

# TroPinball

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# TroPinball

## Team

Content Creation

Benjamin Hohlmann

Game logic

Laurin Scholz

Graphics

Matthias Möller



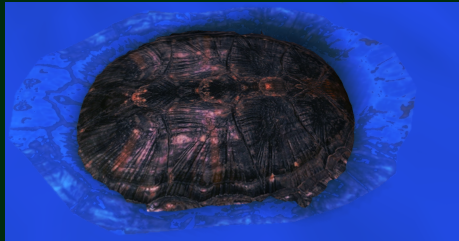
# TroPinball



# Mission System

## Turtle Quest

Hit Barrel & Chest to unlock the Turtle

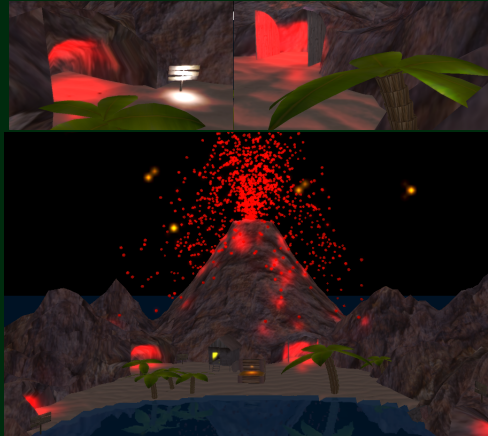




# Mission System

## Vulcano Quest

Enter all caves to unlock the closed one and unleash the vulcano



# Workflow

## Original Workflow



- XML used for own format
- 3dsMax was soon replaced by Blender
- Editor was aborted



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# XML

## Example

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<physics rbscalar="0" mass="0" startRot="0,1,0,0" startPos="50,3,40" RBody="btConeShape"
  name="pBarrel" rbvector="0.1,5,0">
  <transformation scale="1,1,1" translation="0,-2.5,0" rotation="0,1,0,0">
    <shader texture="WoodPlanks">
      <geometry object="Barrel.obj"/>
    </shader>
  </transformation>
  <pointlight name="plBarrel" radius="5" color="1,0.8,0"/>
  <roundKickEvent name="rkBarrel" power="10" award="2"/>
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## Benefits & Problems

- allow live changing
- Game logic supports multiple Parents, XML doesn't.
- 'Dirty' solution:
  - Some Nodes hard-coded for efficiency



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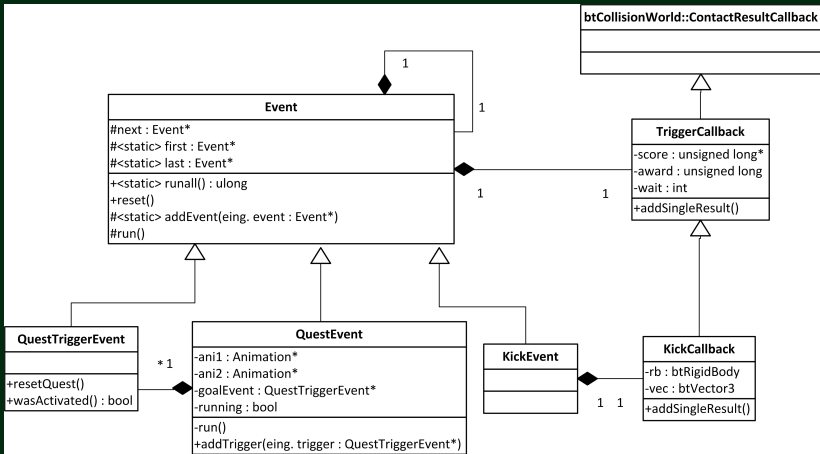
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# Game Logic

## Event-&Missionsystem



# Game Logic

## Animationsystem

- structural similar to the event system
- xml support for simple animations
- hardcoded complex animations e.g. vulcano

## Other gameplay features

- multiball-support
- randomised portals



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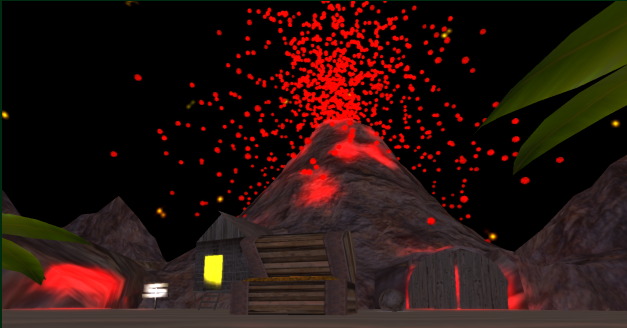
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# Modern Graphics

## Deferred Shading

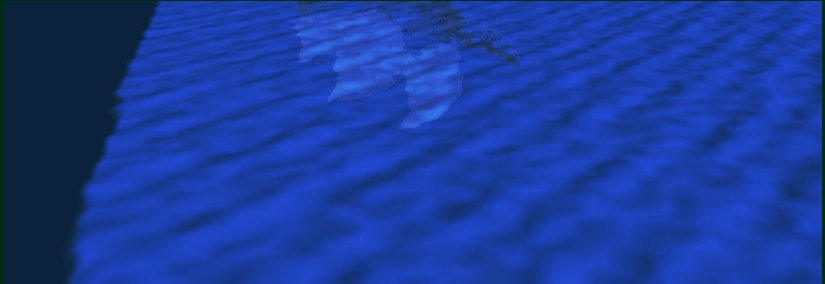


- more than 1000 lights
- using scissor optimization
- plus: XML support



# Modern Graphics

## High-Performance Water



- used as background water
- computed by the GPU
- real-time reflection (objects and skybox)



# Modern Graphics

## Interactive Water



- supports same effects like the High-Performance Water
- integrates into High-Performance Water
- tracks ball or other physic objects
- you need to see it in real-time



# Modern Graphics

## Dynamic Daytime

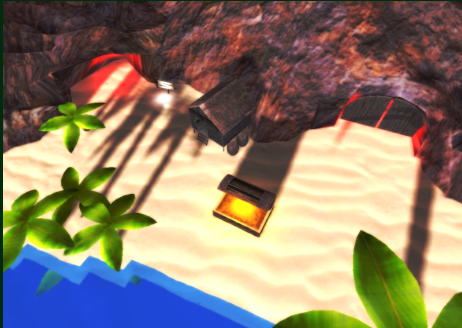


- modern must-have-feature
- produce a realistic atmosphere for several scenarios
- supported by glow



# Modern Graphics

## Shadows

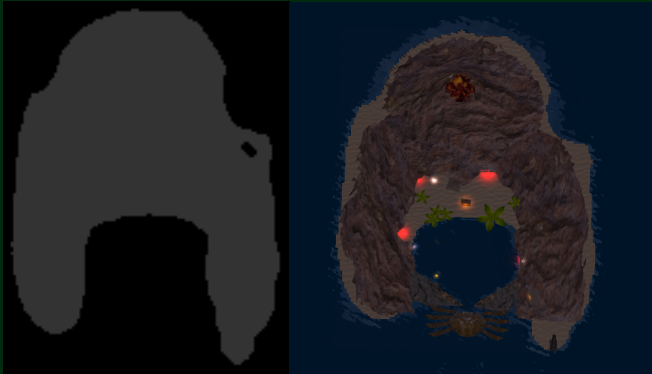


- soft shadows using PCF
- reduces flickering to a minimum
- no pre-computation supporting the Dynamic Daytime



# Modern Graphics

## Heightmap



- creating new levels fast (no code)
- great workflow in combination with XML



# Now Available!

