

Electronic Journal Index
Systems Analysis and Design Project
Part 2
Systems Design Report

Mike Lawrence
Mike Patti
Jeff Raybuck

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1. Management Summary

1.1 Problem

The MCS department has observed an opportunity to develop a new system that would aid college professors across the world. Many universities require professors to submit articles for publication in academic journals. There are hundreds of academic journals in publication. With this wide variety of choices, professors face a difficult task in finding an appropriate journal in which to publish their work. Currently, only authors of business related articles have a reference available to find journals. The resource, Cabel's, records information on hundreds of business related academic journals. The journals in Cabel's are indexed by Category, but no further search criteria are available. Observing the deficiencies of Cabel's, the MCS department decided to begin a new application development project.

The Cabel's system provides many opportunities for improvement, all of which point to the development of an Internet based system. Cabel's is only available in business libraries on college campuses. Users are limited to the library's hours to access the information. Further, the reference can not be checked out, and there is often only one copy available. Providing a system on the Internet allows users to access the system at any time, from any location. Second, print media limits the update frequency of the reference. Cabel's is reprinted every two years. A database system can be constantly updated. Cabel's limits searches to by journal category. A computerized system will allow more detailed search functionality. Finally, Cabel's is limited in scope to business related journals. Developing a new system allows the scope of the reference to be expanded to include many more disciplines.

1.2 Feasibility Analysis

Three feasibility analyses were performed during the design phase of the project. All three pointed to the use of Microsoft Visual InterDev as a development tool and Microsoft Internet Information Server as a platform. An operational feasibility analysis indicates that the Active Server Pages produced by InterDev will provide the necessary functionality for the system. Using a technical feasibility analysis, InterDev was again chosen as the development tool. InterDev provides a drag and drop development environment similar to tools the team has used in the past. This similarity decreased the learning curve involved in systems development. Finally, development using InterDev and IIS is feasible from an economic point of view. Academically priced, InterDev costs less than \$50. The MCS department already owns NT Server and IIS, placing the platform cost at \$0.

1.3 Recommended Solution

Following the detailed design analysis, the project team recommended developing a web-enabled database system using Microsoft Visual InterDev.

1.4 Summary of System Requirements

In order for the MCS department to run the developed system, they will have to meet the following criteria. The web server must be running Windows NT version 4.0, with Internet Information Server version 4.0. Both of these criteria are already met. Visual Studio web server extensions will have to be applied to the server before putting the system into production. The server running the system also needs an ODBC data source named EJI, pointing to eji.mdb (an Access database that can be found on the root

of this CD). From a user point of view, either Internet Explorer or Netscape Navigator 4.0 or above should be used to access the system.

1.5 Overview of System Design

Due to the limited initial scope of the system, we had no trouble allocating the responsibilities of the system design. One team member took care of the database and system level support, as well as the administrative log on screen, menu system, and the journal data entry screens. A second team member was in charge of the user search screen. The final team member worked on the other data entry screens and all edit and delete screens.

1.6 Recommendation

The Electronic Journal Index is a long-term project at its first stage of completion. The database currently contains only test data. Due to the slowness of data entry over the Internet, we recommend the initial data population take place using Access directly. Once the system is populated with data, it will be ready for launch on the web. The user side of the system is fully functional and ready for use. However, we only recommend using the administrative side of the system for infrequent adds or edits.

Future versions of the system can take advantage of many recommended improvements. First, the data entry screens need to be upgraded to support data validation. A better search interface can be implemented for the edit and delete screens. Some completely new features are recommended as well. To facilitate keeping data current, the system should allow publishers to edit their own journal records. The database contains a field for publisher password, which is currently not in use. The

system allows for detailed journal information to be displayed in an HTML file.

Currently, the file must be manually linked into the system. A recommended feature is to automate this process. Finally, the team recommends the addition of the ability for users to rate journals. In the long term, once the system has established a user base, a billing module should be implemented to allow revenue generation from the system.

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3. Design Overview

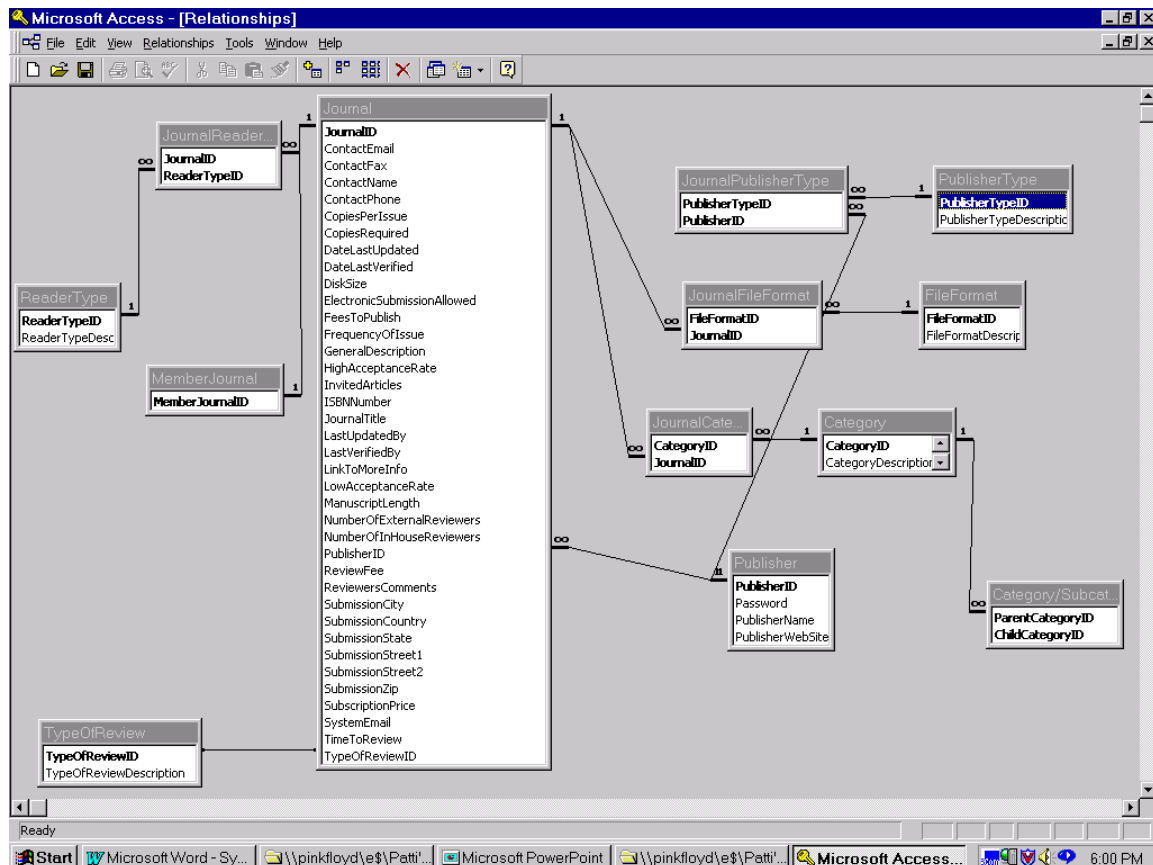
3.1 *Description of application architecture*



The Electronic Journal Index system is an Internet based system. The system uses a two-tier, client / server architecture. The web server hosts most of the application logic and the database. Most of the Active Server Pages code is run server-side. Using the Internet as a means of connection, clients anywhere in the world can connect to the system. A very small part of the code is run on the client, placing some application logic on this side.

4. Data Design

4.1 Global entity/relationship data model



This E-R model for the Electronic Journal Index system was copied from Microsoft Access' relationship viewer. The database file, eji.mdb, can be found on the root of this CD.

There are several things to note about the E-R diagram. Journal is the primary entity in the system. It contains relationships with many other entities in the system. A many-to-many relationship exists between Journal and Reader Type. The JournalReaderType entity acts as an intersection entity between these two entities. JournalFileFormat and JournalCategory exist for the same reason. There is also a many-

to-many relationship between Publisher and PublisherType. JournalPublisherType is the intersection entity breaking up this relationship. TypeOfReview exists in a one-to-many relationship with Journal. It provides a valid list of review types for journal data entry.

The final two entities on the model exist for unique purposes.

CategorySubCategory stores a hierarchical relationship of categories in the Category entity. Any category instance can be a parent or a child of other categories. For example, the category Business is a parent category of Accounting. In this example, Accounting is the child category. However, Accounting can simultaneously be a parent category. For example, a category like Tax Accounting may be a child of Accounting. The code that performs journal searches uses this entity to search subcategories if desired by the user.

MemberJournal stores a list of journals that have been granted membership to the system.

At this stage of the project, every journal will be a member. However, in the future, it is possible that administration wishes to restrict a journal from appearing in user queries.

By removing a Journal instance from the MemberJournal entity, this goal is accomplished. At the same time, all the details of the removed journal are still being stored in the journal entity.

4.2 Physical data model

Journal Table					
Field Name	Data Type	Field Size (Bytes)	Domain	Default Values	Null / Not Null
JournalID	Text	8			Not Null
ContactEmail	Text	50			Null
ContactFax	Text	12			Null
ContactName	Text	25			Null
ContactPhone	Text	12			Null
CopiesPerIssue	Number	4	Positive		Null
CopiesRequired	Number	1	Positive		Null
DateLastUpdated	Date	8			Null

DateLastVerified	Date	8			Null
DiskSize	Text	10			Null
ElectronicSubmissionAllowed	Yes/No	1	Yes/No	No	Null
FeesToPublish	Currency	8	Positive	0	Null
FrequencyOfIssue	Number	2			Null
GeneralDescription	Memo	65K			Null
HighAcceptanceRate	Number	1	0-100%		Not Null
InvitedArticles	Number	1	0-100%		Null
ISBNNumber	Text	30			Null
JournalTitle	Text	50			Not Null
LastUpdatedBy	Text	25			Null
LastVerifiedBy	Text	25			Null
LinkToMoreInfo	Hyperlink	60K			Null
LowAcceptanceRate	Number	1	0-100%		Not Null
ManuscriptLength	Number	2			Null
NumberOfExternalReviewers	Number	1			Null
NumberOfInHouseReviewers	Number	1			Null
PublisherID	Text	8			Not Null
ReviewFee	Currency	8	Positive	0	Null
ReviewersComments	Yes/No	1	Yes/No		Null
SubmissionCity	Text	20			Null
SubmissionCountry	Text	20			Null
SubmissionState	Text	2			Null
SubmissionStreet1	Text	30			Null
SubmissionStreet2	Text	30			Null
SubmissionZip	Text	10			Null
SubscriptionPrice	Currency	8	Positive	0	Null
SystemEmail	Text	50			Null
TimeToReview	Text	15			Null
TypeOfReviewID	Text	8			Not Null

MemberJournal Table					
Field Name	Data Type	Field Size (Bytes)	Domain	Default Values	Null / Not Null
MemberJournalID	Text	8			Not Null

JournalCategory Table					
Field Name	Data Type	Field Size (Bytes)	Domain	Default Values	Null / Not Null
CategoryID	Text	8			Not Null
JournalID	Text	8			Not Null

JournalFileFormat Table					
Field Name	Data Type	Field Size (Bytes)	Domain	Default Values	Null / Not Null

FileFormatID	Text	8			Not Null
JournalID	Text	8			Not Null

JournalPublisherType Table					
Field Name	Data Type	Field Size (Bytes)	Domain	Default Values	Null / Not Null
PublisherTypeID	Text	8			Not Null
PublisherID	Text	8			Not Null

JournalReaderType Table					
Field Name	Data Type	Field Size (Bytes)	Domain	Default Values	Null / Not Null
ReaderTypeID	Text	8			Not Null
JournalID	Text	8			Not Null

Publisher Table					
Field Name	Data Type	Field Size (Bytes)	Domain	Default Values	Null / Not Null
PublisherID	Text	8			Not Null
Password	Text	10	At least 4		Null
PublisherName	Text	50			Not Null
PublisherWebSite	Hyperlink	60K			Null

PublisherType Table					
Field Name	Data Type	Field Size (Bytes)	Domain	Default Values	Null / Not Null
PublisherTypeID	Text	8			Not Null
PublisherTypeDescription	Text	20			Not Null

ReaderType Table					
Field Name	Data Type	Field Size (Bytes)	Domain	Default Values	Null / Not Null
ReaderTypeID	Text	8			Not Null
ReaderTypeDescription	Text	20			Not Null

TypeOfReveiw Table					
Field Name	Data Type	Field Size (Bytes)	Domain	Default Values	Null / Not Null
TypeOfReviewID	Text	8			Not Null
TypeOfReviewDescription	Text	20			Not Null

Category Table					
Field Name	Data Type	Field Size (Bytes)	Domain	Default Values	Null / Not Null
CategoryID	Text	8			Not Null

CategoryDescription	Text	20			Not Null
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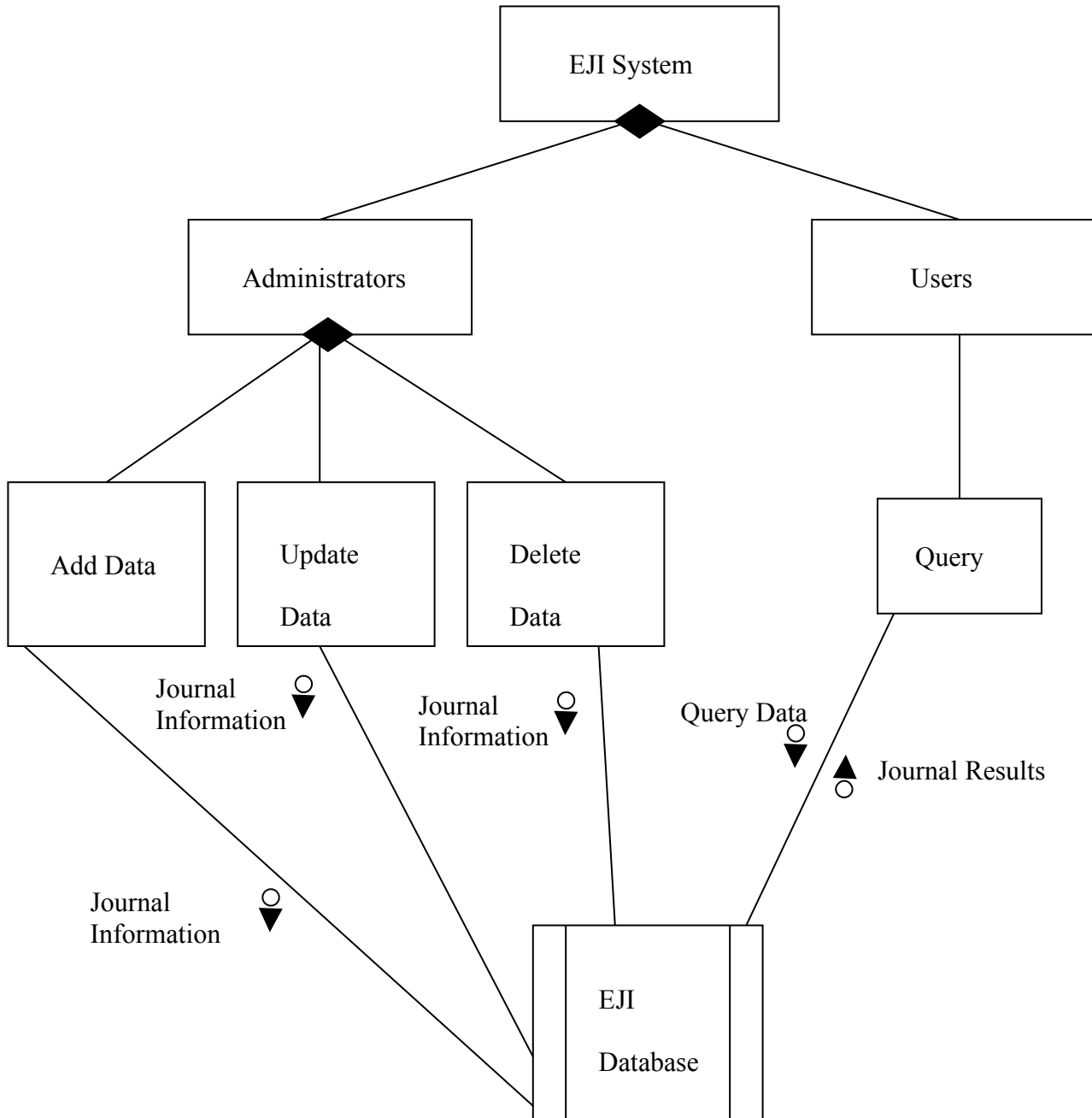
Category/Subcategory Table					
Field Name	Data Type	Field Size (Bytes)	Domain	Default Values	Null / Not Null
ParentCategoryID	Text	8			Not Null
ChildCategoryID	Text	8			Not Null

FileFormat Table					
Field Name	Data Type	Field Size (Bytes)	Domain	Default Values	Null / Not Null
FileFormatID	Text	8			Not Null
FileFormatDescription	Text	20			Not Null

The above set of tables shows the database schema for the Electronic Journal Index system. The tables show the attribute names for each entity, and the data types of those attributes.

5. Software Design

5.1 Overview of Physical Model



The structure chart on the previous page shows how navigation through the system occurs. Upon entering the system, a visitor is faced with two choices, Administrator or User. Under the User menu, there is only one choice, Search. Administrators are faced with three choices, Add data, Edit data, and Delete data. Submenus to these areas allow Administrators to add, edit, or delete records from different entities, but the functionality is the same for each.

5.2 Program Structures

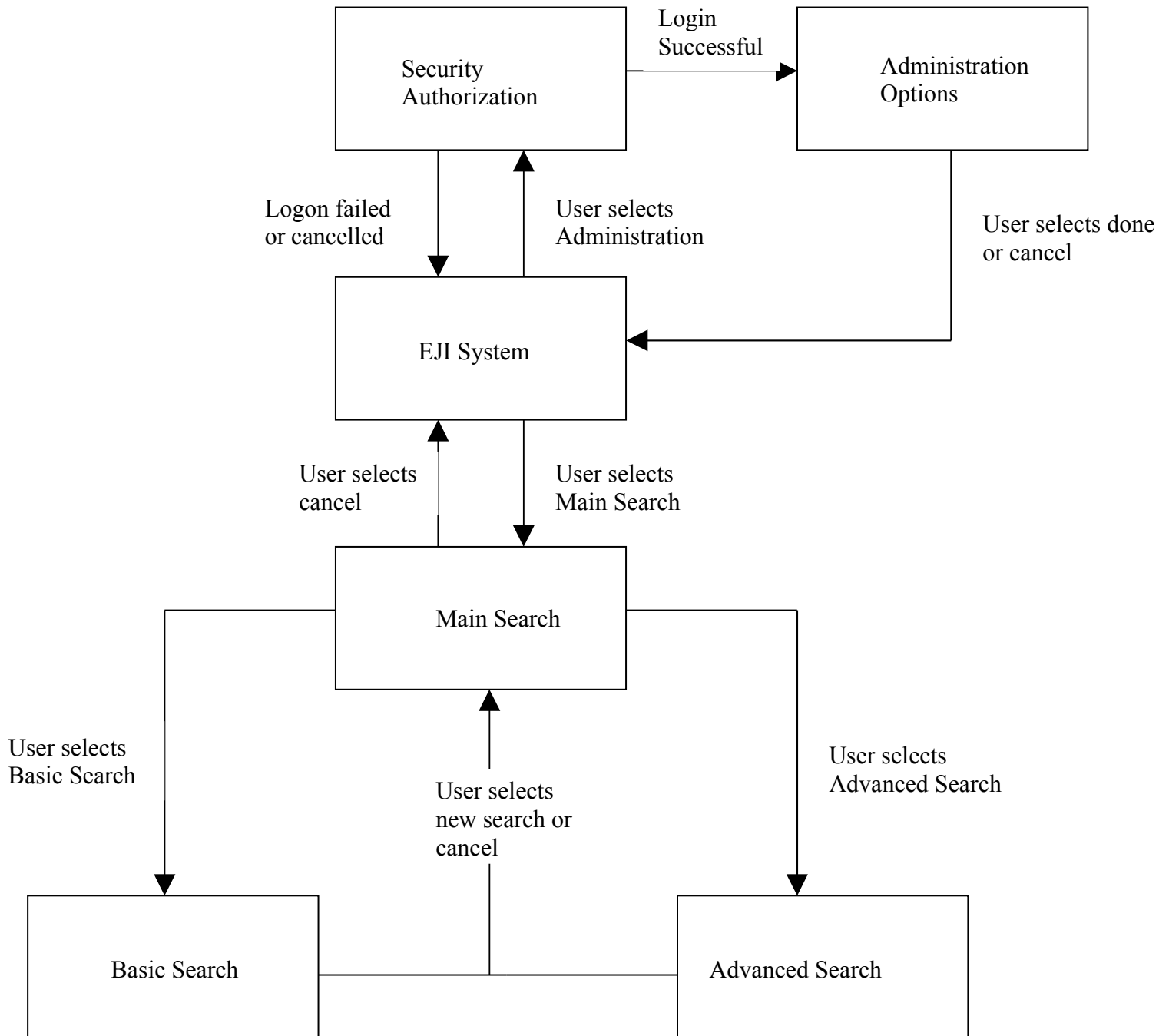
Due to the limited scope of the project, module structure charts are not necessary. The structure chart shown in section 5.1 breaks the system down into its most basic components.

Interface Design

6.1 General Interface Style

The Electronic Journal Index is a web-based information system. The main feature of the interface is the use of framesets. A menu frame is available at all times on the left-hand side of the browser. Site visitors can navigate to any aspect of the system from this menu. The only time a visitor should use the browser provided navigation buttons is when leaving the site. When a menu choice is clicked, the menu updates itself to display the next level of choices. Lower level menus always provide a way of getting back to higher level menus. Data entry screens feature both text boxes and drop down boxes. Buttons are used to save or undo changes. Record navigation bars provide the means of navigating tables to find records to edit or delete.

6.2 Dialogs



The above state transition diagram shows the hierarchy of navigation through the site.

6.3 Screens (inputs) and reports (external and internal)

Principal screens for input

The screenshot shows a web browser window with the following content:

Data Entry Menu

- [Add a New Journal](#)
- [Journal](#)
- [Maintenance](#)
- [Add a New Publisher](#)
- [Publisher](#)
- [Maintenance](#)
- [Add a New Category](#)
- [Category](#)
- [Maintenance](#)
- [Add a New File](#)
- [Format](#)
- [Add a New Reader](#)
- [Type](#)
- [Add a New Publisher Type](#)
- [Add a New Type of Review](#)
- [Review](#)

Main Menu

- [Administrators](#)
- [Users](#)

JOURNAL TABLE

(ADD A NEW JOURNAL)

Journal Information (Field Definitions)

Journal ID	<input type="text"/>	Journal Title	<input type="text"/>
Low Acceptance Rate	<input type="checkbox"/>	High Acceptance Rate	<input type="checkbox"/>
Publisher ID	<input type="text" value="Mike Publishing"/>	Type of Review ID	<input type="text" value="Editorial"/>
Copies Per Issue	<input type="text"/>	Copies Required	<input type="text"/>
Fees To Publish	<input type="text"/>	Frequency Of Issue	<input type="text" value="4"/>
Number Of External Reviewers	<input type="text"/>	Number Of In House Reviewers	<input type="text"/>
Reviewers Comments	<input type="checkbox"/> (Check for Yes)	Review Fee	<input type="text"/>
Time To Review	<input type="text"/>	Invited Articles	<input type="text"/>
Manuscript Length	<input type="text"/>	Subscription Price	<input type="text"/>
Electronic Submission Allowed	<input type="checkbox"/> (Check for Yes)	Disk Size	<input type="text" value="3.5"/>
General Description			
<input type="text"/>			
Link To More Information	<input type="text"/>	ISBN Number	<input type="text"/>
Contact Information		Submission Address	
Name	<input type="text"/>	<input type="text"/>	<input type="text"/>
Phone	<input type="text"/>	<input type="text"/>	<input type="text"/>
Fax	<input type="text"/>	<input type="text"/>	<input type="text"/>

(Journal Record Data entry screen)

The screenshot shows a web browser window titled "Electronic Journal Index - Microsoft Internet Explorer". The address bar displays "http://pinkfloyd/eji/". The page content is divided into two main sections. On the left, a yellow sidebar contains a "Data Entry Menu" with links for "Add a New Journal", "Journal Maintenance", "Add a New Publisher", "Publisher Maintenance", "Add a New Category", "Category Maintenance", "Add a New File Format", "Add a New Reader Type", "Add a New Publisher Type", and "Add a New Type of Review". Below this is a "Main Menu" with links for "Administrators" and "Users". The main content area is also yellow and features the title "Electronic Journal Index Administrative Login Screen" in large blue text. Below the title, it says "Please enter your login name and password to login to the system." There are two input fields: "User Name:" and "Password:". Below the "Password:" field are two buttons: "Login" and "Reset". The browser's status bar at the bottom shows "Local intranet zone" and the time "5:01 PM".

Electronic Journal Index - Microsoft Internet Explorer

File Edit View Go Favorites Help

Back Forward Stop Refresh Home Search Favorites History Channels Fullscreen Mail Print

Address <http://pinkfloyd/eji/> Links

Data Entry Menu

[Add a New Journal](#)
[Journal Maintenance](#)
[Add a New Publisher](#)
[Publisher Maintenance](#)
[Add a New Category](#)
[Category Maintenance](#)
[Add a New File Format](#)
[Add a New Reader Type](#)
[Add a New Publisher Type](#)
[Add a New Type of Review](#)

Main Menu
[Administrators](#)
[Users](#)

Electronic Journal Index Administrative Login Screen

Please enter your login name and password to login to the system.

User Name:

Password:

Login Reset

Local intranet zone

Start N-Internet Electronic Journal In... 5:01 PM

(Administrative Password data entry screen)

6.3.2 Principal reports / output screens

JOURNAL INFORMATION	
Journal Title: TEST RECORD	Category: Business Tax Accounting
General Description: This journal is used to publish articles about testing web enabled database systems.	
Acceptance Rate: 0 to 15 Percent	Journal Reader Type: Academic
Publisher: Mike Publishing	Type of Review: Editorial
Copies Per Issue: 5000	Copies Required: 3
Fees To Publish: 5	Frequency Of Issue: 4
Number Of External Reviewers: 3	Number Of In House Reviewers: 2
Reviewers Comments: Yes	Review Fee: 2
Time To Review: 3 weeks	Invited Articles: 5
Manuscript Length: 250	Subscription Price: 3.99
Electronic Submission Allowed: Yes	Disk Size: 3.5"
Link To More Information: http://mcs.uww.edu	ISBN Number:
Contact Information:	Submission Address:
Name: Michael J. Patti	1024 W. Starin 203 Arey Hall Whitewater,WI 53190 USA
Phone: 414-472-2286	
Fax: 414-472-2286	
Email: pattimj13@uwwax.uww.edu	
File Format Accepted: Microsoft Word 97 Word Perfect 8	
Date Last Verified: 4/28/1999	Last Verified By: Mike Patti
Date Last Updated: 4/28/1999	Last Updated By: Mike Patti

(Query Results output screen / report)

7. Training and systems support

7.1 Training manual

The system does not have an external training manual. Any help visitors to the site should need can be found right on the site. As menu options are chosen, the right hand frame changes to a help screen customized for the selected aspect of the system. In addition to the help mentioned above, we have made all links and buttons as descriptive as possible to help visitors in making decisions.

Testing

In order to test the system, data was added to each entity via the web-based system. All delete and edit screens were tested as well. The search screen was tested using each option at least once, and multiple options concurrently.

8. Recommendation

8.1 Recommended Action

The MCS department needs to take several steps before using the Electronic Journal Index system. First, the system must be populated with initial data. Due to the slowness of data entry over the Internet, we recommend that this initial data dump take place via direct interaction with Microsoft Access. Once the database has been populated, the system will be ready for use.

Appendix

9.1 Feasibility analysis

Feasibility Criteria	Wt.	Candidate 1	Candidate 2	Candidate 3
<p>Operational Feasibility</p> <p>Functionality. A description of to what degree the candidate would benefit the organization and how well the system would work.</p> <p>Political. A description of how well received this solution would be from both user management, user, and organization perspective.</p>	30%	<p>Oracle is an enterprise wide DBMS. The product would easily support a project of this scope. We foresee no problems with capacity or speed using Oracle. However, version 8i of this product is not yet on campus. Due to the incredible cost of this product, we feel user management would have a problem with this candidate.</p> <p>Score: 75</p>	<p>Fully supports user required functionality.</p> <p>Score: 100</p>	<p>Same as Candidate 2.</p> <p>Score: 100</p>
<p>Technical Feasibility</p> <p>Technology. An assessment of the maturity, availability (or ability to acquire), and desirability of the computer technology needed to support this candidate.</p> <p>Expertise. An assessment to the technical expertise needed to develop, operate, and maintain the candidate system.</p>	30%	<p>Oracle is currently at version 8, indicating the maturity of the product. However, the Internet enabled version of this product is not currently available on campus. Due to the complexity of Oracle, much technical expertise would be necessary to develop using this tool.</p> <p>Score: 50</p>	<p>Visual InterDev has been on the market for several years, and is a maturing product. Based on current version number, the product is a mature technology. In addition, Active Server Pages, at version 2.0, is a maturing technology. Training developers in the use of this technology is relatively simple.</p> <p>Score: 90</p>	<p>JAVA has been used on the Internet for several and is a maturing technology. JAVA is a less developer friendly environment to develop in compared to other candidate's. This solution would require more technical expertise</p> <p>Score: 70</p>
<p>Economic Feasibility</p> <p>Cost to develop:</p> <p>Payback period:</p> <p>Net present value:</p> <p>Detailed calculations:</p>	30%	<p>Approximately: \$ 11,960</p> <p>Approximately: 6 years</p> <p>Approximately: -\$3,700</p> <p>See Schedule A</p> <p>Score: 20</p>	<p>Approximately: \$100</p> <p>Approximately: < 1 year</p> <p>Approximately: \$7,300</p> <p>See Schedule A</p> <p>Score: 100</p>	<p>Approximately: \$0</p> <p>Approximately: < 1 year</p> <p>Approximately: \$7,400</p> <p>See Schedule A</p> <p>Score: 100</p>
<p>Schedule Feasibility</p> <p>An assessment of how long the solution will take to design and implement.</p>	10%	<p>9-15 months</p> <p>Score: 10</p>	<p>3-6 months</p> <p>Score: 100</p>	<p>3-9 months</p> <p>Score: 90</p>
Ranking:	100%	44.5	97	90

9.2 Candidate matrix

Characteristics	Candidate 1	Candidate 2	Candidate 3
Portion of System Computerized Brief description of that portion of the system that would be computerized in this candidate.	Oracle 8i would be purchased and used to build the entire system.	Use Microsoft Access to build the database, and connect to it using Microsoft Visual InterDev Active Server Pages technology.	Use Microsoft Access to build the database, and use Java code (JDBC) to connect to the database on the web pages.
Benefits Brief description of the business benefits that would be realized for this candidate.	Oracle is an enterprise level database. A system built using Oracle would have no problem handling large volumes of data.	Active Server Pages are growing in popularity. Finding people to support this technology should be relatively easy.	Same as candidate 2.
Servers and Workstations A description of the servers and workstations needed to support this candidate.	A Pentium II class Windows NT Server would be required to run the site. An Oracle database server would have to be running on the machine along with web server software. Any workstation equipped with a current web browser would be able to access the system.	The hardware requirements for the server are the same as candidate 1. However, Active Server Pages requires Windows NT Server and Microsoft Internet Information Server to be running on the machine. Again, any workstation with a current web browser would be able to access the system.	Same as candidate 2
Software Tools Needed Software tools needed to design and build the candidate (e. g., database management system, emulators, operating systems, languages, etc.). Not generally applicable if applications software packages are to be purchased.	<ul style="list-style-type: none"> • Oracle 8i • Web Browser 	<ul style="list-style-type: none"> • Microsoft Access 97 • Microsoft Visual InterDev 6.0 • Web Browser • Internet Information Server 	<ul style="list-style-type: none"> • Microsoft Access 97 • Web Browser • Internet Information Server
Application Software A description of the software to be purchased, built, accessed, or some combination of these techniques.	Custom Solution	Same as candidate 1	Same as candidate 1
Method of Data Processing Generally some combination of: on-line, batch, deferred batch, remote batch, and real-time.	Client / Server using the Internet	Same as candidate 1	Same as candidate 1
Output Devices and Implications A description of output devices that would be used, special output requirements, (e.g. network, preprinted forms, etc.), and output considerations (e.g., timing constraints).	Web pages must be designed to be viewable on a variety of client platforms.	Same as candidate 1	Same as candidate 1
Input Devices and Implications A description of Input methods to be used, input devices (e.g., keyboard, mouse, etc.), special input requirements, (e.g. new or revised forms from which data would be input), and input considerations (e.g., timing of actual inputs).	Keyboard and mouse	Same as candidate 1	Same as candidate 1
Storage Devices and Implications Brief description of what data would be stored, what data would be accessed from existing stores, what storage media would be used, how	Oracle 8i would be used to store data. At least 1 Gig of storage will be required.	Microsoft Access 97 will be used to store the data. On the high end of storage needs, an estimated 1 Gig storage will be required.	Same as candidate 2

much storage capacity would be needed, and how data would be organized.			
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9.3 Application architecture diagrams

[See section 3.1.](#)

9.4 Logical data model

[See section 4.1.](#)

9.5 Physical data file definitions

[See section 4.2.](#)

9.6 Structure charts

[See section 5.1.](#)

9.7 Module logic

[See section 5.2.](#)

9.8 State transition diagram

[See section 6.2.](#)

9.9 Screen and report layouts

The screenshot shows a Microsoft Internet Explorer browser window displaying a web application. The browser's address bar shows the URL <http://pinkfloyd/eji/>. The page is titled "Electronic Journal Index - Microsoft Internet Explorer".

The main content area is divided into two sections. On the left is a yellow sidebar titled "Data Entry Menu" containing several links: [Add a New Journal](#), [Journal Maintenance](#), [Add a New Publisher](#), [Publisher Maintenance](#), [Add a New Category](#), [Category Maintenance](#), [Add a New File Format](#), [Add a New Reader Type](#), [Add a New Publisher Type](#), and [Add a New Type of Review](#). Below these links are three more links: [Main Menu](#), [Administrators](#), and [Users](#).

The right section is titled "PUBLISHER TABLE" and contains the sub-heading "(ADD A NEW PUBLISHER)". Below this heading is a form with the following fields and controls:

- Publisher Id:
- Publisher Name:
- Publisher Web Site:
- Primary Publisher Type:

At the bottom of the form are two buttons: "Add Record" and "Clear".

The browser's taskbar at the bottom shows the Start button, several open folders (\\pinkfloyd...), a Microsoft Word window, and a taskbar with the time 8:46 PM.

(Data entry example)

Electronic Journal Index - Microsoft Internet Explorer

File Edit View Go Favorites Help

Back Forward Stop Refresh Home Search Favorites History Channels Fullscreen Mail Print

Address <http://pinkfloyd/eji/> Links

Publisher Maintenance Menu

[Add a New Publisher Type Record](#)

[Main Menu](#)
[Administrators](#)
[Users](#)

[Data Entry](#)

PUBLISHER TABLE
(Stores Publisher Types associated with a Publisher)

(ADD A PUBLISHER TYPE)

Publisher Publisher Type

Local intranet zone

Start \\pinkfloyd... \\pinkfloyd... \\pinkfloyd... \\pinkfloyd... Microsoft ... N:\ N:\Internet Electroni... 8:48 PM

(Intersection table data entry screen)

The screenshot shows a Microsoft Internet Explorer browser window titled "Electronic Journal Index - Microsoft Internet Explorer". The address bar displays "http://pinkfloyd/eji/". The browser interface includes a menu bar (File, Edit, View, Go, Favorites, Help) and a toolbar with buttons for Back, Forward, Stop, Refresh, Home, Search, Favorites, History, Channels, Fullscreen, Mail, and Print. The main content area is divided into two sections:

- Data Deletion Menu:** A yellow sidebar containing a list of links: [Delete a Journal](#), [Delete a Publisher](#), [Delete a Category](#), [Delete a File Format](#), [Delete a Reader Type](#), [Delete a Publisher Type](#), and [Delete a Type of Review](#). Below this list are links for [Main Menu](#), [Administrators](#), and [Users](#).
- JOURNAL TABLE (DELETE A JOURNAL):** A form with the following fields:
 - Journal Title:** A text input field containing "TEST RECORD".
 - Journal Description:** A text area containing "This journal is used to publish articles about testing web enabled database systems."Below the form are navigation buttons: "< < > >|" and a "Delete Record!" button.

The Windows taskbar at the bottom shows the Start button, several open folders (\\pinkfloyd...), a Microsoft Office application, and a taskbar icon for "Electroni...". The system tray on the right shows the time as 8:49 PM and the date as 12/1/2001.

(Data deletion screen)

Electronic Journal Index - Microsoft Internet Explorer

File Edit View Go Favorites Help

Back Forward Stop Refresh Home Search Favorites History Channels Fullscreen Mail Print

Address <http://pinkfloyd/eji/> Links

Edit Data Menu

[Edit Journal Data](#)
[Edit Publisher Data](#)
[Edit Category Data](#)
[Edit File Format Data](#)
[Edit Reader Type Data](#)
[Edit Publisher Type Data](#)
[Edit Type of Review Data](#)

[Main Menu](#)
[Administrators](#)
[Users](#)

PUBLISHER TABLE
(EDIT A PUBLISHER)

Publisher ID:

Publisher Password:

Publisher Name:

Publisher Website:

<| < > >|

Update Undo

Local intranet zone

Start \\pinkfloyd... \\pinkfloyd... \\pinkfloyd... \\pinkfloyd... Microsoft ... N:\ N:\Internet Electroni... 8:49 PM

(Data edit screen)

Example test data with proceduresCategory:

Category ID: 1234

Category Description: Business

Category Memo: Journals on business topics.

Category/Subcategory:

Parent Category ID: 1234

Child Category ID: 2345

File Format:

FileFormatID: 1234

FileFormatDescription: Microsoft Word 97

Journal:

JournalID: 1234

ContactEmail: pattimj13@uwvvax.uww.edu

ContactFax: 414-472-2286

ContactName: Michael J. Patti

ContactPhone: 414-472-2286

CopiesPerIssue: 1000

CopiesRequired: 5

DateLastUpdated: 5/3/1999

DateLastVerified: 5/3/1999

DiskSize: 3.5inch

ElectronicSubmissionAllowed: Yes

FeesToPublish: 5.99

FrequencyOfIssue: 4

GeneralDescription: This is a journal about Mike.

HighAcceptanceRate: 25

InvitedArticles: 3

ISBNNumber: 12-ADB-465-ADPODJ

JournalTitle: The Life and Times of Mike

LastUpdatedBy: Mike Patti

LastVerifiedBy: Mike Patti

LinkToMoreInfo: ../moreinfo/1234.html

LowAcceptanceRate: 5

ManuscriptLength: 125

NumberOfExternalReviewers: 3

NumberOfInHouseReviewers: 3

PublisherID: 1234

ReviewFee: 5.00

ReviewersComments: Yes

SubmissionCity: Whitewater

SubmissionCountry: USA

SubmissionState: WI

SubmissionStreet1: 1024 W. Starin

SubmissionStreet2: 203 Arey Hall

SubmissionZip: 53190

SubscriptionPrice: 4.95

SystemEmail: pattimj13@uwvvax.uww.edu

TimeToReview: 2

TypeOfReviewID: 1234

JournalCategory:

JournalID: 1234
CategoryID: 1234

JournalFileFormat:

JournalID: 1234
FileFormatID: 1223

JournalPublisherType:

PublisherID: 1234
PublisherTypeID: 1234

JournalReaderType:

JournalID: 1234
ReaderTypeID: 2334

MemberJournal:

JournalID: 1234

Publisher:

PublisherID: 1111
Password: hello
PublisherName: John's Publishing World
PublisherWebSite: <http://www.johnpubs.com>

PublisherType:

PubisherTypeID: 3214
PublisherTypeDescription: Corporate

ReaderType:

ReaderTypeID: 1241
ReaderTypeDescription: Academic

TypeOfReview:

TypeOfReviewID: 3223
TypeOfReviewDescription: Blind