

ROOT.NET: Making ROOT accessible from CLR based languages

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ROOT.NET provides an interface between Microsoft's Common Language Runtime (CLR) and .NET technology and the ubiquitous particle physics analysis tool, ROOT. This tool automatically generates a series of efficient wrappers around the ROOT API. Unlike pyROOT, these wrappers are statically typed and so are highly efficient as compared to the Python wrappers. The connection to .NET means that one gains access to the full series of languages developed for the CLR including functional languages like F# (based on OCaml). Dynamic languages based on the CLR can be used as well, of course (Python, for example). A first attempt at integrating ROOT tuple queries with Language Integrated Query (LINQ) is also described. This poster will describe the techniques used to effect this translation, along with performance comparisons, and examples. All described source code is posted on SourceForge.

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