as_01: case study

by Romans Malinovskis, Agile Technologies (c) 2010



Your Web 2.0 Software Partner

About this document

This document is presented by Agile Technologies Limited. Agile Technologies provides services of web software development. More information about the company can be found on www.agiletech.ie



Table of Contents

Background	4
Accounting Industry Before The Revolution	4
The Vision	4
The Challenge	4
Design and UI approach	6
Making a Jaw-Dropping software	6
Master Screens	8
Reconciliation screen	9
Tillrolls	11
Reports	12
Help system	12
Accounting Made Easy	14
No training. Easy sign up	14
Which is better? Credit or Debit?	14
Rich Web application	15
Administration System	16
Product page	18
A Successful Project is:	20
Our Thanks	20
Cradite	20

C O N F I D E N T I A L D O C U M E N T

Development Team	20
Management and Administration	20
Testing Team	20
Q&A and Planning	20
Early Adopters	20

Background

Web Software is a revolution in every industry. Together with Aisling Software we developed a revolutionary On-Line accounting software which significantly changed how many companies in Ireland manage their accounts.

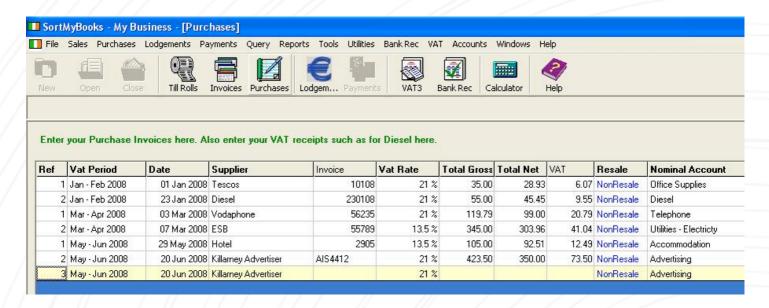
Accounting Industry Before The Revolution

Referred by many as an "a-word", accounting is often associated with unpleasant and boring task which many business owners would rather outsource to someone else outside company. Traditionally accounting is done on a bulky and very complicated desktop software. Developers of such a software make more money on training than on the actual software sales. Data is stored on a local hard drives or flash drives and sometimes even floppies.

Computer dedicated to accounting task would sit in the company detached from the internet for the sole purpose of entering heaps of paper and producing other heaps of paper.

The Vision

Aisling Software came up with a vision, where accounts would become more friendly with a common business owners. Almost a decade ago they have deployed a desk-top software: Sort My Books, which were designed to be friendly to accountants yet still still compliant with the accountants.



The Challenge

Existing software of our client was being submerged into number of problems. Customer support was the major issue, but there were many other reasons which required Aisling Software to deliver an On-Line software.

Agile Technologies were picked as a web development company who would develop a simple accounting package from the very start based on existing strengths.

Let me say this: Making on-line accounting is not that easy. Many companies have tried to do it and failed after spending millions. So what did we do differently to succeed?

- <u>Picking an experienced team</u>. Over the course of 1 development year team consisting of 3 developers, 3 testers, 1 designer and 1 manager were working on the software. For a complex software like Sort My Books it's important to have developers with very good software experienced.
- <u>Picking a development approach</u>. We have adopted Agile Scrum for project development. It required for all of us to get used and adopt the way we think into a more progressive form.
- <u>Picking the right foundation</u>. The most popular web software language PHP in combination with "Agile Toolkit" was very essential for the longevity and flexibility of the project. By using a very unique MVC design in Agile Toolkit in combination with jQuery and jQuery UI we build a very powerful architecture.

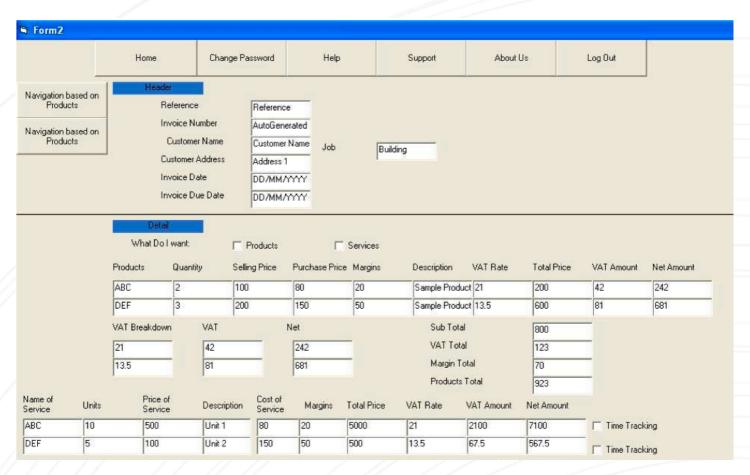
By being very collaborative and open-minded we completed a software which rivals other world-class web applications and exceeds any other attempts at delivering Web Accounting my a magnitude in terms of ease of use, features, flexibility and beauty.

A lot of suggestions and ideas were coming from Agile team. Many concepts of accounting were challenged and redesigned in a very modern yet compatible way.

Design and UI approach

Making a Jaw-Dropping software

Throughout the development look and feel of the software was significantly changed.





Initial drafts of the forms and initial icons designed by 3rd party design agency. Agile technologies took over the design job to produce a higher quality icons and improve the design. Below is one of the first attempts at system design

and layout.

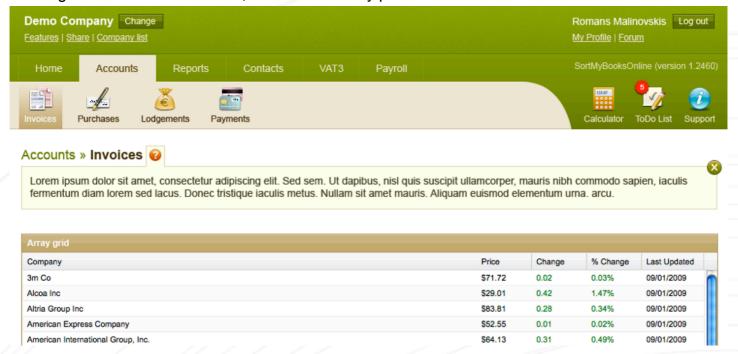




It's worth noting that we scraped some ideas like having one big toolbar with all the pages and having sub-menus on the left in favour of current design.

A significant decision was proposed by Agile team to introduce ability to share company data. While per-user licensing is very popular in desktop - web software must take advantage of it's ability to share information. That's why we wanted to promote sharing of Sort My Books On-Line company files between owners, employees, accountant and auditors.

Colour of the application was also a huge debate. Eventually we decided to implement support for theming and let our users decide, which colour they prefer.



Finally we decided to use CSS2 for styling and making application look really cool in modern browsers, while still look decent in older browsers. Our final menu uses very refined look and handdrawn icons.



Master Screens

As you navigate through pages, some of the screens look similar. Sales Invoices, Quotes, Purchases, Customers. Those screens are developed around a data grid.

From the very start we were looking for a best user experience as they interact with the grids.

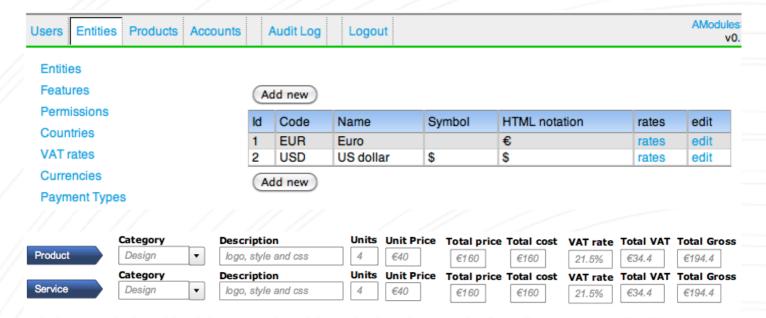
Desktop Sort My Books was extremely efficient at data entry as it was using Excel-like interface with seamless record entry.

Ref	Vat Period	Invoice Date	Customer	Invoice	Vat Rate	Total Gross	Total Net	VAT	Region
1	Jul - Aug 2008	01 Jul 2008	Bill Gates	20080700001	21 %	2,323.00	1,919.83	403.17	Ireland
1	Jul - Aug 2008	01 Jul 2008	Alexander Dudchenko	20080700001	21 %	12,345.00	10,202.48	2,142.52	Ireland
2	Jul - Aug 2008	01 Jul 2008	Steve Jobs	20080700002	21 %	2,999.00	2,478.51	520.49	Ireland
3	Jul - Aug 2008	01 Jul 2008	Steve Jobs	20080700003	20 %	12,312.00	10,260.00	2,052.00	Ireland
4	Jul - Aug 2008	01 Jul 2008	Steve Jobs 🔻	20080700004	20 %				Ireland

We looked at alternatives and acknowledged that we need something similar. Inline editing of the greeds was a must-have feature. One of the first drafts for our grid design was like this:



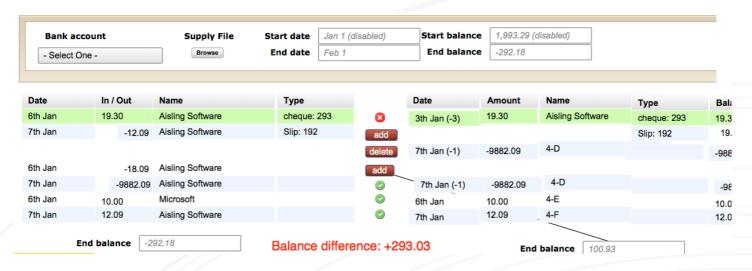
We were also working on admin backend, which at that time was looking very plain:



Reconciliation screen

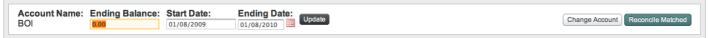
So many solutions to reconcile accounts out there seem to do it in a very non-intuitive and improper way. We started to look for a perfect solution which will exceed our client expectations.

C O N F I D E N T I A L D O C U M E N T



And final version:





Imported Bank Statement Balance

Reconciling Your Bank

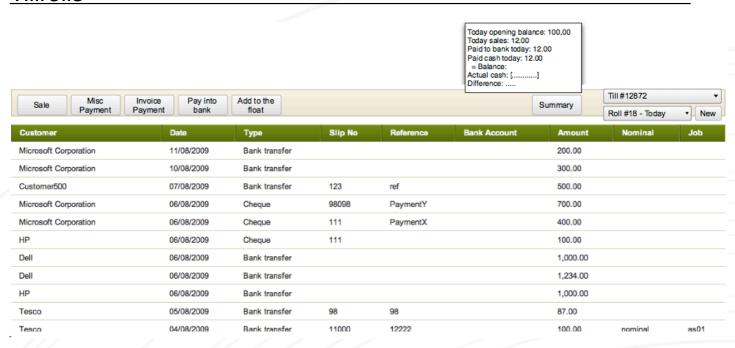
To do your bank rec, you need to have a copy of your paper bank statement in front of you. Set the ending balance, start date and end date to match what is on your paper bank statement, and click update. The transactions appearing to the right should match what is on your paper, although possibly not in the same order. Use your mouse to rearrange the transaction in the order they appear on your statement, and click match.

Troubleshooting

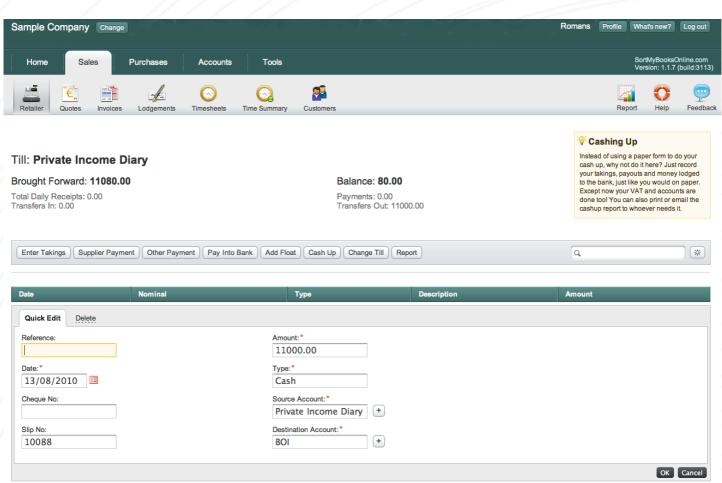
If there is a payment on your bank statement that is not on your screen, you can add it now. For example if you need to add bank charges, click on Miscellaneous Payments and add them. Then click on Reconciliation again to continue with your bank rec.

Transactions in Sort My I	Books	Start Balance 0.00
21/07/2010	121.00	121.00
ID:19919 lodgement#: paymen	matched	
30/06/2010	17,025.00	17146.00
ID:2142 lodgement#: payment t	for invoice #8 (Barack Obama)	matched
30/06/2010	-11,500.00	5646.00
ID:2156 payment#5: payment for	or invoice #5 (Snazzy Interiors)	matched
23/06/2010	100.00	5746.00
ID:15163 lodgement#123: payr	nent for invoice #31 (George Clooney) (slip: 123)	matched
16/06/2010	790.00	
ID:13207 lodgement#: paymen	t for invoice #11 (Mickey Mouse) (slip: 500121)	match
11/06/2010	-300.00	

Tillrolls

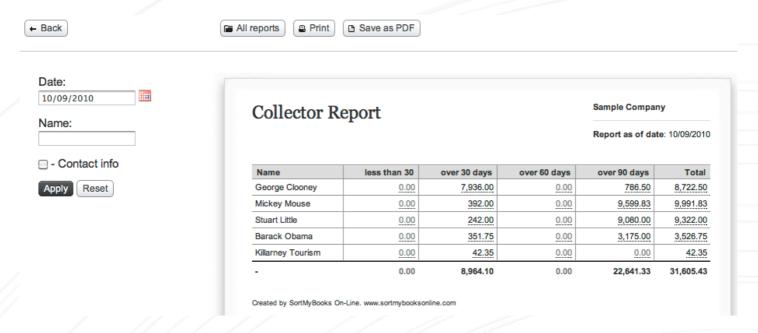


From early mock-up to a a final version:



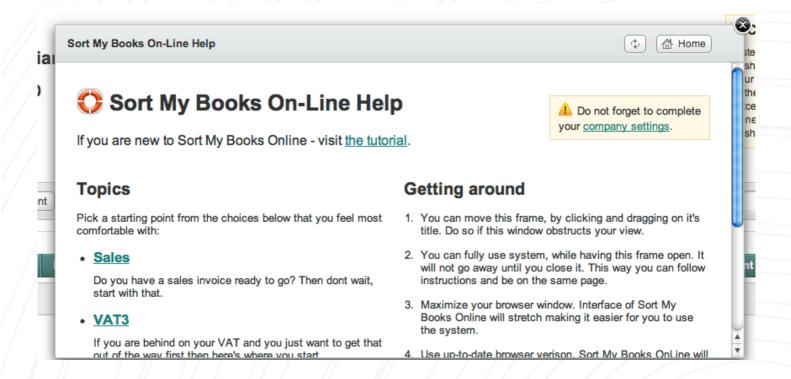
Reports

Sort My Books On-Line provides a wide variety of reports in HTML or PDF format. A very popular feature in desktop version - a drill-down allows user to click on any figure to get a explanation on how the figure was calculated is also present in on-line version of the software.

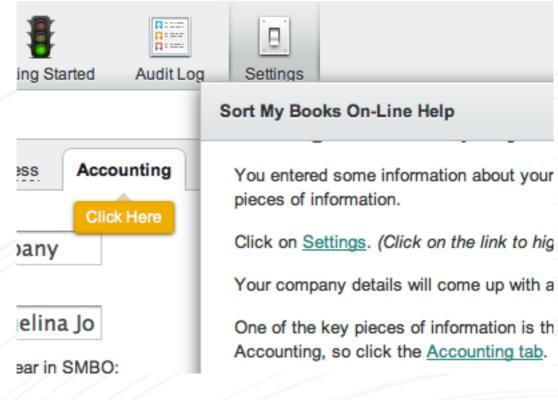


Help system

Help system is designed to be a tightly integrated with the system. Here is how home screen of the help looks like:



Help system is opened in a drag-able frame and is fully interactive with the application. For instance it can advise users how to find particular things in the system.



Accounting Made Easy

We wanted to make time our users spend in the software a pleasant experience.

No training. Easy sign up

Traditionally company setup process with accounting software takes about 5 steps, half hour of time and assistance of your accountant. We made it much simpler. A good example is our approach for "start of accounting year". Because not always business owners would know when their accounting started or what invoicing type they use or what are their company registration number - we are not asking clients to enter that information on the signup.

Once user logs in he can start entering invoices. If client is not set up, then there is a convenient "plus" button which let you add one without leaving your invoice entry process.

Which is better? Credit or Debit?

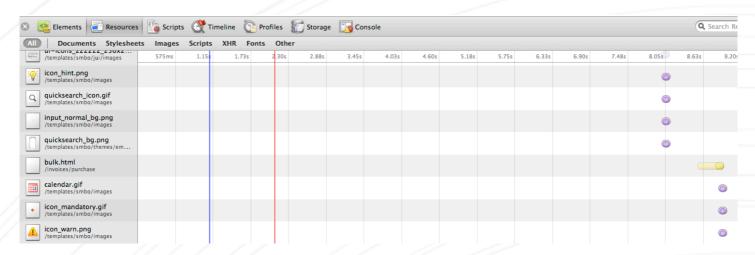
Even accountants we consult with get confused with those terms. That's why we do not drop those on our users. In the application we rely on a well-known and obvious terminology to describe simple things. Payments. Lodgements.

Reports we provide are specifically made to be easy to understand for people even without accounting experience. We try to focus on business values and show what's really important.

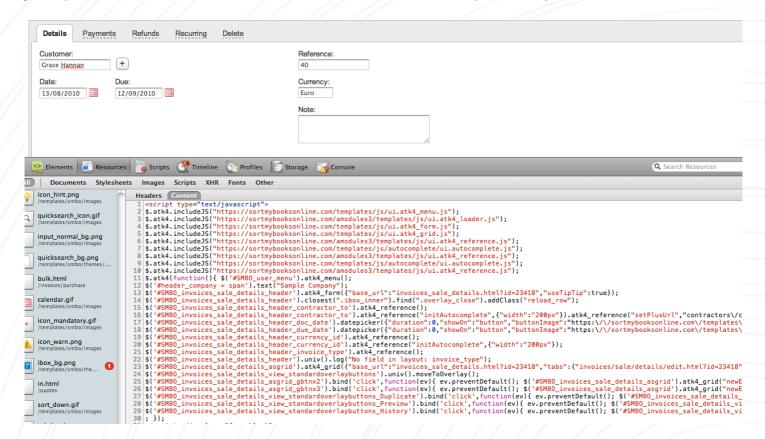
However some of the reports are specifically designed to match accountant expectations and those break things down into credit and debit.

Rich Web application

Accounting application is a serious test for any UI framework. Amount of controls sometimes is overwhelming. We however are using very innovative way of developing AJAX application, which provides us with very quick initial loading times and loads additional JavaScript libraries on demand. While you are logged into SortMyBooks online you are never refreshing the page. As you travel through pages additional data is requested from the server, but only the part which is required. A lot of assets are cached in your browser memory making application extra fast:

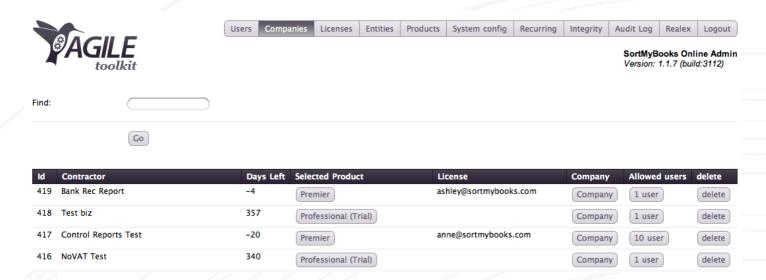


The power of Agile Toolkit automatically looks after dependencies and resources and together with jQuery UI and ATK-JS framework initialises elements seamlessly on the fly:

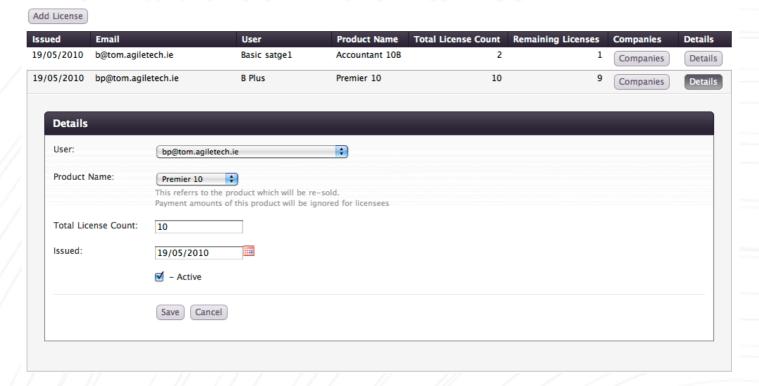


Administration System

Our administration system is lovely. It provides a deep management of all the data, while relying on same models as the frontend.



A very universal and lightweight interface is used to control every aspect of web application.

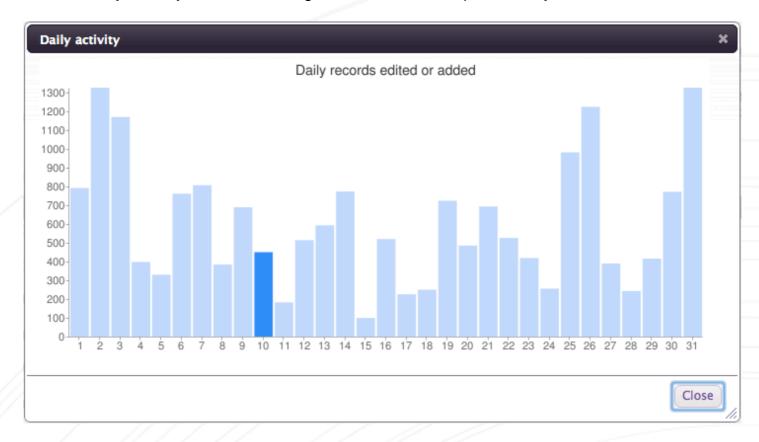


Below is integrity validation - helps us scan system to see any inconsistency in the data and fix it.

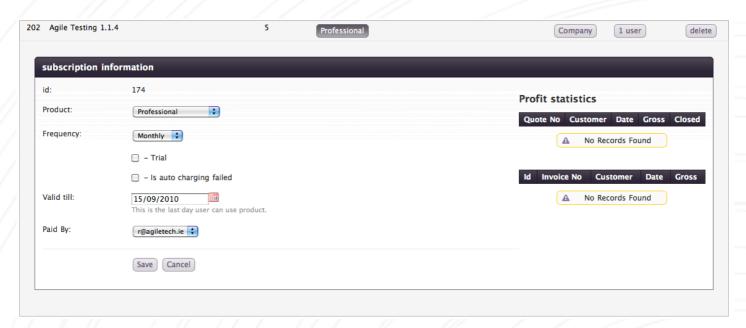
Invoices have multiple specifications. When vat, net and gross of each specification is added up it should match totals from the dochead table. This is achieved by calling updateTotals() on the invoice (which also updates outstanding and status). This test case looks for the entries in the databes, where totals haven't been properly calculated



Global activity monthly statistics shows good amount of traffic produced by our beta-testers.



Consistent interface for company subscription administration



and many more features inside.

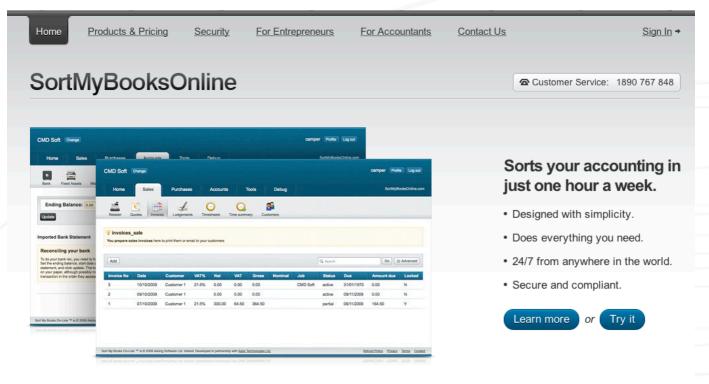
Product page

Every product needs a pretty packaging. Web software is no exception.

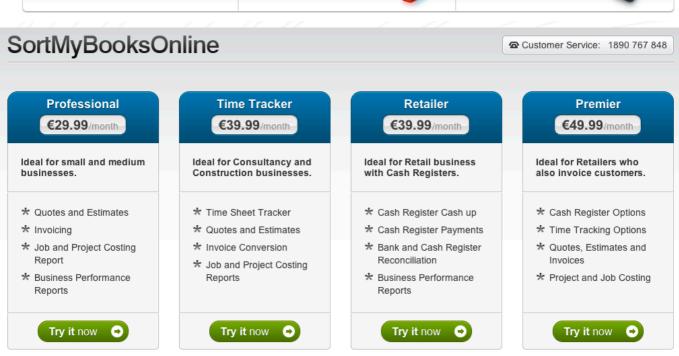


Signup and login screens use completely different design template.

Product page is developed on top of WordPress, also with a custom design template.







A Successful Project is:

So after over a year of development, over 3 thousands of SVN commits, after 2 thousands of MantisBT issues we have 50 thousands lines of PHP code in over 700 of files. 10 thousands of HTML template code lines. Few dozens of MySQL tables and 8 stored procedures.

By any means - that's very compact and elegant implementation.

Our Thanks

Agile Team would like to thank everyone at Aisling Software for an opportunity to develop such a beautiful piece of software.

We also thank everyone who helped us to beta-test the software and provided valuable feedback.

Credits

Development Team

- · Romans Malinovskis
- · Dmitry Malinovskis
- Alexandr Dudchenko
- · Vladimir Mamzikov
- Alexander Khokhlov
- Sathees Kumar

Management and Administration

- · Gita Malinovska
- Janis Vorbergs
- Serhij Stasjuk

Testing Team

- Tom Cruz
- · Ashley Hassal
- · Geraldine O'Connor

Q&A and Planning

- Aileen Hannan
- Anne Hannan
- · Romans Malinovskis
- Sambit Mirasa

Early Adopters

• .