

# OFFICEDIGGS – 24-7 EXHIBITS.COM

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## TECHNICAL OVERVIEW

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### v0.0.1.1 November 19, 2008

This document describes the 247exhibits.com code that is for sale on [http://www.officediggs.com/web\\_tools](http://www.officediggs.com/web_tools). The goal of this document is to briefly indicate the extensiveness of actual documentation available upon purchase of the code. It is not to provide code documentation per se.

24-7 Exhibits allows you to create a professional, online exhibit by making your own website with fully customizable and feature-rich options. Affordable web sites from 24-7 Exhibits offer collaboration opportunities for you or your group to contribute to and write about the multimedia presented: 24-7 (that is, all day, everyday!)

24-7 Exhibits is a robust, scalable web-based application (found at [www.247exhibits.com](http://www.247exhibits.com)), programmed by a nationally-known Silicon Valley firm using a Zend/PHP framework that has a fully-functional e-commerce component, e-mail notification capabilities, an application that delivers customizable, privatizable single or group-level (multiple contributor) website templates with commercially-licensed slideshows, blogs, tags and comments, and an SQL database with a 2,500+ user capacity.

### SPECIAL EDUCATIONAL OFFER

We will sell a generic version of the 24-7 Exhibits code for \$500 complete with documentation, and capacity test results. Click here to read server specifications and the basic code documentation. If enough people sign up, then we can have our programming team formally "genericize" the code and sell it at such a low price. Our goal is to help others learn about programming a website since many universities and schools do not teach programming, just theory. Since there are many things you can do with the code, and ways to embellish it further, it is not a threat to us. Satisfactory demand for sales at these terms must be met by midnight EST 12-31-08 to warrant sales at this price.

The generic version of 24-7 Exhibits will come with revised documentation; placeholders in lieu of all 24-7 Exhibits' logos, copy and images including those in e-mail alerts and notifications; different file names, class names, and function names that do not reference 24-7 Exhibits; and will be configurable to work on other servers with file caching. The generic version of the code will use a variable domain name that can be set in the config file; will have an option to turn off the SSL required for the sales site; will come with instructions on how to insert your own PayFlowPro payment information into the site or toggle this e-commerce option off; and come with proof of testing on a different server with a different domain.

Sales are targeted toward programming-savvy individuals. Our firm's generic code can be used in many ways to help the next generation learn about technology and business. Students may dissect, evaluate, analyze, change, improve and learn from our well-documented standard-compliant raw code in an experiential learning activity that not only provides them with a solid example of good coding to observe and learn from, but to also to help them decide if programming is something they would like to study further in college/post-secondary school. Organizations with open-source IT departments can implement the application and use it as they see fit.

Contact Rob or Ann if you have questions about this offer. The 1,700+ hours of standards-compliant code is sold as a non-exclusive license, will be presented as is with no representation, warranties or guarantees if satisfactory demand for it exists. Buyers will need to license the Slide Show Pro application else replace it in the code. To sign up for this offer (we will follow up with you), please sign up online at: [http://www.officediggs.com/web\\_tools](http://www.officediggs.com/web_tools).



## What Is 24-7 Exhibits?

24-7 Exhibits is an ideal digital venue to showcase galleries of photographs with text, tags and comments and invite discussion, reaction, evaluations, critiques, and the sharing of opinions, facts, and information about sets of images and multimedia depicting various different places, people, pets, flora, fauna, collectibles, artifacts, artwork, crafts, projects, lessons, assignments, activities, or events. The possibilities are endless; the choices are yours! You may be the sole contributor, or you may allow many others to join your community as contributors to your site. 24-7 Exhibits is the easiest way to create an exhibit online. It can be used to organize membership, categorize case studies, manage a student's portfolio, administer a teacher's lessons, display a family's history and/or recipes and/or travels, showcase pets in need of adoption, sell crafts, advertise a small business and display that business' inventory online, and/or record life-coaching sessions and help patients in counseling to journal and receive therapy via writing and imagery, etc.

The 24-7 Exhibits web-based tool automatically creates out of the box, gallery-focused websites. You may visit our sales site at [www.247exhibits.com](http://www.247exhibits.com) and our company blog at [www.247exhibitscompanyblog.com](http://www.247exhibitscompanyblog.com) to read more about this tool.



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## 1 SERVER ENVIROMENT

The hardware requirements are going to depend heavily on the number of users on the site. Right now, for site maintenance, our programmer can run everything fine on his MacBook functioning as a server. But, once you begin to add 50, or 500 users to the site at any give time... there are much higher demands on the web server in terms of CPU, memory, and storage space. Our current server environment is with Rackspace and server specs are available with purchase.

officeDiggs, Inc. is a Rackspace Partner, and you may sign up for hosting with Rackspace here:  
[http://www.rackspace.com/partners/solution\\_partners/index.php?partner\\_id=144](http://www.rackspace.com/partners/solution_partners/index.php?partner_id=144)

Software requirements are: PHP 5, Apache, MySQL, Zend Framework, memcached.  
*More information will be formally documented in the purchased version of this handout.*

## 2 APPLICATION ARCHITECTURE

The original 24-7 Exhibits web project was created and developed by local developers in the Pennsylvania area. It was re-coded to higher standards by a professional services consulting agency in Silicon Valley. The web application consists of two PHP/MySQL web applications, one for the sales site and one for the exhibit websites that the users could purchase on the sales site.

The databases were consolidated into a single database. The code bases of the two web applications were partially reorganized. They were not consolidated into one application, but kept separate for the sales website and the user's website. The Zend Framework was introduced as a library, mainly for database calls, caching and input validation. JAVASCRIPT redirects were inserted.

The payment processor is PayPal's PayflowPro.

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### 2.1 DATABASE SCHEMA

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Both web applications (sales site and user's websites) are now using the same database. The database schema derives from the schemas of the original two databases. Some tables were removed and a few were added. See the Appendix at the end of this report for the complete Entity Relationship Model.

#### 2.1.1 WEBSITES

Exhibit websites that customers purchase are stored in the *websites* table. A few notable fields are:

- **site\_name** - This is the sub domain the customer chose for their website (site\_name.247exhibits.com).
- **firstpayment\_date & payment\_day** - *firstpayment\_date* stores the date that the first payment happened / will happen. *payment\_day* is a redundant data field that stores only the day of that date, on which the recurring payment will happen each month. This is used i.e. to send monthly invoices.
- **ccexpiration\_month & cccExpiration\_year** - Only the credit card's expiration date is stored in the database, for a possible later handling of expiring credit cards.
- **pfp\_profile\_id** - The Payflow Pro profile id of the recurring payment profile.
- **account\_id** - For paid websites this is the same as the Payflow Pro profile id. Free websites have an account id generated from the table's id.



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- **offline\_date** – If the website gets canceled, access to the site will not be granted anymore starting this day.
- **question\_id** – During the purchase process the customers gets to choose from a set of security questions.

*More information will be formally documented in the purchased version of this handout.*

### 2.1.2 PAGES

Every website has a set of pages. Their content is saved in the *pages* table. The *section\_id* determines which page is meant:

- 1 – About page
- 2 – Home page
- 3 – Terms and Conditions page
- 4 – Privacy Policy page

### 2.1.3 SITE\_CONFIG

*Will be formally documented in the purchased version of this handout.*

### 2.1.4 PACKAGES

*Will be formally documented in the purchased version of this handout.*

### 2.1.5 INVOICES

A cron job sends an email to the customer with a monthly invoice. This will get logged in the *invoices* table. It stores the generated *invoice\_number*, the amount billed, the associated Payflow Pro profile id, and the date/time.

### 2.1.6 DOMAINS

Customers can point their own domains to the website. They will have to set these domain names in the website settings, so the application knows which website to show, based on the domain name. This relation between a domain name and a website is stored in the *domains* table.

*Figure 1: Table 'websites' and its relations will be formally documented in the purchased version of this handout.*

### 2.1.7 USERS

Everybody purchasing a website becomes a user in the *users* table. Also all contributors and guests that can sign up to the websites will be entered in the users table, as well as the officeDiggs admin user.

A notable field is *type*. The values determining the permission level of the user *will be formally documented in the purchased version of this handout.*

A user can only be related to one website! Purchasing a second website requires to set up a new user for this website.

If a blog, comment, project, photo or file is related to a website is determined by the relation of its user to this website.

### 2.1.8 PHOTOS AND FILES

The *photos* table is both related to the user who uploaded the photo file and the project that the photo is supposed to be shown in. A photo could be uploaded by a user who is not the creator of the project.

*Files* are not associated to projects, so they are only related to a user. *Files* can be both actual files or just urls.



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### 2.1.9 SALES PAGES

This is a table that is only used on the Sales website. It stores revisions of old versions of the text of a couple of pages on this website, like the Terms and Conditions and the Privacy Policy.

### 2.1.10 VERIFY

The *verify* table is used for the email verification of users who use the register form to sign up with a user's website. This could theoretically be merged with the *user* table later.

Figure 2: Table 'users' and its relations *will be formally documented in the purchased version of this handout.*

### 2.1.11 PROJECTS

Users can set up projects in their website, where they can add photos and blogs to.

### 2.1.12 TAGS

Each project can have a number of tags assigned to it. Each tag can be assigned to different projects.

### 2.1.13 BLOGS

Blogs with a *title* and a text (*blogpost*) can be assigned to a certain project and the user who created the blog post.

Figure 3: Tables 'projects', 'tags', 'blogs' and their relations *will be formally documented in the purchased version of this handout.*

### 2.1.14 COMMENTS

Comments can be written for both projects and blogs. They are associated in a n:m relationship. Each comment belongs to the user who wrote it.

Figure 4: Table 'comments' and its relations *will be formally documented in the purchased version of this handout.*

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## 2.2 CODE STRUCTURE

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The 24-7 Exhibits project consists of two separate web applications that use the same database. This is a legacy issue from the original application that we decided not to change for now. Unfortunately this leads to code redundancies, mainly for database access. In the future these two applications could be merged into one. Both applications were reworked and put into the same code/directory structure.

One application exists for the Sales website (the sales application), where customers can purchase an exhibits or online portfolio website. The other application (the user's application) is for the exhibit websites that customers purchase.

### 2.2.1 URLS FOR BOTH APPLICATIONS

sales.247exhibits.com is the only 247exhibit sub domain that points to the sales application. An SSL certificate exists for this domain, so credit card transaction can only be handled on this domain, including purchasing new websites and changing credit card information for existing recurring profiles.



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\*.247exhibits.com and 247exhibits.com point to the user's application. The bootstrap there redirects www.247exhibits.com and 247exhibits.com to the sales app (sales.247exhibits.com). All other sub domains will be checked in the database, if a website for that sub domain exists and the matching site will be displayed.

Also if a user's own domain is pointed to his 24-7 exhibits website and if it is assigned to that website by the user (see database chapter 2.1.6 Domains) the bootstrap will show the appropriate website.

Figure 5: Two applications and their URLs *will be formally documented in the purchased version of this handout.*

### 2.2.2 ZEND FRAMEWORK

The Zend Framework was introduced as library for some specific functionality, but also for possible future use of its MVC (Model-View-Controller) and URL routing features. The Zend Framework features used in this project *will be formally documented in the purchased version of this handout.*

### 2.2.3 DIRECTORY STRUCTURE

Both applications have the same directory structure with a few exceptions.

#### 2.2.3.1 / (ROOT)

*Will be formally documented in the purchased version of this handout.*

#### 2.2.3.2 /APPLICATION/INC/

This folder can contain files with snippets to be included on a page and certain files with globally available non-oo functions and *will be formally documented in the purchased version of this handout.*

#### 2.2.3.3 /APPLICATION/MODELS/

All database models are in this directory. *Will be formally documented in the purchased version of this handout.*

#### 2.2.3.4 /APPLICATION/VC/

*Will be formally documented in the purchased version of this handout.*

#### 2.2.3.5 /APPLICATION/VC/CLASS/

*Will be formally documented in the purchased version of this handout.*

#### 2.2.3.6 /APPLICATION/VC/SLIDESHOW/

*Will be formally documented in the purchased version of this handout.*

It contains PHP files related to the third party commercially licensed flash tool Slideshow Pro. Owners of this code must license SlideShowPro ([www.slideshowpro.net](http://www.slideshowpro.net)) before using it.

#### 2.2.3.7 /CONFIG/

*Will be formally documented in the purchased version of this handout.*

#### 2.2.3.8 CRON

*Will be formally documented in the purchased version of this handout.*

#### 2.2.3.9 /FILES/UPLOADS/

*Will be formally documented in the purchased version of this handout.*



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#### 2.2.3.10 /LIBRARY/

The folder contains libraries from third parties

#### 2.2.3.11 /LIBRARY/PHPTHUMB/

*Will be formally documented in the purchased version of this handout.*

#### 2.2.3.12 /LIBRARY/SOLUTION/

*Will be formally documented in the purchased version of this handout.*

#### 2.2.3.13 /LIBRARY/ZEND/

The Zend Framework library. See <http://framework.zend.com/manual/en/>

#### 2.2.3.14 /LIBRARY-PLUGINS/

This folder contains extensions to the libraries in the library folder. *Will be formally documented in the purchased version of this handout.*

#### 2.2.3.15 /LIBRARY-PLUGINS/ZEND/CACHE/BACKEND/

The Memcache cache backend that comes with the Zend Framework does not support tags. A professional services consulting agency in Silicon Valley developed a cache backend for Zend\_Cache using Memcache with support for tags, class Zend\_Cache\_Backend\_MemcachedTags.

#### 2.2.3.16 /LIBRARY-PLUGINS/ZEND/VALIDATE/

*Will be formally documented in the purchased version of this handout.*

#### 2.2.3.17 /PUBLIC/

*Will be formally documented in the purchased version of this handout.*

### 2.2.4 URL ROUTING

*Will be formally documented in the purchased version of this handout.*

#### 2.2.4.1 PAGE REQUESTS

*Will be formally documented in the purchased version of this handout.*

#### 2.2.4.2 REQUESTS TO OTHER RESOURCES

*Will be formally documented in the purchased version of this handout.*

#### 2.2.4.3 ADDING PARAMETERS

*Will be formally documented in the purchased version of this handout.*

### 2.2.5 THE BOOTSTRAP INDEX.PHP

*Will be formally documented in the purchased version of this handout.*

### 2.2.6 DATABASE ACCESS AND MEMCACHE

Zend\_Db with the PDO\_MYSQL adapter is used for the database access, which ensures that all SQL queries sent to the database are prepared statements, quoting inserted parameters correctly and this way eliminating the risk of SQL injections.



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*More details will be formally documented in the purchased version of this handout.*

#### 2.2.6.1 RETRIEVING DATA FROM THE DATABASE

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*Will be formally documented in the purchased version of this handout.*

#### 2.2.6.2 CHANGING DATA IN THE DATABASE

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For inserts, updates and deletes, no SQL statements are written. Instead the adapters *insert()*, *update()* and *delete()* methods are used.

*More details will be formally documented in the purchased version of this handout.*

#### 2.2.6.3 CACHING DATABASE RESULTS

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Almost all database SELECT query results are cached, using Zend\_Cache and a cache backend developed by a professional services consulting agency in Silicon Valley for tag supported memcache caching, Zend\_Cache\_Backend\_MemcachedTags. Caching is set up in the bootstrap file. File caching could be used as an alternative to memcache, but is disabled.

*More details will be formally documented in the purchased version of this handout.*

#### 2.2.7 EMAILS

The folder */application/vc/class/* contains a class *Email*. Each email that is send by the system is a public method in this class, containing the html and text of the email. *Zend\_Mail* is used to send out the email.

#### 2.2.8 CRON JOBS

*Will be formally documented in the purchased version of this handout.*

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### 2.3 PAYMENT PROCESSING

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The complete purchase flow of the sales website to buy an exhibit website was newly developed. Please refer to *Billing Rules* document for more details; available separately. *More details will be formally documented in the purchased version of this handout.*

*Zend\_Filter\_Input* is used in conjunction with *Zend\_Validate* and *Zend\_Filter* to validate the form field input by the customers. Validators and filters shipped with the Zend Framework are used as well as a couple of validators developed by a professional services consulting agency in Silicon Valley.

PayPal's Payflow Pro is used as credit card processor.

*Solution\_Ecommerce\_PayFlowPro* is a class used to interact with the Payflow Pro HTTPS API. It allows single sale transactions as well as handling recurring payments.

Please refer to the *Payflow Pro Developer's Guide* and the *Recurring Billing Service Guide for Payflow Pro*, which can be found in the PayPal Integration Center:

[https://www.paypal.com/IntegrationCenter/ic\\_payflowpro.html](https://www.paypal.com/IntegrationCenter/ic_payflowpro.html)

For a manual about Payflow's HTTPS interface, refer to

<http://www.paypaldeveloper.com/pdn/board/message?board.id=payflow&thread.id=1008>

*More details will be formally documented in the purchased version of this handout.*



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## 3 APPENDIX

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### 3.1 PASSWORDS & SERVER INFORMATION

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#### 3.1.1 ADMIN TOOLS

*More details will be formally documented in the purchased version of this handout.*

#### 3.1.2 MYSQL

*More details will be formally documented in the purchased version of this handout.*

#### 3.1.3 MUNIN

*More details will be formally documented in the purchased version of this handout.*

#### 3.1.4 FTP & SHELL

*More details will be formally documented in the purchased version of this handout.*

#### 3.1.5 SERVER PATHS

*More details will be formally documented in the purchased version of this handout.*

#### 3.1.6 SVN

*More details will be formally documented in the purchased version of this handout.*

#### 3.1.7 DEPLOYMENT

*More details will be formally documented in the purchased version of this handout.*

### 3.2 SVN & DEPLOYMENT INSTRUCTIONS

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Every code that will be deployed to either staging or production will be taken by the deploy scripts from the SVN repository. The repo is the one and only place where the code base is stored and needs to be committed to. The deploy scripts are the only way we put code on the server, we never FTP there.

*More details will be formally documented in the purchased version of this handout.*

#### 3.2.1 SVN

In case you haven't worked with SVN before, please familiarize yourself with the concept of this version control system. If you develop on windows, you will want to use Tortoise, a graphical SVN client that integrates into the Windows Explorer. You will see 'TortoiseSVN' and other SVN options when you right click.

<http://tortoisesvn.tigris.org/>

If you develop with Eclipse, there is a SVN plugin:

<http://subclipse.tigris.org/>

We use both.

On Linux you want to use the SVN command line commands, which are pretty straight forward and descriptions for svn checkout, update and commit can be found on the net.

For more information, please contact:

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Please allow at least 24 hours for me to respond.

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