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Native Language Integrated Queries with CppLINQ in C++

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Programming language evolution brought to us the domain-specific languages (DSL). They prooved to be very useful for expressing specific concepts, turning into a vital ingredient even for generic-purpose frameworks. Supporting declarative DSLs (such as SQL) into imperative languages (such as C++) can happen in the manner of language integrated query (LINQ).

We approach to integrate a similar to LINQ programming language, native to C++. We review its usability in the context of the high energy physics. We present examples using CppLINQ for many common workflows done by the end-users doing data analysis and simultaion. We discuss evidences how this DSL technology can simplify massively parallel grid system such as PROOF.

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