Introduction to Augmented Reality

Tutorial 9: Spatial Behavior & AR Project Kickoff

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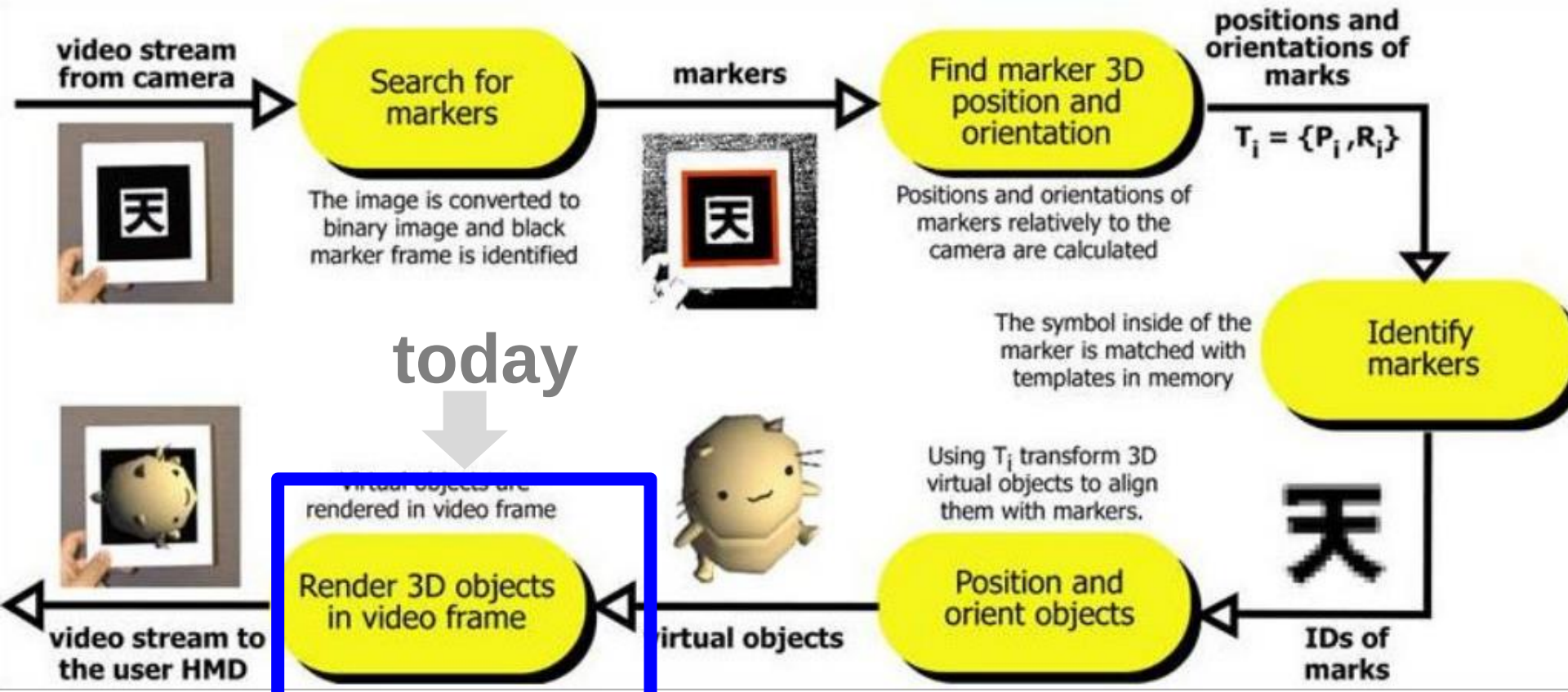
Marker-based Tracking



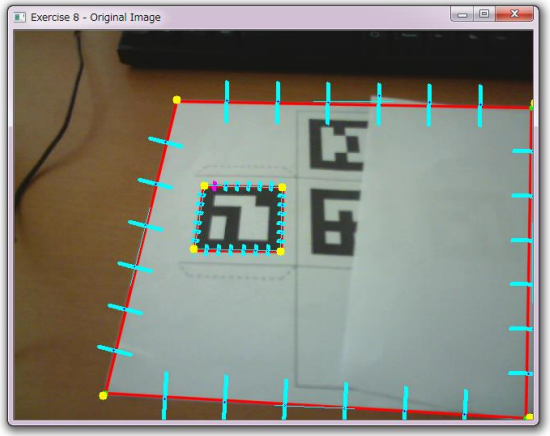
ARToolKit

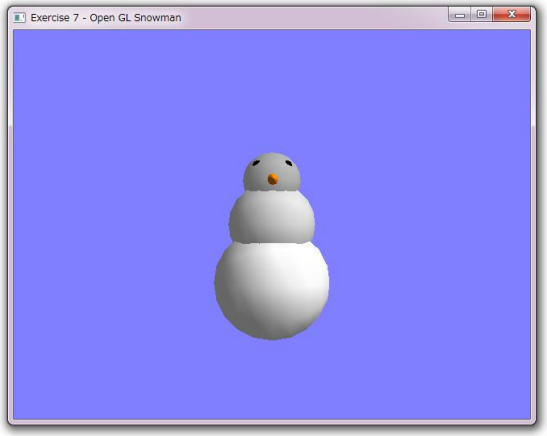
Ex. 8~9

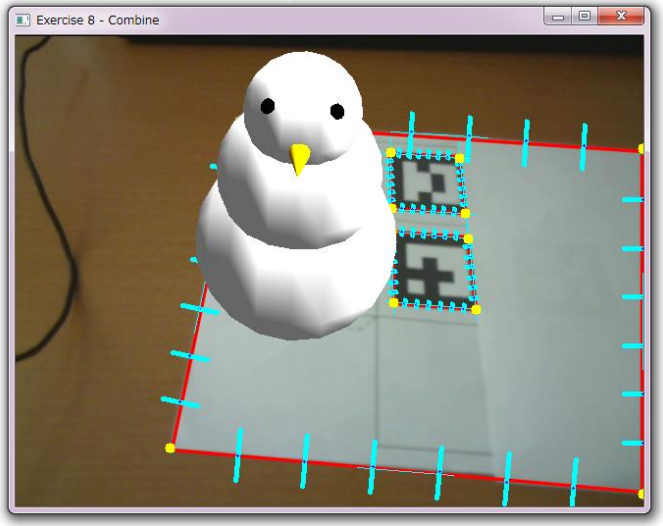
Solution for the Previous Tutorial

Ex. 8

Combine AR



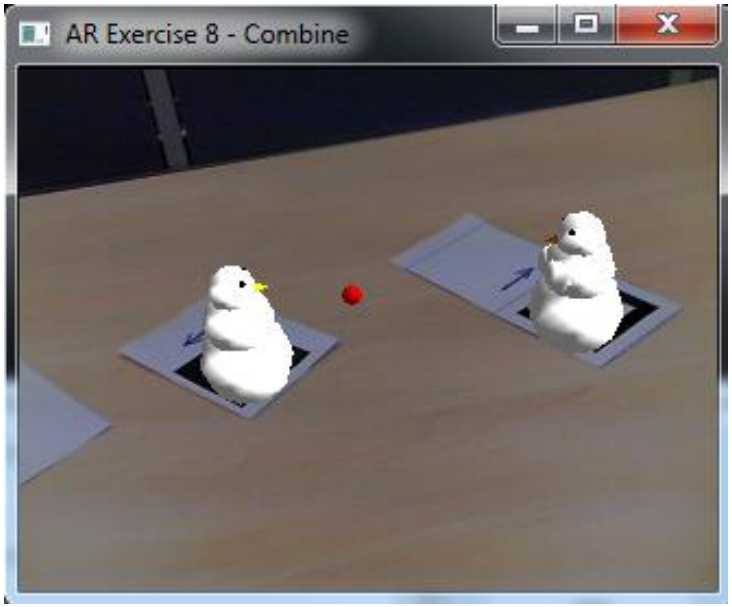




Today's Tutorial

Ex. 9

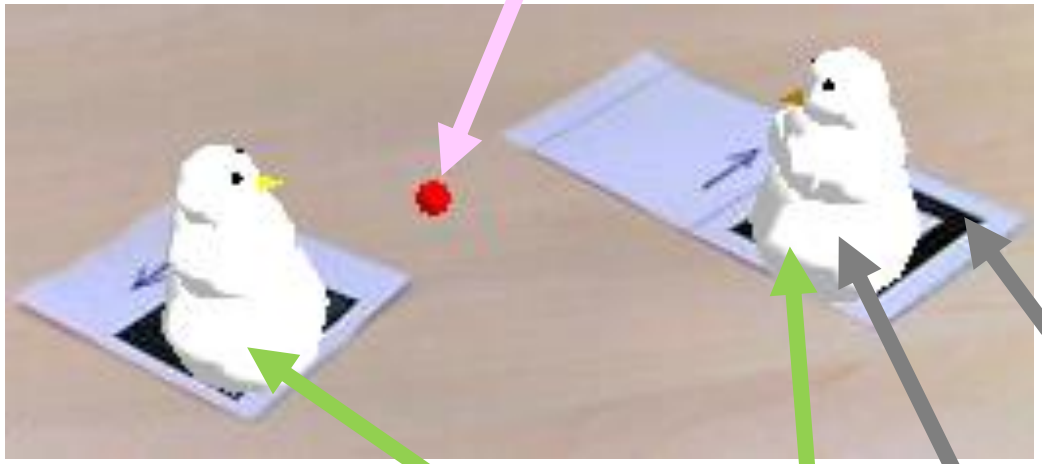
Spatial behavior



AR Project

- Kick-off presentation
- Prototype demonstration

Spatial Behavior



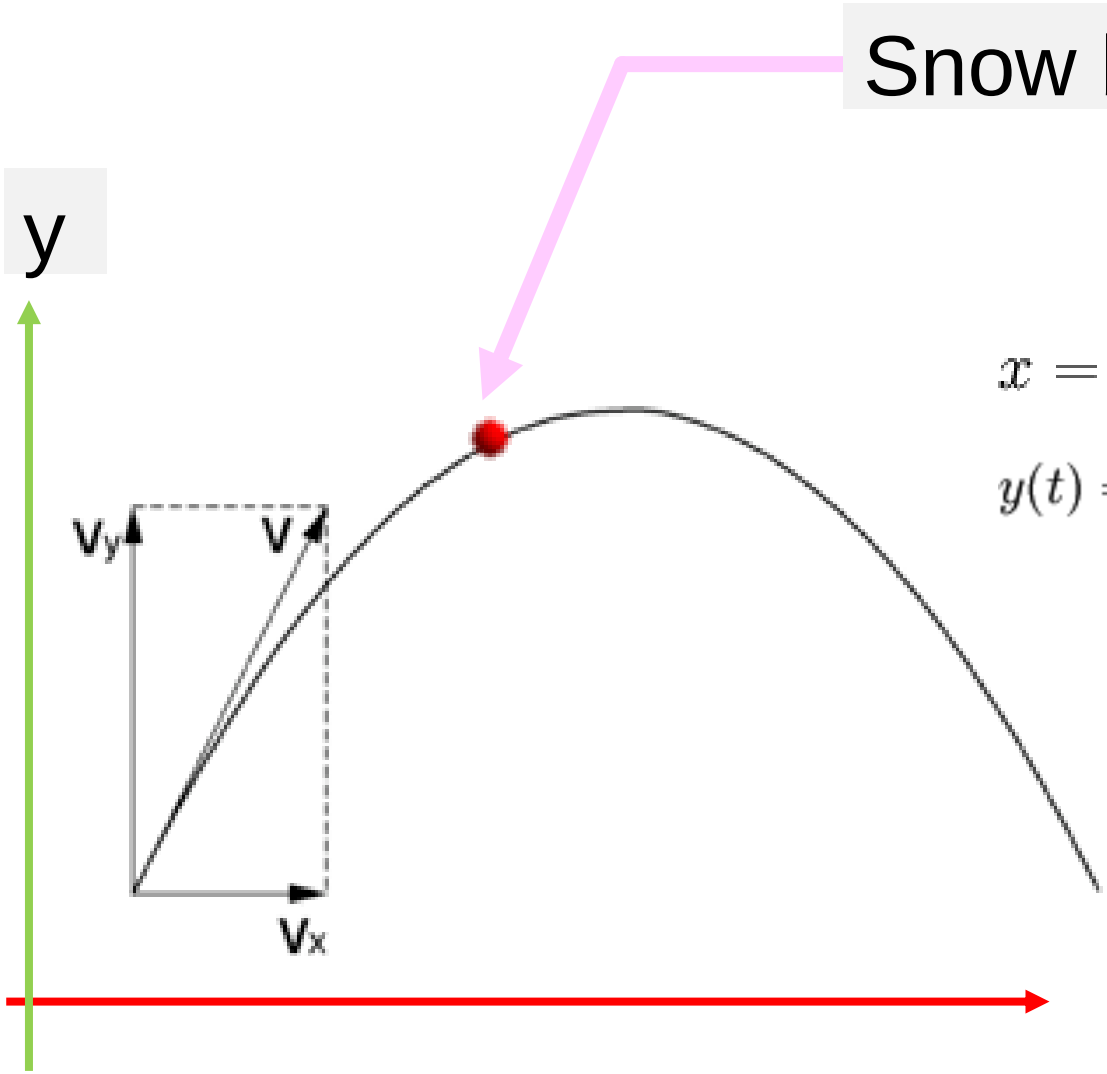
Snow ball moving between

2nd Marker

2nd Snowman

They must look at each other!

Spatial Behavior



$$x = v_x \cdot t = v_0 \cdot \cos(\alpha) \cdot t \quad .$$

$$y(t) = -\frac{g}{2} \cdot t^2 + v_0 \cdot \sin(\alpha) \cdot t + h_0$$

Some Hints/Features Occlusion Object

```
// disable color rendering
glColorMask( 0, 0, 0, 0 );

glMatrixMode( GL_MODELVIEW );
glPushMatrix();

// draw the occluder object
glTranslatef( 0, 0, -3.0 );
glutSolidCube( 6.0 );
```

```
glPopMatrix();

// re-enable color
rendering
glColorMask( 1, 1, 1, 1 );
```

Homework

Implement spatial behavior

Project Kick-off

Photo by NASA

Please send to
teaching.langbein@tum.de
the following:

- Project Name
- The name of your team members
- Kickoff presentation slides

Demo Day

That‘s it…

- Questions