



Visual DCT

Visual Database Configuration Tool

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Once upon a time...

```
Terminal
File Edit Settings Help
# this is a comment
record(ao,ao002) {
    field(SDIS,"ts:ao001,HIHI")
    field(DTYP,"Soft Channel")
    field(DOL,"test.ALST")
    field(DESC,"analogue ouput 2")
    field(SIML,"ts:ao001")
}

record(ai,grp1Test:smile) {
}

record(ai,grp1Test:grp2Test:smile34) {
}

record(ai,ts:grp1:smile) {
}

record(ao,ts:ao001) {
    field(OUT,"ts:ai002.LOW")
    field(DTYP,"Soft Channel")
    field(DESC,"analogue ouput 1")
}

record(ai,ts:ai002) {
    field(DTYP,"Soft Channel")
    field(SCAN,"5 second")
    field(DESC,"analogue input 2")
}

record(ai,ts:ai001) {
    field(INP,"#C0 S0 @")
    field(FLNK,"ts:ai002")
    field(DTYP,"Huber DMC 9200")
    field(SCAN,"5 second")
    field(DESC,"analogue input 1")
}

:wq!
```

```
emacs@localhost.localdomain
VLT Buffers Files Tools Edit Search Mule C++ Help
# this is a comment
record(ao,ao002) {
    field(SDIS,"ts:ao001.HIHI")
    field(DTYP,"Soft Channel")
    field(DOL,"test.ALST")
    field(DESC,"analogue ouput 2")
    field(SIML,"ts:ao001")
}

record(ai,grp1Test:smile) {
}

record(ai,grp1Test:grp2Test:smile34) {
}

record(ai,ts:grp1:smile) {
}

record(ao,ts:ao001) {
    field(OUT,"ts:ai002.LOW")
    field(DTYP,"Soft Channel")
    field(DESC,"analogue ouput 1")
}

record(ai,ts:ai002) {
    field(DTYP,"Soft Channel")
    field(SCAN,"5 second")
}

--:-- test.db (C++)--L19-- 3%
```

... present

VisualDCT Console

o) Checking consistency with DBD file... OK

Warning: ao002 -> DTYP field must be defined before any DBF_INPUT/DBF_OUTPUT fields...
Warning: ts:ao001 -> DTYP field must be defined before any DBF_INPUT/DBF_OUTPUT fields...
Warning: ts:ai001 -> DTYP field must be defined before any DBF_INPUT/DBF_OUTPUT fields...

Inspector - ao002

GUI_COMMON	
DESC	analogue oupt 2
ASG	
GUI_LINKS	
DTYP	Soft Channel
FLNK	
GUI_INPUTS	
SIML	ts:ao001
SIOL	
SIMS	<none>
GUI_OUTPUT	
DOL	test.ALST
OUT	anotherRecord
OROC	
OMSL	<none>
OIF	<none>
DRVH	closed_loop
DRVL	supervisory
IVOA	<none>
IVOV	
GUI_SCAN	
SDIS	ts:ao001.HIHI
SCAN	<none>
PINI	<none>
PHAS	
EVNT	
TSEL	
DISV	1
DISS	<none>
PRI0	<none>

Comment

this is a comment

Output Mode Select ☐ Frozen

VisualDCT - [/home/matej/VisualDCT/test.db]

File Edit View Help

grp1Test

ts

ao
ao002

SDIS:ts:ao001.HIHI
DTYP:Soft Channel
DOL:test.ALST
OIF:analogue oupt 2
SIML:ts:ao001
OUT:anotherRecord

SDIS NPP NMS ts:ao001.HIHI
DOL NPP NMS ts:ao001.VAL
SIML NPP NMS
OUT NPP NMS

/home/matej/VisualDCT/test1.dbd Main group

100%

```
[--nobdrs] [--out <File>] [--xy] [--add value] [--frame]
dina matej:" 486 > xwd -root screenshot
usage: xwd [-display host:dpy] [-debug] [-help] [{-root|-id <id>|-name <name>}]
[--nobdrs] [--out <File>] [--xy] [--add value] [--frame]
dina matej:" 487 > xwd -out screenshot

dina matej:" 488 > xwd -root -out screenshot
```

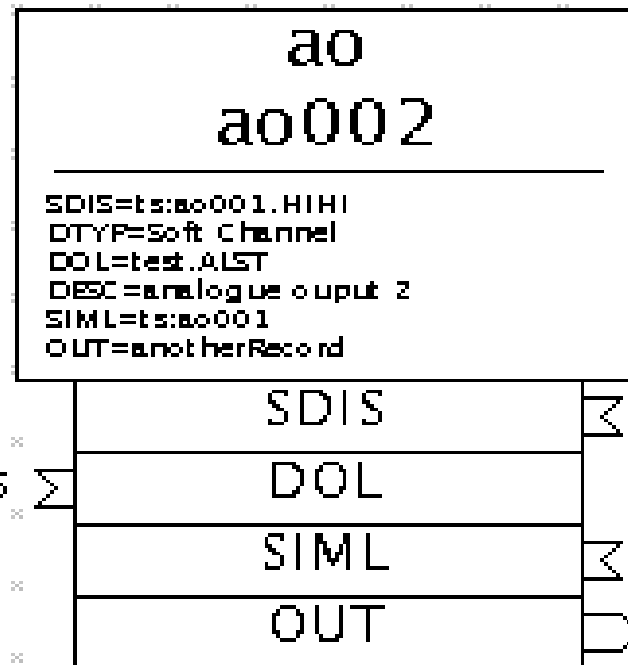
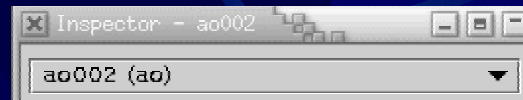
Advantages of visual building

- “RDD” (Rapid Database Development)
- Easier to understand
- Easier to find errors, find better design
- Faster building
- ...

Visual DCT features

- System independency
 - Java Runtime Environment 2
- DCT GUI features
 - Clipboard, undo, object inspector, visual linking
- Supports hierarchical design
- Powerful DB parser
 - Existing DB support
 - Preserves DB comments, record/field order
 - DBs can edited in other tools or manually

GUI Overview



NPP NMS

NPP NMS — ts:ao001.HIHI

NPP NMS — ts:ao001.YAL

NPP NMS —

OUT ➤ NPP NMS

/home/matej/VisualDCT/tes

Output Mode Select

Frozen ☐

100%

Visual DCT future plans

- XML support
- Add arbitrary text, lines, rectangles for documentation
- Handling more than one DB at the same time
- Wrapper to handle so-called startup scripts
- Debugging (with active connection to EPICS DB)
- Alternative hierarchy support (like in Capfast)
- CS Modeling Language support
- ... and any user feature requests