

Typical Programming Sequence of CERTI

by Chen Feng

Receiver Side

Preparation

1. Federation Management
 - RTIambassador.**createFederationExecution**
 - RTIambassador.**joinFederationExecution**
2. Declaration Management
 - RTIambassador.**getObjectClassHandle**
 - RTIambassador.**getAttributeHandle**
 - RTIambassador.**subscribeObjectClassAttributes**
3. Object Management

```
while (!myFedAmb.discovRT) { rtiAmb.tick(); /*.....*/ } //tick loop
```

- NullFederateAmbassador.**discoverObjectInstance**
 - function need override
 - function will be invoked during tick loop automatically by libRTI, no explicit invoking code needed for CERTI lib user

Simulation/Receive Loop

```
while ( true ) { // Receive loop, receive once per iteration
    while (!myFedAmb.newRT) { rtiAmb.tick(); } //tick loop, receiving
    /*.....*/
}
```

- NullFederateAmbassador.**reflectAttributeValues**
 - function need override
 - function will be invoked during tick loop automatically by libRTI, no explicit invoking code needed for CERTI lib user

Clean Up

1. Declaration Management
 - RTIambassador.**unsubscribeObjectClass**
2. Federation Management
 - RTIambassador.**resignFederationExecution**
 - RTIambassador.**destroyFederationExecution**

Sender Side

Preparation

1. Federation Management
 - RTIambassador.createFederationExecution
 - RTIambassador.joinFederationExecution
2. Declaration Management
 - RTIambassador.getObjectClassHandle
 - RTIambassador.getAttributeHandle
 - RTIambassador.**publishObjectClass**
3. Object Management
 - RTIambassador.**registerObjectInstance**

Simulation/Send Loop

```
while (true) { //Send loop, send once per iteration
    /* calculate attribute values that are to be changed.....*/
    rtiAmb.updateAttributeValues //sending
    /*.....*/
}
```

- RTIambassador.**updateAttributeValues**

Clean Up

1. Declaration Management
 - RTIambassador.**unpublishObjectClass**
2. Federation Management
 - RTIambassador.resignFederationExecution
 - RTIambassador.destroyFederationExecution