0 A.D. a FLOSS Game

Capitole du Libre 2019

by Stanislas Dolcini

Index

Presentation

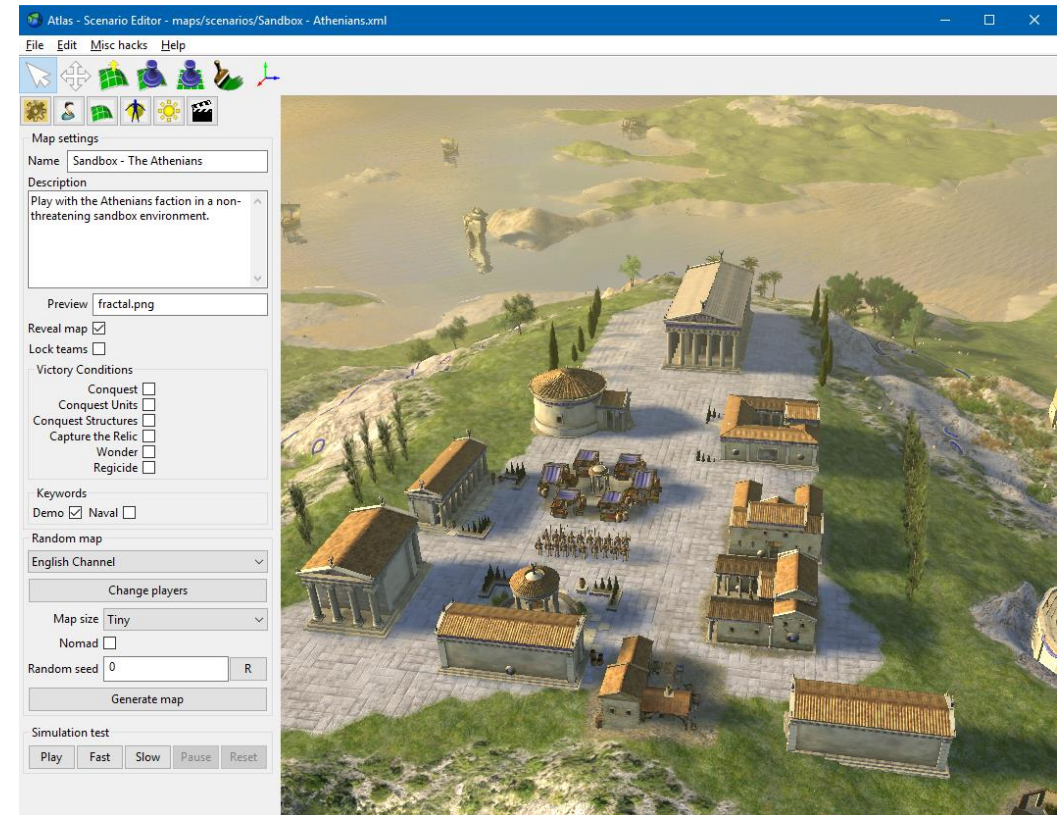|	
What is 0 A.D.	What is new since A23
History	
What is new in A23	

What is 0 A.D.

- A historical, antiquity based, real time strategy game.
  - From a simple military base, grow, evolve, and beat your enemies.
- A Free Libre Open Source Software, multi-platform game.
- The game is in an advanced stage and already playable.
- Available on Mac OS, Linux and Windows on https://play0ad.com

History

- Started in 2001 by "Microsoft Age of Empires : Age of Kings fans".

- Made Open Source in 2009

- Last version Alpha 23b : Ken Wood (24th version)

https://www.moddb.com/mods/rome-at-war

The team behind 0 A.D.

- Since 2000:
  - 200+ Wildfire Games staff members.
  - 500+ external contributors.

- Currently:
  - About 30 staff members (15 Nationalities)
  - 10+ active external contributors + Modders

https://team.wildfiregames.com/

What was new in A23

- New 3D Models

- New maps and game modes

- Mod.io an open source steam workshop

- Building range is now visible

- Diplomacy colors

- GDPR Compliance

- A new faction: the Kushites

Kushite Emblem by Lion.Kanzen and Sundiata, find more about the Kushites here:
https://wildfiregames.com/forum/index.php?/topic/21602-the-kingdom-of-kush-a-proper-introduction-illustrated/

What is new since A23 (1 year ago)

- Programming
  - Improved pathfinding code and performance
  - Improved water reflection
  - Better CI scripts
  - Better UTF-8 Support
  - Package-Config support
  - Improved GUI code and performance
  - Code fixes and memory leak fixes

https://play0ad.com/0-a-d-development-report-may-august-2019/

What is new since A23 (1 year ago)

- Art
  - New Flora, new fauna
  - Some new buildings
  - New maps
  - All civilizations now have workshops
  - Improved icons
  - Unit prop overhaul

https://play0ad.com/0-a-d-development-report-may-august-2019/

The Engine

Technical details

OS Support

Current Challenges

Technical details

- Homegrown game engine

- Game Languages:
    - C++
    - JavaScript (Mozilla Engine)

- Assets: XML/JSON/

- Tools Perl/Python

- Build LUA (Premake)

- Multiplayer chat XMPP

- (Translation) PO files (transifex.com)

- OpenGL 2.0, GLSL 1.10 / OpenGL 1.0, ARB Shaders

- Third party libraries: Boost, Enet, Gloox, Iconv, ICU, libcurl, libpng, libsodium, libxml2, miniupnpc, OpenAL, Vorbis, Wxwidgets, nvtt, zlib, Fcollada, Spidermonkey SDL 2.

Technical details
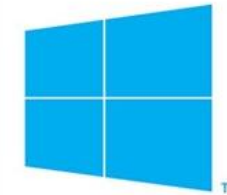
- 4k texture resolution support
  - PNG and DDS (S3TC compression) support
- Models up to 32 768 vertices per mesh
  - 1 Material, Multiple UV supported
  - DAE Format
  - In house PMD and PSA Formats
    - Scaling not supported in those files.

Britonnic struct texture

OS Support

- Mac OS (10.9.5+ (Mavericks))
- GNU/Linux
- Windows (XP+)
- Partial Android Support (Unmaintained build)

Platform support

- X86-X64 (32-bit version)

- ARM with patched SpiderMonkey

- RISC-V ?

Project Challenges
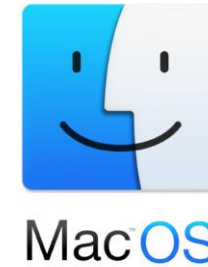
General Challenges

Mac OS Future Challenges

General Challenges

- Libraries must be updated. (Bugs & Vulnerabilities) + GDPR
  - Needs testing for a safe upgrade

Mac OS Future Challenges

- Open AL, Open CL, and Open GL deprecations

- HiDPI Support (Retina displays)

- Dark mode support (Wx Widgets)

Thank you for your time