

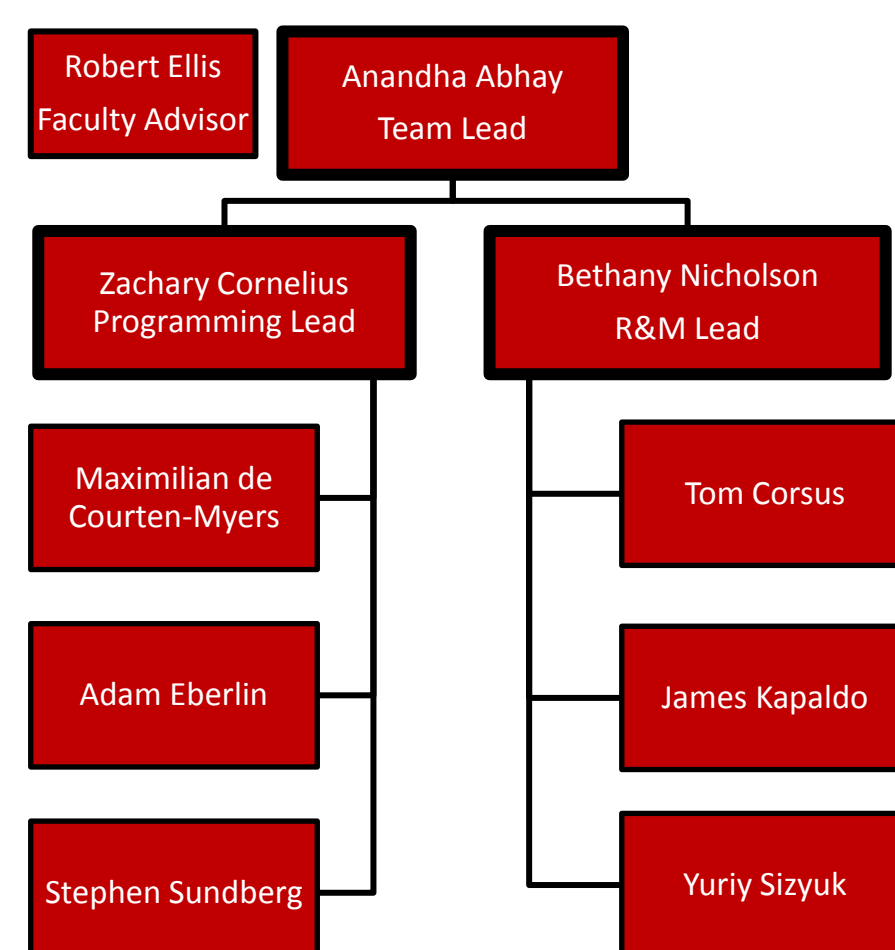
Problem

- Lack of understanding of research process
- Lack of promotion of research opportunities
- No place for student initiated research
- No central, online place for undergraduates to display research

Objectives

- Improve/Expand undergraduate research at IIT
- Survey the IIT population
- Design and Build the tools and features

Team Structure



Research & Marketing Team

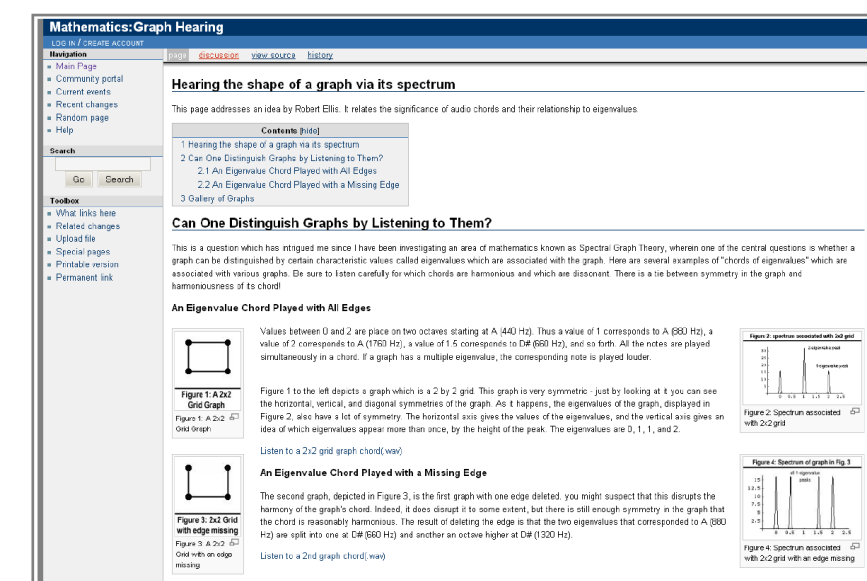
- Find out what would be most useful in an online research tool
- Learn about website design and usability
- Design the site features
- Map out the Site

Programming Team

- Learn about website design and usability
- Figure out which software to use
- Create the site
- Maintain the server

Site Background & Development

History of ResearchWeb



ResearchWeb began as an Undergraduate Research Fellowship for our team leader, Anandha Abhay, in Fall 2008. During the past year he did extensive background research and created a prototype of the site which allowed the team to start this semester with a well-defined direction.

Software

Ruby on Rails

Web Framework
Model-View-Controller architecture
Includes JavaScript libraries and Ajax
Open source

Redmine

Flexible project management web application
Open source



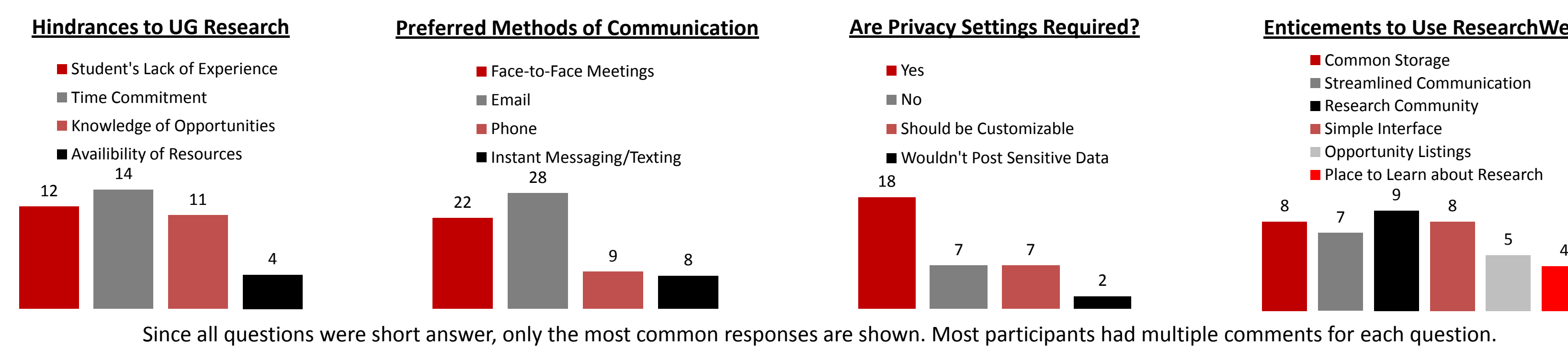
Server

Feature	Original Server	Temporary Server	Current Server	Virtual Private Server
Monthly Cost	Free	Free	Free	\$40.00
Student Administrative Access	✓	✓	*	✓
Secure Location		✓	✓	✓
Reliable Network Connection			✓	✓
Professional Maintenance			✓	✓
Guaranteed Up-time (5 9's)				✓

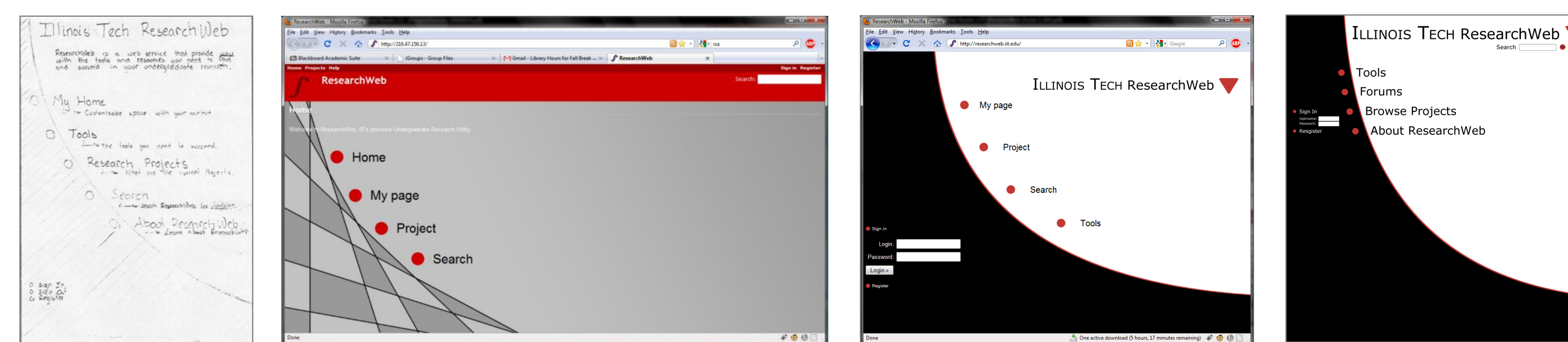
* Students have limited access

User Survey

The R&M team sent out an online survey targeting student and faculty researchers. The survey consisted of 6 short answer questions and we received 38 responses summarized below:



Website Design



Original Concept

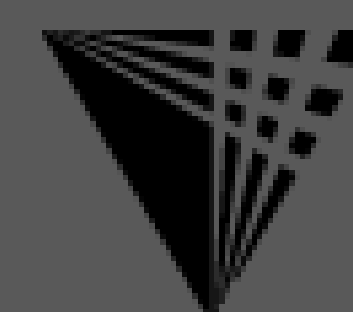
The Site at Midterm

The Current Site

Final Site Concept


Acknowledgments

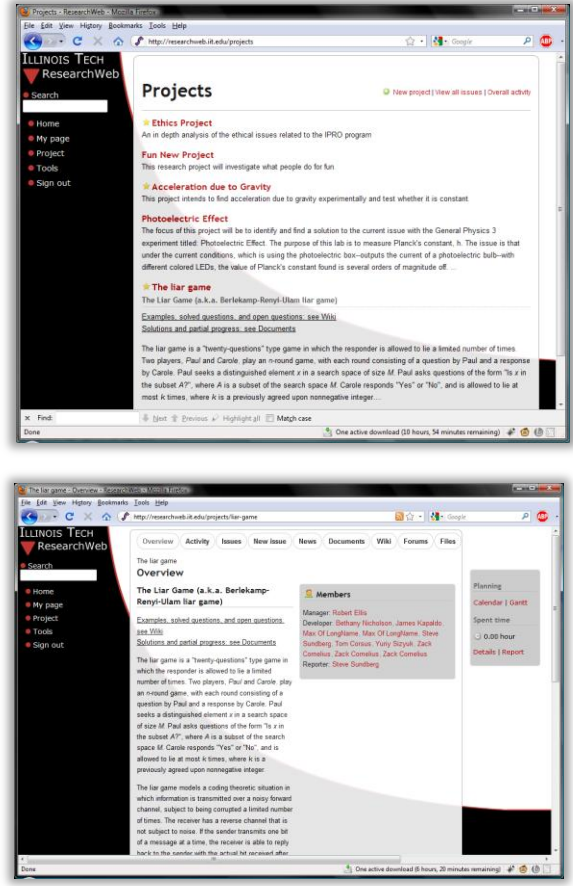
- We would like to thank
- Prof. Robert Ellis, our advisor
 - Prof. Eric Brey, Assistant Dean Office of Undergraduate Research
 - Prof. Karl Stolley, Co-director of the Usability Testing and Evaluation Center
 - Nickolay Schwarz, software developer at Centro
 - Sourixat Thavisouk, Executive Producer and CEO of A List TV
 - Jeffery Lee, Marketing consultant of BET



How it Works

Project

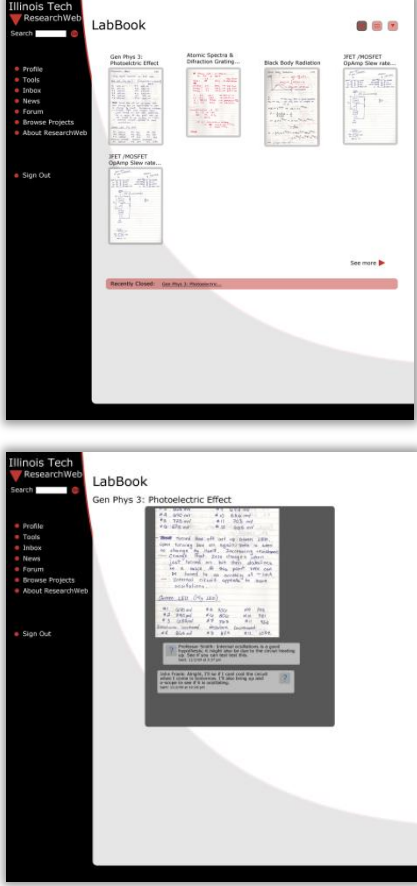
Concept 

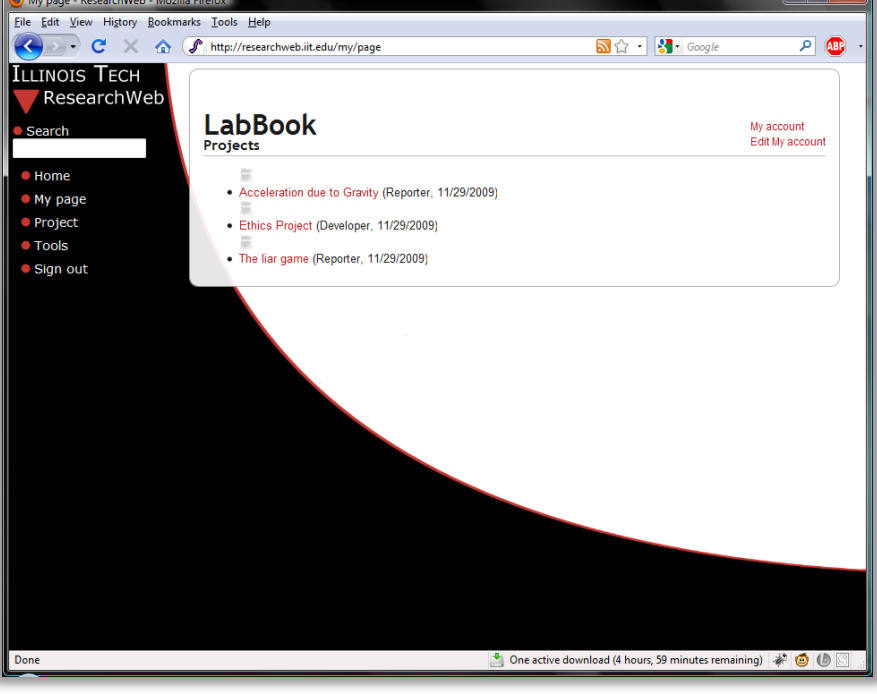
Current 

Functionality
 List of Collaborators
 Calendar
 Task Tracking
 Private Forum
 Announcements
 File/Data sharing via Lab Book

Projects can be personal or collaborative. Some privacy settings for projects have been implemented on the site. More privacy controls will be added in the future.

Lab Book

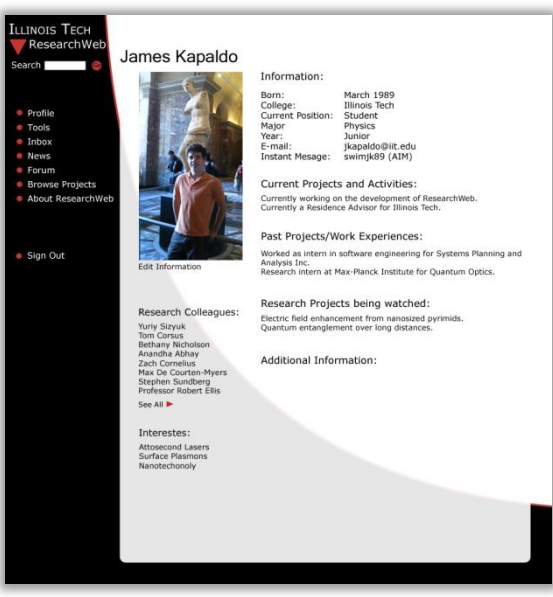
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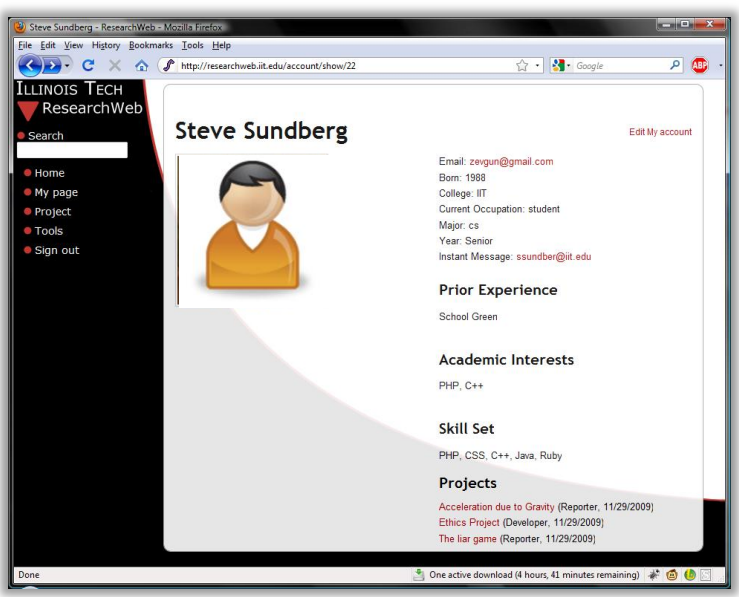
Current 

Functionality
 Post
 File
 Data
 Graph
 Image
 Commenting on Posts

Each user will have a personal lab book containing all the posts they have made to any project they worked on. Each project will have a lab book containing all posts made to that project.

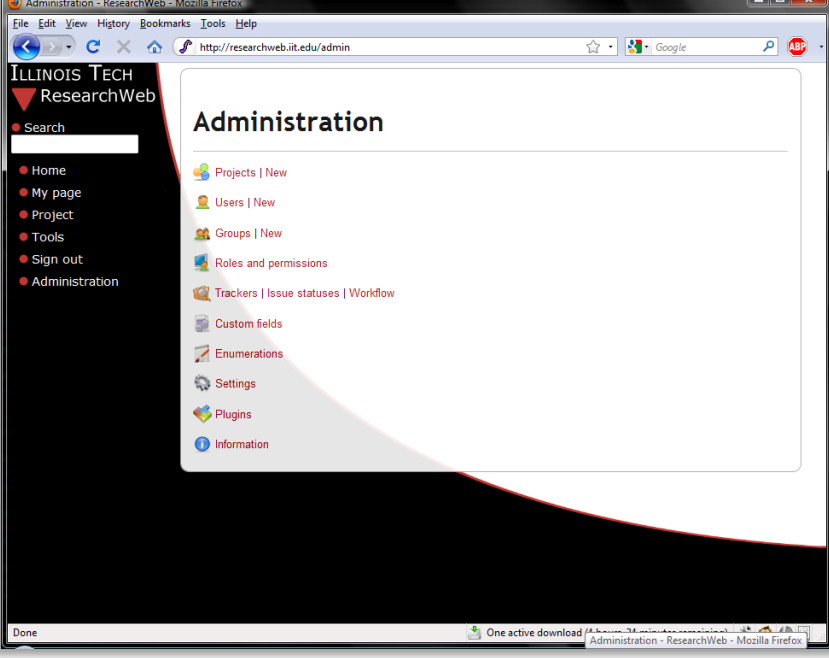
User Profile

Concept 

Current 

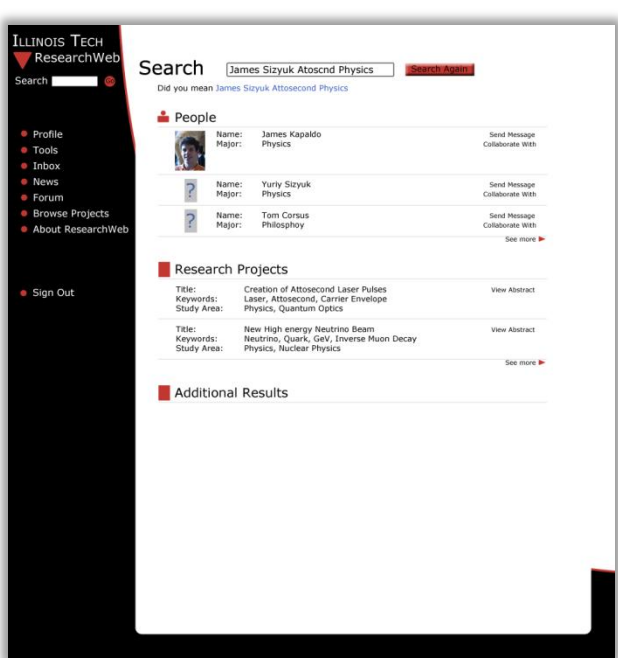
Functionality
 User Information
 Searchable Interests
 Informal Resume
 Contact Information
 List of Colleagues & Collaborators
 List of Projects Involved In
 Past Research
 Papers, Presentations, and Posters

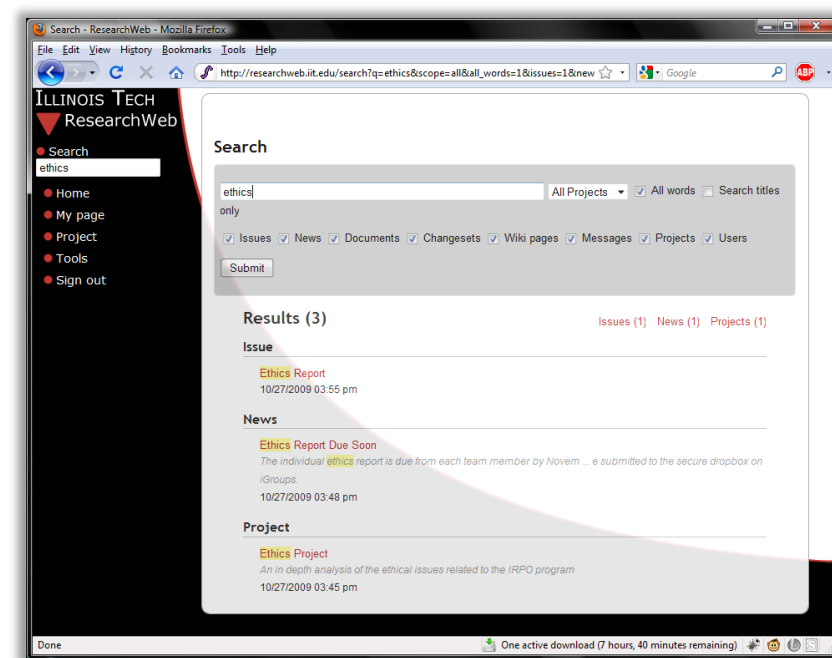
User Hierarchy

Current Admin Page 

The user hierarchy of ResearchWeb follows a cascading model. Permissions to access services cascade down from the most privileged, to the least. The order is as follows: Bots, Administrators, Faculty, Users, and Visitors. This allows ResearchWeb to maintain a strict work flow and keep each user or visitor from harassing projects they do not belong to. This set up also leaves room for adding new member levels in the future.

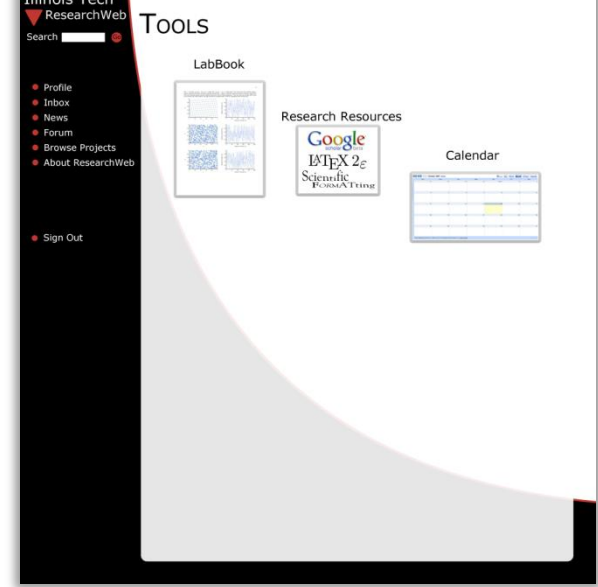
Search

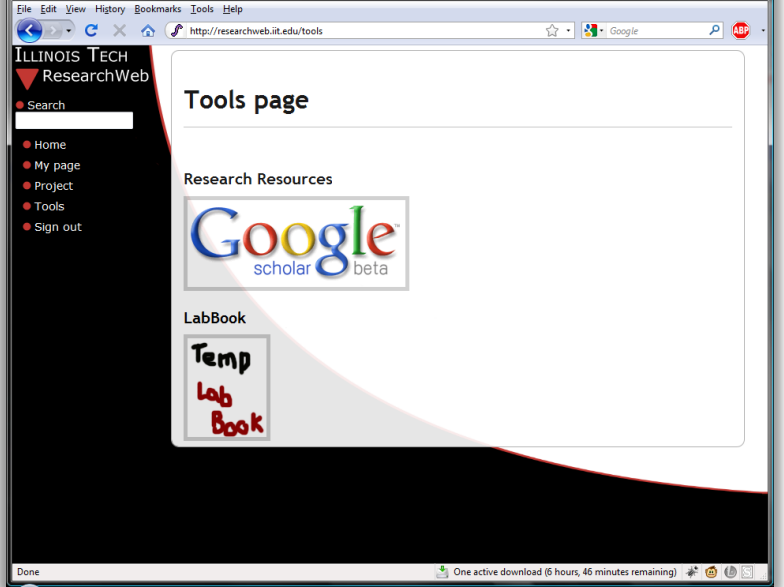
Concept 

Current 

Functionality
 Categorized Results
 Documents
 Profiles
 Projects
 Forums
 Lab Book
 Categorization System for User Interests
 Project Keywords

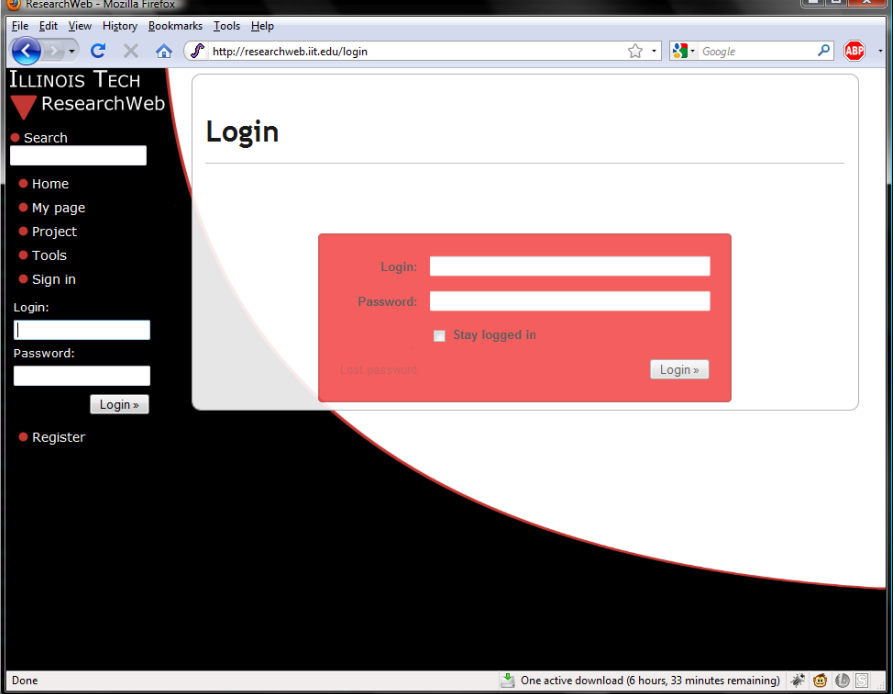
Research Tools

Concept 

Current 

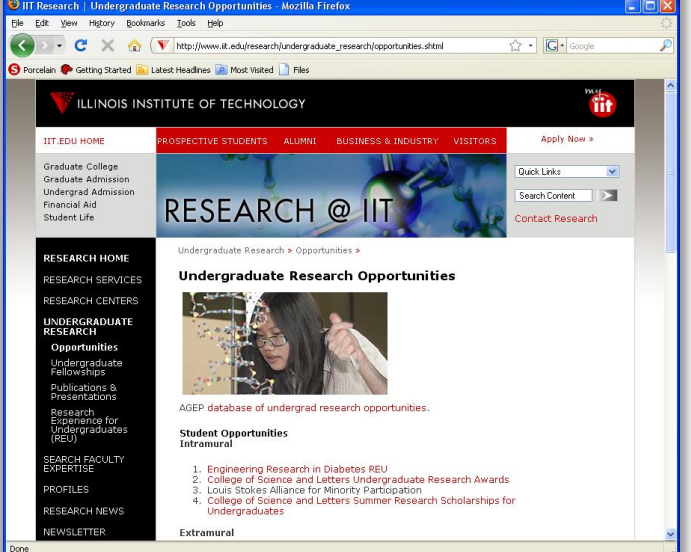
Functionality
 Links to Other Online Resources
 Academic Databases
 Information about Research
 Research Process
 Paper Writing
 Source Citing
 Formatting Styles

Sandbox Environment

Current 

A sandbox environment of ResearchWeb will be created to allow guest visitors to see what the web application is all about. Guest users will have the opportunity to use all of the site's features without affecting the registered community. This will be done by having any action performed by a guest visitor committed to an entirely separate database that clears out daily or weekly.


On-Campus Opportunities

Current at IIT 

Functionality
 Centralized place for posting current student and faculty initiated research opportunities.

This feature has not yet been implemented on the site and will be a task for the team next semester.

Forums

Concept 

Functionality
 Talk openly about research
 General Discussion
 Experiences
 Proposals
 Questions

Since the usefulness of this feature is dependent on a strong and active online community this feature has not yet been added to the site. Research on successful forums found that the community must come before the forum.

