#### Walk-in Slide: AU 2014 Social Media Feed

1. Click on the link below, this will open your web browser

http://aucache.autodesk.com/social/visualization.html

2. Use "Extended Display" to project the website on screen if you plan to work on your computer. Use "Duplicate" to display same image on screen and computer.



# V5194-L - Integrating Water Elements and Fountains into Architectural Renderings Using Particle Flow

Steven Schain

Spectra3D Technologies - President www.spectra3d.com





## Thank You





#### **Class Summary**

Many architectural structures incorporate a water feature as a prominent visual component of the structure. This exciting class explains how to implement 3ds Max Particle Flow for architectural use. This class takes you through the creating water fountains, waterfalls, and other water features architects like to use. We will cover creating particle flow networks to simulate water flow and using space warps to affect the motion of the particles. We will also cover the point cache and particle rendering.

#### My Story...

#### Trainer / Instructor

- Teaching 3ds since 3D Studio DOS Release 3.
- Autodesk Certified Instructor since 1998.
- Trainer The 3D Professor (3ds Max / Maya / AutoCAD)

#### Business Owner

- Started Spectralight Images, LLC, 1984
- The 3D Professor, 2003, Instructor led training
- Spectra3D Technologies, 2014, Stratasys sales
- Graduated BASE Incubator after 4 years in 2014
- Business development / coaching volunteer

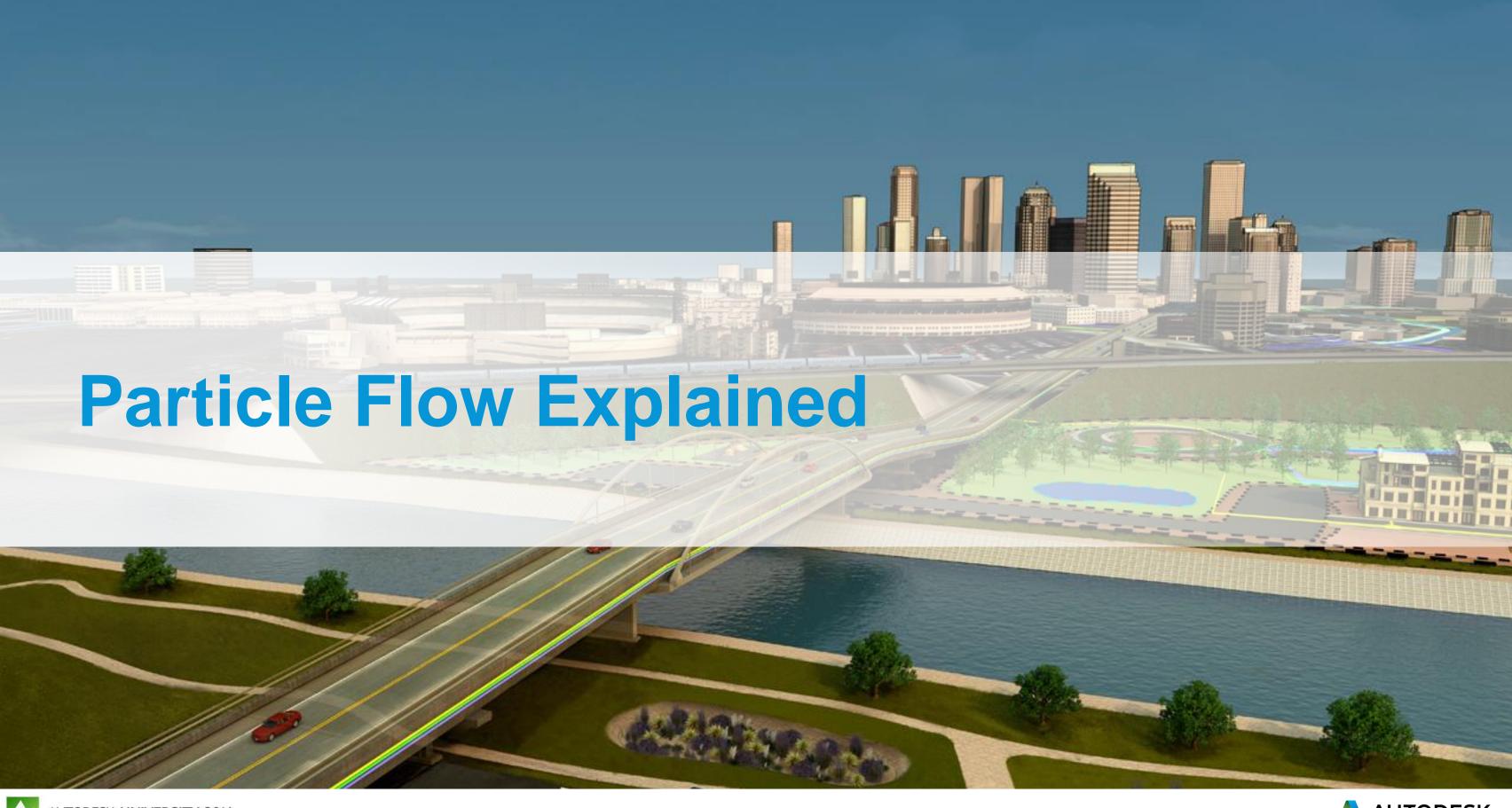


#### **Learning Objectives**

#### At the end of this class, you will be able to:

- Create a Particle Flow
- Work with space warps
- Edit Particle Flow events
- Cache particles using a Cache operator
- Create an animation preview
- Setup and render using Mental Ray



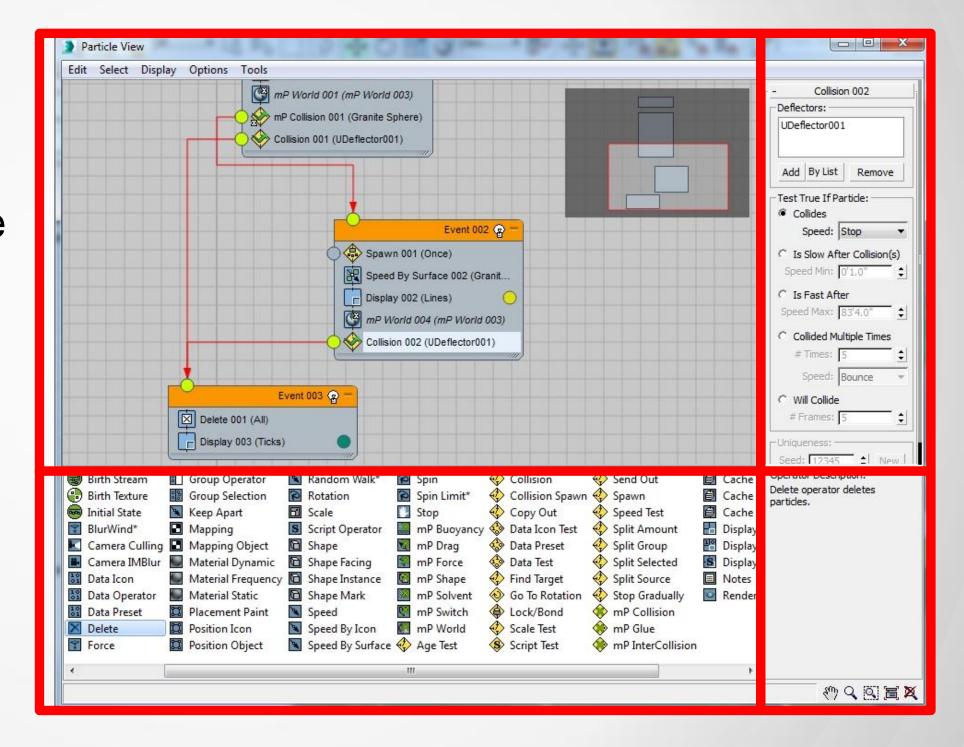






## Particle Flow Explained

- Particle Flow
  - Event driven
  - Particle View interface
    - Event display
    - Depot
    - Parameters
    - Description

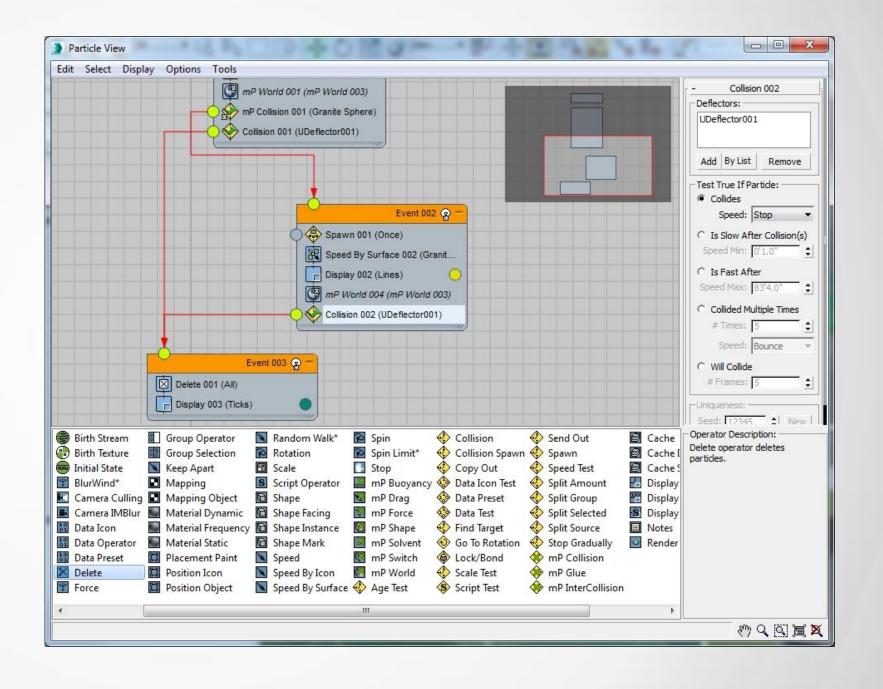




## **Particle Flow Explained**

#### Particle view

- Operators
- Tests
- Flows





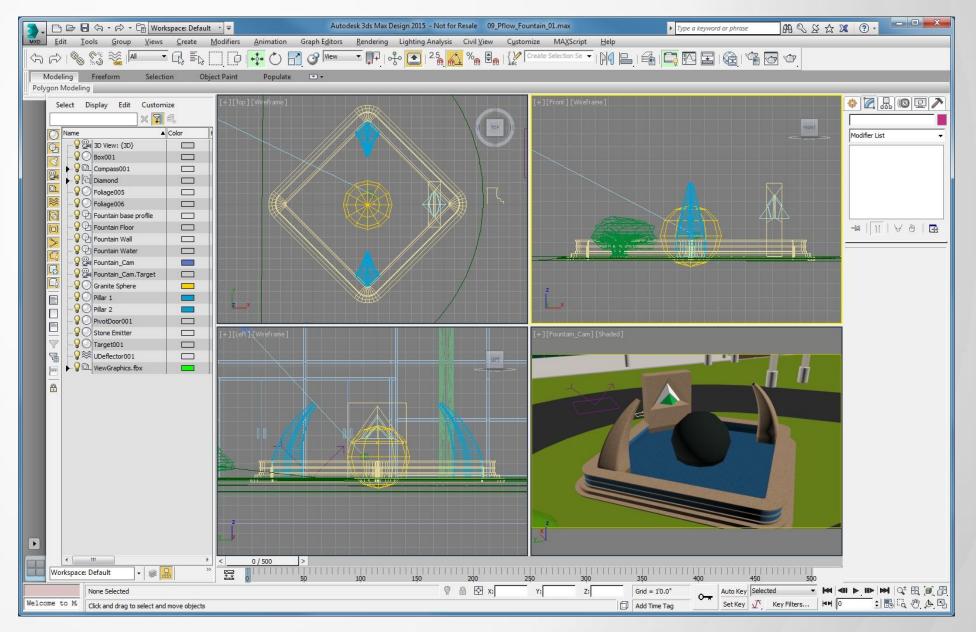






## Setting up the scene

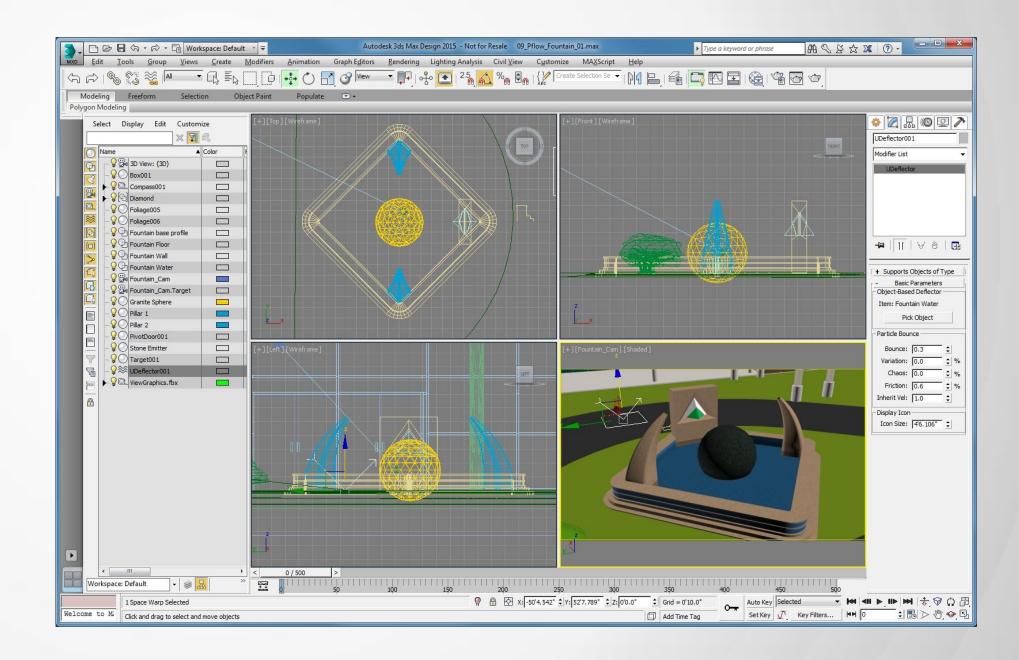
Determine particle system function





## Setting up the scene

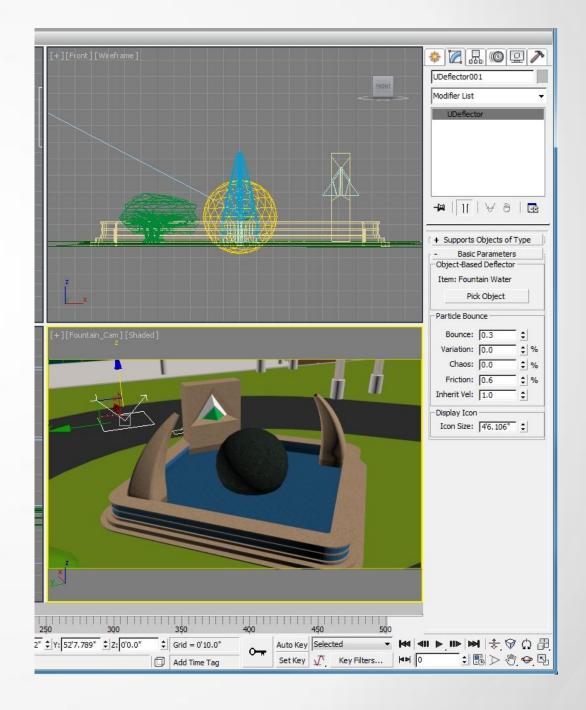
- Adding Space Warps
  - Deflectors
    - Universal deflector



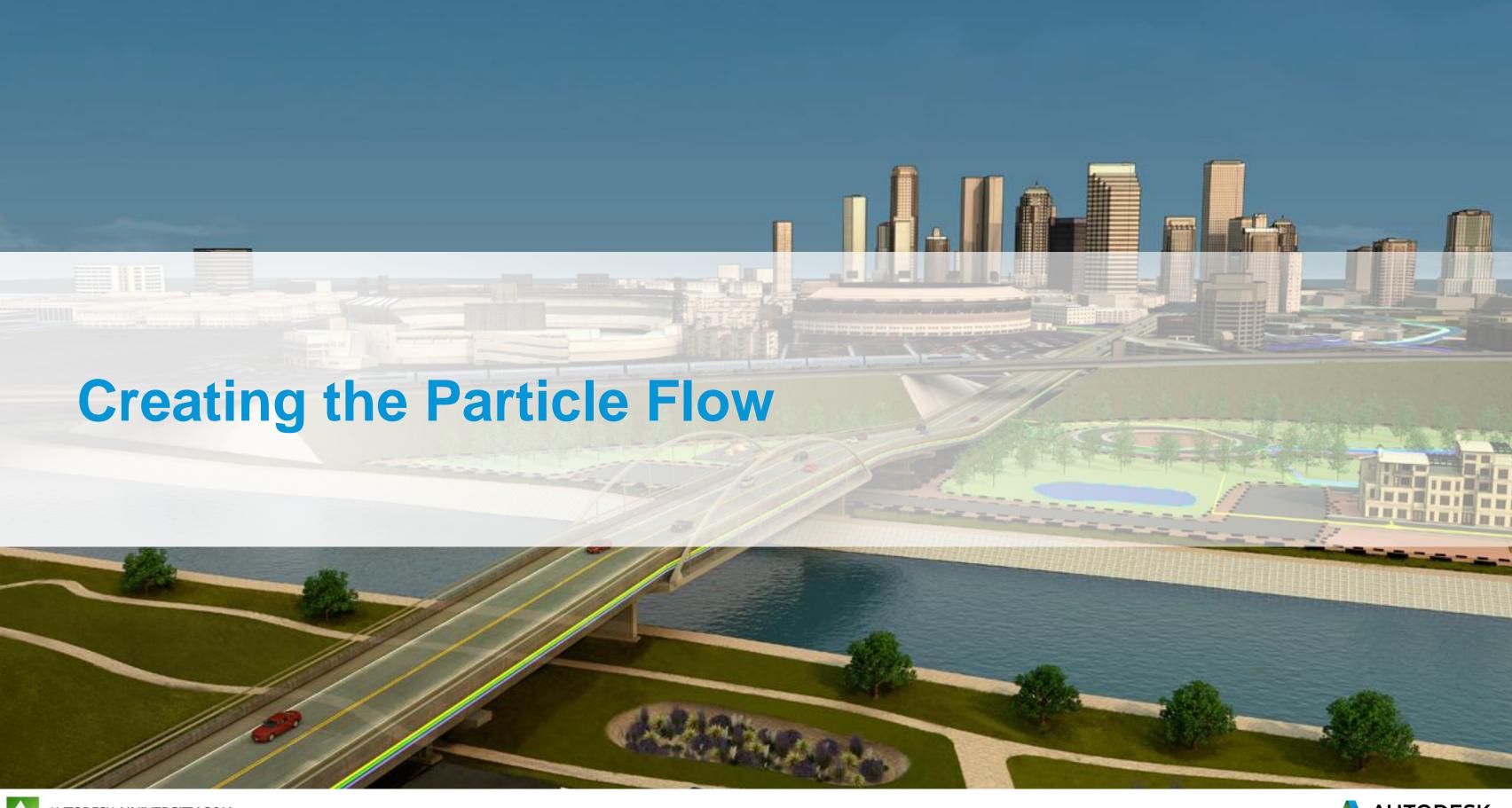


## Setting up the scene

- Editing Space Warps
  - Deflector parameters
    - Bounce
    - Friction





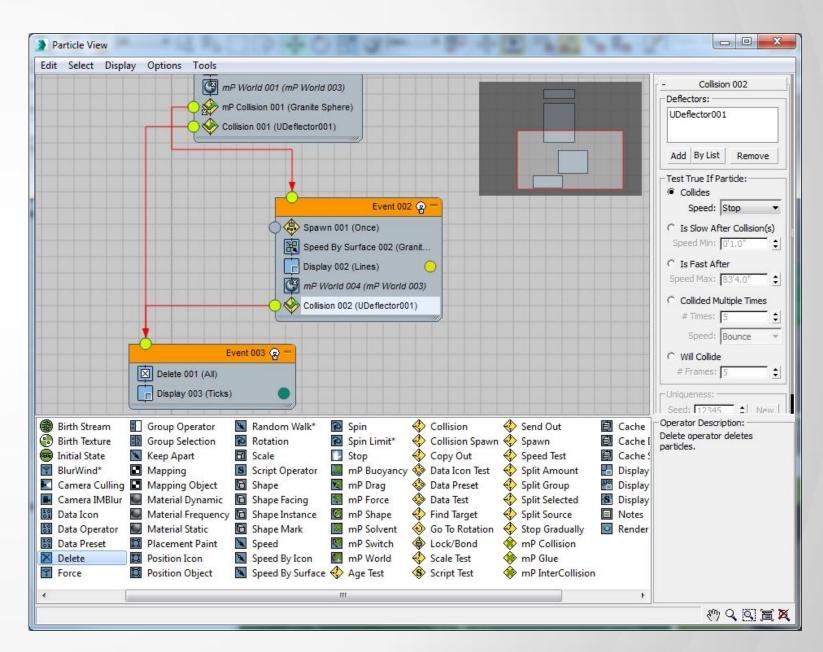




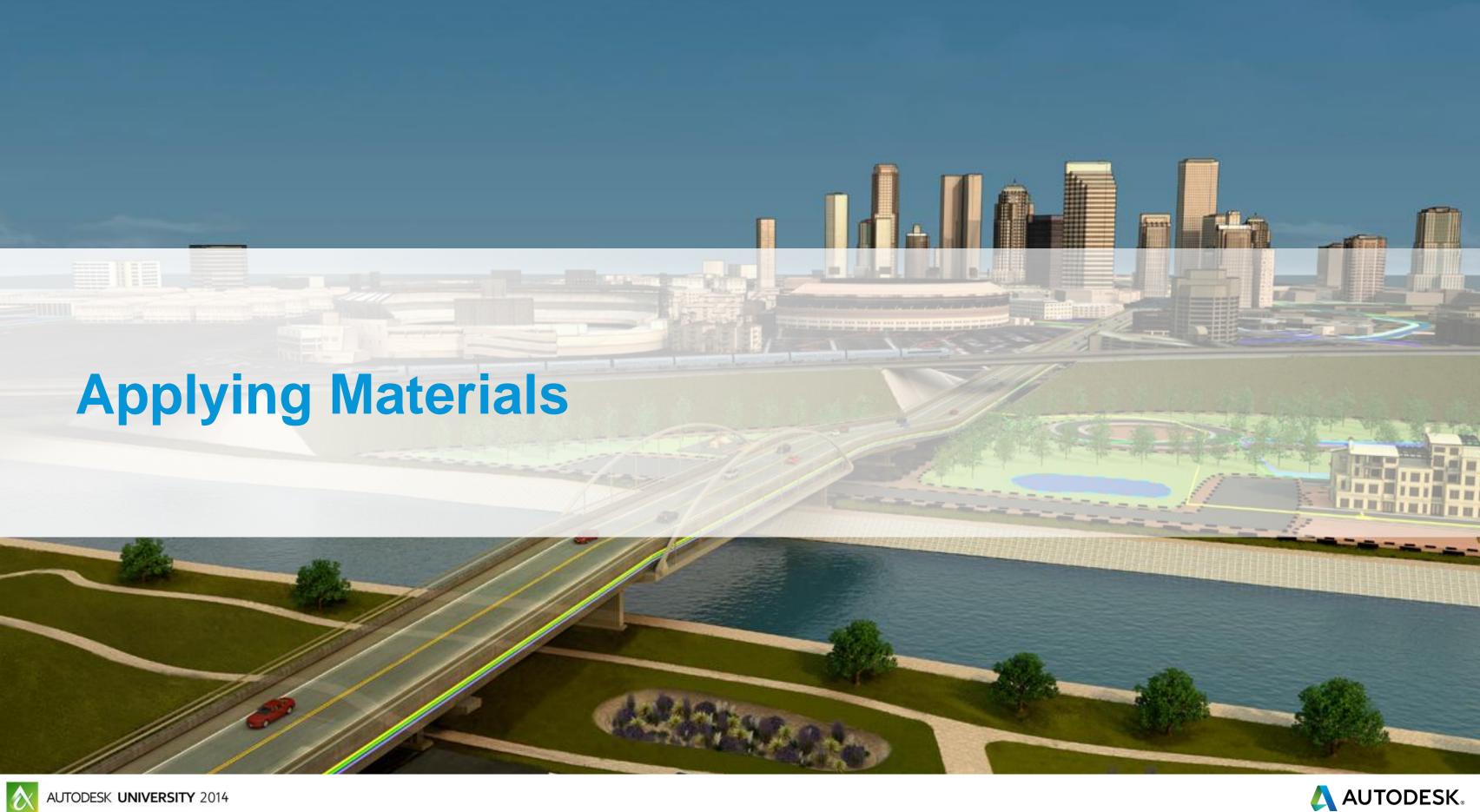


## **Creating the Particle Flow**

- Adding a Pflow source
- Setting up events
  - Adding forces
  - Configuring a collision spawn test
- Setting particle shapes







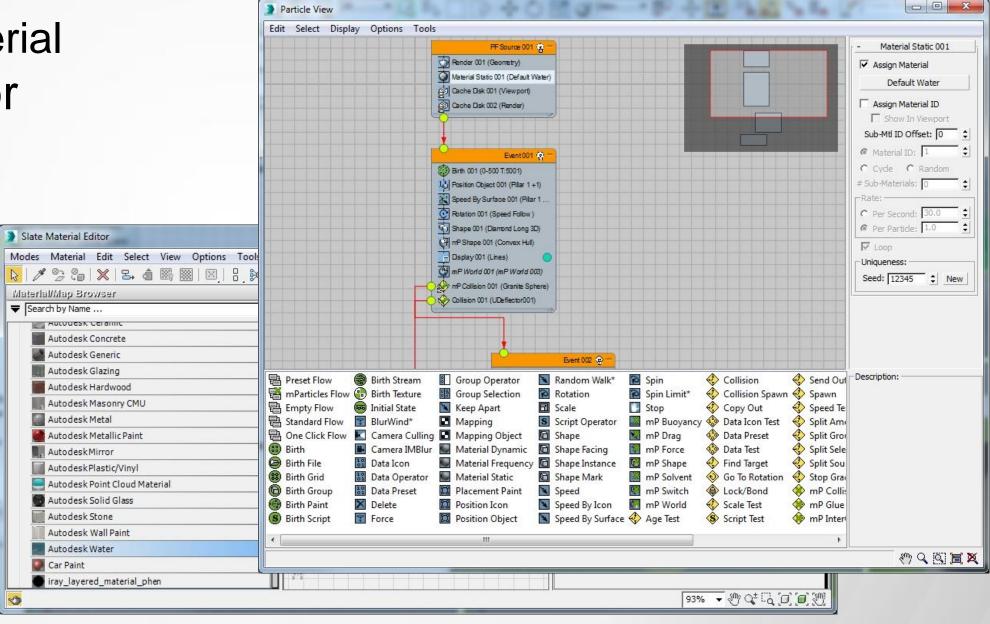
## **Applying materials**

Choosing an appropriate material

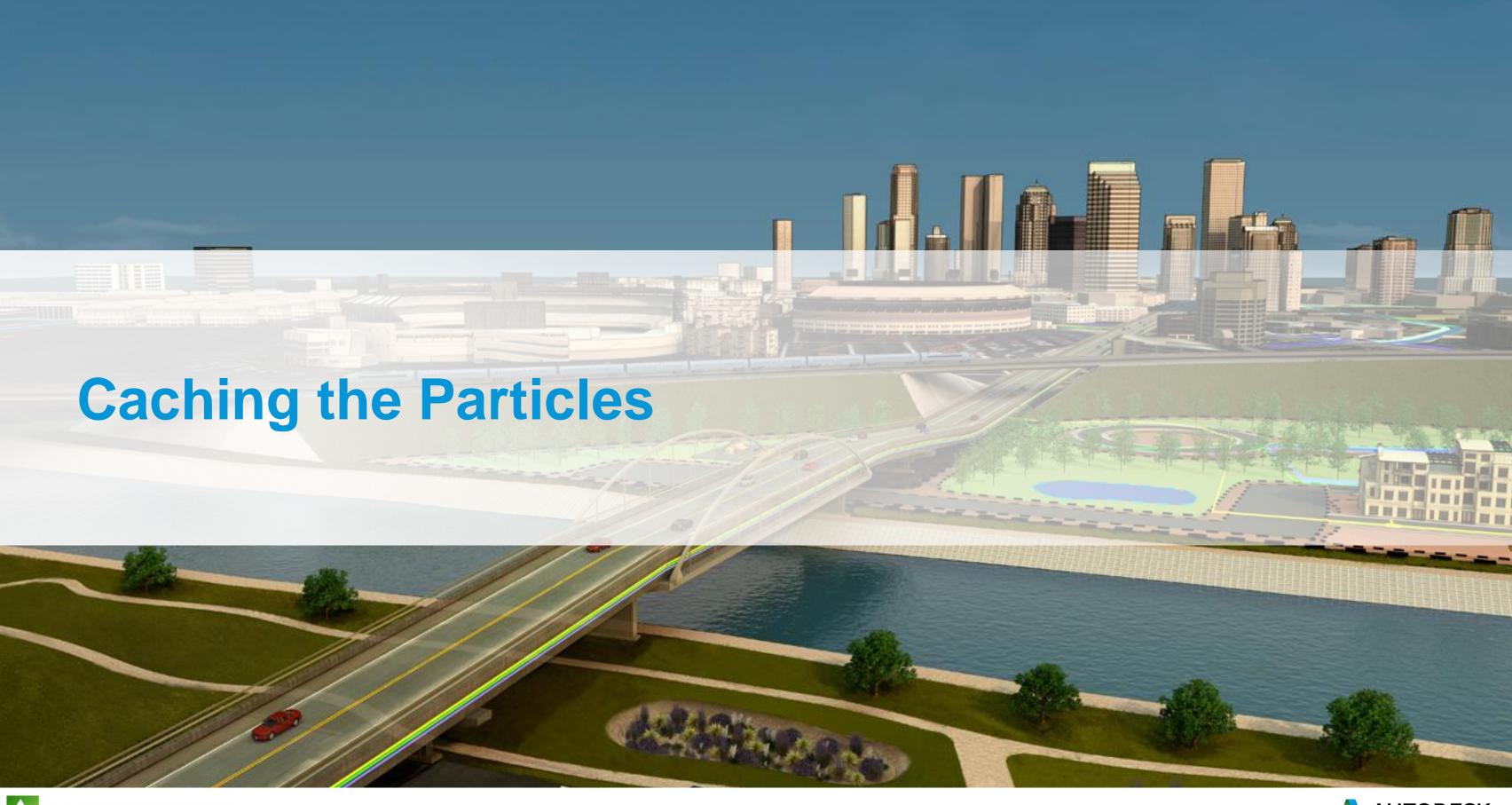
Autodesk Water Material

Material Static operator

Operator Placement

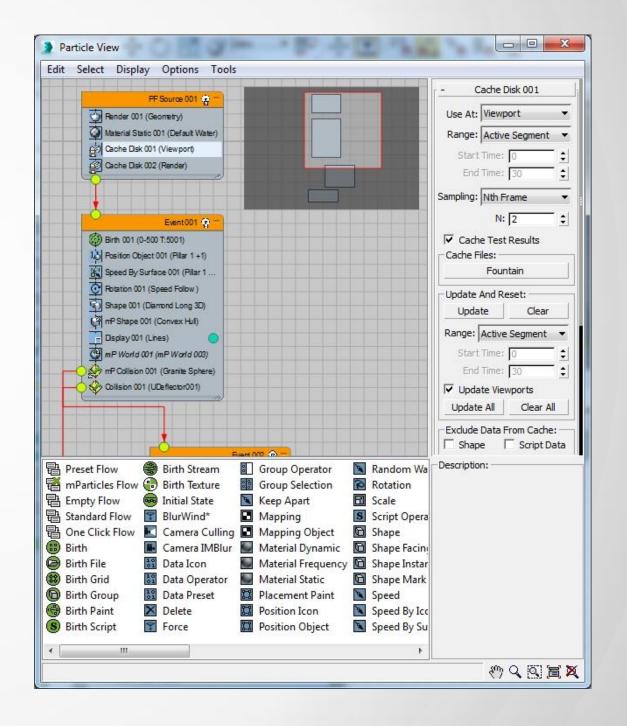






## **Caching the Particles**

- Particle Cache
  - Increases Pflow efficiency
  - Scrub Timeline
  - Render Efficiently
- Add a Cache Disk operator







## Previewing and Rendering the Fountain

- Creating a preview rendering
  - Viewport preview
  - Mental Ray rendering setup
  - Incorporating motion blur





#### **Session Feedback**

Via the Survey Stations, email or mobile device

AU 2014 passes given out each day!

Best to do it right after the session

Instructors see results in real-time





#### **Thank You**



#### Steven Schain

Steve@sli-3d.com www.spectra3d.com











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