DABC Editorial

Titel: DABC Introduction

Document	Date	Editor	Revision	Comment
DABC-intro	2008-12-18	Hans G.Essel	1.0.0	First scetch

Contents

Editorial

[environment/dabc-editorial.tex]

1.1 Structure of document

The document is structured hierarchically. To make sure that files to be included by \input{filename} or \include{filename} can be located, set the following environment variables:
Linux:
export TEXINPUTS=<topdirectory>//:
Windows: If one uses fpTeX with WInEdt:
Append ;P:\Application\TeXLive2005\bin\win32 to PATH.
Set TEXINPUTS to x:\topdirectory\//;
(Systemsteuerung->System:Erweitert:Umgebungsvariablen)

The full document is built by command (we are on topdirectory):

```
pdflatex main-all
makeindex main-all.idx
pdflatex main-all
```

or by `make`. It builds the document in parts from the steering files in the directories. On each subdirectory xxx there might be a main file main-xxx.tex to build a document from this directory only, i.e.

```
cd template
pdflatex main-template
makeindex main-template.idx
pdflatex main-template
```

Alternatively on top directory the script

```
makedoc <subdirectory>
```

can be used. The files on directory `template` can be used as templates, i.e. copied to a new subdirectory. All occurences of XXX in file names and tex files should then be renamed properly. The script `rename.sh` can be used to do so:

```
. ../rename.sh XXX yyy
```

replaces all `XXX` to `yyy` in tex file names and tex files. (After that all eventually remaining `*XXX*` files can be deletetd).
The file `XXX-section.tex` contains commonly used tex commands. It could be used as cut&paste source.
Figures (pdf) can be located in any subdirectories, typically `figures`.

Description of the files:

1.1.0.1 Topdirectory

Makefile make file.
makedoc script to make a subdirectory.
main-all.tex main file to be texed. Includes all steer files from subdirectories.
bibitem.tex references
dabc-glossary.tex glossary
dabc-requirements.tex brief and informal list of requirements
dabcclass.cls document description
rename.sh script to rename/replace strings in file names and content.

1.1.0.2 Subdirectory `environment`

dabc-docrev.tex document name and revision information
dabc-defs.tex central definitions (included by all main files)
dabc-post.tex reference and index chapters (included by all main files)
dabc-frontpage.tex first page of top document
dabc-people.tex list of people
dabc-preface.tex this text
dabc-work.tex working packages

1.1.0.3 Subdirectory `controls`

Example of a manual part.

ctrl-docrev.tex document name and revision information. Is included by `main-all.tex` and `main-controls.tex`.
main-controls.tex main file to be texed. Includes `steer-controls.tex` and `ctrl-docrev.tex`. Adjust document information here.
steer-controls.tex includes everything needed from this directory. Is included by `main-all.tex` and `main-controls.tex`. Controls chapters.
ctrl-section.tex is an example section file (several sections) as included in the steering file.

All other directories below topdirectory have the main, docrev and the steer file.

1.2 Formatting shortcuts

Some macros are defined in the style file `dabcclass.cls`

1.2.1 Font styles

- macro `\verba{Verbatim}` , tt `Verbatim`
- macro `\decl{Declaration}` , tt `Declaration`
- macro `\class{Class}` , bf em ***Class***
- macro `\func{Function}` , sl *Function*
- macro `\member{Member}` , sl *Member*
- macro `\strong{Strong}` , bf **Strong**
- macro `\keyw{Keyword}` , sf Keyword

- macro `\param{Parameter}` , sf Parameter
- macro `\comm{Command}` , sf Command

Example text:
When we have a ***MyNewClass*** it might have some *Functions* and some *Members*. It also might have some Constants and `Declarations`. Fixed terms should be in `Typewriter`. Text to be highlighted: **Note!**. DIM parameter and commands as DataRate and setBufferSize

1.2.2 Lists

b is for begin, e for end

```
{\bbul} = {\begin{compactitem}[$\bullet$]}
{\ebul} = {\end{compactitem}}
{\bcir} = {\begin{compactitem}[$\circ$]}
{\ecir} = {\end{compactitem}}
{\btri} = {\begin{compactitem}[$\triangleright$]}
{\etri} = {\end{compactitem}}
{\bbox} = {\begin{compactitem}[$\Box$]}
{\ebox} = {\end{compactitem}}
{\bnum} = {\begin{compactenum}}
{\enum} = {\end{compactenum}}
{\bdes} = {\begin{compactdesc}}
{\edes} = {\end{compactdesc}}
```

- bbul - ebul

○ bcir - ecir

▷ btri - etri

□ bbox - ebox

1. bnum - enum

item bdes - edes

1.3 Naming conventions

Preface

[environment/dabc-preface.tex]

This document describes the requirements, design, and implementation of the general purpose data acquisition backbone core *DABC*. This system is a result of the discussions about DAQ concepts for CBM, Panda, and FutureDAQ started in 2004.

There is a set of manuals which are available as single books, or combined in one book with separate parts for each manual.

The manuals are:

Introduction and Overview Gives a first idea about *DABC* , why it was developed, and what it is good for, the use cases and the requirements.

User Manual The basics how to use *DABC* . This manual cannot be complete, because the *DABC* as a backbone needs some application specific components, which cannot described here, including application specific GUIs. There are, however, some applications provided within the *DABC* distribution which are described, like the *MBS* or *Read Out Controller Board* .

Programmer Manual The application specific components mentioned above have to be implemented as plug-ins into the *DABC* framework. These mechanisms are described here.

Reference Manual Reference of all classes, interfaces and functions.

Controls Because the *DABC* is divided in a core part and a controls environment part, the current controls part might be replaced. This manual describes the current controls as well as the implementation rules of another one.

Java GUI Reference As mentioned above, applications may need their specific GUIs. Java written application GUIs can be hooked into the *DABC* GUI. This is described in the programmers manual. The references can be found here.

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[1] membership to be confirmed