3D Planning Visualizations with Sketchup and Google Earth (and Community Viz) DRAFT

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3D Modeling at MAPC

• Weymouth Landing Part 1
  – Sketchup (v6.0.1099) + Community Viz, Scenario 3D

• Weymouth Landing Part 2
  – Sketchup + Google Earth / 3D Warehouse
  – Video editing

• Participatory Chinatown
  – Sketchup + Advanced Photoshop
  – Video game...?
Part 1 - can we do it?

• Weymouth Landing, 3D Downtown?
  – Community Viz, Scenario 3D

• Environmental Simulation Center (ESC)

• Sketchup experience?
  – Which photos to take?
  – Photographs into Sketchup?
  – Apply texture...
Scenario 3D

• Data for 3D model
  – Elevation
  – Imagery
  – Building Footprints
  – Shapefiles for park, road, sidewalks, etc...

• This worked great! But...
Scenario 3D - Challenges

- Building rotation
- Model elevation setting
- Model scale
- Performance issues
  - Hours of tweaking to get the max detail
- Detail vs. functionality?
  - Stills of model with more detail
  - Optimized model for presentation/video
- Sketchup export...
  - Version 6.0.1099...
Meeting #1 - May 2009

• Scenario 3D, bookmarks
• Desktop necessary (new graphics card)
• Introduction to a “3D Model”
Part 2

• **Zoning Scenarios**
  – MAPC recommended zoning
    • Follows Metrofuture (our 30 year plan)
    • Smart growth principles from the Strategic Plan
      – Mixed-use buildings downtown
      – Housing, with retail at ground floor
      – Redevelopment where development already exists
Building Models

• Other buildings in the region
  – Milton Landing and Scituate
    • Reflect MAPCs Smart Growth strategies
  – Landing Pub façade improvement
Meeting #2 - November 2009

- Interactive Model Presentation in Google Earth
- Visualizing Zoning Recommendations:
  - New residential development north of downtown
  - New mixed use buildings downtown (at 3 story height levels)
- Visualizing PWED/MAPC recommended improvements
  - New Park with daylighted Smelt run
  - Façade Improvements
  - Sidewalk Improvements
  - Smelt Arch (sense of place)
  - Waterfront walkway
Meeting #3 - March 2009

• Videos embedded in PowerPoint
  – Focusing on key issues
  – Reminders of model:
    • Height limit visualizations
    • Façade Improvements
    • Waterfront Walkway
    • New residential development north of downtown
Video Editing - Web & Meeting Content

• CamStudio (http://camstudio.org/)
  – Frame rates, video quality...
  – Google Earth tips
    • Tours, stops/views
    • Window size
    • Caching before tour

• iMovie - with YouTube tutorials

• On MAPC website

• Running at Meeting, along with live Google Earth
Story Heights Downtown

- (video)
Façade Improvements

• (Video)
New Residential Development / Waterfront Walkway

• (video)
3D Warehouse

- All Weymouth Landing Models are up
- All have been submitted to go on Google Earth, but...
Participatory Chinatown

- Planning Meeting Video Game
- Part 1: Quests to look for housing, employment, or social space
- Part 2: Land use scenarios for area just south of I-90 (contested area for Chinatown Master Planning (CMP) Effort)
  - Comments and opinions gathered to submit to CMP
- MAPC’s role: Full 3D Model of Boston’s Chinatown
Participatory Chinatown

- Try to get youth / non-traditional workers / non-English speakers involved in the planning process
- Can we get additional insights with new media?

- Next step: toolkit for communities to create a game for <25k
Where do you start?

BRA Models?
Where do you start?

Google Earth Models??
Google Earth Models??
Where do you start?

Google 3D Warehouse???
3D Environment

Buildings?
3D Environment
Hi Evan. Last week's exam was killer. I'm ready for the weekend already. I know you're on your break and want to find a place to chill. Let me help you out.
3D Modeling at MAPC

• Ideally:
  – 3DS, Maya, or one of the others...
  – More detail, higher quality
  – 3D analysis (with 3D analyst)
    • Viewsheds?

• Visualization platforms:
  – ArcScene?
  – For now, Google Earth and Sketchup
  – Excited to see next release of Scenario 3D
    • Cviz analysis windows / presenter mode?
Thank you!

- Still looking for the perfect engine and platform!
- Suggestions? Experiences? Success stories?

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