The Firebird Documentation Project

Writing Firebird Docs with DocBook XML

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Session Overview

Part 1

- Who, Where, What
- What we have so far
- What is needed

Part 2

- How to write docs

  A hands-on introduction to DocBook XML

Who, Where and What

- ***Paul Vinkenoog***:

  Project Coordinator, DocBook wizard, proof reader, copyright watchdog, „heart and soul" of the Documentation Project

- ***Helen Borrie***:

  Compilation and maintainance of Release Notes, mailing list admin, thousands of bits and pieces…

- ***Norman Dunbar***:

  Reference manuals for command line tools

- ***Various others***:

  Articles, papers, translations into various languages

Who, **Where** and What

- Mailing list:
  firebird-docs@lists.sourceforge.net

- CVS access (doc sources):
  firebird.cvs.sourceforge.net (*manual* module)

- Online access (finished docs):
  http://www.firebirdsql.org/index.php?op=doc

Who, Where and **What**

- **The vision**:

    A complete, comprehensible, up-to-date set of documentation for Firebird

- **Complete**:

    You should find everything in the docs

- **Comprehensible**:

    It should be easy to understand

- **Up-to-date**:

    All Fb versions should be covered (2.0 + up)

What we have so far

- Quick start guides
- User manuals
- Release notes
- Various papers
- Language Reference Update for 1.5
- *[InterBase 6.0 Manuals]*
  Outdated, copyright issues

What is needed ?

- ## *MOST WANTED: SQL Language Reference*

  - A *(the?)* Complete Reference of Firebird SQL+PSQL from V1.0 (at least V2.0) to V2.5 and beyond…

- ## Translations

  - Make the docs available in Italian, Portuguese, French, German, Russian, (…) language

- ## Consolidation

  - Bring all the bits and pieces together

Part 2: How to write docs

- What is DocBook XML?

- Why DocBook?

- How does it work?

- Setting up a build environment

- Editing tools

- Practical example: „My first Firebird Doc"

What is DocBook XML?

DocBook „home": http://www.docbook.org

- DocBook is an *XML Schema*

    designed for writing books and papers about computer hard- and software

- **Key feature**:

    Strict separation of **content** (text) and **representation** (formatting, fonts…)
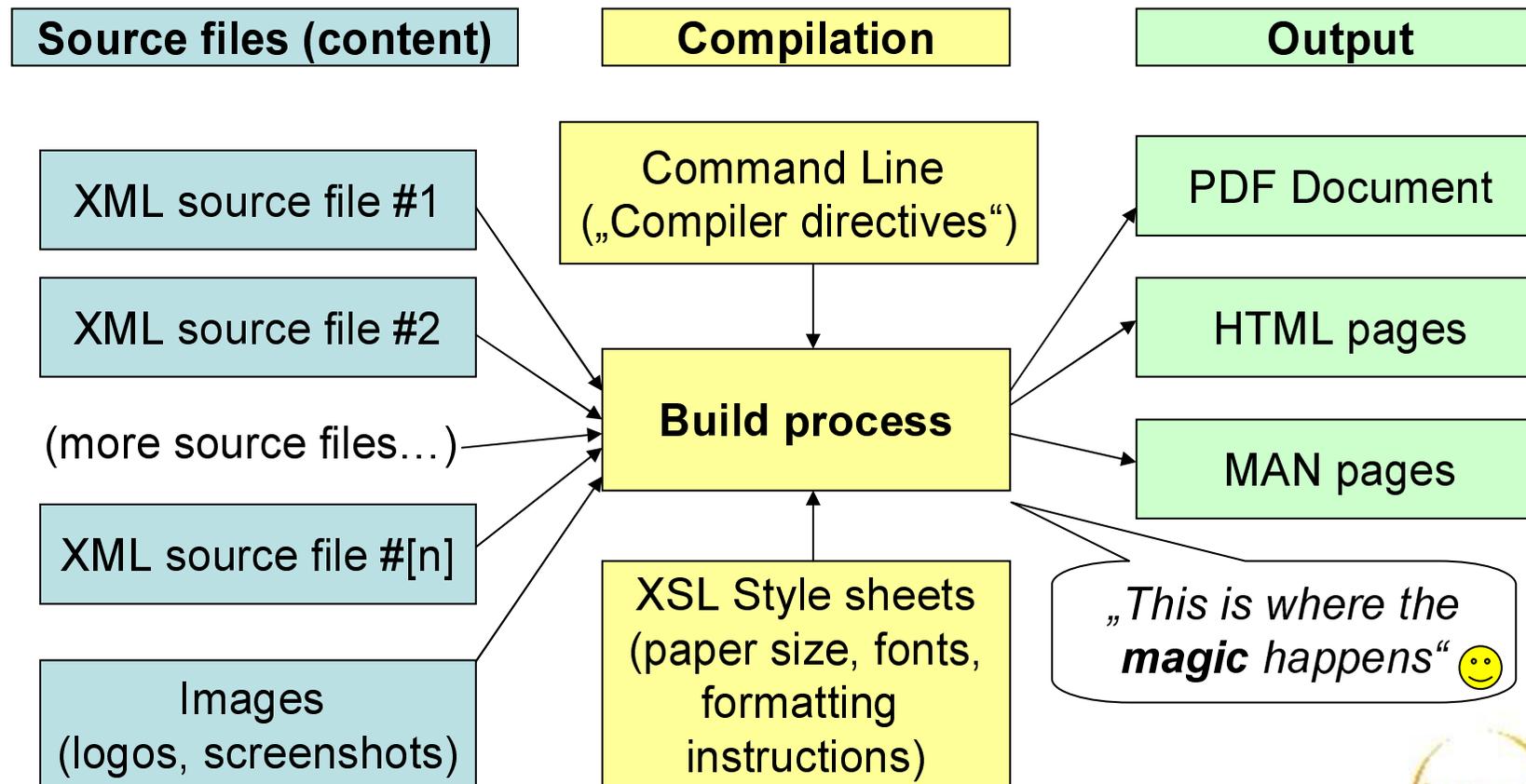
Why DocBook?

- **Modularity**
  - Books, Articles, Chapters in *separate source files*
  - Can be INCLUDEd into bigger docs
- Various **output formats**
  - PDF, HTML, MAN pages from the *same sources*
- plain **text format**
  - Editing with any text editor
  - CVS: same version control as Firebird
- Focus on **content**
  - Author just writes content
 - doesn't care about formatting output, fonts etc.

How does it work?

Basically, DocBook works just like a compiler:

Source files (content)	Compilation	Output

XML source file #1

XML source file #2

(more source files…)

XML source file #[n]

Images
(logos, screenshots)

Command Line
(„Compiler directives")

Build process

XSL Style sheets
(paper size, fonts,
formatting
instructions)

PDF Document

HTML pages

MAN pages

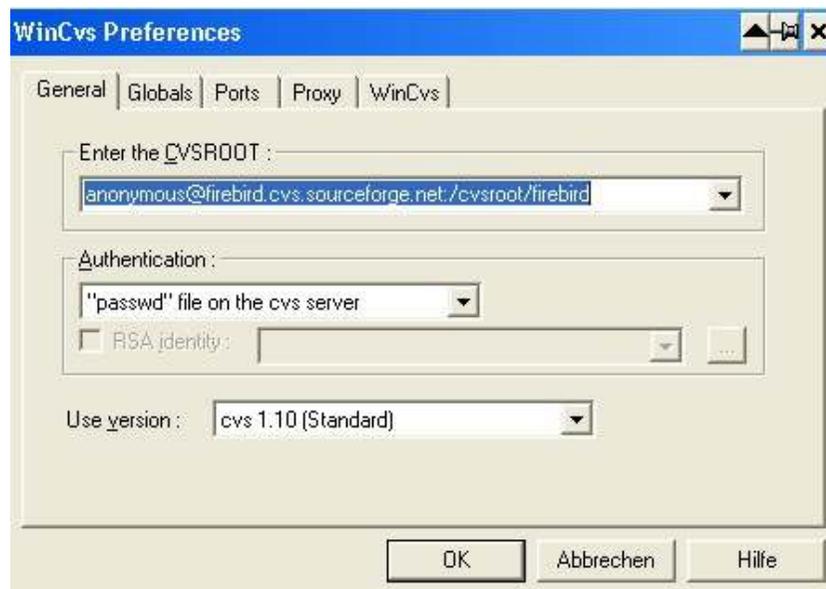„This is where the
magic happens" ☺

Setting up #1: **Get Java**

- **Download +**
  install Java (JRE)

- Set the **JAVA_HOME**
  environment variable
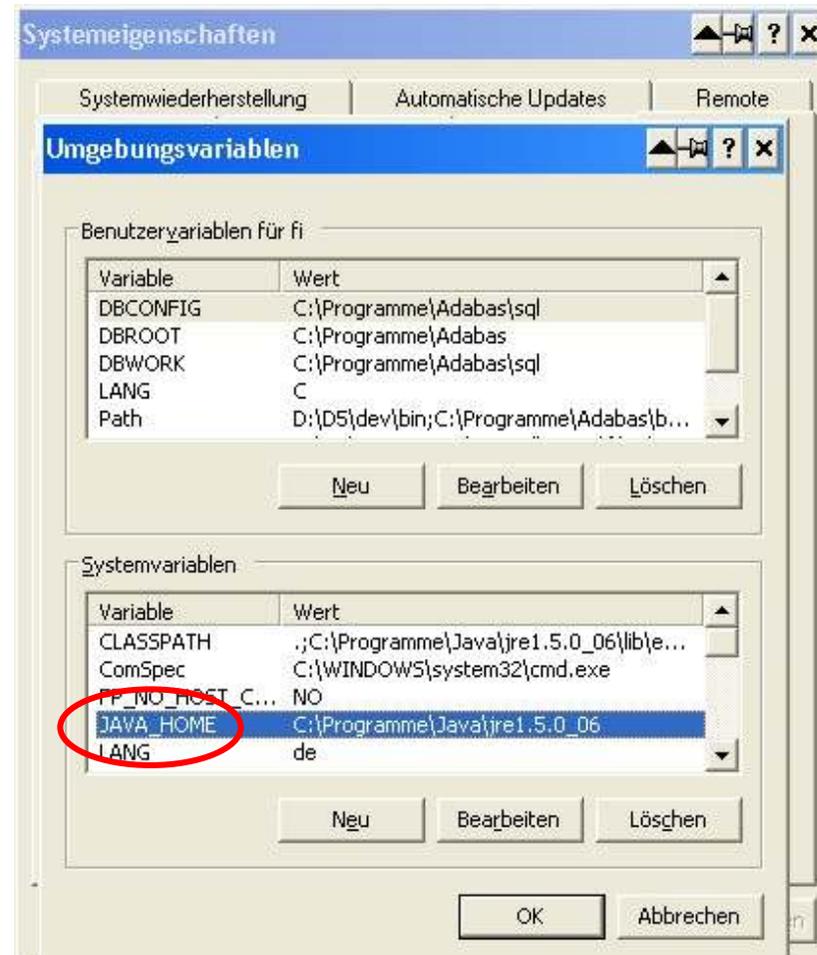
Setting up #2: **CVS Checkout**

- **Check out Manual module** from CVS
  - Set the CVS root
  - Checkout „manual"

Manual tree after cvs checkout

```
docbook
  manual
    config
    lib
    src
      build
      docs
        firebirddocs
        firebirddocs-de
        firebirddocs-es
        firebirddocs-fr
        firebirddocs-it
        firebirddocs-ja
        firebirddocs-nl
        firebirddocs-pt_br
        firebirddocs-ru
        images
        papers
        papers-fr
        refdocs
        refdocs-fr
        rlsnotes
        rlsnotes-it
        xsl
    tools
```

- **Config**
  - config settings for „fo" (formatting objects)

- **Lib**
  - Java libs for the build process

- **Src**
  - XML source files (content) and **build.bat**

- **Tools**
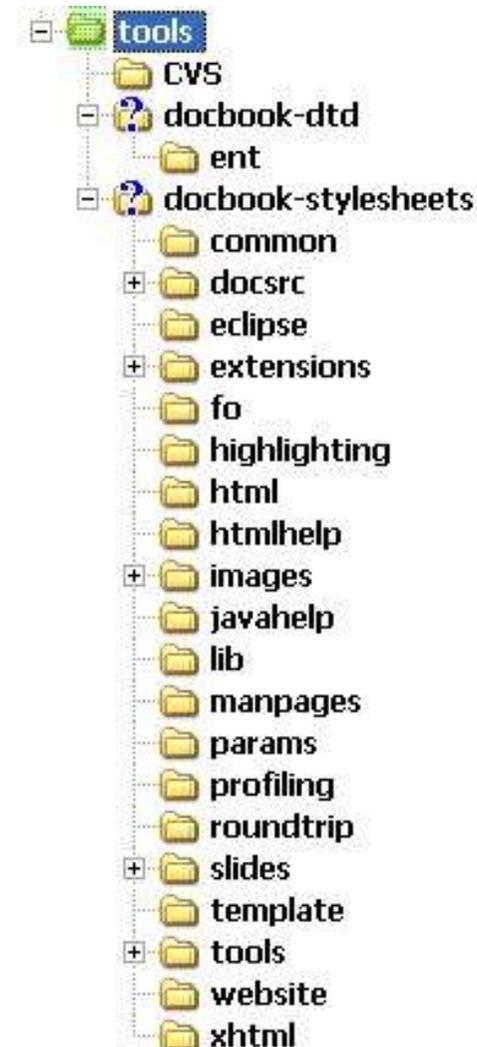 - DocBook dtd and stylesheets (formatting, fonts,…)

Setting up #3: **Get the tools**

- **Go to**

  http://www.firebirdsql.org/doctools/

- **Download and unzip everything into the `tools` dir**

Index of /doctools/

2008-07-04	10:01:37	..	(dir)
2007-04-15	10:05:08	00-README.TXT	184 bytes
2007-04-15	09:15:41	docbook-dtd.zip	96 KB
2007-04-15	09:18:40	docbook-stylesheets.zip	3 MB

```
tools
   CVS
   docbook-dtd
      ent
   docbook-stylesheets
   common
   docsrc
   eclipse
   extensions
   fo
   highlighting
   html
   htmlhelp
   images
   javahelp
   lib
   manpages
   params
   profiling
   roundtrip
   slides
   template
   tools
   website
   xhtml
```

Setting up #4: **Get the libs**

- **Go to**
  http://www.firebirdsql.org/doclibs/

- **Download and unzip ALLJARS.ZIP into the `lib` dir**

Name	Größe
CVS	
_readme_libs.txt	1 KB
ALLJARS.ZIP	8.768 KB
ant-launcher.jar	9 KB
ant-trax.jar	68 KB
ant.jar	1.010 KB
avalon-framework.jar	85 KB
batik.jar	2.563 KB
commons-io-1.1.jar	61 KB
commons-logging-1.0.4.jar	38 KB
fop-hyph.jar	717 KB
fop.jar	1.987 KB
foxon.jar	10 KB
jai_codec.jar	209 KB
jai_core.jar	1.540 KB
jimi-1.0.jar	445 KB
saxon-xml-apis.jar	65 KB
saxon.jar	557 KB
xmlgraphics-commons-1.1...	295 KB

Index of /doclibs/

2008-07-04	10:01:37	..	(dir)
2007-04-15	08:47:07	old	(dir)
2007-04-15	09:58:39	00-README.TXT	177 bytes
2007-04-15	10:05:55	ALLJARS.ZIP	9 MB
2007-04-15	08:48:52	ant-launcher.jar	9 KB

Setting up: **Test-run the build**

- Open a command line in the *src/build* dir,
  run „**build pdf**"

```
D:\docbook\manual\src\build>build pdf
java version "1.5.0_06"
Java(TM) 2 Runtime Environment, Standard Edition (build 1.5.0_06-b05)
Java HotSpot(TM) Client VM (build 1.5.0_06-b05, mixed mode, sharing)

Unable to locate tools.jar. Expected to find it in C:\Programme\Java\jre1.5.0_06\lib\tools.jar
Buildfile: build.xml

init:
    [echo] Apache Ant version 1.6.5 compiled on June 2 2005

prepare:

getrootarg:

getfontargs:

fo:
    [echo] Building Formatting Objects file. Please wait...
  [delete] Deleting: D:\docbook\manual\inter\fo\firebirddocs.fo
    [java] Making portrait pages on A4 paper (210mmx297mm)

copy-images:

copy-img-files:
    [copy] Copying 1 file to D:\docbook\manual\inter\fo\images

copy-img-files:
    [copy] Copying 7 files to D:\docbook\manual\inter\fo\images

copy-img-files-not:

fo2pdf:
    [echo] Building PDF from Formatting Objects. Please wait...
     [fop] 12.07.2008 12:08:32 org.apache.fop.apps.FopFactory configure
     [fop] INFO: Initializing FopFactory Configuration
```
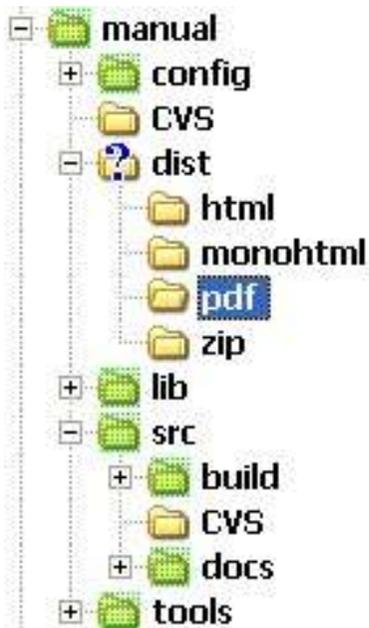
Setting up: **Verify the build**

- After some time, you should get:

```
pdf:

BUILD SUCCESSFUL
Total time: 1 minute 6 seconds
D:\docbook\manual\src\build>
```

- In the `\dist\pdf` dir you will find:

Name	Größe	Typ
firebirddocs.pdf	2.383 KB	PDF Document

Docwriting workflow

- Write doc(s) with XMLMind or text editor
- Build doc set as HTML and/or PDF
- Proof-read, correct errors, build again
  Tip: *don't proof-read yourself, contact the mailing list and find someone to help you!*
- Add new files to CVS
- Commit new/modified files to CVS
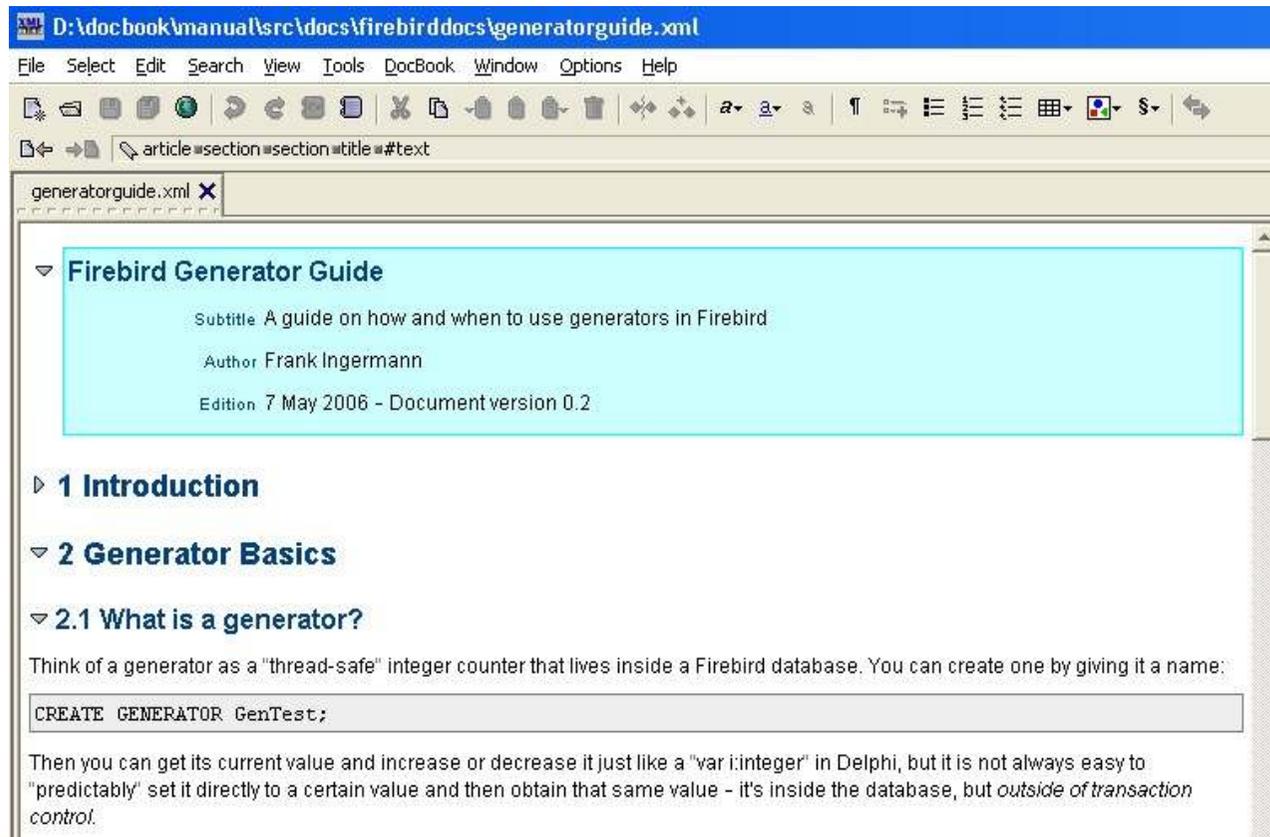- Keep your docs up-to-date

Editing Tools for DocBook

- Simple: plain text editors
  - VI, Notepad *(argh…)*
  - „decent" **text editor** with syntax highlighting

- Advanced XML-aware editors:
  - Dedicated XML Editors
    e.g. **XMLMind** (Free edition)
    has built-in DocBook support

Editing in XMLMind

- Checks XML structure, knows DocBook,
  „almost WYSIWYG"

Building Doc sets

Use **build.bat** in `\manual\src\build`:

build <target> [<options>]

<target> = pdf | html | monohtml

build html   builds multi-file html docs
build monohtml builds a single, huge html file

Building non-english docs

Use „`-Dsfx=<languagecode>`" option:
   (sfx = **suffix** for the **src directory** and **all xml files**)

`build pdf -Dsfx=de`   builds the German doc set

```
D:\docbook\manual\src\build>build pdf -Dsfx=de
java version "1.5.0_06"
Java(TM) 2 Runtime Environment, Standard Edition (build 1.5.0_06-b05)
Java HotSpot(TM) Client VM (build 1.5.0_06-b05, mixed mode, sharing)

Unable to locate tools.jar. Expected to find it in C:\Programme\Java\jre1.5.0_06\lib\tools.jar
Buildfile: build.xml

init:
     [echo] Apache Ant version 1.6.5 compiled on June 2 2005

prepare:

getrootarg:

getfontargs:

fo:
     [echo] Building Formatting Objects file. Please wait...
   [delete] Deleting: D:\docbook\manual\inter\fo\de\firebirddocs-de.fo
     [java] Making portrait pages on A4 paper (210mmx297mm)
```

Language codes: it, es, de, ru, pt_br, fr, ja, nl

Building a part (set) of the Docs

Use the **-Dbasename** option:

build pdf -Dbasename=rlsnotes

Builds **rlsnotes.pdf** containing *only* the release
   notes

**basename = firebirddocs (default) |
   rlsnotes | papers | refdocs**

Before you start writing:

- **Read the DocWriting How-To**

  Really, really read it! *It's worth it !!*

- **Pick a topic**

  You think you know everything about it?

  Write documentation, and find out

  how little you knew! ;-)

- **Announce it in the mailing list**

  Get Together & Don't duplicate work!

DocBook structure elements

- **<set>**

  Top-level: a set of <book>s make a doc **set**

- **<book>**

  A <book> contains articles and/or chapters

- **<article>** or **<chapter>**

  An article or chapter contains sections

- **<section>**

  A section contains **para**graphs

- **<para>**

  Bottom-level: a paragraph holds a block of text together

DocBook formatting elements

Some examples:

`<programlisting>` for SQL statements,
  command line, ISQL etc.

`<example>` for – guess what ☺

`<tip>` for tips (in blue boxes)

`<emphasis>` to highlight words or terms

See Paul Vinkenoog's „Firebird Docwriting Guide"
  for more !

DocBook IDs

- Any structure element can have an **ID**
  (*an IDentifier is a **text label** in DocBook!*)

- IDs can be used for hyperlinks

- IDs can be used to include XML files into others

- IDs **MUST BE UNIQUE** throughout
  all files in one SET (!)

DocBook **Set** example

```xml
<?xml version="1.0" encoding="UTF-8"?>
<!DOCTYPE set PUBLIC "-//OASIS//DTD DocBook XML V4.5//EN" "../../tools/docbook-dtd/docbookx.dtd" [
  <!ENTITY fbutilities-intro SYSTEM "firebirddocs/fbutil_intro.xml">
  <!ENTITY fbutilities-gsec SYSTEM "firebirddocs/fbutil_gsec.xml">
]>

<set id="firebird-docset">                              <!-- top-level element is the "set" -->
  <title>Firebird Documentation Set</title>             <!-- defines the title of the set -->

  <book id="firebird-database-documentation">           <!-- starts a "book" inside the "set" -->
    <bookinfo>
      <title>Firebird Database Documentation</title>    <!-- defines the title of this book -->
    </bookinfo>

    <article id="generatorguide">                       <!-- starts an article inside the book -->
      <!-- content of the article goes here... -->

    </article>                                          <!-- closes the article -->

    <!-- ...more articles of the book here... -->

  </book>                                               <!-- closes the first book -->

  <book id="fbutils">                                   <!-- starts the second book in the set -->
    <bookinfo>
      <title>Firebird Commandline Utilities</title>
    </bookinfo>

    &fbutilities-intro;                                 <!-- this includes the Intro article -->
    &fbutilities-gsec;
  </book>                                               <!-- closes the second book -->
</set>                                                  <!-- closes the entire set -->
```

DocBook **Article** example

- **Each <article> should be in a separate file**
  (not necessary, but keeps things more modular!)

```
<article id="generatorguide">              <!-- starts an article inside the book -->
  <articleinfo>
    <title>Firebird Generator Guide</title>
  </articleinfo>

  <section id="generatorguide-intro">        <!-- first section in the article -->
    <title>Introduction</title>

    <section id="generatorguide-intro-about">  <!-- sub-section inside a section -->
      <title>what is this article about?</title>

      <para>This article explains what Firebird  <!-- text in a "para" is kept together -->
      generators are,...</para>
    </section>

    <section id="generatorguide-intro-forwhom">  <!-- each ID must be UNIQUE! -->
      <title>who should read it?</title>

      <para>Read this article if you...</para>

    </section>                                  <!-- closes the innermost section -->
  </section>                                    <!-- closes the outer section -->

  <!-- ...more sections here... -->

  <appendix id="generatorguide-dochist">        <!-- starts an appendix to the book -->
    <title>Document history</title>
    <!-- content of the appendix goes here... -->
  </appendix>                                   <!-- closes the appendix -->

</article>                                      <!-- closes the article -->
```

Now let's write some docs!

Your Doc team needs you!

join us at

firebird-docs@lists.sourceforge.net

„Ich habe fertig!"

(Giovanni Trapattoni)

Thank You for your attention !

Any questions ?