VIVO

enabling national networking of scientists

Users, interface design, and evaluation

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VIVO 1 Conference

Presented by:
Nick Cappadona, Ellen Cramer
Manolo Bevia, Leslie McIntosh
## User interface – Goal & Definitions

- Make the user’s experience as simple, productive, efficient and enjoyable as possible

<table>
<thead>
<tr>
<th><strong>User Interface (UI)</strong></th>
<th>system by which a person (user) interacts with a machine (human-computer interaction)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>User Interface Design</strong></td>
<td>design of such systems with focus on the user’s experience and interaction</td>
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<tr>
<td><strong>Usability</strong></td>
<td>the ease with which a user can employ a particular tool in order to achieve a particular goal</td>
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<tr>
<td><strong>User Experience (UX)</strong></td>
<td>a person’s perception in response to use or anticipated use of a system or product</td>
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</tbody>
</table>
UI Design Components

- Functionality Requirements
- User Analysis
- Information Architecture
- Visual Design
- Prototyping
- Usability Testing

User Interface Design
Our Process

1. Identify our users
2. Understand our users
3. Identify key tasks
4. Analyze interface elements in existing systems
5. Design and prototype interfaces
6. Apply visual design to prototypes
7. Test our designs on our users
8. Listen, analyze and learn (Identify Patterns)
9. Apply what we've learned

wash, rinse and repeat
## Mental Models: Aligning Design Strategy with Human Behavior

*Indi Young, Rosenfeld Media, Brooklyn, NY 2008*

### Audience Analysis – Mental Model

<table>
<thead>
<tr>
<th>Self-editor</th>
<th>Self-promoter</th>
<th>Curator</th>
<th>People-Finder</th>
<th>Networker</th>
<th>Data harvester</th>
<th>Data ingester</th>
<th>Web site manager</th>
<th>Ontology editor</th>
<th>System administrator</th>
</tr>
</thead>
<tbody>
<tr>
<td>Log in to web site</td>
<td>Export pub citations</td>
<td>Edit multiple individuals at one time</td>
<td>Find other researchers</td>
<td>Track individuals</td>
<td>Utilize data for external applications</td>
<td>Ingest data from an external source</td>
<td>Modify the look and feel of this application</td>
<td>Create/edit classes, object properties, and data properties</td>
<td>Install the application</td>
</tr>
<tr>
<td>Edit profile</td>
<td>Create brochure (about me)</td>
<td>Create relationships from an organization (group) to people (individuals)</td>
<td>Find most collaborators</td>
<td>Keep track of interest in own work</td>
<td></td>
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</tr>
<tr>
<td>Create author relationship to publication</td>
<td>Create funding application output</td>
<td>Tag individuals</td>
<td>Find like-minded colleagues</td>
<td>Mark individuals</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Hyperlink to research output</td>
<td>Create CVs</td>
<td>Modify the structure/organization of your institution</td>
<td>Create a list of people by keyword or logic</td>
<td>Contact people</td>
<td></td>
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</tr>
<tr>
<td>Edit someone's profile</td>
<td>Network among colleagues</td>
<td>Manage users</td>
<td>Search and browse by keyword or tag</td>
<td>See my relationships or how I fit in.</td>
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<tr>
<td>Self-promote private data on profile?</td>
<td>Find upcoming opportunities for funding</td>
<td>Add or edit individuals</td>
<td>Retrieve full-text publication for person</td>
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</table>

#### FEATURES

<table>
<thead>
<tr>
<th>FEATURES</th>
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</thead>
<tbody>
<tr>
<td>Disambiguate terms for people and pubs</td>
<td>Turn off all or part of a profile</td>
<td>Get expert advice on your own work</td>
<td>Means of communication</td>
<td>Theme editor</td>
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<td></td>
<td></td>
<td></td>
<td>Recommendation engine for upcoming events</td>
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<td></td>
<td></td>
<td></td>
<td>Visualization of relationships and connections (including collaborations)</td>
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<td></td>
<td></td>
<td></td>
<td>Enable ability to gauge level of research in various areas</td>
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<td></td>
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<td></td>
<td>Send out notifications of updates</td>
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<td></td>
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<td></td>
<td></td>
<td></td>
<td>Favorites list</td>
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</table>
Audience Analysis – Mental Model
Audience Analysis – User Scenarios

- Round 1 - Draft of 34 based on review of wiki, notes, feedback
- Round 2 - 40 more contributed = 74
- Round 3 - 65 more contributed = 139
- Round 4 - 153 with master scenarios, 53 after cleanup of duplicates and those subsumed by master scenarios.
- Survey of importance and priority, 50 started, 43 completed

:: *Is it important for successfully creating the national network? An important scenario may not be done first – other work may be needed first.*

:: *Priority speaks to what we work on first, second, third, etc. Some work of high priority may be necessary for other work deemed more important for national adoption and use.*

<table>
<thead>
<tr>
<th>PRIORITY/IMPORTANCE MATRIX</th>
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<tbody>
<tr>
<td></td>
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<tr>
<td>Extremely Important</td>
</tr>
<tr>
<td>Very Important</td>
</tr>
<tr>
<td>Important</td>
</tr>
<tr>
<td>Somewhat important</td>
</tr>
<tr>
<td>Not important</td>
</tr>
</tbody>
</table>
Audience Analysis – User Scenario Categories
• Find researchers based on various different criteria.
• Ingest content from university data sources
• Ingest/Harvest Configuration Wizard
• Check integrity of data.
• Install VIVO application
• Locate and contact the appropriate individual to assist him with updating his profile.
• Log in to VIVO application
• Log into VIVO and add/edit information on an individual profile.
• Log into VIVO and add/edit publication information on an individual profile.
• Manage users (add, edit permissions)
• Provide persistent short meaningful URI for profiles
Audience Analysis – User Scenarios by Priority and Keyword

High Priority (do first)
- Install VIVO application (34)
- Check integrity of data (168)
- Manage VIVO content & profiles (142)
- Motivate users to update profiles (161)
- Customize VIVO look and feel (152)
- Transfer profile between VIVOs (126)
- Manage multiple identities for a person (14)
- Output a form for a grant proposal (33)
- Find studies in a research area (94)
- Find researcher by unique id (149)
- Context-aware search support (119)
- Find shortest path between researchers (104)
- Present selected data on demand (112)
- Expose RDF for external apps (149)
- Export CV data to CV app (154)

Medium priority (do next)
- Login (141)
- Manage Users (46)
- Refer to proper source for updates (130)
- Ingest (132)
- Add/edit own publications (145)
- Ingest (132)
- Short meaningful URI's for profiles (13)
- Ingest (132)
- Identify reviewers (funding agency) (62)
- Locate research services or equipment (122 & 147)
- Visualize clusters of research (138)
- Visualize faculty research activity (152)
- Reports showing research activity by topic over time (143)
- Literature analysis by topic over time (139)

Low priority (do last)
- Update VIVO site info (51)
- Find transfer info to mobile device (29)
- Proxy editing & approval workflow (131)
- Identify & manage groups for proposals (124)
- Track collaborator/competitor activity (135)
- Find reference info on job applicants (99)
- Produce a feature, tell a story (12)

Find researchers and collaborators
Scenario: John Williams is a researcher at the University of Transylvania. He would like to find other researchers based on a variety of different criteria.

Specifically, he would like to find researchers by research area, conferences, and by institution. Sometimes John wants to only search at University of Transylvania, and sometimes he wants to search across multiple institutes.

John likes to search using multiple criteria, for instance he might want to search for researchers interested in Lou Gehrig's disease within the state of Transylvania, or for researchers who attended the 'Medicine in the 21st century' workshop, and are also interested in brain cancer. When John was a grad student he searched for mentors or advisers, but now he usually searches for potential collaborators.
Welcome to the User Testing server!

Feel free to play around here. The content is not stable, not harvested, and not accurate. Thanks!
What is VIVO?


More

Search VIVO

Log in

Email

Password

Log in

Remember me

Forgot your password?

Request an account

Browse

People (7,280)

Organizations (280)

Publications (1,980)

Events (80)

Courses (290)

Activities (67)

Topics (678)

Locations (456)

Equipment (20)

Attendee Role (90)

Faculty Member (290)

Graduate Student (2,550)

Librarian (67)

Non-Academic (98)

Non-Faculty Academic (179)

Person (4,780)

PostDoc (55)

Professor Emeritus (32)

Relationship (567)

Undergraduate Student (870)

Visual Graph
Wireframe for Login

VIVO 1.1 Log in
Log in. User with an account

1.0 Forgot your password?
Please see Forgot your password page for a more detailed explanation of this task.

2.0 Request an Account
Please see Request an Account page for a more detailed explanation of this task.

3.0 VIVO Dashboard/Requested Page
When a user successfully logs in, the user will be taken to the dashboard by default or the initial requested page if one was requested.

4.0 Error alert
If user inputs wrong email or password, an error alert will appear with the following message: “Email or Password is incorrect.”

5.0 Highlighted text fields
Text field borders will use same color as error alert box
Wireframe for Photo Upload

1. Individual's Photo
   If somebody creates an individual type person, we would like to suggest adding a generic photo profile for any individual type person that is created.

2. Modal Windows
   We would like to recommend using modal windows for this photo upload UI. Also we should fade out the page behind the floating window.

3. Replacing a photo
   If somebody replaces a photo, this will be deleted from the server. There is no point to keep the original one, since we are showing one photo per individual type person.

4. Alert Dialog
   If user deletes a photo, this alert will be a modal view too.
Initial Sketches for Menu Management
Evaluation

- Site Visits
- Surveys
- Analytics
- Interviews
- Usability Testing
- Team Interactions
Evaluation Functions

- Understand: how the VIVO interface is used
- Assess: how researchers may use VIVO
- Survey: what the VIVO team members are thinking
- Monitor: website usage
- Report: all of the above
14,517 visits came from 95 countries/territories

<table>
<thead>
<tr>
<th>Country/Territory</th>
<th>Visits</th>
<th>Pages/Visit</th>
<th>Avg. Time on Site</th>
<th>% New Visits</th>
<th>Bounce Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>United States</td>
<td>11,486</td>
<td>4.23</td>
<td>00:04:21</td>
<td>43.13%</td>
<td>40.95%</td>
</tr>
<tr>
<td>Australia</td>
<td>459</td>
<td>3.12</td>
<td>00:03:12</td>
<td>35.29%</td>
<td>49.02%</td>
</tr>
<tr>
<td>France</td>
<td>260</td>
<td>2.53</td>
<td>00:01:49</td>
<td>80.77%</td>
<td>61.92%</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>252</td>
<td>2.60</td>
<td>00:01:27</td>
<td>71.03%</td>
<td>53.97%</td>
</tr>
<tr>
<td>Brazil</td>
<td>251</td>
<td>2.25</td>
<td>00:01:52</td>
<td>75.30%</td>
<td>74.10%</td>
</tr>
<tr>
<td>Canada</td>
<td>232</td>
<td>2.46</td>
<td>00:02:17</td>
<td>66.81%</td>
<td>54.74%</td>
</tr>
<tr>
<td>Germany</td>
<td>174</td>
<td>4.39</td>
<td>00:03:42</td>
<td>48.85%</td>
<td>35.06%</td>
</tr>
<tr>
<td>Netherlands</td>
<td>156</td>
<td>4.29</td>
<td>00:03:48</td>
<td>58.33%</td>
<td>37.82%</td>
</tr>
<tr>
<td>China</td>
<td>130</td>
<td>3.06</td>
<td>00:05:31</td>
<td>56.15%</td>
<td>34.62%</td>
</tr>
</tbody>
</table>

Google Analytics

Map Overlay

Feb 1, 2010 - Aug 9, 2010
Comparing to: Site
Interviews