



eCommerce 2007/8

Module Guide, Lecture Notes and Activities

Level 6 (Final Year)

School of Computing, Information Systems and
Mathematics, Kingston University

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This booklet documents a course in ecommerce run at Kingston University from September 2007 to January 2008. The course is updated each year and new versions of sessions (and new sessions) will be published on www.jonathanbriggs.com

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Goals of the Module

- To provide students with an overview of the impact of and trends in electronic commerce in differing business, retail and leisure environments.
- To introduce students to issues from across the industry in companies large and small, traditional businesses and start-ups
- To provide opportunities for students to consider their own ecommerce business ideas
- To discuss how the IT industry is changing and the roles for information systems designers and computer scientists in the ecommerce industries
- To explore the link between business strategy and electronic commerce and the importance of customer service
- To examine the emerging business models in e-business in terms of efficiency, effectiveness and innovation.

By the end of the module each student should be able to

- Describe current trends in the ecommerce marketplace
- Describe designing and building of ecommerce solutions
- Discuss some of the technical options for implementing and running web based ecommerce
- Discuss the importance of online marketing, customer relationships and search engine optimisation
- Identify key business, legal and regulatory issues which may impact on electronic business.
- Relate the development and implementation of electronic business systems (including training, Intranet, customer service, monitoring and entertainment systems) to wider social and business trends.
- Critically assess how the technical and non-technical aspects can best be managed to ensure the successful implementation of electronic business systems.
- Develop a case to justify the expenditure on electronic commerce in terms of business benefits.
- Apply appropriate tools and techniques to identify opportunities for implementing e-business

Lessons from last year

I have run this module for the past 4 years but it changes every year as the eCommerce marketplace changes. Here are some of the lessons from last year and some of the changes I have made as a result:

The module was extremely well received and well attended with very high levels of participation in all activities. Jarek's OS Commerce session was particularly popular with students applying what they had learned to their projects as well as within the module. Sessions on Google, customer journeys and advertising were also very popular. I experimented with Podcasting producing one every two weeks during the module. These were all listened to by a large number of students. Interviewing experts from the industry was the most successful format.

The examination produced a wide spread of marks. I felt that a few students suffered from extremely poor exam technique and appeared not to have answered the actual questions at all. Some produced very scrappy answers resulting in low marks. Only a few students produced really well thought through exam answers despite generally good case study preparation.

I was disappointed by some of the eCommerce work presented at the Projects Poster session and am determined to try to improve the overall quality of eCommerce projects. A student in our Faculty should not be able to spend 14 weeks struggling to connect a PHP web server to a MySQL database.

Changes in this module for 2007/8

- Change some of the technical aspects of the course to introduce Ruby on Rails instead of ASP as a language for exploring web/database prototyping
- Emphasise the growing importance of Mashups and Web Services in the eCommerce marketplace
- Increase the number of Podcasts
- Change the case study preparation to focus more on ideas that will also influence final year projects. These include customer journeys and wireframing
- Provide more revision questions to help the students plan for the examination
- Encourage less technical students to do some of the activities in my new First Year Toolbox Module that runs alongside eCommerce

Teaching and learning approach

Lectures

The module will be run as a series of lectures with accompanying online activities.

For this course I will be using www.jonathanbriggs.com to disseminate information and support discussion.

I prefer this to Blackboard but would welcome comments and feedback.

All lecture notes will be posted to **www.jonathanbriggs.com** before each session.

Please ask questions by commenting on the appropriate document or lecture.

Online activities

Each week you will be presented with an activity that will allow you to get involved with ideas explored in the lectures.

At the end of each activity you must complete an online survey form to feedback your ideas. I will then provide you with comments and answers questions as appropriate.

It is essential that you participate in all the online activity. In previous years a few students have felt they are following the course only to be disappointed by their exam results.

Many have clearly misunderstood key concepts.

The online components of this course should allow us to test this understanding earlier and help each student improve their performance. This year I am able to award up to 10% of the exam mark for your contribution to these activities.

Assessment

The module will be assessed by examination only (single 2 hour exam). The exam will consist of two parts: one multiple-choice paper plus one short answer paper.

The short answer paper will be based on an activity that you must complete during the semester. You will take a report produced during the semester into the exam and hand it in along with your exam answers.

You will NOT be expected to memorise or to copy large sections of your report onto the exam paper but re-present key ideas in answer to specific questions.

You will work in a small group to complete the activity (Groups must not be larger than 4 people). If you choose to work alone then you should still complete all the deliverables as outlined below.

The work will involve the creation of a proposal for the improvement of an existing electronic business. Criteria for selecting a suitable business will be distributed in week 3 of the course.

Case study preparation for eCommerce examination

This module is examined using an examination based on a Case Study that you will prepare during the module.

The Case Study asks you to choose an existing UK ecommerce site and make specific improvements as to how it could be improved by comparing it to other sites in the same market.

Choosing your case study client

- Must be a UK based company that already sells online
- Should not sell mobile phones, general books or DVDs
- Must be capable of significant improvement
- Budget for improvements should be between £30,000 and £60,000
- Must be possible to identify competitors and compare with your chosen company
- You do not have to contact the company directly but use information available online

Preparing your case study

- You may work individually or in a group of no more than 4 people
- Structured activities during the module will allow you to develop parts of the report
- Feedback will be provided on ideas raised during these activities
- You may develop a single document or individual versions
- You must bring the document into the examination and must hand it in
- Find evidence (references and examples) to back up your recommendations
- Draw diagrams to illustrate your ideas
- The module team is unable to review individual reports during the module
- If you are working in a group then it is expected that you will use roughly the same proposal as other members of the same group – this is OK!

- Marks will be deducted if more pages are taken into the exam or if more than 4 students use the same basic proposal!

Areas for your report

1. Background on your chosen “client” and their business
2. Clearly identify (and prioritise) design improvements with explanations of each
3. Description of current and proposed home page improvements using wireframes
4. Exploration of likely levels of existing integration
5. Estimation of current traffic and business
6. Recommendations for SEO, PPC and online marketing activity
7. Competitor analysis (at least 3 other sites)
8. Estimation of current online visibility plus recommendations for improvement
9. Description of current and proposed customer journeys
10. Discuss decision support tools that might be developed to help your customer choose products or services from the site

The examination

- The examination consists of 20 multiple choice questions (worth 40%) to test your general understanding of eCommerce concepts plus short answer questions (worth 50%). 10% of your marks are awarded for participation in module activities.
- Please note that you may take a proposal document of up to 10 sides of A4 (Minimum text size 10pt) into your examination. All proposals must be handed in alongside the exam answers. No other notes may be brought into the exam room.
- The case study itself is not marked as part of the examination
- The examination asks you to re-present your ideas in order to answer a series of short answer questions
- These questions will not ask you to consider all of the issues addressed in your report

How to achieve high marks in your examination

1. Read all the questions before you start to make sure that the answer you are writing is not expected later in the paper
2. Answer the questions written rather than the questions you would like to be there
3. Justify suggestions and recommendations you make in your proposals
4. Draw clear labeled diagrams
5. Assume that the marker does not have access to your case study document
6. Provide sufficient points in your answer to justify the number of marks available
7. Spread your time out across all the questions and don't leave any questions completely unanswered
8. Write rough notes at the start of each question and put a single line through it if you do not want it to be marked (we may still give you some marks for these notes)
9. Remember that the first few marks for any question are much easier to achieve than the last few
10. Make sure that your answers refer directly to your case study company

Example questions for revision

These are more general than those asked in the actual examination but if you can answer all of these you will be well prepared for the exam.

1. What is the biggest fault with the current site, in what way does it damage the site and how would you recommend fixing it?
2. Describe the 3 major changes you would make to the site and explain why these are the most important
3. Describe other companies. B2B partners and other organisations who are likely to be involved in implementing a new version of the site
4. Discuss whether landing pages could be developed for your client and describe how these might affect traffic to the site
5. Describe 3 things that competitors do that you would want to incorporate into the new site
6. Draw a diagram showing the improvements you would make to the visitor journey through the checkout process for the site
7. Design a PPC advertising campaign for the client and explain why it is likely to be successful
8. Estimate in high level terms the work that is likely to be involved in implementing your full proposals
9. Describe suitable technologies for implementing the changes you are suggesting
10. Describe likely future changes in the eCommerce marketplace that you would want to take into consideration in making your recommendations.

Indicative reading

The focus of this module is on the ecommerce business marketplace.

You should try and read some of the following books

Search Engine Marketing Inc., Mike Moran and Bill Hunt, IBM Press (2006), ISBN: 013185292-2

The Perfect Store: inside eBay, Adam Cohen, Piatkus (2002), ISBN: 0749924039

Why we buy, the science of shopping, Paco Underhill, Texere Publishing (2000), ISBN 158799044X

Right Side Up, Alan Mitchell, Harper Collins Business (2001), ISBN: 0002571528

Dot Con, John Cassidy, Allen Lane Publishing (2002), ISBN: 071399598X

Amazon.com: Get Big Fast, Robert Spector, Random House (2000), ISBN: 0712669671

Futurize Your Enterprise: Business Strategy in the Age of the E-customer, David Seigal, Hardcover - 318 pages (September 1999) John Wiley & Sons; ISBN: 0471357634

Net Success : 24 Leaders in Web Commerce Show You How to Put the Web to Work for Your Business, Ford, Haylock, Len Muscarella, Hardcover - 320 pages (April 1999) Adams Media Corporation; ISBN: 1580621147

The E-Commerce Book: Building the E-Empire, Steffano Korper, Juanita Ellis Hardcover - 284 pages (15 August, 1999) Academic Press Inc; ISBN: 0124211607

Customers.com, Patricia Seybold, Hardcover - 380 pages (November 1998), Business (Century/Arrow); ISBN: 0712680713

Contact details

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Please make sure that ALL of your emails have telephone contact details and a proper subject line. Emails without a subject line are likely to be rejected by my spam filters.

1. Key ideas in eCommerce



This session will explore ways of thinking about eCommerce that move beyond the simply technical into areas such as “look and feel”, business issues and customer expectations.

eCommerce technology for selling online

- Database of products
- Web site front end
- Shopping cart software
- Payment relationship

But it can be a bit more complex

1. What happens if the company is selling the same stock online and offline?
2. How will customers find the site?
3. Consider how a company would give discounts to regular customers?
4. How would a store allow customers to operate accounts?
5. How can customers track the status of their orders?
6. Consider blind or partially sighted customers
7. How will search engines find and index the site?
8. How do competitor-pricing decisions affect the store?
9. How should the payment process work?
10. How should customers choose products?
11. How does a company update a whole season at one time?
12. International orders?
13. How does social networking and blogging affect the marketing of the site?

14. How can the behaviour of customers affect the design of the site?
15. How can other sites be used to drive traffic?
16. How can the site be kept running 24/7?
17. How is everything kept secure?
18. How do we design a site that customers want to do business with?
19. How can the store be operated in other countries and languages?
20. How might relationships with suppliers be automated?
21. How can offline and online customers be linked?
22. What happens when customers are using their mobiles to interact with the store?
23. How should the store be organised so that customers can find their way around?
24. In what ways do legal issues become important for the store?
25. How to customers return products or make complaints?
26. How does electronic fulfilment affect some stores?

And many more.

Just think about Gift Vouchers

1. What form should the gift voucher be in: paper, plastic card or e-voucher?
2. Are there any restrictions on who can buy vouchers and how many?
3. How can vouchers be bought and delivered?
4. How do we stop e-vouchers from being copied?
5. Can vouchers be used both offline and online?
6. How do we make the transactions completely secure?
7. How does the store market and sell the voucher?
8. Should gift vouchers expire?
9. What happens if the customer wants to spend less than the value of the voucher?
10. What happens if the customer returns the goods purchased with a gift voucher?

Real eCommerce involves tight business integration, an understanding of offline and online marketing, harnessing of customer service and a wide range of graphical, interface, security and implementation technologies.

Where are the jobs in eCommerce?

1. Advising companies on how their eCommerce stores can be improved
2. Running eCommerce development projects
3. Designing ways to allow customers to explore products
4. Designing effective online marketing
5. Building new better eCommerce stores
6. Designing new (AJAX) interface components for stores

7. Integrating retail, payment, supplier, marketing, mobile, fulfilment, CRM and analytics partners
8. Analysing and supporting the evolving online business
9. Designing secure 24/7 hosting and support environments
10. Writing copy and taking photographs

Scale of eCommerce projects

(from Online Marketing Voodoo July 07)

- 31.7% of retailers participating in the research operate with an annual e-commerce technology budget of \$50,000 or less
- 29.6% with yearly budgets ranging from \$50,001 to \$200,000
- 13.7% from \$200,001 to \$500,000
- 8.5% from \$500,001 to \$999,000.
- 12.1% of merchants maintain annual e-commerce budgets of \$1 million to \$2.5 million
- 5.8% from \$2.5 million to \$5 million
- 4.4% at more than \$5 million

Watch this

[How to Create a Successful E-Commerce Web Site \(YouTube\)](#)

Activity 1: Comparing sites

In this first activity you need to find a couple of sites that sell the same things and compare them; showing what one site could learn from the other.

Questions to think about

1. What makes a good eCommerce site?
2. Can you look beyond the design?
3. Can you make specific recommendations about how a site can be improved?

Read this first

You should always print out these instructions

Every activity comes with things to do and things to think about. At the end of each activity there is a feedback survey that allows you to prove that you have completed the work. The feedback survey will not test every part of the activity and will also allow you to ask questions and report problems. Group feedback will be provided if you complete the survey before the stated deadline.

You should always make sure that you make notes (on paper or in a word processor) during the activity so that it is easy to fill in the feedback survey. This also ensures that if the feedback survey does not work for some reasons you can go back and fill it in again. The software used for the survey Zoomerang is the market leader in commercial survey tools and is highly reliable.

eCommerce activities are compulsory and worth 10% of the overall module (a grade). Do remember that these activities should be completed individually unless otherwise stated. This does not prevent group discussion or collaborative planning of the activities but each student must complete the feedback surveys on their own.

eCommerce

I want you to choose TWO UK retail sites (in the same product area) that match the following criteria:

1. They are UK companies in the same sector (eg both sell jewellery)
2. Please do not choose companies that are selling DVDs, video games, mobile phones, cars, general books, supermarkets, airlines or computers as these sectors are particularly well done by leading brands.
3. One business should clearly be doing better online than the other.

Write down the names of the two sites that you have chosen to use:

Site 1

Site 2

Write down the type of products that both of these sites sell?

Fill in the answers to the questions below and then fill in the online feedback form.

Which site is better?

For each of the following features indicate which of the sites is better

| | Site 1 | Site 2 | Both the same |
|------------------------------|--------|--------|---------------|
| Navigation | | | |
| Branding and design | | | |
| Product information | | | |
| Easy to use | | | |
| Helps customers choose | | | |
| Reassures customers | | | |
| Involves the customer | | | |
| Regularly updated | | | |
| Integrated into the business | | | |
| Optimised for search engines | | | |

Some suggested product areas:

- handbags, perfume, shoes, wine,
- tickets, fashion, furniture,
- accessories, gifts, car parts, plants, art,
- sports equipment, lighting

Answer these questions

1. Overall, which is the better site?
2. What are the 3 best features (functionality, design, etc) about the better site?
3. What are the 3 worst things about the worse site?
4. Write down 5 specific recommendations you would make to the poorer site based on what you can see in the better
5. see in the better

2. Evaluating eCommerce clients

This session will provide guidance on how to look at existing eCommerce sites and help you make suggestions about how they could be improved.

Every potential client is different and the key to being a good “eCommerce consultant” is being able to relate these ideas directly to the company that you are evaluating; choosing those which are relevant and giving specific examples for those that are not.

The process of winning work

Every pitch is different but there are some common patterns. This process often takes 3-6 months or longer.

1. Receive a request for proposals or invitation to tender
2. Decide whether to respond or not – “triage”
3. Create a small team to evaluate the possibilities
4. Analyse the site and the competitors
5. Create a proposal, timescales and budget
6. Create wire frames and content plan
7. Create a design (including “wow” elements)
8. Provide relevant “proofs of experience”
9. Make presentation
10. Win the project!

What do we look for?

This is not a complete list and it is worth building up your own vocabulary for analysing sites and making recommendations.

Customer

1. Look at the customer journeys
2. Look at the language of the site (inward or outward looking)
3. Pretend to be a customer who knows the brand
4. Pretend to be a customer who does not know the brand
5. Look at the complexity of the navigation
6. Does the site make it easy to do business?
7. Find competitors
8. Are they listening to their customers?

Graphical & design issues

1. What are your first impressions?
2. How is the site organised?

3. Look at how space and colour are being used
4. Does it fit with their brand?
5. Does the site have a sense of time?

Business

1. Buy something (VISA card 4111 1111 1111 1111, any Exp/CV2, www.mailinator.com)
2. How are regular customers treated?
3. Try to estimate traffic
4. Look at how Google views the site
5. Compare with competitors
6. Look at how well payment is integrated (PayPal, 3rd party, invisible, standard "basket")
7. What effort is being made to encourage the visitor to come back whether or not they purchased in this occasion?

Technical

1. Look for clues as to how the site is built (ASP, JSP, Catalog)
2. Find out when it had its last major upgrade
3. Measure intelligence about some of the competitors
4. Is there an effective search?
5. Is the site accessible?

Common suggestions

Here are some ideas that are often useful as a starting point for recommendations.

1. Make the core pages work harder
2. Provide better decision support
3. Integrate better with the business and with payment
4. Make the site work better with search engines
5. Add more, richer information
6. Improve customer reassurance
7. Learn from your competitors
8. Improve the look and feel
9. Use modern interface techniques
10. Give the site a better sense of personality and listen to your customers

And a few more modern ideas

We will cover many of these in more detail in a later session.

1. Consider price comparison engines
2. Affiliate schemes

3. Social networking
4. Blogging from inside the business
5. Exporting data for mashups
6. Syndicating content
7. Landing pages
8. Understanding your customers
9. Integrated marketing
10. Responding to business to business opportunities

Activity 2: Ecommerce Detective

A challenging but I hope interesting activity this week. Using one or both of the same sites as last week I want you to try and discover the answers to the following questions and then fill in an online survey for each of the sites.

The deadline is Wednesday 10th at midnight. I recommend that you look at doing both sites although you will have completed the activity if you only look at one.

You will need to make notes on the answers to each question before completing the survey to feed back your answers.

If you cannot find an answer leave that part of the survey blank and complete the rest.

Questions

1. What operating system is the site running on?
2. What server software is being used?
3. When did the company launch its first site?
4. When did the site last have a major upgrade?
5. How many visitors does this company get per month?
6. What scripting language, cms or shopping cart system is being used?
7. How many other sites link to this one?
8. What is the PageRank reputation for this site?
9. What is the AlexaRank reputation for this site?
10. What keywords bring people to the home page?

Tools and clues

You can answer some of the questions just by looking but you will probably need to explore the web in ways you have never done before. There are many free tools for analysing different aspects of sites. Let me know if you find some good ones.

Here are some tools that will help.

<http://www.Google.com> – extended search – try “link:www.url.com” in the search box

<http://www.URLTrends.com>

<http://www.domaintools.com>

<http://www.Netcraft.com>

<http://www.TrafficEstimate.com>

<http://www.Alexa.com>

Keyword Analyser

<http://www.archive.org> - The Wayback machine

Keyword Discovery

Concept Q

Grokker

You can often find out what tools/scripts/software a site is running by looking at the URL strings and “powered by” messages on the site or by looking at the source code.

3. Stanfords Case Study



Outline

1. Show the complexity of professional ecommerce projects
2. Examine the work involved in creating the system
3. Describe the technical infrastructure
4. Introduce some of the business and marketing issues
5. Show how the site is integrated within the wider business
6. Demonstrate how ongoing work is needed to support the client

Basic information

1. Client: Edward Stanfords Ltd
2. Site: Stanfords.co.uk
3. Project start date: May 2006
4. Site launch date: December 2006 (and again March 2007)
5. Scale of project: 12 person months
6. URL: <http://www.stanfords.co.uk>

Goals from original proposal (Feb 2006)

1. Create a site that supports the business to drive significant revenue
2. Develop a confident, fast loading and engaging Stanfords online design
3. Reorganise the presentation of the content around "landing pages" (places, audience needs, technologies) that meet identified customer needs
4. Improve the site navigation to reflect the hierarchical nature of geographical classification
5. Optimise the shopping process and encourage purchasing. This involves creating a smooth customer journey

6. Provide full content management, store management and reporting
7. Integrate the site into the existing business processes
8. Work to make the site accessible to all audiences
9. Optimise the design and the content for search engine indexing
10. Help experiment with site features to drive increasing traffic and revenue
11. Provide long term support and hosting
12. Provide foundations for expansion of on and offline marketing activities

What we actually did for Stanfords?

1. Redesigned the “look and feel” of the site to match their branding
2. Introduced a radically different way of searching for products using modern AJAX technologies
3. Optimised the site for search engines through the introduction of landing pages and improved tagging
4. Provide content management tools for magazine and general interest content
5. Integrated with the company’s retail system Trilogy <http://www.trilogygroup.com/>
6. Provide ongoing marketing, hosting and systems support
7. Developing a new additional site for the business-to-business aspects of the company
8. Help Stanfords track visitors through their site and monitor effectiveness of their marketing

The challenges of this project

1. 30,000 – 100,000 specialist products (maps, travel guides, travel accessories) most associated with one or more geographic locations
2. Product taxonomy is highly complex because a product (or a series) may be associated with continents, countries, subregions, super-regions, cities as well as with product categories
3. Some product categories have many products while most have very few
4. Uneven global distribution of product titles presents navigation problems
5. “Product quality gradings” need to allow better products to be featured higher up search results than less highly rated products
6. Spider activity seriously affected first version of new site

Technical infrastructure (simplified)

- Stanfords web site built on scalable J2EE framework
- Web server to serve main site (running OTHERobjects CMS)
- Website database running on separate hardware
- Web services (XML) provide communication between retail system and web site
- Transaction server supports web services on web server end (synchronisation, order passing, payment)
- Web services server (on client site) provides XML wrapper for Trilogy retail system
- Trilogy retail system running on Microsoft architecture over multiple sites/servers
- Web server architecture mirrored to create development environment

- Payment taken by Trilogy (via their interface with payment gateway Commidea)
- Definitive database held within Trilogy (products, orders, customers, promotions, images, classification system) – this is used within the whole business (shops and online)
- Softer marketing information held within content management system on web server
- Data synchronised periodically with web site database depending on volatility (product catalogue updated every few hours)

Helping the customer find products

1. Three interfaces proposed: “free text” search, location/product taxonomy and mapping
2. Text search implemented by internal “relevance” based search engine (Lucene) modified to detect “direct location/product” matches and for product quality (reputation)
3. Location/product taxonomy implemented using AJAX widget - relies on behind the scenes calls from the web page to the database
4. First version (December 2006) was too slow due to number of database queries and has been optimised through extensive caching
5. Mapping interface prototyped but much more difficult than it appears because of uneven distribution of products (Peru and Paris have 100s but France 10,000)
6. Many customers will start their search on Google rather than on the site

What are we doing now?

1. Continuing to optimise the site to allow fuller indexing by search engines
2. Promotions, affiliates and further integration with Trilogy
3. Designing Pay-per-click (PPC) advertising
4. Analysing traffic and looking for clues as to how this should inform marketing
5. Improving content presentation for Christmas and seasonal campaigns
6. Rebuilding separate B2B site
7. Providing ongoing strategy and marketing support

General lessons

1. Modelling products is often more complex than you will imagine
2. Helping customers find best, most relevant products is key
3. Integration with existing (or developing) retail systems can be complex
4. Web services provide clean industry standard interfaces between systems
5. Search engines can be key to a business

The changing market for maps online

1. Consider the effect of Google Maps and mashups
2. Lonely Planet recently bought by BBC Worldwide

3. Guardian Travel Blogs
4. Customised digital maps and satellite images
5. Impact of mobile

Activity 3: Ecommerce Case Studies

This week I want you to choose the company that you (and perhaps a small group) will use for your case study. Even if you are working in a group you need to fill in the feedback survey individually (to get the credit). You may change your mind later.

Your case study company needs to be a UK retailer who is already online but not making the best of eCommerce. Please be aware that the companies you choose should be willing to spend £30,000-£50,000 on improving their online business and so this rules out "your uncle's garage" or "an artist you know who wants to sell online". It should also rule out the mega-brands and companies who already spend millions online (such as the banks).

Here are the questions I want you to answer:

1. What is the name of the company?
2. What do they sell?
3. What is the URL?
4. Is it an existing UK retailer?
5. Is it likely to spend the required budget?
6. Can you see ways of significantly improving its website?
7. Can you see ways of significantly improving its online business?

4. OSCommerce

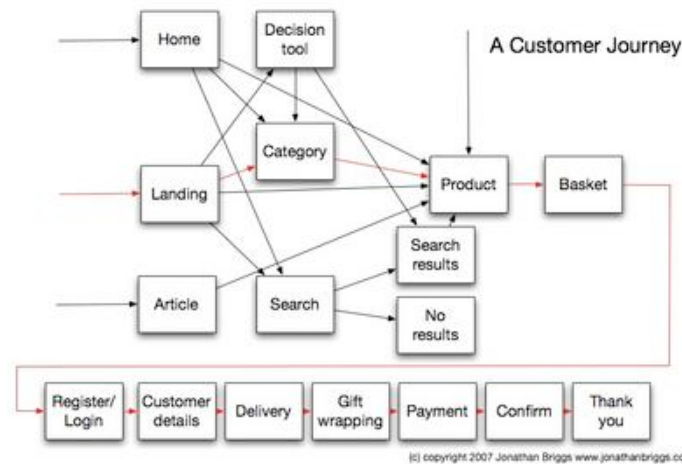


Today's lecture will be given by Dr Jarek Francik who will provide an explanation of how to go about installing and deploying OSCommerce. His lecture notes can be found at <http://openboard.co.uk/ecommerce/oscom.html>.

OSCommerce is an important and popular Open Source development system for ecommerce written in PHP. Once you have seen it in action you will notice its use on several online shops because OSCommerce sites tend to look similar.

This week's activity asks you all to try to install OSCommerce on your own computers. Last year over 90% of the class were successful in getting it running. Marks for the activity will be for reporting on your attempt rather than on being successful.

5. Designing customer journeys



In this lecture we will look at how customers use eCommerce sites, where they start their shopping journeys, why they often abandon their purchase and how to design sites to maximise its effectiveness.

Where do customers start?

1. Customers start with a need: a problem, a brand, an idea for a purchase, a search
2. Many will use the Web to try to find information or a product to satisfy that need
3. Some will remember the URL for a website; many will use a search engine
4. Some will come straight to your site; many will be referred from other sites
5. Some will only look at your site; most will look at many sites including your competitors

Not all visitors are looking to buy

1. Some are researching a future purchase
2. Students may be looking for images or information for a project
3. Suppliers may be looking for new sales outlets or business partners
4. High street shoppers may want to complain or find store opening hours
5. Lots of people are comparing brands, products, delivery times (availability), specs and prices
6. Some people want to keep in touch with what their “brands” are doing: celebrity links, news, offers, new products

Where do visitors arrive at your site?

1. Home pages: the core “brand” page. Needs to help them find what they are looking for as quickly as possible
2. Product pages: they looked for X in Google and found X on your site

3. Information or brochure pages: editorial content (reviews, blogs,
4. Landing pages: alternative starting points to the home page arranged around an audience or theme
5. Offer pages: special landing pages based around a particular promotion

How does this affect design of eCommerce sites?

1. List the specific needs of the customers for the specific site
2. Research what competitors do well or badly (look for opportunities to do better)
3. Develop visitor “personae” describing the features of likely customers thinking about what is special or different about them Using a customer persona
4. Define ways of converting visitors into shoppers (now or later): newsletters, RSS feeds, sign up for offers
5. Define ways of converting shoppers into repeat shoppers (worth more): VIP status
6. Draw out the journeys that you expect customers to take
7. Look to remove any barriers to shopping or interacting: errors, pop-ups, registration, loops, add reassurance about common worries (security, delivery, trust, privacy)
8. Develop strong calls to action
9. Design navigation to make it easy to move the customer forwards through the process: “avoid the back button of death”

Elements of a customer journey

1. Starting point: Google search result, directory, advert, affiliate, email, review, direct
2. Entry point: core page (home), landing page, article page, product page
3. Next steps: search, browse, follow “call to action”, add to basket, leave
4. Leave to: competitor, back to Google, remember that they may come back
5. Search results: filter, search again, no results”, explore
6. Decision support: gift finder, reviews, product guide, compare products
7. Follow “call to action”: checkout, sign-up, enter competition, send to a friend
8. Checkout: Register/Login, Customer details, Delivery details, Gift wrapping, Payment Details, Confirmation, Thank You
9. Where next?

Why do customers not buy?

1. Only 1-8% of visitors will make a purchase on a website
2. Only 30-50% of those who put things in their basket will buy
3. Customers window shop (trying out the process)
4. Customers leave when they encounter problems, confusion, errors or doubt
5. They often have multiple tabs/windows open and are comparing prices, availability and service
6. Customers research online and buy offline
7. They hate being made to work or wait

Customer journeys and wireframes

1. Wireframes show navigation, content and functionality
2. Wireframes may be animated with software or an HTML prototype: Powerpoint, ConceptDraw, Viseo, OmniGraffle
3. Wireframes may or may not be used to define layout
4. A set of wireframes will illustrate the steps in the customer journey (for a particular persona)
5. Wireframe journeys allow the basic working of the site to be “signed off” before the site is built
6. They allow the logic of the site to be explored before implementation costs are incurred

Reference: http://en.wikipedia.org/wiki/Website_wireframe

Example customer persona for a jewellers

Karen is 21 and is engaged to be married. She wants to show her boyfriend, Gary, the types of wedding rings she really loves. She has not bought much from the web although she uses Facebook a lot. She is a bit afraid of using her credit card online. Karen wants Gary to spend a thousand pounds on a ring – he can afford it. She wants to let him make the final choice so that it is a surprise.

Some things that might come out from this persona

- Searching for wedding rings
- Landing page for wedding rings
- Sort by price
- Group by style
- Send to a friend
- Reassurance and trust
- FaceBook marketing?

Developing personae for your case study

1. Develop 3 or 4 very different personae
2. Separate by age, job, motivation, needs
3. Consider their familiarity with the brand
4. Consider their needs and worries
5. Define their personal customer journey

Some common useful personae components

- Unfamiliar with the brand – new customer
- Price sensitive
- “I know what I want and want it fast”
- Researching the best product
- Looking for news stories, project information, jobs

6. Linking databases and the web: a step-by-step checklist

This session, requested by students on the module, will explore some of the underlying ideas of dynamic websites (as used in eCommerce sites) and provide pointers to learning resources that should allow students to master this themselves.

Buy your own web space and domain name

Make sure that you understand how to point your domain at your web space if you buy from different companies. You can try out most of these ideas locally on your own PC but you may need to do extra configuration (the hardest bit) and integration with other systems may be impossible.

Make sure that you buy a hosting package that makes installing PHP and MySQL straightforward. The most popular hosting packages come with Fantastico De Luxe which provides one-click installation of many common tools and services. Make sure that your hosting package allows you to run a number of MySQL databases.

Brush up on basic client-server concepts.

You should be able to answer the following questions. If you can't then research the answers before proceeding:

1. How does a simple web (page) server work?
2. How are URLs used to locate documents, post queries and return results?
3. What are cookies and why are they important for extending the power of "web pages"?

Brush up on your understanding of HTML

Or preferably XHTML which requires stricter adherence to standards and will be more useful in your future. You should be able to create a web page in a text editor (without using a tool such as Dreamweaver or Frontpage). Your page should:

1. Layout text including headlines
2. Incorporate images (aligned left or right to text)
3. Incorporate links to other pages you have created
4. Explore table based data layouts (although you should not generally use tables for modern page layouts)
5. Explore table free layout (using style sheets: span & div tags)
6. Validate inside Firefox (which you should download)

Brush up on basic programming concepts.

You should be able to explain the basic ideas behind each of the following.

- Variables
- Arrays

- Conditionals
- Loops
- Libraries
- Functions

If you can't then I recommend exploring a highly simplified language such as LOGO. [Here is a web based version of logo with a good tutorial.](#)

This language was especially designed to help people build mental models of programming. The lessons you learn in LOGO can be transferred to PHP and other languages.

Brush up on basic relational database concepts.

If you have a web host with cPanel and Fantastico De Luxe, some database software and access software will already have been installed and configured. Once again you can install these on your own machine but cPanel does all the work for you. You should be able to explain the following database concepts. If you can't then set yourself the task of mastering these ideas. Make sure, before you proceed that you can create a small database of perhaps personal or product information and that you can add and query data with this database. Use PHPAdmin to manage your database.

- Tables
- Related tables
- Data types
- Primary keys
- Inserting data
- Simple querying of data (using SQL to return results that match your requirements)
- Querying of data requiring JOINS
- Updating data
- Deleting data
- Make sure that you can set up a new user (and password) for your database so that your PHP program will be able to access the data.

Explore PHP without databases to start with.

1. Explore how PHP scripts can be embedded inside xHTML web pages
2. Make sure that you can write text and HTML from inside your PHP scripts. This can be as simple as "hello world".
3. Find out how to pick up any parameters inside your page request and make your page respond to the parameters. For example change the colour of the page background to red if ?bg=red is appended to your page request
4. Create a simple working form and response page that takes data from a form and formats it nicely on a page
5. Set up some simple arrays manually and make sure that you can access the data inside these arrays

Link PHP to a database you have already created.

1. Find out how to create a database connection by passing the appropriate user name and password
2. Find out how to send a simple query to the database and return values
3. Explore how to get the values you need out of the arrays that are returned from the query
4. Issue a query to add data to database
5. Create a simple form that adds data to the database and returns an appropriate result

Explore FaceBook development

1. Go to developers.facebook.com
2. Add the developer application
3. Explore the documentation and identify the components of Facebook: canvas, profile, news feed, mini-feed, etc
4. Follow the tutorial downloading the PHP library, uploading into a new folder and uncompressing
5. Experiment with each part of Facebook in turn

Activity 6: Exploring PPC advertising

Down the right hand side of Google's search results are Pay-Per-Click or PPC adverts. The adverts shown are related to the keyword you have typed. Type in keywords related to your case study and look at how the adverts change.

A search for Kingston generates the following ads...

Virgin Holidays: Jamaica

Research and Book to Jamaica
with Virgin Holidays. Save Online
www.virginholidays.co.uk

Holidays to Jamaica

Great deals on holidays to Jamaica
Book & save online at First Choice.
www.firstchoice.co.uk

Kingston Properties

UK's Property Search Website. Find
Kingston Properties Now.
www.PropertyFinder.com

Flash Memory -Crucial.com

Shop at Crucial.com for quality and
Excellent prices. Buy Now and Save.
Crucial.com/UK

Look at the adverts themselves. They are made up of a headline, two short lines of text and a link (actually two links – a visible one, usually short and a hidden longer one that actually takes you to a specific location on the site).

Try making small changes to the phrase being searched to see how the ads change

Compare broad and more detailed searches.

Kingston
Kingston property
Kingston rental property
Kingston holidays

This week's activity

This week's activity asks you to look at your case study site and plan the start of a pay-per-click advertising campaign for the site.

PPC advertising allows you to pay only when an ad is actually clicked (not when shown) and can result in highly qualified traffic.

The best known PPC advertising is Google adwords although MSN and Yahoo both offer similar programs (and will do more in the future).

The steps this week are

1. What keyword or keyphrase would you buy? (choose the main one and some variation)
2. What ad would you show? Read Google adwords guidelines and write an adword text ad.
3. What page would you link to on the site?
4. What changes might you make to the site to make the ad more effective?
5. How much would you be willing to pay for each click? (guess if you don't know)
6. How much would you expect the average customer to spend per order? (guess if you don't know)
7. What percentage of the customers who come from a PPC keyword campaign would you expect to make an order? (guess if you don't know)
8. What questions do you have about advertising online?

7. Marketing eCommerce sites: search engines, advertising and reputation



This lecture should help you see how sites are promoted in order to gain traffic and customers. At the end of this lecture you should be able to plan a campaign for your case study client or for your own site.

Why promote your site?

1. Customers will not find you unless you tell them
2. Potential customers won't stumble across you
3. Search engines drive a significant percentage of your visitors
4. Search engine advertising is an effective way of promoting your site

Not all visitors are equal

1. Only some visitors want what you sell
2. Reaching those customers is important
3. Search engines are good places to find customers with particular needs (expressed as search)
4. Remember to create customer journeys that allow visitors to become customers

Understand search engines

1. Recognise the difference between automated engines such as Goggle, Yahoo Search and Live Search and directories (DMOZ and Yahoo Directory); automated engines use a spider to collect and index information, directories use human editors.
2. Each search engine has a different algorithm (top secret) but are all based on keyword matching in content (relevance), recency and reputation. A few (but not the main ones) add payment to this list.
3. Search engines categorise pages according to the keywords used in the content (and titles, headings, images, page links and in-bound links)

4. Search engines prefer regularly updated pages rather than old pages and can detect the creation date for files.
5. Most engines measure the popularity (reputation) of a page (usually based on the number (and reputation) of in-bound links) and rank more popular pages above less popular ones. You can get a measure of reputation by examining the Google rank of a page, search for the number of linking in sites (using URLtrends) or study statistics from sampling sites such as Alexa.com.
6. Search engines hate people who try and artificially increase the position of a page and may block the pages and sites involved.
7. Directories such as DMOZ are often used as the starting point for new crawls of the web. Try and get listed there.
8. Blogs have become useful tools for improving reputation. Bloggers tend to point to useful links and these sites therefore become more popular. It is worth creating content that popular bloggers will link to.

Here are some easy things you can do

1. Create a site with excellent content and services. You will naturally use keyword rich relevant text and search engines will index this (eventually)
2. Use predictable URLs that are easy for humans to remember and contain keywords that search engines will notice
3. Design your site and your pages with search engines in mind. This means designing a simple site with appropriate page titles, META tags and headlines.
4. Avoid things that put roadblocks in front of search engine crawlers such as Flash, frames, tables and some database techniques.
5. Analyse the words used by visitors by examining your analytics or server logs
6. Run exploratory search engine advertising to look at the demand, the effective keywords and the conversion rates.

Search engine promotion strategies

1. Understand the search engines, keywords and their importance
2. Brainstorm keywords and phrases
3. Analyse keywords looking for synonyms and alternative meanings
4. Search for keywords on Google and analyse competitors
5. Run a test campaign on adwords
6. Select keywords and phrases for your campaign
7. Create content (and landing pages) to capture those keywords
8. Create content pages that are worth linking to; they are more likely to be found and links will slowly improve reputation
9. Tell the major search engines that your site exists. This is getting harder.
10. Try and get listed in DMOZ
11. Add your URL to high ranking directories
12. Search for blogs in your subject area and comment on them

Example: How would we promote a new site such as English Eccentrics

1. Measure the traffic now by looking at the server logs
2. Press/PR campaigns (trade and general); This is unlikely to be successful unless you can find a real 'angle'. Launching a site is not a story. You can use personalities to create a story. The computer trade press is always desperate for stories but this is unlikely to generate leads. Try a behind the scenes story for the fashion papers.
3. Consider two-way site links – good for Google ranking. Join forums and comment on blogs leaving URL behind. Make sure that you are not “selling” or you will get flamed by irate forum members.
4. Consider affiliate deals
5. Experiment with a specific keyword campaign such as “1980's fashion”
6. Register interested visitors for special offers

Designing search engine marketing campaigns

1. Understand when search engines show ads
2. Recognise the different ways keywords that can be 'matched': exact, phrase and broad
3. Set up a test campaign
4. Use landing pages to bring prospects directly to the content or products you want to show
5. Research and use negative words to improve quality of matches
6. Limit the ads to geographical areas or times of day
7. Experiment with different advert text
8. Bid high enough to be seen and then lower the bid on high performing ads
9. Recognise the way Google rewards high performing (relevant) ads
10. Look at ecommerce as well as advert conversion rates

How do we promote the OTHER media?

- Word of mouth recommendations
- Keep an eye on Google ranking
- Sell benefits on our site through news, articles and case studies rather than products or services
- Use blogs and expert articles to link to our site
- Cross selling – “we've built this for X”
- Brochures and newsletters
- Networking: industry functions, seminars and activities
- Reward people who recommend us
- Be better than our competitors and be able to demonstrate it

8. Costs and tasks in eCommerce projects

It is hard to estimate how much a project will cost without analysing the specific requirements and the environment in which the project is being implemented.

In this session we will explore the steps often found in a project and discuss the time involved in executing those steps

1. Project planning including creative, technical, integration, budgeting, testing and promotion
2. Setting and agreement of project goals and constraints
3. Assembling and briefing the project team
4. Brainstorming creative ideas
5. Competitor and market analysis
6. Analysis of business logic (selling, fulfilment, returns)
7. Wireframing/diagramming of processes and functionality
8. Agreement of functionality, specifications and plan within budget
9. Selection of platform, tools and hosting environment
10. Graphical design (within brand guidelines)
11. Conversion of design into templates and style sheets
12. Product modelling and database design
13. Promotion design and logic
14. Design of decision support tools to help shoppers select, choose and experience
15. Writing of all text pages (Terms & Conditions, Privacy)
16. Design and implementation of CRM integration
17. Design of customer service processes and systems
18. Design of testing regime and tools
19. Implementation within shopping software, CMS or from scratch
20. Integration with stock and ordering systems
21. Integration with payment partner
22. Photography
23. Collection and manipulation of content
24. Testing of business logic
25. Testing with users
26. Testing for DDA compliance
27. Cross browser and platform testing
28. Delivery and training (editorial and CMS)
29. Promotions and shop management
30. Design of reputation campaign

31. Implementation of reputation campaign
32. Design of PPC campaigns
33. Implementation of PPC campaigns
34. Integration of Google analytics and monitoring software
35. Monitoring of SEO and PPC
36. Support and management of problems and issues
37. Changes in requirements following feedback and experience

Not included

- Marketing
- Selling
- Contract negotiations
- Project management
- Meetings and reviews
- Iterations
- Client changes of requirements
- Technical roadblocks

Questions about budgets

1. How long would you expect each of these steps to take?
2. How many people would you expect to be involved with each step?
3. Do less experienced people cost you less?
4. What would you expect each person to cost per day?
5. Is it possible to leave any of the steps out?
6. Which parts of the project could be outsourced?
7. How significant is the choice of software tools to this process?
8. Which of these steps would you expect to be the most expensive?
9. How can you make the project cheaper?
10. How can you ensure that you make money on each step (if you are a supplier) or keep the budget under control (if you are a client)?
11. What would be a typical budget for this sort of project?
12. Which parts of this process are omitted by clients who choose to use systems such as OScommerce, Actinic Catalog and Amazon Marketplace?

How accurate is this budget?

The following is a fictitious budget open for full discussion but assumes integration with moderately complex back-office systems, strong branding guidelines and the need for an excellent customer experience. No software, database or other licensing costs are included and ongoing costs have only been estimated for the first 2-3 months.

The budget is shown in person days.

| | |
|---|----|
| Project planning including creative, technical, integration, budgeting, testing and promotion | 4 |
| Setting and agreement of project goals and constraints | 1 |
| Assembling and briefing the project team | 1 |
| Brainstorming creative ideas | 3 |
| Competitor and market analysis | 3 |
| Analysis of business logic (selling, fulfilment, returns) | 4 |
| Wireframing/diagramming of processes and functionality | 2 |
| Agreement of functionality, specifications and plan within budget | 2 |
| Selection of platform, tools and hosting environment | 1 |
| Graphical design (within brand guidelines) | 10 |
| Conversion of design into templates and style sheets | 5 |
| Product modelling and database design | 2 |
| Promotion design and logic | 2 |
| Design of decision support tools to help shoppers select, choose and experience | 2 |
| Writing of all text pages (Terms & Conditions, Privacy) | 4 |
| Design and implementation of CRM integration | 5 |
| Design of customer service processes and systems | 5 |
| Design of testing regime and tools | 3 |
| Implementation within shopping software, CMS or from scratch | 15 |
| Integration with stock and ordering systems | 10 |
| Integration with payment partner | 5 |
| Photography | 5 |
| Collection and manipulation of content | 10 |
| Testing of business logic | 3 |
| Testing with users | 3 |
| Testing for DDA compliance | 3 |

| | |
|---|-----|
| Cross browser and platform testing | 3 |
| Delivery and training (editorial and CMS) | 2 |
| Promotions and shop management | 3 |
| Design of reputation strategy | 1 |
| Implementation of reputation strategy | 5 |
| Design of PPC campaigns | 1 |
| Implementation of PPC campaigns | 5 |
| Integration of analytics and monitoring software | 1 |
| Monitoring of SERPS and PPC | 2 |
| Support and management of problems and issues | 4 |
| Changes in requirements following feedback and experience | 5 |
| TOTAL person days | 145 |

This will not necessarily all be done by the design/development company but includes tasks to be done by the client such as photography and content writing.

9. Patterns for building eCommerce

We have seen how a web server Apache can be extended using the scripting language PHP and linked to a database such as MySQL. A set of prewritten web pages such as OSCommerce can be installed and customised to provide a web store. In this lecture we will contrast this approach with a newer one that relies less on web pages and more on seeing a web server as an extendable application.

Basic principles of web pages

1. Documents served on request from a web (HTTP) server
2. Pages may include references to images and links to other pages (local or remote)
3. HTML used to style and format pages but not standard across all browsers
4. HTTP servers were originally stateless and could not remember the progress of a visitor through a sequence of pages
5. Cookies developed to maintain “sessions” or remember a visitor (for personalisation). Cookie is a small file stored on the client and passed (on request) to the server.
6. Client side scripting improves interactivity and initially reduced round-trip traffic to the server. Examples include form data validation, calculation and interface elements.
7. Server side scripting developed to allow increased range of information to be served from the server including links to databases and other applications
8. Scripts are embedded in web pages usually mixed in with HTML code and design layout elements)
9. Scripts may be run on the browser (client side) or on the server (server side)
10. Many different scripting languages exist including Perl (for server side), VBScript, ECMA Script (Javascript), Java, Cold Fusion, PHP and Python
11. Server side scripts are processed by an extension to the web server (such as ASP.DLL or mod-php) before the page is returned to the browser.

Problems with this approach

1. Design and application logic are mixed together
2. Designers create sites which developers have to implement which can be slow and difficult.
3. The alternative of allowing developers to create standard pages to which designers add design tends to produce sites that look templated and ugly.
4. Application logic is scattered across multiple pages making it hard to debug
5. Code is hard to update, reuse or structure
6. Scales poorly and difficult for a team to develop
7. Approaches such as “includes” improve but do not solve the problems

Application approach to web design

1. Separate design from content from logic

2. Replace the simple HTTP server with a more sophisticated controller application such as Tomcat, Websphere or Resin
3. Extend the controller through the use of a web application framework. This is a library of software components such as Jakarta Struts or Spring which supports common tasks such as fetching data from databases, validating data from forms and maintaining sessions
4. Develop additional software components that reflect the business logic that is needed for your application (such as an ecommerce customer shopping process)
5. Use templates to capture the design. Ideally use a templating system that provides designers with flexibility without forcing coding of logic into the templates.
6. This approach supports the “model-view-controller” (MVC) software development pattern. The business, its data and how it works (model), how it looks (view), how these are linked together (controller).
7. Commercial and open source software tools support this approach.
8. Wide community of developers using this approach particularly those using Java
9. MVC pattern can also be supported by tools such as PHP and .Net.
10. The OTHER media uses this application approach for all its projects including the development of its content management system and its ecommerce software.

Ruby on Rails

- Ruby is a language
- Rails is a development framework
- Together Ruby on Rails implement MVC very cleanly
- If you on a PC then have a look at InstantRails
- If you on a Mac then use Locomotive (or follow one of the Rails installation tutorials)
- One of the many tutorials or books will get you started very quickly

In conclusion

1. Think software applications instead of web pages
2. Web pages are simply a view onto a software application and its data
3. Design views that present useful views of this data
4. Controller takes page requests, updates the model and presents a new view
5. MVC approach can improve productivity, reuse and collaborative development

10. Getting the best out of your case study

The exam is not simply a test of memory but of your ability to answer questions on your feet. In many ways it mirrors exactly what happens when you go and present your ideas at a pitch and the preparation you do plus the answers you give determine whether you win the job.

The mock questions were similar (but not identical) to those in the exam and the range of answers you gave was as expected; a range. Some of you answered the questions that were written and some the questions you hoped had been written.

Here are some further general comments and some pointers to revision

1. Read the questions carefully and then answer them. The first question was about navigation changes and some of you answered about “adding more information” or “adding a logo”: these are probably not navigation changes.
2. Try and think of 3 or 4 parts to your answer and explain each part. If you are suggesting renaming and reordering the main category buttons then explain why “to make it clearer to the customer what is on offer”
3. There is no ONE correct answer just sensible suggestions. Just make sure that your suggestions are clearly laid out and explained.
4. In the exam small pictures and diagrams will help explain your ideas quicker than a paragraph of text.
5. Be realistic about the numbers. Small improvements in a site could double the conversion rate (percentage of customers completing their transaction) and proper marketing and search engine optimisation could double or perhaps triple the relevant traffic after 12 months.
6. When discussing linking strategies remember there are two effects: more links means that more customers will follow those links but it also means a higher reputation score (PageRank) which means a higher listing in the search engines. Links on irrelevant sites will have little effect on either.
7. Don't expect changes to happen quickly. Search engine optimisation and reputation building could take up to a year.
8. If you want to increase visitors to a site in the short term you have to do something outside the site otherwise noone will know. This means advertising, offline promotion, email newsletters (to a list you bought), in-store promotions etc. Once they are there you can work on converting them to customers but you must get them there in the first place.
9. Your existing loyal customers are your VIPs and this question was about making them feel special. Offers, newsletters, wish lists, making repeat shopping easier were all suggestions that you could have included.
10. You may be thrown a question, like the B2B one that you are not expecting. This often happens in pitches and you have to cope. The key idea here is streamlining business processes and this probably includes relationships with suppliers, banks, partners, affiliates and anyone else who is not a direct customer. Putting in place inter-company systems that allow orders etc to be exchanged is what most companies are doing. Perhaps an extranet to allow suppliers to communicate the the company.
11. Keep up to date with the latest ideas such as AJAX or web services (see below) and expect to be able to think about their application to a client.

Questions you raised

Are you looking for aesthetic changes only?

Absolutely not. One of the biggest changes is likely to be tighter integration with backend systems to allow “live” availability, customer relationship management, integrated order processing, affiliation, customer accounts, order tracking and decision support.

What are the key B2B ideas?

Web services and automating the communications between partners. Some companies may use eBusiness to automate their entire supply chain through visibility of the whole process from manufacture through distribution to retail and beyond into affiliation and marketing. If this course was entirely about B2B then we could find a set of major players for each market that look just like eBay, Amazon, Tradedoubler and even perhaps Google.

Conversion rates?

This is the number of visitors who go through the whole buying process and become customers. 1000 visitors might turn into 80 customers. This would be an 8% conversion rate. Look back at ways of improving which include simplifying process, removing barriers, remembering customers etc.

How long should the exam answers be?

There are 3 questions in the exam and each is worth 15-20 marks. This means that you need to make 15 or so good points. The questions are a little different from here in that they may combine two parts: list 5 design changes and explain why they are required. This would need 5 changes (change what to what) and 5 explanations (why and with what benefit). To get more marks you would have to link the 5 explanations directly to your case study company. We are happy if your answers are in bulleted note form and include diagrams. Don't assume that we know your company or have your case study in front of us (even if we do).

What if we don't know?

Be sensible. Think on your feet. You will not be penalised for suggesting a 2-fold increase in sales but 1000 fold is unrealistic. These are not trick questions and if you go back through what we have covered (and do some background reading and research) then you will be well prepared. You do not need to provide specific references in your answers.

Trends you should think about (and perhaps research)

1. Digital brands: relationships between brands and “digital” customers
2. Social networking and social media marketing: involve your customers
3. Impact of search engines: understand reputation
4. Increases in the use of rich media (video): engage your visitors
5. Web services and interoperability: integrate with your partners
6. Mashups: build upon other data and services
7. AJAX and the move towards web applications: improve the experience
8. Importance of analytics and business intelligence: understand your visitors and your business processes
9. Syndication and feeds: share your data
10. Mobile (including special versions of sites): think of new channels
11. Customer relationship management: 360 degree views of customers