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Going Visual

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Since the silicon era, programming languages throve: assembler, macro assembler, Fortran, C, C++, LINQ. A common characteristic between the generations is the level of abstraction. While assembly languages didn't provide abstractions, macro assembers, Fortran, C and C++ promised to improve the deficiencies of the abstractions of the older ones. The increasing popularity of the domain specific languages showed that a single textual (ascii) language cannot supply convenient concepts, necessary for multidisciplinary frameworks.

In many situations, the offered details by C++ language and ROOT become a burden for users in their every day job. One approach to hide some of the details is to provide a multistage interface layers. This allows rich graphical user interface (GUI) to be build on top of them, turning framework's GUI into a domain specific programming language. In this paper we present a few modern technologies, which helped to reduce the complexity of producing simulation and analysis algorithms in various domains. Mashup technologies such as Yahoo Pipes, Presto Wires, OpenWires and visual programming languages such as LabVIEW, KNIME, VESPA solved a wide variety of problems. We argue for a mixed approach of using visual and textual algorithm design and implementation. We outline a methodology of common steps typically taken in data analysis. The work discusses the advantages and disadvantages going visual at every step of the data analysis. We give insights and scenarios, where going visual in the software development is more optimal in field of high energy physics.

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