



LAUREA
AMMATTIKORKEAKOULU

Uuden edellä

A web user interface to serve for e-commerce at Aseanic Trading Oy

Qian, Mei

2014 Leppävaara

Laurea University of Applied Sciences
Leppävaara

A web user interface to serve for e-commerce at Aseanic Trading
Oy

Qian Mei
Business information technology in
Bachelor's Thesis
May, 2014

Qian Mei

A web user interface to serve for e-commerce at Aseanic Trading Oy

Year	2014	Page	38
-------------	-------------	-------------	-----------

The background to this thesis is an online shopping project. The project consists of three parts: a static web page design in the user interface, a dynamic web and engine design and a database respectively. The main purpose of this thesis project was to customize the graphical web user interface for Aseanic Trading Oy, a Finnish-based Asian food market.

The processes of customizing focus on collecting customer requirements and analysing user experiences. The research methods used in this thesis include an interview, survey and benchmarking. This thesis implements research methods to gather and finalize customer requirements about the web user interface for Aseanic Trading Oy. The visual design is consistent with the finalized customer requirement, and design processes are composite of wireframe and mock-ups.

As a conclusion, all stakeholders of this project were satisfied with the final graphical web user interface, and the quality of this customized design can be viewed as a success.

Key words Aseanic Trading Oy, E-commerce web, web design, graphical user interface

Table of contents

1	Introduction	5
1.1	Background information of project	5
1.2	Background information of Aseanic Trading Oy.....	5
1.3	Objective	6
1.4	Thesis research problem.....	Error! Bookmark not defined.
1.5	Thesis research approach	7
1.6	Thesis research method	7
2	Theoretical base	8
2.1	Design steps	8
2.2	Design principle.....	10
3	Customer requirements colleting	11
3.1	Interview target users	11
3.2	Questionnaires with target customers.....	12
3.3	Working with target users by benchmarking	14
4	Implementation of design	17
4.1	Finalization of customer requirements.....	17
4.2	Design tools.....	18
4.3	Design processes	19
5	Graphical web user interface of Aseanic Trading Oy.....	26
6	Conclusion	30
6.1	Student's self-assessment	31
6.2	Reason for success.....	31
6.3	Suggestion for future development.....	31
	Reference.....	32
	List of figure.....	33
	List of table	34
	Appendix	35

1 Introduction

The Internet has resulted in new ways for companies to generate revenue and the advent of e-business. E-business was formed as a hybrid of information technology and organizational management, which influenced the way that organization and people work in it. In order to continue business cycle, organization had to develop e-commerce based on the requirements of web-based world. (Middleton 2006)

Today, Europe is emerging as the largest e-commerce market in the world. According to statistics released by the European Multi-channel and Online Trade Association, there were 3,500 online retailers in 15 European countries, including Finland. By the end of 2013, EMOTA stated that European e-commerce has created a great benefit of € 350 billion. Scandinavia regions took up of 33% of which turnover created by 15 European countries as shown in Figure 1.

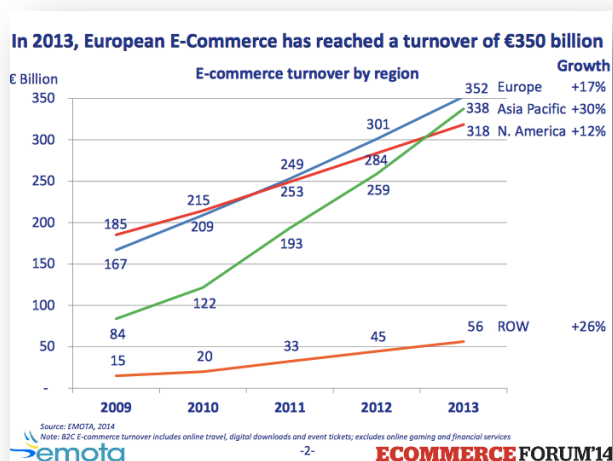


Figure 1: European E-Commerce in 2013

1.1 Background information of project

A Finnish-based Asian Food supermarket called Aseanic Trading Oy launched a web development project. The target of the project was to develop a web with online shopping functionality for e-commerce at Aseanic Trading Oy. The project was collaboration between three students who were assigned to take a static web page design in user interface, a dynamic web and engine design and a database respectively. My responsibility in this project was to take the role of designing the web user interface. The group members can work in a remote way, and my task was to deliver my final result based on a work plan, which was a necessary part

in this project. In this way, the other two members could start their jobs and extend this project.

The online shopping web was designed to suit regular customers at Aseanic Trading Oy, and the visibility and functionality of web were required to serve the customer needs. Because of these, the core business of this project was to collect customer requirements. The final design had to be customized.

The stakeholders engaged in this project consisted of normal customers, employees and employers at Aseanic, and other web visitors. Normal customers and web visitor were considered as the direct users who can take part in concrete activities of on-line shopping. Employers and employees at Aseanic were indirect users who were implementing of monitoring and managing on-line status functionalities of web. Since these reasons, this web user interface design was required to achieve needs from normal users and administrator.

Ultimately it is the web users, their satisfactions and feedback can prove the effectiveness of web user interface design. Customers' final feedback was the most important assessment about the research question solution in this thesis.

1.2 Background information of Aseanic Trading Oy

Aseanic Trading Oy was a privately run enterprise specialized in sales of Asian food, running over 3 years in Kolmas Linja 300530 Helsinki as shown in Figure 2. The current business model at Aseanic was a traditional entity shop with a warehouse at Työpajankatu 2 Rakennus 1C as shown in Figure 3. In order to explore business, the owners of Aseanic decided to develop on-line shopping web. Not only was e-commerce the mainstream consumption model in the current business but also an electronic channel can attract more buyers from Internet as well as renew business life of Aseanic Trading Oy.



Figure 2: Aseanic Trading Oy entity



Figure 3: Aseanic Trading Oy warehouse

1.3 Objective

The objective of the thesis was to raise customers' awareness of online shopping at Aseanic by a customized web user interface. A successful web is able to integrate visibility and functionality. Besides a powerful and comprehensive functionality, a customized user interface was necessary. The main action plan of this thesis was to collect information from customers about their ideal web user interface, as well as their specific requirements about web user interface when they were on-line shopping. The final web user interface was designed to involve all customer requirements.

1.4 Thesis research approach

This thesis research combined theoretical research and practice in real work, concerning an effective solution of customizing web user interface design. During this research, primary research data and information was derived from project stakeholders. In addition to, reporting timely to owners about project findings was essential, as they possessed the final decision of web development. In this manner, this thesis research approach was under principles of action research methodology.

Action research methodology as shown in Figure 4 recommended that built an action loop between action nodes and reflection after them, in order to keep the flexibility of possible change during the duration of an investigation or project. The advantage of the methodology consists in its flexibility of generating new solutions to practical problems in different segments of activities (Dick 2000).



Figure 4: A model of action research methodology

1.5 Thesis research method

Interview was a method frequently used to study questions around a topic in different social activities, which included many sorts, for example, questionnaire-based interviewing and face-to-face interviewing (UK Data Service n.d.). Interview in this research was a face-to-face interview, which was particularly helpful to collect basic information about web user interface from customers.

A questionnaire was an effective way to collect and record information around a particular problem. It consisted of a list of questions based on that issue. (Kirklees n.d.) This research was a task based on real business project, and all the information and data resource was collected from stakeholders of Aseanic Trading Oy. Questionnaires were sent to them directly or answered online. A sample of a questionnaire implemented in this thesis was attached as appendix 1.

Benchmarking was a process of detecting an operational standards or criteria around related issues (Reh n.d.). Benchmarking was useful to gain information of web user interface by comparing with strong competitors with on-line shopping web. A benchmarking between Finnish-based Asian markets www.DHF.fi and www.viivoan.fi was implemented in this research. It was a beneficial process to define a general framework of web user interface based on benchmarking of successful websites.

2 Theoretical base

In order to create a user-friendly user interface design for Aseanic web, a process from concept formed to activity executed had to be defined accurately. It required a set of design principles and design steps consistent with professional design needs.

2.1 Design steps

The design steps in this thesis were three main parts, defining design goals, processing design, and testing design result with users. Understanding the site goals was the first step for designing the company website. These goals were connected directly with web concept, structure, visual design and layout and web content. (Lopuck 2012a)

The business requirements were a list of possible functionalities of the web. The list had to describe all the abilities that the web was capable of achieving. In this thesis, these business requirements of Aseanic website had been discussed with the client company. A couple of web abilities focused on practical web goals as below Table 1.

Website ability	Compulsory re-requirement	Remarks
The ability to register users into a database	Must have	
The ability to log in and out, and manage account.	Must have	

The ability to showcase featured products timely.	Must have	
The ability to provide online feedback by users	Nice to have	
The ability to provide handicap accessibility		Could have in the future

Table 1: Business requirements of Aseanic Trading Oy web design

Defining customer requirements was the other important part to assist at achieving design goals in this thesis, which was also a key process to support customizing the design. Since in this project the stakeholders were the final clients, the designer was required to identify the target customers before initiating the design phase. Table 2 showed target customers invited in interactive activities of this thesis.

Participate category	Participate
Asian customers (Filipino, Malaysian, Chinese, Japanese.)	100 people selected randomly
Local customers (Finnish, European)	30 people selected randomly
Employees work at Aseanic Trading Oy	All people in shop and warehouse
Aseanic Trading Oy owners	All

Table 2: Target customers

In this thesis, two design processes were implemented. A wireframe is a simple visual web page layout, which represent the original design for the website. The main use of wireframe is to produce a creative web page layout. A wireframe can show the global navigation scheme as it appears on each page, text and media, and compatible design (Lopuck 2012c). Compared with wireframe, a mock-up contains colours, typography, pictures and other details. It emulated web pages in a full-size design. The mock-ups were possible to be used as a tester to get feedback from final users.

Testing wireframe and mock-ups with clients were an iterative process in the whole development of the project. Testing early with user was a high effective way to quickly make an adjustment before working deeper and deeper, which was also a safeguard that can always correct design to match with customized logical idea. (Lopuck 2012d)

2.2 Design principle

Design principle is basement of an efficient web design. In this thesis, three main design principles are implemented through whole design process. The rule of thirds is a guideline used to in the process of composing visual image by nine equal parts divided into two equally horizontal lines and two equally vertical lines as shown in Figure 5. The general idea of its implementation in web design is that it produced flexible design spaces for designer rather than fixed-width designs. (Dawson 2011a)

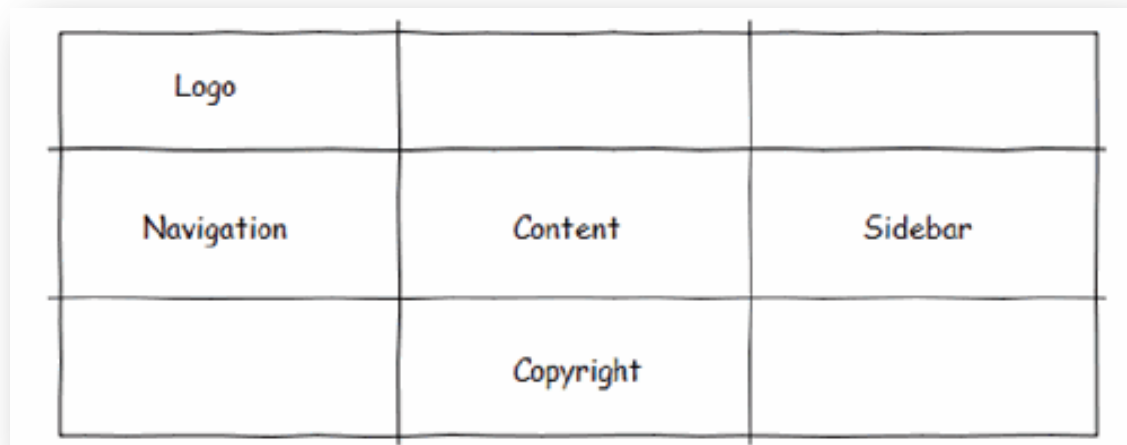


Figure 5: A model of web layout design by the Rule of thirds (Dawson 2011b)

A good performance of a website is a quickest and easiest route by the shortest time costing. However, visitor prefers to use a familiar route even if it is slower to navigation, because of the resistance caused by unknown path. Designer should provide visitors both choices of preference and performance in that way they can decide freely, as shown in Figure 6. (Dawson 2011c)

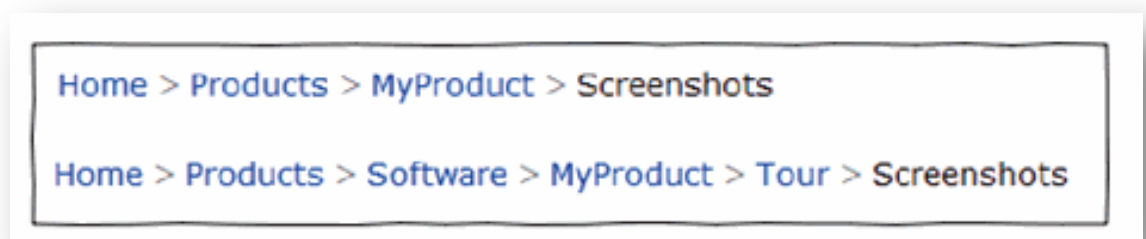


Figure 6: A shorter route of performance and a longer route of preference (Dawson 2011d)

Occam's Razor recognized that the simplest option was the best in case of that all the other options can product equal influence. It suggested that a designer should reduce complicated

implementation by an easier existed one (Dawson 2011e). Figure 7 displayed a simplified design supporting this theory.

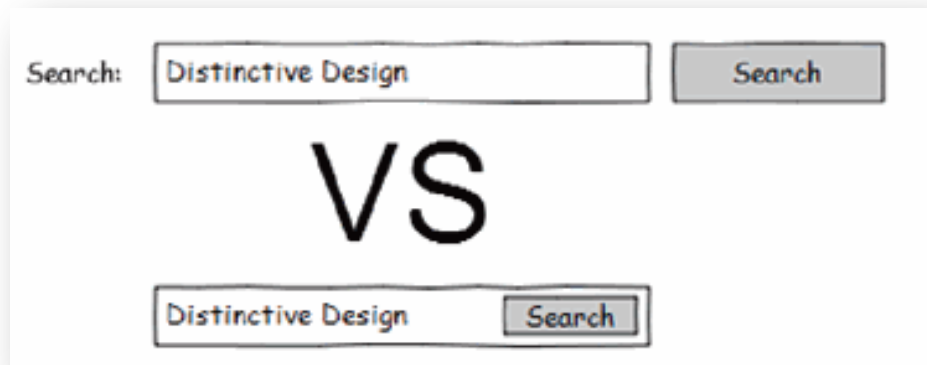


Figure 7: A simplified search engine design by Occam's Razor (Dawson 2011f)

3 Customer requirements collecting

In this thesis, web user interface design was customized at an angle of customer needs. After identifying targets customers, there were three methods as below used to gather customer requirements.

3.1 Interview target users

Face-to-face contact with users through individual interviewing is an important method, advantaging interviewer seeking and validates customer requirements. Customers appearing at Aseanic Trading Oy randomly, so the length of interview time was limited and was impossible to make a reservation of interview. In these situations, the interview questions were considered as a simple and direct conversation in three to five minutes per person. A voice recorder was necessary when interviewing, which is help to go through the whole process after finishing the interview.

As information conversational interview (Patton 1987), the scope of information had to be decided before interviewing. There were six types interview questions related to Patton's think of interview as shown in Table 3.

Patton's think of interview	Interview question description	Question category
Experience	Experiences of on-line shopping and frequency	Open-ended question

Opinion	Opinion of Aseanic on-line shopping	Open-ended question and multiple question
Feelings	Feelings compare with shopping in entity	Open-ended question
Knowledge	Education level and computer skills	Multiple options
Sensory	Attention on on-line shopping	Open-ended question
Demographic	Age and Gender	Multiple options

Table 3: A framework of interview questions

This interview lasted 10 days started from 1st of March 2014 to 10th of March 2014. The number of interviewees was 50 persons, compositing of Filipino, Malaysian, Chinese, Japanese, Finnish and other European. Except for three persons did not have any on-line experience, all rest participate interviewed successfully. As Figure 8 showed that 94 per cent interviewees had on-line shopping experiences and paid a sustainable attention on on-line shopping at least twice a week, as they recognized that an entity shop with on-line shop can provide convenience shopping service rather than traditional entity shop. In addition to this, they proposed that web user interface should be simple and user-friendly, using product pictures as much as possibly, updating information about new product and sales promotion, and overall sight of the web was positive and comfortable.

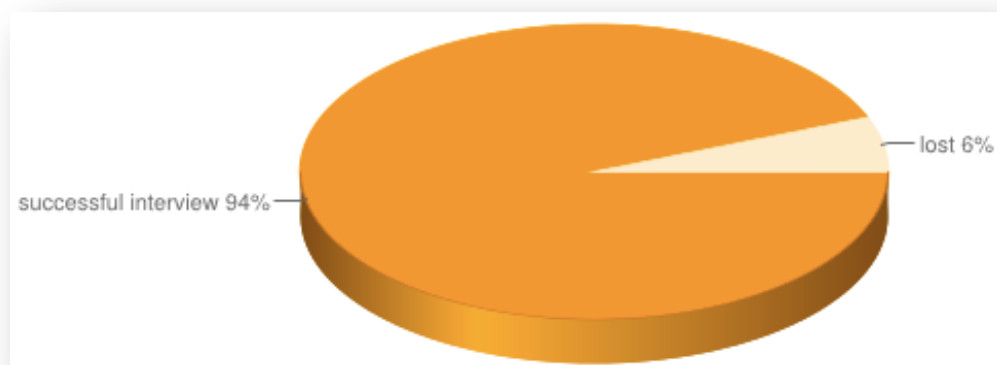


Figure 8: Interview result

3.2 Questionnaires with target customers

Customers at Aseanic Trading Oy are international, including Malaysian, Filipino, Vietnamese, Chinese, Japanese, Thai and other Asian. Sometimes, face-to-face meetings with these cus-

tomers are not feasible. Such as it is hard to find a proper way to explain about design terms even though most of them can speak English or Finnish. In those situations, I considered using questionnaires. Sending a set of questions formed with diverse responses as much as possible, to the relevant customers. A questionnaire was created from an online tool called Esurveycreator. All results can be sent back by email or deliver to Aseanic shop when they returned.

This questionnaire engaged 50 persons as research objects, including 10 Chinese, 10 Vietnamese, 10 Thai, 10 Finnish, and 10 others such as Estonian, Japanese, Korea, Indian. The content of the questionnaire was designed to obtain information of graphical visual view about web user interface, containing questions of user general information, user experiences, user feelings, and user desires. It aimed to define the detail of customer requirement in terms of web visibility by comparing individual customer distinct. Figure 9 showed a questionnaire architecture implemented in this thesis.

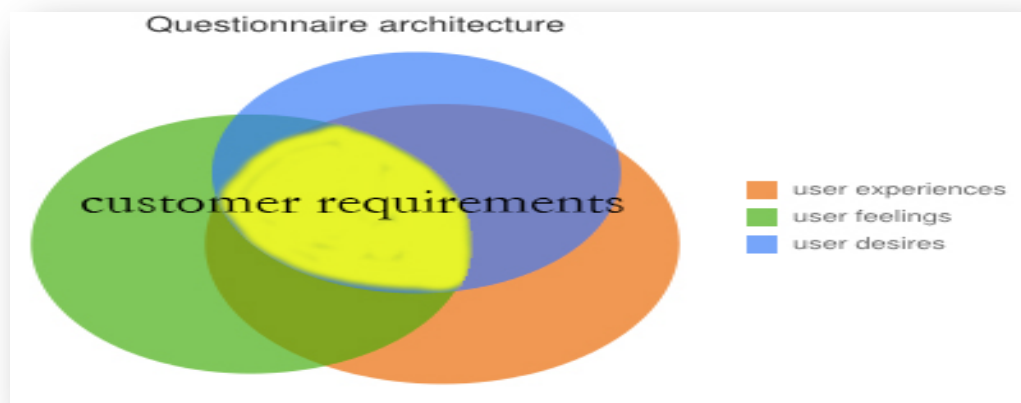


Figure 9: Questionnaire architecture

As can be seen in Table 4, result from 50 participates indicated that customer requirements about graphical visual view of web focused on colour scheme, web layout, content updating, feedback and booking. The customers required that the web should be easy-to-browse with an online booking functionality while it can support them a simultaneous online feedback also. Meanwhile, most of participates, including European, they proposed that a web of an Asian supermarket should present an Asian style of web user interface.

Categorisation	Description	Percentage
User experiences	Good: <ul style="list-style-type: none"> • Comfortable colour using, • Pictures instead of a mass of text 	45/50(90%)

	<ul style="list-style-type: none"> • Simple and clear layout • Online feedback • Booking • Timely updating 	
	<p>Bad:</p> <ul style="list-style-type: none"> • Long loading time • Overdue information • Incompatible colours and layout • Lack of information supply 	43/50(86%)
User feelings	<ul style="list-style-type: none"> • Powerful social media • Mobile support 	35/50(70%)
User desires	<ul style="list-style-type: none"> • Asian features • Pictures used as much as more • Lucky colours used • Simple and clear web layout • Simple domain • Highlight products promotions • Booking. 	40/50(80%)

Table 4: Questionnaire result

3.3 Working with target users by benchmarking

Not only is experiencing with users contributed to disclose problems are resisting previous solutions, but also help designer to understand customer requirements further. In this case, the designer launched an interactive activity called “online with customer”. This was a positive channel to observe customers’ preference of web, customers’ experiences when browsing, and customers’ suggestions relevant to the problem they meet.

Ten participates were invited to use websites of two biggest competitors of Aseanic Trading Oy, www.viivoan.fi and www.dfh.fi as shown in Figure 10 and Figure 11 respectively. Their emotions and suggestions were recorded and compared with the above result defined by interview and questionnaire. Furthermore, benchmarking these two web portals from web functionality, visibility, and customer emotions as shown in Table 5, which was taking a role of building basic web framework for Aseanic web. As a result, it was obvious that customers figured out an expected web user interface, which composited of a comfortable and fashion visual sight, sufficient product and company information, and a customized service of sale and after sale.



Figure 10 www.viivoan.fi



Figure 11 www.dfh.fi

	Functionality	Visibility	Customer feelings and suggestions
www.viivoan.fi	<ul style="list-style-type: none"> • Product searching by name and categorization • Navigation links are working in three main pages • Email feedback does not work • Non-international • No online booking 	<ul style="list-style-type: none"> • Two-column layout. • Colour scheme: red, black, white, f6f3e6. • Sidebar menu • Static picture, map. • Search bar with categorized list. • Three main pages with static brand advertisement. • Company general information • Social media 	<ul style="list-style-type: none"> • Simple but not so comfortable for sight • Few information about shop promotion besides products • No online booking • No feedback with customer online • Available share from social media
www.dfh.fi	<ul style="list-style-type: none"> • Two-column layout with a dynamic slider shows homepage • Online booking and shopping • Customer account administrating • Order tracking • Product newsletter • Navigation in whole website • Internationalized and support six languages 	<ul style="list-style-type: none"> • Two-column layout with a dynamic slider shows homepage • Color scheme: red, black white, 702a1f, fffff7. • Sidebar menu • Product newsletter and service tracking • Search bar with categorized list • Brand advertisement only at homepage • Online feedback with customers 	<ul style="list-style-type: none"> • New and fashion web • Sufficient product and company information • Good online booking and tracking service, also after service • Good customer account administrating • Customized online service: getting

	<ul style="list-style-type: none"> • Online feedback 	<ul style="list-style-type: none"> • More detailed company information with map • Social media 	start and help
--	---	--	----------------

Table 5: Benchmarking Viivoan and DFH

4 Implementation of design

In this thesis, implementing customized design according to customer requirements contained clearly finalizing customer needs, selecting proper design tools, and designing target web pages segmentally.

4.1 Finalization of customer requirements

A customized web user interface should be adapted to individual user's needs. This design should display customized online services, product information, company information, customer account information, sales information, as well as personalized visual views on the web user interface can feature Asian style, such as, colour scheme implemented, logo, slogan, and languages.

A preliminary design was considered to use a two-columns layout with a colour scheme of black, red, white. A two-columns layout tended to be a less sidebar room and large content area that can supply sufficient space for pictures and text. Red, black, white were three basic colours implemented since red and black are traditional preference colours symbolizing luck and high-end services consistent with Asian sense of value (Nations Online 2013). There were four main webpages, homepage, product, contact us, about us.

- ⇒ Homepage was start point, which contained centred product slide shows, sidebar menu of product, navigation bar linking with other pages, search engine, customer account link, online shopping link, product newsletter, and brand advertisement.
- ⇒ Product page was allocated with a categorized product list, and each categorization was linked to individual product page.
- ⇒ Contact us page was involved company general information, location, contact with online feedback, and dynamic map.
- ⇒ About us page referred to information of company development, organization structure.

As respective webpage elements, header, content, footer were impossible to ignore, a basic setting as below.

- ⇒ Header consisted of logo, search bar, navigation bar, login/logout, register, shopping car, and slogan.
- ⇒ Content consisted of product slide shows, individual show, text, feedback form, menu, navigation links, and Google map.
- ⇒ Footer consisted of social media, customer service links, and copyright.

4.2 Design tools

In this design process, a way to integrate ideas to visual design need be supported by distinct functional tools that were decided by different design stages.

Mocking bird as shown in Figure 12 is an open source web developer, built by an American based company Some Character in 2010. It provided an application of creating wireframe or mock-ups by a web-based portal <https://gomockingbird.com/mockingbird/>. In this thesis, the designer decided to design wireframe of Aseanic web by it.



Figure 12: Design tool of Mockingbird

Photoshop as shown in Figure 13 is a graphics-editing program developed and published by Adobe since 1990 (Wikipedia The Free Encyclopaedia 2014). Since its web developing functionality was adapted to develop web user interface design, it was implemented to improve mock-ups in this thesis.

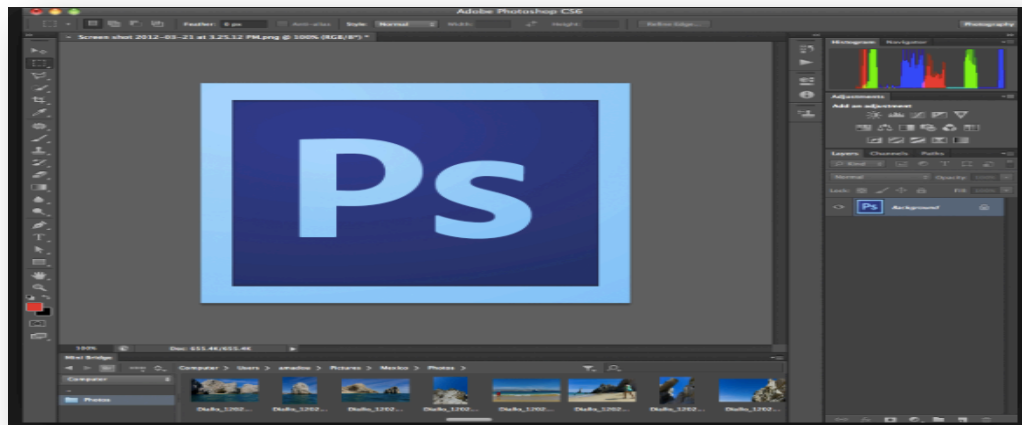


Figure 13: Photoshop CS 6

4.3 Design processes

In this design, drawing wireframe and mock-ups were two important segments before presenting a final design. As preliminary design described in section 4.1, this wireframe included four pages, homepage, product page, contract page, about us page. Each page contained main web elements, header, content, and footer.

Figure 14 showed a customized header. Enabling customers search target product by a search engine with a favourite product categories, which provide a shortcut to search. Presenting product information or shop event by a continuously changing product slide show. Establishing a customer zone by a language selection composited of most popular languages and customer account management connected with shopping cart. In addition, launching a business slogan was advantageous to interact with customers and strength business reputation (Chauhan 2011).

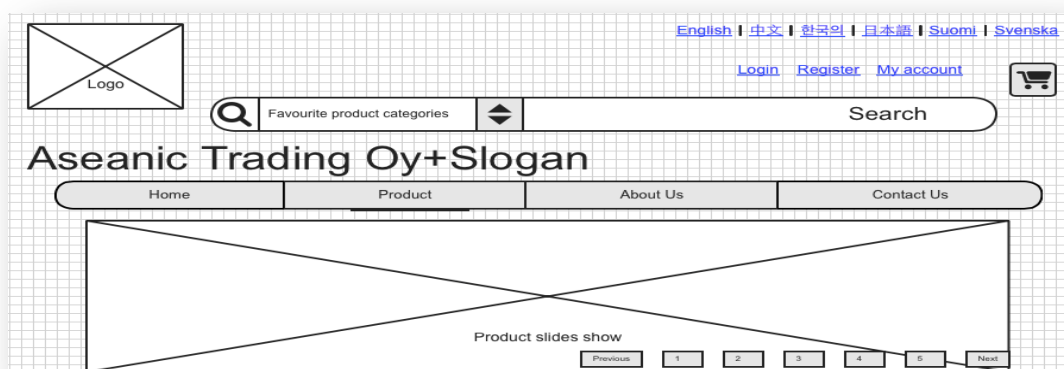


Figure 14: Header of webpage

As the focus of homepage to customers, Figure 15 showed the content of homepage, which was designed to present a comprehensive overview of product information. A left sidebar with rolling picture showed supported customers to review the different product. After that, three categorized product buttons provided detailed choices to meet customers' needs. Video show displayed brand advertisements or shop events while it was possible to receive newsletters by fill personal email.

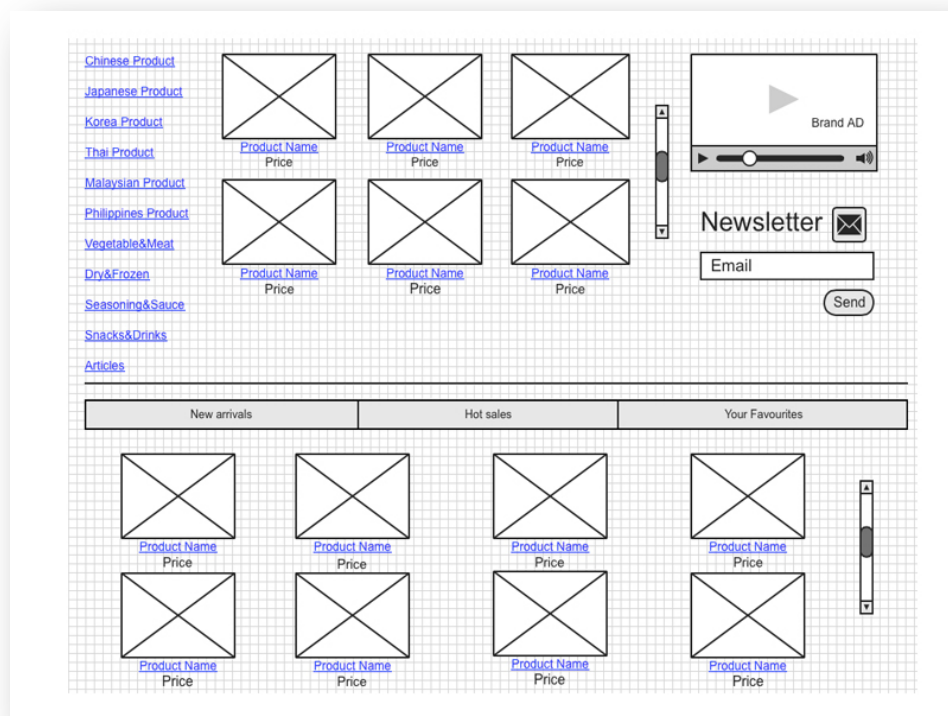


Figure 15: Content of Homepage

Figure 16 showed a footer of wireframe. It was designed to provide web services instruction, online payment instruction, and customer services. Since the popularity of social medias, there were icons of common social medias. Besides, an online service for mobile devices was laid at right down corner as a two-dimension code of Aseanic Trading Oy.

In this design, all pages were decorated by a layout of same header and footer as the home page. In this way, the web layout was compatible in a simple and user-friendly way, while customers were serviced conveniently on each page for most service and management functionalities were mapping to header and footer. The following sections introduced different content in different functional web pages.

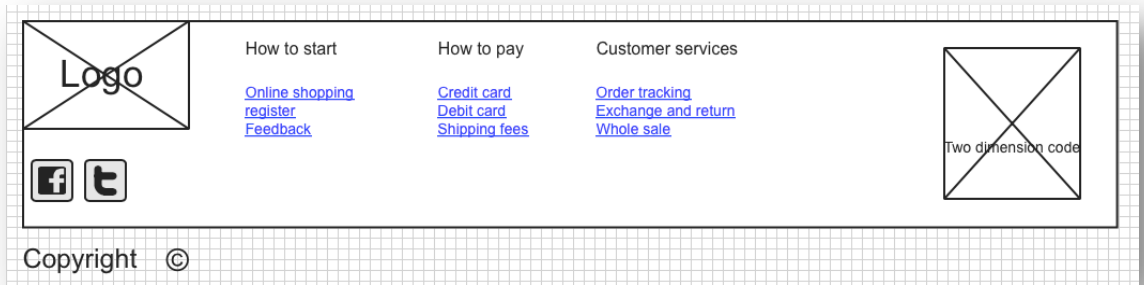


Figure 16: Footer of webpage

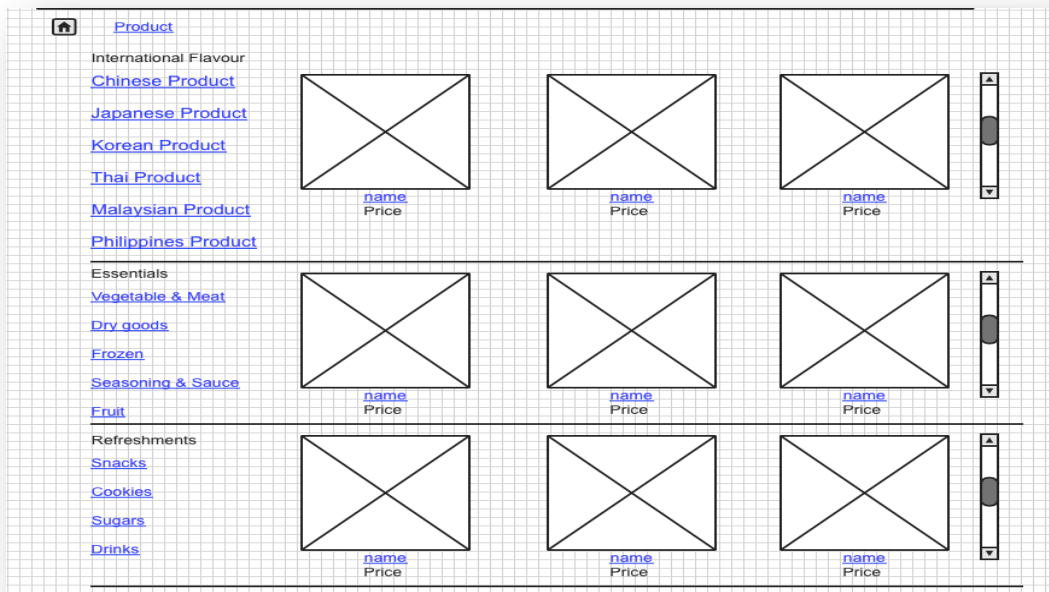


Figure 17: Content of Product page

Figure 17 showed the content of the product page, and all product information was categorized by customer consumption requirements, and displayed by a rolling picture show, so that customers can view product depending on their own shopping needs. Each product was mapping with its own product subpage. Such as Figure 18 was a detailed description of the product with product booking functionality. Customer can make an order by book button, and all booked product can be rechecked in shopping cart located in the header by managing customer accounts.

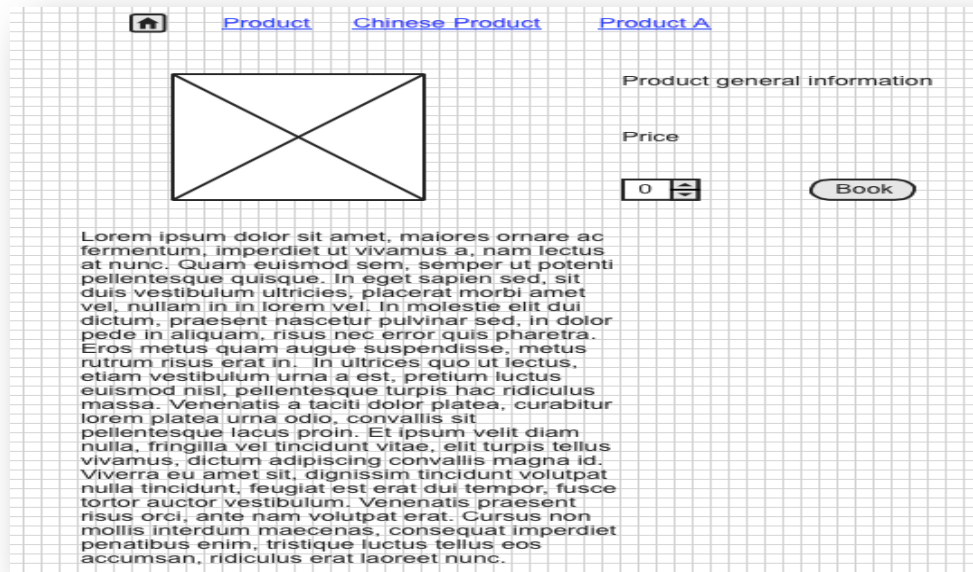


Figure 18: Single product page of webpage

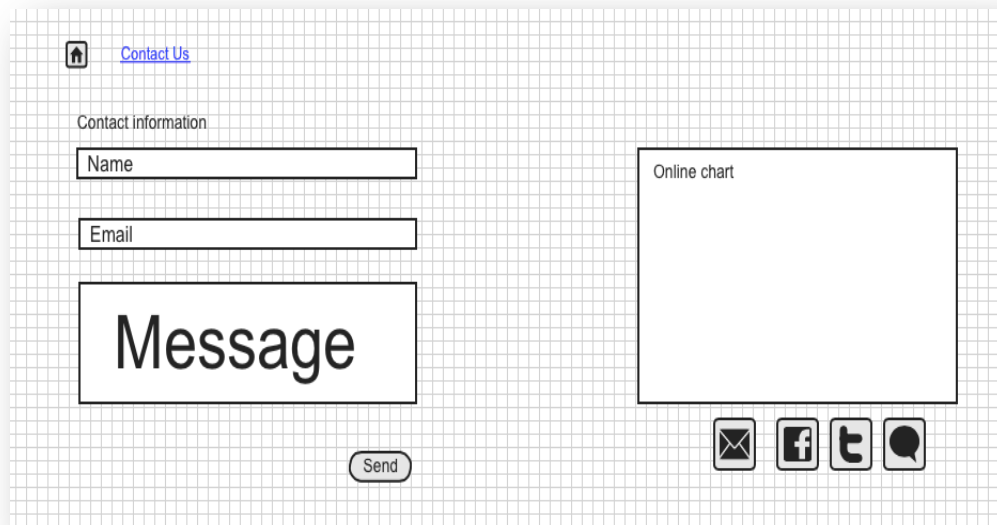


Figure 19: Content of contact us page

Figure 19 showed contact us page. There were two contact us information forms that customer can send online feedback with Aseanic Trading Oy. One was email feedback by sending their email address online. The other was online chatting service, enabling chat through social media icons.

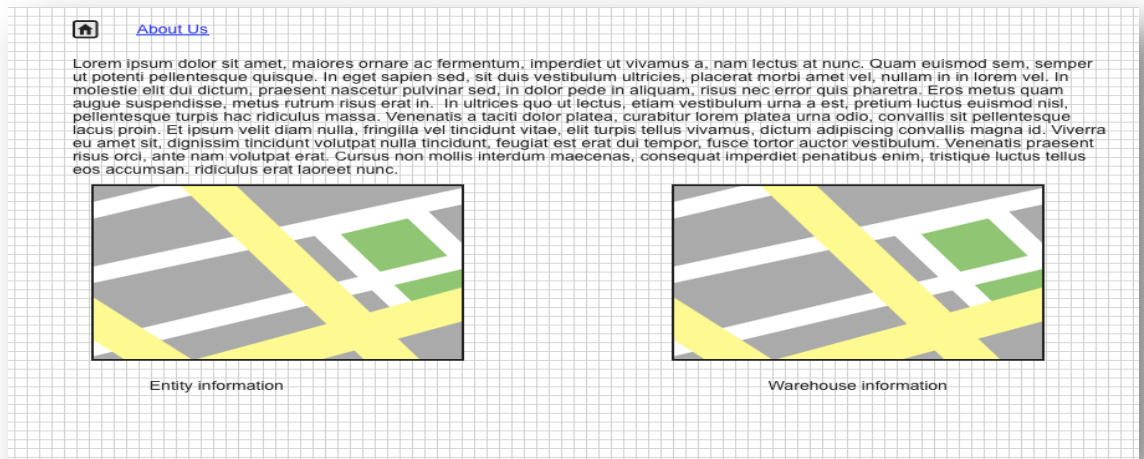


Figure 20: Content of about us page

Figure20 showed the content of about us page. There was detailed company information, concerning history, subsidiaries, contact of subsidiaries, address of subsidiaries, and goggle map of subsidiaries. The navigation structure of this web was tree model, Home page was original starting point, other three were extended from homepage and their subpages were extended from them. Each subpage was linked with its upper page that was linked back with the home page.

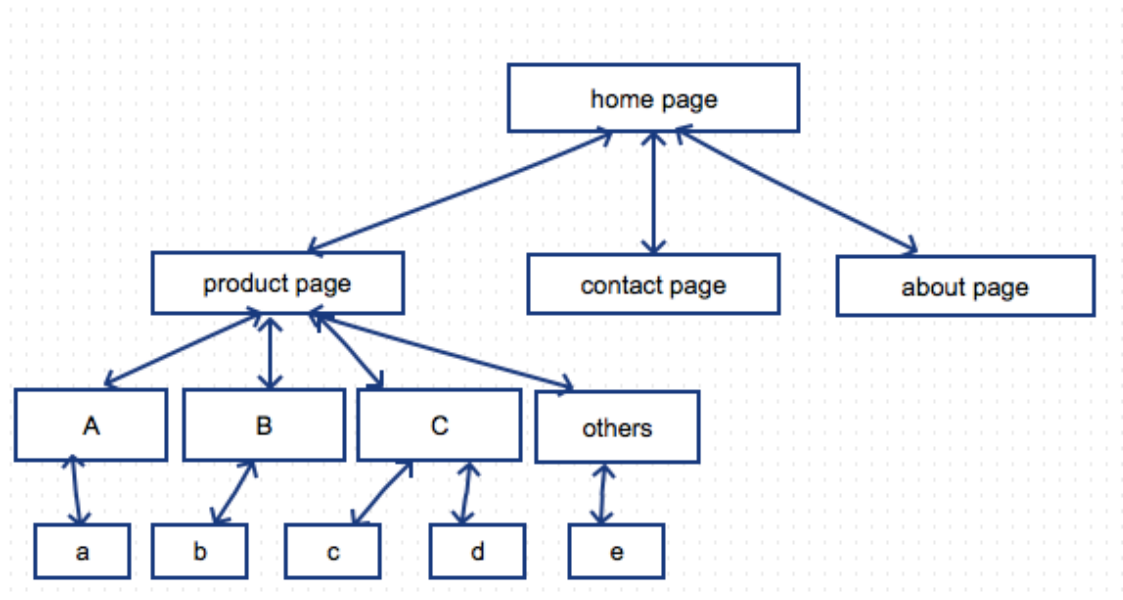


Figure 21: Basic navigation structure of Aseanic web

As a preliminary plan, it was necessary to get feedback from stakeholders in order to revise the design correctly under customized criteria. However, even though stakeholders were satisfied with layout and functionality displayed on wireframe, colour scheme and picture

demonstrations were not developed until follow mock-ups. In these reasons, detailed views of graphical user interface were reserved until mock-ups show.

Compared with above black-and-white wireframes of web, mock-ups tended to present a further graphical layout and visual design. In this design processes, designer needed to deal with textual arrangement, button colours and shapes, background colour, and images modification according to customers' needs. These can be represented easily by creating mock-ups after finishing wireframes.

From this section, all colour code was based on web colour code. As mentioned in section 4.1, the final colour scheme was a hybrid of red, black and white, for example, red in the logo was the colour code `ea1919`, shopping car was black in the colour code `010101` and the red button carried it was the colour code `930a0a`. Gradient colour based on selected colour scheme was implemented in the background colour of all webpage, as the colour code `1a0f0f` and the colour code `392323`. Besides that, newsletter button and book button were coloured by gradient effect.

Readability is an important principle could never be neglected when considering web usability (Cronin 2009). Textual design had to follow this that customers were able to read and absorb information in this text. In these mock-ups, except for company name and slogan were typed with special effect font type aiming to emphasize business reputation, the rest text of the whole web was kept in the same font style, Arial style. Current showing font sizes were in size of 18 and 24, which were typed in header and footer, content respectively. These fonts made textual layout consistently so that customers can scan clearly and effectively. In addition, font sizes in functional areas, such as newsletter button and search engine, were typed in bold, which were capable of attracting customers' attentions.

Buttons were drawn in different radii of round rectangles while navigation bar and sidebar was followed mainstream design drawing in rectangles and list style respectively. Featured icons in this design were shopping car and social medias. Since it was a web of Asian food market, shopping car was drawn in Chinese ink painting style emphasizing an oriental art element, which matched the main design style of this web. Considering popularity of Asian social medias, social media icons involved three Chinese social medias, QQ, WECHAT, SINA blog. A two-dimension's code icon provided a shortcut for mobile device holders while a video icon was a functional media channel of Aseanic Trading Oy. Picture resource supplied by Aseanic Trading Oy was insufficient. Because of this reason, most pictures inserted in this design were searched from Internet.



Figure 22: Mock-up of home page

After finishing a mock-up of the home page as shown in Figure 22, it was essential to start second user testing. It aimed to collect detailed sight views about this graphic user interface from customers. All customers' ideas and requirements were implementing in the final design.

Stakeholders were satisfied with this design overview, especially concerning colour scheme of red and black, creative button design, Asian social media icons, and comfortable reading feelings. Meanwhile, they suggested that the background colour of the web page could be lighter of gradient colours. In order to finalize web user interface design, the background colour was modified according to suggestions. All revised web pages were displayed in section 5 as final graphical web user interface of Aseanic Trading Oy.

5 Graphical web user interface of Aseanic Trading Oy

In this section, a final web user interface design can be seen as can be seen from Figure 23 to Figure 26. Since the suggestion of background colour from customers and stakeholders, the background colour was adjusted by a gradient colour of the colour code 382828 and the colour code 4e3131.

Except for mock-up of homepage showed in above section, there were mock-ups of contact page, about page, product pages, including web elements as below:

- Input Controls: buttons, text fields, checkboxes, dropdown lists, date field.
- Navigational Components: breadcrumb, slider, search field, pagination, tags, icons
- Informational Components: tooltips, icons, progress bar, notifications, message boxes, modal windows.

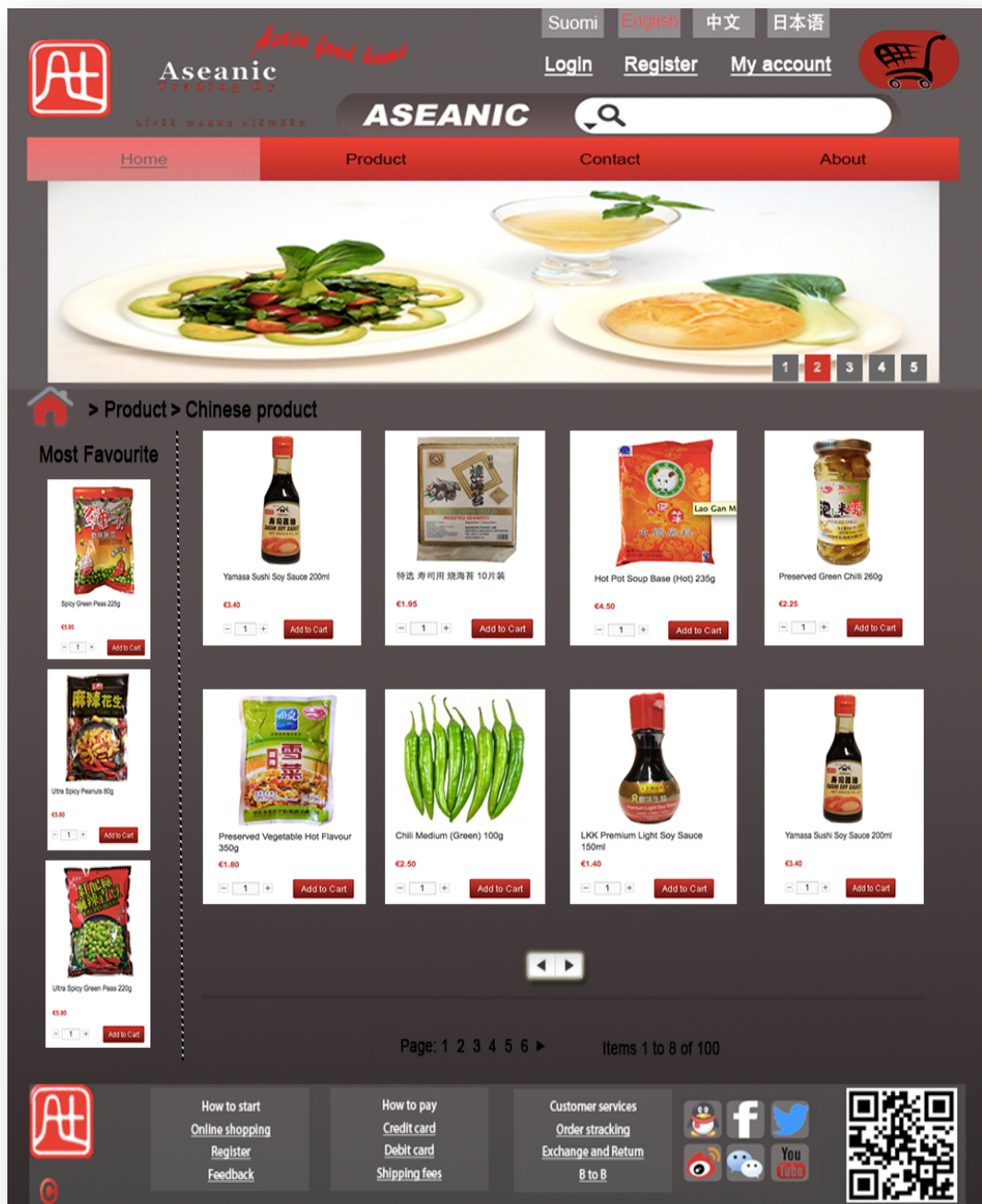


Figure 23: Mock-up of product categorization



Figure 24: Mock-up of product item



Figure 25: Mock-up of about page



Figure 26: Mock-up of contact page

6 Conclusion

This design was a graduation design created by a student, final result needed to be summarized in a neutral way that student can evaluate personal efforts correctly.

6.1 Student's self-assessment

As a student in bachelor's degree of business information technology, my personal purpose of this thesis was to practice all knowledge of my professional field, learning new skills in development of real business environment.

- I have learned a flow of design web user interface and the way to deliver concrete customer requirements to technical web developer.
- I was adaptable to study according to needs in work, as knowledge and skills are backups to finish the work. In this thesis, I made an efficient preparation about web design principle and design tools, while I applied a lot of chart & graph generator and e-survey creator to process information.
- Since I worked remotely in this project, it was impossible to contract with the other two members frequently in each design segment. As this reason, group discussion was not efficiently implemented in this project, which could result in design constraint.

6.2 Reasons for success

This web user interface design was customized for Aseanic Trading Oy. The key of success-fail value was depended on its quality of customized design. Stakeholder's satisfactions were the final assessment for this design rather than standard web visual design.

In this design processes, all customer requirement was collected directly from customers themselves by efficient information searching methods. Information selecting and analysing were experienced with customers so that designer can figure out framework of design work at the angle of customers from the beginning. Moreover, stakeholders were engaged in each design segment, which was beneficial for designer to adjust web user interface design based on their requirements timely. Regardless of business value of this web user interface design, its customized value was verified successfully.

6.3 Suggestions for future development

Since customer requirement was flexible, a successful customized web user interface was updated possibly as new customer requirement appeared. A simultaneous maintenance of web user interface was to enhance interaction with customers that can understand further deep customers' views and desires of this web. For example, a periodical survey of daily web access traffic making efforts to monitoring the popularity of web, or launching online campaign to encourage customers which was a user-friendly way to collect new customer requirement.

References

Chauhan, N. 2011. Web design. Accessed 28 April 2014 <http://ezinearticles.com/?Benefits-of-Company-Slogans&id=6472328>

Cronin, M. 2009. 10 Principles for readable web typography. Accessed 7 May 2014. <http://www.smashingmagazine.com/2009/03/18/10-principles-for-readable-web-typography/>

Dawson, A. 2011. Distinctive design. Chichester: John Wiley.

Dick, B. 2000. A beginner's guide to action research. Accessed 10 May 2014. http://www.uq.net.au/action_research/arp/guide.html

Kirklees. No date. Research & Consultation Guidelines. Accessed 10 May 2014. <http://www.kirklees.gov.uk/community/yoursay/Questionnaires.pdf>

Lopuck, L. 2012. Web design for Dummies. 3rd Edition. Hoboken: John Wiley&Sons.

Middleton, J. 2006. Gurus on E-business. London: Thorogood.

Nations Online. 2013. Symbolism of colours. Accessed 7 May 2014. http://www.nationsonline.org/oneworld/Chinese_Customs/colours.htm

Patton, M. 1987. How to use qualitative methods in evaluation. London: Sage.

Reh, F. No date. How to use benchmarking in business. Accessed 10 May 2014. <http://management.about.com/cs/benchmarking/a/Benchmarking.htm>

See how e-commerce is doing. 2014. Accessed 10 March 2014. www.emota.eu/#!/statistics/ccor

UK data service. No date. Qualitative interviews. Accessed 10 May 2014. <http://ukdataservice.ac.uk/teaching-resources/interview/qualitative.aspx>

Wikipedia the free encyclopaedia. 2014. Adobe photoshop. Accessed 13 April 2014. http://en.wikipedia.org/wiki/Adobe_Photoshop

List of Figures

Figure 1: European E-Commerce in 2013	5
Figure 2: Aseanic Trading Oy entity.....	6
Figure 3: Aseanic Trading Oy warehouse	6
Figure 4: A model of action research methodology.....	7
Figure 5: A model of web layout design by the Rule of thirds (Dawson 2011b)	10
Figure 6: A shorter route of performance and a longer route of preference (Dawson 2011d)	10
Figure 7: A simplified search engine design by Occam’s Razor (Dawson 2011f)	11
Figure 8: Interview result.....	12
Figure 9: Questionnaire architecture	13
Figure 10 www.viivoan.fi	15
Figure 11 www.dfh.fi.....	15
Figure 12: Design tool of Mockingbird	18
Figure 13: Photoshop CS 6	19
Figure 14: Header of webpage	20
Figure 15: Content of Homepage	20
Figure 16: Footer of webpage.....	21
Figure 17: Content of Product page.....	21
Figure 18: Single product page of webpage.....	22
Figure 19: Content of contact us page.....	22
Figure 20: Content of about us page.....	23
Figure 21: Basic navigation structure of Aseanic web.....	23
Figure 22: Mock-up of home page	25
Figure 23: Mock-up of product categorization.....	27
Figure 24: Mock-up of product item	28
Figure 25: Mock-up of about page.....	29
Figure 26: Mock-up of contact page.....	30

List of Tables

Table 1: Business requirements of Aseanic Trading Oy web design	9
Table 2: Target customers.....	9
Table 3: A framework of interview questions	12
Table 4: Questionnaire result	14
Table 5: Benchmarking Viivoan and DFH	17

Appendix

Confirm your email address to access all of eSurvey Creator's features. A confirmation message was sent to qmel1118@gmail.com.
[Learn more](#) - [Resend email](#)

Web user interface design of Aseanic Trading Oy

Page 1

Dear Sir or Madam:

Aseanic Trading Oy, are inviting you to participate a research of web user interface design. It should take no longer than five minutes to complete following questionnaires. Your responses are utmost importance to us.

Yours sincerely

Aseanic Trading Oy

Your gender

Your age

Your ethnicity

How often do you browser Asian food supermarket?

Do you have any impressive experience about browsing web? good or bad

Do you like the logo of Aseanic?

yes

no

Do you like the colour scheme as below, or your favourite

black, red, white

green, yellow,white

How many product information do you want to know from webpage?

Product pictures

Product specification

Product price

Promotions

Do you want to know the followings from webpage? or something more?

company information

customer feedback

product updating

product booking

Do you like this web can connect with

Facebook

Twitter

QQ

two dimension code

Do you have any opinion about Aseanic web?