

"How to age well a 20 y.o. Scotch"

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Abstract

The Scotch software package is now 20 years old. The purpose of this talk is to address ways to make software last, from the technical, organisational and licensing points of view.

Most of the code produced during these years has been new code. It is the consequence both of a constant need for new features and of a set of initial design choices that enabled extensibility and maintainability.

The features of Scotch reflect the evolution of high performance architectures in this 20 year period. While Scotch has been initially designed to compute process- processor mappings, because parallel architectures in the 1980's were NUMA, this feature is little known by the public because in the 1990's hardware advances made these architectures UMA again, and plain partitioning features were sufficient. Now, machines become NUMA again, and parallel mapping features become mandatory. Scotch became free software in 2006, which considerably extended its user base, but not its contributor base, due to the technicality of such toolboxes.

We will conclude by proposing our vision for the next 20 years to come.