MVC and Multimedia

- MVC is actually a general approach to interactive application development, not multimedia alone.

- But, multimedia is a specific type of interactive application, and so has its own twists on MVC.

Digital Assets: M, V, or C?

- Since multimedia applications focus on the organization and presentation of digital assets, the question arises: are digital assets part of the model, view, or controller?

- The answer, it turns out, is *all of the above*.

- Technical term: a multimedia application’s digital assets are *orthogonal* to its MVC organization.
<table>
<thead>
<tr>
<th></th>
<th>Model</th>
<th>View</th>
<th>Controller</th>
</tr>
</thead>
<tbody>
<tr>
<td>Images</td>
<td>images</td>
<td>gallery, actual content (e.g. what the user actually wants to see)</td>
<td>icons, buttons</td>
</tr>
<tr>
<td>Audio</td>
<td></td>
<td>ambience, accents</td>
<td></td>
</tr>
<tr>
<td>Video/Motion</td>
<td>video/motion</td>
<td>animations, styling</td>
<td></td>
</tr>
</tbody>
</table>

- Literally, “orthogonal” means “at right angles to each other” (ortho = right)

- When two concepts can be tabulated against each other — the way digital assets and MVC are correlated above — one can think of these concepts as being “at right angles” to each other; thus, “orthogonal”
Authoring with MVC in Mind

• Not all multimedia authoring environments explicitly support (or enforce) MVC

  *Exception*: the latest Web standards
  HTML = model, CSS = view, JavaScript = controller

• MVC is more of a guide for you or your team to use internally

Gather Raw Material

• This is where a sufficiently detailed specification may start reaping dividends

• Never overwrite or erase your raw material — you never know when you’ll need to revert to the original

• Scans, digital photos, recorded tracks, unprocessed video clips
Create Separate Sections

• On disk, create separate folders for: raw, model, view, controller

• You may want to create subfolders, for instance to separate images, audio, and video

• Alternatively, separation may be subject-driven instead

Start “Repurposing” the Raw Digital Assets

• Repurposing is the process of combining, cutting, or modifying your raw material for final use in the multimedia application

Images: compositing, color corrections, retouches, effects, filters
Audio: mixing, mastering, effects, clean-up
Video: editing, transitions, splicing, dubbing

• Never delete the raw material — you might need to go back to them
Prepare the Model

• Repurpose assets toward “final viewable form” — the exact content that the user will perceive

• May require different levels of quality (for example, different video sizes)

• Placeholders can help move things along if the content isn’t available yet

Prepare the View

• Repurposing typically involves stylization or toning down
  • Tinting to a color
  • Compositing into a background
  • Lowering volumes, looping, cutting
  • Similar to “skinning”
Glue through the Controller

- Generally done under an overall authoring environment (DVD, Flash, Web)
- Highly interactive and iterative: composing model and view elements, sometimes realizing that these need to be changed
- Controller used to involve a lot of scripting; it has decreased as authoring environments grew in sophistication

Remember…

- Let your spec guide you
- Keep your assets organized
- Don’t delete your raw materials
- Stay aware of the MVC role of a particular element
- Note that this is still all “source” work — we haven’t talked about deployment yet