



Modeling 3D Urban Spaces Using Procedural and Simulation-Based Techniques

# Introduction

Peter Wonka

Arizona State University

# Who are the speakers?



Carlos Vanegas



Daniel Aliaga



Peter Wonka



Pascal Müller



Michael Frederickson

# What is urban modeling?

- Creating digital models of real or virtual cities
- Cities are large collections of man-made structures

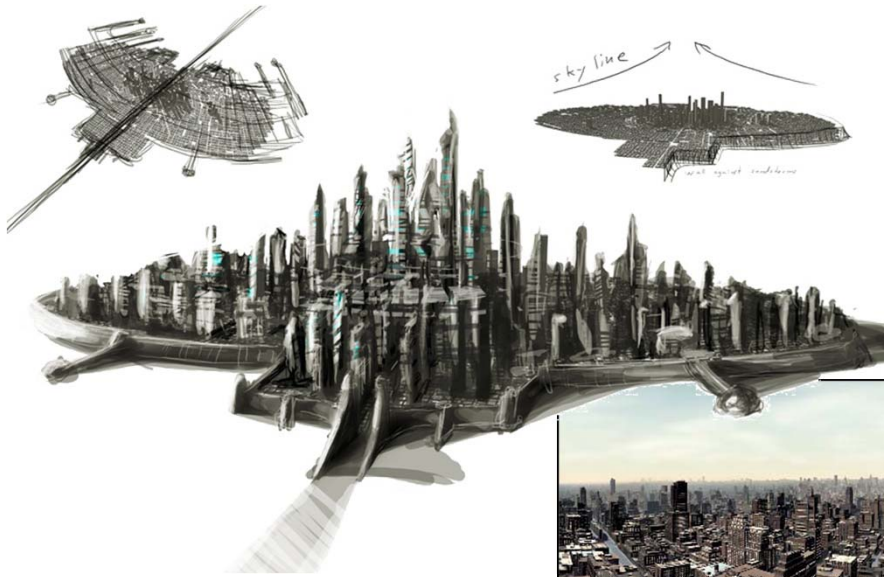


# Why should you learn about it?

- Urban models are important!

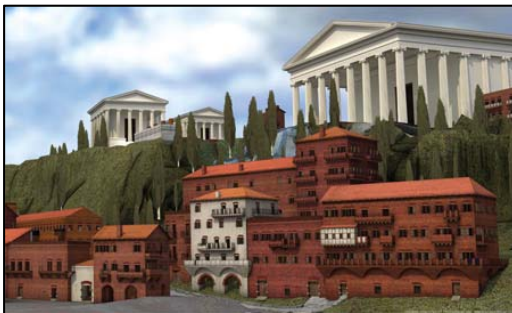
# Why should you learn about it?

- Urban models are important!
  - Entertainment



# Why should you learn about it?

- Urban models are important!
  - Entertainment
  - Mapping and visualization



# Why should you learn about it?

- Urban models are important!
  - Entertainment
  - Mapping and visualization
  - Urban planning



time →

# What is the main challenge?

- Solving the **content problem**
  - As computing and display capabilities continually improve, audience expects ever higher quality digital content
  - Traditional tools are insufficient for increasing demand and few tools are available for efficient large-scale urban modeling



# Schedule

- Introduction (10 min)
- Urban Layouts and Road Networks (30min)
- Computational Building Design (25min)
- Image-based Buildings and Facades (25min)
- Break (15min)
- Bridging the Gap between Urban Simulation and Urban Modeling (40min)
- Procedural Modeling in Industry (40min)
- Conclusions (10min)