Taxonomy of Media Usage in Multimedia (T-MUM)

Meg Williams, MA
Agenda

- Introduction
- Problem Statement
- Taxonomy Solution
- Foundational Taxonomies
- T-MUM
- Future Work
Introduction

- **Current**
  - Doctoral student at Nova Southeastern University
  - Developer Mentor at A. G. Edwards
- **Past**
  - MA – Interactive Media
  - BA – Commercial Photography
  - Interactive Multimedia Program Director
  - Digital Imaging Specialist
Problem Statement

- Subjective interpretation of media use
- Subjective implementation of guidelines
- Poorly-used media defeating its intended purpose
Taxonomy Solution

• How can a taxonomy help solve the issues mentioned previously?
  – Create a common vocabulary
  – Common means for interpreting media use
  – Guidelines could be created or adjusted to leverage common terminology
Example Guidelines

• Avoid redundant content
• Use graphics to show real content, not just to decorate your homepage

Why don’t existing taxonomies address this issue?

– Meticulously describe the media itself
  (e.g. Media and Multimedia Taxonomies\(^1\), Media Characteristics\(^2\), and the Taxonomy of Representational Systems\(^3\))

– Describe interactive usage only
  (e.g. Taxonomy of Multimedia Interactivity\(^4\))

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Foundational Taxonomies

• 15 Taxonomies reviewed
• Three key taxonomies provided the T-MUM’s foundation
  – Media Taxonomy\(^1\)
  – Taxonomy of Multimedia Interactivity (TMI)\(^2\)
  – Multimedia Taxonomy\(^3\)


Foundational Taxonomies ... continued

Media Taxonomy

- Clearly identified the Media Types
- Defined the Media Expression - attributes

## Foundational Taxonomies …continued

### Media Taxonomy

<table>
<thead>
<tr>
<th>Media Type</th>
<th>Media Expression</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Elaboration</strong></td>
<td><strong>Representation</strong></td>
</tr>
<tr>
<td>Text</td>
<td>free text</td>
</tr>
<tr>
<td></td>
<td>sentences</td>
</tr>
<tr>
<td></td>
<td>paragraphs</td>
</tr>
<tr>
<td>Graphics</td>
<td>photographs</td>
</tr>
<tr>
<td></td>
<td>renderings</td>
</tr>
<tr>
<td></td>
<td>scanned images</td>
</tr>
<tr>
<td>Sound</td>
<td>speech</td>
</tr>
<tr>
<td></td>
<td>audio transcripts</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>Motion</td>
<td>raw film footage</td>
</tr>
<tr>
<td></td>
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</tr>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Foundational Taxonomies ...continued

Taxonomy of Multimedia Interactivity

- Expanded Media Types
- Defined interactive Media Expressions

### Taxonomy of Multimedia Interactivity (Excerpt)

<table>
<thead>
<tr>
<th>Media Type</th>
<th>Media Expression</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Passive</strong></td>
<td>Delivers the information and gives the user some options: page turner, print, linear spacing, rearrange words, change words</td>
</tr>
<tr>
<td><strong>Reactive</strong></td>
<td>Delivers the information and gives the user some options: page turner, print, linear spacing, rearrange words, change words</td>
</tr>
<tr>
<td><strong>Proactive</strong></td>
<td>Allows for browsing, hypertext, fixed anchors, paths for user in closed space, searching</td>
</tr>
<tr>
<td><strong>Directive</strong></td>
<td>Allows for a dialog-based, creative writing, fully functioning interactive text-based application, prompts user information</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>User Activity</th>
<th>No user control</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Passive</strong></td>
<td>Limited by author</td>
</tr>
<tr>
<td><strong>Reactive</strong></td>
<td>Greater user control than before</td>
</tr>
<tr>
<td><strong>Proactive</strong></td>
<td>Users discretion</td>
</tr>
<tr>
<td><strong>Directive</strong></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Examples</th>
<th>Words, titles, phrases, columns or paragraphs, streaming across the screen</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Passive</strong></td>
<td>Go to next page or previous page, print, 'What's the correct response 'A' or 'B'?''</td>
</tr>
<tr>
<td><strong>Reactive</strong></td>
<td>Select, drag and drop, build a story, insert, delete, add, copy, move, find, 'What's the best procedure?'' chooses between hyperlinks</td>
</tr>
<tr>
<td><strong>Proactive</strong></td>
<td>Question and answer, interactive fiction, &quot;pick up dagger&quot;, highly-interactive drama where the user determines the outcome</td>
</tr>
<tr>
<td><strong>Directive</strong></td>
<td></td>
</tr>
</tbody>
</table>

Foundational Taxonomies ...continued

Multimedia Taxonomy

- Refined Media Types
- Identified milieus in which element attributes could be assessed
  - e.g. audience, usefulness, aesthetics

Foundational Taxonomies ...continued

Multimedia Taxonomy

T-MUM: Building from the Foundation

- Extends existing taxonomies
  - Media types already identified
  - Interactivity expressions already identified
T-MUM: The Early Versions

- Aligned Media Types with TMI
- Identified usage, both contextual and interactive, in Media Expression
T-MUM: The Early Versions ...continued

<table>
<thead>
<tr>
<th>Media Type</th>
<th>Decorative</th>
<th>Purposeful</th>
<th>Functional</th>
</tr>
</thead>
<tbody>
<tr>
<td>Graphics</td>
<td>&quot;Scenery&quot; image, something that serves no purpose but to look pretty</td>
<td>Diagram, logo</td>
<td>Imagemap, hyperlinked image</td>
</tr>
</tbody>
</table>

Relevant

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Taxonomy of Media Usage in Multimedia - Meg Williams
**T-MUM: The Current Version**

- Aligned Media Types with Multimedia Taxonomy
- Separated contextual and interactive usage
- Aligned interactive usage with TMI
T-MUM: The Current Version …continued

- Identifies the Contextual Expressions
  - Extraneous
  - Relevant
  - Germane
T-MUM
Taxonomy of Media Usage in Multimedia

Interactive Expression (increasing functionality)
- Directive
- Proactive
- Reactive
- Passive

Contextual Expression (increasing pertinence)
- Extraneous
- Relevant
- germane

Media Type (increasing complexity)
- Text
- Sound
- Graphics
- Motion
- Multimedia
Example Guidelines
reworded to utilize T-MUM terminology

Avoid redundant content *could become*

- Avoid the use of media elements falling in the **relevant** contextual expression classification.

Use graphics to show real content, not just to decorate your homepage *could become*

- Avoid the use of any graphic media elements falling in the **extraneous** contextual expression classification.

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polysemous

Pronunciation:

Function: adjective

Etymology: Late Latin polysemus, from Greek polysemous with many meanings, from poly- + sex 

having many meanings <explains that his poem is polysemous -- C.S. Singleton> <excited by the difficult, the ambiguous, the polysemous -- R.G. Davis>
T-MUM: Next Steps

- 3 rounds of evaluation
  - Graduate students
  - Professors
  - Professionals
Future Work

- Guidelines incorporating common T-MUM terminology
- Identify corporate adoption plan
Questions?

For more information visit:

http://megwilliams.com/T-MUM

Or email me:

meg@megwilliams.com