C++是开发仿真软件的理想工具

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因为历史原因，很多仿真软件代码都使用了Fortran，但是从长远考虑，仿真软件的开发不管是前处理，后处理还是求解器，HPC，都应该基于C++，用Fortran封装好的稳定模块除外。

Two leading ideas :

"Are object oriented methodologies the future way of accuracy and sustain development for scientific numerical computation? What about C++ or FORTRAN? "

面向对象是将来科学数值计算精确和可持续开发的方向吗？C++ 还是 Fortran

"Is it possible to unify disciplines and their methods inside a single framework in order to be well prepared to answer tomorrow challenges : multidisciplinary analysis and virtual prototyping?"

Researches were performed in this sense, based on object oriented philosophy and the use of associated methodologies (OOD, G. Booch, OMT, UML) applied to numerical computation without deteriorate performances obtained with the structured FORTRAN language.

These researches have conduct to three advantages for the object oriented languages:

Better robustness of the code and guarantee on the reliability of the implementation of algorithms

更好的保证代码的健壮性和算法实现的可靠性

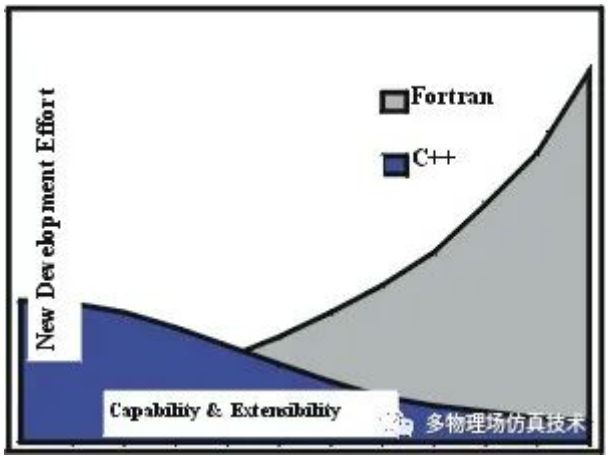
Reduction of efforts of maintenance and extensibility of the code generated

有效减少代码维护和扩展的开销

Better capability to become integrated into present tools and graphical interfaces

更有效的集成到已有的工具和图形界面中

看一下两者的扩展性，维护性和功能吧。不考虑历史因素，C++完胜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