PAT Tools Discussion

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- Physics Analysis is where multiple software components come together

  - PAT should help provide consistency and coherence where possible by organizing/supporting the technical components.

  - But PAT cannot implement, validate, and maintain the actual logic of the tools... this should be done in the Combined Perf and Physics (CP & P) groups within the context of physics.

- Currently, many tools are either

  - Produced independently in Comb Reco/Physics groups and passed around via Twiki, Sharepoint, emails, AFS area, etc... every tools has it's own recipe

  - Produced by PAT but incomplete, behind in validation, broken, and/or unused... (eg TAG)

- We would like to build a closer working relation between PAT and CP & P groups:

  - Designate liaisons who keep PAT informed of activity in CP & P groups (and visa-versa)...

  - PAT work closely with people in CP & P groups who are writing tools... giving credit (ie OTP) to people who help create the "official" version of their tool (ie PC blessed).

  - Share the documentation, support, and validation responsibility.

- PAT provides the big picture (across groups + long term) as well as technical support/expertise

- You can't just ask for a tool and expect PAT to provide it... we must built tools together.

- Object Quality, Selection, Scale, Efficiency, Resolution, etc Tools:
    - These will naturally evolve after every reprocessing of data and cannot be maintained via the EDM.
    - These must be IOV aware... perhaps even in ROOT!
    - A common infrastructure for these would accelerate physics analysis... as well as reducing maintenance/validation overhead.

- PAT can provide (via PAT core sub-group)
    - Interface, access to COOL, ROOT version, packaging, etc...
    - Technical support for developers and users. Centralized Documentation/Tutorial.
    - Automatic use in TAG, DPD-making, etc...

- In return, CP & P groups (via PAT Tools sub-group)
    - Liaisons can communicate requirements between CP&P and PAT groups and help iterate on design.
    - Liaisons can help PAT identify required tools and people developing/using tools.
        - PAT can work closely with these people and give OTP credit.
    - CP & P can Validate (with help from PAT).

- Create a survey that will be completed by every analysis in the final stages:
    - Documents for each analysis which data sets, DPDs, software versions, tools, … are used
    - The liaisons can help the analyzers to complete this survey