

# **LOCATION STATUS INFORMATION**

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## **INSTALLATION GUIDE**

**NEC America, Inc.**

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# Chapter 1 Introduction

This guide provides specific field entries that need to be made in the process of installing and configuring **Location Status Information**. In addition to this guide, use the following manuals for this installation:

- *Applications Manager (APM) Installation Manual* – Contains step-by-step instructions for installing the software from the release media.
- *Applications Manager (APM) Operations Manual* – Explains how applications like **Location Status Information** are configured in the APM environment, using the entries and values provided in this guide.
- NEAX System Manuals - Give very detailed explanations about the assignments that need to be made with the NEAX2400 Maintenance Administration Terminal (MAT) commands, the NEAX2000 Customer Administration Terminal (CAT), or the NEAX2000 Maintenance Operations Console (MOC).

Briefly, the installation and set up of **Location Status Information** involves the following processes:

- **Software Installation - Location Status Information** software must first be loaded from the release media. Log in to the APM Platform Management Menu, select the Installation of Applications/Packages option, and follow the instructions provided in the *APM Installation Manual* to complete this part of the installation.
- **Application Configuration - Location Status Information** is internally supported by the APM and must be configured in the APM environment. [Application Configuration](#) of this guide provides the information that must be entered into this APM configuration file. Use the instructions provided in the *APM Operations Manual* to make the entries provided in this section.
- **Database Requirements - Location Status Information** requires two application databases which are constructed and maintained through the APM Database Administration option. [Database Requirements](#) of this guide defines the information which must be included in these database files. Use the instructions provided in the *APM Operations Manual* to make the entries contained in this section.
- **Control Options** - If the AMS\_to\_LSI utility is running with AMS, AMS\_to\_LSI must be set up to run nightly.
- **NEAX Command Assignments** - Before **Location Status Information** will function, specific data settings must be assigned at the NEAX2400 Maintenance Administration Terminal (MAT), the NEAX2000 Customer Administration Terminal (CAT), or the NEAX2000 Maintenance Operations Console (MOC). [NEAX Command Assignments](#) specifies the necessary commands and the values at which they are to be set. Use the instructions provided in the appropriate NEAX System Manuals to make the entries contained in this section.

The installation process, including its presentation in this manual and reference to other required manuals, is illustrated below:



## Chapter 2 Application Configuration

**Location Status Information** is set up in the APM system using the **Add** function of the Application Configuration option on the APM System Administration menu:

1. Enter the APM option from the APM Platform Management Menu.
2. Enter the System Administrator password at the APM password screen.
3. Enter the Application Configuration option from the System Administration menu.

This section contains the information that should be entered to the configuration file for **Location Status Information**. For specific instructions on what these parameters mean and how to make these entries, refer to the *APM Operations Manual*.

**Note:** *Configure AMS\_to\_LSI only if the Attendant Management System (AMS) is installed on the same UAP as Location Status Information (LSI) and the LSI database will be generated from the AMS database. This option is only available on the NEAX2400 System.*

### Step 1 – Application Characteristics

In the APM Application Configuration option, choose the Add command to display the Define Application Characteristics screen. Then make the entries exactly as shown below:

Parameter	LSI Entry	AMS_to_LSI Entry	Definition
OAI Application	Y	N	Whether (Yes or No) the application communicates with the NEAX2400 using OAI processes.
CRT Application	N	N	Whether (Yes or No) the application requires a terminal screen of the same type as the one used by the APM.
Communication Queue	N	N	Whether (Yes or No) the application needs an IPC queue to communicate with other processes.

## Step 2 – Primary Configuration Parameters

On the APM Configuration Entry screen, make the following entries for the parameters shown below:

Parameter	LSI Entry	AMS_to_LSI Entry	Definition
Application Name	Location_Status	AMS_to_LSI	The name to be displayed in the APM menus. This name is displayed exactly as it is entered here.
Executable Filename	/oai/app/lsi	/oai/app/bldlsi	The path name of the executable file.
Group	(no entry)	(no entry)	The application is not a group member.
Response Mode	I(gnore)	I(gnore)	The default value, since the components do not belong to a group.
Initialization Batch	N(o)	N(o)	The application is not to be initialized automatically when the OAI system is initialized.
Termination Mode	M(essage)	T(erminate)	How the APM is to notify the application to terminate.
Standard Output	/oai/log/dbg/lsi.out	/oai/log/dbg/bldlsi.out	Where output is sent.
Number of Restarts	0	0	The APM is not to restart the application if it terminates in error.

## Step 3 – Facilities

According to instructions in the *APM Operations Manual*, designate the following facilities for **Location Status Information** using the **Facilities** command on the APM Configuration Entry screen:

```
MRFI Mode Release Facility (I)          SCF  Switch Control Facility
MRFR Mode Release Facility(R)          TCFD Terminal Control Facility (D)
MSF  OAI Mode Set Facility             TCFI Terminal Control Facility (I)
NTF  Number Transfer Facility
```

**Note:** The same MSF identification number (i.e., from 128 to 192) that is selected in the APM during Step 3 must be assigned to **Location Status Information** with the appropriate NEAX commands. See [NEAX Command Assignments](#) for more information.



## Step 4 – Secondary OAI Configuration Parameters

**Note:** Entries for parameters that are marked with an asterisk (\*) should be made exactly as shown. All other entries in this section serve as examples only.

Using the **OAI-Conf** command on the APM Configuration Entry screen, make the entry shown for each of these parameters required by **Location Status Information**. Use the instructions provided for this option in the *APM Operations Manual*:

Parameter	Entry	Definition
Database Name #1*	/oai/db/cur/lsi_extn	The pathname of the database containing extension information. The database filename (i.e., lsi_extn) shown here with its path should be entered as the name of the application database as noted in the “Database Requirements” section.
Database Name #2*	/oai/db/cur/lsi_msg	The pathname of the database containing the possible messages. The database filename (i.e., lsi_msg) listed here with its path should be entered as the name of the application database as noted in the “Database Requirements” section.
Time-out Value #1	20	The number of seconds LSI waits for user input before it releases the D <sup>term</sup> .
Time-out Value #2	10	The number of seconds LSI displays a message on the D <sup>term</sup> LCD.
Tenant Number (0-64)†	1	The number of the tenant that LSI serves.
Source Link Name	OAI1TCP	The port on the source side of the communication link. This entry should match a link name in the APM system configuration file.
Destination Link Name	PBX1TCP	The port on the destination side of the communication link. This entry should match a link name in the APM system configuration file.
Association Recovery	10	The number of seconds LSI waits before trying to re-establish an association with the NEAX that has been released.

† – The maximum Tenant Number for the NEAX2000 is 64.

## Step 5 – User-Defined Parameters

Make these parameter entries for **LSI installation** through the **UserDefined** command on the APM Configuration Entry screen:

User-Defined	LSI Entry	Definition
#1	Installation-dependent	This is the OAI key assigned to LSI.
#2	/oai/db/cur/Lsi_extn	The full pathname of the master LSI extension database.
#3	Installation-dependent	Set to 1 if using in conjunction with AMS. Set to 2 if using in conjunction with AMS and a space exists between the last name and first name in the AMS database. (i.e., 'last name, first name')

This completes the configuration of **Location Status Information** in the APM. Refer to [Database Requirements](#) for information on how to create its database support.

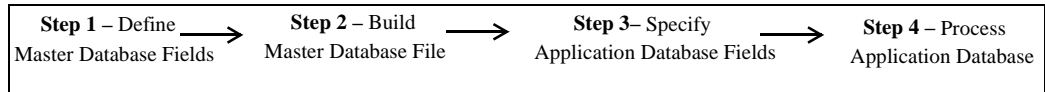
Make this parameter entry for **AMS\_to\_LSI** installation through the **UserDefined** command on the APM Configuration Entry screen:

User-Defined	AMS_to_LSI Entry	Definition
#1	/oai/db/cur/Lsi_extn	This is the name of the master extension database for LSI.

This completes the configuration of **AMS\_to\_LSI** in the APM. Refer to [Control Options](#) to choose its control options.

## Chapter 3 Database Requirements

**Location Status Information** requires two databases (i.e., extensions and messages). These databases are created through the Database Administration option on the APM System Administration Menu. Database creation involves the following four-step process for each of the two required databases:



1. **Define Master Database Fields:** This step involves creating the master database fields. Generally one master set of fields serves as parent databases for several applications. **Location Status Information**, however, requires two separate sets of fields, one for the extensions and one for the messages.
2. **Build a Master Database File:** This step involves entering data (e.g., actual extension numbers and the names associated with them) into the master database fields that were just defined in Step 1.
3. **Specify Location Status Information Database Fields:** This step defines how data from the master files is to be converted to meet the needs of **Location Status Information**. The database names in the application configuration file (*lsi\_extn* and *lsi\_msg*) must be entered during this step.
4. **Process the Location Status Information Database:** In this step, the Master Database input is converted to database files according to the definitions created in Step 3, using the Process and Install Application Database options on the APM Database Administration menu. Activate the **Process** command to draw data from the master database and convert it to the formats specified for **Location Status Information**. Then activate the **Install** command to enable **Location Status Information** to access its database.

### Instructions

The information required in all four steps for each **Location Status Information** database is provided in table form on the following pages. Using this information with the procedural instructions provided in the *APM Operations Manual*, enter the Database Administration option on the APM System Administration Menu and build the **Location Status Information** databases, one at a time. Refer to the Process and Error Messages chapter of the *APM Operations Manual* for information about any messages displayed during these steps

**Note:** Remember to complete **STEP 4, Process the Application Database**, for each database after entering the information on the following pages in **STEPS 1 through 3**.

## Extension Database Information

This database contains the extensions that can access **Location Status Information**. For each, the name of the person associated with it and the person's identifying access code is given. Name the master file **Lsi\_extn** and the application file **lsi\_extn**.

Field Description	Master Definition File				Application Definition File	Master Database
	Type	Size	Min. Value	Max. Value	Data Type	Typical Entry
Extension Key	N	6	1	999999	Long Integer	036150
Extension	N	5	1	99999	Long Integer	03615
Name	A	16			ASCII	MILLER, KAREN
Access Code	N	10	0	9999999999	ASCII	805
Message	A	16			ASCII	
Month	N	2	0	99	Integer	99
Day	N	2	0	99	Integer	99
Hour	N	2	0	99	Integer	99
Minute	N	2	0	99	Integer	99
Phone to Call	A	22			ASCII	
Active Flag	N	1	0	1	NBCD	0

### Field Definitions

- Extension Key– The extension number followed by 0 for the first employee assigned to the extension, 1 for the second, etc.
- Extension– An internal telephone number within the range from 1 to 99999.
- Name– The two- to 16-character name of the person assigned to the extension.
- Access Code– The identification number used to identify this person.
- Message– This field should be left blank. It will be filled in by the application unless the user changes status.
- Month– The two-digit number for the month. Initially, if there is no message, this is 99.
- Day– The two-digit number for the day. Initially, if there is no message, this is 99.
- Hour– The two-digit number for the hour. Initially, if there is no message, this is 99.

**Field Definitions  
(Cont.)**

- Minute— The two-digit number for the minute. Initially, if there is no message, this is 99.
- Phone to Call— This field should be left blank.
- Active Flag— This should be set to 0.

**Employee Identification Database Information**

This database contains the messages that can be selected for display on the D<sup>term</sup> LCD. Name the master file Lsi\_msg and the application file lsi\_msg.

Field Description	Master Definition File				Application Definition File	Master Database
	Type	Size	Min. Value	Max. Value	Data Type	Typical Entry
Message Number	N	2	1	14	Short Integer	01
Message	A	16			ASCII	Out to Lunch

**Field Definitions**

- Message Number— The number of the message that follows, from 1 to 14.
- Message— The message itself, up to 16 characters long (e.g., On Vacation, In a Meeting, In the Field, Out of Office, etc.).

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## Chapter 4 Control Options

If AMS\_to\_LSI is running with AMS on a NEAX2400, it should be configured to run nightly as follows:

1. Choose Control Options from the System Administration menu.
2. Choose Applications from the Control Options menu.
3. Choose AMS\_to\_LSI from the Application Selection menu.
4. Choose Initialize from the Application Control Options menu.

<b>Application Control Options Screen Field Name</b>	<b>Entry</b>
Minute (0-59):	10
Hour of Day (0-23):	1
Day of Month (1-31):	*
Month of Year (1-12):	*
Day of Week (0-6):	*

This will build a new master extension file. To make these changes effective, take the following steps:

1. Choose Control Options from the System Administration menu.
2. Choose Databases from the Master File Options menu.
3. Choose Lsi\_extn from the Database Control Options menu.
4. Choose Process Install from the Database Control Options menu.

<b>Database Control Options Screen Field Name</b>	<b>Entry</b>
Minute (0-59):	10
Hour of Day (0-23):	2
Day of Month (1-31):	*
Month of Year (1-12):	*
Day of Week (0-6):	*

In this example, Lsi\_extn is built every night at 1:10 a.m. and is installed at 2:10 a.m. The one-hour difference permits the database building to end before the installation begins.

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## Chapter 5 NEAX Command Assignments

This guide assumes that data settings that affect the operation of all OAI software on a system-wide basis have already been assigned on the NEAX2400 Maintenance Administration Terminal (MAT) commands, the NEAX2000 Customer Administration Terminal (CAT), or the NEAX2000 Maintenance Operations Console (MOC). Such settings include, for instance, system index values and assignment of Interface I/O Port Data in the Interface Processor (IP). For more information about the system data settings and about the Code Master settings discussed in this section, refer to the following technical manuals for the specific NEAX system in use:

- OAI System Manual.
- Command Manual.
- Job Specification.
- Programming Manual (for RDS, MDS, and HDS systems).
- System Data Design Manual (for ICS systems).

**Location Status Information** requires assignment of the Mode Set Facility (MSF) to an OAI-assigned function key on all D<sup>term</sup>s affected by application. This process involves assigning the MSF and its Operation Code (Op-Code), configured for **Location Status Information** in the APM Application Configuration option, to one of the 14 OAI Key Codes. (The MSF Op-Codes range from 128 to 191; available for on screen viewing through the **Providers** command in the APM Application Configuration option.) Each of the OAI Key Codes corresponds to an AKYD Function Key Index (FKI) value which is then assigned to the specific D<sup>term</sup> function key. This process is illustrated below.

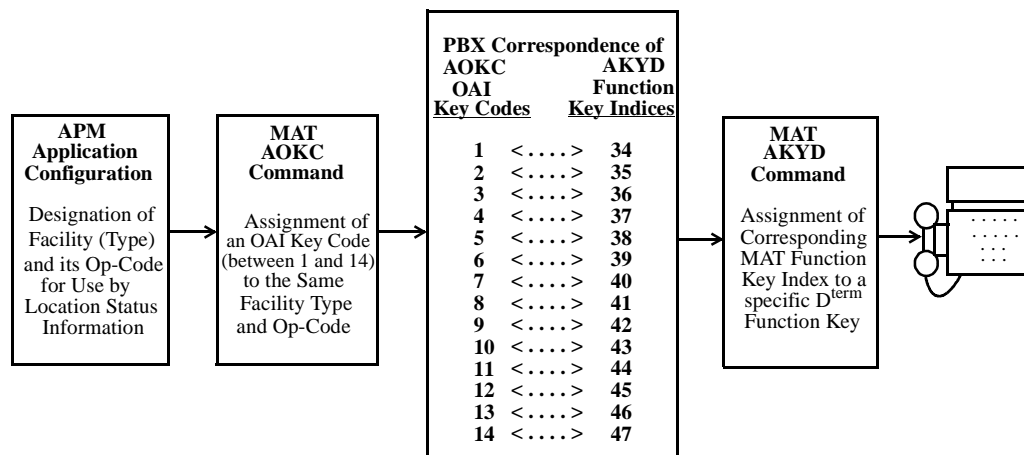


Figure 5-1 OAI Function Key Assignment

## NEAX2400 Commands

Use the NEAX2400 Maintenance Administration Terminal (MAT) to enter these commands.

A knowledge of the D<sup>term</sup> stations in the NEAX system and which ones will have access to **Location Status Information** is necessary to using the following commands:

### AOKC Command: (Assignment of OAI Key Codes)

This command is used to associate the MSF facility and its Op-Code that was configured in the APM for **Location Status Information** to one of the 14 OAI Key Codes in the MAT.

- (a) Select an unused OAI Key Code, from 1 to 14. To determine what Key Codes are available for assignment, use the LOKC command to list the AOKC Key Codes that are already assigned.
- (b) Enter MSF as the facility to be assigned to the selected Key Code, using the values on the screen.
- (c) Enter the same Op-Code that was configured for **Location Status Information** in the APM. If necessary, retrieve it using the **Providers** command on the APM Configuration Entry screen.

### AKYD Command: (Assignment of D<sup>term</sup> Function Key)

This command is used to assign key data on the D<sup>terms</sup> that are to be used to access **Location Status Information**.

MAT Function Key Indexes #34 to #47 have been designated for use in the OAI system and correspond to the 14 OAI Key Codes as illustrated on the previous page. The AKYD command is used to assign a D<sup>term</sup> function key to the specific MAT Function Key Index that, in turn, corresponds to the previously assigned OAI Key Code. This command must be used to assign the function key on each D<sup>term</sup> that is to be set up with access to **Location Status Information**.

- (a) Enter the same tenant number that is configured for **Location Status Information** in the APM Application Configuration option.
- (b) Enter the station number of the D<sup>term</sup> on which the function key is being assigned.

(c) Enter to the D<sup>term</sup> function key field the MAT Function Key Index that corresponds to the previously assigned OAI Key Code.

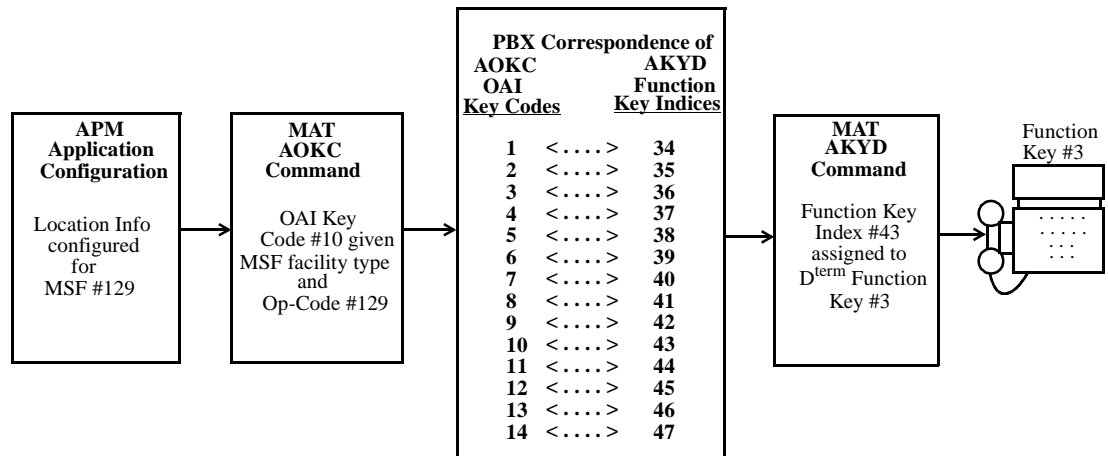


Figure 5-2 OAI Function Key Assignment Example

**Example**

The example above indicates that MSF #129 is configured for **Location Status Information** and is assigned through the AOKC command to OAI Key Code 10. OAI Key Code 10 corresponds in the PBX to MAT Function Key Index 43. Each D<sup>term</sup> in the system that is to access **Location Status Information** has function key 3 assigned to MAT Function Key Index 43 via the AKYD command. Now whenever a phone user presses function key 3 on any assigned D<sup>term</sup>, MSF 129 initiates communication with **Location Status Information**.

Location Status Information is now installed and ready to be initialized. Enter the APM Operations Menu and initialize Location Status Information according to instructions provided in the APM Operations Manual.

## NEAX2000 Commands

Use the NEAX2000 Customer Administration Terminal (CAT), or the NEAX2000 Maintenance Operations Console (MOC) to enter these commands. (Refer to the **NEAX2000 System Manuals** for more information.)

A knowledge of the D<sup>term</sup> stations in the NEAX system and which ones will have access to **Location Status Information** is necessary to using the following commands:

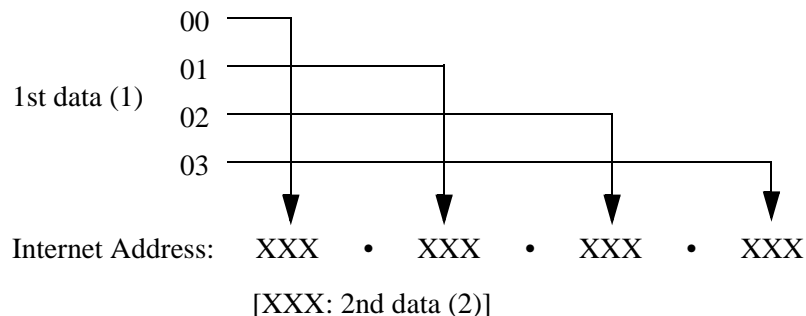
### **CMD79:** **(Assignment of** **Internet Address)**

Assigns the Internet Address of TCP/IP-Ethernet.

1st data 00–03: Division No. of Internet Address

2nd data 0–255: Address Data (1–3 digits)

The Internet Address must be assigned to the 1st data 00–03 as follows:



### **CMD7:** **(Assignment of** **MSF Operation** **Code)**

Y=0: When pressing the OAI function key to start up MSF, assign the operation code to the OAI function key assigned by CM90.

1st data: F1032                      Function Key Number 0

–

F1047                                OAI Function Key Number 15

2nd data: 128–191                Operation Code for MSF

Y=0: When dialing a digit code (1–3 digits) after pressing OAI function key to start up MSF, assign the digit number of digit code, then assign the operation code to the digit code.

1st data: F1032                      Function Key Number 0

–

F1047                                OAI Function Key Number 15

2nd data: DCX (X=1–3)            Operation Code for MSF

**CM90:  
(Assignment of the  
OAI Function Key  
for MSF)**

Assigns the OAI function key for starting up MSF to a D<sup>term</sup>.

1st data My line number + , + Key Number

2nd data F1032                      Function Key Number 0

—

F1047                      OAI Function Key Number 15

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