Johnson Controls

Object Library

Anti-Loitering Object

Version 1.0, December 2008
24-10239-57 Revision B

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ANTI-LOITERING OBJECT

INTRODUCTION

The Anti-Loitering object tracks the date and time of transition of up to 1000 different entities into a specific area.

The Anti-Loitering object is informed about any transitions into or out of the area by the Access Control objects.

The use of the anti-loitering feature is to monitor the time individual entities spend in an anti-loitering area. If an entity exceeds the area's anti-loitering time, an anti-loitering notification is generated.

An anti-loitering area may be accessible through several portals, and may span controllers. Also, a single controller may hold several anti-loitering areas.

The following diagram shows the major blocks the Anti-Loitering object interacts with.

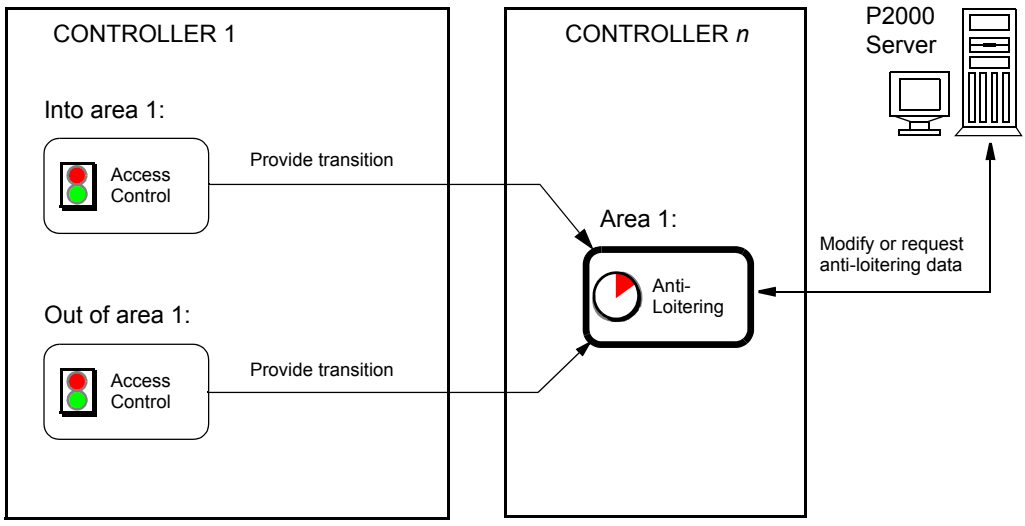

Figure 1: Anti-Loitering Object

ATTRIBUTES

This section describes visible attributes specific to the Anti-Loitering object. This object also contains:

- Attributes common to all objects in the P2000 Security Management System. For details, see the *General Object Information* document.
- Internal attributes, which are invisible to the user and cannot be modified directly, but may be referred to throughout this document.

Table 1: Anti-Loitering Object Attributes

Attribute Name	Attribute Number	Data Type	Notes	Initial Value	Values/Options /Range
Anti-Loitering Time	3704	Unsigned32	WCA	300	In seconds 10 - 86400 (1 day)
Event State	36	Enumeration	F	-	0 = Normal 1 = Fault 2 = Off-Normal
Notification Class	17	Unsigned32	WCA	1	-
Notify Priority	3644	Unsigned8	WCA	-	-
Notify Type	72	Enumeration	-	-	Always Event (Refer to *BACnet Standard 12.19.20*)
Present Value	85	Unsigned16	F	-	In entities
Release Suppress	3709	Boolean	W	-	-
Suppress	2933	Boolean	WZV	-	-
Suppress Priority Array	4698	BACnetARRAY [16] of Boolean	-	-	-
Transition Notification	4297	Boolean	WCA	-	-

A - Archive, C - Configurable, F - PMI refreshing, W - Writable, V - Initial value redirected, Z - Priority allowed on write

Anti-Loitering Time – Specifies the time that entities are allowed to remain in the area before an anti-loitering notification is generated.

Event State – Indicates the principal state of the Anti-Loitering object. The options are:

- Normal - The number of monitored entities is between 0 and 999.
- Off-Normal - The number of monitored entities has reached 1000, so that no more entities are monitored.

Notification Class – Specifies which Security Notification Class object should be used by the Anti-Loitering object to send its notifications.

Notify Priority – Specifies the Priority parameter of all notifications generated by the Anti-Loitering object.

Notify Type – Indicates that all notifications generated by the Anti-Loitering object are of type "Event."

Present Value – Indicates the current number of entities that are monitored by the Anti-Loitering object. The maximum value is 1000.

Release Suppress – When written to "True," priorities 16 through 3 of the *Suppress* attribute are released. The value of the *Release Suppress* attribute always remains "False."

Suppress – Specifies whether the generation of notifications shall be suppressed.

Suppress Priority Array - Indicates the current values in all 16 priority slots of the *Suppress* attribute.

Transition Notification – Specifies whether the Anti-Loitering object shall generate a notification every time an entity transitions into or out of the area, or when the Anti-Loitering object first starts up. The Transition Notification attribute should only be set to "True" when an application in the P2000 system is set up to make use of this notification.

COMMANDS

This section describes commands that can be issued to this object from SCT.

Table 2: Anti-Loitering Object Commands

Command Name	Description
`Suppress`	Writes the *Suppress* attribute depending on the parameter. See the description below for details. This command accepts priority.
`Release All Suppress`	Writes the *Release Suppress* attribute to "True."
`Change Attribute`	See the description below.

The `Suppress` command writes the *Suppress* attribute based on the command parameter:

- Release - Releases the *Suppress* attribute at the specified priority.
- Suppress - Writes the *Suppress* attribute to "True" at the specified priority.
- Unsuppress - Writes the *Suppress* attribute to "False" at the specified priority.

Table 3: Suppress Command Parameters

Parameter Name	Data Type	Parameter Type Dependent Properties
Action	Enumeration	0 = Release 1 = Suppress 2 = Unsuppress

The `Change Attribute` is a generic command available for writing the attributes of an object. It is mainly used to change an attribute value from those features which work only with commands. For the sole purpose of giving a generic example, there is no command defined to change the *Notify Priority* attribute of an object. `Change Attribute` could, therefore, be used to change the *Notify Priority* attribute through an interlock or multiple command, both features which require commands to be entered. The `Change Attribute` command requires two parameters:

- Attribute - This parameter specifies which attribute of the object is to be written. Only writable attributes may be changed by this command.
- New value - This parameter specifies new value to be written and must be the same data type as the attribute. The only data types allowed in this command are those allowed as command parameters. A command priority can be specified if the attribute to be changed is a prioritized attribute.

VIEWS

This section illustrates how the System Configuration Tool displays properties of the Anti-Loitering object. This screen also allows you to set the values of configurable attributes. For more information refer to the *System Configuration Tool (SCT)* manual.

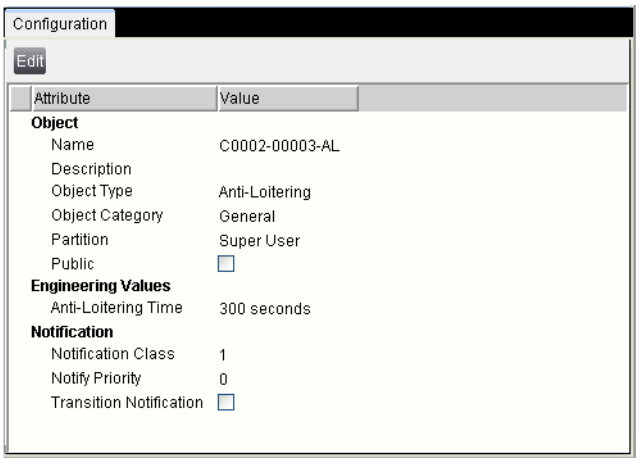

Figure 2: Configuration View

DESCRIPTION OF OPERATION

An Access Control object informs the Anti-Loitering object about an entity transitioning into the area by writing the entity's ID to the *Set Entity ID In* attribute. The Anti-Loitering object checks if this entity is currently monitored. If yes, no action is taken. If not, the entity ID is added to the list of monitored entities, along with the current time and date.

An Access Control object informs the Anti-Loitering object about an entity transitioning out of the area, by writing the entity's ID to the *Set Entity ID Out* attribute. The Anti-Loitering object checks if this entity is currently monitored. If not, no action is taken. If yes, the entity ID is removed from the list of monitored entities.

If an entity is in the list of monitored entities, and is has been there for a longer time than specified in the *Anti-Loitering Time* attribute, an Anti-Loitering notification is generated, and the entity is removed from the list of monitored entities. This can also happen when the value of the *Anti-Loitering Time* attribute is reduced.

When the *Suppress* attribute is set to "True," the generation of notifications is skipped, but all other functionality is as described above.