

## Project Description for 'Shibbolising' Online Librarian

### Vision & Scope Breakdown

#### 1. Problem Statement

##### a) Project background

##### Current Online Librarian

- Collaboration between
  - [Murdoch University Library](#) and
  - [Macquarie University Library](#)
- Service commenced in 2003 originally using VoIP NetMeeting application
- Since October 2004 uses MSN Messenger with handle: [onlinelib@hotmail.com](mailto:onlinelib@hotmail.com)
- In 2004 a total of 214 calls received; in 2005 a total of 823 calls; and to June 2006 502 calls were received
- Anonymous service (other than MSN nicknames)
- Limited hours of operation – total of 34 hours per week
- Restricted to one library operator at a time
- Reference interview must be conducted to gather status
- Handover between libraries is a manual process
- Service is public with no priority for MQ or Murdoch users

The current service lacks scalability as there can only be one operator logged onto Online Librarian; users cannot be identified and calls cannot be routed to the most relevant operator. The caller must be using MSN messenger and no other chat service is compatible.

In 2005 we discussed offering OLL for a greater spread of hours, however this was considered unmanageable as only one operator could work at a time and handovers would involve cumbersome logging off and re-signing onto MSN. As a consequence the service continued with limited hours. In the first quarter of 2006 following conversations with MAMS personnel it was decided to investigate solutions offered by adding authentication of users, automation of processes, scalability and flexibility in the distribution of conversations. In June 2006 we applied for a MAMS Mini grant to enable implementation of these solutions

##### b) Stakeholders

Janet Fletcher <i>Manager Information Access Macquarie University Library</i> Jean McKay <i>Manager Liaison Services Murdoch University Library</i>
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Janet & Jean, Project managers of the original & ongoing Online Librarian Project, require a text chat reference service that:

- Provides role based identification
  - Service can still be anonymous
  - Helps prioritise queries
  - Helps direct queries between operators
- Uses existing hardware and software
- Accommodates multiple operators
- Allows transferring of conversations
- Automates some features
  - Frequently asked questions
  - "Answering machine" or instructions out of hours

- Develops automatic scripts for answering questions
- Records statistics
- Makes chat transcripts available (optional)
- Links into Australian Federation

#### MAMS Federation

Potential of the project to promote the growth of the MAMS Testbed by other institutions joining the Online Librarian service or by providing a demonstrator of an authenticated chat service for use by other enquiry services for exam[le student services.

#### c) Users

Students and staff Macquarie University  
Students and staff Murdoch University

A chat reference service that is available when I need it  
I can chat using my messaging system  
I can chat to a librarian who understands my requirements  
I can chat to a specialist librarian if I need to  
I can get a transcript of the chat emailed to me if I want

Community of interest to Macquarie University  
Community of interest to Murdoch University

I can get some help from a librarian at a university

## 2. Vision of the Solution

### a) Vision Statement

#### Goals

- To develop and improve design of a text chat information service between library patrons and librarians, building on the existing Online Librarian service by adding authentication of users, automation of processes, scalability and flexibility in how conversations are distributed.
- To evaluate the potential of the service to meet the needs of other service providers within each university, eg student support, IT support

#### Objectives

- To develop and improve design of a personalised chat information service that can be tailored (over time) towards the user. To achieve this it is essential to authenticate for the service via Shibboleth so that customer attributes including staff/student status, university/campus, Faculty/School, study level, study mode (where information is available) can be used.
- To develop automatic scripts for answering questions.
- To build a service that is scalable to accommodate current and future usage of the chat service
- To build a service that uses existing hardware and software thus keeping costs down and also reducing the need for librarians to be retrained.
- To allow the use of 3<sup>rd</sup> party clients (such as MSN Messenger currently used by Online Librarian) as well as Gaim or Trillion which users may have installed.
- To allow for automatic routing of calls, ie smart allocation of new conversations.
- To allow forwarding of calls from one librarian to another
- To promote the growth of the MAMS Federation test bed

## **b) List of Features**

- Supports multiple operators
- Supports multiple networks (Jabber, MSN)
- Provides reference interview information
- Smart assignment of conversations
- Operators can transfer conversations
- Offers usage statistics
- Can sit alongside existing service
- MQ, Murdoch students use their existing login and gain access to other Federation services

## **d) Features That Will Not Be Developed**

- Text instant message only. Not developing screen sharing, voiceover IP, video conferencing or file sharing.

## **Stage 1 Work Breakdown Structure** (complete by August 21<sup>st</sup>)

1. Set-up currently on MAMS machine, move to level 2 Federation on Macquarie IdP machine [completed]
2. Set-up the identify provider and trialed at the workshop for both Murdoch and Macquarie [completed]
  - Set up interface consistent with Murdoch MAIS authentication page
  - Smart assignment of calls: establish rules code (hard coded at this stage)
  - Macquarie calls routed directly to Macquarie librarian if available. Murdoch to Murdoch
  - Once connection established at a library, rotate calls sequentially
  - A librarian handles up to 3 concurrent chat sessions. If all librarians at one institution have 3 users each then next call routed to other institution. If all librarians at maximum level or unavailable then user is routed to the relevant email address.
3. Establish commands [in place needs refining]
  - Transfer command: Forwarding from librarian to another (!transfer) [Transfer command (!transfer) will result in the display of a numeric list of available librarians designated by Macquarie or Murdoch. Select number OR enter transfer command as !transfer initial for a display of available librarians with that initial OR enter as !transfer full name for an exact match. If not available response is "name is not available cannot transfer". Note process does not include text in context at this stage, so necessary to phone librarian in advance]
  - Information command: Find out further attributes of user (!info,)
  - Develop scripts for basic functions, eg welcome message (into September)
4. Develop web pages for Murdoch and Macquarie
  - Install web based client: JWChat [completed]. Ensure that java/javascript turned on for web browsers in libraries. <https://idp.mq.edu.au/onlinelib> [Peter to set up]
  - Re-design web pages for new Online Librarian
  - Link through to Murdoch and Macquarie authentication pages
  - Non authenticated clients are referred to email at Murdoch and Macquarie

5. Establish Jabber accounts for librarians at Murdoch and Macquarie [Install psi client on librarians' desktops
6. Set-up Jabber accounts for other messaging clients – eg Yahoo, ICQ, MSN  
Prepare and deliver basic training for librarians (late August-early Sept)
7. Automate and produce basic operating statistics
  - o Number of calls from Murdoch users and number of calls from Macquarie users
  - o Number of calls answered by Murdoch and number of calls answered by Macquarie
  - o Time of the day of calls

### Stage 2 Work Breakdown Structure

Priority	Task	Acceptance Testing	Time
1	Develop further commands Set of commands for users: Transaction log on exiting; with optional ability to email transcript	On exiting the user is asked if they wish to be sent a transcript by giving an email address. End result user obtains transcript.	4 days
	Automate some features, eg FAQs or "answering machine" or instructions out of hours	Operator can provide templated response eg top ten most frequently asked FAQs.	2 days
	Advance transfer function with context	Operator receiving forwarding query knows prior discussion between frontline librarian and user	2-3 days
2	Develop further rules codes. Ensuring existing and new rules are configurable.	Rules are checked to ensure compliance	5 days
	Automatically directing callers to a particular operator based on the attributes of the caller	Arrange for a client with known attributes to be matched automatically with appropriate operator (eg PG Law@ Murdoch with Murdoch law librarian)	3-4 days
	Operator has option to nominate as frontline service (accept all calls) or specialised (accept forwarded calls) Change status of Operator between frontline and specialised	Operator (direct or via administrator) can choose to accept all calls or be a 'referred' operator	2 days
3	Seek feedback through exit survey	On exiting the user is asked to participate in a feedback survey. Results fed to statistics database	5 days

4	<p>Statistics</p> <p>Length of calls and number of messages exchanged</p> <p>Number of concurrent calls each librarian receives</p> <p>Number of turnaways during operating hours</p> <p>Number of calls forwarded</p> <p>Number of calls received from categories of users (eg external/offshore/postgrad etc)</p>	<p>All required statistics to automatically populate a 'statistics database'</p> <p>Start time-end time and total length of session. Measures how busy the service is</p> <p>Measures workload of operators and can determine need for more staff or raising number of concurrent callers</p> <p>Measures how many users are unable to obtain access due to exceeding number of concurrent users</p> <p>Measures how many calls cannot be satisfactorily answered by frontline staff</p> <p>Measures the use of service by different categories of users</p>	2-3 days
5	<p>Set-up a web page for guest users to answer compulsory questions before given access</p> <ul style="list-style-type: none"> <li>Develop questions about the user</li> </ul>	<p>That the operator provides basic reference service and refers where necessary</p>	2-3 days
6	<p>Administration module</p> <p>Develop trust function – specify features that operator doesn't need to log-in each time (useful for users too)</p> <p>Administrator to determine operator operating parameters</p>	<p>Operators are required every two weeks to log-in to system. Students every 24 hours</p> <p>Administrator(s) can select operators to either be frontline or subject specialist and/or set up system in order for operators to self-select this option</p>	4 days
7	<p>Ability to deep link from resources in the Library</p>	<p>Provides initial information to the operator based on what the user has already searched, eg within catalogue or a database.</p>	1-2 days

8	<p>Add chat room functionality so multiple operators can be in conversation with a user.</p> <p>Multiple users can chat to an operator in a 'conference room' environment.</p>	<p>A frontline operator forwards to a subject specialist and then remains in the conversation with the user.</p> <p>'Tutorial' set-up, would require arranging in advance. Students talk to students as well as operator. Everyone one logged in but don't have to exchange identities with each other.</p>	<p>8-10 days</p>
9	<p>Improve current system to receive more detailed sets of users' attributes</p>	<p>Operator could interrogate attributes of user without asking further questions</p>	<p>1 day</p>
10	<p>Produce a report on the evaluation of the service</p>	<p>Analysis of usage statistics, exit survey, ease of operation from operators, benefits of authentication and smart allocation of calls</p>	<p>1-2 days</p>
11	<p>Develop system to a stage where it can be easily deployed and configured by other institutions, including providing adequate packaging, documentation and interfaces</p>	<p>A CD and relevant documentation is produced</p>	<p>5+ days</p>

\* It also need some extra design work for the whole system before we start coding.