The Demoscene on Android

Becoming PARA'N'DROID - A Demo for Breakpoint 2010

irata ^ **TRSI**   spotter ^ **TRSI**   bodo ^ **RAB**   eyebex ^ **BC**

What is the Demoscene?

- Computer art sub-culture
  - Roots in Warez-Scene ("Cracktros")
- Non-interactive audio-visual presentations ("intros", "demos") that run in real-time
- Programmers, musicians, artists team up and compete at Demoparties
- Platforms include PC, Amiga, C64 as well as PS3, Xbox, NDS and homebrewn hardware

The Motivation

- Do something cool with our smartphones
  - Android is OSS and the SDK is free
  - Samsung Galaxy, HTC Hero, Motorola Milestone
- Conquer a new platform ("firstie")
  - Appreciation and respect in the Demoscene
- Congratulate Irata to TRSI's 20th birthday
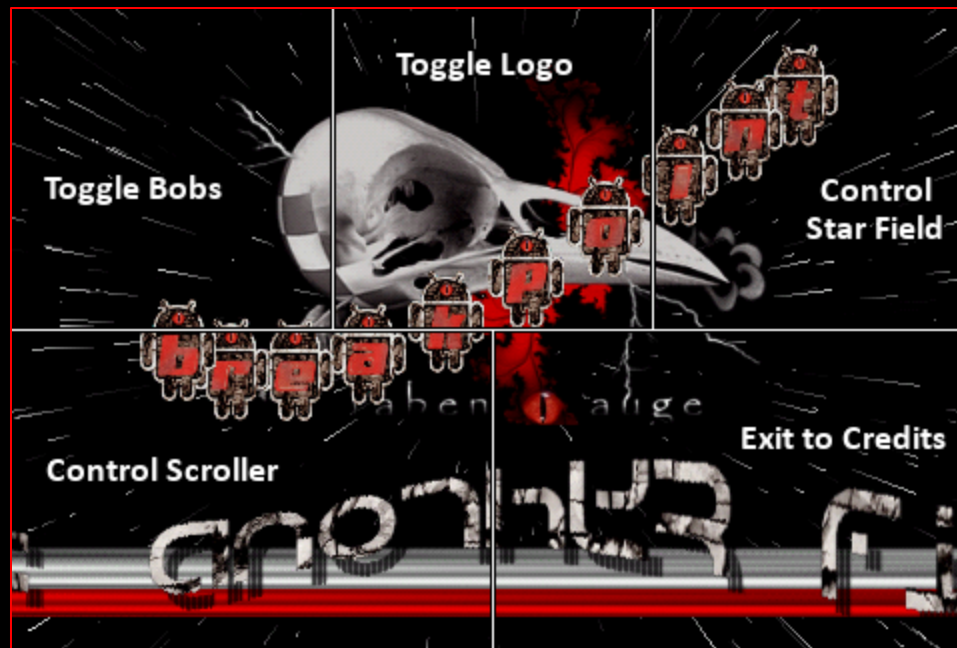 - Red Sector Inc. was already founded in 1985

The Team

- Gather know-how from different groups
  - spotter ^ TRSI: Graphics and design
  - bodo ^ Rabenauge: Mobile coding
  - eyebex ^ Brain Control: OpenGL coding
  - Ralf Wadephul: Music

The Idea

- Old-school style, not just usual 3D stuff
- Sensors: Make it interactive

What did we learn? (1)

- GPU performance rather bad
  - Anyone sponsor us with recent Android phones?
- Non-zero position in `gl*Pointer()` buffer makes some implementations crash
  - Use `slice()` instead
- `glu(Un)Project()` unusable without OES_matrix_get
  - Need to track matrices on GPU and CPU due to missing `glLoadMatrix()`

- OpenGL bugs
  - Smooth points are aliased
  - Invalid parameters are accepted, e.g. `glColorPointer(3,…)`
- Android bugs
  - `Sensor.TYPE_ALL` does not work as `Sensor.TYPE_*` are not powers of two

References

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- ## Demoscene

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  - http://www.elektrischer-reporter.de/elr/video/85/

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- ## Demoparties

  - http://breakpoint.untergrund.net/

  - http://www.demoparty.net/

- ## Android

  - http://blog.jayway.com/2009/12/03/opengl-es-tutorial-for-android-part-i/

  - http://www.androidguys.com/2009/01/30/projecting-android-on-the-big-screen/