

## Test analysis and keywords technology

Test procedures and test scripts must be clear and unambiguous. The keyword principle in the software testing method TestFrame<sup>®</sup> assists in creating clear and unambiguous test scripts. A keyword, as used in TestFrame<sup>1</sup>, is comparable to a command / procedure. Generally, a keyword is followed by one or more parameters, which clarify and/or complete the command / procedure. The keyword is developed by a test analyst and must be executed during the test execution phase by a software tester - often a different person. The keyword specifies a set of actions to be followed during a test of the system.

Let's explain the keyword principle with a simple example and assume that the system under test in the example is a desktop with a Windows operating system with MS-Word! A requirement of the system is: "MS-word must open a \*.doc-file". A test analyst analyses which test condition must be tested during test execution in order to measure the quality of the software. An important requirement to be tested is to open a document. The test analyst designs a test script of four rows in a grid. Each row starts with a keyword in bold letters. The grid in the figure below lists four rows (of which three start with a keyword in the first column). Row:

- i) starts with the standard keyword "test case". Generally the first column of the spreadsheet tool is reserved for a keyword. The keyword "test case" has one parameter with the value: "Open document in different ways." This parameter is the description of the test case and its value is entered in the second column of the same row;
- ii) is a comment line. A comment line has a blank cell in the keyword column. In this case the comment line describes respectively the keyword parameters of row *iii* and *iv*, "How" and "File name" in the second and third column;
- iii) starts with a test analyst defined keyword "open document". It states that the software tester must open a document during test execution. The keyword parameters' values describe that this must be done via the menu (in the MS-Word-application) - the "How" parameter - and that the file of the document to be opened is "C:\test.doc" - the second parameter, File name;
- iv) starts with the same keyword as row three. This time it states that the software tester must open the same document via the "Run"-programs option via the "Start-Windows"-button.

test case	Open document in different ways	
	How	File name
open document	Menu	C:\test.doc
open document	Start Windows-->Run	C:\test.doc

This is a clear test procedure, because the software tester knows that he must open the same file twice in different ways. However it is still ambiguous. What must the software tester do when he opens the file the second time? An experienced test analyst will maintain the test script and insert the "close document" keyword between the two "open document" keywords, because MS-word cannot open the same file twice when it is not a shared file.

<sup>1</sup> TestFrame is a software testing method according which ICT-Systems could be tested in a structured way. CMG has developed this method in 1995. TestFrame is an open standard and is available to everybody [Wikipedia, 2010].