



Proposal of Substructure XML Database template

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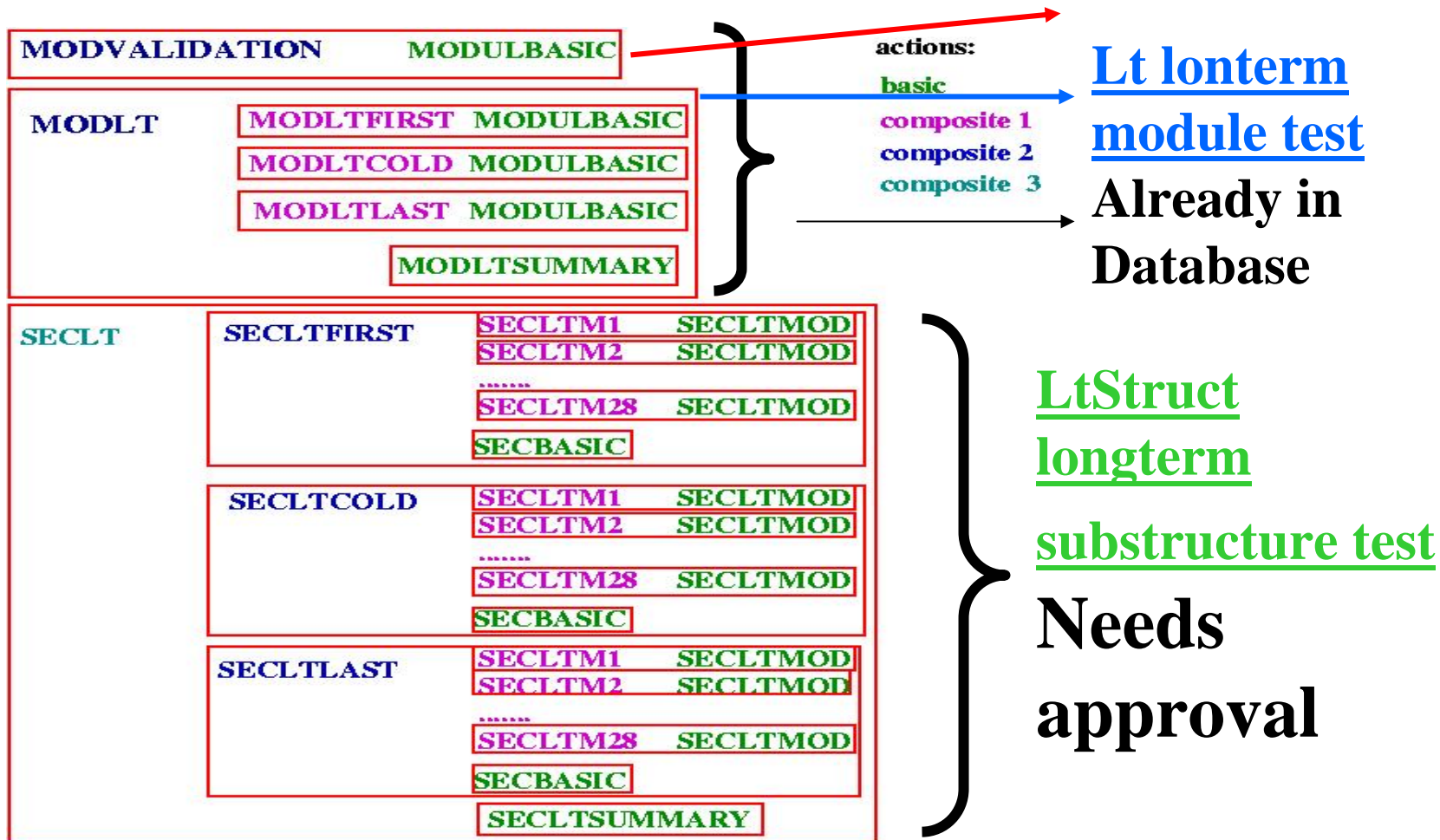
Module Test meeting

16/03/2004

Current status

- **Module validation**: in use, already in the production Dbase
- **Module longterm**: xml template version 2, already in the production Dbase
- **Substructure validation**: xml template already proposed, needs confirmation to be implemented. More complexity (up to 28 modules, triple compositeness)

Overview: degree of compositeness



Reminder: module longterm xml

```
<unit>
<object id=""/>
<composite>
<action_description input_id="775" name="MODLT" version="2" object_name="MOD"/>
  <composite>
    <action_description input_id="772" name="MODULLTFIRST" object_name="MOD" version="2"/>
    <action>
      <action_description object_name="MOD" input_id="769" version="2" name="MODULBASIC"/>
      <result value=":0:" name="MODULBASIC_val"/>
      <result value="" name="Tdate"/>
      <result value="" name="operator"/>
      <result value="" name="tool_id"/>
      <result value="" name="status"/>
      <result value="" name="Tcomment"/>
      <result value="" name="StatusApv"/>
      <result value="" name="StatusMUX"/>
      <result value="" name="StatusPLL"/>
      <result value="" name="StatusDCU"/>
      <result value="" name="StatusSensors"/>
      <result value="" name="StatusHybrid"/>
    </action>
  </composite>
</action_description>
</composite>
</action_description>
</unit>
```

**Common
and status
variables**

Reminder: module longterm xml (cont)

```
<result value="" name="DCUId"/>
<result value="" name="PLLDAC"/>
<result value="" name="NBadChan"/>
<result value="" name="BadChanList"/>
<result value="" name="Settings"/>
<result value="" name="TempSetup"/>
<result value="" name="TempExt"/>
<result value="" name="HumSetup"/>
<result value="" name="HumExt"/>
<result value="" name="TempHybDcu"/>
<result value="" name="TempHybNtsc"/>
<result value="" name="TempSenNtsc1"/>
<result value="" name="TempSenNtsc2"/>
<result value="" name="TempSenNtsc1Dcu"/>
```

```
<result value="" name="Ihyb250"/>
<result value="" name="Ihyb125"/>
<result value="" name="Vhyb250"/>
<result value="" name="Vhyb125"/>
<result value="" name="Vhyb250Dcu"/>
<result value="" name="Vhyb125Dcu"/>
<result value="" name="HVbias"/>
<result value="" name="IleakDcu"/>
<result value="" name="Ileak"/>
<result value="" name="Vtest1"/>
<result value="" name="Itest1"/>
<result value="" name="Vtest2"/>
<result value="" name="Itest2"/>
```

Slow control and voltage part

Reminder: module longterm xml (cont)

```
<result value="" name="noise pion"/>
<result value="" name="noise pioff"/>
<result value="" name="noised ion"/>
<result value="" name="noised ioff"/>
<result value="" name="rawnoise pion"/>
<result value="" name="rawnoise pioff"/>
<result value="" name="rawnoised ion"/>
<result value="" name="rawnoised ioff"/>
<result value="" name="cmnnoise pion"/>
<result value="" name="cmnnoise pioff"/>
<result value="" name="cmnnoised ion"/>
<result value="" name="cmnnoised ioff"/>
<result value="" name="avgcmn pion"/>
<result value="" name="avgcmn pioff"/>
<result value="" name="avgcmnd ion"/>
<result value="" name="avgcmnd ioff"/>
<result value="" name="avgnoise pion"/>
<result value="" name="avgnoise pioff"/>
```

```
<result value="" name="avgnoised ion"/>
<result value="" name="avgnoised ioff"/>
<result value="" name="ped pion"/>
<result value="" name="avgped pion"/>
<result value="" name="rmsped pion"/>
<result value="" name="badchped"/>
<result value="" name="calPApioff"/>
<result value="" name="calPApion"/>
<result value="" name="calPAdioff"/>
<result value="" name="calPAdion"/>
<result value="" name="calPTpioff"/>
<result value="" name="calPTpion"/>
<result value="" name="calPTdion"/>
<result value="" name="calPTdioff"/>
```

Noise and calibration variables

Reminder: module longterm xml (cont)

```
<result value="" name="avgcalPApioff"/>
<result value="" name="avgcalPApion"/>
<result value="" name="avgcalPAdioff"/>
<result value="" name="avgcalPAdion"/>
<result value="" name="avgcalPTpioff"/>
<result value="" name="avgcalPTpion"/>
<result value="" name="avgcalPTdioff"/>
<result value="" name="avgcalPTdion"/>
<result value="" name="badchcalprof"/>
<result value="" name="apvModePinhole"/>
<result value="" name="calApinhole"/>
<result value="" name="avgcalApinhole"/>
<result value="" name="Ipinhole"/>
<result value="" name="badchpinhole"/>
<result value="" name="apvModeCal"/>
```

```
<result value="" name="calA"/>
<result value="" name="avgcalA"/>
<result value="" name="badchcal"/>
<result value="" name="apvModeBP"/>
<result value="" name="calBP"/>
<result value="" name="avgcalBP"/>
<result value="" name="badchbp"/>
<result value="" name="chflag"/>
<result value="" name="voltageIV"/>
<result value="" name="currentIV"/>
<result value="" name="timeIt"/>
<result value="" name="currentIt"/>
</action>
</composite>
```

End of MODLTFIRST

Reminder: module longterm xml (cont)

```
<composite>  
<action_description input_id="773" name="MODULLTCOLD" object_name="MOD" version="2"/>  
<action>  
<action_description object_name="MOD" input_id="769" version="2" name="MODULBASIC"/>  
<result value=":0:" name="MODULBASIC_val"/>  
.....  
</action>  
</composite>
```

Cold test and last test

```
<composite>  
<action_description input_id="771" name="MODULLTLAST" object_name="MOD" version="2"/>  
<action>  
<action_description object_name="MOD" input_id="769" version="2" name="MODULBASIC"/>  
<result value=":0:" name="MODULBASIC_val"/>  
.....  
</action>  
</composite>
```

Reminder: module longterm xml (cont)

```
<action>
<action_description input_id="774" name="MODULLTSUMMARY" object_name="MOD" version="2"/>
<result value=":0:" name="MODULLTSUMMARY_val"/>
<result value="" name="Tdate"/>
<result value="nobody" name="operator"/>
<result value="1" name="tool_id"/>
<result value="valid" name="status"/>
<result value="" name="Tcomment"/>
<result value="" name="Settings"/>
<result value="" name="Run"/> <!-- run number for the multimodule test load -->
<result value="" name="StatusApv"/>
<result value="" name="StatusMUX"/>
<result value="" name="StatusPLL"/>
<result value="" name="StatusDCU"/>
<result value="" name="StatusSensors"/>
<result value="" name="StatusHybrid"/>
<result value="" name="NBadChan"/>
<result value="" name="BadChanList"/>
<result value="" name="chflag"/>
</action> </composite> </unit> </DBFile>
```

Final summary of module

<!--final status -OR for the 3 tests -->

<!--final flag is the OR for the 3 tests -->

Longterm test on **substructures** xml template

```
<unit>
<object id="77"/>
<composite>
<action_description input_id="77" name="SECLT" object_name="SEC" version="1"/>
  <composite>
    <action_description input_id="771" name="SECLTFIRST" object_name="SEC" version="1"/>
    <!--module 1` related info -->
    <object id="77"/>
    <composite>
      <action_description input_id="77" name="SECLTM1" object_name="MOD" version="1"/>
      <action>
        <action_description input_id="77" name="SECLTMOD" object_name="MOD" version="1"/>
        <result name="SECLTMOD_val" value=":0:"/>
        <result name="Tdate" value=""/>
        <result name="operator" value="nobody"/>
        <result name="tool_id" value="1"/>
        <result name="status" value="valid"/>
        <result name="Tcomment" value=""/>
        <result name="Nbadch" value=""/>
      </action>
    </composite>
  </action_description>
</composite>
</action_description>
</unit>
```

Substructures template (cont)

```
<!--measured by DCU, adc [int] -->
<result name="Vhyb25Dcu" value=""/>
<result name="Vhyb125Dcu" value=""/>
<result name="TempHybDcu" value=""/> <!--internal DCU, adc [int] -->
<result name="TempHybNtsc" value=""/> <!--on hybrid measured by DCU , adc [int] -->
<result name="IleakDcu" value=""/> <!-- I hv bias measured by DCU converted , nA [float] -->
<result name="PLLDAC" value=""/> <!-- PLL DAC low+high bytes [int]-->
<result name="GAOH" value=""/> <!-- AOH bias and gain -->
<result name="apvModePed" value=""/> <!-- noise adc* 100 [varchar(4000)] and pedestal at one mode-->
<result name="pedestal" value=""/>
<result name="noise" value=""/>
<result name="avcmn" value=""/> <!--average per module cmn noise -->
<result name="avnoise" value=""/> <!--for relative calibration -->
<result name="avped" value=""/>
<!-- badchflag after all tests(PedRun , CalProf and Pinholes?) ch#, flag [varchar(4000)] -->
<result name="badchflag" value=""/>
</action>
</composite>
```

End of SECLTM1

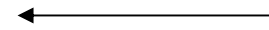
Substructures template (cont)

```
<action>
<action_description input_id="77" name="SECBASIC" object_name="SEC" version="1"/>
<result name="SECBASIC_val" value=":0:"/> <!-- composite qualification flag, [int]: all defects are coded here -->
<result name="Tdate" value=""/>
<result name="operator" value="nobody"/>
<result name="tool_id" value=""/>
<result name="status" value=""/>
<result name="Tcomment" value=""/>
<result name="TempSetup" value=""/> <!--external probe in box T C.[float] -->
<result name="TempExt" value=""/> <!--external probe in room T C. [float] -->
<result name="HumSetup" value=""/> <!-- external probe in box RH% [float] -->
<result name="HumExt" value=""/> <!-- external probe room RH% [float] -->
<result name="Isec25" value=""/> <!-- Low voltage V25 for all groups current externaly measured -->
<result name="Isec125" value=""/> <!-- Low voltage V125 for all groups current externaly measured -->
<result name="Settings" value=""/> <!--settings.xml name [varchar[30]] -->
<result name="Nsecmodules" value=""/> <!-- total number of modules -->
<result name="HVbias" value=""/> <!-- HV during test from HV supply, V [float] -->
<result name="Isecleak" value=""/> <!-- Total I leak externaly measured, V [float] -->
<result name="Nsecbadch" value=""/> <!-- total number of bad channels per structure -->
</action></composite>
```

Substructures template (cont)

<!--last test at cold -->

```
<composite>
<action_description input_id="771" name="SECLTCOLD" object_name="SEC" version="1"/>
<composite>
  <action_description input_id="" name="SECLTM1" object_name="MOD" version="1"/>
  <action>
    <action_description input_id="" name="SECLTMOD" object_name="MOD" version="1"/>
    .....
  </action>
</composite>
```



COLD

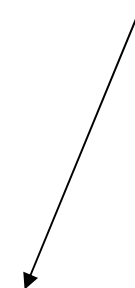
and

LAST test

```
<composite>
  <action_description input_id="" name="SECLTM2" object_name="MOD" version="1"/>
  <action>
    <action_description input_id="" name="SECLTMOD" object_name="MOD" version="1"/>
    .....
  </action>
</composite>
```

..... other modules

```
<action>
<action_description input_id="" name="SECBASIC" object_name="SEC" version="1" />
.....
</action>
</composite>
```



<!--last test at warm same as the first one -->

```
<composite>
<action_description input_id="771" name="SECLTLAST" object_name="SEC" version="1"/>
<action> .....
```

Substructures template (cont)

```
</composite>
<!-- summary of the whole test for the substructure -->
<action>
  <action_description input_id="774" name="SECLTSUMMARY" object_name="SEC" version="1"/>
  <!-- all defect are coded here in _val -->
  <result value=":0:" name="SECLTSUMMARY_val" />
  <result value="" name="Tdate" />
  <result value="nobody" name="operator" />
  <result value="1" name="tool_id" />
  <result value="valid" name="status" />
  <result value="" name="Tcomment" />
  <!-- run number for the multimodule test -->
  <result value="" name="Run" />
  <!-- 0-all ok; Nbadmodules= -->
  <result value="" name="StatusModules" />
  <result value="" name="StatusAOH" />
  <result value="" name="StatusCCUM" />
  <result value="" name="StatusDCU" />
  <result value="" name="NtotBadChan" />
  <!-- Nbadchmod1, Nbadchmod2, ...etc [varchar(200)] -->
  <result value="" name="BadChanList" />
</action>
</composite>
</unit>
```

**Final
summary of
substructure**