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CanOpen OPC server

Current status



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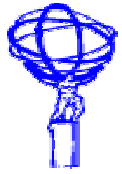
OPC (OLE for process control)

- OPC is a specification for the set of the interfaces and the objects
- OPC bases on the COM/DCOM technology from Microsoft
- PVSS system has an OPC client.



CANopen Type Messages

- NMT (Network Management COB_ID=0)
- SYNC
- NG (Node Guarding)
- Emergency
- Boot-up
- SDO (Service Data Object)
- PDO (Process data object)
- Remote PDO



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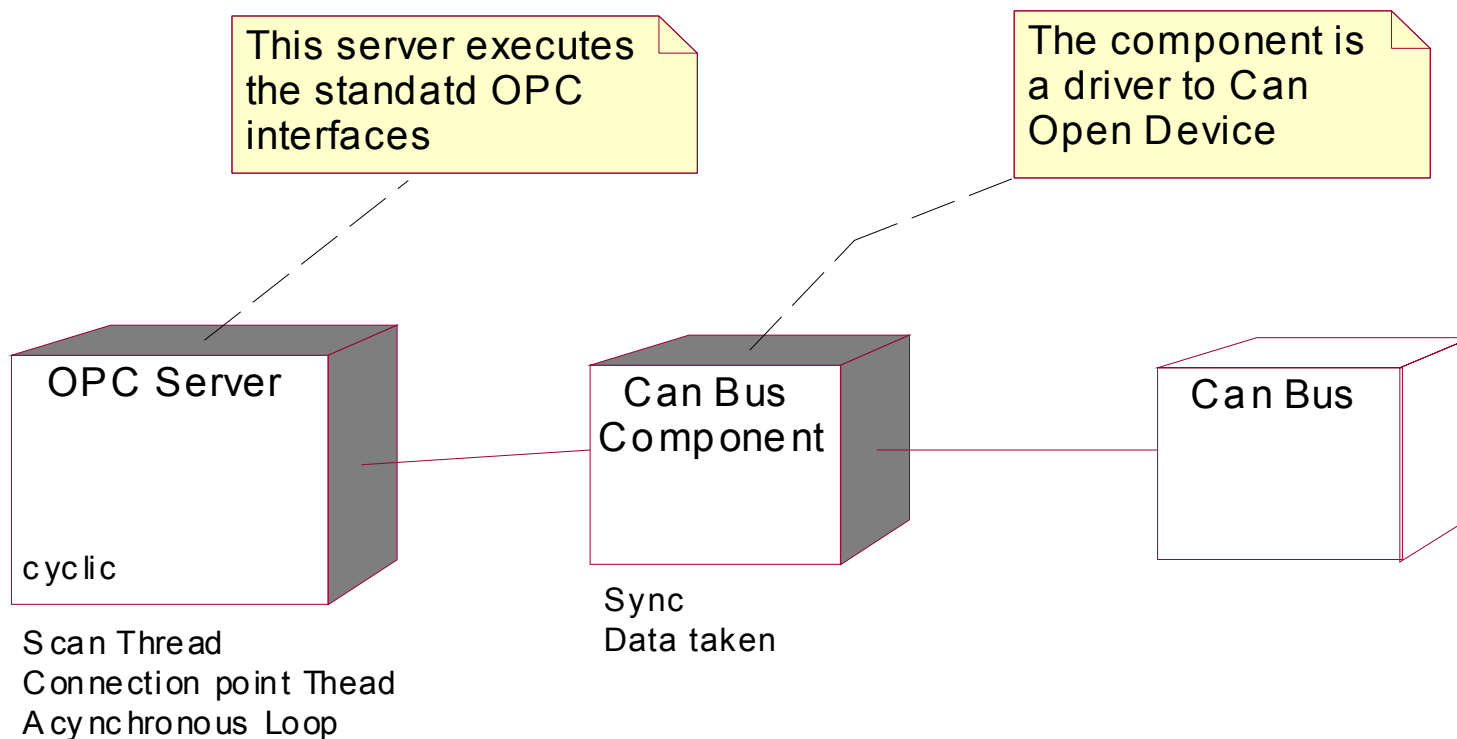
Type of interactions

| Type of interaction | Source | CANOpen message |
|----------------------|-----------------------|-----------------------------|
| | | |
| Synchronous reading | Cache | PDO |
| | Device | SDO, remote PDO |
| | | |
| Asynchronous reading | Cache (not OPC 2.0) | Not recommend, <u>PDO</u> |
| | Device | SDO, remote PDO, <u>PDO</u> |
| | | |
| Subscribe | Cache | PDO |
| | | |
| Synchronous writing | Device | SDO,NMT,PDO |



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Top level view





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Naming convention

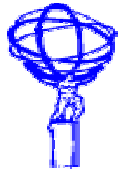
<Name of CAN bus>.<Name of node>.<Name of source>

MUON.ELMB_1.rd1

TRT_COOLING.LMB.ADC_setting

test.SynchInterval

MUON.NMT



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Configuration

[CANBUS]

Test = can0 125000

[DEVICE]

ELMB = Test 2F NG

[SDOItem]

AS = ELMB 1800 2 IO VT_UI1

LMBADCCONF = ELMB 2201 0 IO VT_UI1

[PDO]

1AF = Test ELMB IN 0 16

[PDOItem]

rd = LMB 1AF VT_UI2 ALL 1

Config1 = LMB 1AF VT_UI1 0 4

[Init]

Test.SyncInterval = 20000

Test.NMT = 1

Test.ELMB.AS = 2



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New Feature

- [Init] section in configuration file
- Improvement of error handling
- OPC Foundation Complain Test



What should be done

- Configuration on fly
- Support 302 profile
- Using other computer board