

MDT Configuration Database

Tasks done:

Integrated new
installed EE side A
chambers

Added new python
management tools

An example to list
disabled Mezz cards

```
listDisabledMezz.py: Querying (ATONR) for a list of disabled Mezzanine cards.nine cards.
| INFO Sending summary e-mails to: h.cheng@cern.ch
| INFO with cc to: ['dai1568@gmail.com']
atnr_r : BIS2A08      1015      1023  Disabled Mezz  3
atnr_r : BIS2A14      959       1023  Disabled Mezz  6
atnr_r : BIS3C04      1021      1023  Disabled Mezz  1
atnr_r : BIS4C14      1015      1023  Disabled Mezz  3
atnr_r : BIS1C16      2047      4095  Disabled Mezz 11
atnr_r : BIS1C02      4091      4095  Disabled Mezz  2
atnr_r : BMS1A08     16255     16383  Disabled Mezz  7
atnr_r : EIL1C05      4091      4095  Disabled Mezz  2
atnr_r : EIS1A14     16127     16383  Disabled Mezz  8
atnr_r : EMS2A08     65527     65535  Disabled Mezz  3
atnr_r : EMS2C12     62463     65535  Disabled Mezz 10 11
atnr_r : EOS3A02     14335     16383  Disabled Mezz 10
atnr_r : EOS3A16     16127     16383  Disabled Mezz  8
atnr_r : EOS4A02      3583      4095  Disabled Mezz  9
atnr_r : EOS5C06      3071      4095  Disabled Mezz 10
atnr_r : EOS5C02      4087      4095  Disabled Mezz  3
atnr_r : EOS5C08      4031      4095  Disabled Mezz  6
atnr_r : ESL1A13      5775     245791  Disabled Mezz  4
atnr_r : EES1C16      4031      4095  Disabled Mezz  6
atnr_r : Disabled Mezzanine cards listed, ALL OK
```

EO chambers disappeared after
the commissioning

```
listDisabledMezz.py: Querying (ATONR) for a list of disabled Mezzanine cards.
| INFO Sending summary e-mails to: h.cheng@cern.ch
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atnr_r : BIS2A08      1015      1023  Disabled Mezz  3
atnr_r : BIS2A14      959       1023  Disabled Mezz  6
atnr_r : BIS3C04      1021      1023  Disabled Mezz  1
atnr_r : BIS4C14      1015      1023  Disabled Mezz  3
atnr_r : BIS1C16      2047      4095  Disabled Mezz 11
atnr_r : BIS1C02      4091      4095  Disabled Mezz  2
atnr_r : BMS1A08     16255     16383  Disabled Mezz  7
atnr_r : EIL1C05      4091      4095  Disabled Mezz  2
atnr_r : EIS1A14     16127     16383  Disabled Mezz  8
atnr_r : EMS2A08     65527     65535  Disabled Mezz  3
atnr_r : EMS2C12     62463     65535  Disabled Mezz 10 11
atnr_r : ESL1A13     245775     245791  Disabled Mezz  4
atnr_r : EES1C16      4031      4095  Disabled Mezz  6
atnr_r : Disabled Mezzanine cards listed, ALL OK
```

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Tasks done:

Implemented new CANBUS control scheme:

from 12 CANBUS/PC to 16 CANBUS/PC (Reduced PC from 8 to 6)

Added new python management tools

An example to list PC for CANBUS

MDM4

| | |
|-------------|---------|
| El_A_top | Port 1 |
| El_A_bottom | Port 2 |
| EIL4_A | Port 3 |
| EO_A_01-04 | Port 4 |
| EO_A_05-08 | Port 5 |
| EO_A_09-12 | Port 6 |
| EO_A_13-16 | Port 7 |
| Free | Port 8 |
| ----- | |
| EM_A_01-02 | Port 9 |
| EM_A_03-04 | Port 10 |
| EM_A_05-06 | Port 11 |
| EM_A_07-08 | Port 12 |
| EM_A_09-10 | Port 13 |
| EM_A_11-12 | Port 14 |
| EM_A_13-14 | Port 15 |
| EM_A_15-16 | Port 16 |

16-port switch added for the hardware
Into DB? TBD

```
[atint02] /home/hcheng/db/python/trunk/python > python readPCForCANBUS.py %
readPCForCANBUS.py: Reading PC (ATONR and DEVDB11) for a given CANBUS
| INFO Sending summary e-mails to: h.cheng@cern.ch
| INFO with cc to: ['dai1568@gmail.com']
devdb11: PCATLCHARIOT.cern.ch      1      CHARIOT
devdb11: PCATLMDTMDM1.cern.ch     1      BI_A01-02
devdb11: PCATLMDTMDM1.cern.ch    10     BI_C03-04
devdb11: PCATLMDTMDM1.cern.ch    11     BI_C05-06
devdb11: PCATLMDTMDM1.cern.ch    12     BI_C07-08
```

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Tasks done:

Installed new elevator

chambers BOE3A13,
BOE3C13, BME4A13 and
BME4C13 to both ATONR
and DEVDB11

MDM parameters
for BOE chambers

```
[atint02] /home/hcheng/db/python/trunk > ./bin/check_chamber_mdm BOE3A13
/net/s3_data_home/hcheng/db/python/trunk/scripts/.checkChamberMDM.py: Che
| INFO Sending summary e-mails to: h.cheng@cern.ch
| INFO with cc to: ['dai1568@gmail.com']
devdb11 : BOE3A13 B663 node 23
devdb11 : BOE3A13 B663 type b
devdb11 : BOE3A13 B663 mask_tsen 262143
devdb11 : BOE3A13 B663 mask_bsen 0
devdb11 : Chamber BOE3A13 MDM checked, ALL OK
[atint02] /home/hcheng/db/python/trunk > ./bin/check_chamber_mdm BOE3C13
/net/s3_data_home/hcheng/db/python/trunk/scripts/.checkChamberMDM.py: Che
| INFO Sending summary e-mails to: h.cheng@cern.ch
| INFO with cc to: ['dai1568@gmail.com']
devdb11 : BOE3C13 C266 node 10
devdb11 : BOE3C13 C266 type b
devdb11 : BOE3C13 C266 mask_tsen 262143
devdb11 : BOE3C13 C266 mask_bsen 0
devdb11 : Chamber BOE3C13 MDM checked, ALL OK
```

```
[atint02] /home/hcheng/db/python/trunk > ./bin/check_chamber_mdm BME4A13
/net/s3_data_home/hcheng/db/python/trunk/scripts/.checkChamberMDM.py: Ch
| INFO Sending summary e-mails to: h.cheng@cern.ch
| INFO with cc to: ['dai1568@gmail.com']
devdb11 : BME4A13 x013 mask_bsen 0
devdb11 : BME4A13 x013 node 1
devdb11 : BME4A13 x013 type b
devdb11 : BME4A13 x013 mask_tsen 511
^[[A devdb11 : Chamber BME4A13 MDM checked, ALL OK
[atint02] /home/hcheng/db/python/trunk > ./bin/check_chamber_mdm BME4C13
/net/s3_data_home/hcheng/db/python/trunk/scripts/.checkChamberMDM.py: Ch
| INFO Sending summary e-mails to: h.cheng@cern.ch
| INFO with cc to: ['dai1568@gmail.com']
devdb11 : BME4C13 x015 mask_bsen 0
devdb11 : BME4C13 x015 node 1
devdb11 : BME4C13 x015 type b
devdb11 : BME4C13 x015 mask_tsen 511
devdb11 : Chamber BME4C13 MDM checked, ALL OK
```

MDM parameters for
BME chambers

H. Cheng - UM

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Ongoing and Foreseen Tasks

Continue to develop new python management tools to provide new functions, like displaying hardware replacement history

Update document accordingly

Configuration selection from DCS? Introduce more configurations, such as long latency configuration

Management tool development especially to deal with multiple configuration

Tune MDT configuration to minimize MDT integrate gate and threshold for high luminosity

Support new GUI development

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