SAMIEdit Version 1.1.4 - Release Notes

1. NEW RELEASE DESCRIPTION

1.1 Software and Hardware Requirements

The SAMIEdit application is available for the following computer platforms and operative systems:

- Windows 7/8 (32-bit application)
- Mac OS X Intel 10.8 or above (64-bit application)
- iPad iOS 8.2 or later

The SAMIEdit software requires:

- 500 MB of hard disk space
- Graphic card
  - If the platform only has an integrated graphic card (e.g. Intel® HD Graphics 4000), the display of 3D scenes may not be completely smooth. For some type of cards, it has been observed flickering of the satellite 3D model.
    - Tested successfully with integrated graphic cards such as Intel® HD Graphics 520

  - If the platform has both a dedicated and an integrated graphic card, make sure you run the executable with the dedicated graphic card.
    - In Windows, this can be ensured by right-clicking on executable and selecting 'Run with graphics processor'→High-performance NVIDIA processor.
      Another option is to right-click on the executable and select 'Change default graphics processor…'. Then in 'Program Settings'
      1. Select a program to customize: 'SAMIEdit.exe'
      2. Select the preferred graphics processor for this program: e.g 'High-performance NVIDIA processor'

    - In Mac OSX, the graphic card selection is handled transparently to the user. If you want to ensure the high performance graphic card is used at all times, then in System Preferences → Energy Saver, deselect the 'Automatic graphics switching' checkbox

    - Tested successfully with dedicated graphic cards such as NVIDIA Quadro 5000 and NVIDIA GeForce 840M on Windows, NVIDIA GeForce GT 650M on Mac OS X

- For Windows: Direct X runtime version 11
- For Mac OS X: OpenGL 3

1.2 Third-Party Libraries

SAMIEdit is based on Unity rendering engine v5.5.1. The application also makes use of the EO CFI SW libraries version 4.10 to drive the satellite(s) orbital parameters, instruments swath behaviour and Sun/Moon objects.

1.3 Installation Packages

The SAMIEdit distribution consists of one archive for each supported computer platform:

	Package
Windows	SAMIEdit_1_1_4_0_Win_x86.zip
Mac OS X	SAMIEdit_1_1_4_0_OSX_x86_64.zip
iPad	Download from the App Store

1.4 Installation Hints

In order to install SAMIEdit, the distribution package needs to be unzipped into the selected installation directory. See the SAMIEdit Quick Start guide for further details.

2. NEW FUNCTIONALITIES

This release provides the following new functionalities with respect to v1.1.2:

- **SAMI-AN-011**: Display (on/off) an arrow pointing to the Sun to provide a visual clue of the Sun direction
- **SAMI-AN-012**: Solar array rotation movement implemented Sentinel-2 and Sentinel-3
- **SAMI-AN-024**: Default simulation time window (at start-up) set to [current time, current_time + 1 week].
- **SAMI-AN-034**: Aeolus model: add oxygen tanks & texture changes
- **SAMI-AN-041**: Integrated Sentinel-5P model and mission files

3. CLOSED SPRS

The following SPRs have been closed:

- **SAMI-AN-031**: Simulation pauses if main application window is not in focus (simulation resumes automatically when back in focus). This means that the simulation would not continue running in auxiliary screen while the computer is used interactively to perform other tasks.
- **SAMI-AN-047**: SAMIEdit hangs after showing splash-screen in Sierra Mac OSX

4. ADDITIONAL COMMENTS AND KNOWN PROBLEMS

4.1 Mission Support

The SAMIEdit distribution package already includes mission configuration files for the following supported ESA missions:
- Aeolus
- Cryosat-2
- Sentinel-1A/B
- Sentinel-2A/B
- Sentinel-3A/B

- Sentinel-5P
- SMOS
- SWARM A/B/C

The following mission configurations have been updated wrt v1.1.2:
- Orbit Scenario File & Predicted Orbit File for Cryosat-2
- Orbit Scenario Files for Sentinel-1A & Sentinel-1B
- Orbit Scenario Files for Sentinel-2A & Sentinel-2B
- Orbit Scenario File for Sentinel-3A
- Orbit Scenario File for Sentinel-5P
- Orbit Scenario File for SMOS
- Example projects provided for all supported missions

4.2 Known Issues

The current SAMIEdit release has de following known problems:

- **SAMI-AN-038**: The Earth appears distorted in Mac OS X if in full screen mode, regardless of the screen resolution selected.
  Proposed workaround: Export an image after starting-up the application. This forces the screen to re-adjust and the distortion disappears
- **SAMI-AN-052**: The application crashes when loading a project where the orbit file is not found and a swath block is defined
- **SAMI-AN-056**: Export videos in High Quality in Mac OS X sometimes does not produce any output
- **SAMI-AN-057**: Shadow casting (satellite-relative 3D camera) is applied during eclipse

4.3 Hints and Tips

Please check the SAMIEdit Quick Start guide for further information.

5. REPORTING PROBLEMS

For any problems or questions please send an e-mail to the SAMIEdit helpdesk:
sami@eopp.esa.int