Tekelec EAGLE® 5 Integrated Signaling System

Release 39.2

Feature Notice

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Patents

This product is covered by one or more of the following U.S. and foreign patents:

U.S. Patent Numbers:

5,732,213; 5,953,404; 6,115,746; 6,167,129; 6,324,183; 6,327,350; 6,456,845; 6,606,379; 6,639,981; 6,647,113; 6,662,017; 6,735,441; 6,745,041; 6,765,990; 6,795,546; 6,819,932; 6,836,477; 6,839,423; 6,885,872; 6,901,262; 6,914,973; 6,940,866; 6,944,184; 6,954,526;6,954,794; 6,959,076; 6,965,592; 6,967,956; 6,968,048; 6,970,542; 6,987,781; 6,987,849; 6,990,089; 6,990,347; 6,993,038; 7,002,988; 7,020,707; 7,031,340; 7,035,239; 7,035,387; 7,043,000; 7,043,001; 7,043,002; 7,046,667; 7,050,456; 7,050,562; 7,054,422; 7,068,773; 7,072,678; 7,075,331; 7,079,524; 7,088,728; 7,092,505; 7,108,468; 7,110,780; 7,113,581; 7,113,781; 7,117,411; 7,123,710; 7,127,057; 7,133,420; 7,136,477; 7,139,388; 7,145,875; 7,146,181; 7,155,206; 7,155,243; 7,155,505; 7,155,512; 7,181,194; 7,190,702; 7,190,772; 7,190,959; 7,197,036; 7,206,394; 7,215,748; 7,219,264; 7,222,192; 7,227,927; 7,231,024; 7,242,695; 7,254,391; 7,260,086; 7,260,207; 7,283,969; 7,286,516; 7,286,647; 7,286,839; 7,295,579; 7,299,050; 7,301,910; 7,304,957; 7,318,091; 7,319,857; 7,327,670

Foreign Patent Numbers:

EP1062792; EP1308054; EP1247378; EP1303994; EP1252788; EP1161819; EP1177660; EP1169829; EP1135905; EP1364520; EP1192758; EP1240772; EP1173969; CA2352246

Ordering Information

Your Tekelec Sales Representative can provide you with information about how to order additional discs.

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Feature Notice

Feature Content

Introduction

Feature notices are distributed to customers with each new release of software.

This *Feature Notice* includes a brief overview of each feature, lists new hardware required (if any), provides the hardware baseline for this release, and explains how to find the *Release Notice* and other customer documentation on the Customer Support Site.

Feature Notice Updates

The following updates have been made to the EAGLE 5 ISS Release 39.2 Feature Notice since Revision A.

- Mapping of original OPC to STPLAN/ECAP
  The Mapping of original OPC to STPLAN/ECAP enhancement allows the originating point code (OPC) from the incoming MSU to be sent to the **stplan** application
- Update to the add-gtwyls SEAS Command
  The **`add-gtwyls`** SEAS command is updated to allow the **gwsa**, **gwsd**, and **gwsm** parameters to default to the current values for those parameters in the linkset.
- The Additional Subscriber Data Support enhancement is updated to indicate that the ATINP feature supports Additional Subscriber Data.
- The Feature Control Requirements for ATINP are updated to reflect the correct action for turning on the GTT feature bit.
- The Feature Control Requirements for TIF are updated to reflect the correct action for turning on the GTT and GWS feature bits.
- The EAGLE 5 ISS Card Overview Table is updated to display the correct part numbers for the TSM-1024 cards.
- The Error Messages are updated to display the most current messages.
- The Feature Restrictions table is updated to remove the TINP feature.

The changes are marked with revision bars.

New Features

The EAGLE 5 ISS Release 39.2 includes the following new features:

- ATI Number Portability Query (ATINP)
  The ATINP feature is used to obtain number portability and routing information for a subscriber directly from the EAGLE 5 ISS number portability database. This feature also supports Additional Subscriber Data.

- Enhanced GSM MAP Screening
  The existing Enhanced GSM MAP Screening (EGMS) feature is updated to allow messages to cross between ITUI and ITUN domains and spare domains. Messages remain restricted between ANSI and ITU domains. The feature is also updated to allow provisioning of the translation type for an outgoing message per EGMS ruleset and to support non-segmented XUDT and XUDTS messages for GT-routed and MTP-routed GSM messages.

- Remote Backup
  The Remote Backup feature allows the database to be saved and stored to a remote server, using FTP.

- Remote Upgrade Download
  The Remote Upgrade Download feature allows new software to be downloaded to the EAGLE 5 ISS from a remote server, using FTP.

- Triggerless ISUP Framework
  The Triggerless ISUP Framework (TIF) is a common framework used to process ISUP messages.

- TIF Number Portability
  The TIF Number Portability feature uses the TIF to perform number portability functions.

- TIF SCS Forwarding
  The TIF SCS Forwarding feature allows messages to be forwarded to the Tekelec Service Creation System (SCS) after TIF processing has completed.

- TIF Simple Number Substitution
  The TIF Simple Number Substitution feature uses the TIF to replace the calling party in an ISUP IAM message with a configured calling party number from the TIFOPTS table.

Other Changes

The EAGLE 5 ISS Release 39.2 contains the following enhancements:

- Additional Subscriber Data Support
  The existing G-Port, G-Port SRI Query for Prepaid, and INAP Number Portability/ANSI-41 INP Query features are enhanced to support Additional Subscriber Data. The ATINP feature, introduced in EAGLE 5 ISS Release 39.2, also supports Additional Subscriber Data.

- Migration Prefix
  The existing IS-41 to GSM Migration feature is enhanced to provision a migration prefix.

- MSU Key Enhancements for MTP Mode Transaction Based GTT LS
  An enhanced MTP algorithm is provided for processing UDT and UDTS messages.

- Multiple Local SCCP Subsystems
  The Multiple Local SCCP Subsystems (MLSS) enhancement allows the ATINPQ, EIR, INP, and V-Flex subsystems (AINPQ, ATINP, EIR, INP, and V-Flex features) to co-exist in the same EAGLE 5 ISS.

- Unknown Subscriber
  The Unknown Subscriber enhancement provides processing if a database query indicates that the specified directory number is not known.

- Update to the chg-measopts Command
  Controls for multiple daily and hourly reports are moved from the **chg-measopts** command to the **chg-mtc-measopts** command.

- Update to the rept-imt-lvl1 Command
  The **rept-imt-lvl1** command is enhanced to display counts of MSUs returned with errors and MSUs discarded with no report.

- Update to the rept-stat-card Command
  The **rept-stat-card** command is enhanced to display the CARD WARNING field for an HC-MIM or E5-E1T1 card in a **mode=full** report if the specified card is using an obsolete IC framer (version 2.1).

- Update to the rept-stat-sys Command
  The **rept-stat-sys** command is enhanced to display subsystem status for the INP subsystem.

- Update to the rtrv-gta and rtrv-gtt Commands
  The **rtrv-gta** and **rtrv-gtt** commands are enhanced to report the number of entries that are displayed by the command.

- Update to the Software Upgrade Procedure
  The software upgrade procedure is updated to require a software access key and to allow provisioning of the disk that contains the source.

Operational Changes

The following sections describe the alarms and error messages that are new or changed in EAGLE 5 ISS Release 39.2:

- Unsolicited Alarm Messages
- Unsolicited Information Messages
- UAM Format Change
- Error Messages

ATI Number Portability Query (ATINP)

The ATINP feature is used to obtain number portability and routing information for a subscriber directly from the EAGLE 5 ISS number portability database. The feature allows a node to send a GSM MAP_Any_Time_Interrogation (ATI) query directly to the EAGLE 5 ISS (which supports the ATINPQ local subsystem) to obtain number portability and routing information for a mobile subscriber from the number portability database. This information is encoded in the ATI response message.

The ATINP feature supports RT-on-SSN and RT-on-GT messages to the EAGLE 5 ISS TSPC/ATINP CPC if the message criteria matches the SSN and service selectors, respectively, for ATINP. If an SCCP message arrives and matches the ATINP service selectors, then it is automatically forwarded to the ATINPQ local subsystem.

The ATINP feature supports ASD digits that are returned from the database lookup for an individual directory number (DN) or a range of DNs. If ASD digits are found in the lookup, then the digits are used to format the routing number, MSISDN, and IMSI entities in the outgoing response.

NOTE: The ATINP feature must be turned on before full processing of an ATI message by the ATINPQ subsystem can be performed.

Feature Control Requirements

The ATINP feature has the following feature control requirements:

- FAK for part number 893-0221-01
- The GTT feature bit must be turned on before the ATINP feature can be enabled.
- The **defcc** parameter for the **chg-stpopts** command must have a value other than **none**.
- The ATINP feature can be turned on and off.
- A temporary FAK cannot be used to enable the feature.
- The ATINP feature cannot exist on the same node as the LNP features.

Hardware Requirements

The ATINP feature requires Service Module cards. The ATINP feature cannot be enabled if TSM cards running the **sccp** application are provisioned in the system. TSM cards running the **sccp** application cannot be provisioned if the ATINP feature is enabled.

Commands

The following commands are added or enhanced to support the ATINP feature. For a complete description of these commands, refer to the *Commands Manual* of your 39.2 documentation set.

- **act-ftp-trns**—Enhanced to support the ATINPQ file type.
- **act-upgrade**—Enhanced to display the status of the EPAP database when the ATINP feature is enabled.
- **alw/ent/init-card**—Enhanced to allow the **data** parameter to be specified if the ATINP feature is enabled and to prevent TSM cards from being provisioned in the system if the ATINP feature ie enabled.
- **alw/inh-map-ss**—Enhanced to support the ATINPQ subsystem.
- **chg/rtrv-atinpqopts**—Added to provision the data that is used to process messages by the ATINP feature. The **rtrv-atinpqopts** command is used to display the data used for number conditioning. The following examples display output for the **rtrv-atinpqopts** command.
  Example 1 displays the output that results when no ATINPQ options are provisioned.

  rtrv-atinpqopts

```
    tekelecstp 08-06-04 07:53:46 EST  EAGLE 39.2.0

    ATINPQ OPTIONS
    ----------------------
    ATIACKIMSI   = NONE
    ATIACKMSISDN = MSISDN
    ATIACKRN     = RN
    SNAI         = INTL
    ATIDLM       = NONE
    ATIDFLTRN    = NONE
    ATINPTYPE    = ANY
;
```

  Example 2 displays the output that results when selected ATINPQ options are provisioned.

  rtrv-atinpqopts

```
    tekelecstp 08-06-04 07:55:30 EST  EAGLE 39.2.0

    ATINPQ OPTIONS
```

```
    --------------------
    ATIACKIMSI   = IMSI
    ATIACKMSISDN = NONE
    ATIACKRN     = RNSP
    SNAI         = NAT
    ATIDLM       = 254565819324258
    ATIDFLTRN    = 731964828246917
    ATINPTYPE    = ALWAYS
;
```

- **chg/rtrv-mtc-measopts**—Added to facilitate control of hourly and daily scheduled maintenance reports.
  The following example displays output for the **rtrv-mtc-measopts** command.

  rtv-mtc-measopts

```
    tekelecstp 08-08-01 16:31:40 EST  EAGLE 39.2.0
    MTCHLNP          = off
    MTCHNP           = off
    MTCHMAP          = off
    MTCHEIR          = off
    MTCHVFLEX        = on
    MTCHATINPQ       = off
    MTCDSTP          = off
    MTCDLINK         = off
    MTCDLNKSET       = off
    MTCDSTPLAN       = off
    MTCDLNP          = off
    MTCDNP           = off
    MTCDMAP          = off
    MTCDEIR          = off
    MTCDVFLEX        = on
    MTCDATINPQ       = off
    MTCDSCTPASOC     = off
    MTCDSCTPCARD     = off
    MTCDUA           = off

;
```

- **chg/rtrv-sid**—Enhanced to support the ATINPQ subsystem. The **rtrv-sid** command displays the ATINPQ information when relevant.
  The following example displays output for the **rtrv-sid** command when the ATINP options are provisioned.

  rtrv-sid:cpctype=atinpq

```
    tekelecstp 08-06-22 15:07:48 EST  EAGLE 39.2.0

       PCA            PCI         PCN               CLLI             PCTYPE
       001-001-001    2-002-2     01234             tekelecstp       ANSI

       CPCA (ATINPQ)
       004-004-004

       CPCI (ATINPQ)
       5-012-0

       CPCN (ATINPQ)
       12345

;
```

- **chg/rtrv-stpopts**—Enhanced to support the ATINP feature.
- **chg-th-alm**—Enhanced to provide threshold alarms for the ATINPQ subsystem.
- **enable/chg/rtrv-ctrl-feat**—Enhanced to enable and turn on the ATINP feature.
  The following example displays partial output for the **rtrv-ctrl-feat** command when the ATINP feature is enabled and turned on.

rtrv-ctrl-feat

```
    rlghncxa03w 08-08-29 16:40:40 EST  EAGLE 39.2.0

    The following features have been permanently enabled:
    Feature Name              Partnum    Status  Quantity
    HC-MIM SLK Capacity       893012707  on            64
    Command Class Management  893005801  on          ----
    LNP Short Message Service 893006601  on          ----
    Prepaid SMS Intercept Ph1 893006701  on          ----
    Intermed GTT Load Sharing 893006901  on          ----
    AMGTT                     893021801  on          ----
    G-Flex MAP Layer Routing  893021701  on          ----
    G-Flex                    893021901  on          ----
    VFLEX                     893016701  on          ----
    ATINP                     893022101  on          ----
;
```

- **ent/chg/dlt-map**—Enhanced to administer the true point code for the ATINPQ subsystem.
- **ent/chg/dlt/rtrv-srvsel**—Enhanced to support the **atinp** service selector.
  The following example displays output for the **rtrv-srvsel** command.

  rtrv-srvsel:serv=atinp

```
    tekelecstp 08-06-24 15:43:22 EST  EAGLE5 39.2.0
    GTII  TT   NP       NAI   SSN   SNP   SNAI   SERV
    4     0    e214     intl  8     ---   ---    atinp

;
```

- **ent/chg/dlt/rtrv-ss-appl**—Enhanced to support the ATINPQ subsystem.
  The following example displays output for the **rtrv-ss-appl** command.

  rtrv-ss-appl

```
    tekelecstp 08-06-24 14:42:38 EST  EAGLE 39.2.0
    APPL   SSN  STAT
    EIR    11   online
    ATINPQ 10   online
    SS-APPL TABLE IS 40% FULL (2 OF 5)
;
```

- **ent-trace**—Enhanced to support the ATINP feature.
- **init-network**—Enhanced to verify warm restart capability for VSCCP cards when the ATINP feature is enabled.
- **init-sys**—Enhanced to support the ATINP feature.
- **rept-ftp-meas**—Enhanced to transfer measurements for an ATINP query.
- **rept-stat-db**—Enhanced to display the status of MPS databases and Service Module Cards if the ATINP feature is enabled.
- **rept-stat-mps**—Enhanced to display the status of the EPAP subsystem if the ATINP feature is enabled.
  The following example displays the output that results if the ATINP feature is enabled.

  rept-stat-mps

```
    rlghncxa03w 08-06-24 10:37:22 EST  EAGLE 39.2.0
                       VERSION       PST            SST        AST
    EPAP A             027-015-000   IS-NR          Active     -----
    CRITICAL PLATFORM    ALARM DATA = No Alarms
    MAJOR    PLATFORM    ALARM DATA = No Alarms
    MINOR    PLATFORM    ALARM DATA = No Alarms
    CRITICAL APPLICATION ALARM DATA = No Alarms
    MAJOR    APPLICATION ALARM DATA = No Alarms
    MINOR    APPLICATION ALARM DATA = No Alarms
          ALARM STATUS = No Alarms
```

```
                    VERSION       PST            SST        AST
    EPAP B          027-015-000   OOS-MT         Fault      Standby
    CRITICAL PLATFORM    ALARM DATA = No Alarms
    MAJOR    PLATFORM    ALARM DATA = h'0123456789ABCDEF
    MINOR    PLATFORM    ALARM DATA = h'0123456789ABCDEF
    CRITICAL APPLICATION ALARM DATA = No Alarms
    MAJOR    APPLICATION ALARM DATA = h'0123456789ABCDEF
    MINOR    APPLICATION ALARM DATA = No Alarms
          ALARM STATUS = ** 0371  Major Platform Failure(s)

    CARD   PST          SST       ATINPQ STAT
    1106 P IS-NR        Active    ACT
    1201   IS-ANR       Active    SWDL
    1205   OOS-MT-DSBLD Manual    -------
    1302   OOS-MT       Isolated  -------
    1310   IS-ANR       Standby   SWDL

    CARD 1106 ALARM STATUS = No Alarms
      DSM PORT A:      ALARM STATUS       = No Alarms
      DSM PORT B:      ALARM STATUS       = No Alarms
    CARD 1201 ALARM STATUS = No Alarms
      DSM PORT A:      ALARM STATUS       = **  0084 IP Connection Unavailable
      DSM PORT B:      ALARM STATUS       = **  0084 IP Connection Unavailable
    CARD 1205 ALARM STATUS = No Alarms
      DSM PORT A:      ALARM STATUS       = **  0084 IP Connection Unavailable
      DSM PORT B:      ALARM STATUS       = **  0084 IP Connection Unavailable
    CARD 1302 ALARM STATUS = ** 0013 Card is isolated from the system
      DSM PORT A:      ALARM STATUS       = **  0084 IP Connection Unavailable
      DSM PORT B:      ALARM STATUS       = **  0084 IP Connection Unavailable
    CARD 1310 ALARM STATUS = No Alarms
      DSM PORT A:      ALARM STATUS       = **  0084 IP Connection Unavailable
      DSM PORT B:      ALARM STATUS       = **  0084 IP Connection Unavailable
    Command Completed.
;
```

- **rept-stat-sccp**—Enhanced to display the status of the ATINPQ service. The following examples display output for the **rept-stat-sccp** command when the ATINP feature is enabled.
  Example 1 displays the output that results when the status of all SCCP and VSCCP cards is requested.

  rept-stat-sccp

```
    tekelecstp 08-06-14 14:33:16 EST  EAGLE 39.2.0
    SCCP SUBSYSTEM REPORT IS-NR          Active     -----
         SCCP ALARM STATUS = No Alarms
    INPQ SUBSYSTEM REPORT IS-NR          Active     -----
         INPQ:  SSN STATUS = ----------  MATE SSN STATUS = ----------
         INP ALARM STATUS = No Alarms
    EIR  SUBSYSTEM REPORT IS-NR          Active     -----
         EIR:   SSN STATUS = Allowed     MATE SSN STATUS = ----------
         EIR ALARM STATUS = No Alarms
    ATINPQ SUBSYSTEM REPORT IS-NR          Active     -----
         ATINPQ:   SSN STATUS = Allowed   MATE SSN STATUS = ----------
         ATINPQ ALARM STATUS = No Alarms

    SCCP Cards Configured= 1      Cards IS-NR= 1
    System Daily Peak SCCP Load       1      TPS 02-01-14 14:18:27
    System Overall Peak SCCP Load     1      TPS 02-01-14 14:18:27
    System Total SCCP Capacity        850    TPS (850    max SCCP Capacity)
    System SCCP Capacity Calc. Method (N)
    System TPS Alarm Threshold        680    TPS ( 80% System   N SCCP Capacity)

    CARD   VERSION      PST           SST        AST       MSU   CPU
                                                           USAGE USAGE
    ------------------------------------------------------------------
    1101 P 130-001-000  IS-NR         Active     -----       0%    5%
    ------------------------------------------------------------------
    SCCP Service Average MSU Capacity =   0%   Average CPU Capacity =   5%

    AVERAGE CPU USAGE PER SERVICE:
      GTT   =   0%
      INPMR =   0%  INPQ  =   0%
```

```
  EIR   =   1%
  ATINPQ=   0%

TOTAL SERVICE STATISTICS:
                                  FAIL     REROUTE\      FORWARD
  SERVICE    SUCCESS    ERRORS   RATIO     WARNINGS        TO GTT     TOTAL
  GTT:             0         0      0%            -             -         0
  INPMR:           0         0      0%            0             0         0
  INPQ:            0         0      0%            -             -         0
  EIR:             1         0      0%            -             -         1
  ATINPQ:          0         0      0%            -             -         0

Command Completed.
;
```

Example 2 displays the output that results when the status of services running on a specified card is requested.

rept-stat-sccp:loc=1105

```
tklc1170501 08-06-18 10:16:51 EST  EAGLE5 39.2.0
CARD   VERSION      TYPE    PST            SST          AST
1105   126-030-000  DSM     IS-NR          Active       -----
CARD ALARM STATUS       = No Alarms.
  GTT:    STAT = ACT       CPU USAGE = 1%
  GFLEX:  STAT = ACT       CPU USAGE = 3%
  GPORT:  STAT = ACT       CPU USAGE = 9%
  ATINPQ: STAT = ACT       CPU USAGE = 2%
                           ---------------
                           TOTAL     = 15%

CARD SERVICE STATISTICS
  SERVICE     SUCCESS    ERRORS      WARNINGS      FORWARD TO GTT     TOTAL
  GTT:            153         2             -                   -       155
  GFLEX:         2582         0             0                   0      2582
  GPORT:         8171         0             1                 102      8274
  ATINPQ:        3089         0             -                   -      3089

Command Completed.
;
```

- **rept-stat-sys**—Enhanced to support the ATINP feature.

  The following example displays partial output for the **rept-stat-sys** command when the ATINP feature is enabled.

rept-stat-sys

```
rlghncxa03w 08-06-17 16:53:22 EST  EAGLE5 39.2.0
MAINTENANCE STATUS REPORT
   Maintenance Baseline established.
   Routing Baseline established.
   SCCP Baseline established.
   ALARMS:     CRIT=    9     MAJR=  10   MINR=   3     INH=    2
   OAM 1113     IS-NR         Active                    INH=    0
   OAM 1115     IS-NR         Standby                   INH=    0
   LIM     CARD IS-NR=   3    Other=        0           INH=    0
   X25     CARD IS-NR=   0    Other=        0           INH=    0
   SCCP    CARD IS-NR=   3    Other=        0           INH=    0
   GLS     CARD IS-NR=   0    Other=        0           INH=    0
   SLAN    CARD IS-NR=   0    Other=        0           INH=    0
   VXWSLAN CARD IS-NR=   0    Other=        0           INH=    0
   SS7IPGW CARD IS-NR=   0    Other=        0           INH=    0
   IPGWI   CARD IS-NR=   0    Other=        0           INH=    0
   IPLIM   CARD IS-NR=   0    Other=        0           INH=    0
   IPLIMI  CARD IS-NR=   0    Other=        0           INH=    0
   HMUX    CARD IS-NR=   0    Other=        0           INH=    0
   SCTP ASSOC   IS-NR=   0    Other=        0           INH=    0
   APPL SERVER  IS-NR=   0    Other=        0           INH=    0
   SS7 DPC      IS-NR=   0    Other=        6           INH=    0
   X25 DPC      IS-NR=   0    Other=        0           INH=    0
   CLUST DPC    IS-NR=   0    Other=        1           INH=    0
   RTX          IS-NR=   2    Other=        1           INH=    0
   XLIST DPC    IS-NR=   0    Other=        0
```

```
      DPC  SS      Actv =   0    Other=        0
      SEAS SS      IS-NR=   1    Other=        0
      TERMINAL     IS-NR=   2    Other=       14          INH=    0
      MPS          IS-NR=   2    Other=        0
      SECURITY SS  IS-NR=   1    Other=        0
      EIR SS       IS-NR=   1    Other=        0
      RTD SS       IS-NR=   0    Other=        1
      VFLEX SS     IS-NR=   1    Other=        0
      ATINPQ SS    IS-NR=   1    Other=        0
;
```

- **rept-stat-trbl**—Enhanced to display a summary of trouble notifications for the ATINPQ subsystem. The following example displays partial output for the **rept-stat-trbl** command when a list of all devices is requested.

  NOTE: All devices and alarms cannot co-exist in the system.

  rept-stat-trbl

```
    tekelecstp 08-06-21 10:31:06 EST  EAGLE 39.2.0
    SEQN UAM  AL DEVICE    ELEMENT       TROUBLE TEXT
    0002.0143  * CARD 1113 OAM           System release GPL(s) not approved
    0002.0143  * CARD 1113 OAM           System release GPL(s) not approved
    0003.0313 *C DPC  s-010-010-003      DPC is prohibited
    0004.0313 *C DPC    010-010-004      DPC is prohibited
    0005.0313 *C DPC ps-010-010-005      DPC is prohibited
    0006.0313 *C DPC  s-252-010-003      DPC is prohibited
    0008.0313 *C DPC    252-010-004      DPC is prohibited
    0009.0313 *C DPC    252-011-*        DPC is prohibited
    0010.0318 ** LSN lsn4                REPT-LKSTO: link set prohibited
    0011.0176  * SECULOG 1116            Stdby security log – upload required
    0019.0236 *C T1PORT 1301,1           REPT-T1F:FAC-T1   LOS failure
    0021.0318 ** LSN lsn1                REPT-LKSTO: link set prohibited
    0022.0318 ** LSN lsn2                REPT-LKSTO: link set prohibited
    0023.0318 ** LSN lsn3                REPT-LKSTO: link set prohibited
   sn3       REPT-LKF: HWP – too many link interrupts
    3545.0202 ** SLK 1203,B   lsn4       REPT-LKF: HWP – too many link interrupts
    2353.0022  * CARD 1107 MCP           Clock B for card failed, Clock A normal
    3587.0048  * TERMINAL    1           Terminal failed
    0007.0110  * IMT SYSTEM              Failure detected on one IMT bus
    2343.0002  * GPL SYSTEM BPDCM        Card is not running approved GPL
    4321.0321  * XLIST                   X-LIST occupancy threshold exceeded
    0046.0344  * SEAS X25 Link A1        SEAS PVC unavailable
    0045.0348  * SEAS SYSTEM             SEAS is at min service limit
    0011.0176  * SECULOG 1116            Stdby security log -- upload required
    3538.0179  * EMAP                    NDC Q.3 association is Unavailable
    4121.0398  * INP SYSTEM              Local Subsystem normal,card(s) abnormal
    2354.0516  * MEAS SYSTEM            Degraded Mode - 1 card failed
    3589.0013 ** CARD 1103 SS7ANSI       Card is isolated from the system
    2358.0013 ** CARD 1111 MCP           Card is isolated from the system
    3590.0013 ** CARD 1115 OAM           Card is isolated from the system
    3590.0514 ** CARD 1115 EOAM          Standby MASP is inhibited
    0006.0108 ** IMT BUS A               Major IMT failure detected
                 Card 1105, 1113, 1115
    0012.0390 ** CARD 1109 HMUX          Illegal Address Error
    0046.0155  * DLK 1104,A1             STPLAN connection unavailable
    3591.0208 ** SLK 1101,A   ls1        REPT-LKF: APF - lvl-2 T2 expired
    3592.0208 ** SLK 1101,B   ls2        REPT-LKF: APF - lvl-2 T2 expired
    1234.0082 ** FUSE PANEL 11xx         Alarm in Fuse Panel
    0012.0341 ** OAP           A         OAP unavailable
    0134.0084 ** IP7 LONGSOCKETNAME1     IP Connection Unavailable
    3537.0084 ** DLK 1215,A  MCP         IP Connection Unavailable
    3537.0084 ** DSM 1315,A              IP Connection Unavailable
    3536.0084 ** EMAP B   7100           IP Connection Unavailable
    0133.0277 ** IP7 as1                 AS Unavailable
    0029.0308 *C SYSTEM                  Node isolated due to SLK failures
    3697.0539 ** ENET 1305,A             Ethernet Interface Down
    3698.0539 ** ENET 1305,B             Ethernet Interface Down
    3699.0539 ** ENET 1307,B             Ethernet Interface Down
    3700.0536  * IP7 assoc1234567890     IP Connection Excess Retransmits
    0915.0541 *C RTD SYSTEM              MSU cksum error threshold exceeded
```

```
    0002.0520 *C                        Frame power usage reached LVL3
    0056.0528 *C GFLEX SERVICE          Service is not available
    0056.0528 *C GPORT SERVICE          Service is not available
    5676.0084 ** MCPM 1101,A            IP Connection Unavailable
    0056.0528 *C MNP SERVICE            Service is not available
    0044.0558 *C RSN RSF                Routeset is prohibited
    0044.0534 *C RTX    001-101-001     RTX is prohibited
    0916.0565 *C ATINPQ SYSTEM          ATINPQ Subsystem is not available
    Command Completed.
;
```

- **`rtrv-data-rtdb`**—Enhanced to display RTDB data when the ATINP feature is enabled.

Measurement Reports

Per-system total (ATINPQ_SYS) and Per-SSP total (ATINPQ_SSP) reports are added to the daily and hourly measurement reports. These reports are available on the Measurements Control Platform (MCP).

The following new registers are used in the ATINPQ daily and hourly reports:

- ATINPQACK—Total number of ATI ACK messages sent by the ATINP service. The ATINP feature must be enabled before this register is incremented.
- ATINPQERR—Total number of incoming ATI messages that did not result in either ATI ACK or ATI NACK with error code of either Unknown Subscriber or ATI Not Allowed. The ATINP feature must be enabled before this register is incremented.
- ATINPQRCV—Total number of ATINP queries received for ATINP service. This register is incremented only if the ATINP feature is enabled and the incoming message opcode is ATI.

Limitations

Due to the 150-character limit on command length, a single **`ent/chg-atinpqopts`** command may not fit on a single line. Two commands may be required to complete the desired provisioning.

Enhanced GSM MAP Screening

The existing Enhanced GSM MAP Screening (EGMS) feature is updated as follows:

- Messages can cross between ITUI and ITUN domains and spare domains. Messages remain restricted from crossing between ANSI and ITU domains.
  If the ANSI ITU SCCP Conversion feature is not turned on, then the domain crossing is performed by altering the message transfer part (MTP) portion of the message. If the ANSI ITU SCCP Conversion feature is turned on, then the domain crossing is performed using point code conversion on the point codes for the SCCP called party (CdPA) and calling party (CgPA).

- The translation type (TT) of an outgoing message can be modified per EGMS ruleset.
  The MAP SCRN table is searched for a provisioned TT value. If a match is found, then this value is used to set the TT value for the CdPA of the outgoing message. If a match is not found, then the OPCODE table is searched. If a match is not found in either table, then the TT value is not modified, and the outgoing message uses the TT value that existed after global title translation (GTT) was performed.

- Non-segmented XUDT and XUDTS messages are supported for GT-routed and MTP-routed GSM messages.

Feature Control Requirements

No additional feature control requirements are associated with the updates to the EGMS feature.

Hardware Requirements

No additional hardware requirements are associated with the updates to the EGMS feature.

Commands

The following commands are enhanced to support the updates to the Enhanced GSM MAP Screening feature. For complete descriptions of these commands, refer to the *Commands Manual* of your 39.2 documentation set.

- **ent/chg/rtrv-gsmmap-scrn**—Enhanced to provision and display routing indicator (RI) and TT values. The following examples display output for the **rtrv-gsmmap-scrn** command.
  Example 1 displays the output for a specific operation code.

rtrv-gsmmap-scrn:opname=e

```
    tekelecstp 08-09-02 00:33:10 EST  EAGLE 39.2.0


    Single CgPA Entries for OPNAME: e
    -------------------------------------

    SADDR           NP NAI FORBD ACT      PCA           SSN CGSR RI     TT
    1111            2  3   all   fwd      001-001-002   12  ad   gt     11

    SADDR           NP NAI FORBD ACT      PCI           SSN CGSR RI     TT

    SADDR           NP NAI FORBD ACT      PCN           SSN CGSR RI     TT

    SADDR           NP NAI FORBD ACT      PCN24         SSN CGSR RI     TT

    SADDR           NP NAI FORBD ACT  CGSR


    Range CgPA Entries for OPNAME: e
    -------------------------------------

    SADDR           EADDR           NP NAI FORBD ACT      PCA           SSN CGSR
    1234            3452            *  *   all   fwd      001-001-002   12  as
    RI=gt  TT=11

    SADDR           EADDR           NP NAI FORBD ACT      PCI           SSN CGSR

    SADDR           EADDR           NP NAI FORBD ACT      PCN           SSN CGSR

    SADDR           EADDR           NP NAI FORBD ACT      PCN24         SSN CSGR

    SADDR           EADDR           NP NAI FORBD ACT   CGSR

    GSM MAP Screening Table (8 of 4000) is 1% full
;
```

Example 2 displays the output for a specific operation code when the Flexible GTT Loadsharing (FGTTLS) feature is turned on.

rtrv-gsmmap-scrn:opname=dd

```
    tekelecstp 08-09-02 00:45:11 EST  EAGLE 39.2.0


    Single CgPA Entries for OPNAME: dd
    -------------------------------------
```

```
    SADDR           NP NAI FORBD ACT      PCA           SSN CGSR    MAPSET   RI

    SADDR           NP NAI FORBD ACT      PCI           SSN CGSR    MAPSET   RI
    *               *  *   all   fwd      1-221-2       13  ab      DFLT     gt
    TT=11

    SADDR           NP NAI FORBD ACT      PCN           SSN CGSR    MAPSET   RI

    SADDR           NP NAI FORBD ACT      PCN24         SSN CGSR    MAPSET   RI

    SADDR           NP NAI FORBD ACT  CGSR


    Range CgPA Entries for OPNAME: dd
    -------------------------------------

    SADDR           EADDR           NP NAI FORBD ACT      PCA           SSN CGSR

    SADDR           EADDR           NP NAI FORBD ACT      PCI           SSN CGSR
    1234            3452            *  *   all   fwd      1-221-2       13  ak
    MAPSET=DFLT RI=gt  TT=11

    SADDR           EADDR           NP NAI FORBD ACT      PCN           SSN CGSR

    SADDR           EADDR           NP NAI FORBD ACT      PCN24         SSN CSGR

    SADDR           EADDR           NP NAI FORBD ACT   CGSR

    GSM MAP Screening Table (14 of 4000) is 1% full
;
```

Example 3 displays the output for a specific MAP set when the FGTTLS feature is turned on.

rtrv-gsmmap-scrn:opname=rr:mapset=1

```
    tekelecstp 08-09-02 00:59:18 EST  EAGLE 39.2.0


    Single CgPA Entries for OPNAME: rr
    --------------------------------------

    SADDR           NP NAI FORBD ACT      PCA           SSN CGSR    MAPSET   RI

    SADDR           NP NAI FORBD ACT      PCI           SSN CGSR    MAPSET   RI

    SADDR           NP NAI FORBD ACT      PCN           SSN CGSR    MAPSET   RI

    SADDR           NP NAI FORBD ACT      PCN24         SSN CGSR    MAPSET   RI


    Range CgPA Entries for OPNAME: rr
    -------------------------------------

    SADDR           EADDR           NP NAI FORBD ACT      PCA           SSN CGSR
    1234            3452            *  *   all   fwd      001-001-002   12  au
    MAPSET=1 RI=gt  TT=11

    SADDR           EADDR           NP NAI FORBD ACT      PCI           SSN CGSR

    SADDR           EADDR           NP NAI FORBD ACT      PCN           SSN CGSR

    SADDR           EADDR           NP NAI FORBD ACT      PCN24         SSN CSGR

    GSM MAP Screening Table (26 of 4000) is 1% full
;
```

Example 4 displays the output for the global translation routing indicator.

rtrv-gsmmap-scrn:opname=test3:ri=gt

```
    tekelecstp 08-09-02 17:26:42 EST  EAGLE 39.2.0
```

```
    Single CgPA Entries for OPNAME: test3
    -------------------------------------

    SADDR           NP NAI FORBD ACT      PCA           SSN CGSR    RI     TT
    *                *  *   all  fwd      001-001-002   12  ad      gt     11

    SADDR           NP NAI FORBD ACT      PCI           SSN CGSR    RI     TT

    SADDR           NP NAI FORBD ACT      PCN           SSN CGSR    RI     TT

    SADDR           NP NAI FORBD ACT      PCN24         SSN CGSR    RI     TT

    SADDR           NP NAI FORBD ACT  CGSR


    Range CgPA Entries for OPNAME: test3
    -------------------------------------

    SADDR           EADDR           NP NAI FORBD ACT      PCA           SSN CGSR
    *               *               *  *   all   fwd      001-001-002   -   d
    RI=gt  TT=11

    SADDR           EADDR           NP NAI FORBD ACT      PCI           SSN CGSR


    SADDR           EADDR           NP NAI FORBD ACT      PCN           SSN CGSR


    SADDR           EADDR           NP NAI FORBD ACT      PCN24         SSN CSGR


    SADDR           EADDR           NP NAI FORBD ACT   CGSR

    GSM MAP Screening Table (4 of 4000) is 1% full
;
```

Example 5 displays the output for the subsystem number routing indicator.

rtrv-gsmmap-scrn:opname=e:ri=ssn

```
    tekelecstp 08-09-02 15:40:00 EST EAGLE 39.2.0


    Single CgPA Entries for OPNAME: e
    -------------------------------------

    SADDR           NP NAI FORBD ACT      PCA           SSN CGSR    RI     TT
    *               *  *   all   fwd      001-001-002   12  ad      ssn    11

    SADDR           NP NAI FORBD ACT      PCI           SSN CGSR    RI     TT

    SADDR           NP NAI FORBD ACT      PCN           SSN CGSR    RI     TT

    SADDR           NP NAI FORBD ACT      PCN24         SSN CGSR    RI     TT


    Range CgPA Entries for OPNAME: e
    -------------------------------------

    SADDR           EADDR           NP NAI FORBD ACT      PCA           SSN CGSR
    *               *               *  *   all   fwd      001-001-002   12  d
    RI=ssn TT=11

    SADDR           EADDR           NP NAI FORBD ACT      PCI           SSN CGSR


    SADDR           EADDR           NP NAI FORBD ACT      PCN           SSN CGSR


    SADDR           EADDR           NP NAI FORBD ACT      PCN24         SSN CSGR
```

```
    SADDR           EADDR           NP NAI FORBD ACT   CGSR

    GSM MAP Screening Table (4 of 4000) is 1% full
;
```

Example 6 displays the output for the global translation routing indicator and a specified MAP set.

rtrv-gsmmap-scrn:opname=e:mapset=dflt:ri=gt

```
    tekelecstp 08-09-02 00:57:57 EST  EAGLE 39.2.0


    Single CgPA Entries for OPNAME: e
    -------------------------------------

    SADDR           NP NAI FORBD ACT      PCA           SSN CGSR    MAPSET   RI
    1111            2  3   all   fwd      001-001-002   12  ad      DFLT     gt
    TT=11

    SADDR           NP NAI FORBD ACT      PCI           SSN CGSR    MAPSET   RI

    SADDR           NP NAI FORBD ACT      PCN           SSN CGSR    MAPSET   RI

    SADDR           NP NAI FORBD ACT      PCN24         SSN CGSR    MAPSET   RI


    Range CgPA Entries for OPNAME: e
    -------------------------------------

    SADDR           EADDR           NP NAI FORBD ACT      PCA           SSN CGSR
    1234            3452            *  *   all   fwd      001-001-002   12  as
    MAPSET=DFLT RI=gt  TT=11

    SADDR           EADDR           NP NAI FORBD ACT      PCI           SSN CGSR

    SADDR           EADDR           NP NAI FORBD ACT      PCN           SSN CGSR

    SADDR           EADDR           NP NAI FORBD ACT      PCN24         SSN CSGR

    GSM MAP Screening Table (26 of 4000) is 1% full
;
```

Example 7 displays the output for called and calling party references.

rtrv-gsmmap-scrn:opname=rr:cgsr=au:cdsr=aj

```
    tekelecstp 08-09-02 00:58:55 EST  EAGLE 39.2.0


    SADDR           EADDR           NP NAI FORBD ACT      PCA           SSN CDSR
    1234            3452            *  *   all   fwd      001-001-002   12  aj
    MAPSET=1 RI=gt  TT=11

    GSM MAP Screening Table (26 of 4000) is 1% full
;
```

Example 8 displays the output for a calling party reference.

rtrv-gsmmap-scrn:opname=dd:cgsr=ak

```
    tekelecstp 08-09-02 00:44:34 EST  EAGLE 39.2.0


    Single CdPA Entries for OPNAME: dd and CGSR: ak
    -----------------------------------------------------

    SADDR           NP NAI FORBD ACT      PCA           SSN CDSR RI     TT

    SADDR           NP NAI FORBD ACT      PCI           SSN CDSR RI     TT
    3476            *  *   all   fwd      1-221-2       13  gu   gt     11

    SADDR           NP NAI FORBD ACT      PCN           SSN CDSR RI     TT

    SADDR           NP NAI FORBD ACT      PCN24         SSN CDSR RI     TT
```

```
    SADDR           NP NAI FORBD ACT   CDSR


    Range CdPA Entries for OPNAME: dd and CGSR: ak
    ------------------------------------------------------

    SADDR           EADDR           NP NAI FORBD ACT      PCA           SSN CDSR

    SADDR           EADDR           NP NAI FORBD ACT      PCI           SSN CDSR
    1234            3452            *  *   all   fwd      1-221-2       13  gh
    RI=gt  TT=11

    SADDR           EADDR           NP NAI FORBD ACT      PCN           SSN CDSR

    SADDR           EADDR           NP NAI FORBD ACT      PCN24         SSN CDSR

    SADDR           EADDR           NP NAI FORBD ACT   CDSR

    GSM MAP Screening Table (14 of 4000) is 1% full
;
```

Example 9 displays the output for a specified translation type.

rtrv-gsmmap-scrn:opname=test4:tt=12

```
    tekelecstp 08-09-02 17:26:42 EST  EAGLE 39.2.0


    Single CgPA Entries for OPNAME: test4
    ---------------------------------------

    SADDR           NP NAI FORBD ACT      PCA           SSN CGSR    RI     TT
    *                *  *   all  fwd      001-001-002   12  ad      ssn    12

    SADDR           NP NAI FORBD ACT      PCI           SSN CGSR    RI     TT

    SADDR           NP NAI FORBD ACT      PCN           SSN CGSR    RI     TT

    SADDR           NP NAI FORBD ACT      PCN24         SSN CGSR    RI     TT

    SADDR           NP NAI FORBD ACT  CGSR


    Range CgPA Entries for OPNAME: test4
    ---------------------------------------

    SADDR           EADDR           NP NAI FORBD ACT      PCA           SSN CGSR
    *               *               *  *   all   fwd      001-001-002   -   d
    RI=ssn TT=12

    SADDR           EADDR           NP NAI FORBD ACT      PCI           SSN CGSR


    SADDR           EADDR           NP NAI FORBD ACT      PCN           SSN CGSR


    SADDR           EADDR           NP NAI FORBD ACT      PCN24         SSN CSGR


    SADDR           EADDR           NP NAI FORBD ACT   CGSR

    GSM MAP Screening Table (4 of 4000) is 1% full
;
```

Example 10 displays the output for a specified translation type and MAP set.

rtrv-gsmmap-scrn:opname=e:mapset=dflt:tt=12

```
    tekelecstp 08-09-02 00:57:57 EST  EAGLE 39.2.0


    Single CgPA Entries for OPNAME: e
    ---------------------------------------
```

```
    SADDR           NP NAI FORBD ACT      PCA           SSN CGSR    MAPSET   RI
    1111            2  3   all   fwd      001-001-002   12  ad      DFLT     ssn
    TT=12

    SADDR           NP NAI FORBD ACT      PCI           SSN CGSR    MAPSET   RI

    SADDR           NP NAI FORBD ACT      PCN           SSN CGSR    MAPSET   RI

    SADDR           NP NAI FORBD ACT      PCN24         SSN CGSR    MAPSET   RI


    Range CgPA Entries for OPNAME: e
    ---------------------------------------

    SADDR           EADDR           NP NAI FORBD ACT      PCA           SSN CGSR
    1234            3452            *  *   all   fwd      001-001-002   12  as
    MAPSET=DFLT RI=ssn TT=12

    SADDR           EADDR           NP NAI FORBD ACT      PCI           SSN CGSR

    SADDR           EADDR           NP NAI FORBD ACT      PCN           SSN CGSR

    SADDR           EADDR           NP NAI FORBD ACT      PCN24         SSN CSGR

    GSM MAP Screening Table (26 of 4000) is 1% full
;
```

- **ent/chg/rtrv-gsms-opcode**—Enhanced to provision and display RI and TT values. The following examples display output for the **rtrv-gsms-opcode** command.
  Example 1 displays output for all operation codes.

rtrv-gsms-opcde

```
    tekelecstp 08-09-02 00:32:17 EST  EAGLE 39.2.0

    OPCODE  OPNAME     DFLTACT       PCA             SSN   RI     TT
     15     d          fwd           001-001-002     12    ssn    11
     16     e          fwd           001-001-002     12    gt     21
     19     f          fwd           001-001-002     12    gt     14
     20     h          fwd           001-001-002     -     gt     11


    OPCODE  OPNAME     DFLTACT       PCI             SSN   RI     TT
     17     dd         fwd           1-221-2         13    gt     244


    OPCODE  OPNAME     DFLTACT       PCN             SSN   RI     TT


    OPCODE  OPNAME     DFLTACT       PCN24           SSN   RI     TT


    OPCODE  OPNAME     DFLTACT
     12     a          disc
     13     b          disc


    GSMMS OPCODE Table (9 of 257) is 4% full
;
```

Example 2 displays output when the FGTTLS feature is turned on.

rtrv-gsms-opcode

```
    tekelecstp 08-09-02 00:54:42 EST  EAGLE 39.2.0

    OPCODE  OPNAME     DFLTACT       PCA             SSN   MAPSET RI     TT
     15     d          fwd           001-001-002     12    DFLT   ssn    11
     16     e          fwd           001-001-002     12    DFLT   gt     21
     19     f          fwd           001-001-002     12    DFLT   gt     14
     20     h          fwd           001-001-002     -     DFLT   gt     11
     21     k          fwd           001-001-002     12    DFLT   gt     11
```

```
 22     t          fwd           001-001-002     -     DFLT   gt     128
 23     u          fwd           001-001-002     12    DFLT   ssn    11
 39     rr         fwd           001-001-002     12    1      ssn    11


OPCODE  OPNAME     DFLTACT       PCI             SSN   MAPSET RI     TT
 17     dd         fwd           1-221-2         13    DFLT   gt     244
 31     kk         fwd           1-221-2         13    DFLT   ssn    11
 44     rf         fwd           1-221-2         13    2      gt     11


OPCODE  OPNAME     DFLTACT       PCN             SSN   MAPSET RI     TT


OPCODE  OPNAME     DFLTACT       PCN24           SSN   MAPSET RI     TT


OPCODE  OPNAME     DFLTACT
 12     a          disc
 13     b          disc


    GSMMS OPCODE Table (13 of 257) is 5% full
;
```

Example 3 displays output that includes a spare point code.

rtrv-gsms-opcode

```
    tekelecstp 08-09-02 00:54:42 EST  EAGLE 39.2.0

OPCODE  OPNAME     DFLTACT       PCA             SSN   RI     TT
 15     d          fwd           001-001-002     12    ssn    11
 16     e          fwd           001-001-002     12    gt     21
 19     f          fwd           001-001-002     12    gt     14
 20     h          fwd           001-001-002     -     gt     11
 21     k          fwd           001-001-002     12    gt     11
 22     t          fwd           001-001-002     -     gt     128
 23     u          fwd           001-001-002     12    ssn    11
 39     rr         fwd           001-001-002     12    ssn    11


OPCODE  OPNAME     DFLTACT       PCI             SSN   RI     TT
 17     dd         fwd           1-221-2         13    gt     244
 31     kk         fwd           1-221-2         13    ssn    11
 44     rf         fwd           1-221-2         13    gt     11


OPCODE  OPNAME     DFLTACT       PCN             SSN   RI     TT


OPCODE  OPNAME     DFLTACT       PCN24           SSN   RI     TT

OPCODE  OPNAME     DFLTACT
 12     a          disc
 13     b          disc


    GSMMS OPCODE Table (13 of 257) is 5% full
;
```

Example 4 displays output for a specific MAP set when the FGTTLS feature is turned on.

rtrv-gsms-opcode:mapset=2

```
    tekelecstp 08-09-02 00:56:01 EST  EAGLE 39.2.0

OPCODE  OPNAME     DFLTACT       PCA             SSN   MAPSET RI     TT


OPCODE  OPNAME     DFLTACT       PCI             SSN   MAPSET RI     TT
 44     rf         fwd           1-221-2         13    2      gt     11
```

```
    OPCODE  OPNAME     DFLTACT       PCN             SSN   MAPSET RI     TT

    OPCODE  OPNAME     DFLTACT       PCN24           SSN   MAPSET RI     TT

    GSMMS OPCODE Table (13 of 257) is 5% full
;
```

Example 5 displays output for a specific operation code.

rtrv-gsms-opcode:opname=e

```
    tekelecstp 08-09-02 00:32:45 EST  EAGLE 39.2.0

    OPCODE  OPNAME     DFLTACT       PCA             SSN   RI     TT
     16     e          fwd           001-001-002     12    gt     21

    GSMMS OPCODE Table (9 of 257) is 4% full
;
```

Example 6 displays output for an ITU International point code.

rtrv-gsms-opcode:opname=dd

```
    tekelecstp 08-09-02 00:55:43 EST  EAGLE 39.2.0

    OPCODE  OPNAME     DFLTACT       PCI             SSN   RI     TT
     17     dd         fwd           1-221-2         13    gt     244
    GSMMS OPCODE Table (13 of 257) is 5% full
;
```

Example 7 displays the output for the global translation routing indicator.

rtrv-gsms-opcode:ri=gt

```
    tekelecstp 08-09-02 00:54:53 EST  EAGLE 39.2.0

    OPCODE  OPNAME     DFLTACT       PCA             SSN   RI     TT
     16     e          fwd           001-001-002     12    gt     21
     19     f          fwd           001-001-002     12    gt     14
     20     h          fwd           001-001-002     -     gt     11
     21     k          fwd           001-001-002     12    gt     11
     22     t          fwd           001-001-002     -     gt     128

    OPCODE  OPNAME     DFLTACT       PCI             SSN   RI     TT
     17     dd         fwd           1-221-2         13    gt     244
     44     rf         fwd           1-221-2         13    gt     11

    OPCODE  OPNAME     DFLTACT       PCN             SSN   RI     TT

    OPCODE  OPNAME     DFLTACT       PCN24           SSN   RI     TT

    GSMMS OPCODE Table (13 of 257) is 5% full
;
```

Example 8 displays the output for the subsystem number routing indicator. The FGTTLS feature is enabled.

rtrv-gsms-opcode:ri=ssn

```
    tekelecstp 08-09-02 00:55:03 EST  EAGLE 39.2.0

    OPCODE  OPNAME     DFLTACT       PCA             SSN   MAPSET RI     TT
     15     d          fwd           001-001-002     12    DFLT   ssn    11
     23     u          fwd           001-001-002     12    DFLT   ssn    11
     39     rr         fwd           001-001-002     12    1      ssn    11

    OPCODE  OPNAME     DFLTACT       PCI             SSN   MAPSET RI     TT
     31     kk         fwd           1-221-2         13    DFLT   ssn    11
```

```
    OPCODE  OPNAME     DFLTACT       PCN             SSN   MAPSET RI     TT


    OPCODE  OPNAME     DFLTACT       PCN24           SSN   MAPSET RI     TT


    GSMMS OPCODE Table (13 of 257) is 5% full
;
```

Example 9 displays the output for a specified translation type.

rtrv-gsms-opcode:tt=11

```
    tekelecstp 08-09-02 00:54:53 EST  EAGLE 39.2.0

    OPCODE  OPNAME     DFLTACT       PCA             SSN   RI     TT
     15     d          fwd           001-001-002     12    ssn    11
     20     h          fwd           001-001-002     -     gt     11
     21     k          fwd           001-001-002     12    gt     11
     22     t          fwd           001-001-002     -     gt     11
     23     u          fwd           001-001-002     12    ssn    11
     39     rr         fwd           001-001-002     12    ssn    11


    OPCODE  OPNAME     DFLTACT       PCI             SSN   RI     TT
     31     kk         fwd           1-221-2         13    ssn    11
     44     rf         fwd           1-221-2         13    gt     11


    OPCODE  OPNAME     DFLTACT       PCN             SSN   RI     TT


    OPCODE  OPNAME     DFLTACT       PCN24           SSN   RI     TT


    GSMMS OPCODE Table (13 of 257) is 5% full
;
```

Limitations

No additional limitations are associated with the updates to the EGMS feature.

Remote Backup

The Remote Backup feature allows the database to be saved to and restored from a remote server, using FTP. If the EAGLE OA&M IP Security feature is turned on, then Secure FTP is used for data backup.

For a database backup, the EAGLE 5 ISS packs and compresses all files in a TAR file before transferring to a remote server. For a database restore, the EAGLE 5 ISS unpacks and uncompresses the files and places the files on the active partition group of the TDMs.

Feature Control Requirements

There are no feature control requirements identified for this feature.

Hardware Requirements

The Remote Backup feature requires E5-IPSM cards.

Commands

The following commands are enhanced to support the Remote Backup feature. For complete descriptions of these commands, refer to the *Commands Manual* for your 39.2 documentation set.

- **chg-db**—Enhanced to initiate backup or restore of the database to or from a remote server.
- **chg/rtrv-stpopts**—Enhanced to indicate whether the database backup archive file contains the EAGLE 5 ISS build number instead of the EAGLE 5 ISS release number.
- **ent/chg/dlt/rtrv-ftp-serv**—Enhanced to provision the remote server that is used to support the database backup or restore.

Limitations

No limitations are associated with this feature.

Remote Upgrade Download

The Remote Upgrade Download feature allows new software to be downloaded to the EAGLE 5 ISS from a remote server, using FTP. If the EAGLE OA&M IP Security feature is turned on, then Secure FTP is used for data transfer.

The EAGLE 5 ISS downloads software by downloading a single TAR file that contains compressed files associated with the software release. The EAGLE 5 ISS unpacks and uncompresses all files of a software release and places them on the inactive partition of the TDMs. A remote server must be set up within the customer network to support data transfer to the EAGLE 5 ISS.

Feature Control Requirements

There are no feature control requirements identified for this feature.

Hardware Requirements

The Remote Upgrade Download feature requires E5-IPSM cards.

Commands

The following commands are enhanced to support the Remote Upgrade Download feature. For complete descriptions of these commands, refer to the *Commands Manual* for your 39.2 documentation set.

- **act-upgrade**—Enhanced to initiate a download request of an EAGLE 5 ISS software release.
- **ent/chg/dlt/rtrv-ftp-serv**—Enhanced to provision the remote server that is used to support the software release.

Limitations

No limitations are associated with this feature.

Triggerless ISUP Framework

The Triggerless ISUP Framework (TIF) provides an overall structure for various features that allow the EAGLE 5 ISS to intercept and process ISUP messages that would normally be thru-switched.

NOTE: At least one of the TIF features must be turned on before the TIF capabilities are available.

Existing Gateway Screening rules are used to separate ISUP traffic and forward the appropriate MSUs to the TIF for processing. The TIF decodes the MSU, invokes the Numbering Plan Processor (NPP) on Service Module cards, and encodes the results. TIF features provide Service Actions (SAs) to the NPP. These SAs provide database access, data evaluation, and special handling for the MSU.

The TIF introduces a TIFOPTS table.

NOTE: Only customers that had TINP enabled prior to upgrade to Release 39.2 will be able to access both the TINPOPTS and TIFOPTS tables and use the TINP feature after the upgrade occurs. All other customers will only be able to access the TIFOPTS table after the upgrade occurs.

Feature Control Requirements

The TIF has the following feature control requirements:

- The GTT feature bit must be turned on before any TIF feature can be enabled.
- The Gateway Screening feature bit must be turned on before any TIF feature can be enabled.
- At least one TIF feature must be enabled before the TIFOPTS table can be provisioned.
- The associated feature must be enabled before the desired SA can be enabled.
- The **tif**, **tif2**, or **tif3** service must be turned on before the run-time behavior for any TIF feature can execute.

Hardware Requirements

The TIF and all TIF features require Service Module cards. The TIF is not supported on TSM cards running the **sccp** application. TSM cards running the **sccp** application cannot be provisioned if a TIF feature is enabled.

Commands

The following commands are added or enhanced to support the TIF. For complete descriptions of these commands, refer to the *Commands Manual* for your 39.2 documentation set.

NOTE: All TIF features can use these commands.

- **`chg-gws-actset`**—Enhanced to add stop actions for TIF.
- **`chg/rtrv-isup-msg`**—Added to allow modification to the ISUP test message table. The following examples display output for the **`rtrv-isup-msg`** command.
  Example 1 displays the output when information for all of the messages is requested.

  `rtrv-isup-msg`

```
tekelecstp 08-06-14 10:09:16 EST  EAGLE 39.2.0
MSG = 1          ACTIVE = 1
     CGPN_NAI = 4         CGPN = 987654321
     CDPN_NAI = 125       CDPN = 923487

     CGPN_CAT = 0
```

```
          NMBITS = 1
    MSG = 2           ACTIVE = 0
          CGPN_NAI = 4         CGPN = 01234567890abcdef
          CDPN_NAI = 4         CDPN = 01234567890abcdef

          CGPN_CAT = 0

          NMBITS = 0
    MSG = 3           ACTIVE = 0
          CGPN_NAI = 4         CGPN = 01234567890abcdef
          CDPN_NAI = 4         CDPN = 01234567890abcdef

          CGPN_CAT = 0

          NMBITS = 0
    MSG = 4           ACTIVE = 0
          CGPN_NAI = 4         CGPN = 01234567890abcdef
          CDPN_NAI = 4         CDPN = 01234567890abcdef

          CGPN_CAT = 0

          NMBITS = 0
    MSG = 5           ACTIVE = 0
          CGPN_NAI = 4         CGPN = 01234567890abcdef
          CDPN_NAI = 4         CDPN = 01234567890abcdef

          CGPN_CAT = 0

          NMBITS = 0
    MSG = 6           ACTIVE = 0
          CGPN_NAI = 4         CGPN = 01234567890abcdef
          CDPN_NAI = 23        CDPN = 01234567890abcdef

          CGPN_CAT = 200

          NMBITS = 0
    MSG = 7           ACTIVE = 0
          CGPN_NAI = 4         CGPN = 01234567890abcdef
          CDPN_NAI = 4         CDPN = 01234567890abcdef

          CGPN_CAT = 0

          NMBITS = 0
    MSG = 8           ACTIVE = 0
          CGPN_NAI = 4         CGPN = 01234567890abcdef
          CDPN_NAI = 4         CDPN = 01234567890abcdef

          CGPN_CAT = 0

          NMBITS = 0
    MSG = 9           ACTIVE = 0
          CGPN_NAI = 4         CGPN = 01234567890abcdef
          CDPN_NAI = 4         CDPN = 01234567890abcdef

          CGPN_CAT = 0

          NMBITS = 0
    MSG = 10          ACTIVE = 0
          CGPN_NAI = 4         CGPN = 01234567890abcdef
          CDPN_NAI = 4         CDPN = 01234567890abcdef

          CGPN_CAT = 0

          NMBITS = 0
;
```

Example 2 displays the output when information for a specific message is requested.

rtrv-isup-msg:msgn=10

```
    tekelecstp 08-06-14 10:12:46 EST  EAGLE 39.2.0
    MSG = 10          ACTIVE = 0
          CGPN_NAI = 4         CGPN = 01234567890abcdef
```

```
          CDPN_NAI = 4         CDPN = 01234567890abcdef

          CGPN_CAT = 0

          NMBITS = 0
;
```

- **chg/rtrv-npp-serv**—Enhanced to support the TIF Services. The following examples display output for the **rtrv-npp-serv** command when TIF services are used.
  Example 1 displays the output when the status of all of the services is requested.

  rtrv-npp-serv

```
    tekelecstp 08-08-12 10:24:32 EST  EAGLE 39.2.0

    SERVICE     STATUS   FNAI   NAI    SA          PRECEDENCE

    ____________________________________________________________

    nppt        off      unkn   0      rtdbtrnsp   100
                         intl   4      rtdbtrn     50
                         natl   3      rtdbtsp     50
                         nai1   0      cdial       10
                         nai2   0
                         nai3   0

    tif         on       unkn   0      cdial       10
                         intl   4      fwdscs      5
                         natl   3      crp         92
                         nai1   none   npnrls      91
                         nai2   none   nprelay     90
                         nai3   none   nprls       90
                                       snscgpn     80
                                       cgpnnprqd   90

    tif2        off      unkn   0      cdial       10
                         intl   4      fwdscs      5
                         natl   3      crp         92
                         nai1   none   npnrls      91
                         nai2   none   nprelay     90
                         nai3   none   nprls       90
                                       snscgpn     80
                                       cgpnnprqd   90

    tif3        off      unkn   0      cdial       10
                         intl   4      fwdscs      5
                         natl   3      crp         92
                         nai1   none   npnrls      91
                         nai2   none   nprelay     90
                         nai3   none   nprls       90
                                       snscgpn     80
                                       cgpnnprqd   90

    idprcdpn    off      unkn   0      ccncchk     100
                         intl   4      cdpnnp      80
                         natl   3      lacck       60
                         nai1   none   cgpnnprqd   60
                         nai2   none
                         nai3   none

    idprcgpn    off      unkn   0      cgpnnp      100
                         intl   4
                         natl   3
                         nai1   none
                         nai2   none
                         nai3   none

;
```

  Example 2 displays the output when the status for a specified service is requested.

  rtrv-npp-serv:srvn=tif2

```
tekelecstp 08-08-14 21:43:27 EST  EAGLE 39.2.0

SERVICE     STATUS   FNAI   NAI    SA          PRECEDENCE
------------------------------------------------------------
tif2        off      unkn   0      cdial       10
                     intl   4      fwdscs      5
                     natl   3      crp         92
                     nai1   none   npnrls      91
                     nai2   none   nprelay     90
                     nai3   none   nprls       90
                                   snscgpn     80
                                   cgpnnprqd   90

;
```

- **chg/rtrv-tifopts**—Added to provision the TIF Option table.
  The following example displays output for the **rtrv-tifopts** command.

  rtrv-tifopts

```
tekelecstp 08-06-20 14:51:22 EST  EAGLE 39.2.0

TIF OPTIONS

-------------------------------------------------
IAMCGPN         = dn
NPFLAG          = none
RCAUSENP        = 0
RCAUSEPFX       = 0
NPTYPE          = sprn
NPTYPECGPN      = sprn
ACLEN           = 0
SPLITIAM        = none
CONDCGPN        = none
CRPREL          = 31
RNRQD           = yes
DFLTRN          = none
DLMA            = none
DLMB            = none
DLMC            = none
SNSCGPNDEFAULT  = none

;
```

- **chg-tinpopts**—Enhanced to only be allowed if the TINP feature was enabled before upgrading to Release 39.2 or later.
- **ent/chg/dlt/rtrv-npp-as**—Enhanced to support the **accgpn** Conditioning Action.
- **ent/chg/dlt/rtrv-npp-srs**—Enhanced to support the TIF Services. The following examples display output for the **rtrv-npp-srs** command when the TIF Services are included.
  Example 1 displays the output when information for all Services is requested.

  rtrv-npp-srs

```
tekelecstp 08-06-14 21:26:59 EAGLE 39.2.0

Command entered at terminal #4.
SRVN        FPFX              FDIGLEN  FNAI  ASN
------------------------------------------------------------
nppt        a                 10       intl  asn2
nppt        a                 16       intl  asn3
tif2        b                 12       natl  asn5

;
```

  Example 2 displays the output when information for Services with a specified filter digit length is requested.

  rtrv-npp-srs:fdl=*

```
tekelecstp 08-08-25 15:49:22
```

```
SRVN        FPFX              FDIGLEN  FNAI  ASN
------------------------------------------------------------
tif         9198              *        intl  asn1
tif         919               *        natl  asn1
```

;

Example 3 displays the output when information for Services with a specified filter digit length and filter prefix is requested.

`rtrv-npp-srs:fpfx=91:fdl=16`

```
tekelecstp 08-08-25 15:48:45

SRVN        FPFX              FDIGLEN  FNAI  ASN
------------------------------------------------------------
nppt        91                16       natl  asn3
tif         91                16       natl  asn3
```

- **`ent-trace`**—Enhanced to trace any message within any TIF stop action.
- **`tst-msg`**—Enhanced to support the ISUP test messages.

TIF Number Portability

The TIF Number Portability feature uses the Triggerless ISUP Framework (TIF) to perform number portability functions.

NOTE: The TIF Number Portability feature is used to replace the TINP feature. Only customers that had the TINP feature enabled prior to upgrading to 39.2 can use the TINP feature after upgrade has occurred. All other customers will use the TIF Number Portability feature.

The TIF Number Portability feature includes the following capabilities:

- Terminating Actions
  Number portability can be performed on called party numbers (CdPNs), and either the Relay or Release termination action can be provisioned as the result.

- Circular Route Prevention
  Circular Route Prevention is used when circular routing is caused by incorrect information in one or more networks' number portability databases. If the routing number (RN) of the called number is the RN of the network receiving the message (the incoming RN is found in the HomeRN list.), then if the result of the RTDB lookup is another RN, a loop is detected and the call is released.

- Enhanced CgPN Lookup
  Calling party number lookup can be performed for certain call types.

- Filtering
  A combination of Gateway Screening and TIF filters can be used to select the Service Actions required.

- Number Conditioning for EPAP Database Lookups
  Prefixes can be deleted from a number string and used for either RTDB lookup or in formatting the outgoing message.

- Release Handling
  The Release message can be configured to include the redirection number.

Feature Control Requirements

The TIF Number Portability feature has the following feature control requirements:

- FAK for part number 893-0189-01
- The GTT feature bit must be turned on before the feature can be enabled.
- The Gateway Screening feature bit must be turned on before the feature can be enabled.
- The feature cannot be turned off after it has been turned on.
- A temporary FAK cannot be used to enable the feature.

Hardware Requirements

The TIF Number Portability feature requires Service Module cards. The feature cannot be enabled if TSM cards running the **sccp** application are provisioned in the system. TSM cards running the **sccp** application cannot be provisioned if the TIF Number Portability feature is enabled.

Commands

The following commands are enhanced to support the TIF Number Portability feature. For complete descriptions of these commands, refer to the *Commands Manual* for your 39.2 documentation set.

- **chg/rtrv-stpopts**—Enhanced to prevent the **ansigflex** option from being provisioned if the TIF Number Portability feature is enabled.
- **enable/chg/rtrv-ctrl-feat**—Enhanced to enable, turn on, and display the status of the TIF Number Portability feature.
  The following example displays partial output for the **rtrv-ctrl-feat** command when the TIF Number Portability feature is turned on.

  rtrv-ctrl-feat

```
    rlghncxa03w 08-07-29 16:40:40 EST  EAGLE 39.2.0

    The following features have been permanently enabled:
    Feature Name              Partnum    Status  Quantity
    HC-MIM SLK Capacity       893012707  on            64
    Command Class Management  893005801  on          ----
    LNP Short Message Service 893006601  on          ----
    Lrg BICC MSU for IP Sig   893018401  off         ----
    Transaction Based GTT LS  893017101  on          ----
    Weighted GTT Loadsharing  893017001  off         ----
    G-Flex MAP Layer Routing  893021701  on          ----
    G-Flex                    893021901  on          ----
    VFLEX                     893016701  on          ----
    TIF Number Portability    893018901  on          ----
;
```

- **ent-card**—Enhanced to prevent TSM cards that are running the **sccp** application from being provisioned if the TIF Number Portability feature is enabled.
- **ent/chg/dlt/rtrv-csl**—Enhanced to access functionality for the TIF Number Portability feature.

  NOTE: If the TINP feature was enabled prior to upgrade to Release 39.2, then the values that specify the TIF Number Portability feature in these commands can be used to access functionality for the TINP feature. If the TINP feature was not enabled before upgrade, then the TIF Number Portability values can be used to access functionality for only the TIF Number Portability feature.

The following example displays output for the **rtrv-csl** command when the TIF Number Portability feature is specified.

```
rtrv-csl:feature="TIF Number Portability"
    tekelecstp 08-09-29 15:19:59 EST  EAGLE 39.2.0

    TIF Number Portability
    TINP AcsCode List
    DS                Type
    ---------------   ----------
    044               none
    b001              none
    b002              none

    TINP AcsCode List (   3 of 50) 6%

    TIF Number Portability
    TINP EscCode List
    DS
    ---------------
    00
    09
    b7
    045
    101
    202

    TINP EscCode List (   6 of 20) 30%

    TIF Number Portability
    TIF NPFlgRst List
    PC
    ---------------
       PCA
       001-001-001

    TIF NPFlgRst List (   1 of 50) 2%

    TIF Number Portability
    TIF NPFlgRst List
    PC
    ---------------
       PCA
       001-001-001

    TIF NPFlgRst List (   1 of 50) 2%

;
```

- **ent/chg/rtrv-npp-as**—Enhanced to support the following Service Actions:
  - **cgpnnprqd**—Performs NP lookup on the calling party number (CgPN)
  - **crp**—Performs NP lookup on the called party number (CdPN) and attempts to detect a circular route
  - **npnrls**—Performs NP lookup on the CdPN and indicates release behavior on an unsuccessful lookup
  - **nprelay**—Performs NP lookup on the CdPN and indicates relay behavior
  - **nprls**—Performs NP lookup on the CdPN and indicates release behavior on a successful lookup

Limitations

No limitations are associated with this feature.

TIF SCS Forwarding

The TIF SCS Forwarding feature allows messages to be forwarded to the Tekelec Service Creation System (SCS) after Triggerless ISUP Framework (TIF) processing has completed.

Feature Control Requirements

The TIF SCS Forwarding feature has the following feature control requirements:

- FAK for part number 893-0222-01
- The GTT feature bit must be turned on before the TIF SCS Forwarding feature can be enabled.
- The Gateway Screening feature bit must be turned on before the TIF SCS Forwarding feature can be enabled.
- A temporary FAK cannot be used to enable the feature.

Hardware Requirements

The TIF SCS Forwarding feature requires Service Module cards. The feature cannot be enabled if TSM cards running the **sccp** application are provisioned in the system. TSM cards running the **sccp** application cannot be provisioned if the TIF SCS Forwarding feature is enabled.

Commands

The following commands are enhanced to support the TIF SCS Forwarding feature. For complete descriptions of these commands, refer to the *Commands Manual* for your 39.2 documentation set.

- **`enable/chg/rtrv-ctrl-feat`**—Enhanced to enable, turn on, and display the status of the TIF SCS Forwarding feature.
  The following example displays output for the **`rtrv-ctrl-feat`** command when the TIF SCS Forwarding feature is enabled and turned on.

  `rtrv-ctrl-feat`

```
    rlghncxa03w 08-07-29 16:40:40 EST  EAGLE 39.2.0

    The following features have been permanently enabled:
    Feature Name              Partnum    Status  Quantity
    HC-MIM SLK Capacity       893012707  on            64
    Command Class Management  893005801  on          ----
    LNP Short Message Service 893006601  on          ----
    Lrg BICC MSU for IP Sig   893018401  off         ----
    Transaction Based GTT LS  893017101  on          ----
    Weighted GTT Loadsharing  893017001  off         ----
    G-Flex MAP Layer Routing  893021701  on          ----
    G-Flex                    893021901  on          ----
    VFLEX                     893016701  on          ----
    TIF SCS Forwarding        893022201  on          ----
;
```

- **`ent-card`**—Enhanced to prevent TSM cards that are running the **sccp** application from being provisioned if the TIF SCS Forwarding feature is enabled.
- **`ent/chg/rtrv-npp-as`**—Enhanced to support the **fwdscs** Service Action. This Service Action indicates that any relayed MSUs require data transport access (DTA) processing.

Limitations

No limitations are associated with this feature.

TIF Simple Number Substitution

The TIF Simple Number Substitution feature uses the Triggerless ISUP Framework to replace the calling party in an ISUP IAM message with a configured calling party number from the TIFOPTS table. The RTDB is not used.

Feature Control Requirements

The TIF Simple Number Substitution feature has the following feature control requirements:

- FAK for part number 893-0240-01
- The GTT feature bit must be turned on before the feature can be enabled.
- The Gateway Screening feature bit must be turned on before the feature can be enabled.
- The feature cannot be turned off after it has been turned on.
- A temporary FAK cannot be used to enable the feature.

Hardware Requirements

The TIF Simple Number Substitution feature requires Service Module cards. The feature cannot be enabled if TSM cards running the **sccp** application are provisioned in the system. TSM cards running the **sccp** application cannot be provisioned if the TIF Simple Number Substitution feature is enabled.

Commands

The following commands are enhanced to support the TIF Simple Number Substitution feature. For complete descriptions of these commands, refer to the *Commands Manual* for your 39.2 documentation set.

- **`enable/chg/rtrv-ctrl-feat`**—Enhanced to enable, turn on, and display the status of the TIF Simple Number Substitution feature.
  The following example displays output for the **`rtrv-ctrl-feat`** command when the TIF Simple Number Substitution feature is enabled and turned on.

  `rtrv-ctrl-feat`

```
    rlghncxa03w 08-07-29 16:40:40 EST  EAGLE 39.2.0

    The following features have been permanently enabled:
    Feature Name              Partnum    Status  Quantity
    HC-MIM SLK Capacity       893012707  on            64
    Command Class Management  893005801  on          ----
    LNP Short Message Service 893006601  on          ----
    Lrg BICC MSU for IP Sig   893018401  off         ----
    Transaction Based GTT LS  893017101  on          ----
    Weighted GTT Loadsharing  893017001  off         ----
    G-Flex MAP Layer Routing  893021701  on          ----
    G-Flex                    893021901  on          ----
    VFLEX                     893016701  on          ----
    TIF Simple Number Subst.  893024001  on          ----
;
```

- **ent-card**—Enhanced to prevent TSM cards that are running the **sccp** application from being provisioned if the TIF Simple Number Substitution feature is enabled.
- **ent/chg/npp-as**—Enhanced to support the **snscgpn** Service Action. This Service Action updates the outgoing calling party number (CgPN).

Limitations

No limitations are associated with this feature.

Other Changes

The following core enhancements are included in Release 39.2:

Additional Subscriber Data Support

The existing G-Port, G-Port SRI Query for Prepaid, and INAP Number Portability Phase 2/ANSI-41 INP Query (INP/AINPQ) features are enhanced to support Additional Subscriber Data (ASD). This enhancement extends the existing Number Portability Routing Number functionality for these features.

The ATI Number Portability Query (ATINP) feature, which is introduced in EAGLE 5 ISS Release 39.2, includes support for ASD. Refer to the *Feature Manual - ATINP* and to the *Commands Manual* of your 39.2 documentation set for additional information.

ASD Support for G-Port and G-Port SRI Query for Prepaid

The G-Port and G-SRI Query for Prepaid features are enhanced to support new Mobile Station Routing Number (MSRN) formatting options that use ASD. The ASD information is inserted into the outgoing SRI ACK messages.

If a successful database lookup returns an ASD as one of the entities, and if the ASD option is provisioned, then the ASD is encoded into the outgoing message. The existing behavior for encoding messages for G-Port and G-Port SRI Query for Prepaid is then followed.

Commands

The **chg/rtrv-gsmopts** commands are enhanced to provision and display ASD values for the **msrndig** option. For a complete description of these commands, refer to the *Commands Manual* of your 39.2 documentation set.

The following example displays output for the **rtrv-gsmopts** command when an ASD value is provisioned.

NOTE: This example also displays the results for the Unknown Subscriber enhancement.

rtrv-gsmopts

```
    tekelecstp 08-09-08 14:53:59 EST  EAGLE 39.2.0

    GSM OPTIONS
    -----------------------
    DEFMCC           = NONE
    DEFMNC           = NONE
    SRFADDR          = NONE
    MSRNDIG          = RNASD
    IS412GSM         = NONE
    DEFMAPVR         = 1
    IS412GSM         = NONE
    MULTCC           = 2
    MULTCC           = 4
    MULTCC           = 5
    MULTCC           = 20
    MULTCC           = 119
    MULTCC           = 121
```

```
    MULTCC           = 123
    MULTCC           = 124
    MSISDNTRUNC      = 0
    SRIDNNOTFOUND    = GTT
;
```

ASD Support for INP and AINPQ

The INP and AINPQ features are enhanced to support ASD information in the outgoing destination routing address (DRA) in INAP Connect messages or ANSI-41 Return Result with Routing Digits messages.

Commands

The **chg/rtrv-inpopts** commands are enhanced to provision and display ASD values for the **dra** parameter. For complete descriptions of these commands, refer to the *Commands Manual* of your 39.2 documentation set.

The following example displays output for the **rtrv-inpopts** command when an ASD value is provisioned.

rtrv-inpopts

```
    tekelecstp 08-09-03 16:02:06 EST  EAGLE 39.2.0

    INP OPTIONS
    -----------------------
    NEC         = 0
    DRANAI      = INTL
    DRANP       = E164
    DRA         = ASDRNDN
    SPRESTYPE   = CONTINUE

    CDPNPFX            DLTPFX
    ---------------    ---

    CDPNNAI            SNAI
    ---                ----

;
```

Mapping of original OPC to STPLAN/ECAP

The Mapping of original OPC to STPLAN/ECAP enhancement allows the originating point code (OPC) from the incoming MSU to be sent to the **stplan** application. This enhancement allows the origin of the MSU to be determined for billing purposes.

NOTE: The STP LAN feature must be turned on before the enhancement can be provisioned.

Commands

The **chg/rtrv-ss7opts** commands are enhanced to provision and display whether the OPC from the MSU is copied to the **stplan** application. For complete descriptions of these commands, refer to the *Commands Manual* of your 39.2 documentation set.

The following example displays output for the **rtrv-ss7opts** command.

rtrv-ss7opts

```
    tekelecstp 08-09-26 14:42:38 EST  EAGLE 39.2.0
    SS7 OPTIONS
    -----------------------
    LSRESTRICT          off
    DISCARDTFCI         off
    DISCARDTFCN         off
    SLANCPORGOPC        on
;
```

Migration Prefix

The IS-41 to GSM Migration (IGM) feature is enhanced to provision a migration prefix. This prefix allows determination of whether the prefix in the SRI ACK response message is obtained from the database lookup routing number (RN) or from the GSM to IS-41 Migration prefix.

The IGM feature or the G-Port feature must be enabled before the prefix can be provisioned.

Commands

The **chg-gsmopts** command is enhanced to provision the migration prefix. For a complete description of this command, refer to the *Commands Manual* for your 39.2 documentation set.

NOTE: If the IGM feature is enabled, then the G-Port feature must be turned on before the migration prefix can be set to a value of multiple, which indicates that the RN is used as the prefix.

If the IGM feature was turned on prior to upgrading to EAGLE 5 ISS 36.0, then the migration prefix was hard-coded to a value of multiple. If the chg-gsmopts command is used to change the migration prefix to single, then the G-Port feature must be turned on before the migration prefix can be changed back to multiple.

MSU Key Enhancements for MTP Mode Transaction Based GTT LS

The MSU Key Enhancements for MTP Mode Transaction Based GTT LS enhancement provides an enhanced MTP algorithm (ENHMTP) for processing UDT and UDTS messages. The existing MTP algorithm and the TCAP and SCCP algorithms remain available.

The ENHMTP algorithm can be used when the network is drawing from a limited number of originating point codes (OPCs) or when only even or odd signaling link set (SLS) values are sent to the EAGLE 5 ISS.

Commands

The **chg/rtrv-sccpopts** commands are enhanced to provision and display the enhanced MTP algorithm as a value for the **tgttudtkey** or the **tgttxudtkey** parameter. For complete descriptions of these commands, refer to the *Commands Manual* for your 39.2 documentation set.

Multiple Local SCCP Subsystems

The Multiple Local SSCP Subsystems (MLSS) enhancement allows the ATINPQ, EIR, INP, and V-Flex subsystems (AINPQ, ATINP, EIR, INP, and V-Flex features) to co-exist in the same EAGLE 5 ISS.

NOTE: When sending queries to local subsystems, the capability point code of the appropriate subsystem must be used as the destination point code of the message instead of the capability point code of the EAGLE 5 ISS.

Commands

The following commands are enhanced to support the MLSS enhancement. For complete descriptions of these commands, refer to the *Commands Manual* for your 39.2 documentation set.

NOTE: All relevant output changes for these commands are shown in the Commands section for the ATINP feature.

- **act-upgrade**—Enhanced to display the status of EPAP DBs when single or multiple subsystem(s) are turned on, if the **action=dbstatus** parameter is specified.

- **ent/chg/dlt/rtrv-map**—Enhanced to support the number of ANSI, ITU-I, and ITU-N point codes that can be supported for multiple local subsystems.
- **rept-stat-db**—Enhanced to display the status of EPAP DBs when single or multiple subsystem(s) are turned on.
- **rept-stat-mps**—Enhanced to display multiple subsystems status for cards and Primary card status.
- **rept-stat-sccp**—Enhanced to display multiple subsystem status for all subsystems that are turned on.
- **rept-stat-sys**—Enhanced to display the status of all turned ON subsystems.

Unknown Subscriber

The Unknown Subscriber enhancement allows the **chg/rtrv-gsmopts** commands to provision and display the processing that is used when a result of a database query indicates that the specified directory number is not known. An example of the **rtrv-gsmopts** command output that occurs when the unknown subscriber option (**sridnnotfound** parameter) is provisioned is shown in the Commands section for the ASD Support for G-Port enhancement.

NOTE: The G-Port feature must be enabled before this option can be provisioned.

*Update to the **add-gtwyls** SEAS Command*

The **add-gtwyls** SEAS command is updated to allow the **gwsa**, **gwsd**, and **gwsm** parameters to default to the current values for those parameters in the linkset.

*Update to the **chg-measopts** Command*

The **chg-measopts** command is no longer used to control hourly and daily maintenance report controls. The **mtcdeir**, **mtcdlink**, **mtcdlnkset**, **mtcdlnp**, **mtcdmap**, **mtcdnp**, **mtcdsctpasoc**, **mtcdsctpcard**, **mtcdstp**, **mtcdstplan**, **mtcdua**, **mtcdvflex**, **mtcheir**, **mtchlnp**, **mtchmap**, **mtchnp**, and **mtchvflex** reports are now controlled by the **chg-mtc-measopts** command. For a complete description of this command, refer to the *Commands Manual* for your 39.2 documentation set.

*Update to the **rept-imt-lvl1** Command*

The **rept-imt-lvl1** command is enhanced to display counts of MSUs returned with errors and MSUs discarded with no report. For a complete description of this command, refer to the *Commands Manual* of your 39.2 documentation set. The following example displays output for the **rept-imt-lvl1** command.

rept-imt-lvl1:s=00:e=01

```
rlghncxa03w 08-09-18 09:25:56 EST  EAGLE 39.2.0
Retrieving data from cards...
;

rlghncxa03w 08-09-18 09:25:56 EST  EAGLE 39.2.0
------------------------------------------------------------

Card:  H'0000     Elapsed Time (day - h:m:s):   0 - 00:08:31.2

Count                                Bus A Value    Bus B Value
-----                                ------------   ------------
Transmit Packet                                 0              0
Transmit Byte                                   0              0
Receive Packet                                  0              0
Receive Byte                                    0              0
```

```
    Receive Packet with CRC Error                 36             2
    Receive Packet with Format Error               0             1
    Receive Packet with Invalid Length             0             0
    Primary Control Receive Error                  0             0
    Primary Control Transmit Error                 0             0
    Primary Control Sanity Error                   0             0
    Violation Error                              291             2
    CPU Receive FIFO Full                          0             0
    IMT Error Interrupt                            0             0
    Error Interrupt Overflow                       0             0
    DMA Terminal Count Interrupt                   0             0
    MSU Retransmitted                              0             0
    MSU Safety Packet                              0             0
    ASU Safety Packet                              0             0
    TSU Safety Packet                              0             0
    BSU Safety Packet                              0             0
    SSU Safety Packet                              0             0
    MSU Returned On Error                          0             0
    MSU Dropped With No Report                     0             0
;

    Card:  H'0001     Elapsed Time (day - h:m:s):   3 - 03:20:07.7
    Count                                Bus A Value   Bus B Value
    -----                                -----------   ------------
    Transmit Packet                                0             0
    Transmit Byte                                  0             0
    Receive Packet                                 0             0
    Receive Byte                                   0             0
    Receive Packet with CRC Error                 14             2
    Receive Packet with Format Error               0             0
    Receive Packet with Invalid Length             0             0
    Primary Control Receive Error                  0             0
    Primary Control Transmit Error                 0             0
    Primary Control Sanity Error                   0             0
    Violation Error                              320            12
    CPU Receive FIFO Full                          0             0
    IMT Receive FIFO Half Full                     0             0
    CPU Receive FIFO Half Full                     0             0
    DMA Terminal Count Interrupt                   0             0
    MSU Retransmitted                              1             0
    MSU Safety Packet                              0             0
    ASU Safety Packet                              0             0
    TSU Safety Packet                              0             0
    IMT Receive FIFO Full                          0             0
    SSU Safety Packet                              0             0
    MSU Returned On Error                          0             0
    MSU Dropped With No Report                     0             0
;
    rlghncxa03w 08-09-18 09:25:56 EST  EAGLE 39.2.0
    ================================================================================
    SUMMARY REPORT:  Totals accumulated from all requested cards

    Count                                Bus A Value   Bus B Value
    -----                                -----------   ------------
    Transmit Packet                                0             0
    Transmit Byte                                  0             0
    Receive Packet                                 0             0
    Receive Byte                                   0             0
    Receive Packet with CRC Error                 50             4
    Receive Packet with Format Error               0             1
    Receive Packet with Invalid Length             0             0
    Primary Control Receive Error                  0             0
    Primary Control Transmit Error                 0             0
    Primary Control Sanity Error                   0             0
    Violation Error                              611            14
    CPU Receive FIFO Full                          0             0
    IMT Receive FIFO Half Full                     0             0
    CPU Receive FIFO Half Full                     0             0
    DMA Terminal Count Interrupt                   0             0
    MSU Retransmitted                              1             0
    MSU Safety Packet                              0             0
    ASU Safety Packet                              0             0
```

```
    TSU Safety Packet                              0             0
    IMT Receive FIFO Full                          0             0
    SSU Safety Packet                              0             0
    MSU Returned On Error                          0             0
    MSU Dropped With No Report                     0             0
    ------------------------------------------------------------------
;
    END OF REPORT
;
```

Update to the ***rept-stat-card*** *Command*

The **rept-stat-card** command is enhanced to display the CARD WARNING field for an HC-MIM or E5-E1T1 card in a **mode=full** report if the specified card is using an obsolete IC framer (version 2.1). For a complete description of this command, refer to the *Commands Manual* of your 39.2 documentation set.

The following example displays output for the **rept-stat-card** command when a version 2.1 IC framer is used.

rept-stat-card:loc=1204:mode=full

```
    tekelecstp 08-09-25 12:06:24 IST  EST  EAGLE 39.2.0
    CARD   VERSION      TYPE      GPL        PST            SST        AST
    1204   131-016-000  LIME1     SS7HC      IS-NR          Active     -----
      ALARM STATUS       =  No Alarms.
      IMTPCI  GPL version = 131-007-000
      BLVXW6  GPL version = 131-009-000
      BLDIAG6 GPL version = 131-008-000
      BLBEPM  GPL version = 128-021-000
      PLDPMC1 GPL version = 128-021-000
      BLCPLD  GPL version = 128-021-000
      IMT BUS A           = Conn
      IMT BUS B           = Conn
      CLOCK A             = Active
      CLOCK B             = Fault
      CLOCK I             = Idle
      HS CLOCK A          = Fault
      HS CLOCK B          = Fault
      HS CLOCK I          = Idle
      MBD BIP STATUS      = Valid
      MOTHER BOARD ID     = EPM A
      DBD STATUS          = Valid
      DBD TYPE            = E1T1
      DBD MEMORY SIZE     = 512M
      HW VERIFICATION CODE = ----
      CARD WARNING        = OBSOLETE FRAMER
      CURRENT TEMPERATURE   =  36C ( 97F)
      PEAK TEMPERATURE:     =  37C ( 99F)     [04-01-05 11:33]
      SIGNALING LINK STATUS
          SLK    PST                LS            CLLI
          A      OOS-MT-DSBLD       lsb           -----------
      TVG STATUS
          SNM     TVG RESULT   = 24 hr: ------, 5 min: ------
          SLAN    TVG RESULT   = 24 hr: ------, 5 min: ------
          SCCP    TVG RESULT   = 24 hr: ------, 5 min: ------
          INM     TVG RESULT   = 24 hr: ------, 5 min: ------

    Command Completed.
;
```

Update to the ***rept-stat-sys*** *Command*

The **rept-stat-sys** command is enhanced to display subsystem status for the INP subsystem. For a complete description of this command, refer to the *Commands Manual* of your 39.2 documentation set. The following example displays partial output for the **rept-stat-sys** command when the INP feature is turned on.

rept-stat-sys

```
    rlghncxa03w 08-06-17 16:53:22 EST  EAGLE5 39.2.0
    MAINTENANCE STATUS REPORT
       Maintenance Baseline established.
       Routing Baseline established.
       SCCP Baseline established.
       ALARMS:     CRIT=    9     MAJR=  10   MINR=   3     INH=    2
       OAM 1113     IS-NR         Active                    INH=    0
       OAM 1115     IS-NR         Standby                   INH=    0
       LIM     CARD IS-NR=   3    Other=        0           INH=    0
       X25     CARD IS-NR=   0    Other=        0           INH=    0
       SCCP    CARD IS-NR=   3    Other=        0           INH=    0
       GLS     CARD IS-NR=   0    Other=        0           INH=    0
       SLAN    CARD IS-NR=   0    Other=        0           INH=    0
       VXWSLAN CARD IS-NR=   0    Other=        0           INH=    0
       DPC  SS      Actv =   0    Other=        0
       SEAS SS      IS-NR=   1    Other=        0
       TERMINAL     IS-NR=   2    Other=       14           INH=    0
       MPS          IS-NR=   2    Other=        0
       SECURITY SS  IS-NR=   1    Other=        0
       EIR SS       IS-NR=   1    Other=        0
       RTD SS       IS-NR=   0    Other=        1
       INP SS       IS-NR=   1    Other=        0

;
```

*Update to the **rtrv-gta** and **rtrv-gtt** Commands*

The **rtrv-gta** and **rtrv-gtt** commands are enhanced to report the number of entries that are displayed by the command. For a complete description of these commands, refer to the *Commands Manual* of your 39.2 documentation set. The following examples display sample output for the **rtrv-gta** and **rtrv-gtt** commands.

Example 1 displays output for the **rtrv-gta** command.

rtrv-gta:gttsn=setans001

```
    e1040501 08-09-02 14:25:15 EST  EAGLE 39.2.0

    GTTSN      NETDOM  SETTYPE  NDGT
    setans001  ansi    CDGTA    3,6

    GTA table is (61 of 269999) 1% full.

;

    e1040501 08-09-02 14:25:15 EST  EAGLE 39.2.0

    START GTA END GTA   XLAT   RI     PCA
    100       100       DPCSSN SSN    001-001-002
         MAPSET=DFLT  SSN=10  CCGT=no  NTT=--- CGGTMOD=NO
         CGGTASN=---------- CGPCSN=---------- SELID=----- OPCSN=---------
    101       101       DPCSSN SSN    001-001-003
         MAPSET=DFLT  SSN=10  CCGT=no  NTT=--- CGGTMOD=NO
         CGGTASN=---------- CGPCSN=---------- SELID=----- OPCSN=---------
    104       104       DPCSSN SSN    001-001-003
         MAPSET=DFLT  SSN=10  CCGT=no  NTT=--- CGGTMOD=NO
         CGGTASN=---------- CGPCSN=---------- SELID=----- OPCSN=---------
    105       105       DPCSSN SSN    001-001-003
         MAPSET=1     SSN=14  CCGT=no  NTT=--- CGGTMOD=NO
         CGGTASN=---------- CGPCSN=---------- SELID=----- OPCSN=---------
    115       115       DPCSSN SSN    001-001-002
         MAPSET=2     SSN=15  CCGT=no  NTT=--- CGGTMOD=NO
         CGGTASN=---------- CGPCSN=---------- SELID=----- OPCSN=---------
    111111    111111    DPC    GT     001-001-002
         MRNSET=DFLT  SSN=--- CCGT=no  NTT=--- CGGTMOD=NO
         CGGTASN=---------- CGPCSN=---------- SELID=----- OPCSN=---------
    111112    111112    DPC    GT     001-001-002
         MRNSET=DFLT  SSN=--- CCGT=no  NTT=--- CGGTMOD=NO
         CGGTASN=---------- CGPCSN=---------- SELID=----- OPCSN=---------
```

```
    111113    111113    DPC    GT     001-001-002
         MRNSET=DFLT  SSN=--- CCGT=no  NTT=--- CGGTMOD=NO
         CGGTASN=---------- CGPCSN=---------- SELID=----- OPCSN=---------
    111114    111114    DPC    GT     001-001-002
         MRNSET=DFLT  SSN=--- CCGT=no  NTT=--- CGGTMOD=NO
         CGGTASN=---------- CGPCSN=---------- SELID=----- OPCSN=---------
    111115    111115    DPC    GT     001-001-002
         MRNSET=DFLT  SSN=--- CCGT=no  NTT=--- CGGTMOD=NO
         CGGTASN=---------- CGPCSN=---------- SELID=----- OPCSN=---------
    111116    111116    DPC    GT     001-001-002
         MRNSET=DFLT  SSN=--- CCGT=no  NTT=--- CGGTMOD=NO
         CGGTASN=---------- CGPCSN=---------- SELID=----- OPCSN=---------
    111117    111117    DPC    GT     001-001-002
         MRNSET=DFLT  SSN=--- CCGT=no  NTT=--- CGGTMOD=NO
         CGGTASN=---------- CGPCSN=---------- SELID=----- OPCSN=---------
    111118    111118    DPC    GT     001-001-002
         MRNSET=DFLT  SSN=--- CCGT=no  NTT=--- CGGTMOD=NO
         CGGTASN=---------- CGPCSN=---------- SELID=----- OPCSN=---------
    111119    111119    DPC    GT     001-001-002
         MRNSET=DFLT  SSN=--- CCGT=no  NTT=--- CGGTMOD=NO
         CGGTASN=---------- CGPCSN=---------- SELID=----- OPCSN=---------
    111120    111120    DPC    GT     001-001-002
         MRNSET=DFLT  SSN=--- CCGT=no  NTT=--- CGGTMOD=NO
         CGGTASN=---------- CGPCSN=---------- SELID=----- OPCSN=---------
    111121    111121    DPC    GT     001-001-002
         MRNSET=DFLT  SSN=--- CCGT=no  NTT=--- CGGTMOD=NO
         CGGTASN=---------- CGPCSN=---------- SELID=----- OPCSN=---------
    111122    111122    DPC    GT     001-001-002
         MRNSET=DFLT  SSN=--- CCGT=no  NTT=--- CGGTMOD=NO
         CGGTASN=---------- CGPCSN=---------- SELID=----- OPCSN=---------
    111123    111123    DPC    GT     001-001-002
         MRNSET=DFLT  SSN=--- CCGT=no  NTT=--- CGGTMOD=NO
         CGGTASN=---------- CGPCSN=---------- SELID=----- OPCSN=---------
    111124    111124    DPC    GT     001-001-002
         MRNSET=DFLT  SSN=--- CCGT=no  NTT=--- CGGTMOD=NO
         CGGTASN=---------- CGPCSN=---------- SELID=----- OPCSN=---------
    111125    111125    DPC    GT     001-001-002
         MRNSET=DFLT  SSN=--- CCGT=no  NTT=--- CGGTMOD=NO
         CGGTASN=---------- CGPCSN=---------- SELID=----- OPCSN=---------

    Command Retrieved 20 Entries

;
```

Example 2 displays output for the **rtrv-gtt** command.

rtrv-gtt:type=1:num=22

```
    e1040501 08-09-02 13:14:49 EST  EAGLE 39.2

    TYPEA    TTN        NDGT
    1        --------   6

    GTT table is (22 of 269999) 1% full.

;

    e1040501 08-09-02 13:14:49 EST  EAGLE 39.2

    START GTA             END GTA               XLAT   RI     PCA
    111111                111111                DPC    GT     001-001-002
         SSN=--- NGT=---
    111112                111112                DPC    GT     001-001-002
         SSN=--- NGT=---
    111113                111113                DPC    GT     001-001-002
         SSN=--- NGT=---
    111114                111114                DPC    GT     001-001-002
         SSN=--- NGT=---
    111115                111115                DPC    GT     001-001-002
         SSN=--- NGT=---
    111116                111116                DPC    GT     001-001-002
         SSN=--- NGT=---
    111117                111117                DPC    GT     001-001-002
```

```
     SSN=--- NGT=---
111118               111118               DPC    GT     001-001-002
     SSN=--- NGT=---
111119               111119               DPC    GT     001-001-002
     SSN=--- NGT=---
111120               111120               DPC    GT     001-001-002
     SSN=--- NGT=---
111121               111121               DPC    GT     001-001-002
     SSN=--- NGT=---
111122               111122               DPC    GT     001-001-002
     SSN=--- NGT=---
111123               111123               DPC    GT     001-001-002
     SSN=--- NGT=---
111124               111124               DPC    GT     001-001-002
     SSN=--- NGT=---
111125               111125               DPC    GT     001-001-002
     SSN=--- NGT=---
111126               111126               DPC    GT     001-001-002
     SSN=--- NGT=---
111127               111127               DPC    GT     001-001-002
     SSN=--- NGT=---
111128               111128               DPC    GT     001-001-002
     SSN=--- NGT=---
111129               111129               DPC    GT     001-001-002
     SSN=--- NGT=---
111130               111130               DPC    GT     001-001-002
     SSN=--- NGT=---
111131               111131               DPC    GT     001-001-002
     SSN=--- NGT=---

Command Retrieved 21 Entries

;
```

Update to the Software Upgrade Procedure

All upgrades to the EAGLE 5 ISS require a software authorization key (SAK). Refer to the *System Healthcheck Procedure* (Releases 31.6 and later) and the *Software Upgrade Procedure* (Release 39.2) for additional information on the SAK.

Commands

The following commands are enhanced to support the software upgrade procedure. For complete descriptions of these commands, refer to the *Commands Manual* for your 39.2 documentation set.

- **chg/rtrv-upgrade-config**—Enhanced to configure and display the SAK and the disk that contains the upgrade release.
  The following example displays output for the **rtrv-upgrade-config** command.

  rtrv-upgrade-config

  ```
      rlghncxa03w  08-09-13  08:15:45 EST  EAGLE 39.2.0
      Software Access Key entered on system: VBJYAPDPBTEJB
      Command Completed.
  ;
  ```

- **init card**—Enhanced to provision the disk partition group that is used as the source for downloading the GPL.

Operational Changes

The following operational changes are generated for the features and other changes in Release 39.2.

Unsolicited Alarm Messages

New or changed unsolicited alarm messages (UAMs) that are available in Release 39.2 are shown below.

ATINP

Table 1-1. New UAMs - ATINP

UAM	565	Format	Output Group
Action	Added for ATINP		
Old data			
New data	ATINPQ Subsystem is not available	ATINP SYSTEM	APSS
UAM	566	Format	Output Group
Action	Added for ATINP		
Old data			
New data	ATINPQ Subsystem is disabled	ATINP SYSTEM	APSS
UAM	567	Format	Output Group
Action	Added for ATINP		
Old data			
New data	ATINPQ Subsystm normal, card(s) abnorml		
UAM	568	Format	Output Group
Action	Added for ATINP		
Old data			
New data	ATINPQ Subsystem is available	ATINP SYSTEM	APSS
UAM	569	Format	Output Group
Action	Added for ATINP		
Old data			
New data	ATINPQ Subsystem is removed	ATINP SYSTEM	APSS

Non-feature Related

Table 1-2. New or Changed UAMs - Non-feature Related

UAM	394	Format	Output Group
Action	Enhanced for Release 39.2		
Old data	Local Subsystem is available		
New data	INP Subsystem is available	INP System	APSS
UAM	395	Format	Output Group
Action	Enhanced for Release 39.2		
Old data	Local Subsystem is not available		
New data	INP Subsystem is not available	INP System	APSS
UAM	396	Format	Output Group
Action	Enhanced for Release 39.2		
Old data	Local Subsystem is disabled		
New data	INP Subsystem is disabled	INP System	APSS
UAM	397	Format	Output Group
Action	Enhanced for Release 39.2		
Old data	Local Subsystem is removed		

New data	INP Subsystem is removed	INP System	APSS
UAM	398	Format	Output Group
Action	Enhanced for Release 39.2		
Old data	Local Subsystem normal,card(s) abnormal		
New data	INP Subsystem normal,card(s) abnormal	INP System	APSS

Unsolicited Information Messages

New or changed unsolicited information messages (UIMs) that are available in Release 39.2 are shown below.

ATINP

Table 1-3. New UIMs - ATINP

UIM	1395	Format	OUtput Group
Action	Added for ATINP		
Old data			
New data	Inh ATINPQ SS request alrdy outstanding	I1	APSS
UIM	1396	Format	Output Group
Action	Added for ATINP		
Old data			
New data	Failure Inhibiting ATINPQ SS	I1	APSS
UIM	1397	Format	Output Group
Action	Added for ATINP		
Old data			
New data	LSS: Missing Mandatory Parameter	I13	APSS
UIM	1398	Format	Output Group
Action	Added for ATINP		
Old data			
New data	ATINPQ: Badly formatted Subs Id	I13	APSS
UIM	1399	Format	Output Group
Action	Added for ATINP		
Old data			
New data	ATINPQ: Subscriber Identity not MSISDN	I13	APSS
UIM	1400	Format	Output Group
Action	Added for ATINP		
Old data			
New data	LSS: Invalid MSISDN digits length	I13	APSS
UIM	1401	Format	Output Group
Action	Added for ATINP		
Old data			
New data	LSS: Unsupported numbering plan	I13	APSS
UIM	1402	Format	Output Group
Action	Added for ATINP		
Old data			
New data	ATINPQ: Invalid Requested Info	I13	APSS

UIM	1403	Format	Output Group
Action	Added for ATINP		
Old data			
New data	LSS: Dgts truncated in encd parms	I13	APSS

TIF

Table 1-4. New UIMs - TIF

UIM	1407	Format	Output Group
Action	Added for TIF		
Old data			
New data	Unexpected SI in TIF Stop Action	I16	GWS
UIM	1408	Format	Output Group
Action	Added for TIF		
Old data			
New data	TIF: Modified MSU too large to route	I15	APSS

Non-feature Related

Table 1-5. Enhanced UIMs - Non-feature Related

UIM	1174	Format	Output Group
Action	Enhanced for 39.2		
Old data	Inh Local SS request alrdy outstanding		
New data	Inh INP SS request alrdy outstanding	I1	APSS
UIM	1175	Format	Output Group
Action	Enhanced for 39.2		
Old data	Failure Inhibiting Local SS		
New data	Failure Inhibiting INP SS	I1	APSS

UAM Format Change

ATINP SYSTEM

```
         1         2         3         4         5         6         7         8
12345678901234567890123456789012345678901234567890123456789012345678901234567890
    xxxx.yyyy zz ATINP SYSTEM            text
```

Error Messages

ATINP

Table 1-6. Error Messages - ATINP

Response ID Code	Error Message	New ?	Used by Command
E2136	At least one optional parameter is required	N	**chg-atinpqopts**
E3340	GFLEX, GPORT, INP, PPSMS or VFLEX must be ON or ATINP enbld	N	**rtrv-data-rtdb**
E3342	GFLEX/INP/AINPQ/GPORT/PPSMS/VFLEX must be ON or ATINP enbld	N	**ent-trace**
E3581	SSN value must be the LNP, INP, EIR, VFLEX or ATINPQ SSN	N	**alw/inh-map-ss**

Response ID Code	Error Message	New ?	Used by Command
E3582	INP Subsystem is offine in database	N	**alw-map-ss**
E3929	LNP/INP/EIR/VFLEX must be ON or ATINP must be enabled	N	**alw/inh-map-ss**
E3932	GFLEX/INP/GPORT/VFLEX must be ON or IDPR/ATINP/TIF enabled	N	**ent-trace**
E4177	Invalid TPCs are present in the MAP table for specified SSN	N	**ent-ss-appl**
E4181	Specific SSN already exists	N	**ent-ss-appl**
E4183	INP/AINPQ/EIR/VFLEX must be ON or ATINP must be enabled	N	**ent/chg-map**
E4184	EIR Subsystem is offine in database	N	**alw-map-ss**
E4188	LNP/EIR/VFLEX/ATINP must be enabled or INP/AINPQ must be ON	N	**rtrv-ss-appl**
E4240	GFLEX, GPORT or VFLEX feat must be ON or ATINP enabled	N	**rtrv-data-rtdb**
E4716	LNP/VFLEX must be ON or ATINP must be enabled	N	**ent/chg-map**
E4717	EIR/VFLEX must be ON or ATINP must be enabled	N	**ent/chg-map**
E4816	ATINP feature must be enabled	Y	**chg/rtrv-atinpqopts** **chg-mtc-measopts** **chg/rtrv-sid** **ent/chg/rtrv-srvsel** **ent/chg/dlt-ss-appl** **rept-ftp-meas**
E4820	Failure reading EGLEOPTS table	Y	**chg/rtrv-atinpqopts**
E4838	GTIN24 must not be specified when (N)SERV = ATINP	Y	**ent/chg/rtrv-srvsel**
E4876	STP True PC and ATINPQ Subsystem does not exist in MAP Table	Y	**ent-ss-appl**
E4877	ATINPQ Subsystem is offine in database	Y	**alw-map-ss**
E4895	CPCx must not be ITUN24 if CPCTYPE is ATINPQ	Y	**chg-sid**
E4942	ATINP cannot be turned ON if STPOPTS DEFCC is NONE	Y	**chg-ctrl-feat**
E4979	Cannot set DefCC to NONE, if ATINP feature is ON	Y	**chg-stpopts**

Error Messages - Remote Backup

Table 1-7. Error Messages - Remote Backup

Response ID Code	Error Message	New?	Used by Command
E2155	Invalid parameter combination specified	N	**chg-db**
E2387	Card is not in service	N	**chg-db**
E2774	Server table entry not found for this APP/IPADDR	N	**chg-db**

Error Messages - TIF Features

Table 1-8. Error Messages - TIF Features

Response ID Code	Error Message	New?	Used by Command
E2136	At least one optional parameter is required	N	**chg-isup-msg** **chg-tifopts**
E3356	TIF feature is mutually exclusive with LNP	Y	**enable-ctrl-feat**
E3932	GFLEX/INP/GPORT/VFLEX must be ON or IDPR/ATINP/TIF enabled	N	**ent-trace**

Response ID Code	Error Message	New?	Used by Command
E4819	Failure reading TSTMSG Table	Y	**chg-isup-msg**
E4820	Failure reading EGLEOPTS table	Y	**chg/rtrv-tifopts** **chg/rtrv-ttropts**
E4981	TINP feature must be enabled before upgrade to 39.2 or later	Y	**chg-gws-actset** **chg-tinpopts**
E4982	At least one TIF feature must be enabled	Y	**chg-gws-actset** **chg-isup-msg** **chg-tifopts** **tst-msg**
E4983	TIF,TIF2,TIF3,TLNP,TINP and RDCT are mutually exclusive	Y	**chg-gws-actset**
E4984	TIF,TIF2,TIF3,TLNP,TINP or RDCT must be last stop action	Y	**chg-gws-actset**

Error Messages - Non-Feature Specific

Table 1-9. Error Messages - Non-Feature Specific

Response ID Code	Error Message	New?	Used by Command
E2583	LAN feature must be ON	N	**chg-ss7opts**
E2701	Meas Platform feature must be ON	N	**chg/rtrv-mtc-measopts**
E3009	LNP feature must be ON	N	**chg-mtc-measopts**
E3276	Command not allowed while in upgrade mode	N	**chg/rtrv-mtc-measopts**
E3349	INP/AINPQ feature must be ON or GPORT/PPSMS feature enabled	N	**chg-mtc-measopts**
E3699	EIR feature must be ON	N	**chg-mtc-measopts**
E3883	GSM Map Screening feature must be ON	N	**chg-mtc-measopts**
E3991	GPORT feature must be on	N	**chg-gsmopts**
E4142	VFLEX feature must be ON	N	**chg-mtc-measopts**
E4371	GPORT must be enabled	N	**chg-gsmopts**
E4820	Failure reading EGLEOPTS table	Y	**chg/rtrv-gsmopts** **chg/rtrv-gsmsmsopts** **chg/rtrv-is41opts** **chg/rtrv-is41smsopts**

Related Publications

For information about additional publications that are related to this document, refer to the *Related Publications* document. The *Related Publications* document is published as a part of the *Release Documentation* and is also published as a separate document on the Tekelec Customer Support Site.

Locate Product Documentation on the Customer Support Site

Access to Tekelec's Customer Support site is restricted to current Tekelec customers only. This section describes how to log into Tekelec's Customer Support site and locate a document. Viewing the document requires Adobe Acrobat Reader, which can be downloaded at www.adobe.com.

1. Log into Tekelec's **new** Customer Support site at support.tekelec.com .

   NOTE: If you have not registered for this new site, click the Register Here link. Have your customer number available. The response time for registration requests is 24 to 48 hours.

2. Click the **Product Support** tab.
3. Use the Search field to locate a document by its part number, release number, document name, or document type. The Search field accepts both full and partial entries.
4. Click a subject folder to browse through a list of related files.
5. To download a file to your location, right-click the file name and select **Save Target As**.

Customer Training

Tekelec offers a variety of technical training courses designed to provide the knowledge and experience required to properly provision, administer, operate and maintain the EAGLE 5 ISS. To enroll in any of the courses or for schedule information, contact the Tekelec Training Center at (919) 460-3064 or E-mail **eagletrain@tekelec.com**.

A complete list and schedule of open enrollment can be found at **www.tekelec.com**.

Customer Care Center

The Tekelec Customer Care Center offers a point of contact for product and service support through highly trained engineers or service personnel. The Tekelec Customer Care Center is available 24 hours a day, 7 days a week at the following locations:

- Tekelec, USA

  Phone:

  +1 888 367 8552 (US and Canada only)

  +1 919 460 2150 (international)

  Email: *support@tekelec.com*

- Tekelec, Europe

  Phone: +44 1784 467804

  Email:*ecsc@tekelec.com*

When a call is received, a Customer Service Report (CSR) is issued to record the request for service. Each CSR includes an individual tracking number.

After a CSR is issued, the Customer Care Center determines the classification of the trouble. If a critical problem exists, emergency procedures are initiated. If the problem is not critical, information regarding the serial number of the system, Common Language Location Identifier (CLLI), initial problem symptoms (includes outputs and

messages) is recorded. A primary Customer Care Center engineer is also assigned to work on the CSR and provide a solution to the problem. The CSR is closed when the problem is resolved.

EAGLE 5 ISS Card Overview Table

The EAGLE 5 ISS Card Overview table is a resource table that provides an overview of information for cards that can be provisioned in the EAGLE 5 ISS. For a detailed description of all hardware supported by Release 39.2, see the Hardware Baseline .

This table lists the following card information:

- The name of the card on the card label
- The card part number
- The provisioned card type
- The number of shelf slots that the card occupies (1 or 2)
- The number of physical ports on the card
- The maximum number of links that can be assigned to the card
- The GPLs and applications that can run on the card

Table 1-10. EAGLE 5 ISS Card Overview Table

Card Name as shown on card label	Part Number	Provisioned Card Type	Per Card Slots/Ports		Links per Card	Card GPLs	Card Applications
ACM	870-1008-02 870-1008-03 870-1008-04 870-1008-05	acmenet	2	1	1 IP Service	stplan imt	stplan
DCM	870-1945-01 870-1945-02 870-1945-03 870-1984-01 (DCMX)	dcm	2	2	1 IP Service	bpdcm vwxslan	stplan
				2	2	bpdcm iplim iplimi	iplim iplimi
				2	1	bpdcm ss7ipgw ipgwi	ss7ipgw ipgwi
		stc	2	2	2 IP Service	bpdcm eroute	eroute
EDCM	870-2372-01	dcm	1	2	1 IP Service	bpdcm	stplan

Card Name as shown on card label	Part Number	Provisioned Card Type	Per Card Slots/Ports		Links per Card	Card GPLs	Card Applications
(SSEDCM)	870-2372-08 870-2372-13^					vwxslan	
					8	bpdcm iplim iplimi	iplim iplimi
					1	bpdcm ss7ipgw ipgwi	ss7ipgw ipgwi
	870-2372-01	stc	1	2	2 IP Service	bpdcm eroute	eroute
EDCM-A (SSEDCM)	870-2508-01	dcm	1	2	1 IP Service	bpdcm vwxslan	stplan
	870-2508-02^	stc	1	2	2 IP Service	bpdcm eroute	eroute
DSM†	1 GB MEM 870-1984-02 870-1984-08 870-1984-09 870-1984-15^ 870-1984-17^ 2 GB MEM 870-1984-03 4 GB MEM 870-1984-05 870-1984-06 870-1984-07 870-1984-13^ 870-1984-16^	dsm	2	2	2 IP service	bpdcm vsccp gls	vsccp gls
DSM-1G	870-2371-02 870-2371-06 870-2371-08 870-2371-13^	ipsm	1	2 (use only A)	1 IP service	bpdcm ips	ips
EDSM-2G*	870-2372-03 870-2372-07	mcpm	1	2 (use only A)	1 IP service	bpdcm bpdcm2	mcp

Card Name as shown on card label	Part Number	Provisioned Card Type	Per Card Slots/Ports		Links per Card	Card GPLs	Card Applications
	870-2372-09 870-2372-14^ 870-2372-15^					mcp	
E1/T1 MIM††	870-2198-01 870-2198-02 870-2198-03 870-2198-04 870-2198-07^	lime1 limt1 limch	1	2	8	ss7ml bpmplt	ss7ansi ccs7itu
E1-ATM	870-2455-01 870-2455-02 870-2455-03 870-2455-05^	lime1atm	1	2	1	atmitu bphcap bphcapt	atmitu
E5-ATM	870-1872-01^ 870-1872-02^	limatm lime1atm	2	2	2	atmhc blbepm blcpld bldiag6 blvxw6 imtpci	atmansi atmitu
E5-E1T1	870-1873-02 870-1873-03^ 870-1873-04^	lime1 limt1	1	8	32	ss7hc blbepm bldiag6 blvxw6 imtpci pldpmc1 blcpld	ss7ansi ccs7itu
		lime1 (for SE-HSL)	1	8	1		ccs7itu
E5-ENET	870-2212-02 870-2212-03^ 870-2212-04^	dcm	1	2	16	bldiag6 blbepm iplhc imtpci blvxw6 blcpld	iplim iplimi
			1	2	1	bldiag6 blbepm ipghc	ss7ipgw

Card Name as shown on card label	Part Number	Provisioned Card Type	Per Card Slots/Ports		Links per Card	Card GPLs	Card Applications
						imtpci blvxw6 blcpld	ipgwi
			1	2	2 IP Service	slanhc bldiag6 blbepm blvxw6 blcpld imtpci	stplan
			1	2	32	ipsg bldiag6 blbepm blvxw6 blcpld imtpci	ipsg
	870-2212-05^	stc	1	2	2 IP Service	erthc bldiag6 blbepm blvxw6 imtpci blcpld	eroute
		enet	1	2	32	ipsg bidiag6 blbepm blvxw6 blcpld imtpci	ipsg
E5-IPSM	870-2877-01^ 870-2877-02^	ipsm	1	2 (use only A)	1 IP service	ipshc imtpci blcpld blvxw6 bldiag6 blbepm	ips

Card Name as shown on card label	Part Number	Provisioned Card Type	Per Card Slots/Ports		Links per Card	Card GPLs	Card Applications
E5-SM4G	870-2860-01^ 870-2860-02^	dsm	2	2	2 IP Service	sccphc imtpci blcpld blvxw6 bldiag6 bpbsmg	vsccp
EILA	870-2049-01 870-2049-02	limds0 limocu limv35	1	2	2	ss7ansi ss7gx25 ccs7itu imt	ss7ansi ss7gx25 ccs7itu
EILA-T	870-2049-03	limds0 limocu limv35	1	2	2	ss7ansi ss7gx25 ccs7itu imt	ss7ansi ss7gx25 ccs7itu
GPSM-II	870-2360-01 870-2360-05 870-2360-06 870-2360-08^ 870-2360-09^	N/A	1	N/A	N/A	eoam bpdcm bpdcm2	oam
HC-MIM††	870-2671-01 870-2671-02 870-2671-03^	lime1 limt1	2	8	64	ss7hc blbios blcpld blvxw6 bldiag6 pldpmc1 imtpci	ss7ansi ccs7itu
		lime1 (for SE-HSL)		8	2		ccs7itu
HIPR	870-2574-01 870-2574-02^	N/A	1	N/A	N/A	hipr	hipr
HMUX	870-1965-01 870-1965-03^	N/A	1	N/A	N/A	bphmux	bphmux
LIM-AINF**	870-1014-01 870-1014-02 870-1014-03	limds0 limocu	1	2	1	ss7ansi ss7gx25 ccs7itu	ss7ansi ss7gx25

Card Name as shown on card label	Part Number	Provisioned Card Type	Per Card Slots/Ports		Links per Card	Card GPLs	Card Applications
	870-1014-04 870-1014-05 870-1014-06 870-1488-01 870-1488-02 870-1488-03 870-1488-04 870-1488-05 870-1488-06	limv35				imt	ccs7itu
LIM-ATM	870-1293-02 870-1293-03 870-1293-06 870-1293-07 870-1293-08 870-1293-10 870-1293-13^	limatm	1	2	1	atmansi bphcap bphcapt	atmansi
LIM-DS0	870-1009-02 870-1009-03 870-1009-04 870-1485-01 870-1485-02 870-1485-03	limds0	1	2	2 1 2	ss7ansi ss7gx25 ccs7itu imt	ss7ansi ss7gx25 ccs7itu
LIM-E1††	870-1379-01	lime1 limch	1	2	2	ss7ansi ccs7itu imt	ss7ansi, ccs7itu
LIM-ILA	870-1484-01 870-1484-02	limds0 limocu limv35	1	2	1	ss7ansi ss7gx25 ccs7itu imt	ss7ansi ss7gx25 ccs7itu
LIM-OCU	870-1010-03 870-1010-04 870-1010-05 870-1486-02	limocu	1	2	2	ss7ansi ss7gx25 ccs7itu	ss7ansi ss7gx25

Card Name as shown on card label	Part Number	Provisioned Card Type	Per Card Slots/Ports		Links per Card	Card GPLs	Card Applications
	870-1486-03 870-1486-04					imt	ccs7itu
LIM-V.35	870-1012-02 870-1012-03 870-1012-04 870-1487-01 870-1487-02 870-1487-03	limv35	1	2	2	ss7ansi ss7gx25 ccs7itu imt	ss7ansi ss7gx25 ccs7itu
MDAL	870-0773-04 870-0773-05 870-0773-06 870-0773-08 870-0773-09^	N/A	2	N/A	N/A	N/A	N/A
MPL	870-2061-01 870-2061-03 870-2061-04 870-2061-06^	limds0	1	2	8	bpmpl ss7ml	ss7ansi
TDM	870-0774-10 870-0774-11	N/A	1	N/A	N/A	N/A	N/A
TDM-GTI	870-0774-15 870-0774-18^	N/A	1	N/A	N/A	N/A	N/A
TSM-256	870-1289-02 870-1289-03 870-1289-04 870-1289-06^ 870-1289-07^	tsm	1	N/A	N/A	sccp gls imt	sccp gls
TSM-512	870-1290-02 870-1290-03 870-1290-04	tsm	1	N/A	N/A	sccp gls imt	sccp gls
TSM-768	870-1291-02 870-1291-03 870-1291-04	tsm	1	N/A	N/A	sccp gls imt	sccp gls

Card Name as shown on card label	Part Number	Provisioned Card Type	Per Card Slots/Ports		Links per Card	Card GPLs	Card Applications
TSM-1024	870-1292-02 870-1292-03 870-1292-04	tsm	1	N/A	N/A	sccp gls imt	sccp gls

*Though the system allows 250 MCPM cards, practical usage is 2.

**A LIM, EILA, or ILA is a link interface module using the AINF interface and can be installed in place of the LIM-DS0A, LIM-OCU, or LIM-V.35. It is configured in the database as either a LIM-DS0A, LIM-OCU, or LIM-V.35 card.

†DSMs are required for the LNP, 50,000 GTT, G-Port, G-Flex, EIR, or INP feature. For more information about turning these features on, refer to the appropriate manual.

††For the E1 or T1 interface, SS7 application (SS7ANSI or CCS7ITU) can be assigned to these cards.

For more information on the E1 or T1 interface go to Chapter 3 “System Administration Procedures” in the Database Administration Manual - SS7.

^This part number is the ROHS equivalent of the immediately preceding part number.

Feature Restrictions

The following table lists features that are not supported on certain cards. The cards are listed by the name that appears on the card label. For more information on the cards, such as card type, associated GPLs, etc, please see the EAGLE 5 ISS Card Overview Table .

NOTE: For the purposes of this table, the following conventions apply:

- **The TSM-256, TSM-268, TSM-512, and TSM-1024 cards are collectively referred to as TSM cards.**
- **Restrictions on TSM cards apply only to TSM cards that are running the sccp application. There are no restrictions on TSM cards running the gls application.**
- **The 2-port EILA, EILA-T, ILA, LIM-AINF, LIM-DS0, LIM-E1, LIM-OCU, and LIM-V.35 cards are collectively referred to as 2-port LIM cards.**

Table 1-11. Feature Restrictions

Feature Name	Part Number	Restricted on Card...
384 Million LNP Records	893-0110-24 - 893-0110-36	DSM, TSM
AINPQ	893-0178-01	DSM (less than 4G), TSM
A-Port	893-0166-01	DSM (less than 4G), TSM
ATINP	893-0221-01	TSM
EIR	893-0123-01	TSM
Flexible GTT Loadsharing	893-0154-01	TSM
G-Flex	893-0219-01	TSM
G-Flex MLR	893-0217-01	TSM
G-Port	893-0172-01	TSM
GTT Loadsharing to 32 Destinations	N/A	TSM
Hex Digit Support for GTT	893-0185-01	TSM
IDP Screening for Prepaid	893-0155-01	TSM

Feature Name	Part Number	Restricted on Card...
INP	893-0179-01	TSM
IS41 GSM Migration	893-0173-01	DSM (less than 4G), TSM
Large System # Links, Quantity 2000	893-0059-01	2-port LIM
LNP Ported TNs (204 million, 216 million, 228 million)	893-0110-21 - 893-0110-23	DSM (less than 4G), TSM, E5-SM4G
MO-based GSM SMS NP	893-0194-01	TSM
MO-based IS41 SMS NP	893-0195-01	DSM (less than 4G), TSM
MT-Based GSM SMS NP	893-0200-01	TSM
MT-Based GSM MMS NP	893-0241-01	TSM
MT-Based IS41 SMS NP	893-0199-01	DSM (less than 4G), TSM
MTP Messages for SCCP Apps	893-0174-01	DSM (less than 4G), TSM
Multiple Linkset to Single APC	893-0181-01	2-port LIM
Origin Based MTP Routing	893-0142-01	2-port LIM
Origin Based SCCP Routing	893-0143-01	TSM
Prepaid IDP Query Relay	893-0160-01	TSM
Prepaid SMS Intercept Ph1	893-0067-01	TSM
Proxy Point Code	893-0187-01 - 893-0187-10	2-port LIM
SCCP Loop Detection	893-0165-01	TSM
SCCP Service Re-route	N/A	TSM
TIF Number Portability	893-0189-01	TSM
TIF SCS Forwarding	893-0222-01	TSM
TIF Simple Number Substitution	893-0240-01	TSM
Transaction-based GTT Loadsharing	893-0171-01	TSM
V-Flex	893-0167-001	TSM
Weighted GTT Loadsharing	893-0170-01	TSM

Hardware Baseline

The Hardware Baseline for EAGLE 5 ISS Release 39.2 is shown in the following table.

Table 1-12. Release 39.2 Hardware Baseline

Component	Part Number	ROHS Number (if applicable)	Required for
Control Shelf	870-2321-02 Rev A	870-2321-08 Rev A	HMUX
	870-2321-04 Rev A		HMUX, Standard Frame
	870-2377-01 Rev A	870-2377-02 Rev A	HMUX, Heavy Duty Frame
Control Shelf Backplane	870-0775-03 Rev E		
Extension Shelf	870-2378-01 Rev A	870-2378-02 Rev A	Heavy Duty Frame
	870-0776-02 Rev C		Standard Frame
	870-0776-03 Rev D		
	870-0776-06 Rev A		
	870-0776-07 Rev A		
Extension Shelf Backplane	870-0776-08 Rev A or		
	870-0776-11 Rev A		

Component	Part Number	ROHS Number (if applicable)	Required for
ACM	870-1008-02 Rev D or		
	870-1008-03 Rev A or		
	870-1008-04 Rev A or		
	870-1008-05 Rev A		
Air Management Card	870-1824-01 Rev A	870-1824-02 Rev A	Shelves with Fan Assembly
DCM	870-1945-01 Rev A or		
	870-1945-02 Rev A or		
	870-1945-03 Rev A		
DCMX	870-1984-01 Rev A		
EDCM (single slot)	870-2372-01 Rev E or		
	870-2372-08 Rev A	870-2372-13 Rev A	
EDCM-A (single slot)	870-2508-01 Rev A	870-2508-02 Rev A	
DSM, 1GB MEM	870-1984-02 Rev A or		
	870-1984-08 Rev A or		
	870-1984-09 Rev A	870-1984-15 Rev A 870-1984-17 Rev A	
DSM, 2GB MEM	870-1984-03 Rev A		
DSM, 4GB MEM	870-1984-05 Rev A		Heavy Duty Frame
	870-1984-06 Rev A or		
	870-1984-07 Rev A	870-1984-13 Rev A 870-1984-16 Rev A	
DSM-1G	870-2371-02 Rev A		
	870-2371-06 Rev A		
	870-2371-08 Rev A or	870-2371-13 Rev A	
EDSM-2G (MCPM)	870-2372-03 Rev A		
	870-2372-07 Rev A		
	870-2372-09 Rev A or	870-2372-14 Rev A	
		870-2372-15 Rev A	
E1/T1 MIM	870-2198-01 Rev G or		
	870-2198-02 Rev A or		
	870-2198-03 Rev A or		
	870-2198-04 Rev A	870-2198-07 Rev A	
E1-ATM	870-2455-01 Rev B		
	870-2455-02 Rev B		
	870-2455-03 Rev A	87-02455-05 Rev A	
E5-ATM		870-1872-01 Rev A	
		870-1872-02 Rev A	
E5-ATM Adapter		830-1342-05	
E5-E1T1	870-1873-02 Rev A	870-1873-03 Rev A	
		870-1873-04 Rev A	

Component	Part Number	ROHS Number (if applicable)	Required for
E5-ENET	870-2212-02 Rev A	870-2212-03 Rev A	
		870-2212-04 Rev A	
		870-2212-05 Rev A	
E5-IPSM		870-2877-01 Rev A	
		870-2877-02 Rev A	
E5-SM4G		870-2860-01 Rev F	
		870-2860-02 Rev A	
EILA	870-2049-01 Rev A		
EILA w/ DIMM	870-2049-02 Rev A		
EILA-T	870-2049-03 Rev A		
FAP	870-1606-01 Rev A or		Standard frame or standard frame with HC-MIMs
	870-1606-02 Rev A	870-1606-05 Rev A	
	870-2320-01 Rev A	870-2320-03 Rev A	Heavy duty frame or heavy duty frame with HC-MIMs
	870-1823-01 Rev B		
		870-2804-01 Rev B	
FAP-CF/EF	870-0243-08 Rev C		
FAP-MISC	870-0243-09 Rev C		
FAP Fuse and Alarm Panel	870-2804-01 Rev A		
GPSM-II	870-2360-01 Rev E		
	870-2360-05 Rev A		
	870-2360-06 Rev A	870-2360-08 Rev A	
		870-2360-09 Rev A	
HC-MIM	870-2671-01 Rev P or		
	870-2671-02 Rev B	870-2671-03 Rev A	
HIPR	870-2574-01 Rev D	870-2574-02 Rev A	
HMUX	870-1965-01 Rev A	870-1965-03 Rev A	
LIM-AINF	870-1014-01 Rev D or		
	870-1014-02 Rev A or		
	870-1014-03 Rev B or		
	870-1014-04 Rev A or		
	870-1014-05 Rev A or		
	870-1014-06 Rev A		
LIM-AINF w/ DIMM	870-1488-01 Rev A or		
	870-1488-02 Rev A or		
	870-1488-03 Rev A or		
	870-1488-04 Rev A or		
	870-1488-05 Rev A or		
	870-1488-06 Rev A		
LIM-ATM	870-1293-02 Rev A or		
	870-1293-03 Rev A or		
	870-1293-06 Rev A or		
	870-1293-07 Rev A or		
	870-1293-08 Rev B or		

Component	Part Number	ROHS Number (if applicable)	Required for
	870-1293-10 Rev A or	870-1293-13 Rev A	
LIM-DS0 or	870-1009-02 Rev D or		
	870-1009-03 Rev A or		
	870-1009-04 Rev A		
LIM-DS0 w/ DIMM	870-1485-01 Rev A or		
	870-1485-02 Rev A or		
	870-1485-03 Rev A		
LIM-E1	870-1379-01 Rev A		
LIM-ILA or	870-1484-01 Rev E		
LIM-ILA w/ DIMM	870-1484-02 Rev C		
LIM-OCU or	870-1010-03 Rev D or		
	870-1010-04 Rev A or		
	870-1010-05 Rev A or		
LIM-OCU w/ DIMM	870-1486-02 Rev A or		
	870-1486-03 Rev A or		
	870-1486-04 Rev A		
LIM-V.35 or	870-1012-02 Rev D or		
	870-1012-03 Rev A or		
	870-1012-04 Rev A		
LIM-V.35 w/ DIMM	870-1487-01 Rev A or		
	870-1487-02 Rev A or		
	870-1487-03 Rev A		
MDAL	870-0773-04 Rev B or		
	870-0773-05 Rev A or		
	870-0773-06 Rev A or		
	870-0773-08 Rev A	870-0773-09 Rev A	
MPL	870-2061-01 Rev A or		
	870-2061-03 Rev A or		
	870-2061-04 Rev A	870-2061-06 Rev A	
MPS DC Frame Assembly	890-1843-01 Rev C	890-1843-02 Rev A	
MPS in Heavy Duty Frame	890-1801-01 Rev E	890-1801-02 Rev A	
TDM	870-0774-10 Rev A or		
	870-0774-11 Rev A		Rev C required if installed in a system with more than 11 shelves
TDM GTI	870-0774-15 Rev B	870-0774-18 Rev A	
TSM-256	870-1289-02 Rev A or		
	870-1289-03 Rev A or		
	870-1289-04 Rev A	870-1289-06 Rev A 870-1289-07 Rev A	
TSM-512	870-1290-02 Rev A or		
	870-1290-03 Rev A or		
	870-1290-04 Rev A		

Component	Part Number	ROHS Number (if applicable)	Required for
TSM-768	870-1291-02 Rev A or		
	870-1291-03 Rev A or		
	870-1291-04 Rev A		
TSM-1024	870-1292-02 Rev A or		
	870-1292-03 Rev A or		
	870-1292-04 Rev A		
Single EOAP	890-1050-03 Rev H		
Dual EOAP	890-1050-01 Rev K		
Kit, E1	890-1037-01 Rev A	890-1037-06 Rev A	
Kit, Holdover Clock Assy	890-1013-01 Rev A		
Fan Assy (Standard Frame)	890-1038-01 Rev D		
Fan Assy (Shelves with HC-MIM cards)	890-0001-01 Rev A or		
	890-0001-02 Rev A	890-0001-04 Rev A	
T1000 Application Server	870-2640-01 Rev F	870-2640-03 Rev A	
Dual Port G-Bit E-Net Card	870-2706-02 Rev B	870-2706-04 Rev A	
Modem Card	870-2707-01 Rev B	870-2707-02 Rev A	
Quad Serial Exp. Card	870-2708-01 Rev B	870-2708-02 Rev A	
120 GB Hard Drive Assy	870-2721-02 Rev B	870-2721-04 Rev A	
T1100 (Application Server - DC)	870-2754-01 Rev P or		
	870-2807-01 Rev A	870-1893-03 Rev A	
Dual Port Ethernet	870-2706-02 Rev A	870-2706-04 Rev A	
Hard Disc Drive - 250 GB SATA	870-2787-01 Rev B	870-2787-02 Rev A	
2 GB RAM Kit	870-2833-01 Rev C	870-2833-02 Rev A	

Glossary

A

ACM	Address Complete Message *Application Communications Module*
AINF	Application Interface Appliqué
ATI	Any Time Interrogation
ATM	Asynchronous Transfer Mode

C

CCS7ITU	The generic program load and application for the ITU SS7 signaling links that is used with card types **`limds0, limch, limocu, limv35, lime1, and limt1`**.
CdPA	Called Party Address
CgPA	Calling Party Address
CLLI	Common Language Location Identifier
CSR	Customer Service Request

D

Database	All data that can be administered by the user, including cards, destination point codes, gateway screening tables, global title translation tables, links, LNP services, LNP service providers, location routing numbers, routes, shelves, subsystem applications, and 10 digit telephone numbers.
DCM	Database Communication Module The DCM provides IP connectivity for applications. Connection to a host is achieved through an ethernet LAN using the TCP/IP protocol.
DN	Directory number A DN can refer to any mobile or wireline subscriber number, and can include MSISDN, MDN, MIN, or the wireline Dialed Number.
DRA	Destination Routing Address
DS0A	Digital Signal Level - 0
DSM	Database Service Module.

E

E1	The European equivalent of T1 that transmits digital data over a telephone network at 2.048 Mbps.
E5-E1T1	EPM-based E1/T1 Multi-Channel Interface Module An EPM-based card that provides E1 and T1 connectivity. The E5 indicates the card is for existing EAGLE 5 control and extension shelves. E1T1 is an abbreviation for the ITU E1 and ANSI T1 interfaces. Thus the nomenclature defines the shelves where the card can be used and the physical interface that it provides.

E5-ENET	EPM-based Ethernet card
	A high capacity single-slot IP signaling card (EPM card plus Gig Ethernet PMC cards).
E5-IPSM	Ethernet Card w/ 2GB of main memory
EDCM	Enhanced DCM
	Enhanced Database Communication Module
EILA	Enhanced Integrated LIM Appliqué
EIR	Equipment Identity Register

G

GB	Gigabyte — 1,073,741,824 bytes
G-Flex	GSM Flexible numbering
	A feature that allows the operator to flexibly assign individual subscribers to HLRs and route signaling messages, based on subscriber numbering, accordingly.
G-Port	GSM Mobile Number Portability
	A feature that provides mobile subscribers the ability to change the GSM subscription network within a portability cluster, while retaining their original MSISDN(s).
GPSM-II	General Purpose Service Module
GTT	Global Title Translation.

H

HC-MIM	High Capacity Multi-Channel Interface Module
HIPR	High-Speed IMT Packet Router
HMUX	High-Speed Multiplexer

I

ILA	Integrated LIM Appliqué
INP	INAP-based Number Portability
	Intelligent Network (IN) Portability
IP	Intelligent Peripheral
	Internet Protocol
IP^7	Tekelec's Internet Protocol to SS7 Interface
ISS	Integrated Signaling System

L

LIM	Link Interface Module
LIM-AINF	A link interface module (LIM) with the AINF interface.
LIM-ATM	A link interface module (LIM) with the ATM interface.
LIM-DS0	A link interface module (LIM) with the DS0A Appliqué.
LIM-E1	A link interface module (LIM) with the E1 Appliqué.
LIM-OCU	A link interface module (LIM) with the OCU Appliqué.
LIM-OCU	LIM-Office Channel Unit Applique
LNP	Local Number Portability

M

MCPM	Measurement Collection and Polling Module
MDAL	Maintenance Disk and Alarm Card
MIM	Multi-Channel Interface Module
MPL	Multi-port LIM
MSRN	Mobile Station Roaming Number
MTP	Message Transfer Part
	Module Test Plan

O

OPC	Originating Point Code

R

RI	Routing Indicator
RN	Routing Number
RTDB	Real Time Database

S

SA	Security Administration
SE-HSL	Synchronous E1 High Speed Link
SS7	Signaling System #7
SS7ANSI	SS7 ANSI
	An application used by the LIM cards and the E1/T1 MIM card for the MTP functionality.
SSEDCM	Single Slot Enhanced Data Communications Module

T

T1	Transmission Level 1
	A T1 interface terminates or distributes T1 facility signals for the purpose of processing the SS7 signaling links carried by the E1 carrier. A leased-line connection capable of carrying data at 1,544,000 bits-per-second.
TDM	Terminal Disk Module.
	Time Division Multiplexing.
TDM-GTI	TDM Global Timing Interface
TSM	Translation Services Module
TT	Translation Type.

V

V.35	ITU Interface Recommendation, V.35
	The interface used with the LIMV35 card.