

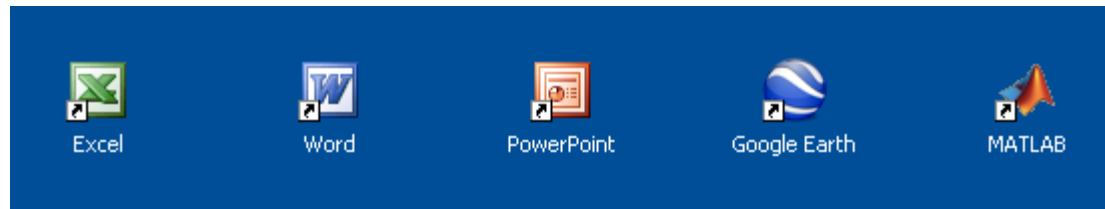
*A Work-In-Progress report
by Paul Obermeier*

CAWT

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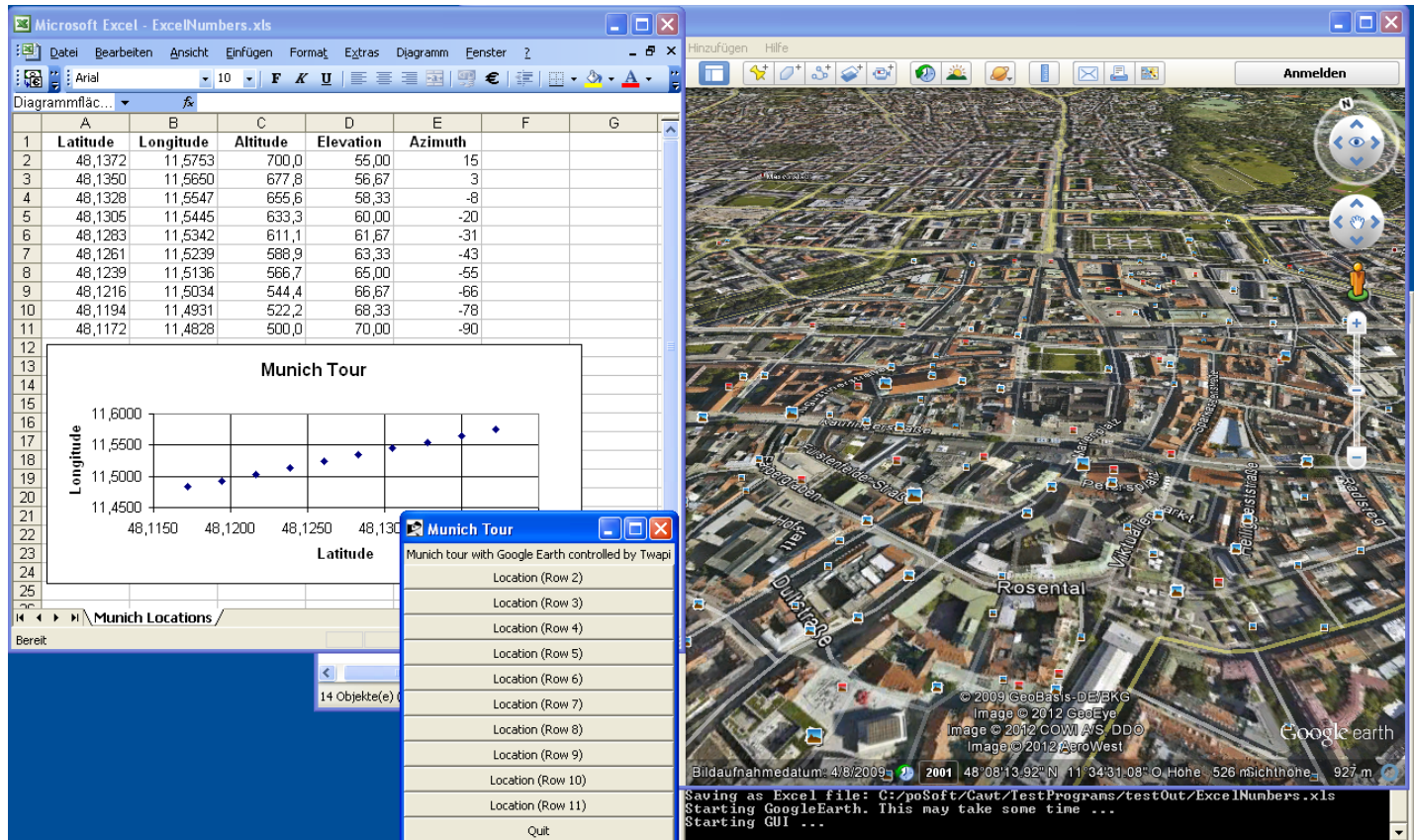
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CAWT – What it is good for?

High-level Tcl interface for scripting Windows applications having a COM interface:

- Excel
- Word
- PowerPoint
- GoogleEarth
- Matlab



CAWT – What it is good for?

Exchange of tabular data:

- Excel tables
- Word tables
- Tablelist
- Raw images
- Matlab MAT-files
- CSV files
- MediaWiki tables

The screenshot displays two windows. The top window is Microsoft Excel, showing a spreadsheet with 10 columns (A-J) and 10 rows (1-10). The data is organized into a table with headers 'Col-1' through 'Col-10'. The bottom window is 'Excel-07_Tablelist', which shows the same data in a 'Tablelist' format, divided into two sections: 'Source tablelist' and 'Twapi tablelist'. Both sections contain the same 10x10 grid of data.

	Col-1	Col-2	Col-3	Col-4	Col-5	Col-6	Col-7	Col-8	Col-9	Col-10
1	Cell_1_1	Cell_1_2	Cell_1_3	Cell_1_4	Cell_1_5	Cell_1_6	Cell_1_7	Cell_1_8	Cell_1_9	Cell_1_10
2	2.1	2.2	2.3	2.4	2.5	2.6	2.7	2.8	2.9	2.10
3	Cell_3_1	Cell_3_2	Cell_3_3	Cell_3_4	Cell_3_5	Cell_3_6	Cell_3_7	Cell_3_8	Cell_3_9	Cell_3_10
4	4.1	4.2	4.3	4.4	4.5	4.6	4.7	4.8	4.9	4.10
5	Cell_5_1	Cell_5_2	Cell_5_3	Cell_5_4	Cell_5_5	Cell_5_6	Cell_5_7	Cell_5_8	Cell_5_9	Cell_5_10
6	6.1	6.2	6.3	6.4	6.5	6.6	6.7	6.8	6.9	6.10
7	Cell_7_1	Cell_7_2	Cell_7_3	Cell_7_4	Cell_7_5	Cell_7_6	Cell_7_7	Cell_7_8	Cell_7_9	Cell_7_10
8	8.1	8.2	8.3	8.4	8.5	8.6	8.7	8.8	8.9	8.10
9	Cell_9_1	Cell_9_2	Cell_9_3	Cell_9_4	Cell_9_5	Cell_9_6	Cell_9_7	Cell_9_8	Cell_9_9	Cell_9_10
10	10.1	10.2	10.3	10.4	10.5	10.6	10.7	10.8	10.9	10.10

CAWT - History

2008/09/11 TcomExcel 0.1 Initial release. Support for Excel 2000 and 2003.

2009/09/19 TcomExcel 0.2 Extended functionality. Added support for Excel 2007.

2010/10/29 TcomExcel 0.3 Bug fixes and extended test programs.

2011/01/13 TcomExcel 0.3.1 Extended functionality. Added support for Excel 2010.

2011/04/05 TcomExcel 0.3.2 Extended functionality.

2011/07/17 TcomOffice 0.4.0 Renaming of extension to TcomOffice.
New module TcomWord for Word automation.

2011/08/28 TcomOffice 0.4.1 Extended functionality.

2012/01/21 TcomOffice 0.5a3 Alpha release: Use Twapi for COM access instead of Tcom.
Tcom has no 64-bit support. No active development.

2012/??/? CAWT 1.0 Yet another rename. No Tcom anymore.
Twapi developer Ashok Nadkarni extends and refactors COM support in Twapi (currently at version 4.0a2)
Added (minimal) support for PowerPoint, GoogleEarth, Matlab.

CAWT – Current Work

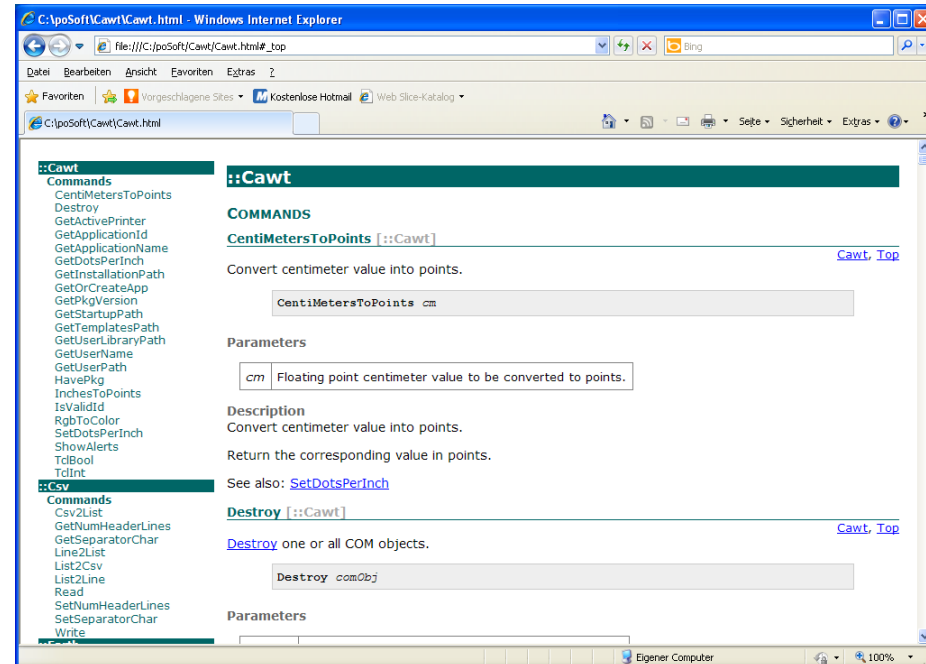
Refactoring to eliminate duplicate code (using common namespace Cawt).

Add inline documentation (will be converted to HTML with ruff)

Improve insertion/extraction speed of large Excel data due to new Value2 function in Twapi version 4.

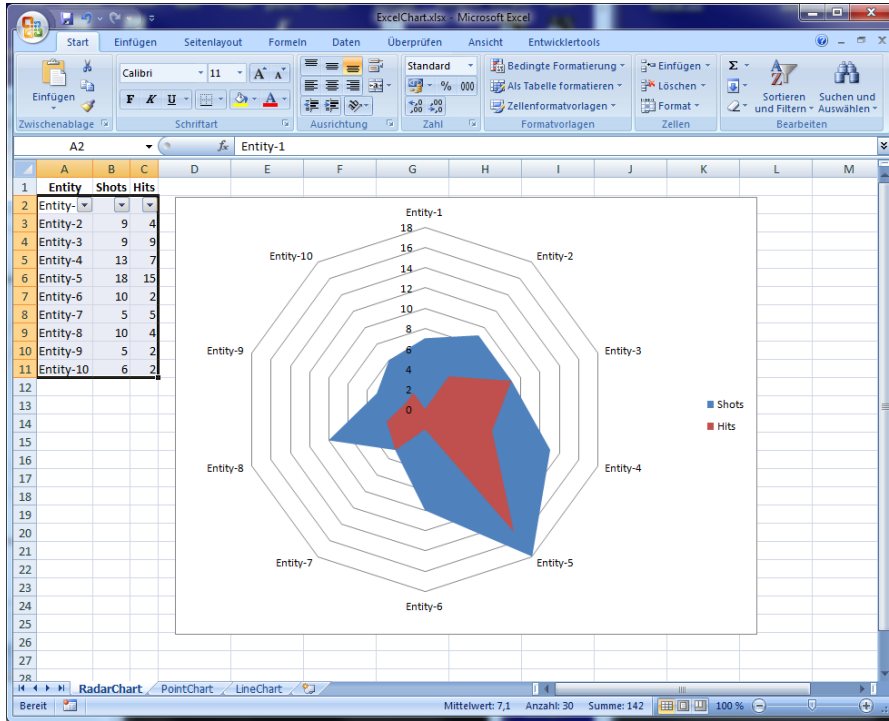
Speed comparison (3 tables with 100x10 cells):

SetCellValue	(visible):	8400 ms
SetCellValue	(hidden):	7200 ms
Using clipboard	(visible):	150 ms
Using clipboard	(hidden):	110 ms
Using Value2	(visible):	45 ms
Using Value2	(hidden):	45 ms



CAWT – Examples

CAWT comes with lots of test programs showing usage examples.



Screenshot of an Excel workbook consisting of 3 worksheets with 3 different chart types generated by a Tcl script.

The Excel chart was copied to the Windows clipboard with the Twapi extension and pasted into a photo image with the help of the tkimg extension.