

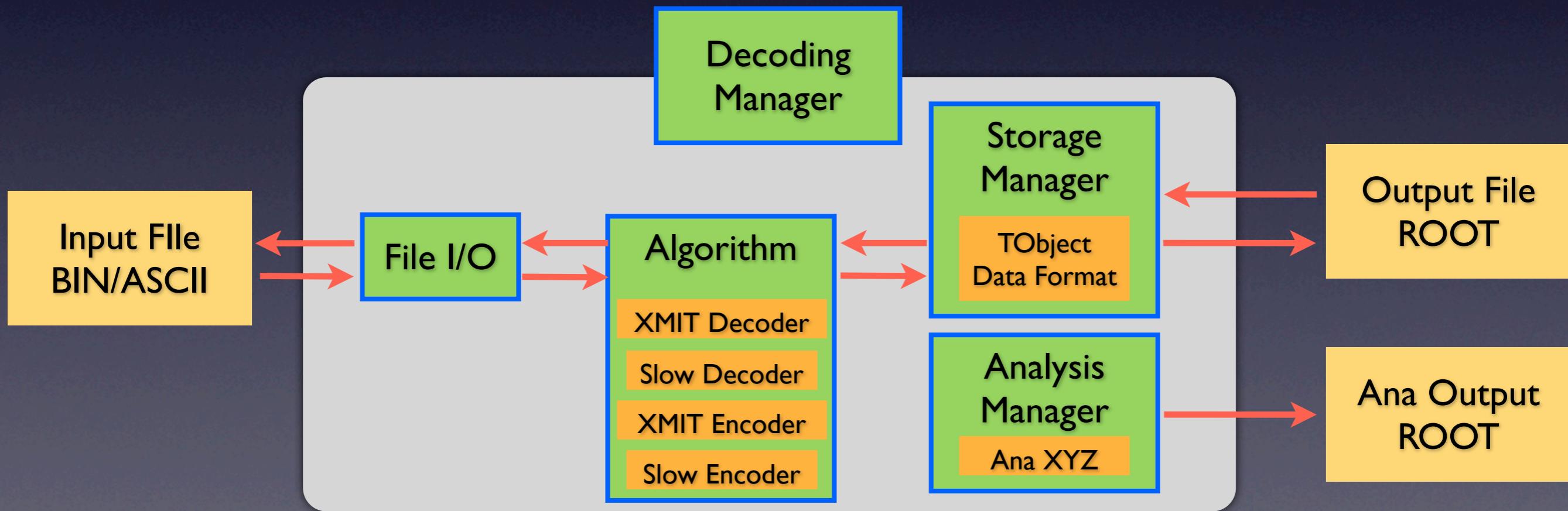
Decoder & Analysis Package

Decoder Framework

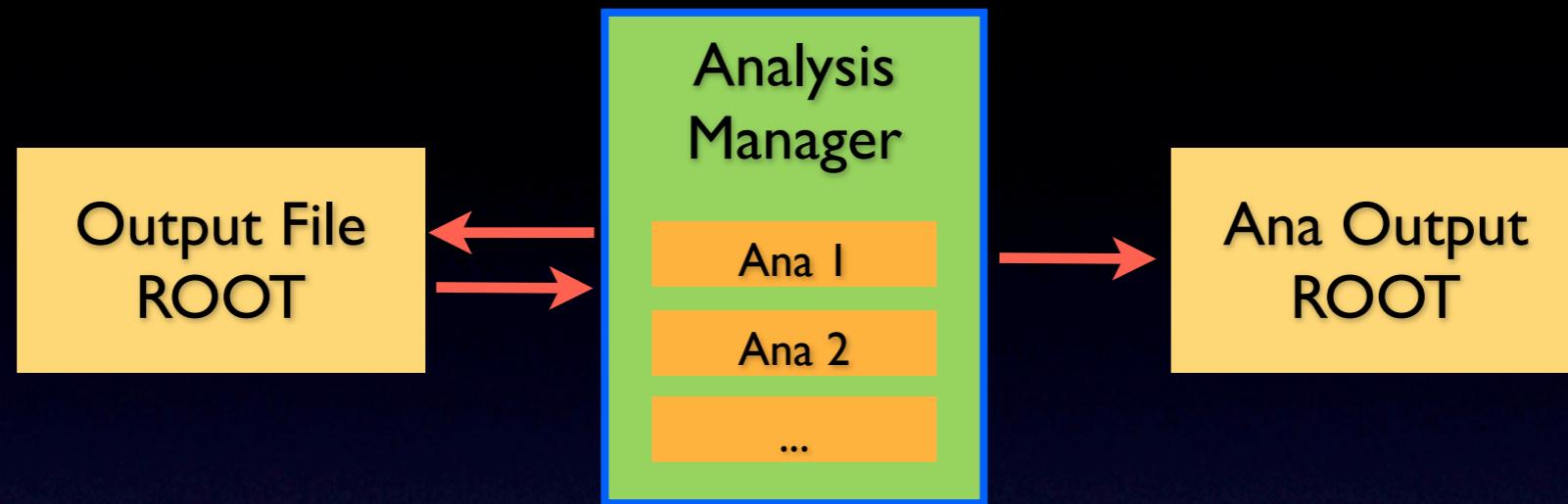
- Goal
 - Framework that can be built on different platform
 - ▶ Easy development work for anyone
 - ▶ OSX and Linux, AIX kernel
 - Provide ROOT data format & analysis framework
 - ▶ Helps real data analysis ... beyond debugging work
 - Portability & easy maintenance
 - ▶ “Plug & Play” ... Modulated design of components
 - High efficiency in cpu and disk I/O

Decoder Framework

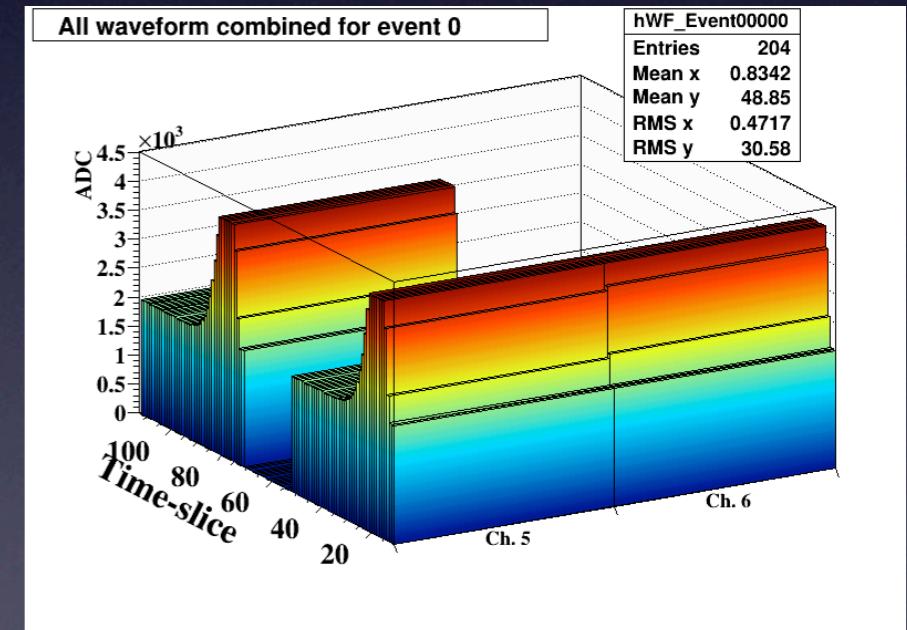
- First version finished, committed
 - Include working version of decoder for the latest data format
 - Provide ROOT data format
 - Provide analysis framework
 - Benchmarked with high event rate + large event size



Analysis Package



- Works on decoder output file
 - Analyzers do not worry about decoding
- Framework handles file I/O
 - Analyzers only focus on analysis part of the code.
- Modular analysis unit design
 - Multiple analysis can run in 1 event loop at once
 - Easy maintenance & development
- Provide class template generator
- Can run within decoder ... can perform online analysis



PMT Readout Test Stand

Decoder available for use

```
> git clone $USER@houston.nevis.columbia.edu:/a/share/westside/kazuhiro/ub_projects.git  
ub_projects  
> cd ub_projects  
> git checkout pmt_decoder_trunk  
> cd PMTDecoder  
> export MAKE_TOP_DIR=$PWD  
> source config/setup.sh  
> make
```

I hope further development on both decoding & analysis is developed on this framework unless otherwise there's a special reason not to.

Generated by “C++Package”
Support under most Linux + OSX kernel
CINT/PyROOT compatible with dictionaries