



TANGO
Device
Server

Multi channel Steerer class for the ESRF storage ring User's Guide

MchSteererMixer Class

Revision: MchSteererMixer-Release_1_6 - Author: meyer
Implemented in C++ - CVS repository: ESRF

Introduction:

A multi channel steerer class to mix the old Taco steerer devices handled by Tango wrappers with the new Tango steerer devices on top of the Bilt power supplies.

Class Identification:

- **Contact** : at esrf.fr - meyer
- **Class Family** : Acquisition (Specific Specific)
- **Platform** : Unix Like
- **Bus** : Not Applicable

Class Inheritance:

- Tango::Device_4Impl
 - MchSteererMixer

Properties:

Device Properties		
Property name	Property type	Description
TangoMchSteererDevice	Tango::DEV_STRING	The name of the Tango multi channel steerer device
TacoMchSteererDevice	Tango::DEV_STRING	The name of the Taco multi channel steerer wrapper device.

Device Properties Default Values:

Property Name	Default Values
TangoMchSteererDevice	none
TacoMchSteererDevice	none

There is no Class properties.

States:

States	
Names	Descriptions
ON	All steerers switched on.
OFF	One or more steerers are off.
ALARM	Alarm detected on one or more steerers.
FAULT	Fault detected on one or more steerers.
UNKNOWN	Connection problems with one or more steerers.

Attributes:

Scalar Attributes			
Attribute name	Data Type	R/W Type	Expert
SlowUpdate: When the slow update rate is true, the update rate of the Taco multi channel steerer device is only 10 seconds!	DEV_BOOLEAN	READ_WRITE	No

Spectrum Attributes			
Attribute name	Data Type	X Data Length	Expert
Current	DEV_DOUBLE	256	No
SteererStates	DEV_STATE	256	No
SteererNames	DEV_STRING	256	No

Commands:

More Details on commands....

Device Commands for Operator Level		
Command name	Argument In	Argument Out
Init	DEV_VOID	DEV_VOID
State	DEV_VOID	DEV_STATE
Status	DEV_VOID	CONST_DEV_STRING
On	DEV_VOID	DEV_VOID
Off	DEV_VOID	DEV_VOID
Reset	DEV_VOID	DEV_VOID
SetpointCheck	DEVVAR_DOUBLEARRAY	DEV_SHORT

1 - Init

- Description:** This commands re-initialise a device keeping the same network connection. After an Init command executed on a device, it is not necessary for client to re-connect to the device. This command first calls the device *delete_device()* method and then execute its *init_device()* method. For C++ device server, all the memory allocated in the *nit_device()* method must be freed in the *delete_device()* method.
 The language device desctructor automatically calls the *delete_device()* method.
- Argin:**

DEV_VOID : none.

- **Argout:**
DEV_VOID : none.

- **Command allowed for:**

- Tango::ON
- Tango::OFF
- Tango::ALARM
- Tango::FAULT
- Tango::UNKNOWN

2 - State

- **Description:** This command gets the device state (stored in its *device_state* data member) and returns it to the caller.

- **Argin:**
DEV_VOID : none.

- **Argout:**
DEV_STATE : State Code

- **Command allowed for:**

- Tango::ON
- Tango::OFF
- Tango::ALARM
- Tango::FAULT
- Tango::UNKNOWN

3 - Status

- **Description:** This command gets the device status (stored in its *device_status* data member) and returns it to the caller.

- **Argin:**
DEV_VOID : none.

- **Argout:**
CONST_DEV_STRING : Status description

- **Command allowed for:**

- Tango::ON
- Tango::OFF
- Tango::ALARM
- Tango::FAULT

- Tango::UNKNOWN

4 - On

- **Description:** Switch all steerers on.
- **Argin:**
DEV_VOID :
- **Argout:**
DEV_VOID :
- **Command allowed for:**
 - Tango::OFF
 - Tango::ALARM

5 - Off

- **Description:** Switch all steerers off.
- **Argin:**
DEV_VOID :
- **Argout:**
DEV_VOID :
- **Command allowed for:**
 - Tango::ON
 - Tango::OFF
 - Tango::ALARM
 - Tango::FAULT
 - Tango::UNKNOWN

6 - Reset

- **Description:** Reset all steerers.
- **Argin:**
DEV_VOID :
- **Argout:**
DEV_VOID :
- **Command allowed for:**
 - Tango::OFF

- Tango::ALARM
- Tango::FAULT
- Tango::UNKNOWN

7 - SetpointCheck

- **Description:** Check the requested setpoint values for all steerers, against the steerer current limits. Returns 0 when inside the limits for all steerers and otherwise -1.
- **Argin:**
DEVVAR_DOUBLEARRAY :
- **Argout:**
DEV_SHORT :
- **Command allowed for:**
 - Tango::ON
 - Tango::OFF
 - Tango::ALARM

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