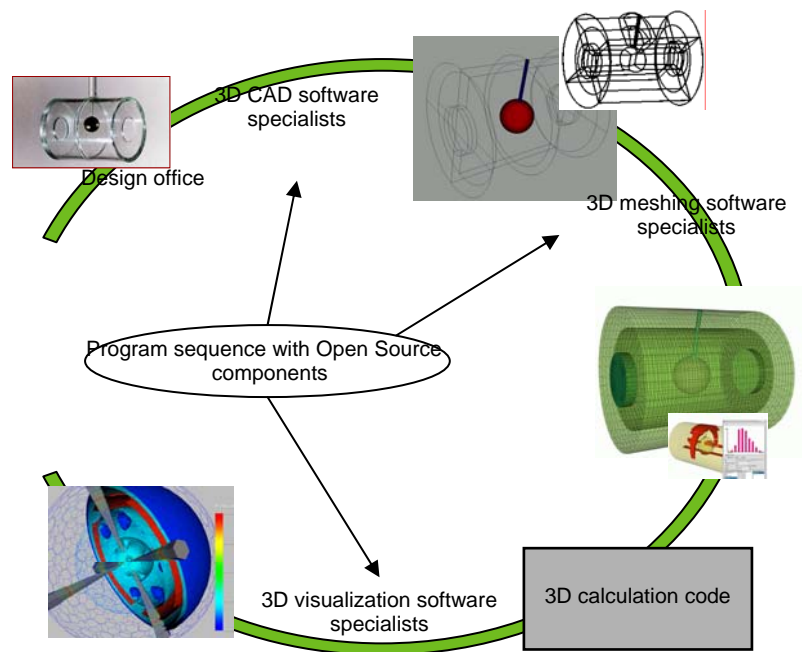


Software development and open source codes

At CEA/DAM, as in the majority of large enterprises, an increasing use is being made of open source software. Here we discuss their contribution in the domain of numerical simulation, particularly for geometric modelling and meshing, in calculations and in visualization of the results.

Since the CEA takes advantage of open source software it also contributes to it. Developments, coming from specialist software for meshing and 3-D visualization are being returned to the VTK community in the form of open source contributions.

Tera computers also make use of open source software, since it is exploited in the Linux system and in the Lustre file system (Lustre, which was originally open source, is a file and directory management software).



The CEA, together with the CNRS and INRIA, has developed a **Cecill licence** (<http://www.cecill.info/>), inspired by the GPL licence of the Free Software Foundation and made compatible with French law. This license enables distribution of CEA developments in the form of free software. Examples of such software include Kazimir, MPC, etc.

Today, open source software is an unavoidable reality. Its uses go from computers and systems to integrated sequences of scientific calculation. It helps in efficient development of program codes and software, by concentrating local efforts on the architectures and the specific functionalities and requirements of our applications. Does finding, testing, selecting, integrating and using open source components and interacting with the communities concerned represent a scientific approach? From our point of view the benefit is very real and should be sustainable for our developments.