

VERSIONS HISTORY

The following versions of Simu-CIC have been issued:

Version	Date	See note ...
1.0.1	2018-11-28	
1.1.1	2019-12-20	
1.2.0	2020-09-28	1
1.2.1	2021-07-30	1
1.3.0 (current)	2022-10-11	2

Notes :

- (1) Versions 1.2.0 and 1.2.1 are similar. The difference concerns spacecraft models: there are more spacecraft models available in version 1.2.1.
These versions can be used with all Scilab versions $\geq 6.0.2$. For Scilab 6.1.1, the following workaround must be applied:
Type `scf()` in the Scilab console before loading Simu-CIC.
- (2) Version 1.3.0 is compatible with all Scilab versions $\geq 6.0.2$, including Scilab 6.1.1.

MAJOR CHANGES BETWEEN VERSIONS 1.1.1 AND 1.2.1

- Interfaces/GUI:
 - Command-line interfaces added to control the GUI via scripts.
 - Test procedure updated thanks to the scripting interface.
 - Scripting examples added.
 - Updated console menu.
 - Updated labels and messages.
 - Updated examples.
- Orbit properties:
 - Updated definition of orbit number, now based on true argument of latitude.
- Attitude:
 - Elementary condition on longitude added.
 - Elementary condition on orbit number added (configurable reference argument of latitude).
 - Custom elementary condition and attitude law added (definition via files).
 - Attitude sequence constraints added (to avoid quaternion discontinuities).
 - Some attitude laws renamed to make them more concise.
- CIC outputs:
 - "DISTANCE_SAT_GROUND_STATION" replaced by "DISTANCE_GROUND_STATION" in accordance with the CIC protocol.
 - "SATELLITE_ECLIPSE_MOON" and "QUATERNION_SA_*" are now compliant with the CIC protocol.
 - Version of CIC files is now 2.0.
 - "POS_GROUND_STATION_*_IN_ANTENNA_*" replaced by "GROUND_STATION_*_DIRECTION-SATELLITE_FRAME". Bug fixed causing comments to not always correspond to the correct ground station.
 - "POS_SAT_IN_GROUND_STATION_*" replaced by "SATELLITE_DIRECTION-GROUND_STATION_*_FRAME" (to be compatible with next CIC protocol update). Comments now clearly indicate the clockwise azimuth convention in station frame.
- Graphs:

- o Updated graphs: ground stations visibility
- o Trajectory relative to ECI/ECF added.
- Miscellaneous
 - o Various general improvements.
 - o Slight changes of the examples.
 - o New script examples

MAJOR CHANGES BETWEEN VERSIONS 1.2.1 AND 1.3.0

- CIC outputs:
 - o New CIC file generated : `Sat_RELATIVE_VELOCITY-SATELLITE_FRAME.TXT`
It gives the coordinates of the velocity vector relative to Earth (hence “relative”) in the spacecraft frame.
 - o Changes in `Sat_SATELLITE_MODES.TXT` and `Sat_SATELLITE_ATTITUDE_MODE.TXT`:
Depending on the values of the maximum angular velocity and angular acceleration (see Specacraft -> Platform tab), intermediate attitudes may be generated. These are denoted by :
 - the name **[SLEW]** in `Sat_SATELLITE_MODES.TXT`
 - the code (or mode) **-99** in `Sat_SATELLITE_ATTITUDE_MODE.TXT`
- Miscellaneous :
 - o The new version is compatible with all Scilab versions (6.0.2 or 6.1.1 in particular).