

AddressBook

```
Private:
-TaskMap: TaskMap_t
-TaskCount: int
-Sderived: std::string

Public:
+AddressBook(std::string d): void
+~AddressBook(): void

+GetTaskCount(void): unsigned

+AddTask(std::string &TaskName, TaskData_t &Data): unsigned
+ListTask(std::vector<std::string> &Tasks): unsigned
+GetTask(std::string &TaskName, TaskData_t &Task): unsigned
+DelTask(std::string &TaskName): unsigned
+TaskState(std::string &TaskName): TaskState_t
+TaskState(std::string &TaskName, TaskState_t State): unsigned
+TaskExecPath(std::string &TaskName): std::string
+TaskExecPath(std::string &TaskName, std::string &NewPath): unsigned
+TaskValid(std::string &TaskName): bool
+TaskMapValid(std::string &TaskName): bool
+TaskLinkValid(std::string &TaskName): bool
+RebuildTask(std::string &TaskName): unsigned
+BuildMaps(std::string &TaskName): unsigned
+BuildLink(std::string &TaskName): unsigned

+AddDevice(std::string &TaskName, Record_t &Device, bool Validate = true): unsigned
+UpdateDevice(std::string &TaskName, DeviceData_t &Data): unsigned

+FindDevice(std::string &TaskName, std::string &Name, const Record_t* &DRec): unsigned
+FindDevice(std::string &TaskName, SymAddr_t Address, const Record_t* &DRec): unsigned
+FindBySuper(std::string &TaskName, SymAddr_t Supervisor, const RecordVect_t* &Records): unsigned
+FindByType(std::string &TaskName, std::string Type, const RecordVect_t* &Records): unsigned
+FindByAttribute(std::string &TaskName, std::string Attribute, const RecordVect_t* &Records): unsigned

+GetDevices(std::string &TaskName, const std::vector<Record_t>* &Records): unsigned
+GetExternals(std::string &TaskName, const std::vector<Record_t>* &Records): unsigned
+GetSupervisors(std::string &TaskName, const std::vector<Record_t>* &Records): unsigned
+GetExtCon(std::string &TaskName, const RecordVect_t* &Records): unsigned

+GetDeviceCount(std::string &TaskName): long
+GetLoadedDeviceCount(std::string &TaskName): long
+GetExternalCount(std::string &TaskName): long
+GetLoadedExternalCount(std::string &TaskName): long
+GetSupervisorCount(std::string &TaskName): int

+IntegCheck(void): unsigned
+IntegCheck(std::vector<unsigned> &TaskIntegs): unsigned
+IntegTask(std::string &TaskName, bool Verbose = false, FILE * = stdout): unsigned
+IntegTask(const TaskRecord_t *TRec, bool Verbose = false, FILE * = stdout): unsigned

+Dump(std::string &Name): void
+Dump(FILE * = stdout, std::string Name = ""): void

Private:
+FindTask(std::string &TaskName): TaskRecord_t*
+ClearMap(TaskRecord_t *TRec): unsigned
+ValidateDevice(TaskRecord_t *TRec, Record_t &DevRec): unsigned
+ValidateTask(TaskData_t &Data): unsigned
+CheckVector(TaskRecord_t *TRec, std::vector<Record_t> &Vect): unsigned
+LinkDevice(TaskRecord_t *TRec, Record_t *DRec): unsigned
+MapDevice(TaskRecord_t *TRec, Record_t *DRec): unsigned
+ClearLink(TaskRecord_t *TRec): unsigned
```

TaskRecord_t

```
-Name: std::string
-Path: std::string
-XML: std::string
-ExecPath: std::string
-DevCntMax: unsigned long
-ExtCntMax: unsigned long
-DevCnt: unsigned long
-SupCnt: unsigned long
-ExtCnt: unsigned long

-State: TaskState_t

-Devices: std::vector<Record_t>
-Externals: std::vector<Record_t>
-Supervisors: std::vector<Record_t>

-MsgTypes: std::vector<MsgTypePair>
-DevTypes: std::vector<DevTypePair>
-AttrTypes: std::vector<AttrTypePair>

-ExtCon: RecordVect_t

-MsgTypeMap: IdxMap_t
-DevTypeMap: IdxMap_t
-AttrTypeMap: IdxMap_t

-SupMap: SupMap_t
-AddrMap: AddrMap_t
-NameMap: NameMap_t

-TaskValid: bool
-MapValid: bool
-LinkValid: bool

+TaskRecord_t(): void
+TaskRecord_t(std::string &N, std::string &P, std::string &X, std::string &E, TaskState_t S, unsigned long DC, unsigned long EC): void
```

DevTypeRecord_t

```
-Name: std::string
-InMsgs: std::vector<MsgIdx>
-OuMsgs: std::vector<OuMsgs>

+DevTypeRecord_t(): void
+DevTypeRecord_t(std::string N): void
```

Record_t

```
-Name: std::string
-Address: SymAddr_t
union
{
  -Supervisor: SymAddr_t
  -Rank: unsigned long
}
-DeviceType: DTypeIdx
-Attribute: AttrIdx
-RecordType: RecordType_t

+Record_t()
```

TaskData_t

```
-Name: std::string
-Path: std::string
-XML: std::string
-ExecutablePath: std::string
-State: TaskState_t
-DeviceCount: unsigned long
-DeviceCountLd: unsigned long
-ExternalCount: unsigned long
-ExternalCounLdt: unsigned long
-SupervisorCount: unsigned long
-DevTypes: std::vector<DevTypeRecord_t>
-MsgTypes: std::vector<std::string>
-AttrTypes: std::vector<std::string>

+TaskData_t(): void
+TaskData_t(std::string &N, std::string &P, std::string &X, std::string &E, TaskState_t S, unsigned long DC, unsigned long EC): void
```

DeviceData_t

```
-Address: SymAddr_t
-Supervisor: SymAddr_t
-Name: std::string
```