inside `glibc` implementations of the `fnmatch()`, `setlocale()` and `glob()` functions. Reported by Laurent Gaffie.
- Fixed "`mail.force_extra_parameters`" `php.ini` directive not to be modifiable in `.htaccess` due to the security implications. Reported by SecurityReason.
- Fixed bug #42869 (automatic session id insertion adds sessions id to non-local forms).
- Fixed bug #41561 (Values set with `php_admin_*` in `httpd.conf` can be overwritten with `ini_set()`).

Source (<http://www.php.net>)

shareware (read: free of charge). The PHP Group also provides complete source code for users to build, customize and extend for their own use. Perfect!

### Betting against Net.Data

Our initial thoughts with regard to developing a streamlined time and attendance system were to leverage our experience in developing a touch screen sports wagering system, which we did two years ago. Why not take a small touch screen panel PC and use a browser program to take control of all the information being displayed? The data collection capacity of the system our client had in place at that time was limited to the 10-12 buttons located on the time clock device. Programs were required to load on the clock so that it could exchange information with applications running on the server. Our thinking was to use the same approach devised for our sports wagering system and give total control to the server.

The sports wagering system we wanted to use as a model was written using Net.Data on the System i. Unfortunately, that language has never really gained traction and is slowly working its way toward a spot alongside the Sony Betamax at the Smithsonian. We consulted with IBM, and they suggested using a recently released PHP option on the System i developed in collaboration with Zend (the Zen Masters of the PHP world).

### Zend Masters

With Zend Core for i5/OS, Zend and IBM have delivered an enhanced version of the open-source PHP with resources and capabilities specific to i5/OS. Zend for i5/OS includes Zend Core, Zend Studio and Zend Platform, providing System i businesses with a complete solution for the development and management of modern Web applications. For businesses deploying System i, Zend touts its products as being “the most productive and cost-effective solution to rapid Web enablement.” Based on our experiences so far, we have to agree with the



spinmeisters in Zend’s marketing department. Our IBM rep came to our office and assisted with the setup of Zend Core on our System i. It loaded flawlessly, and we wrote a simple input screen program that proved our concept. In no time, we were off to the races and developing the full-blown application.

### GUI, Not Green

We use the native IBM DB2 System i database and access data via SQL. PHP macros are used to give users of the system a pleasant experience. Every interface – from the employee swiping a badge to clock in or confirm hours

worked...to management’s review and maintaining of time records...to the network administrator’s setting up of clock locations...to the payroll clerk’s looking up time transactions or answering questions – is presented as a browser window running on networked PC’s.

All of it runs on an ultra-reliable, ultra-secure System i server. The entire system can easily be integrated with other gaming & hospitality back-of-house (BoH) systems. Best of all, perhaps, is the fact that the system is all GUI – not a single green screen exists. The rest of the world may be going green, but this is one instance where we chose not to...and it worked.



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