6 Using ROOT for data analysis

ROOT provides interactive analysis framework (which in certain sense is very close to PAW).

- interactive mode is based on the use of C++ interpreter CINT [**?**]. From the CINT prompt one could do exactly the same things which could be done from PAW interactive prompt (handled by KUIP):

  – issue interactive analysis commands

  – execute interactively C++ scripts, interpreted by CINT

  The major technical difference between ROOT and PAW here consists in that the input language of CINT interpreter is C++, whereas in case of KUIP it was a specialized command language mixed with the FORTRAN-like scripting language (supported by COMIS interpreter).

  Thus ROOT is using only one input language (C++) instead of 2 (KUIP command language and pseudo-FORTRAN) used by PAW. ROOT does not have a specialized command language - this was a concious design decision

- issue of rapid prototyping:

  – if offline code is written in C++, CINT scripts could be plugged into the offline code without any changes;

  – they also could be pieces of offline code;

- major conceptual difference:

  – PAW: a loop over the events is provided by the framework

  – ROOT: a loop over the events is provided by the user. This doesn't mean that user has to write a lot of code: