

Cinematography

Part I: Adams and Rollings

CAMERA DIRECTION (TERMINOLOGY)

Camera Direction (terminology)

- Moving Camera
 - **Dolly:** Forward/Backward (follow avatar)
 - **Truck:** Lateral (side-scroller)
 - **Crane:** Vertical (up/down)



Camera Direction (terminology)

- Stationary Camera
 - **Pan**: Swivel about vertical axis (heading)
 - **Tilt**: Swivel to look up and down (pitch)
 - **Roll**: Rotate around forward axis through lens



Part II: Adams and Rollings

CAMERA PERSPECTIVE

First-Person Perspective



Flight Simulator X

Doom 3

First-Person Perspective

- Advantages
 - Fewer animations needed.
 - No AI needed for camera control.
 - Easier for users to aim at things.
 - Sometimes better for navigation and interaction.



First-Person Perspective

- Disadvantages
 - No fun customizing or evolving an avatar.
 - No avatar expressions visible.
 - No cinematic camera angles for dramatic effect.
 - Sometimes worse for navigation.
 - Motion sickness.



Third-Person Perspective



Mission to France

Dead Reefs

Third-Person Perspective

- How should the camera behave?
- Especially relevant question when turning.
 - Chase View: Always behind avatar
 - Slow Chase: Slowly reorients behind avatar
 - Stop Chase: Only reorients when avatar stops

Third-Person Perspective

- How should the camera behave?
- Especially relevant question when turning.
 - Chase View: Always behind avatar
 - PRO: Can always see where you are going.
 - CON: You never see avatar side or front.
 - CON: Can produce motion sickness during quick movement.
 - Slow Chase: Slowly reorients behind avatar
 - Stop Chase: Only reorients when avatar stops

Third-Person Perspective

- How should the camera behave?
- Especially relevant question when turning.
 - Chase View: Always behind avatar
 - Slow Chase: Slowly reorients behind avatar
 - PRO: You can see avatar side or front sometimes.
 - PRO/CON: Less dizzying (still possible).
 - CON: Can't always see where you are going.
 - Stop Chase: Only reorients when avatar stops

Third-Person Perspective

- How should the camera behave?
- Especially relevant question when turning.
 - Chase View: Always behind avatar
 - Slow Chase: Slowly reorients behind avatar
 - Stop Chase: Only reorients when avatar stops
 - PRO: Least dizzying.
 - CON: Really can't see obstacles or enemies in the your way!

Third-Person Perspective

- The Problem of Intruding Landscape / Walls
 - Render the landscape semitransparent
 - User becomes aware of the blocking environment
 - Move closer to avatar, crane up and tilt down
 - Shows the area around the avatar
 - Place camera immediately behind avatar's semitransparent head
 - User can see what is in front



Third-Person Perspective

- The Solution of User Adjustments
 - Manual adjustment often with left and right buttons that circle the camera around the avatar.
 - Just a quick fix, not a real solution.



Aerial Perspective

- Gives priority to the environment as a whole rather than one particular avatar. More common in “strategic” environments.



Age of Empires III

Aerial Perspective: Top-Down

- Advantages
 - Familiar “map” type of perspective.
 - Easy using 2D graphics.
- Disadvantages
 - Only one angle: Roofs, Tops of heads, ...
 - Distances user from the events: More like a simulation than a real place.



Aerial Perspective: Isometric

- Advantages:
 - Shows all three dimensions at once.
 - Brings user closer to the environment.
 - People become more visible.
- Disadvantages
 - Distorts reality - not real perspective.
 - Only allows trucking or dollying camera moves.



Ultima Online

Aerial Perspective: Free-Roaming

- Advantages
 - True perspective.
 - More freedom for the camera.
- Disadvantages
 - Difficult to implement camera control.
 - May be hard to teach users to do manual control.



Dungeon Siege

Context-Sensitive Perspective

- Intelligent camera movement
 - Based on what is going on in the environment or story.
 - Based on mood and required dramatic effect.



ICO

References

- Adams and Rollings, 2007, [Fundamentals of Game Design](#), Prentice Hall
