

August 19, 2011

Electricbooks Integration Guide (Draft)



Background

Since iPad was released from Apple, many publication have been released digitally. iPad is such a good device for reading digital contents compare to traditinal desktop nor notebook computers. Because those traditional devices will not give you good experiences if you want to read something on your sofa or on public transportation. On the other hand, computing power of iPad is not as powerful as traditional computers, and rendering PDF is not an exception. Nicely laid out printed contents had to be reformatted for iPad, or it had to be convertted into bitmap image, due to lack of computing power in someway. Or user has to wait for a page to be displayed, and may not be able to focus on reading its content.

Overview

Electricbooks solution is based on high performance PDF viewer engine. As we mentioned before it could take quarter to half second to render one single page, and complex page may take longer. We use many techniques to reduce rendering occurrence as less as possible, or taking advantage from GPU, and many other to improve user's response time. Hence, user will not get disturbed when flipping pages or zooming, and should be ablt to focus reading contents.

We also provide a solution to be able to quickly distibute PDF contents whether it is paid or free contents. Electricbooks solution do not require complex server components, it only requires web server to host your PDF contents, therefore, you can jump start distributing PDF contsnts. You will need to create a list of contents to be shown on our store, and we provide authoring software to do that, so you can drag and drop PDF files and giving them titles and some other meta data to finish up authoring inventory list.

Evaluation Kit

We provide Electricbooks evaluation kit for you to try. Watermark will be appear on viewer, and some functionalities are works differently, but you should be able to find how Electricbooks solution work. We provide three componets for this kit.

- Electricbooks template project (with Electricbooks static libraries) for iOS
- Electric Publisher for Mac OS X 10.6

Preparing Contents

This section tells you how to prepare contents for uploading. We use Electric Publisher for preparing contents.

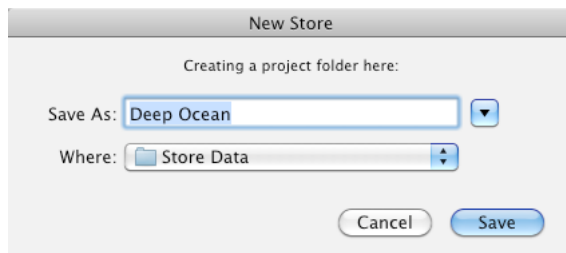
Launch Electric Publisher

Launch Electric Publisher look like following icon. Electric Publisher is a tool to organize its contents.



Create a New Project

Choose "New" from menu to create a project. A project in here represents a folder for managing file structure for preparing contents to publish. It will ask you to save, then please specify the location to save.



Project Settings

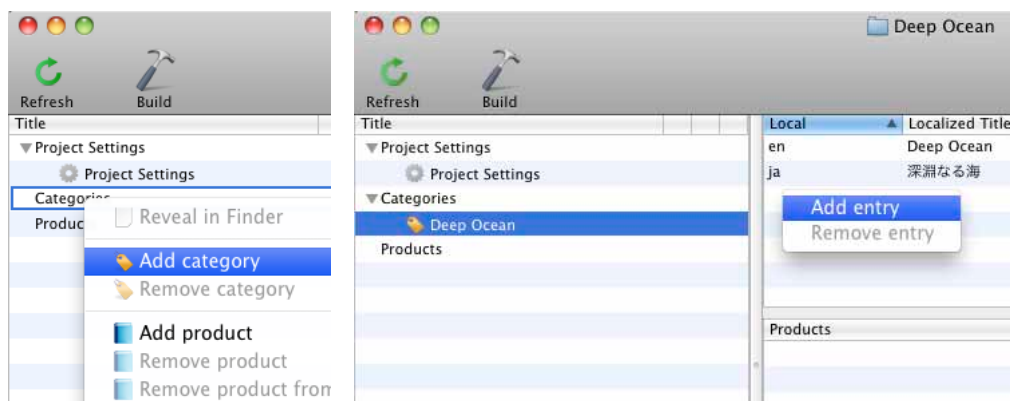
Once a project is created, navigate to project setting item on left side pane. You may specify URL for downloadable content, access control information and PDF encryption passwords. Since changing these information may cause serious impact, all items are locked. In order to make any changes, please turn on editable check button on upper right corner of the view, then all items will become editable.



Note: Do not forget to add '/' at the end of base URL, or catalog may not be loaded properly.

Adding Categories

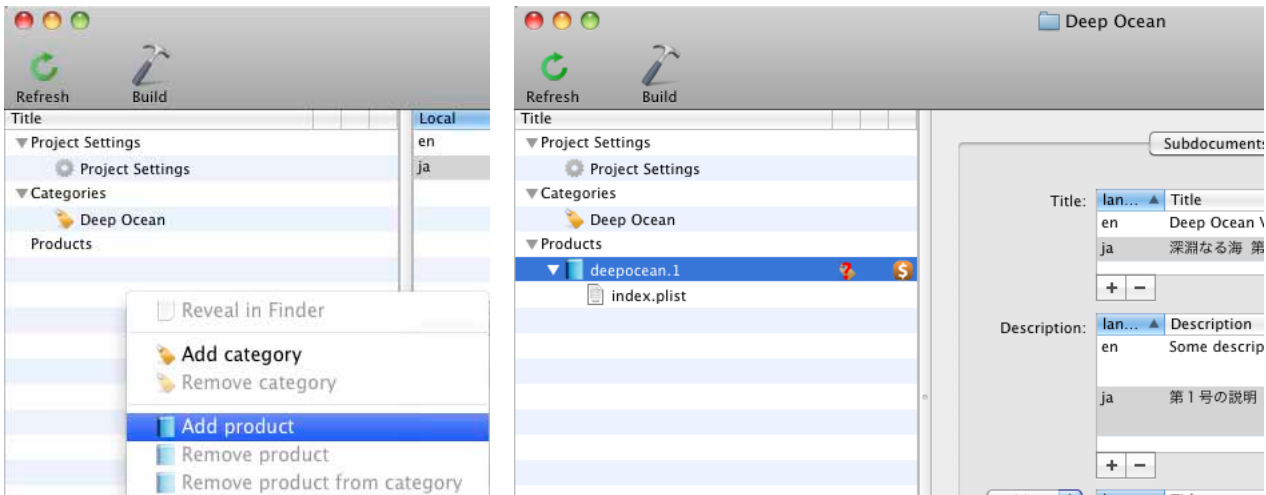
All the contents are displayed in Store view per categories basis. It is up to you how to organize these categories. You need at least one category or contents will not be displayed in Store view. In order to create a category, right click on left side pane, and choose "Add category" from contextual menu.



Selected category can be configured on upper right side of the pane. To add or to remove localized title, please right click on the pane to choose item from contextual menu. Please make sure local is valid code, or localized title will not be displayed as your expectation.

Adding Products

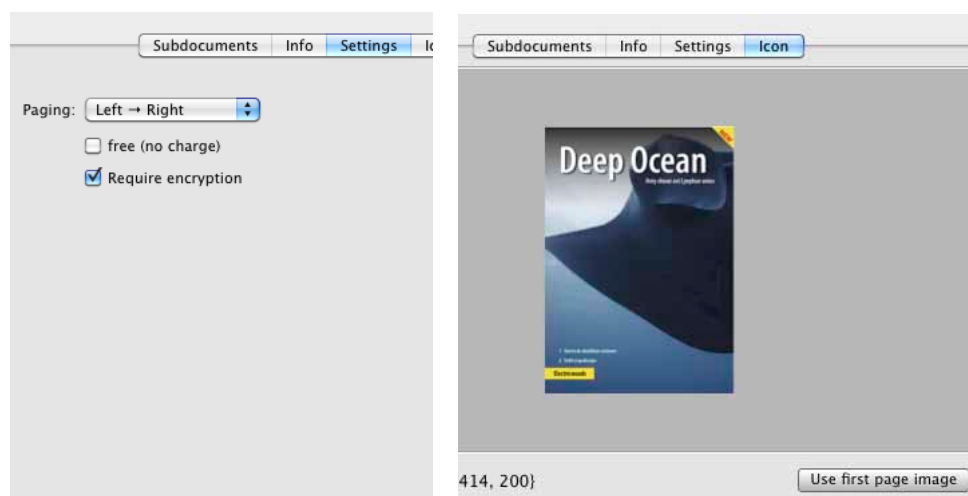
A product represents a downloadable content. We use term "product", because it represents Apple's In-App-Purchase product item and its name refers to product identifier. Because, In-App-Purchase's product identifier only allows to use alphabet, digits and dot. Product name must conform to the same naming convention. To create a new product, please right click on left side pane, and choose "Add product", then created product will be placed under products item. Rename it to much its product identifier.



Just like category, please specify titles, descriptions and other meta data. These entries can be displayed on Electricbooks store view and library view. You may leave some entries blank, as they are optional.

Configuring Product

Each product has some options to configure. For example, paging direction can be specified. Also, paid and free contents can be configured, please note if you set the product to be paid contents, don't forget to configure In-App-Purchase, or product will be omitted from store view. And you may wonder how come some products aren't listed on store view. Plus, don't forget create thumbnail for this products. Thumbnail file name is "thumbnail.png" in the same folder with its product. You can click on "Use first page image" to create one if you like.



Drag PDF files into Product

You may drag PDF files that represents the product and drop into a product item. Multiple PDF files will be treated as if they are one single PDF content. Because, it seems rendering PDF start slowing down around 100MB range, therefore, splitting PDF would be effective if you like to publish large PDF contents. The order of PDF files can be rearrange from subdocument tab.

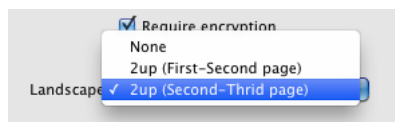
Note: Please use simple ASCII characters for PDF and other filename, Japanese and some other charcters will be garbled when unzipped files will get corrupted.

Double Page on Landscape options (framework 1.2.8, publisher 1.2.4)

If your PDF contents are based on double page spread, we have some options to display two pages on landscape mode.



To take an advantage of these options, you need to specify which page faces to which page.



Prerendered Cache Image (publisher 1.2.4)

Rednering PDF on iOS device takes time. We provide option to distribute prerendered cache images along with PDF, then it will take about 0.1 seconds to load prerendered image, and user will not have to wait for rendering page by page. Hence, you can flip page by page so smoothly regardless of complexity of the design. You can select PDF file on left side pane, and choose "Prerendered" or "None" for the purpose of your choice.

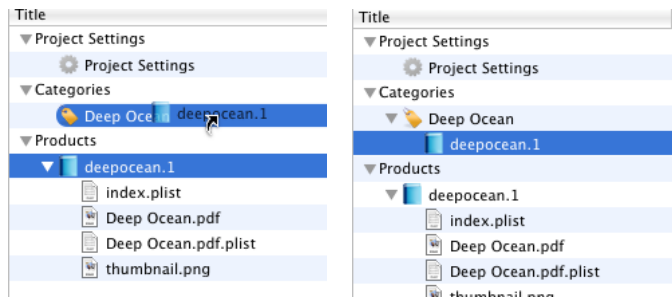


Note: Prerendering process will be done on host computer, and rendered color may look different from actual iOS device especially if PDF is based on CMYK. To minimize this issue, please convert PDF to RGB color space up front, or choose "None" for the option.

Associate Product with Category

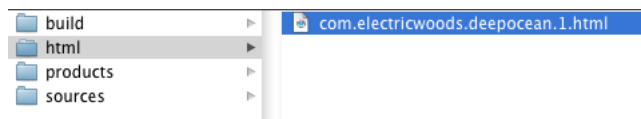
Each products should be belong to at least one of category, or product will not be displayed on Store view. In order to do it, please drag product item from left side pane, and drag it on a category item. Or, you can select product and copy and select category and paste. To remove product from category, right click on

product under category, then choose "Remove product from category" from contextual menu.



Providing HTML Contents

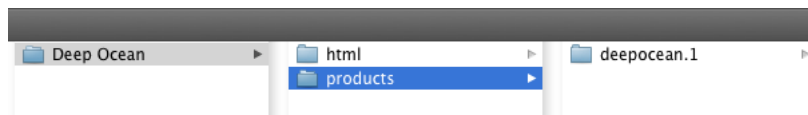
Each Product requires HTML contents to describe its detailed information about the product. This content will be displayed when user tapped on a product in store view, then will be use to make a decision to purchase or not. HTML files should be located under html subfolder in a project folder. The main file to represent a product is based on <product>.html.



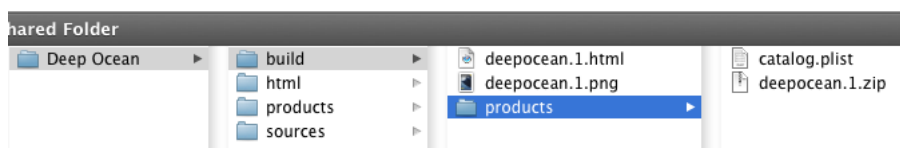
Note: Publisher app may leave some unused html files, when you rename product id. Please maintain files in this folder, and do not edit files under build folder, or you will lose those changes after the next build.

Build Uploadable Contents

We use term "build" to process files for each products to provide materials for uploading contents. Build process generates prerendered cache images, compresses product folder into a zipped file, and assembles all product information into a catalog file. By clicking "Build" button on toolbar, build process will be initiated. It may take a while for this process.



Assembled contents will be written in build folder, and files and folders are ready for uploading.

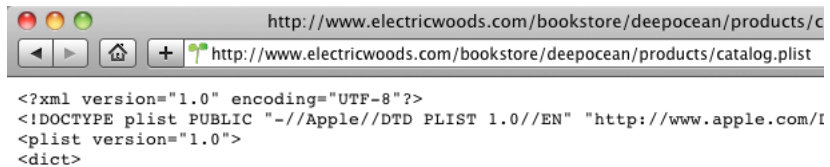
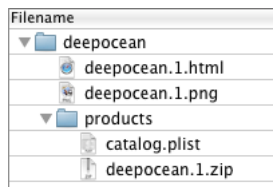


Note: Publisher keeps tracking of files by updating .md5list file. If you think built content hasn't been updated, try remove .md5list file under product folder. And Publisher think all files have been updated and cache files and other files will be recreated in the next build process.

Uploading Contents

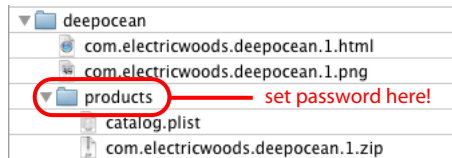
Once uploadable materials are ready, please upload them to the appropriate location. And make sure <base URL>/products/catalog.plist are accessible from Web Browser. In this example, please make sure following URL is accesible.

<http://www.electricwoods.com/bookstore/deepocean/products/catalog.plist>

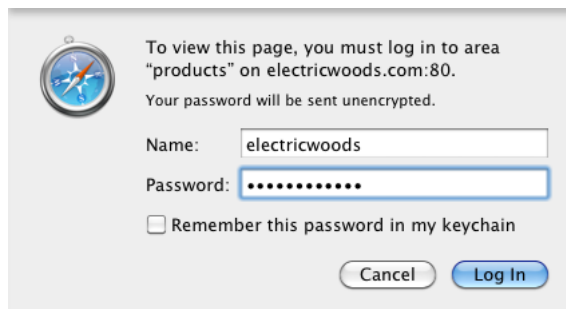


Access Control

You may want to protect contents from unauthorized users by hacking URLs. By setting access authentication for "products" folder, your contents will be protected from unauthorized users without user name and its password. Please ask your ISP how to set it up.



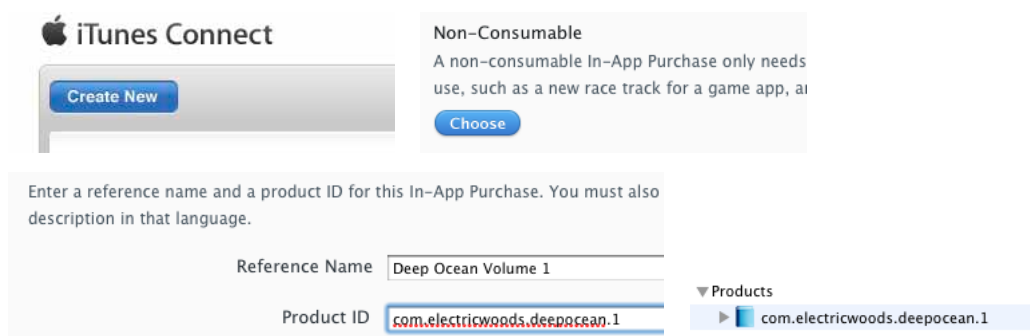
You can test it by typing the URL for the catalog from your Browser, and make sure you will be asked for user name and its password. And of cause, try the same user name and password you specified in project settings.



Note: If you are just experimenting our solution or you don't have to worry about this protection, this step is totally optional and you may go to the next step.

Registering In-App-Purchase items

In order to distribute paid contents, you have to configure In-App-Purchase items from your iTunes Connect Portal site. We are not getting into detail, but when you are creating an item (product), you must create "Non-Consumable". And please make sure product identifier matches to your data. Product identifier here have to be match with product identifier in your data.



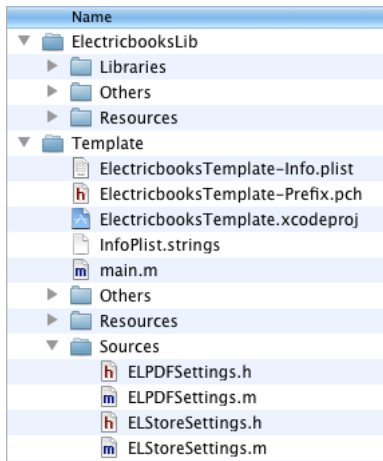
NOTE: If you need to test on actual device, you will have to assign bundle ID properly as well as product ID,

otherwise products will not be shown in your store.

Building your App

Once all of contents have been uploaded to the server. Now its time to build your app. We provide template project, so please unzip it and extracted file structure may look like following. We assume you know how to build basic iOS applications, so if you don't, please ask iOS developer stay with you to follow instructions.

Note: Please place ElectricbooksLib folder and Template folder in the same folder. Template folder's name can be renamed to the way you want. But do not change folder structure.



App ID, Provisioning Profile

Please go to Apple's Developer Portal to assign new App ID, and create new provisioning profile for the new app. If you are just experimenting our solution, this could be optional. Also create a provisioning profile associated with the App ID, then download it, and install it into Xcode. Then open the template project and configure its app ID and provisiioning profiles.

Replace Source Settings

When you finish building upload contents, you will find "sources" folder in the same folder with "build" folder. Electric Publisher exports a couple of source files there, and they should be replaced with Xcode project. Or your app will not able to access to contents nor encrypted PDF cannot be displayed.



```
// global variables
//
NSString *gELPDFPassword = @"ZAUjM1CrhonKTARtXkwV7zkHY8IRXU";

NSString *ELPrimaryBaseURL = @"http://www.electricwoods.com/bookstore/";
NSString *ELSecondaryBaseURL = @"";
NSString *ELStoreUserName = @"electricwoods";
NSString *ELStorePassword = @"7sJa6Gzm41Qx";
```

Note: Please do not change password after releasing app. Content can be uploaded with new password, but there is nothing you can do for apps that have been distributed, and waiting for apps to be updated.

Configure Icons and Default images

If you are just experimenting about solution this is not necessary, otherwise please replace following images files with yours. Note that they are all PNG files not JPEG.

File name	Pixel Size and Format
Default-Landscape~ipad.png	124x748 PNG
Default-Portrait~ipad.png	768x1004 PNG
Default.png	320x480 PNG
Default@2x.png	640x960 PNG
Icon-57.png	57x57 PNG
Icon-57@2x.png	114x114 PNG
Icon-72.png	72x72 PNG
iTunesArtwork	512x512 PNG

Configure Store Background Pattern and Label Color

You may configure background pattern image for store view. Background image can be change by replacing file "StoreBackground.png" and "StoreBackground@2x.png". The pattern should be seamless images, or it will look funny when it appeared on the screen. Further more, you can edit "ELStore.plist" file to specify store background pattern image and/or text color for the label. Text label color can be coded with hexadecial RGB code in the form of #rrggbb.

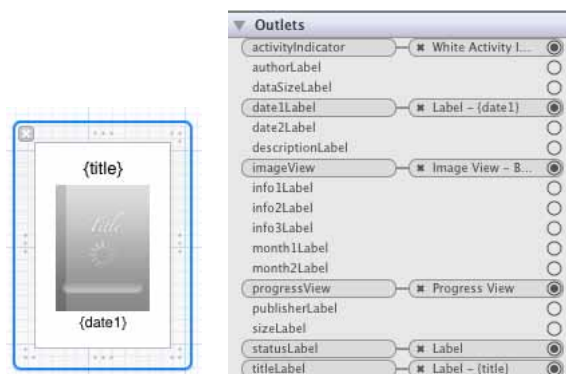
Key	Type	Value
labelTextColor	String	#ffffff
storeBackgroundImage	String	StoreBackground

More Customization

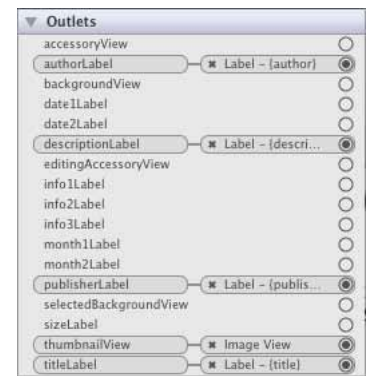
You may want to customize product information view (store), and Product cell view (library). You can edit following files for customize its apperance.

ELProductView_iPhone.xib	iPhone	product information view (store)
ELProductView_iPad.xib	iPad	product information view (store)
ELLibraryBookCell_iPhone.xib	iPhone	book cell (library - list mode)
ELLibraryBookCell_iPad.xib	iPad	book cell (library - list mode)

Here is the example of product view for iPhone, as you can see, there are not so enough space to place all information. So you can carefully choose what you want to display on a view. Product view provides all outlet already, so you may simply bind label and outlet to customize its apperance. You can customize font, font size and text color as well. But, please don't forget to remove 'labelTextColor' entry from 'ELStore.plist', or text color specified here will be overridden by this property.



Here is the other example of book cell, you can customize the same manner as product view.



NOTE: Please consult with experienced iOS developer, if you are not confortable working these issues.

For more question

For more question, please send us e-mail to following address.

support@electricwoods.com

