

# Cinematography



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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 (**h**eading)
  - **Tilt:** Swivel to look up and down (**p**itch)
  - **Roll:** Rotate around forward axis through lens



Part II: Adams and Rollings

# CAMERA PERSPECTIVE

# First-Person Perspective



Fligh 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.

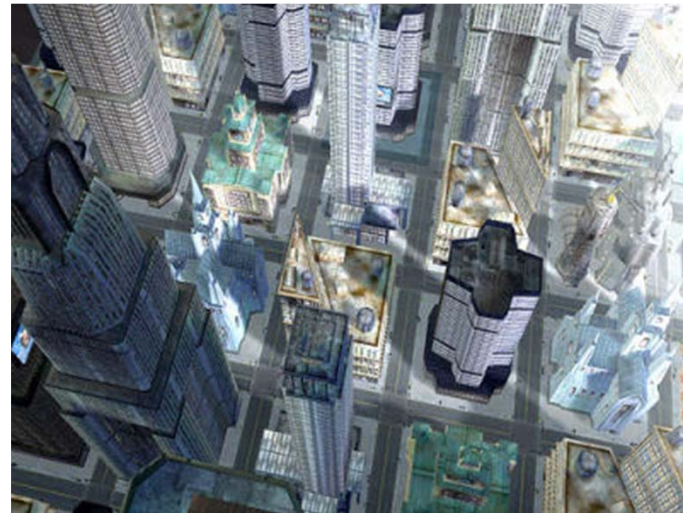


# Aerial Perspective

- 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