## Overview

- Existing methods for machinima creation are challenging, difficult, and often require in-depth knowledge of filmmaking.
- Our system takes a three-pronged approach to machinima authoring, with the goal of making the process accessible to novices while still sufficiently detailed for experts.
- To represent the structure of a film, our authoring tool uses a metaphor of layers. Different aspects of the film are controlled in each layer. The layers are movie, scene, and beat.

## Authoring Modes

<table>
<thead>
<tr>
<th>Authoring Mode</th>
<th>Description</th>
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<tbody>
<tr>
<td>Manual mode</td>
<td>Authors select all of the elements of each scene and beat, including location, character blocking, and camera angle. (Complete, but not integrated with other modes)</td>
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<tr>
<td>Automated mode</td>
<td>Authors hand over partial control of a scene to the Cambot AI and its library of shots, blockings, and other filmmaking aspects. (Complete, but not integrated with other modes)</td>
</tr>
<tr>
<td>Performance mode</td>
<td>Authors control the characters and place cameras afterward. Authors can then splice together shots from the different camera angles. (Under development)</td>
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## Future Work

- As an approach to using AI to support human creativity, we plan to develop an agent capable of acting as a surrogate audience. We call this approach computer-as-audience.
- With computer-as-audience in mind, we plan to have our authoring tool provide feedback to filmmakers, identifying the author's style and making suggestions based on past decisions and existing elements of the film.
- We believe that the computer-as-audience metaphor will help make machinima authoring more accessible to novice filmmakers.

### Story Authoring Tool

- Authors play out the actions of their characters in a video game environment, such as Unreal Tournament.
- After playing, authors are presented with an overhead view of character movement.

### Animated Sequence

- As authors create their films, the surrogate audience AI provides feedback about the story and the decisions made so far.

### Intelligent Feedback

- This portion of the tool is currently in preliminary study.