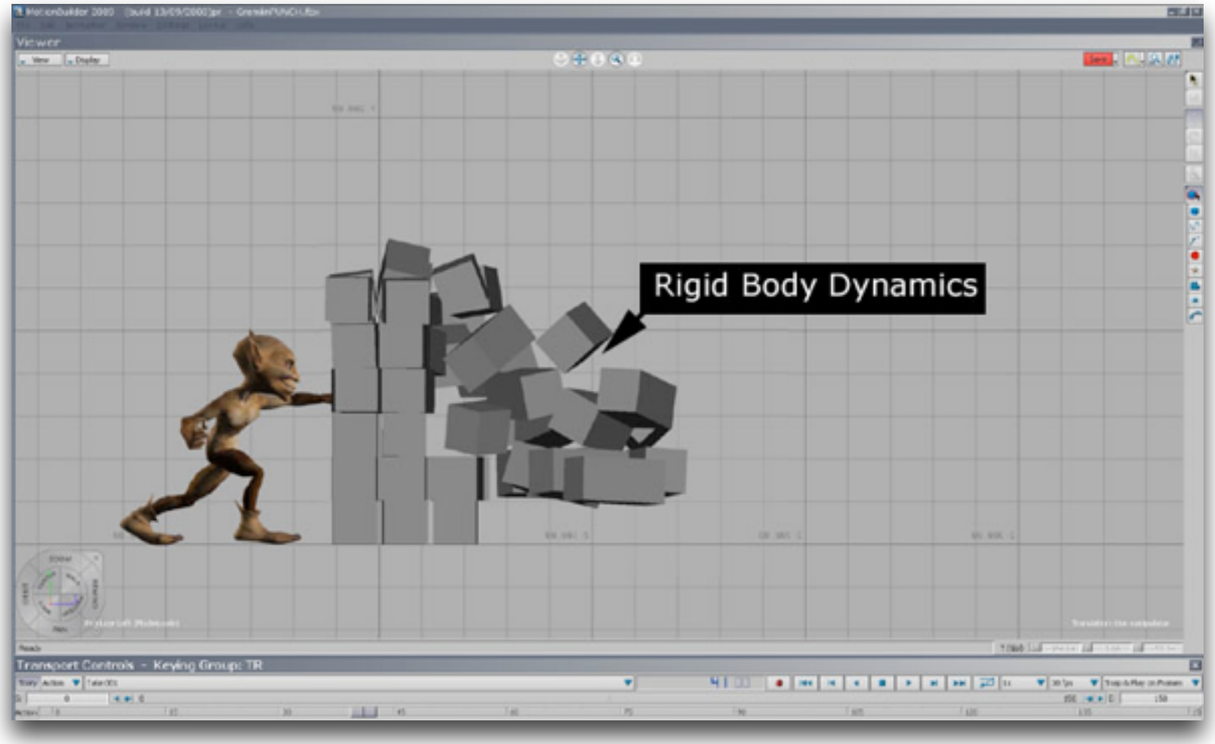
Physik

Festkörperphysik

Festkörperphysik



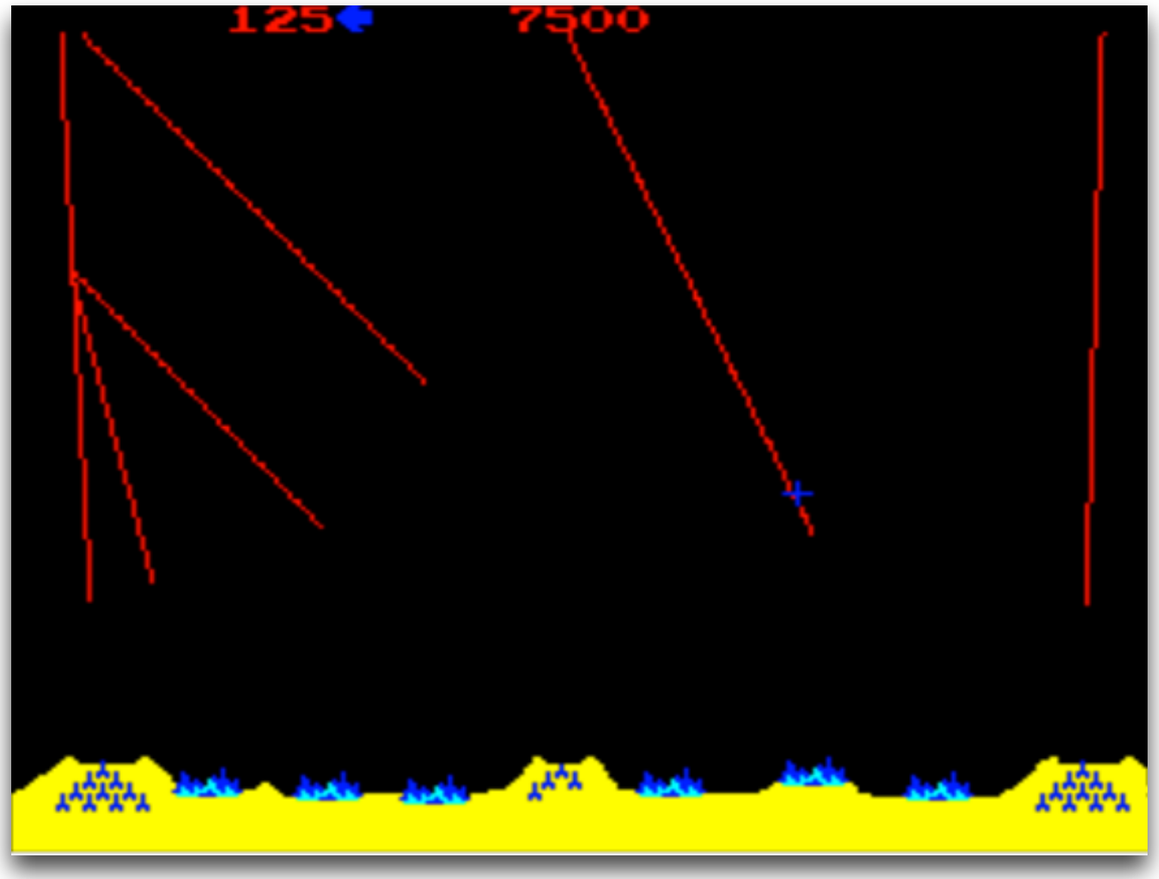
Massen

Kräfte

Position

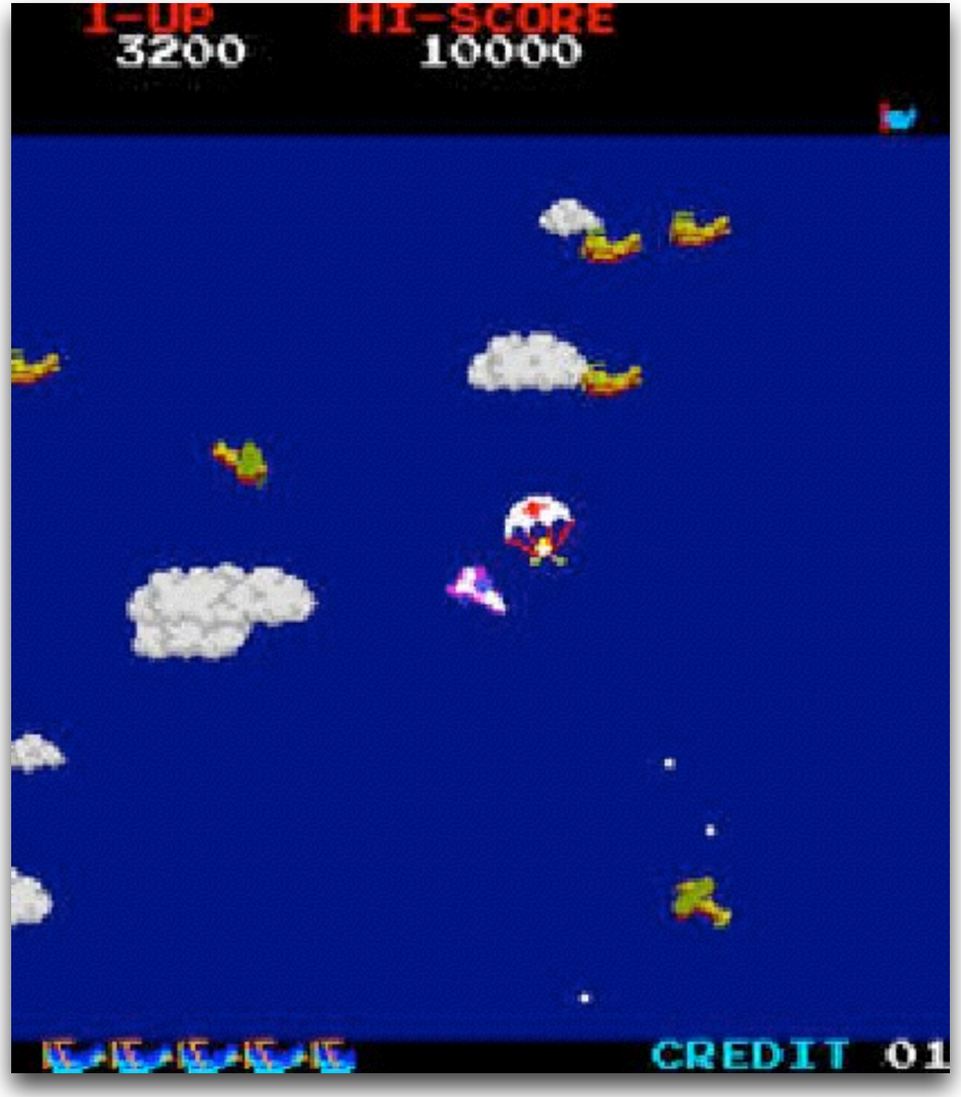
Civilization

Geschwindigkeit



Missile Command

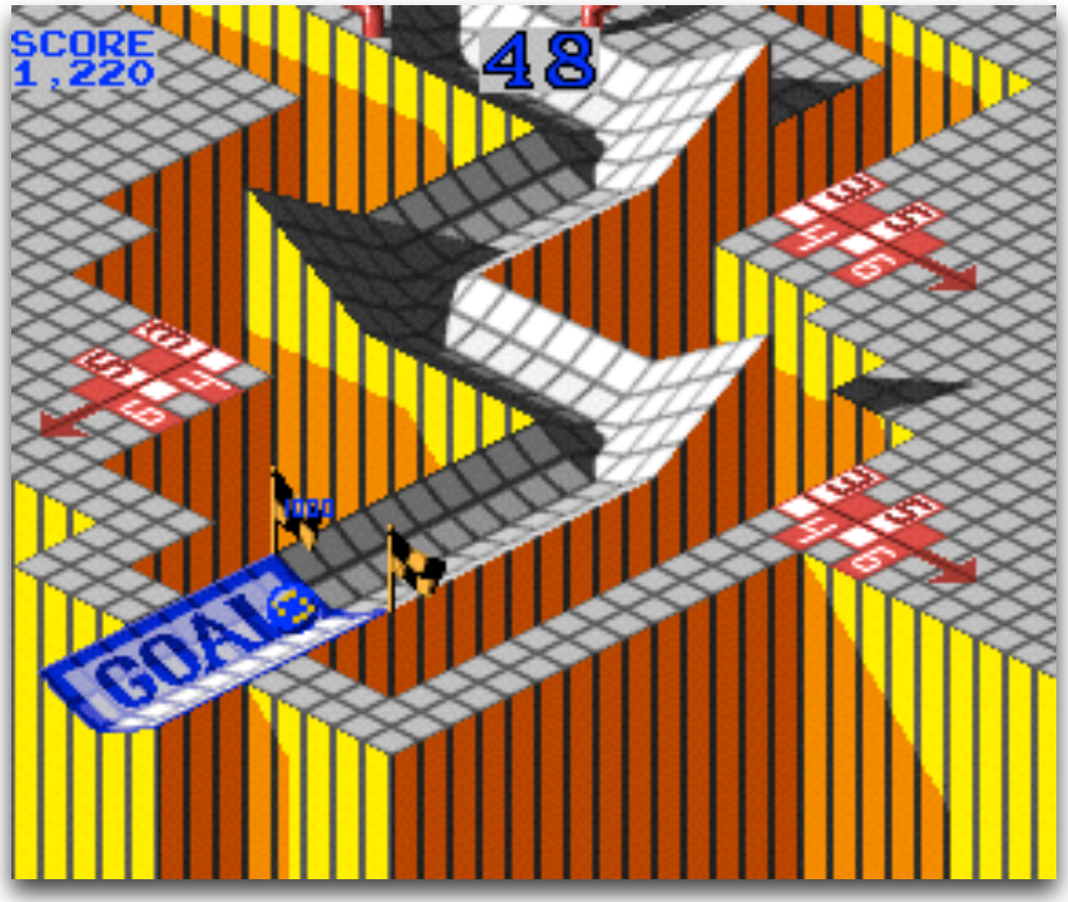
Rotation



Time Pilot

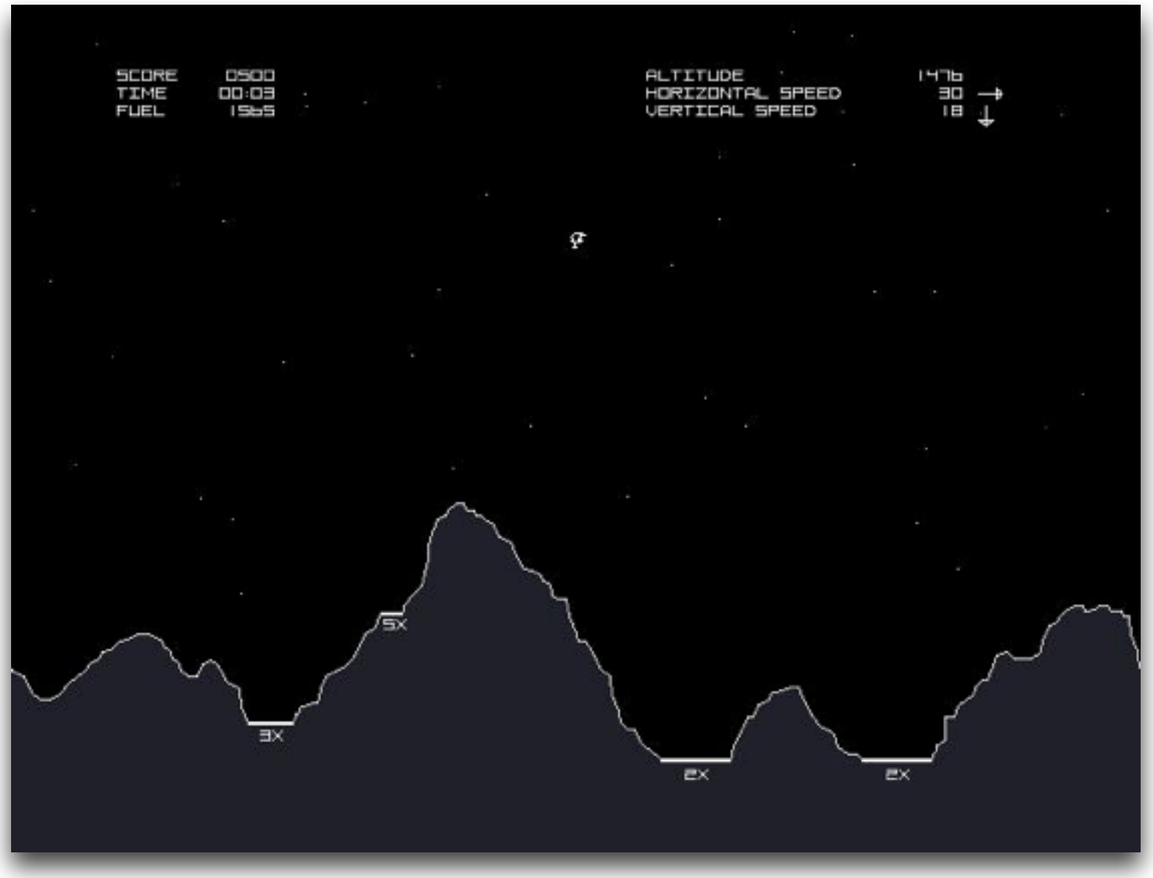
Katamari Damacy

Kraft



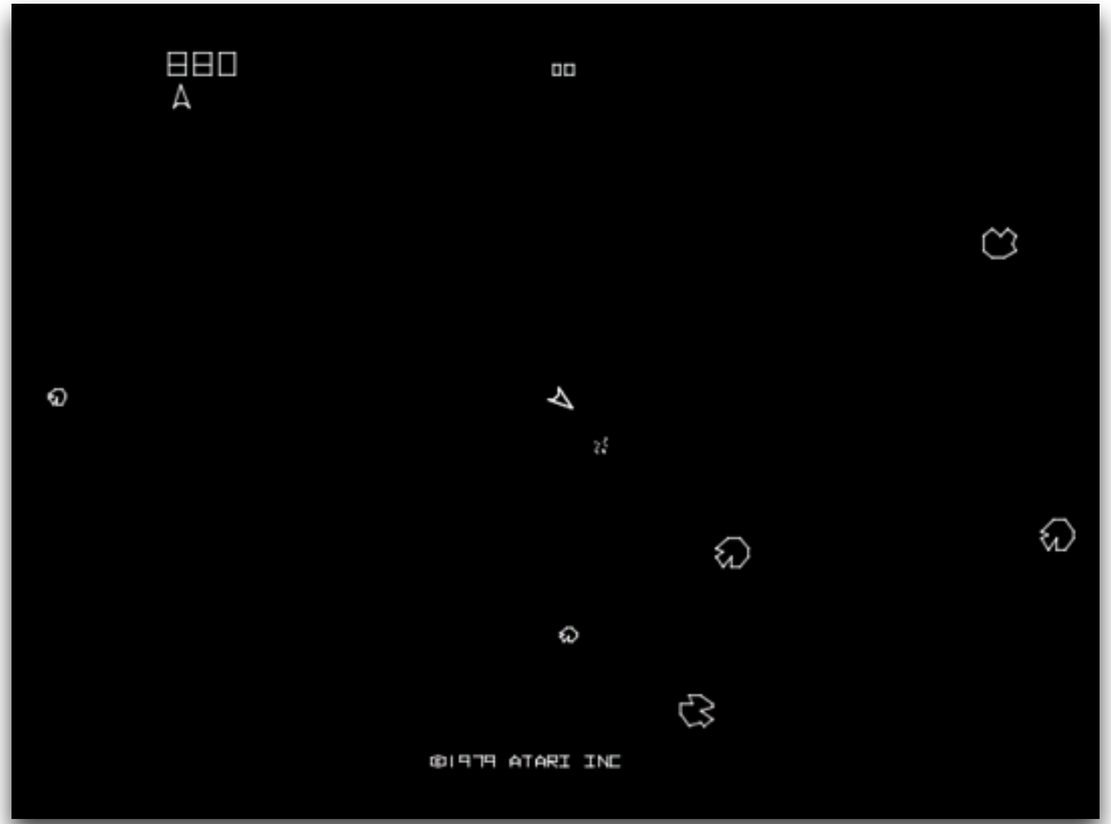
Marble Madness

Beschleunigung und Schwerkraft



Lunar Lander

Reibung

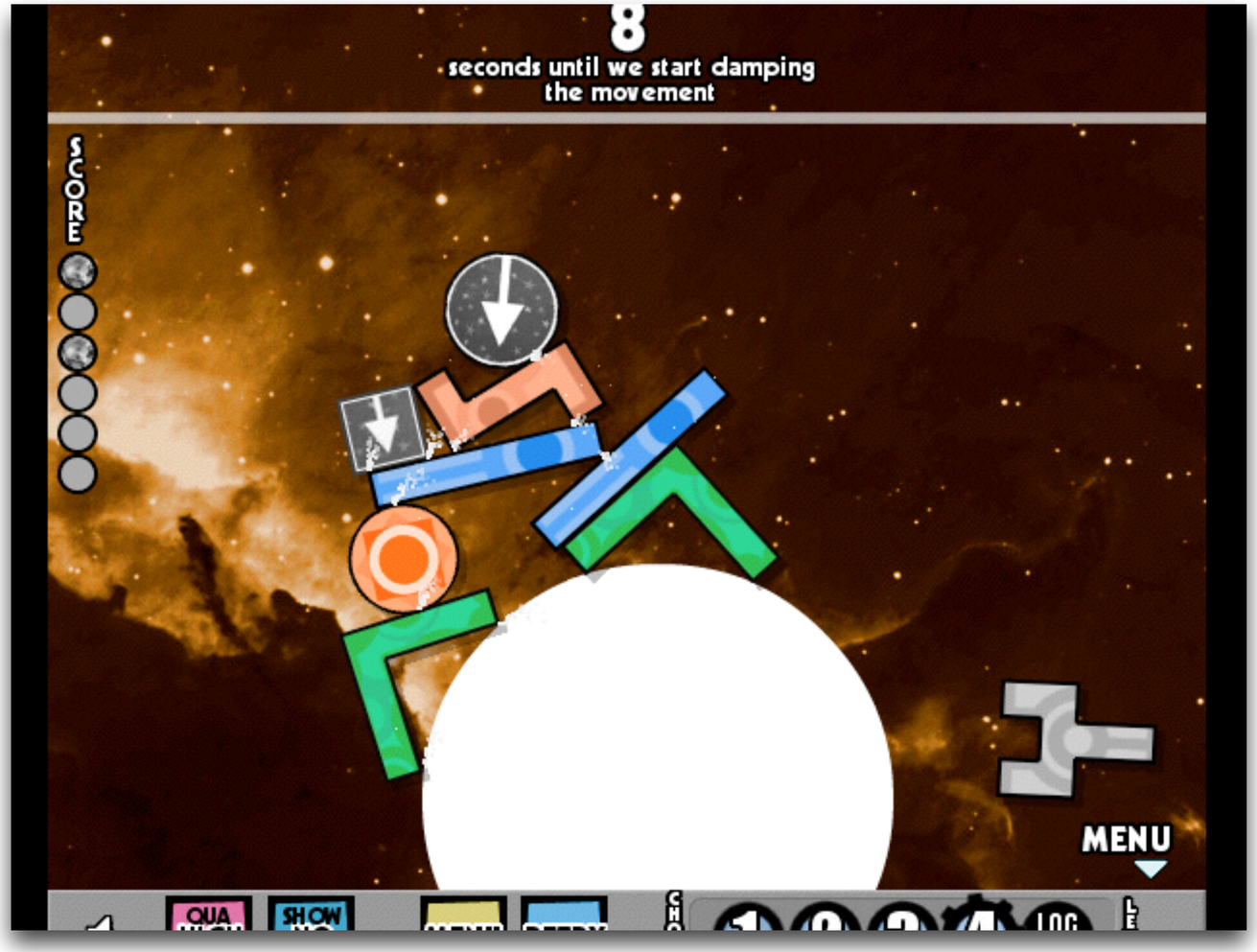


Asteroids

Impuls

Angry Birds

Drehimpuls

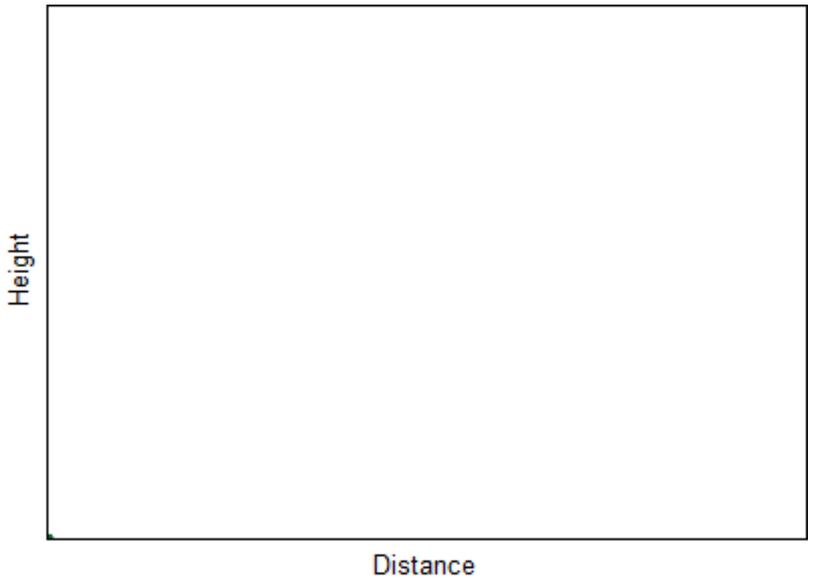


http://www.kongregate.com/games/ttursas/imperfect-balance

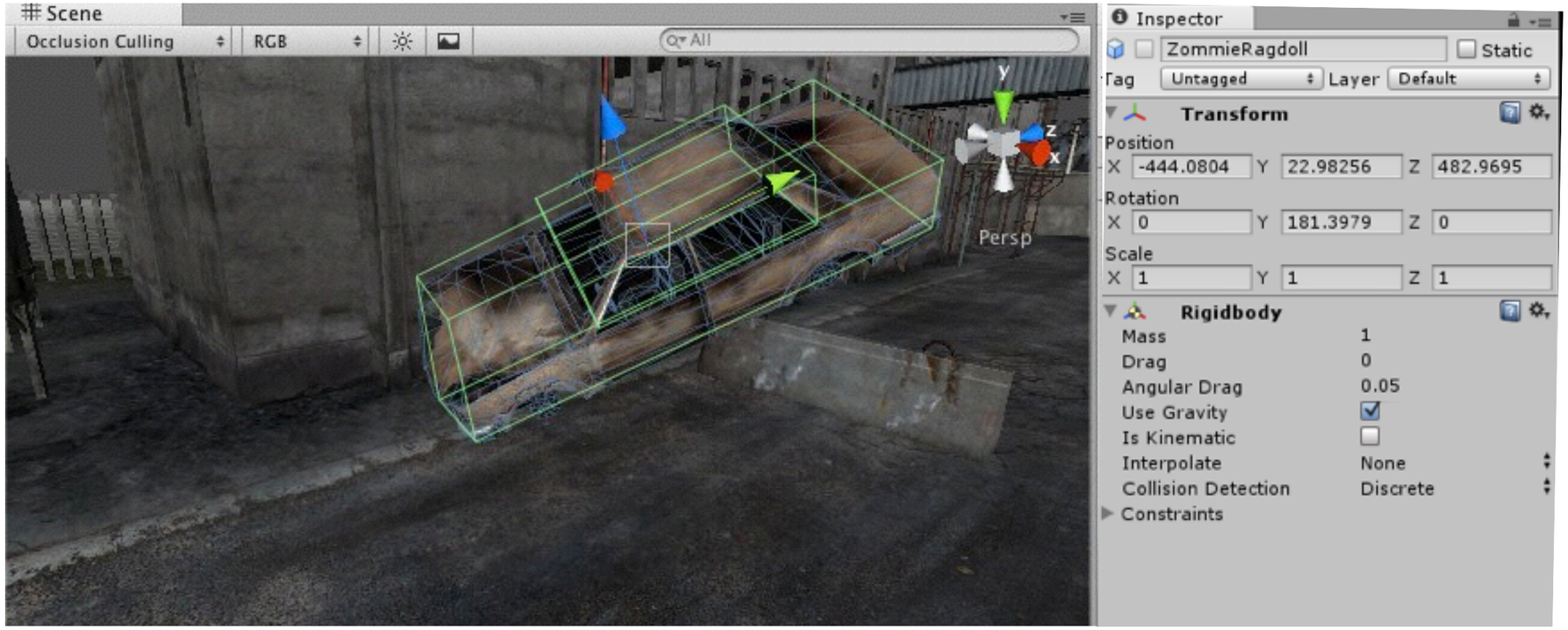
Imperfect Balance

Ballistik

Raft Wars



Unterschiedliche Flugbahnen bei einem schiefen Wurf ohne jegliche Reibung (Schwarz), mit Stokes-Reibung (Blau) oder mit Newton-Reibung (Grün)
http://de.wikipedia.org/wiki/Ballistik



Festkörperphysik

Position (3 Koordinaten)

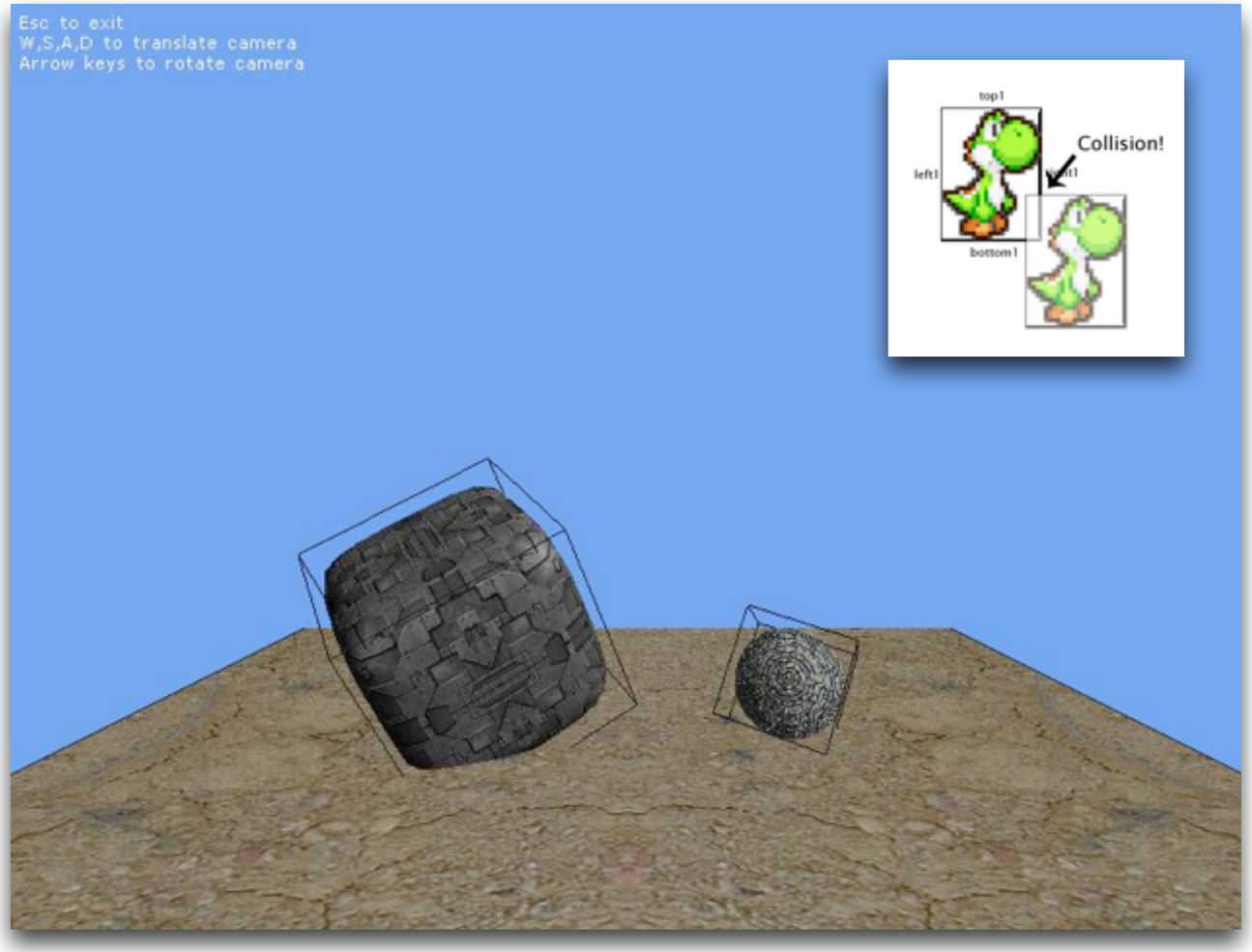
Orientierung (Rotation um 3 Raumachsen)

Masse

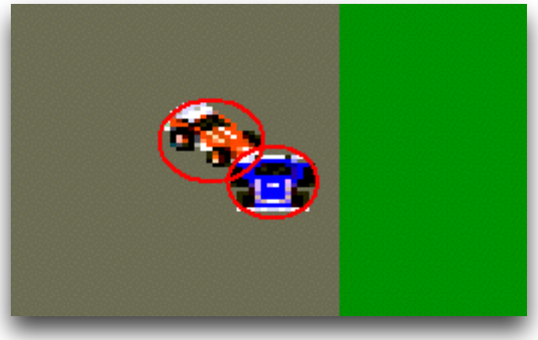
Impuls (Masse * Geschwindigkeit)

Drehimpuls (z.B. Kreisbewegung)

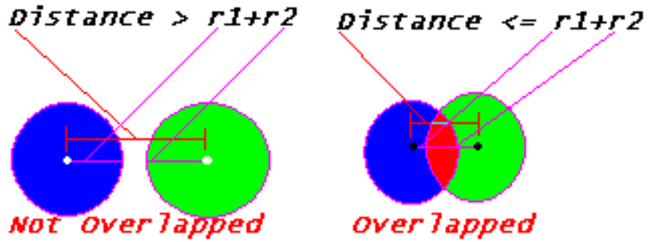
Kollisionen

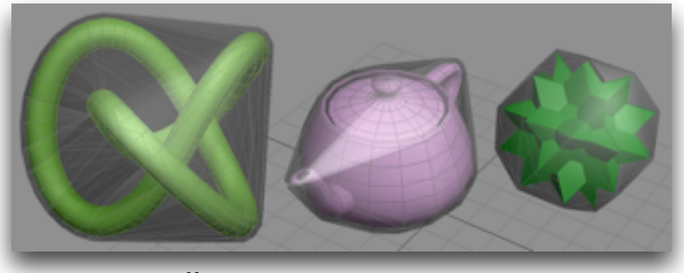


Bounding Box

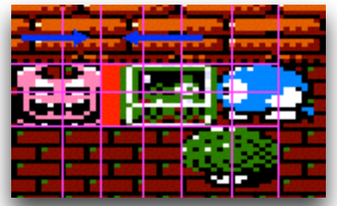


Bounding Circle





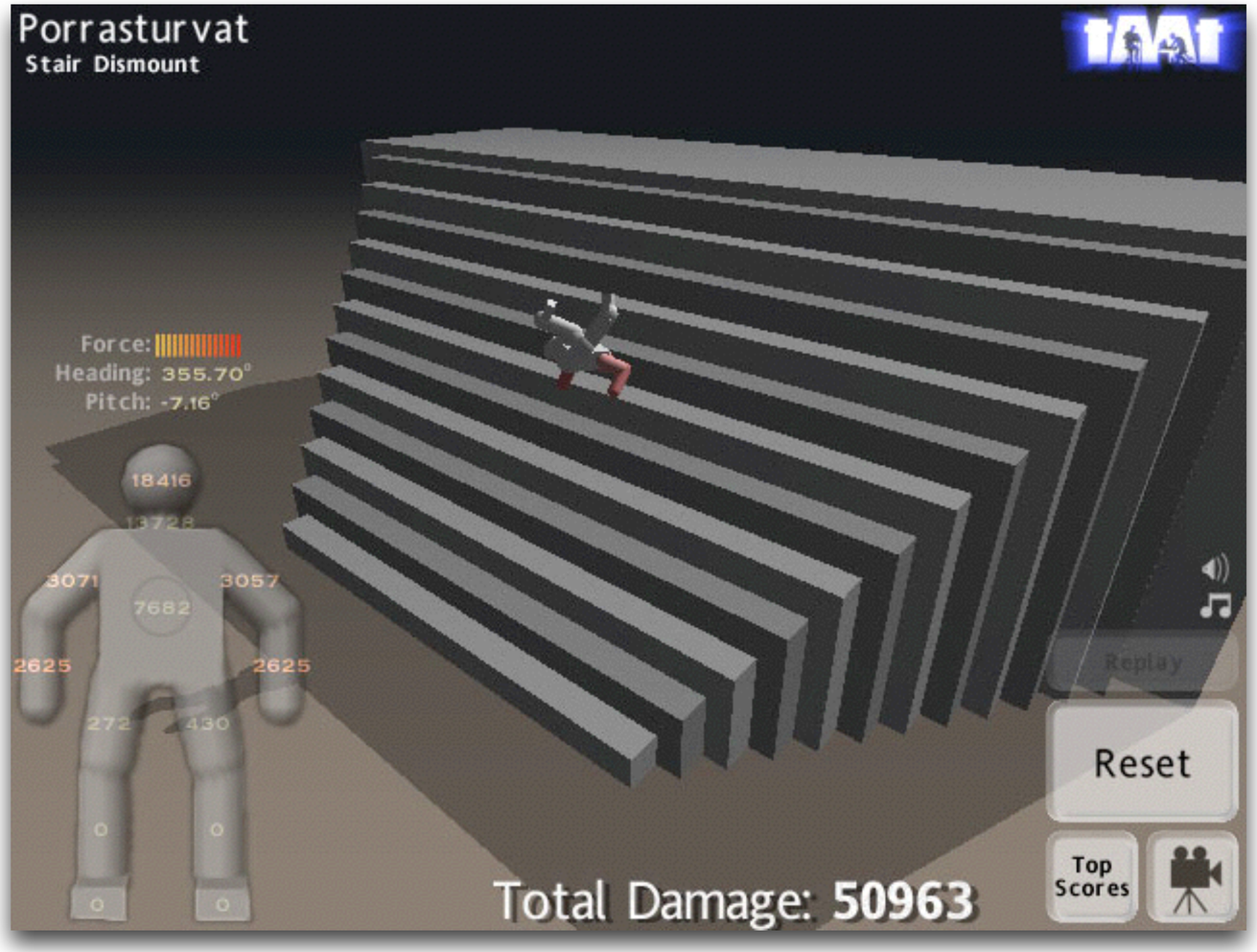
Convex Hull



Grid Based

http://xna-uk.net/blogs/randomchaos/archive/2007/10/31/bounding-box-and-collision-detection.aspx

Ragdoll Physics



Porrasturvat (Stair Dismount)

Umgebungsphysik

https://www.youtube.com/watch?v=paS665grXVY

Realistic environmental physics

Trespasser (1998)

Ragdoll physics started here, as did the idea of physics puzzles in a shooter. You could throw objects at other objects, and they'd react in an almost-realistic way, which was pretty novel for the time.

http://www.gamesradar.com/gamings-most-important-evolutions/?page=7

Fracture Physics

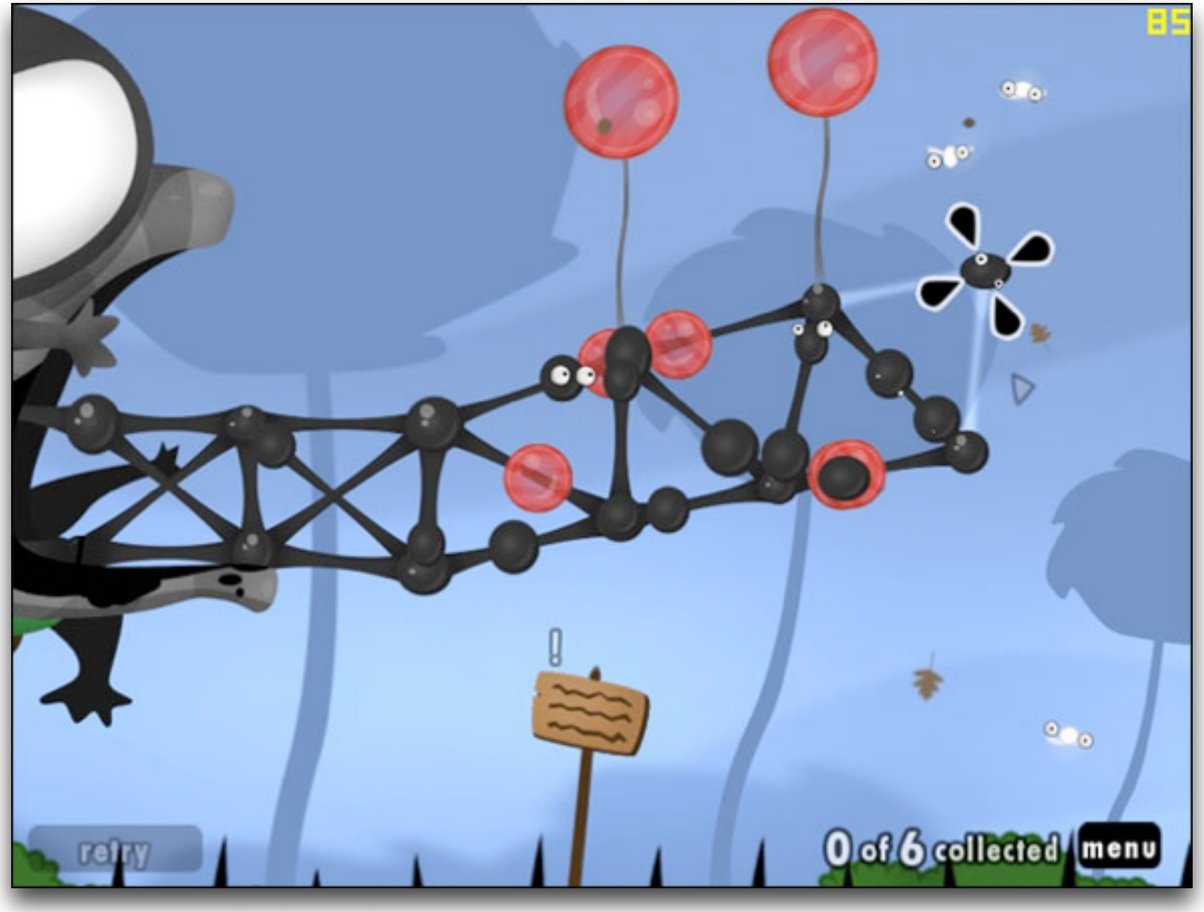
https://www.youtube.com/watch?v=ATU6IGCMpUA

Killzone 2

Soft Body Physics

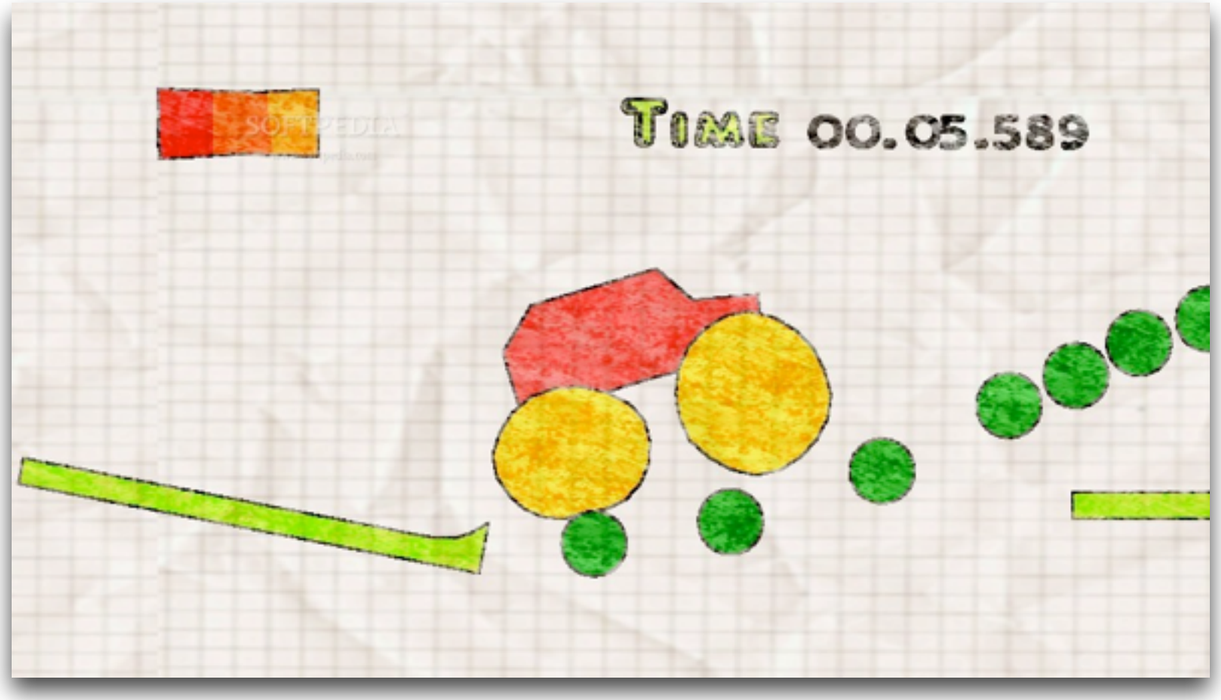
Seile und Federn

Cut the Rope



World of Goo

Oberflächenverformung



Jelly Car

Kleidung (Cloth)

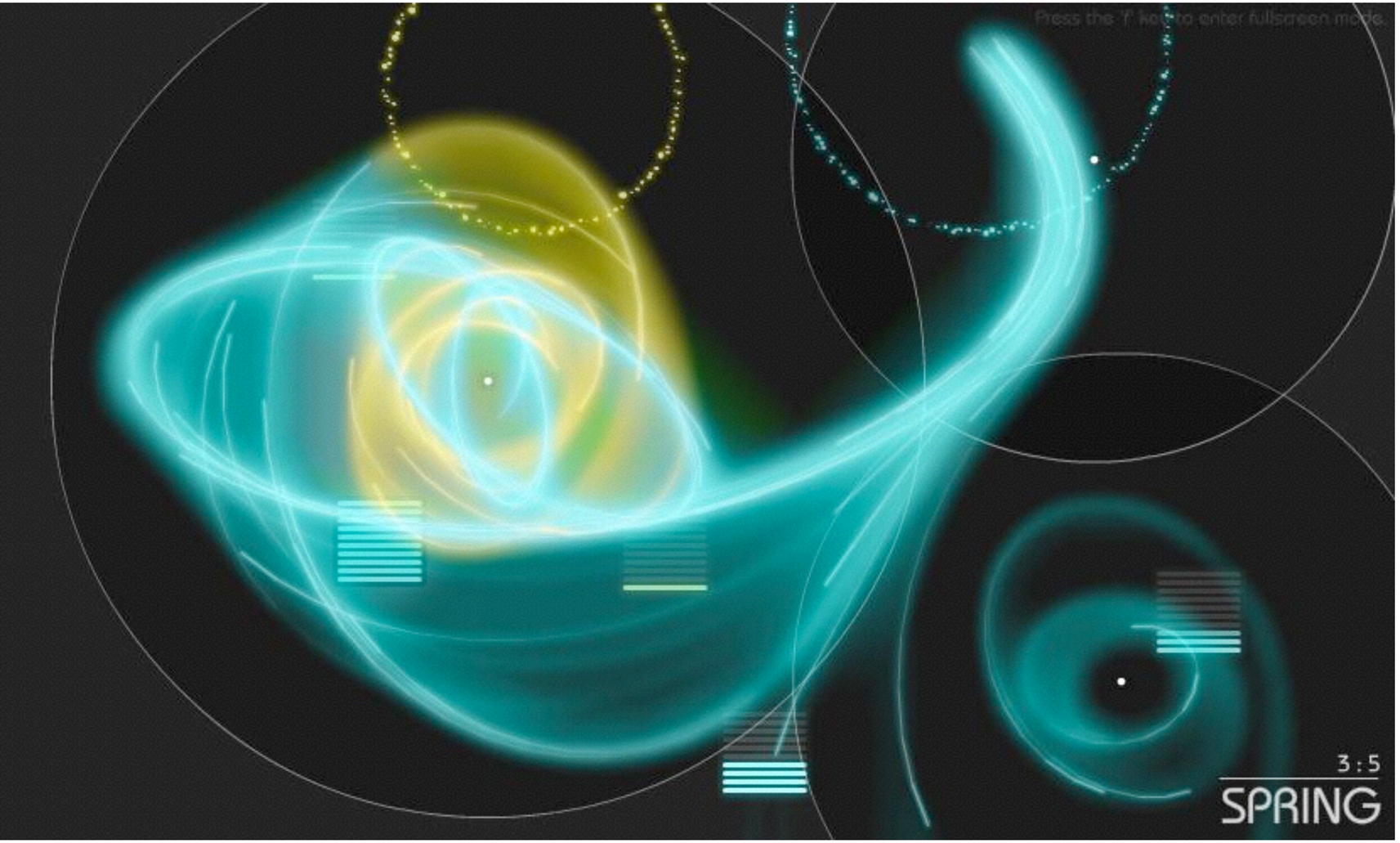
Wasseroberflächen

Crysis

Strömungsdynamik

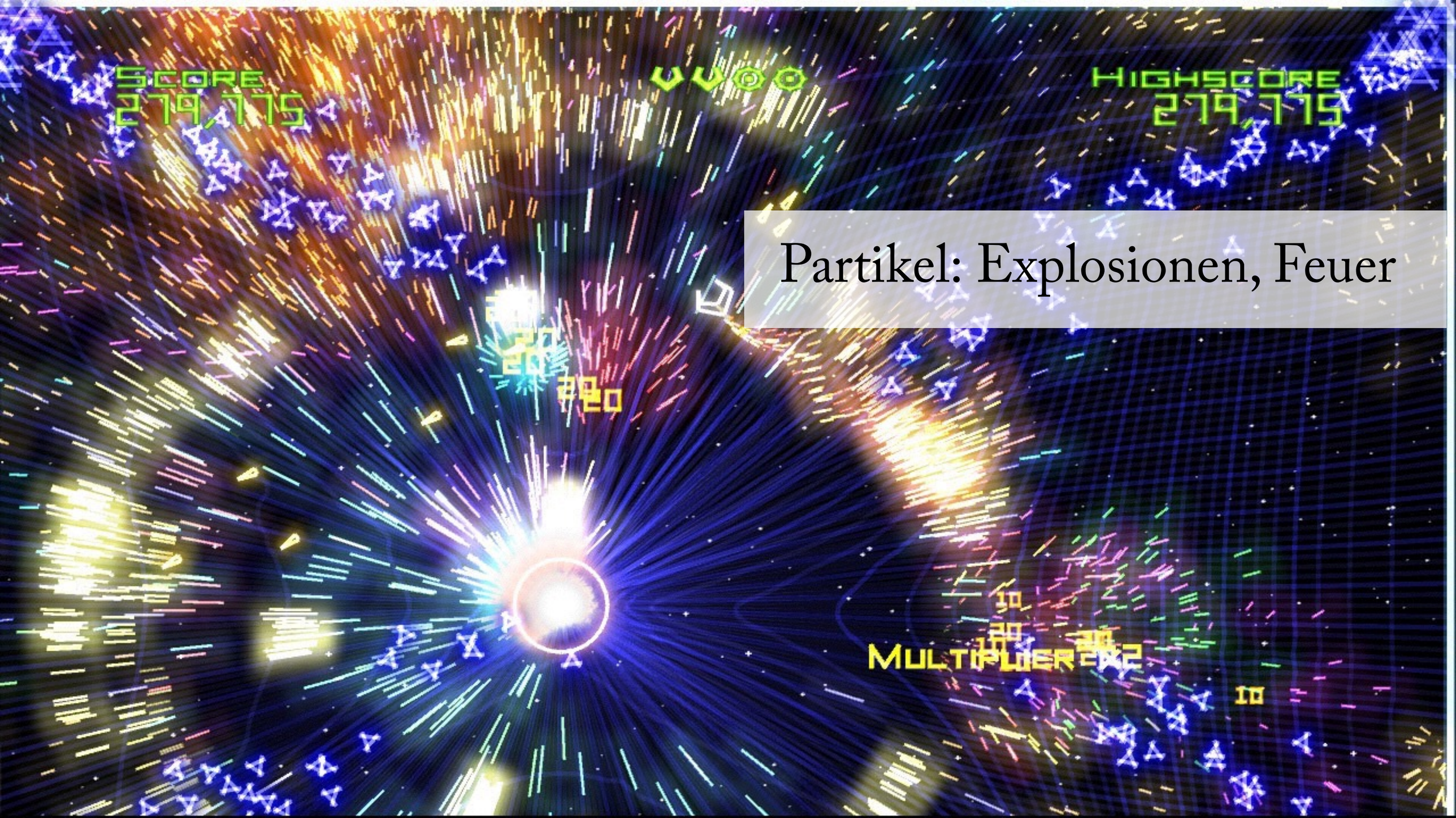
Plasma Pong

Partikelströme



http://www.playauditorium.com/

Auditorium



Partikel: Explosionen, Feuer

Physik Engines

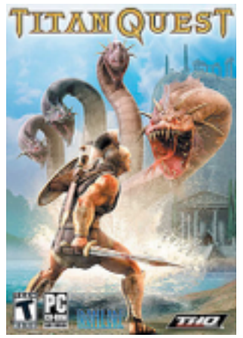
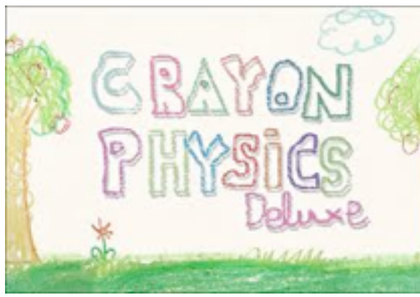
PhysX by NVIDIA

http://physxinfo.com/

havok

Open Source Physik Engines

http://ode-wiki.org/wiki/index.php?title=Products_that_use_ODE



Box 2D