AT70.12 Web Application Engineering

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October, 2013

1 PLANNING YOUR WEB APPLICATION

Goal: In this problem set you will begin to develop an informal requirements specification for your online community system.

1.1 ANSWER THE FOLLOWING QUESTION FROM SEIA:

- What subject will people be able to learn in the community that you are building?

  Since this community is all about encouraging reuse of good, we plan to encourage user to decrease unnecessary waste by selling what is no longer used in their life. Aside from improving usage of existing goods, we also would like to see users exchange experience or information regarding to life in campus, such like stuffs necessary to accommodate upon arrival.

  Learn not only to reuse and make good use of things, but also learn to share life with other members in campus.

- What do you want people to say about your service after visit?

  The main idea behind this online flea market community is to create a open and public channel for people to make good use of their used goods or pick up some nice deals for new life in campus.

  We would like to see most users not only satisfied with the market functionality but also the communication connected via the sell. From which the leaving campus users would pass on their life experience to the next batch.

It's not only business we tried to promote, but a truly campus-wide community which can cross limitation of time.

We'd love to see people create extra friendship, rather than saying something to us, user ought to spend more time with new friends meet from our platform.

- What are the relevant distinct user classes?

  In-campus students, including new coming students and those who about to graduate and leave. Also staffs who lives in campus, including visiting faculties who might visit for short-term of stay. We basically split all users into three categories: those who aiming for selling, aiming for buying, and finally those who aim for not particular purchase or sell. The third category is essentially our potential users to becoming first two categories, and this kind of website is crucially dependent to user datas. If there's not sufficient data available at any point of time, the entire website quality will drop dramatically.

- What should a user on mobile phone (or other mobile devices such as tablets) be able to do? Is there a scope for void interactions?

  First we should be able to set up frames (e.g using bootstrap) to make sure the mobile users can have reasonable view of contents. More over, if we can come up with sort of mobile web app interface (e.g. when accessing yahoo using phones, you actually been redirected to m.yahoo.com instead) Priority of mobile system would be focusing on notifications (successful sell, or purchase. Messages from sellers or questions from buyers.) If possible also include billboard systems so people can have instant interactions. voice interaction is yet to be considered as one feature in core service. Android system has its own voice recognition system for key-in.

1.2 USER PROFILES

- User Profile 1: New Student moving into campus (potential buyers)

  - Name: Kevin
  - Age: 22
  - Occupation: Student
  - Marital status: Single

- Housing situation: Student dormitory provided by school

- income: < 15,000 Baht

- Short term goal: Get a cheap second hand refrigerator and some cookers

- Long term goal: Accommodate himself for next 2 years of study, make some friends, and get to know people from this school

- Question to our site: Is this deal trustworthy? Whom i can trust?

- Hardware: Using Macbook pro with standard browser Safari, also has Chrome as secondary browser for some compatibility issue.

- Connections: Using dormitory fixed LAN

- Other: He's just about to start his two year master degree in this campus. Apart from programming, he's also interested in cooking. With some previous experience around the world, he's able to speak fluent English yet never learn to speak Thai.

- User Profile 2: Student about to graduate (potential sells)

- Name: Tsutomu

- Age: 26

- Occupation: newly graduate

- Marital status: Single

- Housing situation: Dormitory outside campus

- income: > 30,000 Baht

- Short term goal: Find someone to hand over the appliance inside his dormitory, including some huge appliance like refrigerator.

- Long term goal: Get a stable job in Thailand, meaning to settled down somewhere in Bangkok.

- Question to our site: Is this site safe with my personal information? Can I sell my frig asap?

- Hardware: Ubuntu user, heavy programming background. Use all kinds of browsers, but his favourite would be Vimium.

- Connections: Both fixed LAN and 3G connections.
- Other: About to finish his 4 year phD study, Tsutomu is a brilliant star in terms of computer security. During his 4 year stay, Tsutomu had already mastered some fundamental Thai and had a lot of friends both in and outside the campus.

- User Profile 3: Campus member (casual browsing)

- Name: Audrey Tang
- Age: 32
- Occupation: IT manager
- Marital status: unwilling to disclose
- Housing situation: Condominium in BKK
- income: > 100,000 Baht
- Short term goal: See what's in our website. Looking around some new information happening in campus. Kill some spare time during traveling between works and home.
- Long term goal: Not determined yet, possibly becoming our member and make some purchase.
- Question to our site: What can i see or what kinds of products are available?
- Hardware: Windows 8 with Firefox. Notice this user also has a tablet, namely Sony tablet Z running Android.
- Connections: Wifi hotspot around the campus, and 3G during traveling
- Other: Mysterious IT manager, we don't have further information about her interest.

1.3 Usage Scenarios

- Class one: Buyer

Buyer login to the page, use the search bar to key in his ideal product. Or directly choose from the category tree. He's in need of a refrigerator but not in a hurry. If there's some

posts about selling refrigerator, he can keep track of those potential items by hitting the follow button. And if he happens to see good deal available, he can then directly hit the "I want to make a purchase" button for direct contact with seller. During his browsing, Kevin also notice that he might need a notebook for new WAE class.

- Class two: Seller

  After login to the page, Tsutomu typed in his sell. Uploaded the picture of his refrigerator. And await for further notice is someone is interested in his post. At the meanwhile, Tsutomu can also browse through the page looking for some other appliance he could need when he moves into his new place in Bangkok.

- Class three: Browsing (window shopper)

  Finally after a long day of hard work, Audrey got on to school bus heading toward Bangkok. On her way home, she decided to pay a visit to a very popular new site among campus. She never used such purchasing platform online before, therefore she's not intended to do any purchase. Despite not fully trust online trading, Audrey noticed the community mostly consist of member around the campus, some even work with her in the same office. Audrey also discovered that this website is not profit-oriented, but a pure community based platform for people to share information. Trading is not at all through the hand of website itself but only through buying and selling party.

1.4 EVALUATE ALTERNATIVES

One huge prospect of web application is to provide services that deliver more timely and convenient solutions. To evaluate alternatives become very critical during development phase. You ought to have a good reason for building this information system. Make a convincing answer for why we need this system.

1.4.1 OFFLINE ALTERNATIVES

List out possible offline alternatives and explain their best features. Justify why your web version is necessary and superior?

- Billboard around the campus
  - Pros: Easy to access. For people who want to post information about selling just need to provide their contact information and details of the good. Doesn't require account or any usage of computer system.
  - Cons:
    * Difficult to distribute the selling information
    * No fixed form of post, causing unnecessary visual and environmental chaos
    * Selling party must provide the printed hard copy, this might limit the content of information provided (e.g. no colour photos, lack of detail information about certain category of goods)

* Post might be destroyed at any moment of time, or might be posted forever (no guarantees for timing validity)
  * No proof or tracking for false sells
  * Users don't know whom to trust
  * Environmental unfriendly
- Information passing through friends
  - Pros: Trustworthy. Negotiable pricing. Easy to find delivery solution. Providing not only goods, but also some friendly tips about where to buy good stuffs and where can one find cheaper deal.
  - Cons: Very narrow scope of community. Information cannot propagate for entire campus community. Lack of solid information of goods.

1.4.2 ONLINE ALTERNATIVES

Find the best existing online communities in your subject area. Note how closely they conform to the six elements of sustainability (magnet content, collaboration, searching and browsing capabilities, delegated moderation, means of removing bozos, and means for extending the community. Also write down anything strikingly good or bad about the registration process and the mechanisms of collaboration, e.g., in discussion forums, comments on articles, and chat rooms. Look for voice and mobile interfaces. If present, try them out. Look for evidence of personalization and direct controls over preferences.

- Deal Fish: http://www.dealfish.co.th
  Providing online selling services based on different provinces indices. Doesn't provide english user interface causing loss of potential foreign customers. Well organised categories makes simple access for users.

- eBay: http://deals.ebay.co.th
  Origin online selling and shopping site. A pity to see ground-zero dying out of lack of users. Outdated interface shows lack of management.

- Amazon: http://www.amazon.com
  Biggest online selling platform. Originate with book selling and extended. Provide huge verities of collection of items. Based on B2C business model. One of our group member had a bad experience before due to failure to deliver product from local business. Still the tracking system from Amazon shows successful delivery, this indicates inconsistency between local business tracking and Amazon's central tracking. Although given a timely reply from customer service, failure of trading would make user lose confidence of trusting online purchase.

- Flea Bay: http://www.fleabay.net
  Pretty well organized categories. Entire interface is still pre-web2.0. Rough looking interface does decrease interest of buyers. Only provide a platform for user to post their sells. Delivery to different region could cause some problems.

1.5 Magnet of Content

Majority of our content will come from the students who are graduating or who is willing to sell their stuffs their don't want to keep. Of course due to the nature of our web app, we don't prohibit people from selling new stuffs (maybe it is the case which they just bought some item and found out it doesn't fit their need).

Our web app is literally living on the information content it has, if there's no selling information, eventually no more user will hit our website in no time.

In order to stimulate good quality of trading under our system, we also plan to provide some reward points to both selling and buying party once the deal in confirmed by both sides and reach to a satisfaction. The reward point can be good criteria for people to judge whether this user they're dealing with is trust worthy or not.

1.6 DNS registration

Decide on hostname and figure out DNS registration procedures. Be sure to look into the options for hosting of your web site. Ideally, you should all have a real hostname for your system, pointing to your CSIM server, by the end of the semester. At the end of the semester, you should also be ready to move your site off of your project server to a more permanent home. Please include a plan for how you will do this. Note that AIT, CSIM, or AIT SU could probably be persuaded to host some of your groupsâĂŹ sites. Others would be more appropriately hosted offsite.
We currently have couple hostnames in mind:

- usedandfound.com :
  available from 1and1 for $10.99 / year

- usedandfound.co :
  available from GoDaddy for $12.99 / year

- usedandfound.net:
  available from GoDaddy for $9.99 / year

- usedandfound.asiat:
  available from GoDaddy for $19.99 / year

1.7 Intellectual property

Describe the intellectual property rights of you as developers, authors as contributors.

Since the intellectual property office of Thailand is not very English-user friendly, we took the reference from world intellectual property organisation.

Figure 1.1: search result from Domize

In case of using material own by others, one should be aware of getting an agreement or obtaining a license of use before putting other's material on his or her site.

More reference can be found as follows:
`http://www.wipo.int/sme/en/documents/business_website.htm#owns`