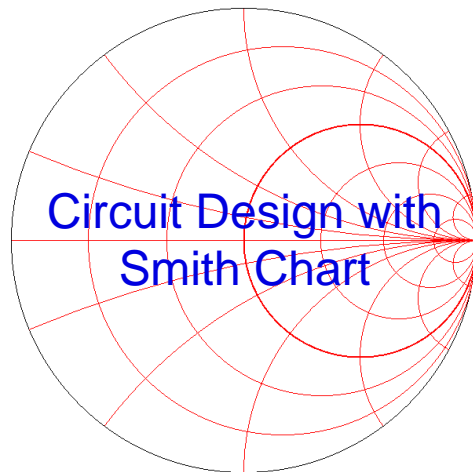January 2018

Smith V4.1

Overview
The software is split in two parts:
Smith-Chart and **S-Plot**

Smith-Chart
Features:

- ☞ Matching ladder networks with capacitors, inductors, resistors, transformers, serial transmission lines and open or shorted stubs
- ☞ Free settable normalization impedance for the Smith-Chart
- ☞ Circles and contours for stability, noise figure, gain, VSWR and Q
- ☞ Edit element values after insertion
- ☞ Tune element values using sliders (Tuning Cockpit) **NEW in V4.0**
- ☞ Sweep versus frequency or datapoints
- ☞ Serial transmission line with loss
- ☞ Export datapoint and circle info to ASCII-file for post-processing in spreadsheets or math software
- ☞ Import datapoints from S-parameter files (Touchstone, CITI, EZNEC)
- ☞ Undo- and Redo-Function
- ☞ Save and load designs (licensed version only)
- ☞ Save netlist (licensed version only)
- ☞ Print Smith-Chart, schematic, datapoints, circles and S-Plot graphs
- ☞ Copy to clipboard for documentation purposes
- ☞ Settings for color and line widths for all graphs

S-Plot
Features:

- ☞ Read S-Parameter - Files in Touchstone[®] -, CITI- and EZNEC- Format
- ☞ Graphical display of s_{11}, s_{12}, s_{21} and s_{22}
- ☞ Graphical display and listing of MAG. (maximum operating power gain), MSG (maximum stable gain), stability factor k, µ and returnloss.
- ☞ Linear or logarithmic frequency axis.
- ☞ Cursor readout at gain and return loss graphs.
- ☞ Convert and export S-Parameter to normalized or unnormalized H-, Z-, Y- or A-Parameters in Touchstone® - Format files.
- ☞ Export s_{11} or s_{22} to Smith-Chart
- ☞ Print all graphics or listings

System requirements:
Windows Vista, Windows 7, 8, 10
.NET Framework 4.6.1 or higher
(Windows XP does not support .NET 4.6.1)

Installation
Default installation folder for program files:
C:\Program Files (x86)\Smith V4.1 (or user specified)

Default installation folder for Projects, S-Parameter and Example files:
(My) Documents\Smith projects
(My) Documents\Smith projects\S-parameter
(My) Documents\Smith projects\Examples

When Smith correctly executes, a configuration file "layout.xml" will be written to
C:\Users\"user"\AppData\Roaming\Smith V4 (Vista and Win7, 8, 10)

Release notes:
Version 4.1, January 2018

- Fixed bug in labels of circles (VSWR, Q)
- Solved problems with multiple datapoints and editing or tuning serial line
- Solved problems with multiple datapoints, datapoint sweep and tuning serial line length
- Corrected text for Operating Power Gain Circles in circle window
- Fixed bug with input for "number of points" in frequency sweep
- Corrected CITI file load problems in S-Plot
- Corrected S21 and S12 swapping in s2p file from "Export > CITI-to S" in S-Plot
- Fixed different labels and minor bugs in "Smith" and "S-Plot"

4.0, October 2016

- Added Tuning Cockpit to tune element values with sliders
- Fixed bugs in element definitions, frequency sweeps and other subjects
- Solved problems with Decimal Symbol in window settings
- Corrected file load problems in S-Plot
- Minor changes in menue and dialog boxes

License
Without the file 'smith.key' (in the same directory as 'smith.exe') the application will work in demo mode only. The demoversion may be freely distributed. More information can be found in the about box.
In the demoversion the following functions are disabled:
- Save project
- Save project As
- Save netlist

Furthermore the demoversion is limited to 5 datapoints and 5 elements.

Commercial licenses of Smith with full capabilities are priced to US$ 120.
Licenses for universities, students and Ham's with callsign are priced to US$ 80.

Demoversion and additional documents related to the Smith-Chart can be downloaded at
www.fritz.dellsperger.net

If you like to get the licensed version please send a mail to:
e-mail   fritz@dellsperger.net

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