
Version 1.0
August 2001
Modem Controller : 5091



LONMARK[®] Functional Profile: Modem Controller

**NOTE: When time permits, this Profile
will be modified to have the proper format.**

Overview

This document describes the functional profile of the Modem Controller Object. This object is used to control the functions of a data modem. These functions include configuration, connection control, and connection status. This object may be applied to many types of communication devices, including analog data modems and ISDN terminal adaptors.

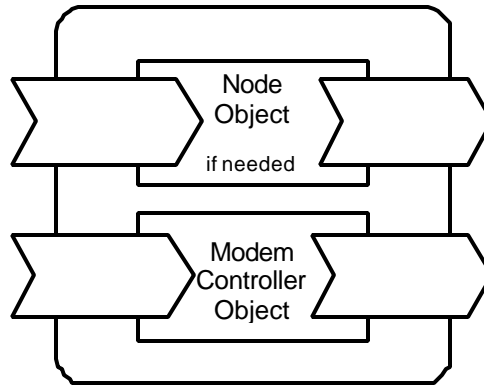


Figure 1 Node Concept

Example Usage

The Modem Controller object is typically used in conjunction with the Telephone Directory (50.92) object and some other event-generating object, which causes connection control information to be given to the modem controller object. This information initiates modem dialing so that, once a connection is established, transfer of data can be accomplished via the modem via a separate mechanism.

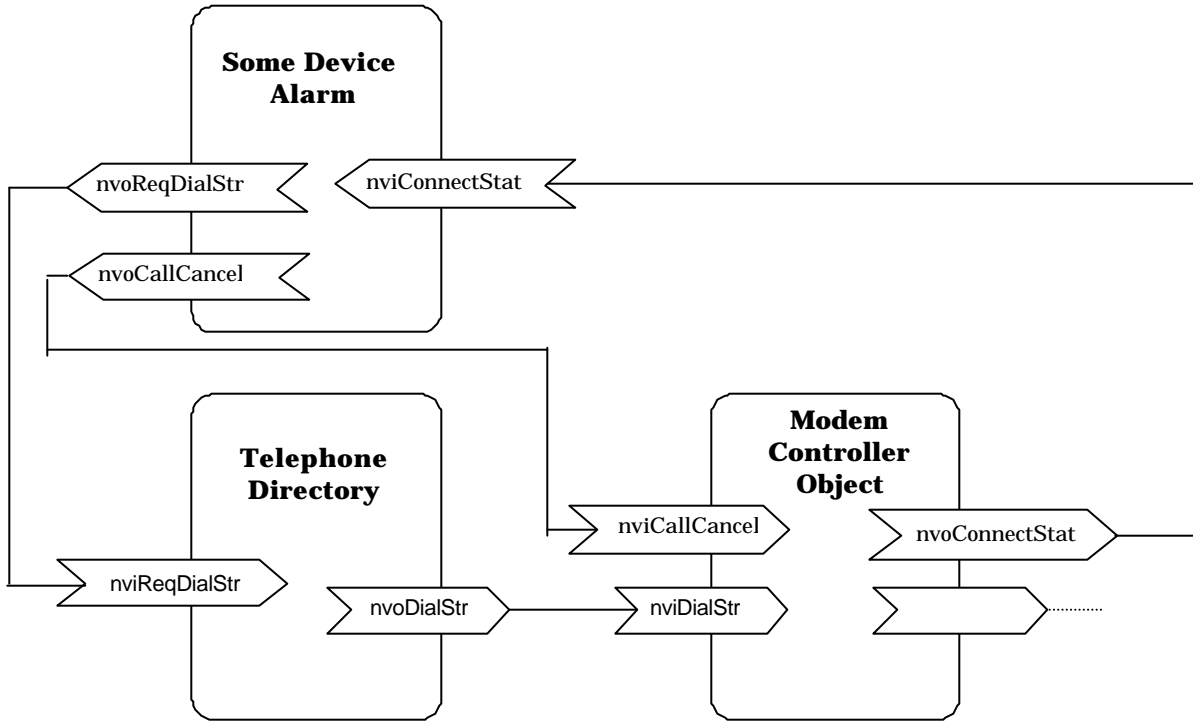


Figure 2 Example Usage of the Object

Object Details

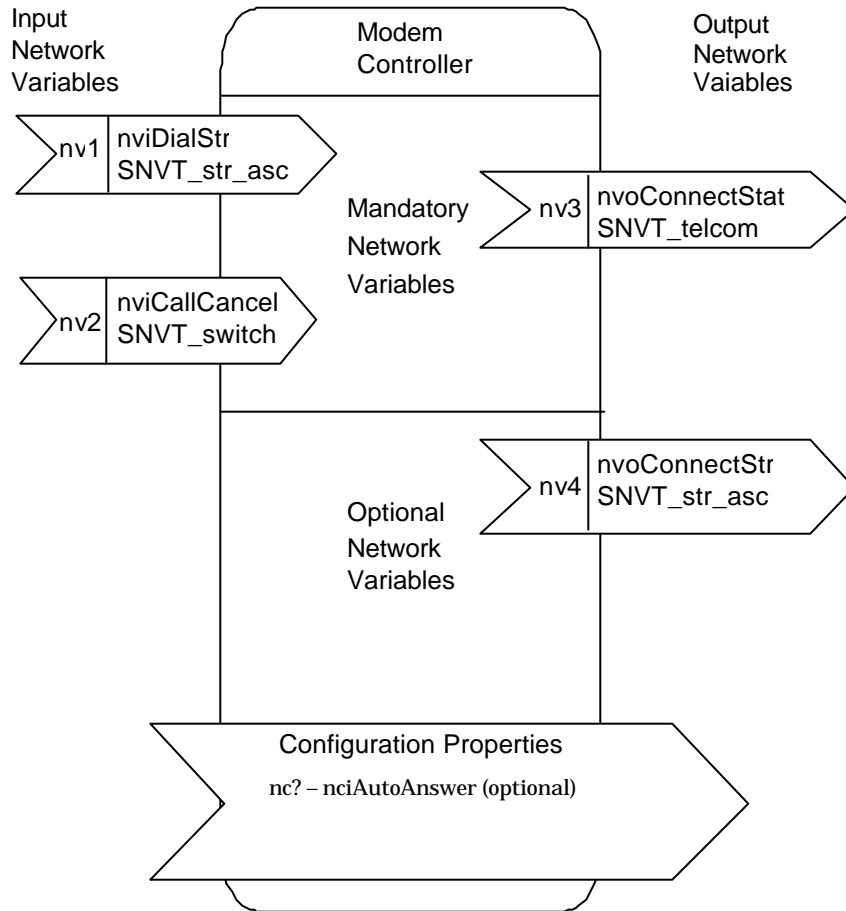


Figure 3 Object Details

Table 1 SNVT Details

NV # (M/O)*	Name	In/Out	SNVT Type (SNVT Index)	Class	Description
1 (M)	nviDialStr	In	SNVT_str_asc (36)	I/O	Modem Dial String
2 (M)	nviCallCancel	In	SNVT_switch (95)	I/O	Disconnect call
3 (M)	nvoConnectStat	Out	SNVT_telcom (38)	I/O	Connection status
4 (O)	nvoConnectStr	Out	SNVT_str_asc (36)	I/O	Connection string
5(O)	nciAutoAnswer	In	SNVT_switch (95)	config	Must be enabled for modem to automatically answer an incoming call

* M = mandatory, O = optional

Table 2 SCPT Details

SCPT Index (M/O)*	Name	Association **	Description
??(O)	SCPT_auto_answer	NV5	If active, allows the modem to automatically answer an incoming call

* M = mandatory, O = optional

Mandatory Network Variables

Dial String Input

```
network input SNVT_str_asc nviDialStr;
```

A *non-null* string sent to this input network variable while the current modem connection state is *idle* causes the modem to go off hook, wait for a dial tone, then perform a dialing sequence using the provided character string.

A *non-null* string sent to this input network variable while the current modem connection state is *other than idle* has no effect on the modem connection state or action.

A *null* string sent to this input regardless of current modem connection state has no effect on the modem connection state or action.

Any string sent to this input while *nviCallCancel* is *ON* is ignored. Subsequent transition of *nviCallCancel* to *OFF* will *not* cause a dial to commence based on this previously ignored *nviDialStr*.

Valid Range

A NULL terminated ASCII string up to 31 bytes in length.

MANDATORY support for the following ASCII characters is required:

Digits 0-9 plus * and # – telephone dialing digits.

OPTIONAL support for the following ASCII characters is specified (if the corresponding function is to be implemented, it MUST be done so using the following specified character):

Letter T (upper or lower case, first character in string only) –
Tone dial.

Letter P (upper or lower case, first character in string only) –
Pulse dial.

Comma (,) – pause dialing for 2 seconds for each comma
encountered.

Letter W (upper or lower case) – Pause dialing until a dial tone
is detected.

Exclamation Point (!) – Hookflash, go onhook for 0.5 seconds,
then back offhook.

Support of any other characters/functions in the dial string are considered optional. If an optional character is encountered in the string which is not supported by a particular implementation (including but not limited to punctuation such as space, dash, left and right parentheses), that character must be ignored, rather than causing an error condition.

Default Value

N/A

Call Cancel Input

network input SNVT_switch nviCallCancel;

An input value of *ON* to this network variable causes the modem to immediately go onhook, terminating the connection attempt in progress or breaking the existing connection to the distant modem. The modem returns to the idle state.

Any string sent to nviDialStr while nviCallCancel is *ON* is ignored. Subsequent transition of nviCallCancel to *OFF* will *not* cause a dial to commence based on this previously ignored nviDialStr.

Valid Range

OFF, ON

Default Value

OFF

Connect Status Output

network output SNVT_telcom nvoConnectStat;

This output network variable provides the current state of the modem connection process.

Valid Range

See enumeration for SNVT_telcom standard network variable type

MANDATORY support of the following SNVT_telcom values and their interpretations are as follows:

TEL_NOTINUSE - modem idle and onhook

TEL_OFFHOOK - dialing in process

TEL_TALKING - modem connected and online with distant modem, ready to send data

When Transmitted

The output is updated upon each change in modem connection state.

Update Rate

The output is updated only once per change in modem connection state.

Default Service Type

The default service type is acknowledged.

Optional Network Variables

Connect String Output

network output SNVT_str_asc nvoConnectStr;

This output network variable provides detail in text format of the connection parameters established after the modem connection has reached the TEL_TALKING state. These parameters include connect speed, protocol, error correction, etc.

Valid Range

A NULL terminated ASCII string up to 31 bytes in length.

When Transmitted

Transmitted upon poll request.

Update Rate

This network variable is sent only once after the modem connection has reached the TEL_TALKING state.

Default Service Type

The default service type is acknowledged.

Configuration Properties

Auto Answer Enable/Disable

```
network input config SNVT_switch nciAutoAnswer;
```

This input configuration network variable allows the automatic answer function of the modem to be enabled or disabled. When enabled, the modem will automatically go offhook after detecting an incoming call and begin the modem connection process.

Valid Range

OFF	Auto Answer function disabled
ON	Auto Answer function enabled

Default Value

OFF

SCPT Reference

SCPTautoAnswer(??)

Data Transfer

None Specified

Power-up State

The power-up state of the modem object is idle, that is the modem is onhook. Thus the power-up state of the nvoConnectStat output is TEL_NOTINUSE and **is** sent on power-up.

The power-up state of nvoConnectStr is NULL and **is** sent on power-up.

Boundary and Error Conditions

none specified

Additional Considerations

none specified

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