

Major assignment 2

Experience Design for a new Environment

RMIT ONLINE UNIVERSITY SYSTEM

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Introduction

This document takes into account the recent audit carried out for the RMIT online university system.

During this audit we recognized key opportunities and requirements to create an updated and modern system which appeals to users which have become accustomed to new standards of online communication.

Drawing on our audit and participation of the system, while also recording feedback from current users we have created this brief to highlight areas which need particular attention and a system of total rebuild which utilizes core technologies as found in modern mainstream systems.

We will concentrate on providing a sense of ownership to the end user so as to propagate a sense of welcome and user involvement on many different levels.

Current Experience

- System is difficult to operate and use due to the use of a forum board system
- System does not allow the end user to collaborate on projects
- Users are forced to rely on many different means of online communication which leads to difficulties in maintaining synchronisation during class time and group assignments
- It is cumbersome to communicate with the layout and mechanics of the current system
- It is difficult to maintain an accurate means of time and due dates for events and projects
- Users have reported that the provided tools of the system are inadequate for actual use due to implementation
- System does not reflect contemporary means of technology and application as utilized by mainstream demographic and end users
- System does not provide a itself to be a channel for information sharing with users

To summarize the current system is very linear and does not stimulate the end user to participate in a more inspired manner. This attitude is developed due to the cumbersome nature of how the user has to interact with the system. From initially logging into the web board system the user is over whelmed by the non intuitive system which serves the sole purpose of communication via utilizing a forum board at its core.

Projected Experience

- System should include all facets of communication of current web 2.0 standards and other emerging technologies
- System should utilise a modular design and user experience for both user personas as discussed in the personas section.
- System should give the end user a sense of ownership and thus provide a tool set which allows the users to participate at the level of a true information exchange hub
- The system should be incorporated as a major module it self within the over all university environment and provide the end users with a portable and dynamic persona throughout their period of study and tutoring
- The system should provide a means to synchronize communication and also aim to keep at the forefront of pioneering communications technology as and when it develops, even at research and development stage.
- The system should thus be designed in a modular manner, which allows expansion and additions after review from a technology orientated committee for the procurement of maintaining advancement and efficiency in the system

Environment Users and Personas

The environment consists of serving two types of users who each play a part of a Lecturer and Student. The roles of the users does not allow them to freely interact as intended. The basics of a virtual class room are thus regulated to a forum board systems which restricts communication and interaction with students from different back grounds who may or may not be computer savvy. It is therefore imperative that the system redesign include such means of communication.

Persona 1. Lecturer

The lecturer is the main point of contact and communication with the student end user. The lecturer plays the role of a teacher as well as administrator to the teaching system. Although we do not have first hand experience with the differences between the teacher administrator section, we can gauge that this end of the system would fall into the same descriptive from studies of similar forum board systems. Even though the lecturer may have the best intentions of tuition and communication, this is restricted by the limitations of the current system and therefore restricts the lecturer person.

Persona 2. Student

The student body consists of a diverse range of users from different backgrounds. They may not all be accustomed to the internet and thus the web board system. Even though seasonal internet system users have used the system, we have been informed of their disdain not just as a result of the forum board based system, but more so from them using and experimenting with systems and technologies which are readily available today and appear through mainstream channels. If a system is the current trend of communication, then the learning system should be at the forefront of it to satisfy the end users persona.

Environment Restructuring

Current web 2.0 systems allow a user to participate on several application platforms simultaneously. Open source development companies have developed next generation software which is designed in a modular system using new dynamic technologies, such as ajax, java and other languages. Server side software has also evolved to the point where it allows these dynamic applications to function on their platforms. Peer to peer sharing network systems have come an gone as the new standard of the internet is the open source free system where end users are allowed to take ownership of a developed product by adding to the project, creating a propriety format for private or commercial use while providing feedback and injection of knowledge back to the open source projects. Major companies have harnessed this very creative and powerful applications provided as they have opened the realm of true interaction with users and developers on all levels.

Environment Restructuring (Continued)

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Real time & Virtual Classrooms.

The worlds first true online classroom experiment, set up by the College of Fine Arts at Sydney's University of New South Wales, titled Om'nium during the year 2000 shows a very infantile stage of a virtual classroom.

With a maximum of 50 students partaking in a study in new media communication students were provided with a virtual easels for individually working on media content which were then composited into a finished

Although this system is a primitive form of a virtual class room, since this time frame in technology has evolved exponentially where real time video conferences are a main stream feature of the internet. One of the proposed components for the rebuild of this system is to incorporate such a feature into the system.

Which the opportunity for the student, class peers and lecturer being able to participate in group discussion in a real time video, the boundaries are thus expanded to allow for better communication. The point of human emotion and contact and all other facets of attending a physical lecture are combined so as students may access this remotely.

There are open source server application which are readily available to implement within the new system rebuild. We will focus on the Darwin Streaming Server (DSS) which is a open source Linux port of the Apple Mac Os X streaming server provided by Apple Co. Ltd. The other function of the video server will allow lectures to be archived to later or offline viewing by students, so theoretically a library of lectures and media will be available to past and present students.

Human Emotion & Interaction

The interface and environment redesign proposes to develop a lifestyle product which fits into the existing lifestyle of the either personas, by providing a tools and an interface which seamlessly integrates with their existing lifestyle out side of university life.

The main aim of this feature is to synchronize day to day tasks through avenues of ulterior communications as utilized by the personas in daily life. This is not a means to intrude on private space but just as a reminder and alert tool which is quite subtle in order to draw the users attention to pressing matters with their educational life style.

We have seen through main stream used of public software and " spaces " , that people like and bond to the concept of ownership of virtual space, or a node in a cloud / cluster based systems. This is one key factor which drives user interaction and development by user provided the tool set. For this particular rebuild, the core system should be closed, yet the tool sets should be provided to students and lecturers who wish to develop and share content and components to add to the system.

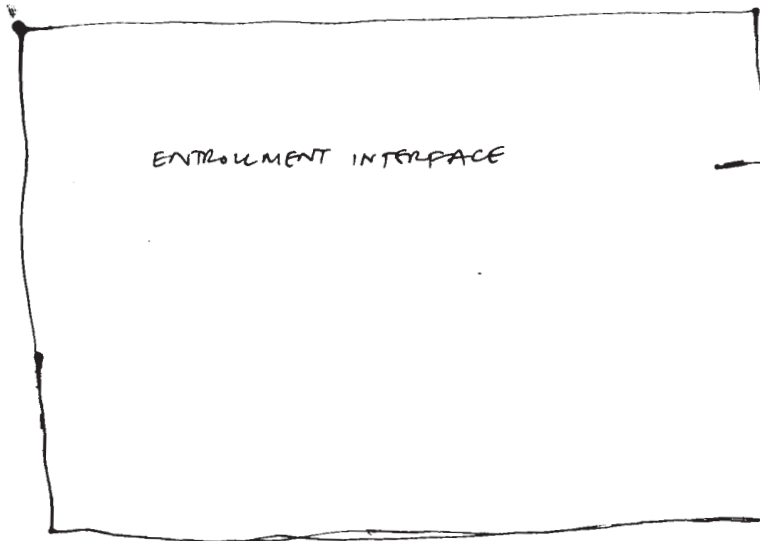
Contributions by end users and developers could be as simple as a theme design, or variant on the GUI to more complex tools which could be released to university life online environment.

Preliminary Concepts

Combined in the following pages are preliminary sketches and notes which will high light the proposed development direction of this new environment. It includes a series GUI notes, a brief site map or the core system interface, references to the video streaming server and the over all integration of the system as a " Uni Life " tool.

RMIT ONLINE LEARNING SYSTEM / DEVELOPMENT NOTES.

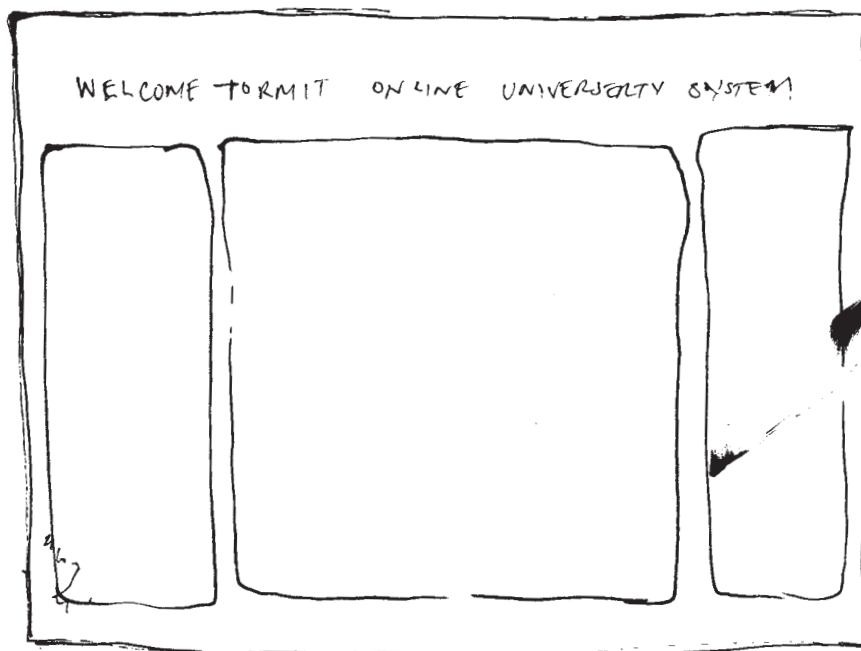
* Enrollment Interface - this design does not concentrate on this system although this a modular component which the system branches from



→ ENROLLMENT SCREEN NEEDS TO BE DEVELOPED TO BE INTEGRATED INTO THE MAIN INTERFACE

- ⇒ INPUT → LIVE INPUT FROM STUDENTS
- BROADCASTING OF VIDEO, LECTURES IN REAL TIME
- ↳ WITH ABILITY TO ARCHIVE LECTURES.

A. TABULAR / MODULAR SYSTEM / INTERFACE.



* The use of a 3 column interface is the ideal requirements of the new environment system

3 COLUMN DESIGN TO ACCOMMODATE MORE FEATURES INTO THE SYSTEM

→ UPDATE REQUIREMENTS

→ ABILITY TO MAINTAIN LIVE COMMUNICATION MEANS.

→ FILE SHARING / POSTING OF MEDIA / STUDENT COMMUNICATION

→ LIVE BROADCASTING OF LECTURES AND ABILITY TO ARCHIVE THEM FOR LATER VIEWING OR FOR STUDENTS UNABLE TO ATTEND.

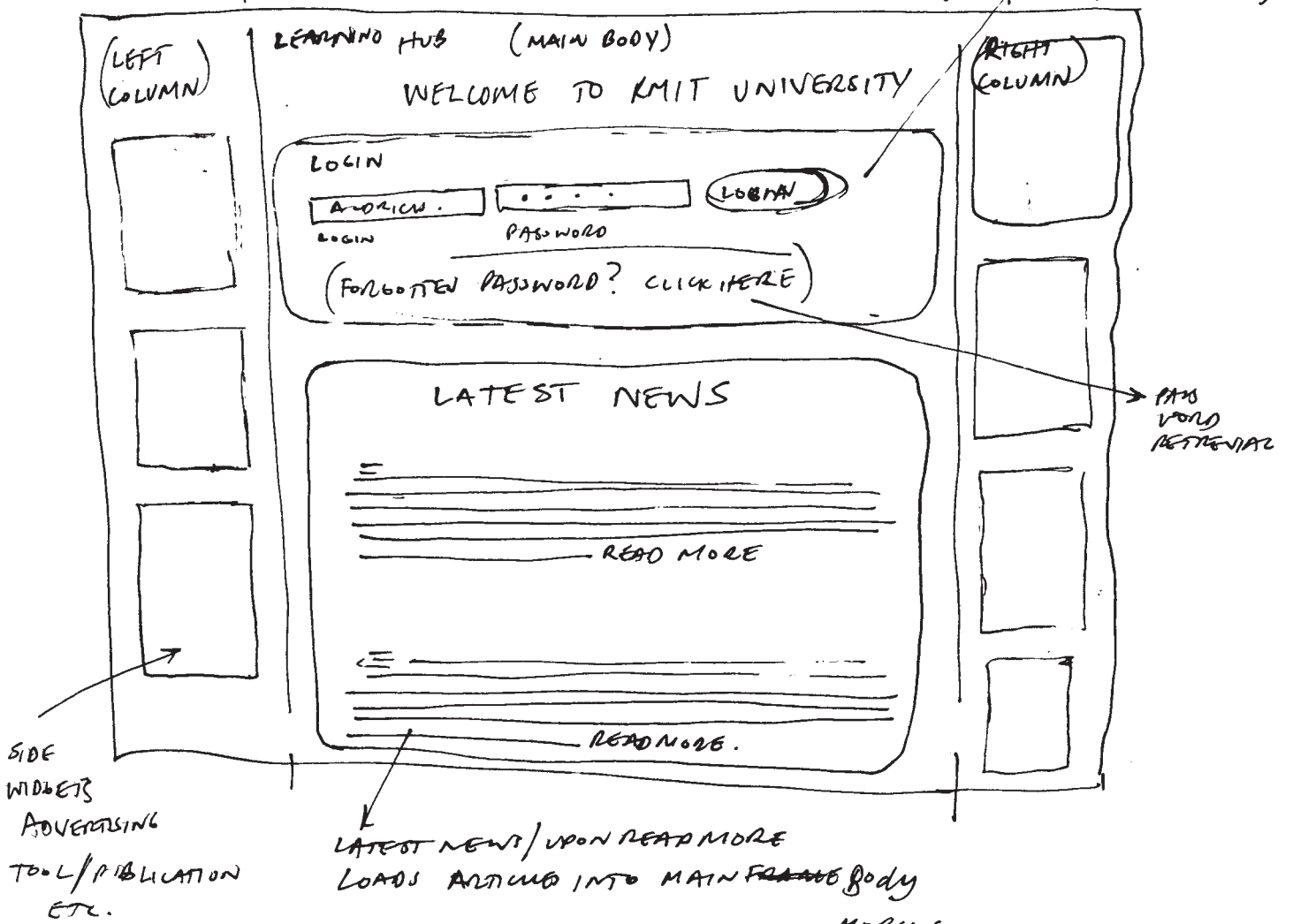
* The main hub or login screen, notice the use of " widgets" in the left and right column and the main content in the center body

THE SYSTEM SHOULD BE A HUB AND ALLOWS EACH STUDENT TO VIEW / ADMINISTER THEIR LEARNING SPACE AT WILL.

→ THESE OF A WIDGET SYSTEM → WORDPRESS

* NO USE OF POP UPS OR SEPERATE BROWSER WINDOWS TO NAVGATE TO MULTIPLE CLASSES →

(ONLY LOGGED IN → NOTIFY IN HEADER)



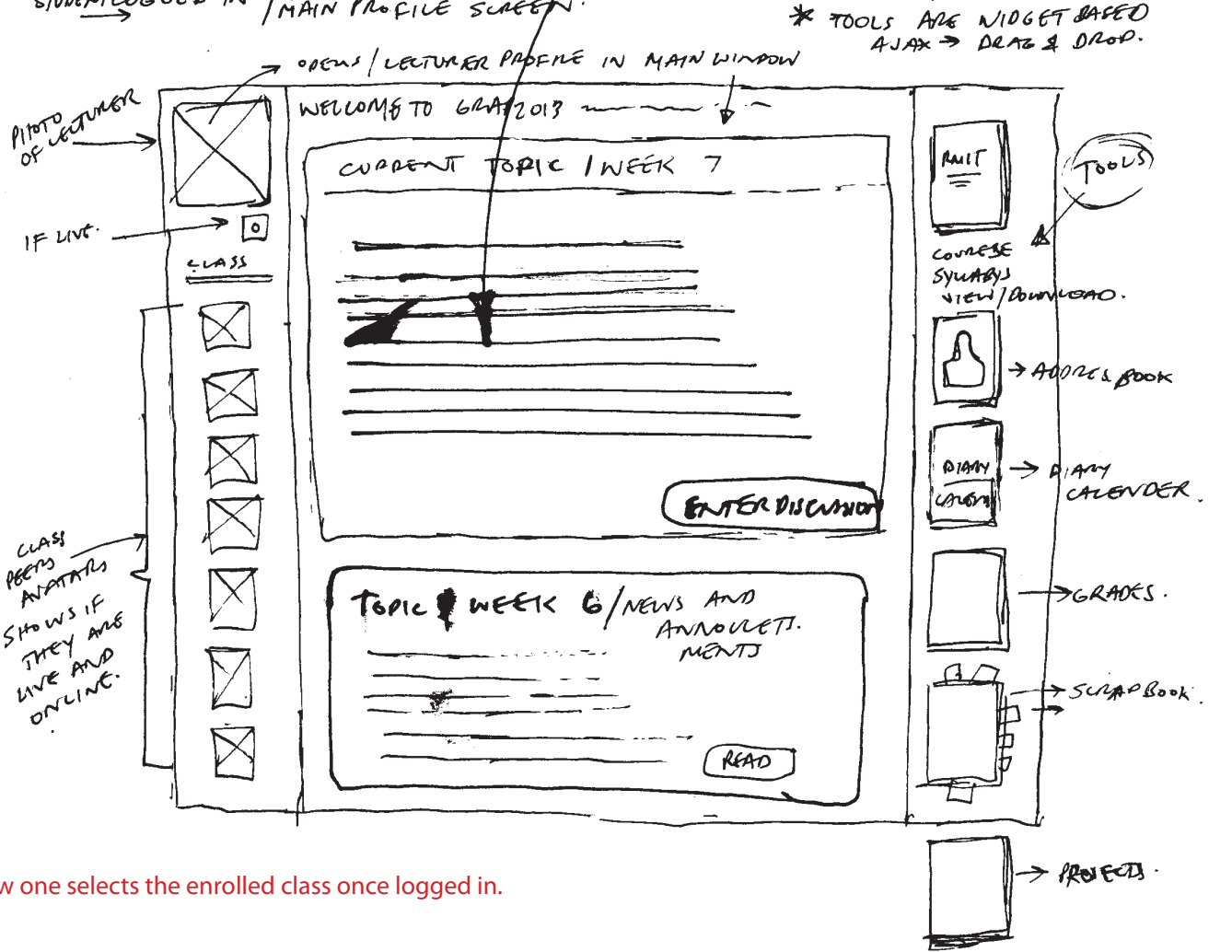
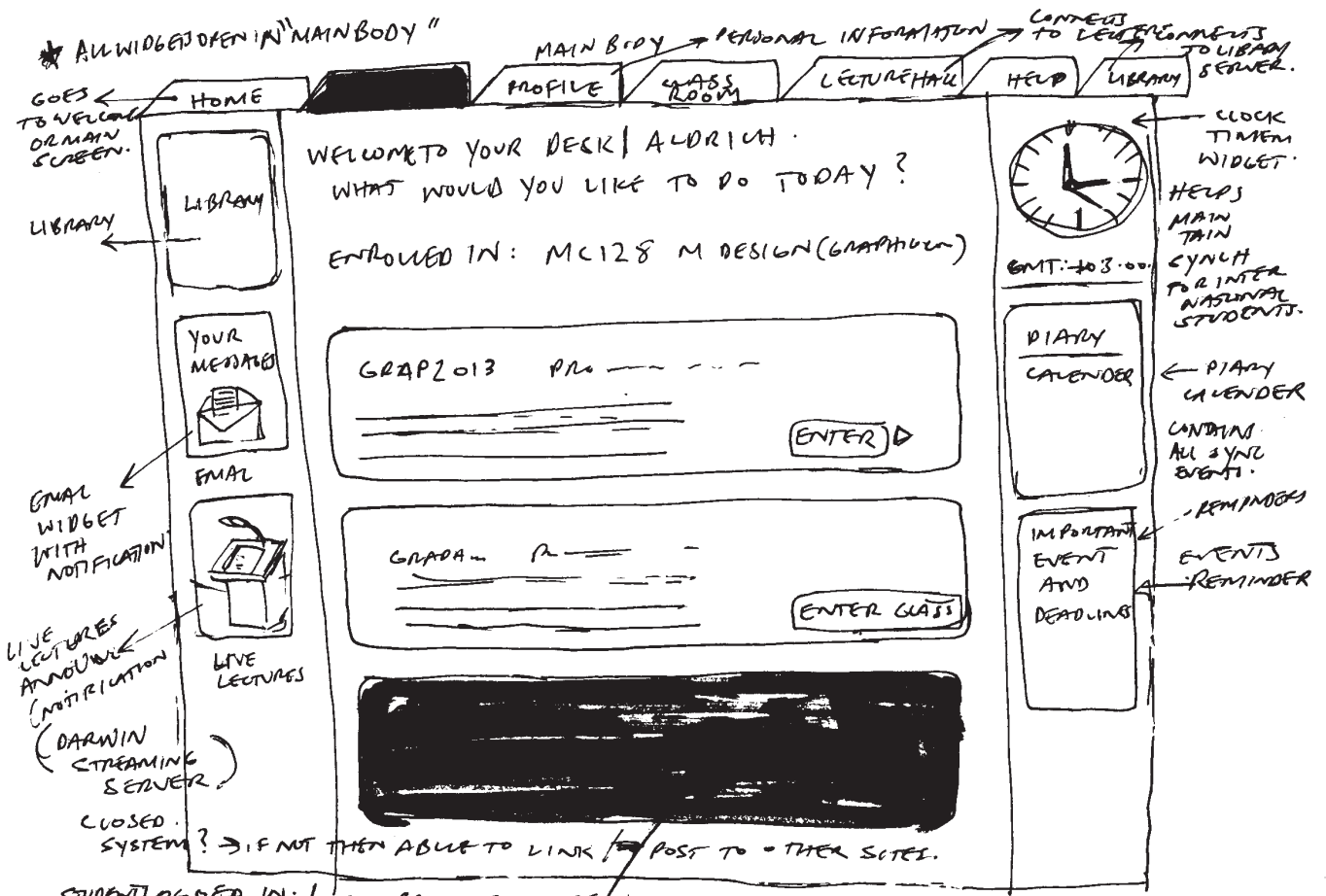
YOUR UNIVERSITY LEARNING SYSTEM AS "YOUR SPACE" & YOUR IDENTITY → APPLIED TO THE ENTIRE RMIT SYSTEM

YOUR IDENTITY → TRAVELS WITH YOU FROM CLASS TO CLASS

→ YOUR ADDRESS BOOKS ARE AUTOMATICALLY UPDATED AND ARE ADDED TO FROM CLASS TO CLASS.

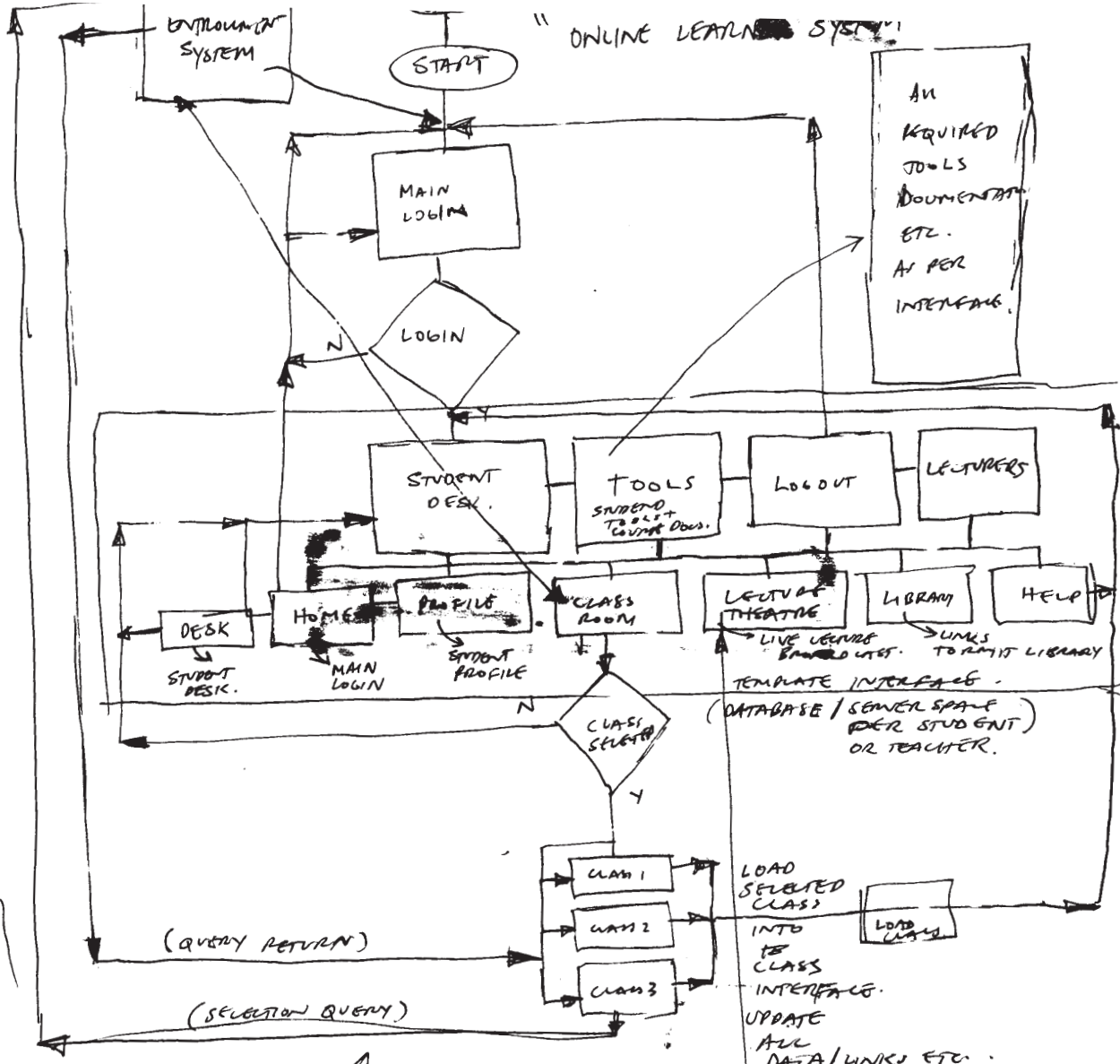
→ YOUR DIARY AND CALENDER ARE SYNCHRONISED WITH YOUR "UNI LIFE" ^{EMAIL ALSO} EQ. ALL YOUR CLASSES AND INVOLVEMENTS WITHIN THE RMIT ENVIRONMENT. EVENTS AND ANNOUNCEMENTS ARE SYNCHRONISHED WITH YOUR DIARY & EMAIL SYSTEM / LECTURES & TIMES / MEETINGS / ~~IF~~ REQUIRED ATTENDANCE.

* Uses a tabula system for main navigation - pseudo - sub sections and "space" within one space or terminal .



* How one selects the enrolled class once logged in.

* Basic flow of operations of end user system, the lecturers persona may differ some what as they would be integrated into the overall "eco system" of the University Main system .



ADD HUMAN "INTERFACE TO THIS"

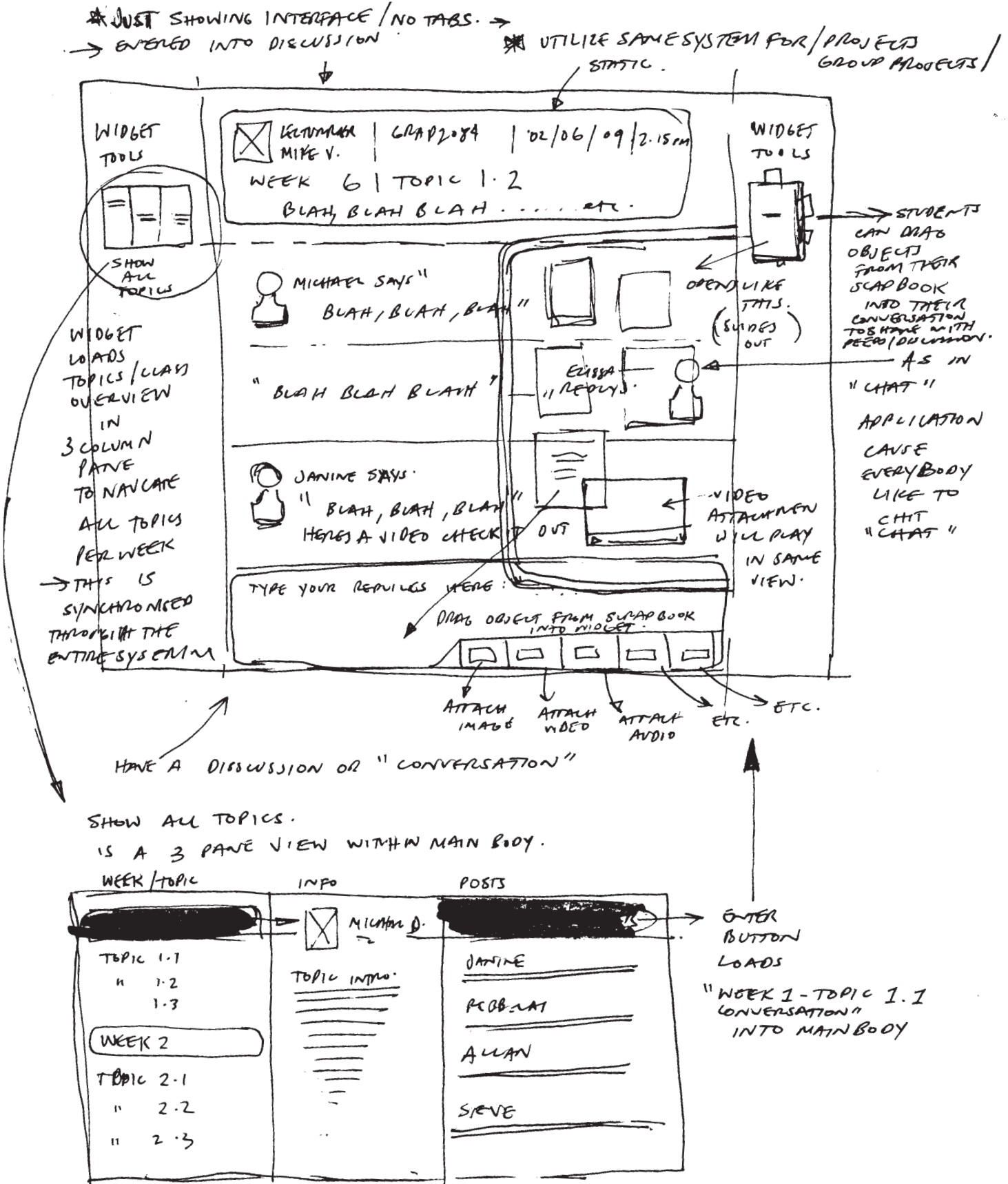
LECTURERS SYSTEM WILL BE THE SAME BUT WITH AN ADMIN SECTION TO FACILITATE INFORMATION AND RESOURCE UPDATES AND ALLOCATIONS.



REAL TIME LECTURES FOR PHYSICAL ATTENDANCE - ACSEC

* Real time lectures broadcast through to the end user system, so the Student Persona, will receive an update to participate in this lecture through their system. It would be up to the lecturer persona to log this into the system

* The new method of participating on the web board, we utilise a system of "Chatting", which is much more intuitive and "human" than the current system. The chat system allows the user to add media and elements from their "Scrap Book" application.



* A three column view for subjects, classes, information and current discussions.

FROM THE LECTURER TO THE STUDENT CALENDAR TO THE LOGIN SCREEN ONCE LOGGED IN AND STUDENT DESK INTERFACE. → ALSO TO EMAILS AND REMINDERS

* Real-time Video "Chat" and conferences, each persona identity is displayed as a avatar, which shows if they are on line . To begin a chat or communication the user simply clicks the persona to initiate a chat. Similar to ichtat or skype.

STARTING AN VIDEO CONFERENCE / STREAMING SERVER.



WHEN A STUDENT IS LOGGED IN THEY MAY HAVE A FACE TO FACE CONVERSATION WITH PEERS AND THEIR LECTURER, :

- ① CLICK ON THE STUDENT FROM THE CLASS ROLL ON LEFT HAND COLUMN (X) P.O.P.U.P.
 - ⊗ - SEND MESSAGE
 - CHAT
 - VIDEO CONFERENCE → ESPECIALLY HAND FOR GROUP PROJECTS.
- THE SYSTEM SHOULD KEEP TRACK OF ALL CHAT TRANSCRIPTS. FOR USAGE / LECTURERS CAN VIEW AND PARTICIPATE IN ANY CHATS OR VIDEO CONFERENCE.
- VIDEO CHAT USES THE "STREAMING SERVER".

→ ANYONE CAN SEE IF A STUDENT IS CHATTING OR IN A VIDEO CONFERENCE FROM THE "CHAT INDICATOR" OR "CONFERENCE INDICATOR" ON THE STUDENT AVATAR. BY CLICKING ON THAT STUDENTS AVATA THEY CAN SEE THE CHAT OR CONFERENCE GOING ON - THEY THEN HAVE THE OPTION TO JOIN THE CHAT. THE AMMOUNT OF CHAT/VIDEO CONFERENCE IS ONLY LIMITED BY THE SERVER & BAND WIDTH RESOURCES.

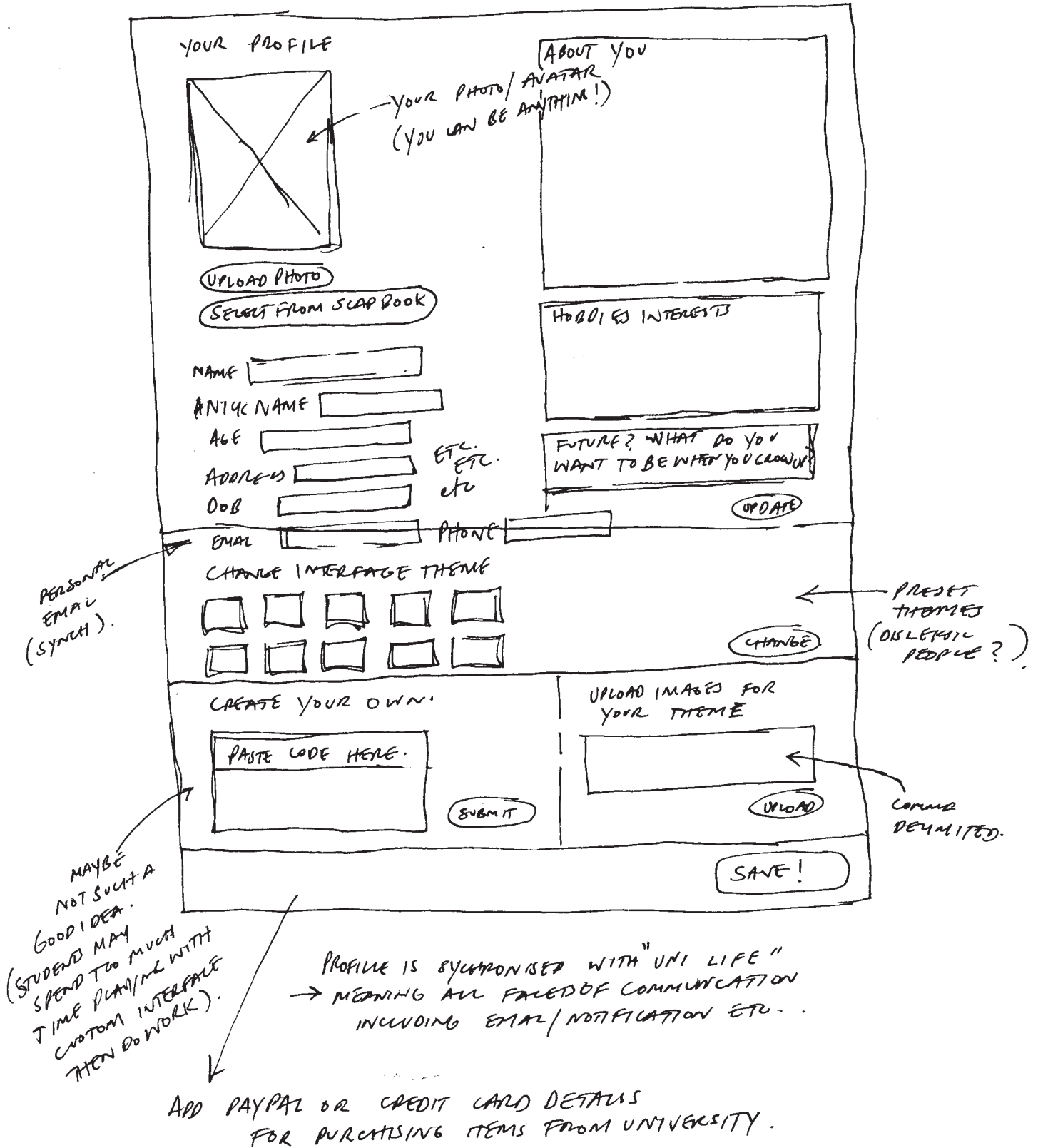


← EXAMPLE OF WHOLE CLASSROOM IN ONE CONFERENCE OR REALTIME ONLINE LECTURE.

* Real-time Lecture participation and interaction

* Creation of persona identity and avatar - this is the users identity for the duration of their "Uni Life" and can be updated, it is portable as it is allocated a "Space" within the "Uni Life" eco system and is accessible in any place or device which supports an internet connection.

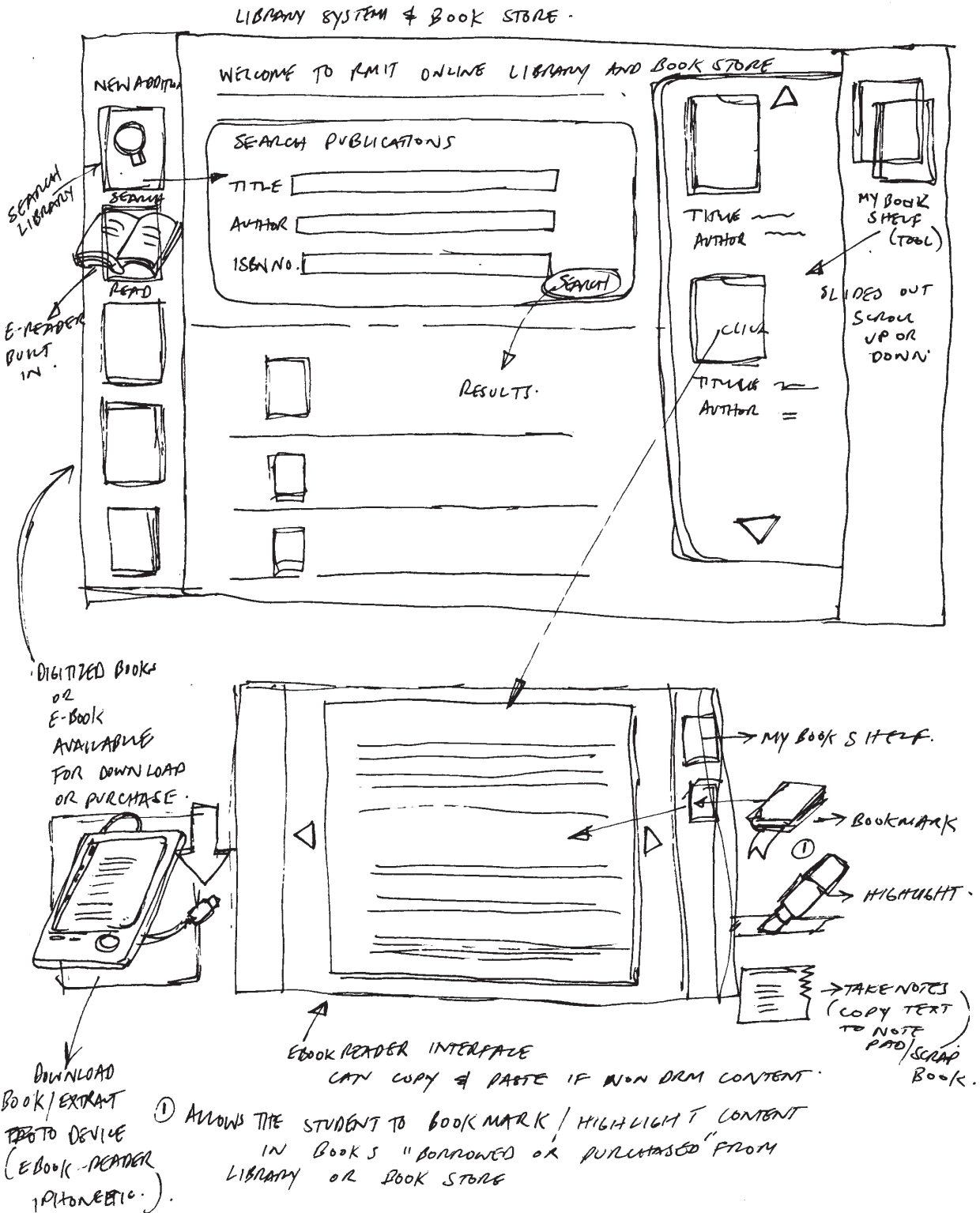
PROFILE EDIT



* Users can customize their interface and share their designs with other personas. (Basic Open Development & contribution)

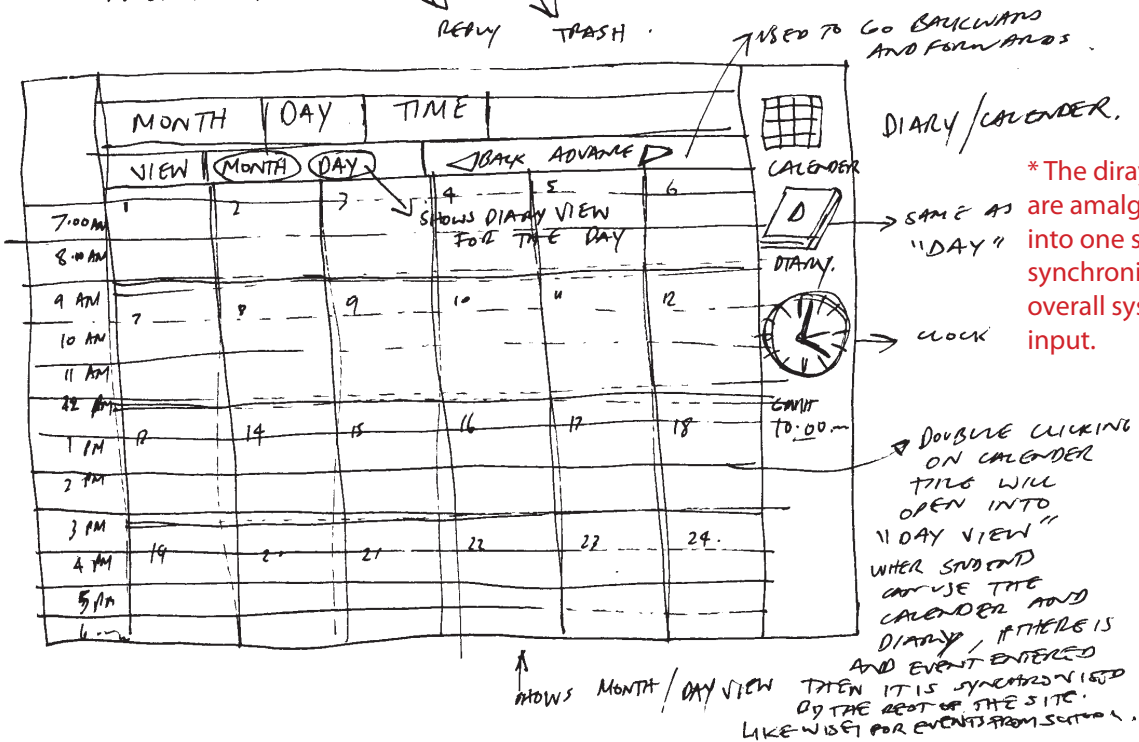
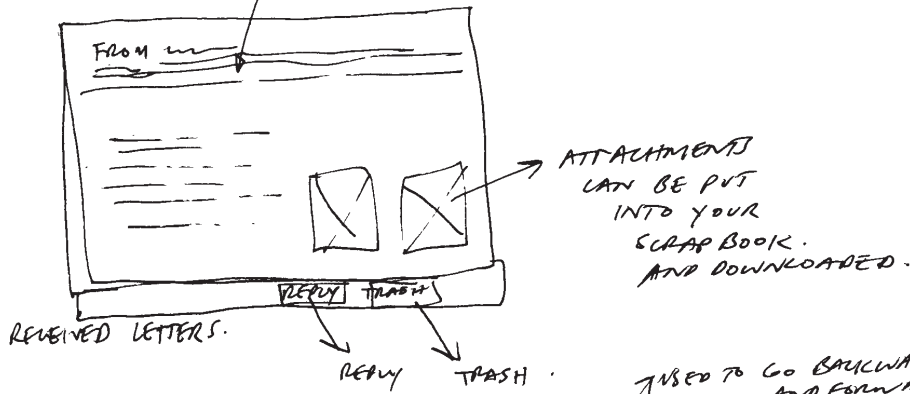
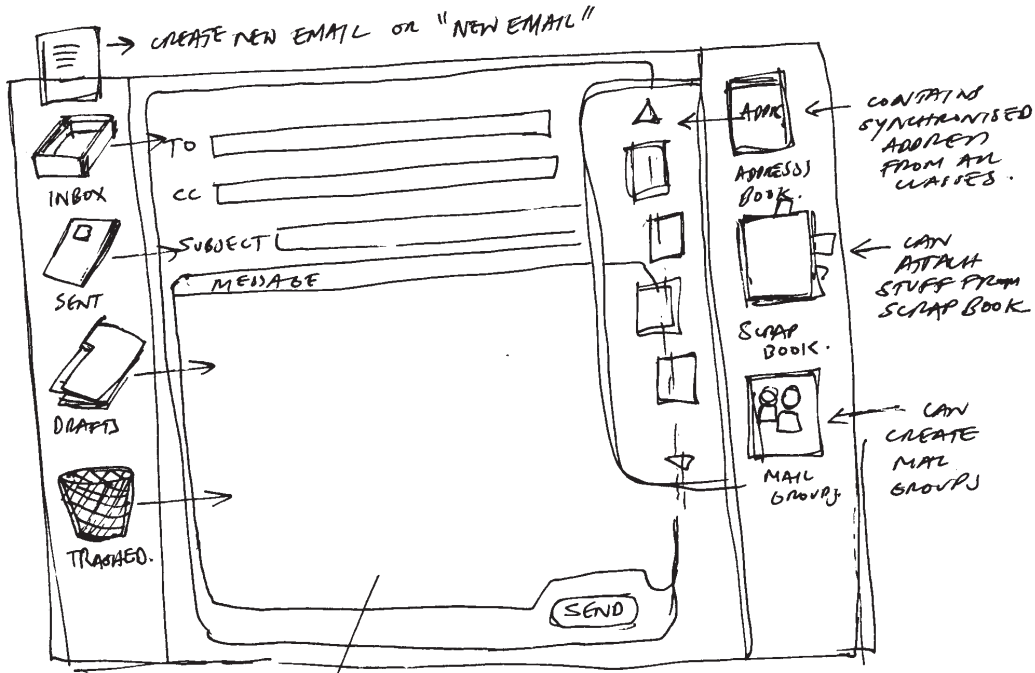
* Credit cards and Paypal can be incorporated with the profile so as personas can purchase syllabus text books, media and products via one click through their "Uni Life" space.

* The Library and book store are integrated with the "Uni Life" system, personas can borrow or purchase texts directly from their interface, students can download, highlight and take notes from text which is non DRM protected and available through the library / book store system.



* NOTE: LECTURERS SYSTEM MUST ALLOW IT TO MAKE A "ROLL CALL" AT THE START OF THE COURSE AS WELL AS WHEN ENTERING A DISCUSSION TO SEE STUDENTS ON LINE.

*The email system, since all facets of the system are synchronised, the user is provided with tools to administer their email communication from this interface.



*The diary and calendar are amalgamated into one system and is synchronised with the overall system and user input.

The next step.

As we can see from this brief and dissection of the previous audit, we have developed the system, from a mundane forum board system and have turned it into a more life style orientated "Space".

We have identified the system to each end user persona and have developed a modular and very streamlined system which differs little between either persona.

We have concentrated on creating a highly intuitive system which will allow the personas to interact on a human level which they are accustomed to and have also created the true next generation of a virtual university classroom which utilizes video interaction to induce participation and collaboration over time, space and distance barriers.

We have designed in concept, a system which is modular and which can be developed with current existing web 2.0 technologies. We have allowed users and developers to contribute to the system to promote its evolvement throughout its use, thus making the system an on going organic process.

We have devised these solutions in concept form and it is our intention that the design and development team have a through understanding of the type of new environment we wish to create. These concepts although preliminary are more then sufficient to draw upon the understanding of key functionality.

There are however more steps necessary to include further additions of components, details and trouble analysis and resolutions in planning and development before a user interface is designed and a test prototype system is assembled.