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Identifier Sensor : 50.35

LONMARK® Functional Profile: Identifier Sensor

SFPTidentifierSensor

Overview

This document describes the Functional Profile of a LonMark Identifier Sensor Object.

A LonMark Identifier Sensor can be associated with a magnetic card reader (magcard). However, the Identifier Sensor can be any kind of device used to identify a person who wants to access a controlled point/area. Therefore, the Identifier Sensor can also be an infrared or a proximity card reader; or a biometric identifier device, etc.

The internal technology is not relevant for interoperability purposes with other nodes. The existing SNVT_magcard format is used (ISO 7811 standard for card stripes). Note that there exist a large number of technologies used for identification cards and other devices. Sometimes the technologies use standard protocols—sometimes proprietary. That is why it is not possible to propose thousands of SNVTs for identification purposes. For the interoperability with other systems in the building, the basic technology used is not relevant, and depends on each manufacturer.

Therefore, the SNVT_magcard in this profile can represent an image of the true internal code of the badge; the advantage is that the SNVT exists already. A conversion-algorithm for other kinds of internal IDs of badges (infrared code bar, Wiegand, chip cards, index in a table, etc) should be used by each manufacturer as needed.

Use of the standard Node object is implied.

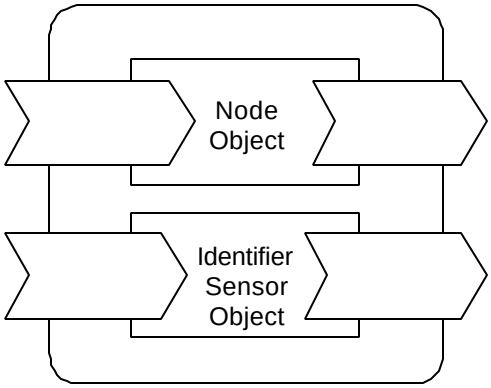

Figure 1 Node Concept

Example Usage

Here is an example of how the Identifier Sensor Profile would be used in a system of other nodes/Objects.

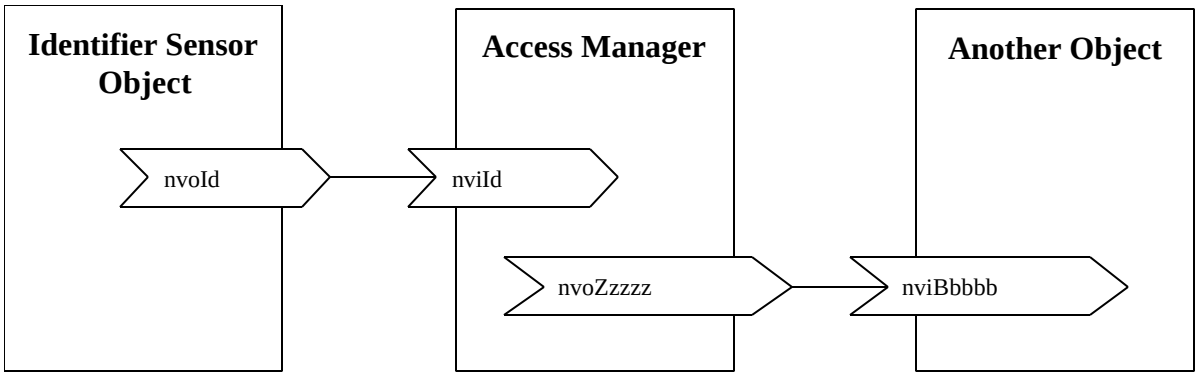

Figure 2 Example Usage of the Object

Object Details

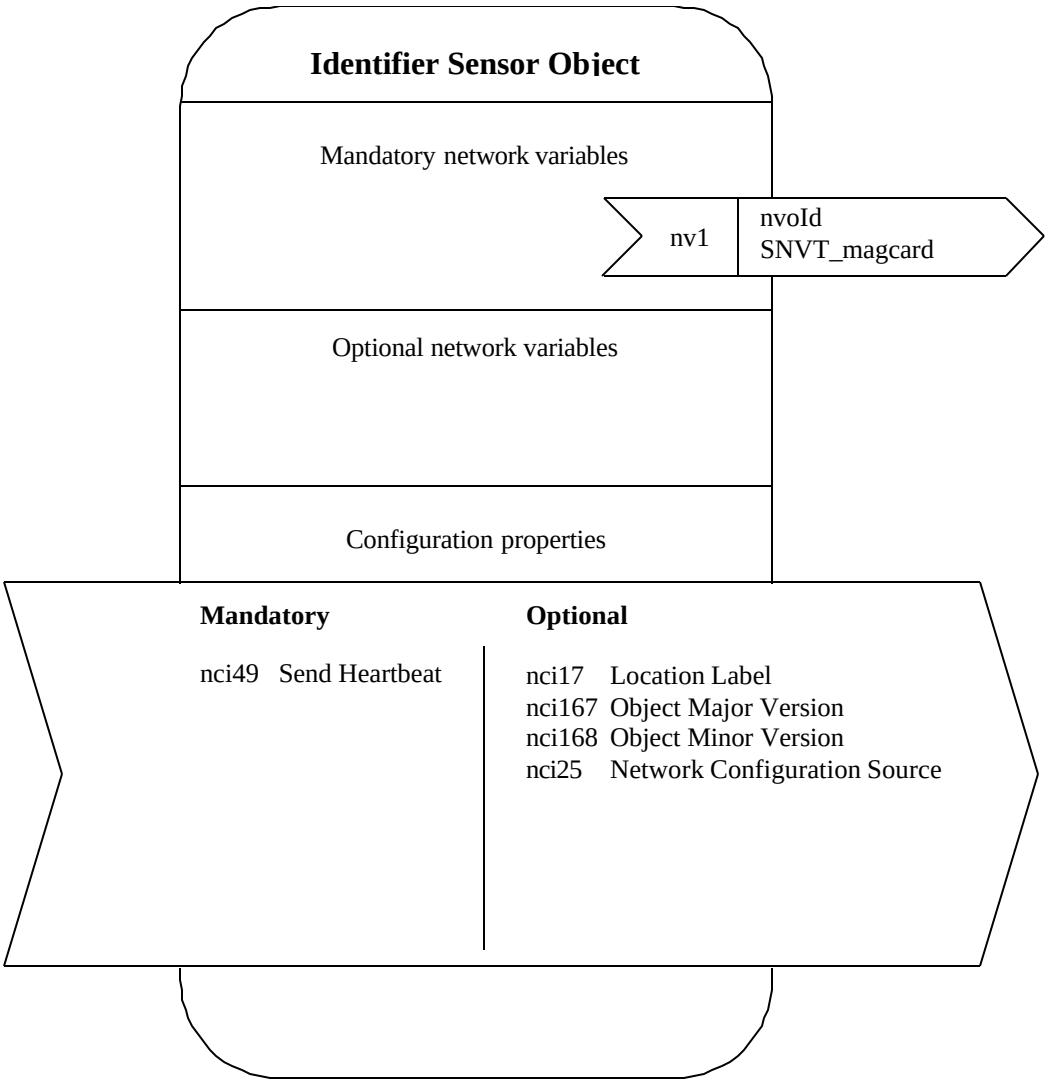

Figure 3 Object Details

Table 1 SNVT Details

NV # (M/O)*	Variable Name	SNVT Name	SNVT Index	Description
1 (M)	nvoId	SNVT_magcard	86	Identifier

* M = mandatory, O = optional

Table 2 SCPT Details

Man. Opt. *	SCPT Name NV Name Type or SNVT	SCPT Index	Associated NVs **	Description
Man	SCPTmaxSendTime nciMaxSendTime SNVT_time_sec (107)	49	nv1 (M)	Maximum period of time that expires before the Object will automatically update NVs
Opt	SCPTlocation nciLocation SNVT_str_asc (36)	17	Entire Object	Used to provide physical location of the node
Opt	SCPTobjMajVer nciObjMajVer unsigned short	167	Entire Object	Defines the major version number of the Object
Opt	SCPTobjMinVer nciObjMinVer unsigned short	168	Entire Object	Defines the minor version number of the Object
Opt	SCPTnwrkCnfg nciNetworkConfig SNVT_config_src (69)	25	Entire Object	Defines the Configuration Source of the node

* "Man" = mandatory, "Opt" = optional.
It should be Mandatory for CPs that are Mandatory for an NV that is also Mandatory. This is also valuable for CPs that apply to the Entire Object.

** List of NVs to which this configuration property applies.
An "(M)" means that the CP is Mandatory if the NV (to which it applies) is implemented. An "(O)" means that the CP is Optional if the NV (to which it applies) is implemented.

Mandatory Network Variables

Some Input

```
network output sd_string("@p|1")
bind_info(ackd)SNVT_magcard nvoId;
```

This network variable transmits the identifier number to an external node (for example: an Access Manager Node).

Valid Range

SNVT_magcard

Default Value

The default value is 0 (no identifier). This value will be adopted at power-up and if no identification device has been detected.

Configuration Considerations

The transmission of this NV is regulated by the time specified in the nciMaxSendTime CP, unless the nciMaxSendTime CP has a value of 0.0, or other invalid value; in which case, the NV is not regulated by the nciMaxSendTime value.

When Transmitted

The variable is transmitted immediately when a new Identifier number is acquired.

The current value is regularly transmitted at the interval defined by the configuration variable nciMaxSendTime.

Default Service Type

The default service type is acknowledged.

Configuration Properties

Send Heartbeat (Mandatory)

```
network input config sd_string("&2,i,0\x80,49")
SNVT_time_sec nciMaxSendTime;
```

This input configuration property sets the maximum period of time that can expire before the Object will automatically update the following network variables:

nv1 – nvoId (Mandatory)

i is the index of the NV in relation to its declaration order within the node, when implemented.

Valid Range

The valid range is 1.0 to 3600.0 seconds.

Values outside this range are invalid and will disable the automatic update mechanism. A value of zero (0) will be used for the internal timer in cases where configured values are above 3600.0 seconds.

Default Value

The default value is 0.0 (no automatic update).

Configuration Requirements/Restrictions

This CP has no modification restrictions (no_restrictions). It can be modified at any time.

SCPT Reference

SCPTmaxSendTime (49)

Location Label (Optional)

```
network input config sd_string("&1,p,0\x80,17")
SNVT_str_asc nciLocation;
```

This configuration property can be used to provide the location of the Object/node, where ***p*** is the Object index. The above code declaration is for providing the location of the Object. If it is preferred, the location of the node can be represented with the following code declaration:

```
network input config sd_string("&0,,0\x80,17")
SNVT_str_asc nciLocation;
```

Valid Range

Any NULL-terminated ASCII string up to 31 bytes of total length (including NULL). The string must be truncated if the length does not allow the 31st character to be the NULL (0x00).

Default Value

The default value is an ASCII string containing 31 NULLs (0x00).

Configuration Requirements/Restrictions

This CP has no modification restrictions (no_restrictions). It can be modified at any time.

SCPT Reference

SCPTlocation (17)

Object Major Version (Optional)

```
network input config sd_string("&1,p,0\x84,167")
unsigned short nciObjMajVer;
```

This configuration property can be used to provide the major version number of the Object when implemented on a device.

Valid Range

Any integer number from 1 to 256. Only 1-byte of information is accepted.

Default Value

The default value is one (1).

Configuration Requirements/Restrictions

This CP is a constant (const_flg). It is not to be modified except that it is allowable to modify the value in a download of new code to the device.

SCPT Reference

SCPTobjMajVer (167)

Object Minor Version (Optional)

```
network input config sd_string("&1,p,0\x84,168")
unsigned short nciObjMinVer;
```

This configuration property can be used to provide the minor version number of the Object when implemented on a device.

Valid Range

Any integer number from 0 to 256. Only 1-byte of information is accepted.

Default Value

The default value is zero (0).

Configuration Requirements/Restrictions

This CP is a constant (const_flg). It is not to be modified except that it is allowable to modify the value in a download of new code to the device.

SCPT Reference

SCPTobjMinVer (168)

Network Configuration Source (Optional)

```
network input config sd_string("&1,p,0\x88,25")
SNVT_config_src nciNetworkConfig;
```

All nodes that support self-installation must provide this CP to allow a network tool to also install the node.

Valid Range

SNVT_config_src

Default Value

For a self-installed node, the default value must be CFG_LOCAL.

Configuration Requirements/Restrictions

This CP must have a “reset after modifying” flag (reset_flg).

SCPT Reference

SCPTnwrkCnfg (25)

Key for Unresolved References

i is the index of the NV in relation to its declaration order within the node, when implemented.

p is this Object's index relative to the node sd_string declaration, when implemented.

Data Transfer

None specified.

Power-up State

There is no immediate network action on Power-up State.

Boundary and Error Conditions

None specified.

Additional Considerations

None specified.