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Service Negotiation Support (SNS)

TNLIST Maintenance Guide

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Information Management Services Division
Bellcore

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TNLIST Maintenance Guide
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Preface

This document is intended for telephone company personnel who will be maintaining the Service Negotiation Support (SNS) TNLIST (telephone number list) database. It is assumed that the reader is familiar with the operation of an Information Management System (IMS) system and understands basic Centrex and Integrated Services Digital Network (ISDN) terminology.

In this revision, "diffmarks" appear in places where new information has been added and where changes or deletions have been made since the last issue. A diffmark is a symbol in the margin of a page. A vertical bar (|) denotes new or changed information; an asterisk (*) denotes deleted information. A page without diffmarks has not been changed since the last issue of the document. When more than half a page has changed or a new page has been added, diffmarks appear in the margin adjacent to the page header. Changes marked by diffmarks are generally changes to the technical content of the document, not grammatical or format changes.

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1. Introduction

The TNLIST Maintenance system allows you to create and maintain lists of telephone numbers that can be used for TN selection by specific customers. You provide the information about the TN lists and their associated customers by entering data on two TNLIST MAINTENANCE screens:

1. The Customer Group/Product Maintenance screen allows you to add or delete customer groups.
2. The Telephone Number/Range Maintenance screen allows you to add or delete TNs in a customer group and change the information associated with the status of the individual TNs.

1.1 Documentation Index

There are six sections and an Appendix in this document.

Section 1 – Introduction and Documentation Index

Section 2 – "SNS TNLIST Maintenance System Structure" briefly describes the relationship between user screen input and the organization of information in the database.

Section 3 – "General Operating Procedures" explains logon and logoff procedures and some screen conventions.

Section 4 – "Customer Group/Product Maintenance Screen" presents procedures for performing different functions with this screen.

Section 5 – "Telephone Number/Range Maintenance Screen" provides instructions on performing different functions with this screen.

Section 6 – "Error Messages" lists all system error messages, describes their probable causes, and explains actions you can take to correct the problem.

Appendix A – "Guide to Acronyms" lists and defines the major acronyms used in this document.

In addition to this TNLIST Maintenance guide, there are six other SNS documents:

1. *Service Negotiation Support (SNS) Contract Specifications* describes the communication between SNS and the contract originator.
2. *Service Negotiation Support (SNS) Description* provides an overview of SNS.

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3. *Service Negotiation Support (SNS) System Administration Guide* covers application installation, security, recovery, troubleshooting, and other topics.
4. *Service Negotiation Support (SNS) Database Administration Guide* describes the SNS databases and explains database installation, recovery, and maintenance.
5. *PREMIS/NMAG Application Guide* explains the procedures for working with the MTC SVA screen and for producing reports.
6. *PREMIS/NMAG Database Administration Guide* describes the PREMIS system marketing database area and provides the physical data specifications for the area and the records.

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2. SNS TNLIST Maintenance System Structure

The information that you enter into the TNLIST Maintenance system about TN lists and the identification of their associated customers is stored in the TNLIST Maintenance database.

The TNLIST Maintenance database is partitioned into *entities*. An entity represents a geographic area that contains *customers*. (See your system administrator for more information about the partitioning of your TNLIST Maintenance database.) A customer may be made up of many *regular Centrex groups*. A regular Centrex group contains one main TN and is associated with its own list of telephone numbers in the TNLIST Maintenance database.

There are specific data items that uniquely identify each customer, group, and family in the TNLIST Maintenance database. A *tie code* identifies a customer. A *main TN* or the combination of a *network element* and a *Centrex group ID* points to a regular Centrex group.

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3. General Operating Procedures

3.1 Logging On and Using the Main Menu

To access the SNS TNLIST Maintenance system, you first need a login and security permission on the IMS system that is running SNS.[1]

1. Log onto the IMS system following the standard procedure in your company.
2. Clear the screen.
3. Type:
   /for yhsns
4. Press RETURN/ENTER. The SNS TNLIST MAINTENANCE main menu appears.

1. See your system administrator to obtain an IMS login or SNS security permission.

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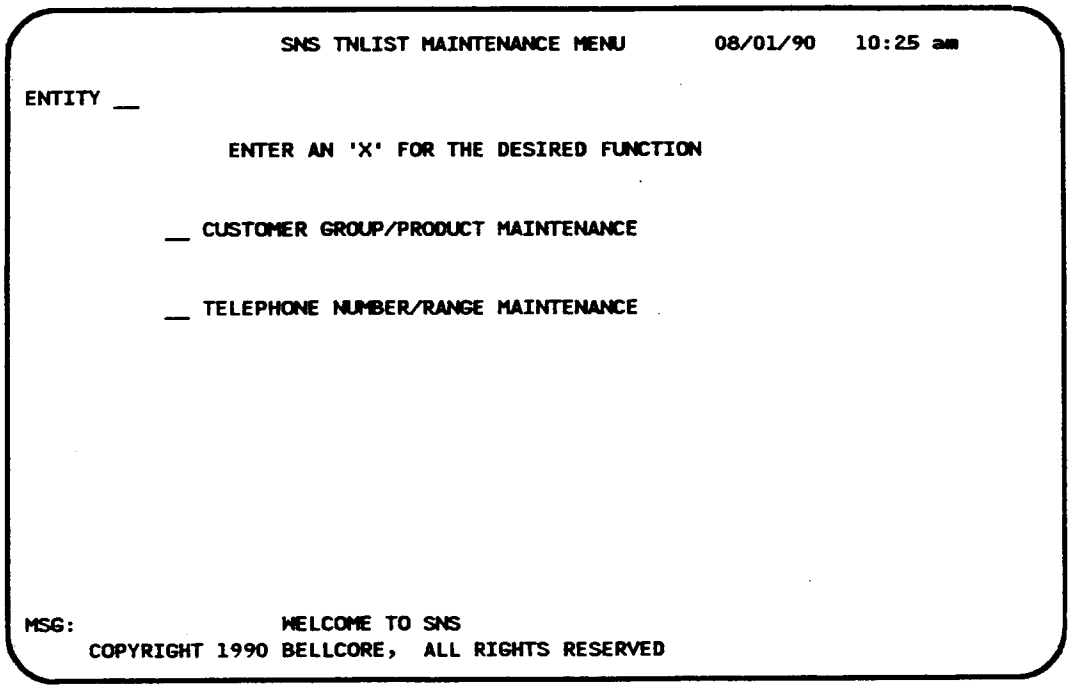

Figure 3-1. SNS TNLIST MAINTENANCE Main Menu Screen

The screen title and the current date and time appear at the top of the screen. The ENTITY field is shown in the top left corner of the screen and the two TNLIST Maintenance functions are listed in the center of the screen. The cursor appears next to the ENTITY prompt.

1. **ENTITY** (required)

   Enter a one-character code to designate the entity you want. The cursor moves to the CUSTOMER GROUP/PRODUCT MAINTENANCE field.

2. Enter an X in the CUSTOMER GROUP/PRODUCT MAINTENANCE field if you want to work with this screen. If you want to work with the TELEPHONE NUMBER/RANGE MAINTENANCE screen, press TAB until you reach the appropriate field and enter an X.

   SNS verifies that you have security permission to perform the function you selected and, if so, displays a new screen.

3.2 Working with the TNLIST MAINTENANCE Screens

The TNLIST MAINTENANCE screens are divided into three main areas:

1. The top portion prompts you to (1) define the action you want to perform and (2) identify the group or customer to be affected by the action. You define the action you want to perform by entering its corresponding code:

   ADD Add information to the database

   CHG Change the information in the database

   DLT Delete information from the database Request a report on information in the database

   PF10 Request a trace on the current TNLIST Maintenance session.

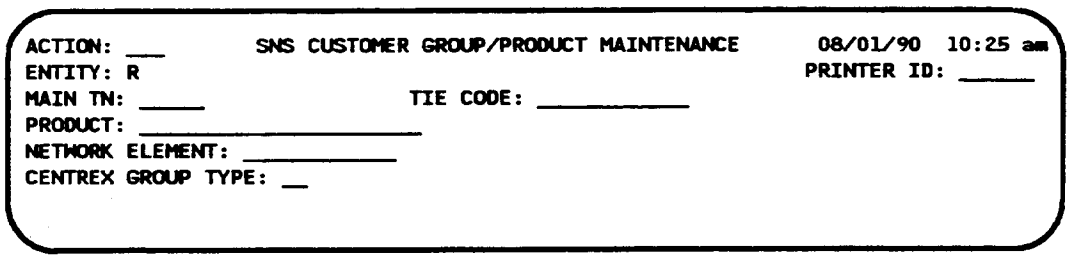

Figure 3-2. Top Portion of the Customer Group/Product Maintenance Screen

2. The middle portion prompts for specific data on the current action.

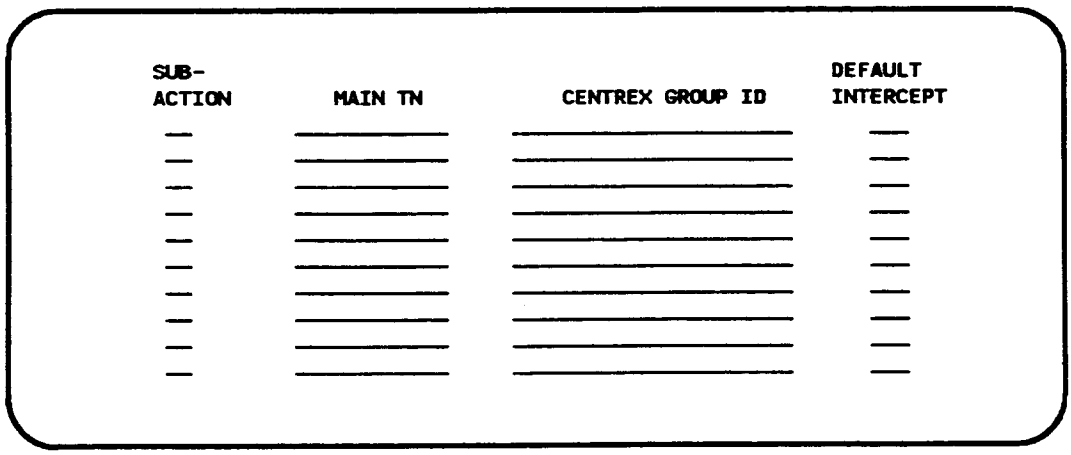

Figure 3-3. Middle Portion of the Screen

3. The bottom portion displays system messages.

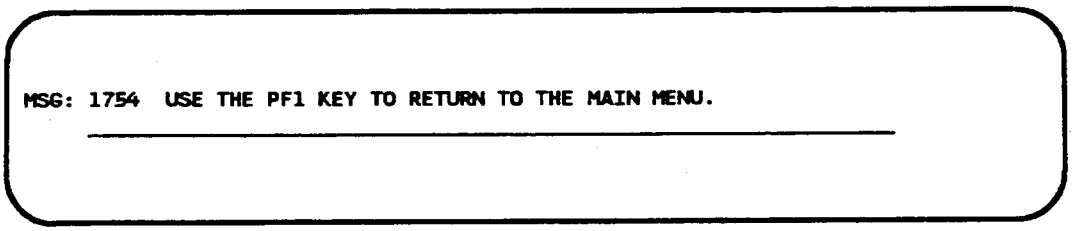

Figure 3-4. Bottom Portion of the Customer Group/Product Maintenance Screen

Some conventions that help you work with the TNLIST MAINTENANCE screens include:

- On the two TNLIST MAINTENANCE screens, the function key 1 brings you back to the TNLIST MAINTENANCE main menu screen. (The first time you access one of the TNLIST MAINTENANCE screens, a message appears in the MSG field: "USE THE PF1 KEY TO RETURN TO THE MAIN MENU.") You can use this function key when you have finished working with a TNLIST MAINTENANCE screen and you want to select another screen or change the entity. However, if you have entered information on a screen and you press the function key 1 before you press RETURN/ENTER, the data you entered on the screen is not saved.
- You can enter information in upper or lower case letters. If you enter data in lower case letters, it is converted to upper case letters. (For example, if you enter data in lower case on one of the TNLIST MAINTENANCE screens and press RETURN/ENTER, the screen is redisplayed with the information you entered in upper case.
- When you have completed an action (ADD, CHG, INQ, etc.) on one of the TNLIST MAINTENANCE screens, the results of that action are displayed (i.e., the screen is shown with the information you entered or requested). At that time, you can perform some other action on the same TNLIST MAINTENANCE screen by changing some or all of the information (except the information in the MSG fields). You can replace displayed information by moving the cursor to the appropriate field and typing over the information. You can delete displayed information by moving the cursor to the appropriate field and pressing the space bar until the information is removed. You can add to the displayed information by moving the cursor to the appropriate field and entering the information. If you want to perform

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another action on the same TNLIST MAINTENANCE screen but you want to start with a blank screen, return to the TNLIST MAINTENANCE main menu screen (function key 1) and select the screen again.

- The fields on the TNLIST MAINTENANCE screens have "auto tabbing." If you fill a field with data, the cursor automatically moves to the next field. If you do not fill a field with data, press the TAB key to move to the next field.
- You can move around on the TNLIST MAINTENANCE screens by pressing the arrow keys on your keyboard. The cursor will move one space in the direction of the selected arrow (up, down, left, right).
- SNS checks for input errors after you press RETURN/ENTER for a screen. If there is an error, the field in error is highlighted and a message is printed at the bottom of the screen. The cursor returns to the field containing the error. If there are many errors, all fields in error are highlighted, but error messages will be printed at the bottom of the screen for the first two errors only. Again, the cursor returns to the first field in error. You can type over or delete the information in that field. Press TAB until the cursor reaches the next field in error. Again, you can type over or delete information. If there are more than two errors on the screen and you want to see the remaining error messages (those that correspond to errors after the first two), correct the first two errors on the screen and press RETURN/ENTER. The screen will be redisplayed with the remaining fields in error highlighted and the next two error messages printed at the bottom of the screen. When you have corrected the information in all fields in error, press RETURN/ENTER again.

3.3 Tracing a TNLIST Maintenance Screen

The following procedures explain how to trace the TNLIST Maintenance screens. For more information on tracing, see your system administrator.

1. Select the screen you want to trace.
2. Press function key 10. The message area at the bottom of the screen will be highlighted and the following statement will appear:

   DEBUG = :FFF;TSO = XXXXXXX.XXXXXX

3. Change the debugging level by typing over the "FFF," or leave the debugging level at "FFF."
4. Type over the "XXXXXXX.XXXXXX" with a valid data set name. (The trace output will be stored in this data set.)

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5. Enter data on the screen.
6. Press RETURN/ENTER.

   The transaction associated with the screen function you just performed will be traced.
7. Repeat all of the above steps for each additional transaction you want to trace.

3.4 Logging Off

When you are finished working with the TNLIST MAINTENANCE screens, you can log off the TNLIST Maintenance system by clearing the current TNLIST MAINTENANCE screen. You can then perform some other IMS function or you can log off IMS following your company's standard procedure.

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4. Customer Group/Product Maintenance Screen

The Customer Group/Product Maintenance screen allows you to perform the following functions:

- Add a regular Centrex group
- Delete a Centrex group or customer

Refer to the *Service Negotiation Support (SNS) Database Administration Guide* for instructions on producing a report on the information you enter with this screen.

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4.1 Add a Regular Centrex Group

```
ACTION: ___        SNS CUSTOMER GROUP/PRODUCT MAINTENANCE      08/01/90  10:25 am
ENTITY: R                                                      PRINTER ID: ______
MAIN TN: _____                    TIE CODE: ___________
PRODUCT: ____________________
NETWORK ELEMENT: ___________
CENTREX GROUP TYPE: __

          SUB-                                                      DEFAULT
          ACTION      MAIN TN          CENTREX GROUP ID             INTERCEPT
            __      __________    ____________________________        __
            __      __________    ____________________________        __
            __      __________    ____________________________        __
            __      __________    ____________________________        __
            __      __________    ____________________________        __
            __      __________    ____________________________        __
            __      __________    ____________________________        __
            __      __________    ____________________________        __
            __      __________    ____________________________        __
            __      __________    ____________________________        __

MSG: 1754  USE THE PF1 KEY TO RETURN TO THE MAIN MENU.
     ____________________________________________________________
```

Figure 4-1. Customer Group/Product Maintenance Screen

The ENTITY field is prepopulated with the entity you selected on the TNLIST MAINTENANCE main menu screen.

1. **ACTION:** (required)

   Enter ADD.

2. Press TAB to move past the PRINTER ID field. You do not need to enter data in this field.

3. **MAIN TN:** (required)

   Enter the main TN of the new regular Centrex group.

4. **TIE CODE:** (required)

   Enter the 11-character alphanumeric code that uniquely identifies the Centrex customer.

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5. Press TAB to move past the PRODUCT field. Do not enter data in this field.

6. **NETWORK ELEMENT:** (required)

   Enter the network element (switch) name in alphanumeric characters.

7. **CENTREX GROUP TYPE:** (required)

   Enter RC for regular Centrex group.

8. Press TAB to move past the SUB-ACTION field. You do not need to enter data in this field.

9. **MAIN TN** (required)

   Enter the main TN for the Centrex group. This main TN must be the same main TN you entered earlier on this screen. (You can leave this first MAIN TN field blank. If you do, SNS assumes that you want to use the same main TN you entered earlier on this screen.)

10. **CENTREX GROUP ID** (required)

    Enter the Centrex group identification code (up to 18 alphanumeric characters).

11. **DEFAULT INTERCEPT** (optional)

    Enter one of the four default intercept status codes: DTC (disconnect transfer calls), DNT (disconnect no transfer), CTC (change transfer calls), or CNT (change no transfer).

12. Repeat Steps 9 through 11 if you want to enter additional regular Centrex groups. All of the regular Centrex groups you enter on this screen must be associated with the same tie code and network element.

13. Press RETURN/ENTER. An error message appears in the MSG field if SNS encounters a user input error; otherwise, a "TRANSACTION SUCCESSFULLY PROCESSED" message appears.

The screen is redisplayed with the information you just entered. The cursor appears in the ACTION field.

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```
ACTION: ADD        SNS CUSTOMER GROUP/PRODUCT MAINTENANCE      08/01/90  10:25 am
ENTITY: R                                                      PRINTER ID: ______
MAIN TN: 2016993897                TIE CODE: ABCDEFGHIJK
PRODUCT: ____________________
NETWORK ELEMENT: GOODSWITCH
CENTREX GROUP TYPE: RC

          SUB-                                                  DEFAULT
          ACTION        MAIN TN          CENTREX GROUP ID       INTERCEPT
           __          2016993897       123456789                  DTC
           __          __________       ____________________       ___
           __          __________       ____________________       ___
           __          __________       ____________________       ___
           __          __________       ____________________       ___
           __          __________       ____________________       ___
           __          __________       ____________________       ___
           __          __________       ____________________       ___
           __          __________       ____________________       ___
           __          __________       ____________________       ___

MSG: TRANSACTION SUCCESSFULLY PROCESSED
     ____________________________________________________________
```

Figure 4-2. Screen after Adding a New Regular Centrex Group

At this time, you can do either of the following:

- Use the information currently displayed to perform a new function (action) by typing over or deleting information or by adding new information to the screen. (Follow the procedures in this document to perform the new function.)
- Return to the TNLIST MAINTENANCE main menu screen (press function key 1).

4.2 Delete a Regular Centrex Group

```
ACTION: __        SNS CUSTOMER GROUP/PRODUCT MAINTENANCE      08/01/90  10:25 am
ENTITY: X                                                     PRINTER ID: ______
MAIN TN: _____                TIE CODE: __________
PRODUCT: ____________________
NETWORK ELEMENT: ___________
CENTREX GROUP TYPE: __

          SUB-                                                DEFAULT
          ACTION        MAIN TN          CENTREX GROUP ID     INTERCEPT
           __          __________    ____________________      __
           __          __________    ____________________      __
           __          __________    ____________________      __
           __          __________    ____________________      __
           __          __________    ____________________      __
           __          __________    ____________________      __
           __          __________    ____________________      __
           __          __________    ____________________      __
           __          __________    ____________________      __
           __          __________    ____________________      __

MSG: 1754  USE THE PF1 KEY TO RETURN TO THE MAIN MENU.
     ____________________________________________________________
```

Figure 4-3. Customer Group/Product Maintenance Screen

The ENTITY field is prepopulated with the entity you selected on the TNLIST MAINTENANCE main menu screen.

1. **ACTION:** (required)

   Enter DLT.

   Before you can delete a regular Centrex group, you must verify that all associated TNs have a status of available or unavailable.

2. Press TAB to move past the PRINTER ID field. You do not need to enter data in this field.

3. **MAIN TN:** (required if deleting customer group RC and you are not entering NETWORK ELEMENT and CENTREX GROUP ID)

   Enter the main TN for the regular Centrex group you want to delete. You can delete another group by entering a NETWORK ELEMENT and

CENTREX GROUP ID on this same screen. Press RETURN/ENTER here if you are deleting only the group identified by this main TN.

4. Press TAB to move past the TIE CODE field. You do not need to enter data in this field.
5. Press TAB to move past the PRODUCT field.
6. **NETWORK ELEMENT:** (required with CENTREX GROUP ID if deleting customer group RC and you are not entering MAIN TN)

   Enter the network element (switch) name, in alphanumeric characters, associated with the customer group you want to delete.
7. **CENTREX GROUP TYPE:** (optional)

   Enter RC.
8. Press TAB to move past the SUB-ACTION field. You do not need to enter data in this field.
9. Press TAB again to move past the MAIN TN field. You do not need to enter data in this field.
10. **CENTREX GROUP ID** (required with NETWORK ELEMENT if deleting customer group RC and you are not entering MAIN TN)

    Enter the Centrex group ID (up to 18 alphanumeric characters) associated with the customer group you want to delete.
11. Press RETURN/ENTER. An error message appears in the MSG field if SNS encounters a user input error; otherwise, a "TRANSACTION SUCCESSFULLY PROCESSED" message appears.

The screen is redisplayed with the information you just entered. The cursor appears in the ACTION field.

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```
ACTION: DLT        SNS CUSTOMER GROUP/PRODUCT MAINTENANCE      08/01/90  10:25 am
ENTITY: X                                                      PRINTER ID: ______
MAIN TN: 2011112222                TIE CODE: __________
PRODUCT: ____________________
NETWORK ELEMENT: ____________
CENTREX GROUP TYPE: RC

          SUB-                                                  DEFAULT
          ACTION        MAIN TN          CENTREX GROUP ID       INTERCEPT
           __          __________    ____________________        ___
           __          __________    ____________________        ___
           __          __________    ____________________        ___
           __          __________    ____________________        ___
           __          __________    ____________________        ___
           __          __________    ____________________        ___
           __          __________    ____________________        ___
           __          __________    ____________________        ___
           __          __________    ____________________        ___
           __          __________    ____________________        ___

MSG: TRANSACTION SUCCESSFULLY PROCESSED
     ____________________________________________________________
```

Figure 4-4. Screen after Deleting a Customer Group with Type RC

At this time, you can do either of the following:

- Use the information currently displayed to perform a new function (action) by typing over or deleting information or by adding new information to the screen. (Follow the procedures in this document to perform the new function.)
- Return to the TNLIST MAINTENANCE main menu screen (press function key 1).

4.3 Delete a Centrex Customer

```
ACTION: __      SNS CUSTOMER GROUP/PRODUCT MAINTENANCE      08/01/90  10:25 am
ENTITY: X                                                   PRINTER ID: ______
MAIN TN: _____                TIE CODE: _____
PRODUCT: ____________________
NETWORK ELEMENT: ___________
CENTREX GROUP TYPE: __

          SUB-                                                DEFAULT
          ACTION        MAIN TN          CENTREX GROUP ID     INTERCEPT
           __          __________      ____________________     ___
           __          __________      ____________________     ___
           __          __________      ____________________     ___
           __          __________      ____________________     ___
           __          __________      ____________________     ___
           __          __________      ____________________     ___
           __          __________      ____________________     ___
           __          __________      ____________________     ___
           __          __________      ____________________     ___
           __          __________      ____________________     ___

MSG: 1754  USE THE PF1 KEY TO RETURN TO THE MAIN MENU.
     ______________________________________________________________
```

Figure 4-5. Customer Group/Product Maintenance Screen

The ENTITY field is prepopulated with the entity you selected on the TNLIST MAINTENANCE main menu screen.

1. **ACTION:** (required)

   Enter DLT.

   Before you can delete a Centrex customer, you must verify that all associated TNs (for all associated groups) have a status of available or unavailable.

2. Press TAB to move past the PRINTER ID field. You do not need to enter data in this field.

3. Press TAB to move past the MAIN TN field. You do not need to enter data in this field.

4. **TIE CODE:** (required)

   Enter the tie code for the Centrex customer you want to delete. All regular Centrex groups associated with this customer (tie code) will be deleted.

5. Press RETURN/ENTER. An error message appears in the MSG field if SNS encounters a user input error; otherwise, a "TRANSACTION SUCCESSFULLY PROCESSED" message appears.

The screen is redisplayed with the information you just entered. The cursor appears in the ACTION field.

```
ACTION: DLT        SNS CUSTOMER GROUP/PRODUCT MAINTENANCE      08/01/90  10:25 am
ENTITY: X                                                      PRINTER ID: ______
MAIN TN: _____                  TIE CODE: BOWBOWBOWBO
PRODUCT: ____________________
NETWORK ELEMENT: ___________
CENTREX GROUP TYPE: __

          SUB-                                                  DEFAULT
          ACTION        MAIN TN          CENTREX GROUP ID       INTERCEPT
           __          __________     ____________________       ___
           __          __________     ____________________       ___
           __          __________     ____________________       ___
           __          __________     ____________________       ___
           __          __________     ____________________       ___
           __          __________     ____________________       ___
           __          __________     ____________________       ___
           __          __________     ____________________       ___
           __          __________     ____________________       ___
           __          __________     ____________________       ___

MSG: TRANSACTION SUCCESSFULLY PROCESSED
     ____________________________________________________________
```

Figure 4-6. Screen after Deleting a Centrex Customer

At this time, you can do either of the following:

- Use the information currently displayed to perform a new function (action) by typing over or deleting information or by adding new information to the screen. (Follow the procedures in this document to perform the new function.)
- Return to the TNLIST MAINTENANCE main menu screen (press function key 1).

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5. Telephone Number/Range Maintenance Screen

The Telephone Number/Range Maintenance screen allows you to perform the following functions:

- Add ranges of TNs or individual TNs for a customer group, including information on TN status, type, etc.
- Change the TN status.
- Delete TNs in a group.

You must first establish a customer group (with the Customer Group/Product Maintenance screen) before you can perform any of the Telephone Number/Range Maintenance screen functions.

Refer to the *Service Negotiation Support (SNS) Database Administration Guide* for instructions on producing a report on the information you enter with this screen.

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5.1 Add TNs for a Customer Group

```
ACTION: ___        SNS TELEPHONE NUMBER/RANGE MAINTENANCE      08/01/90  10:25 am
ENTITY: A                                                    PRINTER ID: _____
MAIN TN: _____                                               SUMMARY ONLY: _____
PRODUCT: _____________________
NETWORK ELEMENT: _____________     CENTREX GROUP ID: _____________
NPA: ___    NXX: ___

     LOW    HIGH      STAT    TYPE      HUNT GRP      EFF DATE      THRESHOLD
     ____   ____      __      -         _____         ________      _____
     ____   ____      __      -         _____         ________      _____
     ____   ____      __      -         _____         ________      _____
     LOW    HIGH      STAT    SUBTYPE   HUNT GRP      EFF DATE      WORKING GRP TN
     ____   ____      __      ___       _____         ________      _____
     ____   ____      __      ___       _____         ________      _____
     ____   ____      __      ___       _____         ________      _____
     ____   ____      __      ___       _____         ________      _____
     ____   ____      __      ___       _____         ________      _____
     ____   ____      __      ___       _____         ________      _____
     ____   ____      __      ___       _____         ________      _____

MSG: 1754  USE THE PF1 KEY TO RETURN TO THE MAIN MENU.
     ____________________________________________________________
```

Figure 5-1. Telephone Number/Range Maintenance Screen

The ENTITY field is prepopulated with the entity you selected on the TNLIST MAINTENANCE main menu screen.

1. **ACTION:** (required)

   Enter ADD.

2. Press TAB to move past the PRINTER ID field. You do not need to enter data in this field.

3. **MAIN TN:** (required if customer group is RC and you are not entering CENTREX GROUP ID and NETWORK ELEMENT)

   Enter the main TN of the customer group.

4. Press TAB to move past the SUMMARY ONLY field. You do not need to enter data in this field.

5. Press TAB to move past the PRODUCT field. You do not need to enter data in this field.
6. **NETWORK ELEMENT:** (required with CENTREX GROUP ID if customer group is RC and you are not entering MAIN TN)

   Enter the network element (switch) name in alphanumeric characters.
7. **CENTREX GROUP ID:** (required with NETWORK ELEMENT if customer group is RC and you are not entering MAIN TN)

   Enter the Centrex group ID (up to 18 alphanumeric characters).
8. **NPA:** (required)

   Enter the three-digit NPA (area code).
9. **NXX:** (required)

   Enter the three-digit NXX (exchange) code.

The remaining fields on this screen (except for the MSG area) are divided into two groups. The fields in each group are organized into columns. The column headings in the top group are: LOW, HIGH, STAT, TYPE, HUNT GRP, EFF DATE, and THRESHOLD. The column headings in the bottom group are: LOW, HIGH, STAT, SUBTYPE, HUNT GRP, EFF DATE, and WORKING GRP TN. You use the top group to add ranges of new TNs to the list of assignable TNs in the database. You use the bottom group when you want to specify additional information about subsets of the ranges entered in the top group. Specifically, you enter information in the bottom group when:

- A subset of the TN ranges in the top group has a status that is different from the one entered for the full range in the top group.
- A subset of the TN ranges in the top group has a subtype classification.

The TN ranges (or individual TNs) you enter in the bottom group *must* be subsets of the ranges entered in the top group on *this* screen. If you want to specify subsets of TN ranges that were entered previously, you must use the CHG action code. (See the following section on changing the TN status for instructions on performing this function.)

After you enter the NXX, the cursor moves to the LOW field in the top group.*

* You can enter data on any line in the top or bottom group. The information is sorted within the groups after you press RETURN/ENTER.

10. **LOW** (required)

    Enter the four-digit number that corresponds to the low end of the range of TNs you want to enter. (If you are entering an individual number, enter it here only.)

11. **HIGH** (optional)

    Enter the four-digit number that corresponds to the high end of the range of TNs you want to enter. This number must be greater than or equal to the number you entered in the LOW field. (If you entered an individual number in the LOW field, leave this field blank.)

12. **STAT** (required)

    Enter one of the two-character TN status codes:

AV	Available. The TNs are available for selection.
US	Unselectable. The TNs are not available for selection (e.g., they may be set aside for future use).
RV	Reserved. The TNs are available for selection for special uses.
SL	Selected. The TNs have been selected for use.
UK	Unknown. The status of the TNs is unknown.

13. **TYPE** (required)

    Enter a one-character TN type code, e.g., Q or X. (The valid values include all alphabetic characters.)

14. Press TAB to move past the HUNT GRP field. Do not enter information in this field. (This field is reserved for future use.)

15. Press TAB to move past the EFF DATE field. Do not enter information in this field. (This field is reserved for future use.)

16. **THRESHOLD** (optional)

    Enter a number that represents the TN threshold level. When the number of TNs in the database reaches this level, SNS sends a notice to the user that the number of TNs in the database is getting low.

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17. Repeat Steps 10 through 16 if you want to enter additional TN ranges. You can enter two additional ranges of TNs in this top group.*

    You can press RETURN/ENTER when you have finished entering TN ranges if you do not want to enter any subset information in the bottom group. If you do want to enter subset information in the bottom group, complete Steps 18 through 25. (The "required/optional" indicator next to each field in Steps 18 through 24 applies if you are entering subset information only.)

18. **LOW** (required)

    Enter a four-digit number that represents an individual TN or the low end of a TN range. (The TNs you enter in these fields must also be included in the TN ranges or individual TNs you entered earlier on this screen.)

19. **HIGH** (optional)

    Enter a four-digit number that corresponds to the high end of a TN range. (If you entered an individual TN in the preceding field, leave this field blank.)

20. **STAT** (required)

    Enter one of the TN status codes: AV, US, RV, SL, or UK. (See the explanation of the STAT field in the top group for a description of these codes.)

21. **SUBTYPE** (optional)

    Enter a three-character TN subtype.

22. Press TAB to move past the HUNT GRP field. Do not enter information in this field. (This field is reserved for future use.)

23. Press TAB to move past the EFF DATE field.

24. Press TAB to move past the WORKING GRP TN field.

25. Repeat Steps 18 through 24 for any other individual TNs or TN ranges that you want to specify in this bottom group of fields.

---

* If you enter multiple TN ranges in the top or bottom group, they cannot overlap within their group.

26. Press RETURN/ENTER. An error message appears in the MSG field if SNS encounters a user input error; otherwise, a "TRANSACTION SUCCESSFULLY PROCESSED" message appears.

The screen is redisplayed with the information you just entered. The cursor appears in the ACTION field.

```
ACTION: ADD        SNS TELEPHONE NUMBER/RANGE MAINTENANCE      08/01/90  10:25 am
ENTITY: A                                                      PRINTER ID: ______
MAIN TN: 2017148000                                          SUMMARY ONLY: _____
PRODUCT: ____________________
NETWORK ELEMENT: ____________      CENTREX GROUP ID: _____________
NPA: 201     NXX: 714

     LOW    HIGH      STAT    TYPE     HUNT GRP     EFF DATE     THRESHOLD
     8001   8999       AV      X        ______      ________       50
     ____   ____       __      _        ______      ________      ______
     ____   ____       __      _        ______      ________      ______
     LOW    HIGH      STAT   SUBTYPE   HUNT GRP     EFF DATE   WORKING GRP TN
     8501   8501       RV     ___      ______      ________      ______
     ____   ____       __     ___      ______      ________      ______
     ____   ____       __     ___      ______      ________      ______
     ____   ____       __     ___      ______      ________      ______
     ____   ____       __     ___      ______      ________      ______
     ____   ____       __     ___      ______      ________      ______
     ____   ____       __     ___      ______      ________      ______

MSG: TRANSACTION SUCCESSFULLY PROCESSED
     ____________________________________________________________
```

Figure 5-2. Screen after Adding TNs

At this time, you can do either of the following:

- Use the information currently displayed to perform a new function (action) by typing over or deleting information or by adding new information to the screen. (Follow the procedures in this document to perform the new function.)
- Return to the TNLIST MAINTENANCE main menu screen (press function key 1).

5.2 Change TN Status

The valid TN status changes that you can perform are:

- From AV (available) to SL (selected) or RV (reserved)
- From SL (selected) to AV (available) or RV (reserved)
- From RV (reserved) to AV (available) or SL (selected)
- From UK (unknown) to AV (available), SL (selected), RV (reserved), or US (unselectable).

If the current status of a TN or range is US (unselectable), it *cannot* be changed to any other status.

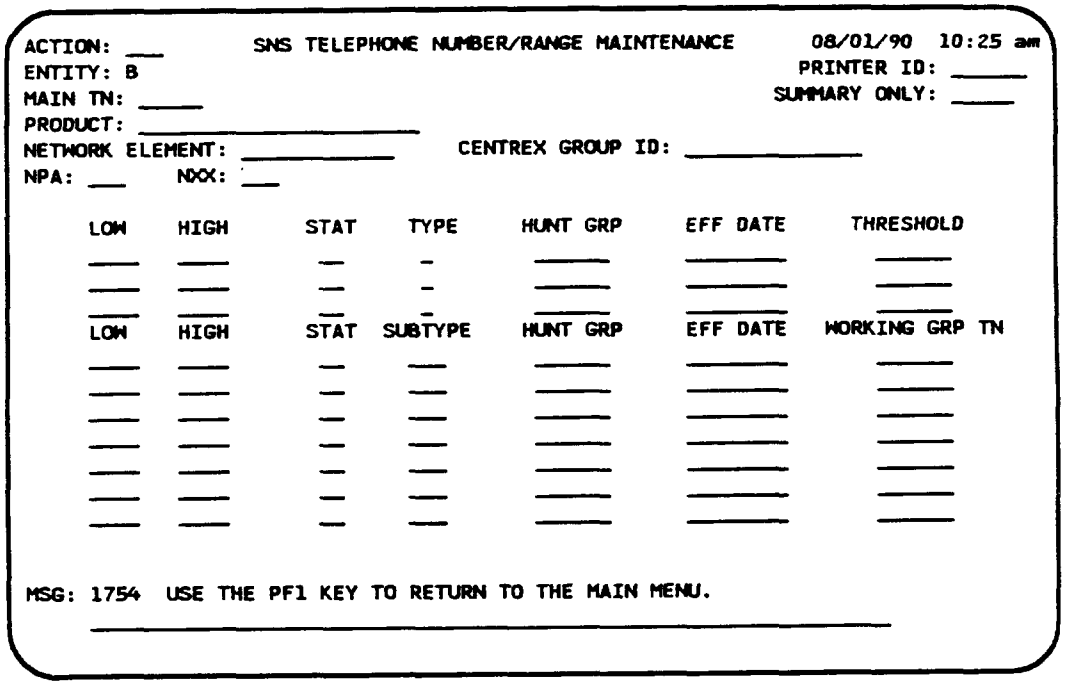

Figure 5-3. Telephone Number/Range Maintenance Screen

The ENTITY field is prepopulated with the entity you selected on the TNLIST MAINTENANCE main menu screen.

1. **ACTION:** (required)

   Enter CHG.

2. Press TAB to move past the PRINTER ID field. You do not need to enter data in this field.

3. **MAIN TN:** (required if customer group is RC and you are not entering CENTREX GROUP ID and NETWORK ELEMENT)

   Enter the main TN of the customer group.

4. Press TAB to move past the SUMMARY ONLY field. You do not need to enter data in this field.

5. Press TAB to move past the PRODUCT field. You do not need to enter information in this field.

6. **NETWORK ELEMENT:** (required with CENTREX GROUP ID if customer group is RC and you are not entering MAIN TN)

   Enter the network element (switch) name in alphanumeric characters.

7. **CENTREX GROUP ID:** (required with NETWORK ELEMENT if customer group is RC and you are not entering MAIN TN)

   Enter the Centrex group ID (up to 18 alphanumeric characters).

8. **NPA:** (required)

   Enter the three-digit NPA (area code).

9. **NXX:** (required)

   Enter the three-digit NXX (exchange) code.

   The cursor moves to the LOW field in the top group on the screen. You can enter the TN status change information in either the top or the bottom group on the screen. If you want to enter information in the bottom group, press TAB until the cursor reaches the LOW field in that group.*

* You can enter data on any line in the top or bottom group. The information is sorted within the group after you press RETURN/ENTER.

10. **LOW** (required)

    Enter the four-digit number that corresponds to the low end of the range of TNs you want to enter. (If you are entering an individual number, enter it in this field only.)

11. **HIGH** (optional)

    Enter the four-digit number that corresponds to the high end of the range of TNs you want to enter. This number must be greater than or equal to the number you entered in the LOW field. (If you entered an individual number in the LOW field, leave this field blank.)

12. **STAT** (required)

    Enter the *new* TN status code: AV (available), US (unselectable), RV (reserved), SL (selected), or UK (unknown).

13. Press TAB to move past the TYPE (or SUBTYPE) field. You do not need to enter data in this field.

14. Press TAB to move past the HUNT GRP field. You do not need to enter data in this field.

15. Press TAB to move past the EFF DATE field.

16. Press TAB to move past the WORKING GRP TN field.

    The cursor moves to the next LOW field in the bottom group. You can continue changing status codes.*

17. Press RETURN/ENTER when you have finished changing TN status codes. An error message appears in the MSG field if SNS encounters a user input error; otherwise, a "TRANSACTION SUCCESSFULLY PROCESSED" message appears.

The screen is redisplayed with the information you just entered. The cursor appears in the ACTION field.

* If you enter multiple TN ranges in the top or bottom group, they cannot overlap within their group.

```
ACTION: CHG        SNS TELEPHONE NUMBER/RANGE MAINTENANCE      08/01/90  10:25 am
ENTITY: B                                                    PRINTER ID: _____
MAIN TN: 2016993897                                          SUMMARY ONLY: ____
PRODUCT: _____________________
NETWORK ELEMENT: _____________     CENTREX GROUP ID: _____________
NPA: 201    NXX: 699

     LOW    HIGH      STAT    TYPE     HUNT GRP     EFF DATE      THRESHOLD
     3000   3900      RV      _        _____        ________      _____
     ____   ____      __      _        _____        ________      _____
     ____   ____      __      _        _____        ________      _____
     LOW    HIGH      STAT  SUBTYPE    HUNT GRP     EFF DATE   WORKING GRP TN
     3901   3901      SL      ___      _____        ________      _____
     ____   ____      __      ___      _____        ________      _____
     ____   ____      __      ___      _____        ________      _____
     ____   ____      __      ___      _____        ________      _____
     ____   ____      __      ___      _____        ________      _____
     ____   ____      __      ___      _____        ________      _____
     ____   ____      __      ___      _____        ________      _____

MSG: TRANSACTION SUCCESSFULLY PROCESSED
     ___________________________________________________________________
```

Figure 5-4. Screen after Changing TN Status Codes

At this time, you can do either of the following:

- Use the information currently displayed to perform a new function (action) by typing over or deleting information or by adding new information to the screen. (Follow the procedures in this document to perform the new function.)
- Return to the TNLIST MAINTENANCE main menu screen (press function key 1).

5.3 Delete TNs from a TN List

You can delete TNs from a TN list only if they have a status of AV (available) or US (unselectable).

```
ACTION: ___        SNS TELEPHONE NUMBER/RANGE MAINTENANCE      08/01/90  10:25 am
ENTITY: Q                                                      PRINTER ID: ______
MAIN TN: _____                                                 SUMMARY ONLY: _____
PRODUCT: ____________________
NETWORK ELEMENT: ___________      CENTREX GROUP ID: ____________
NPA: ___     NXX: ___

     LOW    HIGH      STAT    TYPE     HUNT GRP     EFF DATE     THRESHOLD
     ____   ____      __      _        ______       ________     ______
     ____   ____      __      _        ______       ________     ______
     ____   ____      __      _        ______       ________     ______
     LOW    HIGH      STAT   SUBTYPE   HUNT GRP     EFF DATE    WORKING GRP TN
     ____   ____      __     ___       ______       ________     ______
     ____   ____      __     ___       ______       ________     ______
     ____   ____      __     ___       ______       ________     ______
     ____   ____      __     ___       ______       ________     ______
     ____   ____      __     ___       ______       ________     ______
     ____   ____      __     ___       ______       ________     ______
     ____   ____      __     ___       ______       ________     ______

MSG: 1754  USE THE PF1 KEY TO RETURN TO THE MAIN MENU.
     ____________________________________________________________
```

Figure 5-5. Telephone Number/Range Maintenance Screen

The ENTITY field is prepopulated with the ENTITY you selected on the TNLIST MAINTENANCE main menu screen.

1. **ACTION:** (required)

   Enter DLT.

2. Press TAB to move past the PRINTER ID field. You do not need to enter data in this field.

3. **MAIN TN:** (required if customer group is RC and you are not entering NETWORK ELEMENT and CENTREX GROUP ID)

   Enter the main TN.

4. Press TAB to move past the SUMMARY ONLY field. You do not need to enter data in this field.

5. Press TAB to move past the PRODUCT field.
6. **NETWORK ELEMENT:** (required with CENTREX GROUP ID if customer group is RC and you are not entering MAIN TN)

   Enter the network element (switch) name in alphanumeric characters.
7. **CENTREX GROUP ID:** (required with NETWORK ELEMENT if customer group is RC and you are not entering MAIN TN)

   Enter the Centrex group ID (up to 18 alphanumeric characters).
8. **NPA:** (required)

   Enter the three-digit NPA (area code).
9. **NXX:** (required)

   Enter the three-digit NXX (exchange) code.

   The cursor moves to the LOW field in the top group on the screen. (You can enter the deleted TN information in either the top or the bottom group on the screen.)*
10. **LOW** (required if deleting individual TNs or TN ranges)

    Enter the four-digit number that corresponds to the low end of the range of TNs you want to delete. (If you are deleting an individual TN, enter it in this field only.)
11. **HIGH** (required if deleting a TN range)

    Enter the four-digit number that corresponds to the high end of the range of TNs you want to delete. This number must be greater than or equal to the number you entered in the LOW field. (If you entered an individual number in the LOW field, leave this field blank.)
12. Press TAB to move past the STAT field. You do not need to enter data in this field.
13. Press TAB to move past the TYPE or SUBTYPE field. You do not need to enter data in this field.
14. Press TAB to move past the HUNT GRP field. You do not need to enter data in this field.

* You can enter data on any line in the top or bottom group. The information is sorted within the group after you press RETURN/ENTER.

15. Press TAB to move past the EFF DATE field.

    If you are specifying individual TNs or TN ranges and you want to continue deleting TNs, press TAB until the cursor reaches the appropriate LOW field (in the top or bottom group) and enter the necessary information.*

16. Press RETURN/ENTER when you have finished deleting TNs. An error message appears in the MSG field if SNS encounters a user input error; otherwise, a "TRANSACTION SUCCESSFULLY PROCESSED" message appears.

The screen is redisplayed with the information you just entered. The cursor appears in the ACTION field.

```
ACTION: DLT        SNS TELEPHONE NUMBER/RANGE MAINTENANCE      08/01/90  10:25 am
ENTITY: Q                                                      PRINTER ID: ______
MAIN TN: _____                                                 SUMMARY ONLY: _____
PRODUCT:
NETWORK ELEMENT: ONESWITCH        CENTREX GROUP ID: ABCABCABCABCA
NPA: 201     NXX: 699

     LOW    HIGH      STAT    TYPE     HUNT GRP     EFF DATE     THRESHOLD
     2500   3000       __      _        ______      10-31-90      ______
     3016   3016       __      _        ______      ________      ______
     ____   ____       __      _        ______      ________      ______
     LOW    HIGH      STAT   SUBTYPE   HUNT GRP     EFF DATE   WORKING GRP TN
     ____   ____       __      ___      ______      ________      ______
     ____   ____       __      ___      ______      ________      ______
     ____   ____       __      ___      ______      ________      ______
     ____   ____       __      ___      ______      ________      ______
     ____   ____       __      ___      ______      ________      ______
     ____   ____       __      ___      ______      ________      ______
     ____   ____       __      ___      ______      ________      ______

MSG: TRANSACTION SUCCESSFULLY PROCESSED
     ______________________________________________________________
```

Figure 5-6. Screen after Deleting TNs

* If you enter multiple TN ranges in the top or bottom group, they cannot overlap within their group.

At this time, you can do either of the following:

- Use the information currently displayed to perform a new function (action) by typing over or deleting information or by adding new information to the screen. (Follow the procedures in this document to perform the new function.)
- Return to the TNLIST MAINTENANCE main menu screen (press function key 1).

6. Error Messages

The following error messages and descriptions are arranged in order by error code. They include:*

D0001 through D0002
U0046 through U7032

* All numbers within these ranges are not currently used.

Table 6-1. TNLIST Error Messages

TNLIST Error Messages	
Code	**Message**
D0001	Message not found for < exc_code >
	Possible Cause(s): The exception message for *exc_code* was not loaded in the Exception Code and the Exception Message tables.
	User Action: Notify your database administrator.
D0002	DB2 access failed for < exc_code > : Contact your DBA
	Possible Cause(s): DB2 access failure occurs when an application plan was not bound or a data access routine encounters an application or a system error.
	User Action: Notify your database administrator.
U0046	Screen access not authorized
	Possible Cause(s): The user ID entered during the IMS sign-on is not in an S1 security group or the user ID is in a security group that does not have access permission to this screen.
	User Action: If the user should be authorized to use this screen, add or move the user ID to a security group that has access permissions.
U0047	Contract access not authorized
	Possible Cause(s): The user ID entered during the IMS sign-on is not in an S1 security group or the user ID is in a security group that does not have access permission to this maintenance contract.
	User Action: If the user should be authorized to use this maintenance contract, add or move the user ID to a security group that has access permissions.

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TNLIST Error Messages	
Code	**Message**
U0048	Security processing failed. *Possible Cause(s):* Processing failed while making a system call or while trying to access the S1 security system. *User Action:* Contact Bellcore.
U5000	TIECODE, NTWKELEM, and CTXGRP TYPE must be correctly entered *Possible Cause(s):* One of the three fields identified was incorrectly entered on the screen. The system returns control to the processing module. *User Action:* Re-enter the corrected screen image.
U5001	MAIN_TN, CTXGRP ID, and INTERCEPT must be entered correctly. *Possible Cause(s):* One of the three fields identified was incorrectly entered on the screen. The system rolls back any database modifications and returns control to the processing module. *User Action:* Re-enter the corrected screen image.
U5002	INTERNAL PROCESSING FAILURE -- CHECK LOG FILE. *Possible Cause(s):* This message is displayed on the screen when a BAE function S5000 log file message has been posted. The system rolls back any database modifications and returns control to the processing module. *User Action:* Check the log file before notifying a System Programmer.

TNLIST Error Messages	
Code	**Message**
U5003	MAIN_TN, CTXGRP ID, NTWKELEM, NPA & NXX must be entered *Possible Cause(s):* One (or more) of the identified fields is missing from the screen. The system returns control to the processing module. *User Action:* Enter the appropriate data in its proper location and re-enter the screen.
U5004	NTWKELEM/CTXGRP ID not related to MAIN_TN (*xxx*) *Possible Cause(s):* The network element and Centrex group ID retrieved from the CTXGRP Table does not match the network element and Centrex group ID entered on the screen for the given main telephone number. The system returns control to the processing module. *User Action:* Determine which fields are unrelated and re-enter the correct data or simply enter the MAIN_TN alone, and the NTWKELEM and CTXGRP_ID will default to what is currently in the database.
U5005	MAIN_TN or NTWKELEM & CTXGRP ID must be entered *Possible Cause(s):* To retrieve an entry from the CTXGRP Table, either the MAIN_TN or the NTWKELEM and CTXGRP_ID fields must be entered. The system returns control to the processing module. *User Action:* Using the known values, re-enter the screen with either, but not both, keys.

TNLIST Error Messages	
Code	**Message**
U5006	NO TN Ranges have been entered *Possible Cause(s):* No TN ranges have reached the database processing routines. The system rolls back any database modifications and returns control to the processing module. *User Action:* Make sure that a TN range has been entered in the appropriate screen area. If the error recurs, call Bellcore.
U5050	CANNOT ADD TO DATABASE *Possible Cause(s):* An error condition, which was previously displayed on the screen, prohibits the addition of this entry to the database. The system rolls back any database modifications and returns control to the processing module. *User Action:* Refer to the condition described in the accompanying error message.
U5051	MAIN_TN (*xxx*) already exists *Possible Cause(s):* An entry in the database already exists for this main telephone number. The system returns control to the processing module. *User Action:* Confirm the existence of or change the telephone number you are trying to add.
U5052	NTWKELEM (*xxx*)/CTXGRP (*xxx*) already exist *Possible Cause(s):* An entry in the database already exists for this NTWKELEM and CTXGRP_ID combination. The system returns control to the processing module. *User Action:* Confirm the existence of or change the combination you are trying to add.

TNLIST Error Messages	
Code	**Message**
U5053	MAIN_TN (*xxx*) does not exist on table (*xxx*) *Possible Cause(s):* An entry in the database does not exist for this MAIN_TN. Therefore, it cannot be changed or deleted. The system returns control to the processing module. *User Action:* Confirm the existence of this MAIN_TN and verify the action you are trying to take.
U5054	NTWKELEM (*xxx*) & CTXGRP (*xxx*) not found *Possible Cause(s):* An entry in the database does not exist for this NTWKELEM and CTXGRP_ID combination. Therefore, it cannot be changed or deleted. The system returns control to the processing module. *User Action:* Confirm the existence of this combination and verify the action you are trying to take.
U5055	TN_RNG IN WHOLE/PART ALREADY IN TABLE *xxx* *Possible Cause(s):* You are trying to enter an existing or overlapping TN range. The system rolls back any database modifications and returns control to the processing module. *User Action:* Confirm the existence of the TN range and re-enter the corrected data.
U5056	MAINTN (*xxx*) HAS NO ASSOCIATED GROUP LIST ID *Possible Cause(s):* An inconsistency in the database tables has caused a breakdown in referential integrity. The system rolls back any database modifications and returns control to the processing module. *User Action:* Contact the Project DBA IMMEDIATELY! The database has been corrupted.

TNLIST Error Messages	
Code	**Message**
U5057	TN LINE (*xxx*) DOES NOT EXIST IN TABLE (*xxx*) *Possible Cause(s):* A nonexistent telephone number is being sought. The system rolls back any database modifications and returns control to the processing module *User Action:* Confirm the validity of your entry and re-enter the correct line number.
U5058	TN_RNG (LOW = (*xxx*) - HIGH = (*xxx*) NOT IN TABLE (*xxx*) *Possible Cause(s):* A nonexistent telephone number range is being sought. The system rolls back any database modifications and returns control to the processing module. *User Action:* Confirm the validity of your entry and re-enter the correct range values.
U5059	GRPLST_ID (*xxx*)/CTXLST_ID (*xxx*) FOR TN (*xxx*) NOT EQUAL *Possible Cause(s):* An inconsistency in the database tables has caused a breakdown in referential integrity. The system rolls back any database modifications and returns control to the processing module. *User Action:* Contact the Project DBA IMMEDIATELY! The database has been corrupted.
U5060	TN (*xxx*) HAS AN INVALID STATUS FOR DELETION *Possible Cause(s):* The telephone number cannot be deleted because it does not have an available status. The system rolls back any database modifications and returns control to the processing module. *User Action:* Either do not attempt to delete this number or change its status so that it can be deleted.

TNLIST Error Messages	
Code	**Message**
U5061	LINE (*xxx*) ON CTXLST TABLE HAS INVALID STATUS (*xxx*) FOR CHANGE *Possible Cause(s):* The telephone number cannot be changed because it does not have a changeable status. The system rolls back any database modifications and returns control to the processing module. *User Action:* You cannot change the status of this telephone number.
U5067	(*xxx*) NOT CURRENTLY SUPPORTED BY SYSTEM. *Possible Cause(s):* An unsupported feature has been invoked. The system rolls back any database modifications and returns control to the processing module. *User Action:* Delete the value causing the problem.
U5068	TN_RNG (LOW = (*xxx*)/HIGH = (*xxx*) HAS INVALID STATUS FOR DELETE *Possible Cause(s):* The TN range cannot be deleted because it does not have an available status. The system rolls back any database modifications and returns control to the processing module. *User Action:* Either do not attempt to delete this range or change its status so that it can be deleted.
U5069	CANNOT DELETE FROM DATABASE *Possible Cause(s):* An error condition, which was previously displayed on the screen, prohibits the deletion of this entry from the database. The system rolls back any database modifications and returns control to the processing module. *User Action:* Refer to the condition described in the accompanying error message.

TNLIST Error Messages	
Code	**Message**
U5070	TIECODE *xxx* NOT FOUND *Possible Cause(s):* A nonexistent TIECODE was entered. The system returns control to the processing module. *User Action:* Confirm the TIECODE and correct the input before re-entering the screen.
U5100	ADD *xxx* FAILED -- CONTACT YOUR DBA !!! *Possible Cause(s):* A Data Access Routine has failed. This prohibits the addition of this entry to the database. The system rolls back any database modifications and returns control to the processing module. *User Action:* Notify your database administrator.
U5150	GET *xxx* FAILED -- CONTACT YOUR DBA !!! *Possible Cause(s):* A Data Access Routine has failed. This prohibits the retrieval of this entry from the database. The system rolls back any database modifications and returns control to the processing module. *User Action:* Notify your database administrator.
U5200	CLOSE *xxx* FAILED -- CONTACT YOUR DBA !!! *Possible Cause(s):* A Data Access Routine has failed. This prohibits the closure of this database table. The system rolls back any database modifications and returns control to the processing module. *User Action:* Notify your database administrator.

TNLIST Error Messages	
Code	**Message**
U5250	UPDATE *xxx* FAILED -- CONTACT YOUR DBA !!! *Possible Cause(s):* A Data Access Routine has failed. This prohibits the update of this database table entry. The system rolls back any database modifications and returns control to the processing module. *User Action:* Notify your database administrator.
U5300	DELETE *xxx* FAILED -- CONTACT YOUR DBA !!! *Possible Cause(s):* A Data Access Routine has failed. This prohibits the deletion of this database table entry. The system rolls back any database modifications and returns control to the processing module. *User Action:* Notify your database administrator.
U5350	TABLE *xxx* COULD NOT COUNT # OF ENTRIES WITH STATUS *xxx* *Possible Cause(s):* A Data Access Routine has failed. This prohibits the use of the count option in a DB2 call statement. The system rolls back any database modifications and returns control to the processing module. *User Action:* Notify your database administrator.
U5501	ACTION MUST BE ADD, INQ, CHG, RPT, OR DLT *Possible Cause(s):* You entered an incorrect type of activity in the ACTION field on a maintenance screen. *User Action:* Correct the ACTION field by entering ADD, INQ, CHG, RPT, or DLT.

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TNLIST Error Messages	
Code	**Message**
U5502	PRINTER ID IS REQUIRED FOR ACTION RPT *Possible Cause(s):* You requested a report activity on a maintenance screen, and you left the PRINTER ID field blank. *User Action:* Enter the appropriate printer destination in the PRINTER ID field.
U5503	MAIN TN MUST BE 10 NUMERIC CHARACTERS *Possible Cause(s):* You entered a main TN that was either less than 10 characters or not numeric (contained characters other than 0 through 9). *User Action:* Correct the MAIN TN field(s) by entering 10 numeric characters (0 through 9).
U5504	NETWORK ELEMENT MUST BE 11 ALPHANUMERIC CHARACTERS *Possible Cause(s):* You entered a network element that was either less than 11 characters or not alphanumeric (contained characters other than A through Z and 0 through 9). *User Action:* Correct the NETWORK ELEMENT field by entering 11 alphanumeric characters.
U5505	TIECODE MUST BE 11 ALPHANUMERIC CHARACTERS *Possible Cause(s):* You entered a tie code that was either less than 11 characters or not alphanumeric (contained characters other than A through Z and 0 through 9). *User Action:* Correct the TIE CODE field by entering 11 alphanumeric characters.

TNLIST Error Messages	
Code	**Message**
U5506	DUPLICATE MAIN TNS ARE NOT ALLOWED *Possible Cause(s):* You entered duplicate main TNs in the MAIN TN fields on a maintenance screen. *User Action:* Replace or remove one of the duplicate main TNs.
U5507	DUPLICATE CENTREX GROUP IDS ARE NOT ALLOWED *Possible Cause(s):* You entered duplicate Centrex group IDs in the CENTREX GROUP ID fields on a maintenance screen. *User Action:* Replace or remove one of the duplicate Centrex group IDs.
U5508	REGULAR CENTREX GROUP(S) ADDED SUCCESSFULLY *Possible Cause(s):* A regular Centrex group was successfully added to the TNLIST database. *User Action:* None.
U5509	FUNCTION NOT YET SUPPORTED *Possible Cause(s):* The functionality you requested in the ACTION field on a Maintenance screen is not supported in the current release of SNS. *User Action:* Enter a different function in the ACTION field, or contact Bellcore for more information. Leave the ACTION field blank to obtain a list of valid actions.

TNLIST Error Messages	
Code	**Message**
U5510	GROUP TYPES CC, MC NOT YET SUPPORTED *Possible Cause(s):* You entered group type CC (Centrex family) or MC (pooled TN service group) in the CENTREX GROUP TYPE field. These group types are not supported in the current release of SNS. *User Action:* Enter a different group type in the CENTREX GROUP TYPE field, or contact Bellcore for more information. Leave the CENTREX GROUP TYPE field blank to obtain a list of the valid group types.
U5511	CENTREX GROUP ID REQUIRED FOR GROUP TYPE RC *Possible Cause(s):* While performing maintenance to a regular Centrex group (group type RC), you did not enter a Centrex group ID. *User Action:* Enter a Centrex group identifier in the CENTREX GROUP ID field.
U5512	CUSTOMER TIE CODE REQUIRED FOR GROUP TYPE RC *Possible Cause(s):* While adding a regular Centrex group (group type RC), you did not enter a customer tie code. *User Action:* Enter a customer tie code in the TIE CODE field.
U5513	INTERCEPT STATUS REQUIRED FOR GROUP TYPE RC *Possible Cause(s):* While adding a regular Centrex group (group type RC), you did not enter a default intercept status for each group. *User Action:* Enter a default intercept status in the DEFAULT INTERCEPT field for each Centrex group added.

TNLIST Error Messages	
Code	**Message**
U5514	GROUP TYPE MUST BE ONE OF: RC, CC, OR MC *Possible Cause(s):* You entered a group type other than RC (regular Centrex), CC (Centrex family), or MC (pooled TN service group) in the CENTREX GROUP TYPE field. *User Action:* Enter RC, CC, or MC in the CENTREX GROUP TYPE field, depending on the type of Centrex group.
U5515	INTERCEPT STATUS MUST BE ONE OF: DTC, DNT, CTC, CNT *Possible Cause(s):* You entered a default intercept status other than DTC (disconnect transfer calls), DNT (disconnect no transfer), CTC (change transfer calls), or CNT (change no transfer). *User Action:* Enter DTC, DNT, CTC, or CNT in the DEFAULT INTERCEPT field.
U5516	MAIN TN REQUIRED FOR GROUP TYPE RC *Possible Cause(s):* While performing maintenance on a regular Centrex group (group type RC), you did not enter a main TN. *User Action:* Enter a main TN in the MAIN TN field for the desired group.
U5517	NETWORK ELEMENT IS REQUIRED *Possible Cause(s):* While adding a regular Centrex group (group type RC), you did not enter a network element. *User Action:* Enter the 11-character CLLI code for the Centrex group in the NETWORK ELEMENT field.

TNLIST Error Messages	
Code	**Message**
U5518	ONE OF MAIN TN OR PRODUCT IS REQUIRED *Possible Cause(s):* While attempting to identify a Centrex group, you did not enter a main TN or product name. *User Action:* Enter a main TN in the MAIN TN field for group types RC or CC, or enter a product name in the PRODUCT field for group type MC.
U5519	ONLY ONE MAIN TN ALLOWED FOR GROUP TYPE RC *Possible Cause(s):* While attempting to identify a regular Centrex group (group type RC), you entered more than one main TN. *User Action:* Enter only one main TN in the MAIN TN field for a regular Centrex group.
U5520	PRODUCT ENTRY IS INVALID FOR GROUP TYPE CC *Possible Cause(s):* While attempting to add a Centrex family group (group type CC), you entered a product identifier. *User Action:* Remove the product identifier from the PRODUCT field.
U5521	PRODUCT ENTRY IS INVALID FOR GROUP TYPE RC *Possible Cause(s):* While attempting to add a regular Centrex group (group type RC), you entered a product identifier. *User Action:* Remove the product identifier from the PRODUCT field.

TNLIST Error Messages	
Code	**Message**
U5522	PRODUCT IS A REQUIRED ENTRY FOR GROUP TYPE MC *Possible Cause(s):* While attempting to add a pooled TN service group (group type MC), you did not enter a product identifier. *User Action:* Enter a product identifier in the PRODUCT field.
U5523	ONLY ONE OF MAIN TN OR TIE CODE OR (NE & CTX GROUP) IS ALLOWED *Possible Cause(s):* While deleting a regular Centrex group (group type RC) or a Centrex family (group type CC), you entered too much information to identify the group or family. You must enter only one of the following three options: (1) a main TN, (2) a network element and a group identifier, or (3) a tie code. (A tie code should be used only to delete an entire Centrex family.) *User Action:* Enter a main TN, a network element and a group identifier, or a tie code.

TNLIST Error Messages	
Code	**Message**
U5524	ONE OF MAIN TN OR TIE CODE OR (NE & CTX GROUP) IS REQUIRED *Possible Cause(s):* While deleting a regular Centrex group (group type RC) or a Centrex family (group type CC), you did not enter information to identify the group. You must enter one of the following three options: (1) a main TN, (2) a network element and a Centrex group identifier, or (3) a tie code. (A tie code should be used only to delete an entire Centrex family.) *User Action:* Enter a main TN, a network element and a Centrex group ID, or a tie code.
U5525	MAIN TNS MUST MATCH *Possible Cause(s):* While attempting to identify a Centrex group or family, you entered main TNs that did not match. *User Action:* Enter identical main TNs in the MAIN TN fields to identify the Centrex group or family.
U5526	CTX GROUP(S) SUCCESSFULLY DELETED *Possible Cause(s):* A Centrex group was successfully deleted. *User Action:* None.
U7000	ACTION MUST BE ADD, INQ, CHG, REP, OR DLT *Possible Cause(s):* You requested an invalid action. The system returns control to the calling module. *User Action:* Enter ADD, INQ, CHG, DLT, or RPT in the screen's action field.

TNLIST Error Messages	
Code	**Message**
U7001	PRINTER ID IS REQUIRED *Possible Cause(s):* A printer ID is required for the action input. The system returns control to the calling module. *User Action:* Indicate a printer ID.
U7002	CUSTOMER MAIN TN MUST BE 10 DIGIT NUMERIC *Possible Cause(s):* You entered a value which is non-numeric and/or less than 10 characters. The system returns control to the calling module. *User Action:* Enter a 10-digit numeric main TN.
U7003	EFFECTIVE DATE INPUT IS NOT VALID FOR A PRODUCT ENTRY *Possible Cause(s):* You entered an effective date input for an MVP or a non-Centrex group. The system returns control to the calling module. *User Action:* Remove the effective date input.
U7004	EFFECTIVE DATE INPUT IS NOT VALID FOR A STATUS UK OR SL (for future use) *Possible Cause(s):* You entered an effective date input for TNs associated with an unknown or selected status. The system returns control to the calling module. *User Action:* Remove the effective date input.
U7005	EFFECTIVE DATE MUST BE TODAY'S DATE OR LATER (for future use) *Possible Cause(s):* You entered an effective date that was earlier than today's date. The system returns control to the calling module. *User Action:* Enter a valid effective date.

TNLIST Error Messages	
Code	**Message**
U7006	HIGHLIGHTED TN ENTRY MUST BE A 4 DIGIT NUMERIC *Possible Cause(s):* You entered a TN line that is blank, non-numeric, and/or less than four characters. The system returns control to the calling module. *User Action:* Enter a four-character numeric TN line.
U7007	INVALID STATUS. MUST BE ONE OF: UK, SL, AV, RV, US *Possible Cause(s):* You entered an invalid TN status. The system returns control to the calling module. *User Action:* Enter a valid TN status.
U7008	INVALID TN TYPE. MUST BE ONE OF A-Z *Possible Cause(s):* You entered an invalid TN type. The system returns control to the calling module. *User Action:* Enter a valid TN type (i.e., A through Z).
U7009	NPA MUST BE A 3 DIGIT NUMERIC *Possible Cause(s):* You entered a value that is non-numeric and/or less than three characters. The system returns control to the calling module. *User Action:* Enter a three-character numeric NPA.
U7010	NXX MUST BE A 3 DIGIT NUMERIC *Possible Cause(s):* You entered a value which is non-numeric and/or less than three characters. The system returns control to the calling module. *User Action:* Enter a three-character numeric NXX.

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TNLIST Error Messages	
Code	**Message**
U7011	THRESHOLD MUST BE A NUMERIC *Possible Cause(s):* You entered a value that is non-numeric. The system returns control to the calling module. *User Action:* Enter a numeric value or leave the field blank.
U7012	SUMMARY ONLY FIELD IS REQUIRED FOR ACTION OF RPT *Possible Cause(s):* You did not enter a Summary Only value for a report. The system returns control to the calling module. *User Action:* Enter Y or N (yes or no) in the Summary Only field.
U7013	FUNCTIONALITY NOT SUPPORTED YET *Possible Cause(s):* The functionality for this action is not currently supported. The system returns control to the calling module. *User Action:* Enter another action in the Action field.
U7016	CENTREX GROUP ID MUST BE ALPHANUMERIC AND/OR HYPHEN *Possible Cause(s):* You entered a Centrex group ID which contains a character that is not alphanumeric or a hyphen. The system returns control to the calling module. *User Action:* Enter a valid Centrex group ID.
U7017	PROD, NTWK ELM. AND CTX GRP ID REDUNDANT IF MAIN TN INPUT *Possible Cause(s):* You entered a main TN and additional group level identification. The system returns control to the calling module. *User Action:* Blank out the redundant fields.

TNLIST Error Messages	
Code	**Message**
U7018	NTWK ELM. REQUIRED WITH CTX GRP ID *Possible Cause(s):* You did not enter a network element with a Centrex group ID. The system returns control to the calling module. *User Action:* Enter a network element in the Network Element field.
U7019	PRODUCT INVALID WITH CTX GRP ID *Possible Cause(s):* You entered input in both the Product and the CTX GRP ID fields. The system returns control to the calling module. *User Action:* Blank out either the CTX GRP ID or the Product input.
U7020	NTWK ELM. REQUIRED WITH PRODUCT *Possible Cause(s):* You entered product input without a network element. The system returns control to the calling module. *User Action:* Enter a network element in the Network Element field.
U7021	LOW TN MUST BE LESS THAN OR EQUAL TO HIGH TN *Possible Cause(s):* You entered a low TN line that is higher than the corresponding high TN line. The system returns control to the calling module. *User Action:* Enter a low TN that is less than or equal to its corresponding high TN line.

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TNLIST Error Messages	
Code	**Message**
U7022	OVERLAPPING RANGES ARE NOT ALLOWED *Possible Cause(s):* You entered a TN range that overlaps with another TN range on the screen. The system returns control to the calling module. *User Action:* Determine which ranges overlap and correct the corresponding TN line entries.
U7023	DATE MUST BE 01..12/01..31/00..99 (for future use) *Possible Cause(s):* You entered an invalid date format. The system returns control to the calling module. *User Action:* Enter a valid date format.
U7024	SUBRANGE MUST BE A SUBSET OF TOP GROUP RANGES *Possible Cause(s):* You entered a subrange that is not a subset of a range entered in the top half of the screen. The system returns control to the calling module. *User Action:* Enter a range that is a subset of a range in the top half of the screen.
U7025	SUBTYPE MUST BE AN ALPHABETIC CODE *Possible Cause(s):* You entered subtype input that is not alphabetic. The system returns control to the calling module. *User Action:* Enter an alphabetic subtype.
U7026	WORKING GROUP TN MUST BE A 10 DIGIT NUMERIC *Possible Cause(s):* You entered a TN that is non-numeric and/or less than 10 characters. The system returns control to the calling module. *User Action:* Enter a valid 10-character numeric TN in the Working Group field.

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TNLIST Error Messages	
Code	**Message**
U7027	FUNCTIONALITY FOR MVP GROUPS NOT YET SUPPORTED *Possible Cause(s):* You entered product and network element input. The system returns control to the calling module. *User Action:* Blank out the Product field and enter either a main TN or a Centrex group ID and network element to identify a regular Centrex group.
U7028	MAIN TN OR CTX GRP ID AND NETWK ELEMENT MUST BE INPUT *Possible Cause(s):* You did not enter any group level identification (i.e., a main TN or a Centrex group ID and network element). The system returns control to the calling module. *User Action:* Enter a main TN or a Centrex group ID and network element.
U7029	ONLY TN RANGES SHOULD BE INPUT ON A DELETE *Possible Cause(s):* You entered a field other than TN line information in the range areas of the screen. The system returns control to the calling module. *User Action:* Blank out all fields except TN line information in the range areas of the screen.
U7030	EFFECTIVE DATE INPUT FUNCTIONALITY NOT YET SUPPORTED *Possible Cause(s):* You entered an effective date input. The system returns control to the calling module. *User Action:* Blank out the effective date input.

TNLIST Error Messages	
Code	**Message**
U7031	CHANGE FUNCTIONALITY FOR THIS FIELD NOT YET SUPPORTED *Possible Cause(s):* You entered data in a field other than TN line and TN status in the range areas of the screen when the action code is change. The system returns control to the calling module. *User Action:* Blank out all fields except TN line and TN status in the range areas of the screen.
U7032	TRANSACTION SUCCESSFULLY PROCESSED *Possible Cause(s):* The transaction was successful. The system returns control to the calling module. *User Action:* None.

A. Appendix A — Guide to Acronyms

AIN	Advanced Intelligent Network
BAE	Bellcore Application Environment
BCC	Bellcore Client Company
CAT	Centrex Access Treatment
CCF	Customized Calling Feature
CMT	Communication Terminal Table
CPU	Central Processing Unit
DAR	Data Access Routines
DASD	Direct Access Store Device
DBA	Database Administrator
DBD	Database Definition
DBMS	Database Management System
DBRC	Database Recovery Control
DBRM	Database Request Modules
DCL	Data Control Language
DDL	Data Definition Language
DPS	Display Processing System
FC	Functional Component
FCIF	Flexible Computer Interface Form
FID	Field Identifier
GOT	Generic Output Translator
GTS	Generic Table System
HDAM	Hierarchic Direct Access Method
IMP	Immediate Message Poster
IMS	Information Management System
ISDN	Integrated Services Digital Network
I/O	Input/Output
JCL	Job Control Language
LCC	Line Class Code
LFACS	Loop Facilities Assignment and Control System
MVP	Multi-Variety Package
NMAG	Network Marketing Area Guide
ORT	Output Routing Table
PLBB	Processing Layer Building Block
PREMIS	Premises Information System
PSB	Program Specification Block
RAA	Root Addressable Area

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RAP	Root Anchor Points
RBA	Relative Byte Address
RCU	Recent Change USOCs
RMF	Resource Measurement Facility
SAC	Service Activation Controller
SNS	Service Negotiation Support
SOE	Standard Operating Environment
SOP	Service Order Processor
SQL	Structured Query Language
STOGRP	Storage Group
TCIS	Telecommunications Interface System
TN	Telephone Number
TNLIST	Telephone Number List
TTS	TIRKS Table System
ULBB	User Layer Building Block
USOC	Universal Service Order Code
VSAM	Virtual Sequential Access Method
VTOC	Volume Table of Contents

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