The development of this software was really initiated by my collaboration with Terje Espelid and Jarle Berntsen on DCUTET.

[1] J. Berntsen, R. Cools, and T.O. Espelid. A test of DCUTET. Reports in Informatics 46, Dept. of Informatics, University of Bergen, 1990.

[2] J. Berntsen, R. Cools, and T.O. Espelid. Algorithm 720: An algorithm for adaptive cubature over a collection of 3-dimensional simplices. *ACM Trans. Math. Software*, 19:320–332, 1993.

The need for a more object-oriented design, with clearly separate modules for clearly separate tasks, becomes high if one wants a toolbox for investigating several heuristics.

This work started in Fortran 77 but meanwhile everything is re-written in Fortran 95.

Over the years the following reports and papers were written describing progress on CUBPACK and results obtained using it:

[1] R. Cools. A suite of codes for region collection management in adaptive numerical integration algorithms. Report TW 150, Dept. of Computer Science, K.U. Leuven, 1991.

[2] R. Cools and A. Haegemans. CUBPACK: Progress report. In T.O. Espelid and A. Genz, editors, *Numerical Integration – Recent Developments, Software and Applications*, volume 357 of *NATO ASI Series C: Math. and Phys. Sciences*, pages 305–315, Dordrecht, 1992. Kluwer Academic Publishers.

[3] R. Cools. The subdivision strategy and reliability in adaptive integration revisited. Report TW 213, Dept. of Computer Science, K.U. Leuven, 1994.

[4] A. Genz and R. Cools. An adaptive numerical cubature algorithm for simplices. Report TW 273, Dept. of Computer Science, K.U.Leuven, 1997.

[5] R. Cools and B. Maerten. A hybrid subdivision strategy for adaptive integration routines. *J. of Universal Computer Science*, 4(5):485–499, 1998.

Some things couldn't be done in Fortran and around 1992 a parallel development in C started. This soon switched to C++. This project relies on error estimators and subdivision strategies developed using the above mentioned Fortran toolbox. Reports and papers describing Cubpack++ are:

[1] R. Cools, D. Laurie, and L. Pluym. **Cubpack++**: A C++ package for automatic two-dimensional cubature. Report TW 220, Dept. of Computer Science, K.U. Leuven, 1994.

[2] R. Cools, D. Laurie, and L. Pluym. A user manual for **cubpack++**. Report TW 221, Dept. of Computer Science, K.U. Leuven, 1994.

[3] R. Cools, D. Laurie, and L. Pluym. Algorithm 764: Cubpack++: A C++ package for automatic two-dimensional cubature. *ACM Trans. Math. Software*, 23(1):1–15, March 1997.

[4] R. Cools, D. Laurie, and L. Pluym. A user manual for cubpack – version 1.1. Report TW 255, Dept. of Computer Science, K.U. Leuven, 1997.

[5] D. Laurie, L. Pluym, and R. Cools. Design and implementation of a C++ package for two-dimensional numerical integration. In L. M. Venter and R. R. Lombard, editors, *South African Institute of Computer Science and Information Technology: Proceedings of the 1997 National Research and Development Conference*, pages 162–168, Vanderbijlpark, 1997. Potchefstroom University for Christian Higher Education. ISBN 1-86822-300-0.

[6] B. Maerten and R. Cools. An interactive program to approximate double integrals: an easy to use interface for Cubpack++. *ACM SIGNUM Newsletter*, 32(3):2–8, July 1997.

The recent, still unpublished paper, come with the distribution. They are located in the Doc directory.