Server side GOOSE subscription

Implementing GOOSE subscription in a server type IEC61850 object

Application Note

**For PIS-10
v1.36.08 and above**

Introduction

This Application note briefly covers how to implement a server type IEC61850 object with included GOOSE Subscription.

New Option Flags

There have been 2 new option flags added for use with GOOSE subscription:

IEC61850_OPTION_SERVER_SUBSCRIBE_GOOSE – enables the GOOSE subscriber in an IEC61850_SERVER type object

IEC61850_OPTION_ALLOW_DUPLICATE_DAID – will allow duplicate DAID's to be used in the CID file – may cause issues when updating values.

The option to allow duplicate DAID's should not currently be used if there is any intent to call update on the DAID's that have been duplicated as this may result in unexpected behaviour.

Setting Up the Server

To setup a server object that subscribes, you will need to implement an update callback function, and set the option field to include the IEC61850_OPTION_SERVER_SUBSCRIBE_GOOSE option.

The resulting parameter setup for the create function call should look similar to the code below:

```
memset(&tServerParam, 0, sizeof(struct IEC61850_Parameters));
tServerParam.ClientServerFlag = IEC61850_SERVER;
tServerParam.ptReadCallback   = myIEC61850_ReadCallback;
tServerParam.ptWriteCallback  = myIEC61850_WriteCallback;
tServerParam.ptUpdateCallback  = myIEC61850_UpdateCallback
tServerParam.ptCancelCallback   = NULL;
tServerParam.ptOperateCallback = myIEC61850_OperateCallback;
tServerParam.ptSelectCallback  = NULL;
tServerParam.uiOptions = IEC61850_OPTION_SERVER_SUBSCRIBE_GOOSE;
tServerParam.uiMaxAssociations = 0;
```

Defining subscription in the CID file

There are 2 ways to define GOOSE subscription in the CID file:

You can set up a subscription in a second IED in the same manner that you would for a client device, in that you have a fully defined second IED with GOOSE datasets and DAID's for the points you wish to report on.

Alternatively you can have the GOOSE dataset defined in the second IED, but have all the subscribing points mapped to the local IED using the Inputs section in the manner defined in the example file attached.

The first IED in the CID file *MUST* be a valid server type IED. This will be used to model the local hardware, any additional IED's will be presumed to be subscription IED's for GOOSE only.

If you need assistance

All technical questions must be sent to our support email address: **support@systemcorp.com.au**
Upon receiving your question(s), it will get logged in our support system and you will receive and acknowledgement which will include a tracking number(s). Please refer to your tracking number(s) when you are following up about enquiry.