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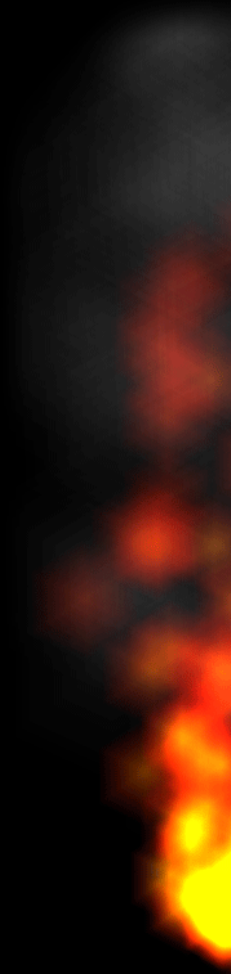
CLOTH

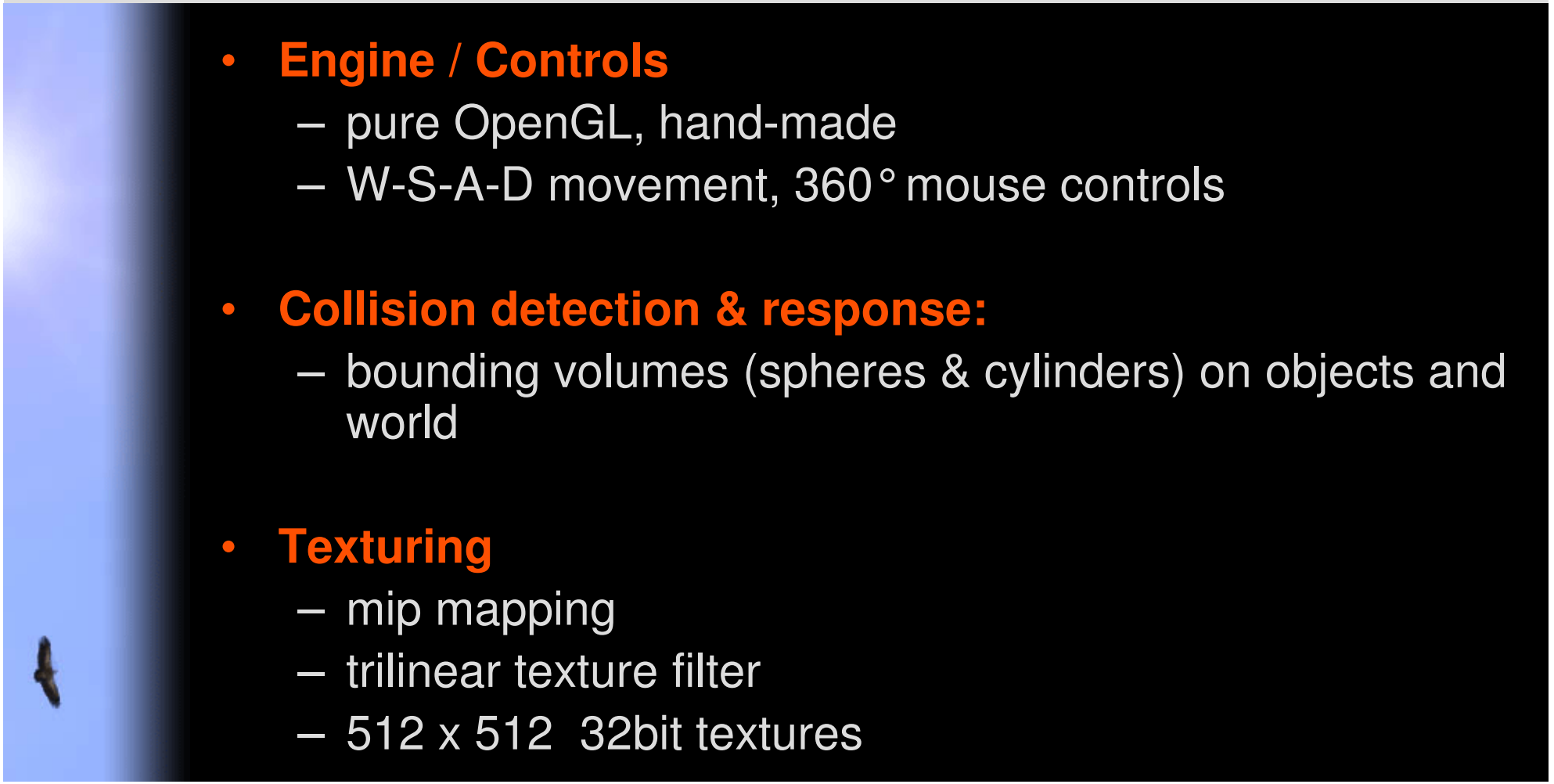
- **a Mass-Spring System** based on
  - some mass points
  - many, many springs
  - semi-implicit Euler-Integration
- **the mass points:**
  - states: normal, fixed, dead
- **the springs:**
  - direct
    - to next neighbors
  - indirect
    - to second next neighbors
    - more realistic simulation

FIRE

- **a Particle System** based on
  - many, many particles
  - some emitters
- **the particles:**
  - 2-dimensional sprites
    - performance gains
    - translucency easy to implement
  - spherical billboarding for 3D impression
- **the emitters:**
  - dynamically creatable, editable and deletable
  - variable number
  - easy handling through emitter-handler



ENGINE



- **Engine / Controls**
  - pure OpenGL, hand-made
  - W-S-A-D movement, 360° mouse controls
- **Collision detection & response:**
  - bounding volumes (spheres & cylinders) on objects and world
- **Texturing**
  - mip mapping
  - trilinear texture filter
  - 512 x 512 32bit textures