Short Status Report: Documentation

Geant4 Workshop at Noorwijk

4 October, 2010

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(for Katsuya Amako)

A Bit of History - 1

In 1998 in Niigata Workshop we made the following decision:

All documents in plain HTML except the 'Physics Reference' and 'Toolkit Developers' manuals.

- Why?
  - Didn't want to depend upon a specific documentation tool (Framemaker, MSWord, latex, ….)
  - Plain HTML is "tool-neutral" and a HTML document can be handled in a minimum computing environment (i.e. only a text editor and a HTML browser are necessary)
- Why not for Physics Reference and Toolkit Developers' Manual?
  - Because of many math formulas, latex was the only choice for Physics Reference.
  - Because of many high resolution figures in eps, latex was the choice for the 'Toolkit Developers' manual.

A Bit of History - 2

Pros and Cons of the decisions in the Niigata workshop:

- Pros
  - It was a wise decision th at we avoided relying on a specific tool because this made it easy to switch to DocBook (see later slides).
  - Also the selection of latex for ‘Physics Reference’ was wise because, even at the current stage (I.e. 12 years later) there there is still no stable “standard” to handle math formula in the web environment.
- Cons
  - Mixed tools environment (i.e. html and latex)
  - Because of plain HTML, we could not generate a “book-style” manual for ‘Application Developers’ – the most important user guide!

A Bit of History - 3

To improve the shortcoming of the ‘Application Developers’ manual (i.e. no “book-style” version of this important manual) , an effort of switching from plain-HTML to DocBook was started in 2006.

The major reasons for this switch were that DocBook could

- provide a logical structure to the source document – the lack of logical structure in HTML created an “HTML jungle” especially in ‘For Application Developers Manual’,
- provide multiple presentations (ex. HTML and book-style PDF file) from a unique source,
- handle multiple sources of figures (ex. eps and gif, png, etc) - this feature was important for the ‘Toolkit Developers’ manual,
- use markup tags which had a good correspondence to HTML - this made easy to transform existing sources,
- handle FAQ in a unified way with other documents.

The 1st public release based on DocBook was May 2007 (Geant4 version 8.3).

Current Status of User Documents

DocBook based documents:

- Application Developers' Guide
- Toolkit Developers' Guide:
- Introduction to Geant4
- Installation Guide
- FAQ

Non-DocBook based documents:

- Physics Reference Manual
  - Based on Latex
  - No html version and only the book-style in pdf is provided (because of instability of the tool 'latex2html')
- Software Reference Manual
  - Automatic generation from the Geant4 source codes by a Perl script

Release Policy of User Documents

- All documents are updated and released in accordance with a major release of Geant4 codes.
- Typos/mistakes in the already released document are handled in the following ways:
  - If it is not serious (as judged by the original author), the correction will be uploaded to the CVS repository and not made public until the next code/document release.
  - If it is serious (again judged by the author) the correction will be uploaded to CVS and also the HTML document on the web page will be updated.

Some problems in utilizing DocBook for Geant4 Doc

- The document author needs to learn a few very basic DocBook tags which are not so familiar compared to HTML.
  - The number of DocBook tags the author needs to know is quite limited and there are very good correspondence between them and in HTML. Though the necessity to learn a new markup language creates a barrier for the authors, and the documentation group is often requested to translate the source (sometimes in plain-text, MSWord etc) to DocBook.

- Physics Reference Manual breaks the uniformity of source document - it is still based on latex.
  - This is because, even though not impossible, the handling of Math formula is very annoying in DocBook.

Next step - a coherent way to provide information

In some sense (albeit the problems mentioned in the last slide) the basic scheme of handling user documentation based on DocBook and Latex is stable and functioning well.

Though when we want to provide to the users the whole Geant4 information coherently, we need to establish a global scheme of handling information currently scattered in various form/places. The global scheme has to include

- the current user documents/manuals,
- Information on G4 Wiki page,
- documentation of novice/advanced examples,
- documentation of physics list,
- Information from code browser (LXR, Doxygen, etc)

Of course we don’t have an idea of this at the current stage and this is a subject we expect to discuss at this workshop.