Cheat Sheet
SIGENCE Scenario Tool

Version : 19

Date : 11 May 2019

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Installation

Just download the latest version of the repository (https://github.com/ObiWanLansi/SIGENCE-Scenario-Tool/archive/master.zip) to a local folder and extract the zipfile. In the directory "Executable" is a compiled executable (SIGENCEScenarioTool.exe) and all dependencies and external libraries for direct starting the application.

Environment Variables

Currently, no environment variables or settings are needed ☺ .

Starting

Just start from the extracted zipfile the main application .\SIGENCEScenarioTool.Executable\ SIGENCEScenarioTool.exe.

Stopping

- Use the standard windows hotkey ALT+F4
- or click the X in the upper right corner of the main application
- or in the mainmenu, select "SIGENCE Scenario Tool → Quit"
- or reboot your computer
- or unplug the power from your computer

RFDevice Model

Name	DataType	DefaultValue	Comment
PrimaryKey	Guid	Guid.NewGuid()	The Unique PrimarKey For This RF Device.
Id	int	0	Every Scenario Element (I.E. Transmitter, Receiver) Must Be Assigned An Unique Id. Negative Id'S Are Reserved For Receivers While All Other Id'S Are Transmitters By Default. Some Applications (I.E. Tdoa Emitter Localization) Require A Reference Transmitter. For These Applications Id=0 Is The Reference Transmitter. Receivers Must Be Assigned First In The Table, Followed Be Transmitters (With Id=0 Being The First). After The Static Scenario, Update Of Id'S Requires No Specific Order. Note That Definition Of New Transmitters/Receivers After The Static Scenario Is Prohibited.
DeviceSource	DeviceSource	DeviceSource.Unknown	The Source Of This RF Device.
StartTime	double	0	This Is The Simulation Time At Which The Parameters (Following The Time Parameter In The Same Line) Are Set. All Transmitters And Receivers Used In The Simulation Must Be Set At Start Of The Simulation, I.E. At Time=0. For Static Scenarios, Where Positions Or Characteristics Settings Never Change Throughout The Simulation, The Time Column Only Contains Zero's.
Name	string	"RFDevice"	A Short Describing Display Name For The RF Device.
Latitude	Latitude	double.NaN	The Latitude Of The RF Device (WGS84).
Longitude	Longitude	double.NaN	The Longitude Of The RF Device (WGS84).
Altitude	Altitude	0	The Elevation Of The RF Device Above The Sea Level (Meter).
Roll	double	0	These Parameters Set The Orientation Of Transmitter / Receiver Antennas. The Respective Antenna Type Is Defined By Antennatype. The Rf Simulation Uses The Antenna

			Orientation To Compute The Resulting Signal Power At The Receivers.
Pitch	double	0	These Parameters Set The Orientation Of Transmitter / Receiver Antennas. The Respective Antenna Type Is Defined By Antennatype. The Rf Simulation Uses The Antenna Orientation To Compute The Resulting Signal Power At The Receivers.
Yaw	double	0	These Parameters Set The Orientation Of Transmitter / Receiver Antennas. The Respective Antenna Type Is Defined By Antennatype. The Rf Simulation Uses The Antenna Orientation To Compute The Resulting Signal Power At The Receivers.
RxTxType	RxTxType	RxTxType.Unknown	For All Receivers (i.e. ID's < 0) This Parameter Defines The Radio Being Used.
AntennaType	AntennaType	AntennaType.Unknown	AntennaType Defines The Antenna Type Used For Transmitter And Receiver Respectively. Note: Currently, Only Omnidirectional Antenna Type Is Available / Supported.
CenterFrequency_Hz	Frequency	0	For Transmitters (I.E. Id's >= 0) This Parameter Defines Transmitter Signal Center Frequency [Hz]. For Receivers (I.E. Id's < 0) This Parameter Is Currently Unused.
Bandwidth_Hz	Bandwidth	0	The Bandwith Of The Transmitter.
Gain_dB	Gain	0	For Transmitters (I.E. Id's >= 0) This Parameter Defines Transmitter Signal Power [Dbm]. For Receivers (I.E. Id's < 0) This Parameter Is Currently Unused.
SignalToNoiseRatio_dB	SignalToNoiseRatio	0	For Receivers (I.E. Id's < 0) This Parameter Is Imposes Gaussian White Noise To The Respective Receiver Signal. For Transmitters (I.E. Id's >= 0) This Parameter Is Unused.
XPos	int	0	XPos,YPos,ZPos Define The Transmitter / Receiver Positions In A Local Coordinate System With The Transmitter (ID=0) Being The Center Position.
YPos	int	0	XPos,YPos,ZPos Define The

			Transmitter / Receiver Positions In A Local Coordinate System With The Transmitter (ID=0) Being The Center Position.
ZPos	int	0	XPos,YPos,ZPos Define The Transmitter / Receiver Positions In A Local Coordinate System With The Transmitter (ID=0) Being The Center Position.
Remark	string	""	A Comment Or Remark For The RF Device.

HotKeys

HotKey	Command	Action
File		
STRG+N	New	Creates a new file for a scenario.
STRG+O	Open	Open an existing scenario file.
STR+S	Save	Save the current scenario.
ALT+F4	Close	Close the application.
F1	OpenCheatSheet	Open this cheat sheet.
RFDevice		
F5 ALT+C	CreateRFDevice	Create a new RFDevice.
F6 ALT+D	DeleteRFDevice	Delete the selected RFDevice.
F7 ALT+E	ExportRFDevice	Export the RFDevice list.
F8 ALT+I	ImportRFDevice	Import an RFDevice list.
ALT+M	MoveRFDevice	Toggle the moving mode from the RFDevices's.
STRG+L	ToggleDALF	Toggle the creating tool for device lines.
STRG+M	OpenInGoogleMaps	Open the current RFDevice in Google Maps.
STRG+Q	RFDeviceQRCode	Show a QRCode from the current RFDevice Location for scanning with a qrcode scanner.
STRG+Z	ZoomToRFDevice	Zoom to the selected RFDevice.
Tools		
F9	SendDataUDP	Send the marked RFDevices via UDP.
F10	ReceiveDataUDP	Receive RFDevices via UDP.
F11 STRG+F	Fullscreen (reserved 4 later)	Switch to a fullscreen display mode.
F12	ToggleInfoWindow	Toogle the information window on the map.
STRG+G	SyncMapAndGrid	Toggle the synchronizing from the selection between the map and the datagrid.
STRG+T	CreateScreenshot	Create a screenshot from the map with the current viewport.
STRG+P	OpenScriptEditor	Open the ScriptEditor for Python.
STRG+X	OpenSettings	Open the Settings Dialog (beta).
Viewer		
Shift + F5	ViewDeviceMap	Fast switch to the device map display.
Shift + F6	ViewDescriptionHypertext	Fast switch to the scenario description view.
Shift + F7	EditDescriptionMarkdown	Fast switch to the scenario description editor.
Shift + F8	EditDescriptionStylesheet	Fast switch to the stylesheet editor.
Shift + F9	ViewValidationResults	Fast switch to the validation results.

Quick Commands

Command	Parameter	Action
new	-	Create A New Empty Scenario.
rand	count	Create (count) Randomized Transmitter.
load	filename	Load The Scenario With The Given Filename.
save	filename	Save The Scenario With The Given Filename, Or If Empty, With The Current Filename.
export		Export The Current Scenario.
export	filename	Export The Scenario To This File. The File Extension Also Determines The Format.
import	filename	Import The Scenario From This File. The File Extension Also Determines The Format.
set	property value	Set The Property From The Marked RFDevices To The Value.
sendudp	Delay	Start Sending The Marked Devices Over UDP With The Delay Between Every RFDevice.
goto	lat, lon	Jumps To The Latitude, Longitude In The Map-
git		Start An Webbrowser With https://github.com/ObiWanLansi/SIGENCE-Scenario-Tool
wiki		Start An Webbrowser With https://de.wikipedia.org/wiki/Wikipedia:Hauptseite
go		Start An Webbrowser With https://www.google.de
xmp		Create Two Specialized RF Devices.
exit	-	Exit The Tool.
close	-	Exit The Tool.
quit	-	Exit The Tool.

Useful Links

- SIGINT
  https://en.wikipedia.org/wiki/Signals_intelligence

- Git Tutorial
  https://www.tutorialspoint.com/git/index.htm

- Mastering Markdown
  https://guides.github.com/features/mastering-markdown/

- Microsoft Visual Studio
  https://visualstudio.microsoft.com/

- C# Tutorial
  https://www.tutorialspoint.com/csharp/index.htm

- WPF Tutorial
  https://www.tutorialspoint.com/wpf/index.htm

- HTML Tutorial
  https://www.w3schools.com/html/default.asp

- Python Tutorial
  https://www.tutorialspoint.com/python/index.htm

- IronPython
  http://ironpython.net/documentation/dotnet/

- SQLite
  https://sqlite.org/index.html