

masc-ato

**Automated Transaction Operator
Samples**

**VSE/MVS
Version 4.1.0**

MATO-SA410-1-E

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PREFACE

This manual describes the Automated Transaction Operator (ATO) commands and how to use them. It contains further appendixes with :

- o **Appendix A: Examples of ATO dialogs**
- o **Appendix B: Migration hints Version 2 to Version 3.1**
- o **Appendix C: Extensions Version 4.1**
- o **Appendix D: User Exit ATOEXI**

Changes to this publication are summarized under the heading "Summary of Changes". Technical changes are marked with a vertical bar | in the left-hand margin.

Readers of this publication should have fundamental knowledge of VSE- resp. MVS functions, as well as experience with the user interface of the corresponding application.

Summary of ATO documentation

- o MATO-H0410-1-E ***masc-ato*** "Automated Transaction Operator": *Handout*
- o MATO-GI410-1-E ***masc-ato*** "Automated Transaction Operator": *General Information*
- o MATO-UG410-1-E ***masc-ato*** "Automated Transaction Operator": *User's Guide*
- o MATO-IN410-1-E ***masc-ato*** "Automated Transaction Operator": *Installation Guide*
- o MATO-MC410-1-E ***masc-ato*** "Automated Transaction Operator": *Messages and Codes*
- o MATO-SA410-1-E ***masc-ato*** "Automated Transaction Operator": *Samples*

UPGRADE OVERVIEW

This is the third edition of "***masc-ato**: Automated Transaction Operator Users Guide*".

An overview of the extended ATO command set and the migration of existing ATO dialogs is contained in appendix B and C on page

Enhancements on Version 2

masc-ato has been reworked extensively and has been supplemented with new commands and parameters. The new command options have been set up in a way that their correlation is logical in many places. Special attention has been paid to clarity and legibility of the commands.

We thank all users whose suggestions have assisted us in the writing of this new upgrade.

CICS: The examples in this documentation are based on CICS/ESA.

SAP: The examples in this documentation are based on SAP 4.3.

TABLE OF CONTENTS

Preface	I
Upgrade Overview	III
Table of Contents.....	V
Table of figures	VI
1. Introduction	1
2. SAP-CICS.....	3
2.1. Corellation between ATO - SAP - CICS	3
2.1.1. SAP-Users	3
2.1.2. Preventative Actions.....	3
2.1.3. Definition of ATO in the Security System	4
2.1.4. ATO Definitions for the SAP User	4
2.1.5. Entering SAP CICS	4
2.1.6. Long Running Transactions	4
2.1.7. Non Initialised Dialogs.....	5
2.1.8. Outstanding Messages	5
2.1.9. Exiting from SAP	5
2.2. SAP Example 1 (D1SA)	6
2.3. SAP Example 2 (NEND)	7
2.4. SAP Example 3 (TM02).....	8
2.5. SAP Example 4 (TUNE)	9
2.6. SAP Example 5 (VSTP)	10
2.7. SAP Example 7 (TF78)	13
2.8. SAP Example 8 (SBDC).....	14
2.9. SAP Example 9 (ABAP)	16
2.10. SAP Example 10 (OTDX Close / ABAP)	17
3. CICS.....	19
3.1. CICS Example 1 (CESN)	19
3.2. CICS Example 2 (CSSF LOGOFF).....	20
3.3. CICS Example 3 (CEMT mit GETRDR)	21
3.4. CICS Example 4 (CEMT Dialog).....	22
3.5. CICS Example 5 (CECI).....	23
3.6. CICS Example 6 (CEDA).....	24
4. TSO	25
4.1. TSO Example 1 (SDSF)	25
4.2. TSO Example 2 (ISPF-Editor).....	26
4.3. TSO Example 3 (ISPF-Editor).....	28
5. Miscellaneous Applications.....	33
5.1. DIAL-IBM Example (PTF Ordering).....	33
5.2. IBM Mail-Exchange	36

TABLE OF FIGURES

Figure 1. Calling and Logon to SAP with D1SA.....	6
Figure 2. SAP Exemple 2 (NEND).....	7
Figure 3. Send messages within SAP with TM02	8
Figure 4. Get SAP statistics with TUNE.....	9
Figure 5. Stop SAP with VSTP Part 1 of 2.....	10
Figure 6. Stop SAP with VSTP Part 2 of 2.....	11
Figure 7. SAP disposition of material with TF70	12
Figure 8. SAP disposition of material with TF78	13
Figure 9. SAP replay of folders with SBDC Part 1 of 2.....	14
Figure 10. SAP replay of folders with SBDC Part 1 of 2.....	15
Figure 11. SAP statistics with ABAP Part 1 of 2.....	16
Figure 12. SAP statistics with ABAP Part 2 of 2.....	16
Figure 13. CICS/SAP ABAP with OTDX Close	17
Figure 14. Logon to CICS with CESN.....	19
Figure 15. Logoff from CICS with CSSF	20
Figure 16. Call CICS Mastertransaction CEMT.....	21
Figure 17. CICS Mastertransaction dialog CEMT	22
Figure 18. Call CICS Command Interpreter CECI.....	23
Figure 19. Call CICS RDO-Transaction CEDA	24
Figure 20. Invoke SDSF in TSO/ISPF	25
Figure 20. Edit in TSO with ISPF-Editor Part 1 of 2	26
Figure 21. Edit in TSO with ISPF-Editor Part 2 of 2	27
Figure 22. Edit in TSO with ISPF-Editor Part 1 of 4	28
Figure 23. Edit in TSO with ISPF-Editor Part 2 of 4	29
Figure 24. Edit in TSO with ISPF-Editor Part 3 of 4	30
Figure 25. Edit in TSO with ISPF-Editor Part 4 of 4	31
Figure 26. PTF ordering via DIAL-IBM Part 1 of 3.....	33
Figure 27. PTF ordering via DIAL-IBM Part 2 of 3.....	34
Figure 28. PTF ordering via DIAL-IBM Part 3 of 3.....	35
Figure 30. Messages via IBM Mail-Exchange Part 1 of 4.....	36
Figure 29. Messages via IBM Mail-Exchange Part 2 of 4.....	37
Figure 30. Messages via IBM Mail-Exchange Part 3 of 4.....	38
Figure 31. Messages via IBM Mail-Exchange Part 4 of 4.....	39

1. INTRODUCTION

The following applications and examples stem from the different practical computer centre requirements of clients. Examples in this manual may be taken over by your ATO support, with few changes.

The dialog examples have been revised and adjusted to the coding techniques used. These have been adapted to the corresponding environment eg. SAP, TSO.

We would like to take the opportunity here to thank all ATO users who have helped to expand this compilation. We are convinced that both new and old ATO users will find helpful tips and examples in this publication. Suggestions for improvement and further examples from the field, for the expansion of this collection of examples, are accepted gladly by the support centre.

2. SAP-CICS

2.1. Corellation between ATO - SAP - CICS

2.1.1. SAP-Users

Against SAP, ATO simulates a SAP user at a display screen. Therefore for the ATO user, the same know-how and rules are valid which you know as a SAP user. In practice the relation between the R/2 system to displays and SAP users is known, therefore you can copy the prescribed relationships with ATO; that is control it by means of organisational action. A few of the common relationships are :

- a) The display is "Out-of-service" in CICS
- b) The SAP user is already active at another display
- c) The display is occupied by another user
- d) The display is turned off while an application is running (Power off)
- e) A local printout has been requested with "A" on line/column 24/5

2.1.2. Preventative Actions

Construct a table for your applications that looks similar to the following :

ATO Netname	CICS Termid	SAP User	Password	CICS Applid	Application
NETAT O0	ATO0	ATO0	ATO	CICSX	Test
NETAT O1	ATO1	ATO1	ATO	CICSP	TF70
NETAT O2	ATO2	ATO2	ATO	CICST	TF70
NETAT O3	ATO3	ATO3	ATO	CICSP	SBDC-1
NETAT O4	ATO4	ATO4	ATO	CICSP	SBDC-2
NETAT O5	ATO5	ATO5	ATO	CICSP	TM02
NETAT O6	ATO6	ATO6	ATO	CICSP	VSTP
NETAT O7	ATO7	ATO7	ATO	CICST	VSTP
NETAT O8	ATO8	ATO8	ATO	CICSP	Shutdown
NETAT O9	ATO9	ATO9	ATO	CICSx	Test
NETAT OA	etc.				

With the application of the above table, you will have a strict organisational separation of the various ATO applications and you will thereby prevent that errors that occur from affecting another application adversely.

2.1.3. Definition of ATO in the Security System

Define the ATO user (eg. Operid etc.) with the same security levels that you have used to define existing operators. Management is thereby made easier, because the ATO user will not be sensitive to changes in your security management any more. Also ensure that the ATO user does not already expire after one month.

2.1.4. ATO Definitions for the SAP User

When it is possible, define all ATO users the same in SAP. SAP will therewith help you to refer to the SAP user ATO respectively. After you have opened the user, do a test run with this user to ensure that the defined security level matches the requirements.

It is helpful if you allocate a printer to all ATO SAP users. This will allow you to request a printout of the current display screen contents at specific points of you ATO dialog locally with the entry of "A" on line/column 24/5. Many ATO applications call the transaction TUNE with VSTP, before an update and prepares statistics that are output to a local printer. Further, TM01 and TM06 are used frequently before completion.

2.1.5. Entering SAP CICS

If you have defined a ATO user for several different types of applications simultaneously, you have to anticipate the case of a terminated preceding ATO dialog. With the restart of such a terminated dialog, in such a case the expected "Good Morning" or startup transaction does not appear, but the image at which the termination took place. To handle this situation correctly, precautionary commands should be coded in the ATO dialogs that will guarantee a correct reentry into SAP with a previously terminated ATO dialog. With this compare the example 1 D1SA on 6.

2.1.6. Long Running Transactions

Two TIMEOUT parameters have been provided in ATO:

- o The TIMEOUT parameter in the PROLOG command is used with a slow running CICS to determine the expected response time.
- o The TIMEOUT parameter in the MAP command is used to determine the maximum expected response time with this transaction.

Both of these TIMEOUT parameters have the purpose to determine the expected response time in CICS. If the response of the transaction is overdue, ATO breaks off the dialog and the control system can start the following job. Thereby it is guaranteed that with possible errors, a part of the planned jobs in the sequence are run during the nightshift. See example 6 TF70 on page .

2.1.7. Non Initialised Dialogs

It may happen that with the starting of a ATO dialog, that the SAP initialisation transactions D1SI, D2SI etc. have not been executed. In such a case the calling of D1SA can be repeated with a SLEEP- and a GOTO MARK=-command. Take note that ATO executes a lp precautionary loop count, to prevent an endless loop. See example 1 D1SA auf Seite 6.

2.1.8. Outstanding Messages

ATO operates strictly on the cycle of in- and output. Because of this method of operation, the coding of ATO commands can be simplified trendously. In order to receive messages outside this dialog cycle, these are first postponed by ATO and when needed they are released with the PENDING command. During the processing of long running transactions SAP allows the user to process another application in the background eg. SBDC applications. When the background transaction has ended, SAP reports it with a "finished message". This situation has to be handled correspondingly with the coding of ATO dialogs. Therefore it is important to know that a display contents with the "finished message" could collide with a display screen entry. Because of this reason the collision should always be captured anew with a loop. See example 8 SBDC page 14.

2.1.9. Exiting from SAP

You should always try to end a dialog correctly, independent from the execution of a dialog with expected and unexpected display screen contents. In such a case ATO signs off correctly from SAP as well, and CICS sets the TCT entry of the logical display to "Rel" (Release) after a LOGOFF.

No matter where you are in a dialog, you can bring the situation to an end after an undesirable situation, if you program the following command sequence (compare the example 2 NEND auf Seite 7):

```
*****  
* --- TERMINATE DIALOG IN CASE OF AN ERROR *  
*****  
*  
ERR08    MARK  
         PUTPRT DATA='ERROR: DIALOG TERMINATED WITH RC=08'  
ERR081   MAP    KEY=PF3  
         MAPEND  
         PENDING  
ERR082   MAP  
         FILL  LIN=24, COL=05, DATA='NEND'  
         MAPEND  
ERR083   MAP    LASTMAP=YES, RC=08, DATA='CSSF LOGOFF'  
         MAPEND
```

Take note that you always output a PUTPRT command with descriptive text before a RC=nn. This will simplify the checking by the computer center personnel measurably.

2.2. SAP Example 1 (D1SA)

```

PROLOG DIALOG=SAPSAM01,                                C
        NETNAME=NETAT01,                                C
        APPLID=CICSP,                                    C
        LOGTERM=NO,                                      C
        LOOP=1000,                                       C
        TIMEOUT=60,                                       C
        SUPPORT=NO
*****
* ATO SAMPLE DIALOG: SAPSAM01                            *
*****
* RESTRICTIONS:                                           *
* -----                                                *
* THIS CODE IS PROVIDED AS AN EXAMPLE FOR MASC-ATO AND IS DISTRIBUTED *
* ON AN "AS IS" BASIS WITHOUT ANY WARRANTY EITHER EXPRESS OR IMPLIED. *
* THIS CODE IS NOT TO BE CONSIDERED SUPPORTED CODE OF MASC. ANY PROB- *
* LEMS ENCOUNTERED IN THE USE OF THIS SAMPLE CODE IS A USER RESPONSI- *
* BILITY.                                                  *
*****
* --- LOGON TO SAP-CICS                                   *
*****
        PUTPRT TITLE=1,DATA='COMMON LOGON SAMPLE (D1SA)'
        PUTPRT TITLE=2,DATA='-----'
        PUTPRT TITLE=3,DATA=' '
LOGON   MARK
        MAP   KEY=PF3
        MAPEND
LOG02   MAP
        FILL  LIN=24,COL=05,DATA='NEND'
        MAPEND
LOG03   MAP   DATA='CSGM'
        MAPEND
LOG04   MAP   DATA='D1SA'
        MAPEND
LOG05   MAP
        FILL  LIN=03,COL=15,DATA='AT01'
        FILL  LIN=04,COL=15,DATA='PSW'
        MAPEND
LOG06   MAP
        FILL  LIN=24,COL=05,DATA='NTM04'
        MAPEND
        SCAN  DATA='UEBERSICHT',FOUND=LOG060K
        PUTPRT DATA='ERROR: LOGON NOT SUCCESSFUL'
        GOTO  MARK=ERR08
LOG060K MARK
LOG07   MAP
        MAPEND
LOG08   MAP
        FILL  LIN=24,COL=05,DATA='A'
        MAPEND
        PUTPRT DATA='MESSAGE: LOGON SUCCESSFUL'
*****
* --- LOGON TERMINATED                                   *
*****
:

```

Figure 1. Calling and Logon to SAP with D1SA

2.3. SAP Example 2 (NEND)

```

* ATO SAMPLE DIALOG: SAPSAM02
*****
* RESTRICTIONS:
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* BILITY.
*****
* --- TERMINATE DIALOG
*****
LOGOFF    MARK
          MAP    KEY=PF3
          MAPEND
OFF02     MAP
          FILL   LIN=24,COL=05,DATA='NEND'
          MAPEND
OFF03     MAP    KEY=CLEAR
          MAPEND
          MAP    LASTMAP=YES,RC=00
          FILL   DATA='CSSF LOGOFF'
          MAPEND
*****
* --- TERMINATE DIALOG IN CASE OF AN ERROR
*****
ERR00     MARK
          PUTPRT DATA='MESSAGE: TERMINATION WITH RC=00'
ERR001    MAP    KEY=PF3
          MAPEND
ERR002    MAP
          FILL   LIN=24,COL=05,DATA='NEND'
          MAPEND
ERR003    MAP    KEY=CLEAR
          MAPEND
          MAP    LASTMAP=YES,RC=00
          FILL   DATA='CSSF LOGOFF'
          MAPEND
*
ERR04     MARK
          PUTPRT DATA='ERROR: TERMINATION WITH RC=04'
ERR041    MAP    KEY=PF3
          MAPEND
ERR042    MAP
          FILL   LIN=24,COL=05,DATA='NEND'
          MAPEND
ERR043    MAP    KEY=CLEAR
          MAPEND
          MAP    LASTMAP=YES,RC=04
          FILL   DATA='CSSF LOGOFF'
          MAPEND
*
ERR08     MARK
          PUTPRT DATA='ERROR: TERMINATION WITH RC=08'
ERR081    MAP    KEY=PF3
          MAPEND
ERR082    MAP
          FILL   LIN=24,COL=05,DATA='NEND'
          MAPEND
ERR083    MAP    KEY=CLEAR
          MAPEND
          MAP    LASTMAP=YES,RC=08
          FILL   DATA='CSSF LOGOFF'
          MAPEND
          EPILOG
          END

```

Figure 2. SAP Example 2(NEND)

2.4. SAP Example 3 (TM02)

```

PROLOG DIALOG=SAPSAM03,                                     C
:
*****
* ATO SAMPLE DIALOG: SAPSAM03                               *
*****
* RESTRICTIONS:                                             *
* -----                                                  *
* THIS CODE IS PROVIDED AS AN EXAMPLE FOR MASC-ATO AND IS DISTRIBUTED *
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* THIS CODE IS NOT TO BE CONSIDERED SUPPORTED CODE OF MASC. ANY PROB- *
* LEMS ENCOUNTERED IN THE USE OF THIS SAMPLE CODE IS A USER RESPONSI- *
* BILITY.                                                    *
*****
* --- SEND MESSAGES WITHIN SAP                               *
*****
      PUTPRT TITLE=1,DATA='SEND MESSAGES (TM02) '
      PUTPRT TITLE=2,DATA='-----'
      PUTPRT TITLE=3,DATA='
:
LOGON   MARK
:
*
BLD10   MAP
      FILL  LIN=24,COL=05,DATA='NTM02 '
      MAPEND
BLD20   MAP  LIN=11,COL=21,KEY=PF14
      MAPEND
      GETRDR EOF=EOF30,T0=MLD30
BLD30   MAP
MLD30   FILL  LIN=11,COL=21,DATA='XXXXXXXXXXXXXXXXXXXXX'
      FILL  LIN=12,COL=35,DATA='*'
      MAPEND
      GOTO  MARK=GUT30
EOF30   MARK
      PUTPRT DATA='ERROR: NO MESSAGES FOUND'
      GOTO  MARK=ERR04
GUT30   MARK
:
LOGOFF  MARK
:
      EPILOG
      END

SAP ENDS FRIDAY AT 5 PM                (GETRDR-Daten)

```

Figure 3. Send messages within SAP with TM02

2.5. SAP Example 4 (TUNE)

```

PROLOG DIALOG=SAPSAM04, C
:
*****
* ATO SAMPLE DIALOG: SAPSAM04 *
*****
* RESTRICTIONS: *
* ----- *
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* BILITY. *
*****
* --- CALL TUNE FOR SAP STATISTICS *
*****
      PUTPRT TITLE=1,DATA='SAP STATISTIC (TUNE) '
      PUTPRT TITLE=2,DATA='-----'
      PUTPRT TITLE=3,DATA=' '
      :
LOGON  MARK
      :
*
BLD10  MAP
      FILL LIN=24,COL=05,DATA=' NTUNE '
      MAPEND
BLD20  MAP
      FILL LIN=24,COL=05,DATA=' A '
      MAPEND
BLD30  MAP KEY=PF13
      MAPEND
BLD40  MAP
      FILL LIN=24,COL=05,DATA=' A '
      MAPEND
BLD50  MAP KEY=PF3
      MAPEND
BLD60  MAP KEY=PF16
      MAPEND
BLD70  MAP
      FILL LIN=24,COL=05,DATA=' A '
      MAPEND
BLD80  MAP KEY=PF3
      MAPEND
BLD90  MAP
      FILL LIN=24,COL=05,DATA=' NTM06 '
      MAPEND
BLDA0  MAP
      FILL LIN=24,COL=05,DATA=' A '
      MAPEND
*
      GOTO MARK=LOGOFF
      :
LOGOFF MARK
      :
      EPILOG
      END

```

Figure 4. Get SAP statistics with TUNE

2.6. SAP Example 5 (VSTP)

```

PROLOG  DIALOG=SAPSAM05,                                     C
:
*****
* ATO SAMPLE DIALOG: SAPSAM05                                *
*****
* RESTRICTIONS:                                              *
* -----                                                    *
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* THIS CODE IS NOT TO BE CONSIDERED SUPPORTED CODE OF MASC. ANY PROB- *
* LEMS ENCOUNTERED IN THE USE OF THIS SAMPLE CODE IS A USER RESPONSI- *
* BILITY.                                                    *
*****
* --- STOP SAP WITH VSTP                                     *
*****
      PUTPRT TITLE=1,DATA='SAP STOP (VSTP) '
      PUTPRT TITLE=2,DATA='-----'
      PUTPRT TITLE=3,DATA=' '
:
LOGON   MARK
:
*
*****
* MELDUNG AN ALLE BENUTZER                                    *
*****
MAP10   MAP
      FILL  LIN=24,COL=05,DATA='NTM02'
      MAPEND
MAP15   MAP  LIN=11,COL=21,KEY=PF14
      MAPEND
MAP20   MAP
      FILL  LIN=11,COL=21,DATA='** PLEASE TERMINATE. SHUTDOWN **'
      FILL  LIN=12,COL=35,DATA='*'
      MAPEND
      SLEEP SEC=120
*****
* STOP SAP WITH VSTP                                         *
*****
MAP25   MAP
      FILL  LIN=24,COL=05,DATA='NVSTP'
      MAPEND
*
      SCAN  DATA='GESTOPPT',FOUND=MAP30
*
      PUTPRT DATA='ERROR WHILE STOPPING SAP WITH VSTP'
      GOTO  MARK=ERR08

```

Figure 5. Stop SAP with VSTP Part 1 of 2

```

* CALL TRANSACTION TM06 TO CHECK DIALOG/TRANS. COUNTER *
*****
MAP30    MARK
        MAP
        FILL LIN=06,COL=15,DATA='D'
        FILL LIN=08,COL=15,DATA='TM06'
        MAPEND
*-----*
* SCAN DIALOG COUNTER -
*-----*
*-----*
*--* PICK TIME AND DATE *-----*
*-----*
        MOVE TO=WORK1, FROM=SPACES
        MOVE TO=WORK1, TOLEN=35, FROM=SCREEN, LIN=1, COL=42
        PUTPRT FROM=WORK1
*-----*
*--* PICK DIALOGCOUNTER *-----*
*-----*
* ENDLOSER LOOP VERHINDERN
        LOOP COUNT=1000
REP10    MARK
        MOVE TO=WORK1, FROM=SPACES
        MOVE TO=WORK1, TOLEN=35, FROM=SCREEN, LIN=4, COL=42
        PUTPRT FROM=WORK1
*-----*
*--* PICK TRANSACTIONCOUNTER *-----*
*-----*
        MOVE TO=WORK1, FROM=SPACES
        MOVE TO=WORK1, TOLEN=35, FROM=SCREEN, LIN=5, COL=42
        PUTPRT FROM=WORK1
*-----*
*--* PICK DIALOGCOUNTER FOR COMPARE *-----*
*-----*
        MOVE TO=WORK1, FROM=SPACES
        MOVE TO=SCN10, FROM=SCREEN, LIN=4, COL=67
*-----*
*--* COMPARE DIALOGCNTR. VERS. TRANS.CNTR ----*
*-----*
SCN10    SCAN DATA='99.999.999', FROM=SCREEN, FOUND=FND10, C
        LIN=5, COL=67
        PUTPRT DATA='DIALOG COUNTER NOT EQUAL TRANSACTION COUNTER'
        MAP
        FILL LIN=24,COL=05,DATA='NTM06'
        MAPEND
        GOTO MARK=REP10
FND10    MARK
        PUTPRT
        PUTPRT DATA='DIALOG COUNTER IS EQUAL TO TRANSACTION COUNTER'
*
        PUTPRT DATA='TERMINATING CICS'
MAP35    MAP
        FILL LIN=24,COL=05,DATA='NEND'
        MAPEND
MAP40    MAP KEY=CLEAR
        MAPEND
*****
* IF SHUTDOWN OF CICS IS REQUIRED WITH THIS DIALOG, UNCOMMENT THE *
* FOLLOWING TWO LINES *
*****
*MAP45    MAP LASTMAP=YES, DATA='CEMT PERFORM SHUT'
*
*MAP45    MAP LASTMAP=YES, DATA='CSSF LOGOFF'
        MAPEND
        EPILOG
        END

```

Figure 6. Stop SAP with VSTP Part 2 of 2 SAP Example 6 (TF70)

```

PROLOG DIALOG=SAPSAM06, C
:
*****
* ATO SAMPLE DIALOG: SAPSAM06 *
*****
* RESTRICTIONS: *
* ----- *
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* LEMS ENCOUNTERED IN THE USE OF THIS SAMPLE CODE IS A USER RESPONSI- *
* BILITY. *
*****
* --- START DISPOSITION OF MATERIAL *
*****
      PUTPRT TITLE=1,DATA='DISPOSITION OF MATERIAL (TF70)!'
      PUTPRT TITLE=2,DATA='-----'
      PUTPRT TITLE=3,DATA=' '
:
LOGON   MARK
:
*
BLD10   MAP
      FILL  LIN=24,COL=05,DATA='NTF70'
      MAPEND
      SCAN  DATA='TF70 MATERIAL',FOUND=GUT10
      PUTPRT DATA='ERROR: UNEXPECTED SCREEN'
      GOTO  MARK=ERR08
*
GUT10   MARK
BLD20   MAP
      FILL  LIN=03,COL=22,DATA='01' *
      FILL  LIN=04,COL=22,DATA='01' * FACTORY
      MAPEND
      SCAN  DATA='TF70 MATERIAL',FOUND=GUT20
      PUTPRT DATA='ERROR: UNEXPECTED SCREEN'
      GOTO  MARK=ERR08
*
GUT20   MARK
BLD30   MAP
      FILL  LIN=06,COL=23,DATA='N'
      MAPEND
      SCAN  DATA='W028',FOUND=GUT30
      PUTPRT DATA='ERROR: UNEXPECTED MESSAGE'
      GOTO  MARK=ERR08
*
GUT30   MARK
REP40   MARK
BLD40   MAP  KEY=ENTER,TIMEOUT=30000
      MAPEND
      SCAN  DATA='I050',FOUND=GUT40
      SCAN  DATA='A048',FOUND=GUT40
      PENDING FOUND=GUT40
      SLEEP SEC=60
      GOTO  MARK=REP40
GUT40   MARK
      PUTPRT
      PUTPRT DATA='OK, TF70 SUCCESSFULLY TERMINATED'
      GOTO  MARK=LOGOFF
:
LOGOFF  MARK
:
      EPILOG
      END

```

Figure 7. SAP disposition of material with TF70

2.7. SAP Example 7 (TF78)

```

PROLOG DIALOG=SAPSAM07,                                     C
:
*****
* ATO SAMPLE DIALOG: SAPSAM07                               *
*****
* RESTRICTIONS:                                             *
* -----                                                  *
* THIS CODE IS PROVIDED AS AN EXAMPLE FOR MASC-ATO AND IS DISTRIBUTED *
* ON AN "AS IS" BASIS WITHOUT ANY WARRANTY EITHER EXPRESS OR IMPLIED. *
* THIS CODE IS NOT TO BE CONSIDERED SUPPORTED CODE OF MASC. ANY PROB- *
* LEMS ENCOUNTERED IN THE USE OF THIS SAMPLE CODE IS A USER RESPONSI- *
* BILITY.                                                    *
*****
* --- DISPOSITION OF MATERIAL SINGLE PLANNING               *
*****
      PUTPRT TITLE=1,DATA='DISPOSITION OF MATERIAL (TF78) '
      PUTPRT TITLE=2,DATA='-----'
      PUTPRT TITLE=3,DATA=' '
:
LOGON   MARK
:
*
BLD10   MAP
      FILL  LIN=24,COL=05,DATA='NTF78'
      MAPEND
      SCAN  DATA='TF78 MAT-BED',FOUND=GUT10
      PUTPRT DATA='ERROR: UNEXPECTED SCREEN'
      GOTO  MARK=ERR08
*
GUT10   MARK
      GETRDR EOF=EOF10,T0=DISP
      GETRDR EOF=EOF10,T0=MATNR
BLD20   MAP
      FILL  LIN=03,COL=22,DATA='01' *
      FILL  LIN=04,COL=22,DATA='01' * FACTORY
      MAPEND
      SCAN  DATA='TF70 MATERIAL',FOUND=GUT20
      PUTPRT DATA='ERROR: UNEXPECTED SCREEN'
      GOTO  MARK=ERR08
BLD30   MAP
DISP    FILL  LIN=13,COL=23,DATA='XXX'
MATNR   FILL  LIN=14,COL=23,DATA='XXXXX'
      FILL  LIN=15,COL=23,DATA='J'
      MAPEND
      SCAN  DATA='W028',FOUND=GUT30
      PUTPRT DATA='ERROR: UNEXPECTED MESSAGE'
      GOTO  MARK=ERR08
*
GUT30   MARK
REP40   MARK
BLD40   MAP  KEY=ENTER,TIMEOUT=30000
      MAPEND
      SCAN  DATA='I029',FOUND=GUT40
      SCAN  DATA='I050',FOUND=GUT40
      SCAN  DATA='A048',FOUND=GUT40
      PENDING FOUND=GUT40
      SLEEP SEC=60
      GOTO  MARK=REP40
GUT40   MARK
      PUTPRT
      PUTPRT DATA='OK, TF78 SUCCESSFULLY TERMINATED'
      GOTO  MARK=LOGOFF
:
LOGOFF  MARK
:
      EPILOG
      END

0      * Disponent (GETRDR-Daten)
02401  * Material-Number

```

Figure 8. SAP disposition of material with TF78

2.8. SAP Example 8 (SBDC)

```

PROLOG DIALOG=SAPSAM08,                                C
      :
*****
* ATO SAMPLE DIALOG: SAPSAM08                          *
*****
* RESTRICTIONS:                                         *
* -----                                              *
* THIS CODE IS PROVIDED AS AN EXAMPLE FOR MASC-ATO AND IS DISTRIBUTED *
* ON AN "AS IS" BASIS WITHOUT ANY WARRANTY EITHER EXPRESS OR IMPLIED. *
* THIS CODE IS NOT TO BE CONSIDERED SUPPORTED CODE OF MASC. ANY PROB- *
* LEMS ENCOUNTERED IN THE USE OF THIS SAMPLE CODE IS A USER RESPONSI- *
* BILITY.                                               *
*****
* --- REPLAY FOLDERS FOR DATA TRANSFER                  *
*****
      PUTPRT TITLE=1,DATA='REPLAY FOLDERS (SBDC) '
      PUTPRT TITLE=2,DATA='-----'
      PUTPRT TITLE=3,DATA='
      :
LOGON   MARK
      :
*
BLD10   MAP
      FILL  LIN=24,COL=05,DATA='NSBDC'
      MAPEND
      SCAN  DATA='BDC-FOLDER-SELECTION,FOUND=GUT10
      PUTPRT DATA='ERROR: UNEXPECTED SCREEN'
      GOTO  MARK=ERR08
*
GUT10   MARK
BLD20   MAP
      MAPEND
BLD30   MAP
      FILL  LIN=22,COL=28,DATA='SEL '
      FILL  LIN=14,COL=33,DATA='RESVE- '
      MAPEND
      SCANB DATA='RESVE- ',FOUND=GUT30
      PUTPRT DATA='ERROR: RESVE-FOLDER NOT FOUND'
      GOTO  MARK=ERR08
*
GUT30   MARK
      PUTPRT
      MOVE  TO=EINS
      MOVE  TO=ZWEI
      MOVE  TO=DREI
*
BLD40   MAP
      FILL  LIN=22,COL=28,DATA='SEL '
EINS    FILL  LIN=22,COL=33,DATA='XXXXXXXXXX'
      MAPEND
      SCAN  DATA='RESVE- ',FOUND=GUT40
      PUTPRT DATA='ERROR: FOLDER NOT SELECTED'
      GOTO  MARK=ERR08
*

```

Figure 9. SAP replay of folders with SBDC Part 1 of 2

```

UT40      MARK
BLD50     MAP    TIMEOUT=30000
          FILL   LIN=22,COL=08,DATA='A'
          FILL   LIN=22,COL=28,DATA='S'
          MAPEND
*
REP50     MARK
          SCAN   DATA='I101',FOUND=GUT50
          MAP    TIMEOUT=30000
          MAPEND
          PENDING FOUND=GUT50
          SLEEP  SEC=60
          GOTO   MARK=REP50
*
GUT50     MARK
          PUTPRT
BLD60     MAP
          FILL   LIN=24,COL=05,DATA='NSBDC'
          MAPEND
          SCAN   DATA='BDC-FOLDER-SELECTION,FOUND=GUT60
          PUTPRT DATA='ERROR: UNEXPECTED SCREEN'
          GOTO   MARK=ERR08
*
GUT60     MARK
BLD70     MAP
          FILL   LIN=22,COL=28,DATA='SEL'
          FILL   LIN=22,COL=33,DATA='XXXXXXXXXXXXX'
          MAPEND
          SCAN   DATA='RESVE - ',FOUND=GUT70
          PUTPRT DATA='ERROR: REPLAYED FOLDER NOT FOUND'
          GOTO   MARK=ERR08
*
GUT70     MARK
          SCAN   DATA='FIN',FOUND=GUT709
          PUTPRT DATA='ERROR: FOLDER NOT FIN'
BLD701    MAP
          FILL   LIN=24,COL=05,DATA='NTM02'
          MAPEND
BLD702    MAP    LIN=11,COL=21,KEY=PF14
          MAPEND
BLD703    MAP
          FILL   LIN=11,COL=21,DATA='FOLDER'
DREI      MFELD  DATA='XXXXXXXXXXXXX'
          MFELD  DATA=' HAD ERRORS, PLEASE CHECK'
          FILL   LIN=12,COL=35,DATA='MEIER'
          MAPEND
GUT709    MARK
          :
LOGOFF    MARK
          :
          EPILOG
          END

```

Figure 10. SAP replay of folders with SBDC Part 2 of 2

2.9. SAP Example 9 (ABAP)

```

PROLOG  DIALOG=SAPSAM09,                                     C
:
*****
* ATO SAMPLE DIALOG: SAPSAM09                                *
*****
* RESTRICTIONS:                                              *
* -----                                                    *
* THIS CODE IS PROVIDED AS AN EXAMPLE FOR MASC-ATO AND IS DISTRIBUTED *
* ON AN "AS IS" BASIS WITHOUT ANY WARRANTY EITHER EXPRESS OR IMPLIED. *
* THIS CODE IS NOT TO BE CONSIDERED SUPPORTED CODE OF MASC. ANY PROB- *
* LEMS ENCOUNTERED IN THE USE OF THIS SAMPLE CODE IS A USER RESPONSI- *
* BILITY.                                                    *
*****
* --- RSDOKTAB AUSDRUCKEN                                     *
*****
      PUTPRT TITLE=1, DATA='RSDOKTAB PRINT (ABAP) '
      PUTPRT TITLE=2, DATA='-----'
      PUTPRT TITLE=3, DATA='
:
LOGON   MARK
:
*
BLD10   MAP
      FILL  LIN=24, COL=05, DATA='NABAP'
      MAPEND
      SCAN  DATA='ABAP/4', FOUND=GUT10
      PUTPRT DATA='ERROR: ABAP/4 NOT FOUND'
      GOTO  MARK=ERR08
*
GUT10   MARK
BLD20   MAP
      FILL  LIN=06, COL=11, DATA='RSDOKTAB'
      MAPEND
      SCAN  DATA='RSDOKTAB', FOUND=GUT20
      PUTPRT DATA='ERROR: ABAP NOT FOUND'
      GOTO  MARK=ERR08
*
GUT20   MARK
BLD30   MAP
      FILL  LIN=05, COL=35, DATA='D'
      FILL  LIN=06, COL=35, DATA='T022B'
      FILL  LIN=11, COL=35, DATA='X'
      MAPEND
      SCAN  DATA='TABLE HANDBOOK', FOUND=GUT30
      PUTPRT DATA='ERROR: TABLE HANDBOOK NOT FOUND'
      GOTO  MARK=ERR08
*
GUT30   MARK

```

Figure 11. SAP statistics with ABAP Part 1 of 2

```

BLD40   MAP  KEY=PF12
      MAPEND
      SCAN  DATA='PRINT-PARAMETER', FOUND=GUT40
      PUTPRT DATA='PRINT-PARAMETER NOT FOUND'
      GOTO  MARK=ERR08
*
GUT40   MARK
BLD50   MAP  TIMEOUT=30000
      FILL  LIN=07, COL=29, DATA='Y108'
      MAPEND
*
REP50   MARK
      SCAN  DATA='I006', FOUND=GUT50
      MAP  TIMEOUT=30000
      MAPEND
      PENDING FOUND=GUT50
      SLEEP SEC=60
      GOTO  MARK=REP50
GUT50   MARK
LOGOFF  MARK
:
      EPILOG
      END

```

Figure 12. SAP statistics with ABAP Part 2 of 2

2.10. SAP Example 10 (OTDX Close / ABAP)

```

PROLOG DIALOG=SAPSAM10,                                     C
:
*****
* ATO SAMPLE DIALOG: SAPSAM10                               *
*****
* RESTRICTIONS:                                             *
* -----                                                  *
* THIS CODE IS PROVIDED AS AN EXAMPLE FOR MASC-ATO AND IS DISTRIBUTED *
* ON AN "AS IS" BASIS WITHOUT ANY WARRANTY EITHER EXPRESS OR IMPLIED. *
* THIS CODE IS NOT TO BE CONSIDERED SUPPORTED CODE OF MASC. ANY PROB- *
* LEMS ENCOUNTERED IN THE USE OF THIS SAMPLE CODE IS A USER RESPONSI- *
* BILITY.                                                    *
*****
* --- ABAP MIT FILE CLOSE                                   *
*****
      PUTPRT TITLE=1,DATA='START ABAP FOR OTDX CLOSE'
      PUTPRT TITLE=2,DATA='-----'
      PUTPRT TITLE=3,DATA='
      :
LOGON   MARK
      :
*
BLD10   MAP
      FILL LIN=24,COL=05,DATA='NABAP'
      MAPEND
      SCAN DATA='ABAP/4',FOUND=GUT10
      PUTPRT DATA='ERROR: ABAP/4 NOT FOUND'
      GOTO MARK=ERR08
*
GUT10   MARK
BLD20   MAP
      FILL LIN=06,COL=11,DATA='ZMRBES60'
      MAPEND
BLD201  MAP
      MAPEND
BLD202  MAP
      MAPEND
REP20   MARK
BLD203  MAP
      MAPEND
      SCAN DATA='***',FOUND=GUT20
      PENDING FOUND=GUT20
      SLEEP SEC=60
      GOTO MARK=REP20
*
GUT20   MARK
      PUTPRT DATA='MESSAGE: ABAP HAS SUCCESSFULLY ENDED'
BLD30   MAP
      FILL LIN=24,COL=05,DATA='NEND'
      MAPEND
BLD40   MAP
      FILL LIN=02,COL=01,
      DATA='CEMT SET FILE(OTDX) CLOSE'
      MAPEND
      SCANB DATA='NORMAL',FOUND=GUT40
      PUTPRT DATA='ERROR: FILE NOT COLSED'
      GOTO MARK=ERR08
*
GUT40   MARK
BLD50   MAP KEY=PF3
      MAPEND
      :
LOGOFF  MARK
      :
      EPILOG
      END

```

Figure 13. CICS/SAP ABAP with OTDX Close

3. CICS

3.1. CICS Example 1 (CESN)

```

PROLOG DIALOG=CICSAM01,                                C
        NETNAME=AT01,                                  C
        APPLID=CICSP,                                  C
        LOGTERM=NO,                                     C
        LOOP=1000,                                      C
        TIMEOUT=60,                                    C
        SUPPORT=NO,                                     C
*****
* ATO SAMPLE DIALOG: CICSAM01                          *
*****
* RESTRICTIONS:                                         *
* -----                                              *
* THIS CODE IS PROVIDED AS AN EXAMPLE FOR MASC-ATO AND IS DISTRIBUTED *
* ON AN "AS IS" BASIS WITHOUT ANY WARRANTY EITHER EXPRESS OR IMPLIED. *
* THIS CODE IS NOT TO BE CONSIDERED SUPPORTED CODE OF MASC. ANY PROB- *
* LEMS ENCOUNTERED IN THE USE OF THIS SAMPLE CODE IS A USER RESPONSI- *
* BILITY.                                               *
*****
* --- LOGON TO CICS                                     *
*****
        PUTPRT TITLE=1,DATA='LOGON TO CICS WITH CESN'
        PUTPRT TITLE=2,DATA='-----'
        PUTPRT TITLE=3,DATA='
LOGON    MARK
LOG00    MAP  KEY=PF3
        MAPEND
LOG01    MAP  KEY=CLEAR
        MAPEND
LOG02    MAP  DATA='CSGM'
        MAPEND
        SCAN  DATA='MAIN-MENU',FOUND=LOG010K
        PUTPRT DATA='*** ERROR: MAIN-MENU NOT FOUND'
        GOTO  MARK=ERR08
LOG010K  MARK
LOG03    MAP  KEY=CLEAR
        MAPEND
LOG04    MAP  DATA='CESN'
        MAPEND
LOG05    MAP
        FILL  LIN=04,COL=14,DATA='AT01'
        FILL  LIN=06,COL=16,DATA='PSW'
        MAPEND
        SCAN  DATA='SIGN-ON COMPLETE',FOUND=LOG060K
        PUTPRT DATA='*** ERROR: LOGON UNSUCCESSFUL'
        GOTO  MARK=ERR08
LOG060K  MARK
        PUTPRT DATA='*** LOGON SUCCESSFUL'
*****
* --- LOGON PROCEDURE TERMINATED                       *
*****
:

```

Figure 14. Logon to CICS with CESN

3.2. CICS Example 2 (CSSF LOGOFF)

```

:
*****
* ATO SAMPLE DIALOG: CICSAM02
*****
* RESTRICTIONS:
* -----
* THIS CODE IS PROVIDED AS AN EXAMPLE FOR MASC-ATO AND IS DISTRIBUTED
* ON AN "AS IS" BASIS WITHOUT ANY WARRANTY EITHER EXPRESS OR IMPLIED.
* THIS CODE IS NOT TO BE CONSIDERED SUPPORTED CODE OF MASC. ANY PROB-
* LEMS ENCOUNTERED IN THE USE OF THIS SAMPLE CODE IS A USER RESPONSI-
* BILITY.
*****
* --- LOGOFF FROM CICS
*****
LOGOFF    MARK
OFF01     MAP    KEY=PF3
          MAPEND
          MAP    KEY=CLEAR
          MAPEND
OFF02     MAP    LASTMAP=YES,RC=00
          FILL   DATA='CSSF LOGOFF'
          MAPEND
*****
* --- LOGOFF IN CASE OF AN ERROR
*****
ERR04     MARK
          PUTPRT DATA='*** WARNING: RETURNCODE = 4'
ERR041    MAP    KEY=PF3
          MAPEND
          MAP    KEY=CLEAR
          MAPEND
ERR042    MAP    LASTMAP=YES,RC=04,DATA='CSSF LOGOFF'
          MAPEND
*
ERR08     MARK
          PUTPRT DATA='*** ERROR: RETURNCODE = 8'
ERR081    MAP    KEY=PF3
          MAPEND
          MAP    KEY=CLEAR
          MAPEND
ERR082    MAP    LASTMAP=YES,RC=08,DATA='CSSF LOGOFF'
          MAPEND
*
ERR16     MARK
          PUTPRT DATA='*** DISASTER: RETURNCODE = 16'
ERR161    MAP    KEY=PF3
          MAPEND
          MAP    KEY=CLEAR
          MAPEND
ERR162    MAP    LASTMAP=YES,RC=16,DATA='CSSF LOGOFF'
          MAPEND
          :
          EPILOG
          END

```

Figure 15. Logoff from CICS with CSSF

3.3. CICS Example 3 (CEMT mit GETRDR)

```

PROLOG DIALOG=CICSAM03,                                     C
      :
*****
* ATO SAMPLE DIALOG: CICSAM03                               *
*****
* RESTRICTIONS:                                             *
* -----                                                  *
* THIS CODE IS PROVIDED AS AN EXAMPLE FOR MASC-ATO AND IS DISTRIBUTED *
* ON AN "AS IS" BASIS WITHOUT ANY WARRANTY EITHER EXPRESS OR IMPLIED. *
* THIS CODE IS NOT TO BE CONSIDERED SUPPORTED CODE OF MASC. ANY PROB- *
* LEMS ENCOUNTERED IN THE USE OF THIS SAMPLE CODE IS A USER RESPONSI- *
* BILITY.                                                    *
*****
* --- CICS MASTER OPERATOR COMMANDS                         *
*****
      PUTPRT TITLE=1,DATA='CICS MASTER COMMANDS (CEMT) '
      PUTPRT TITLE=2,DATA='-----'
      PUTPRT TITLE=3,DATA=' '
      :
LOGON  MARK
      :
*
REP10  MARK
      GETRDR TO=CMD10,EOF=EOF10
BLD10  MAP
CMD10  FILL  LIN=01,COL=01,DATA='XXXXXXXXXXXXXXXXXXXXX'
      MAPEND
      SCANB DATA='RESPONSE: NORMAL',FOUND=GUT10
      PUTPRT DATA='*** ERROR: CEMT CALL NOT SUCCESSFUL '
      GOTO  MARK=ERR08
GUT10  MARK
BLD101 MAP  KEY=PF3
      MAPEND
      MAP  KEY=CLEAR
      MAPEND
      GOTO  MARK=REP10
*
EOF10  MARK
      PUTPRT DATA='*** MESSAGE:: END OF INPUT DATA '
      GOTO  MARK=LOGOFF
      :
LOGOFF MARK
      :
      EPILOG
      END

CEMT SET FILE(MATR) OPE                                     (GETRDR-Data)
CEMT SET FILE(LAGU) OPE
/

```

Figure 16. CallCICS Mastertransaction CEMT

3.4. CICS Example 4 (CEMT Dialog)

```

PROLOG DIALOG=CICSAM04,                                     C
:
*****
* ATO SAMPLE DIALOG: CICSAM04                               *
*****
* RESTRICTIONS:                                             *
* -----                                                  *
* THIS CODE IS PROVIDED AS AN EXAMPLE FOR MASC-ATO AND IS DISTRIBUTED *
* ON AN "AS IS" BASIS WITHOUT ANY WARRANTY EITHER EXPRESS OR IMPLIED. *
* THIS CODE IS NOT TO BE CONSIDERED SUPPORTED CODE OF MASC. ANY PROB- *
* LEMS ENCOUNTERED IN THE USE OF THIS SAMPLE CODE IS A USER RESPONSI- *
* BILITY.                                                    *
*****
* --- CICS MASTER OPERATOR COMMANDS WITH CEMT DIALOG       *
*****
      PUTPRT TITLE=1,DATA='CICS MASTER COMMANDS (CEMT) '
      PUTPRT TITLE=2,DATA='-----'
      PUTPRT TITLE=3,DATA=' '
      :
LOGON  MARK
      :
*
BLD10  MAP      DATA='CEMT '
      MAPEND
BLD20  MAP
      FILL      LIN=01,COL=02,DATA=' INQ  PROGRAM(AUTOINST) '
      MAPEND
BLD30  MAP
      FILL      LIN=03,COL=60,DATA='NEW'
      MAPEND
      SCANB     DATA='RESPONSE: NORMAL',FOUND=GUT30
      PUTPRT     DATA='*** ERROR: CEMT CALL NOT SUCCESSFUL '
      GOTO       MARK=ERR08
*
GUT30  MARK
BLD40  MAP      KEY=PF3
      MAPEND
      MAP      KEY=CLEAR
      MAPEND
      :
LOGOFF MARK
      :
      EPILOG
      END

```

Figure 17. CICS Mastertransaction dialog CEMT

3.5. CICS Example 5 (CECI)

PROLOG DIALOG=C

```

*****
:
*****
* ATO SAMPLE DIALOG: CICSAM05
*****
* RESTRICTIONS:
* -----
* THIS CODE IS PROVIDED AS AN EXAMPLE FOR MASC-ATO AND IS DISTRIBUTED
* ON AN "AS IS" BASIS WITHOUT ANY WARRANTY EITHER EXPRESS OR IMPLIED.
* THIS CODE IS NOT TO BE CONSIDERED SUPPORTED CODE OF MASC. ANY PROB-
* LEMS ENCOUNTERED IN THE USE OF THIS SAMPLE CODE IS A USER RESPONSI-
* BILITY.
*****
* --- INVOKE CICS COMMAND INTERPRETER
*****
      PUTPRT TITLE=1,DATA='COMMAND INTERPRETER (CECI)'
      PUTPRT TITLE=2,DATA='-----'
      PUTPRT TITLE=3,DATA='
:
LOGON   : MARK
:
*
BLD10   MAP      DATA='CECI'
        MAPEND
BLD20   MAP
        FILL     LIN=01,COL=02,DATA='INQUIRE FILE() START'
        MAPEND
        SCAN     DATA='STATUS: ABOUT TO EXECUTE',FOUND=GUT20
        PUTPRT   DATA='*** ERROR: CECI CALL UNSUCCESSFUL'
        GOTO     MARK=ERR08
*
GUT20   MARK
REP30   MARK
BLD30   MAP
        FILL     LIN=01,COL=02,DATA='INQUIRE FILE() NEXT'
        MAPEND
        SCAN     DATA='STATUS: ABOUT TO EXECUTE',FOUND=GUT30
        PUTPRT   DATA='*** ERROR: FILE-NEXT UNSUCCESSFUL'
        GOTO     MARK=ERR08
*
GUT30   MARK
BLD40   MAP      KEY=ENT
        MAPEND
        SCANB    DATA='RESPONSE: END',FOUND=GUT40
        GOTO     MARK=REP30
*
GUT40   MARK
BLD50   MAP      KEY=PF3
        MAPEND
        MAP      KEY=CLEAR
        MAPEND
:
LOGOFF  : MARK
:
        EPILOG
        END

```

Figure 18. Call CICS Command Interpreter CECI

3.6. CICS Example 6 (CEDA)

```

PROLOG  DIALOG=CICSAM06,                                     C
:
*****
* ATO SAMPLE DIALOG: CICSAM06                                *
*****
* RESTRICTIONS:                                              *
* -----                                                  *
* THIS CODE IS PROVIDED AS AN EXAMPLE FOR MASC-ATO AND IS DISTRIBUTED *
* ON AN "AS IS" BASIS WITHOUT ANY WARRANTY EITHER EXPRESS OR IMPLIED. *
* THIS CODE IS NOT TO BE CONSIDERED SUPPORTED CODE OF MASC. ANY PROB- *
* LEMS ENCOUNTERED IN THE USE OF THIS SAMPLE CODE IS A USER RESPONSI- *
* BILITY.                                                    *
*****
* --- CALL RDO TRANSACTION                                    *
*****
      PUTPRT TITLE=1,DATA='RDO-TRANSACTION (CEDA) '
      PUTPRT TITLE=2,DATA='-----'
      PUTPRT TITLE=3,DATA=' '
      :
LOGON   MARK
      :
*
BLD10   MAP      DATA='CEDA '
      MAPEND
BLD20   MAP
      FILL      LIN=01,COL=02,DATA='EXPAND GROUP (CICS*) '
      MAPEND
      SCAN      DATA='RESPONSE: NORMAL ',FOUND=GUT20
      PUTPRT     DATA='*** ERROR: CEDA CALL UNSUCCESSFUL '
      GOTO      MARK=ERR08
*
GUT20   MARK
BLD30   MAP      KEY=PF3
      MAPEND
      MAP      KEY=CLEAR
      MAPEND
      :
LOGOFF  MARK
      :
      EPILOG
      END

```

Figure 19. Call CICS RDO-Transaction CEDA

4. TSO

4.1. TSO Example 1 (SDSF)

```

      PROLOG DIALOG=TSOSAM01,
              NETNAME=NETAT01,
              APPLID=TSO,
              :
*****
* ATO SAMPLE DIALOG: TSOSAM01
*****
* RESTRICTIONS:
* -----
* THIS CODE IS PROVIDED AS AN EXAMPLE FOR MASC-ATO AND IS DISTRIBUTED
* ON AN "AS IS" BASIS WITHOUT ANY WARRANTY EITHER EXPRESS OR IMPLIED.
* THIS CODE IS NOT TO BE CONSIDERED SUPPORTED CODE OF MASC. ANY PROB-
* LEMS ENCOUNTERED IN THE USE OF THIS SAMPLE CODE IS A USER RESPONSI-
* BILITY.
*****
* --- INVOKE SDSF VIA TSO/ISPF
*****
      PUTPRT TITLE=1,DATA='INVOKE SDSF VIA TSO/ISPF'
      PUTPRT TITLE=2,DATA='-----'
      PUTPRT TITLE=3,DATA=' '
*
      PERFORM PROC=LOGON
MAP10  MAP
      FILL   LIN=02,COL=14,DATA='SD.LOG'    * SD.LOG
      MAPEND
MAP15  MAP   KEY=PF8
      FILL   LIN=02,COL=21,DATA='M'         * SKIP TO END OF LOG
      MAPEND
MAP20  MAP
      FILL   LIN=02,COL=21,DATA='PREFIX UME*'
      MAPEND
MAP25  MAP
      FILL   LIN=02,COL=21,DATA='H'         * HELD OUTPUT UME*
      MAPEND
MAP30  MAP   KEY=PF8                       * ADVANCE 1 PAGE
      MAPEND
MAP35  MAP   KEY=PF4                       * EXIT SDSF
      MAPEND
MAP40  MAP
      FILL   LIN=02,COL=14,DATA='X'
      MAPEND
MAP45  MAP   LASTMAP=YES,RC=00,DATA='LOGOFF'
*      FILL   LIN=02,COL=01,DATA='LOGOFF'
      MAPEND
*****
* PROCEDURES
*****
* -----
* LOGON PROCEDURE
* -----
LOGON  PROC
LOG010 MAP
      FILL   LIN=02,COL=01,DATA='#VAR1#'    * ENTER USERID
      MAPEND
LOG020 MAP
      FILL   LIN=08,COL=20,DATA='#VAR2#'    * PASSWORD TSO/E LOGON
      MAPEND
LOG030 MAP   KEY=ENT
      MAPEND
      PROCEND
      EPILOG
      END
```

Figure 20. Invoke SDSF in TSO/ISPF

4.2. TSO Example 2 (ISPF-Editor)

```

PROLOG DIALOG=TSOSAM02,                                     C
:
*****
* ATO SAMPLE DIALOG: TSOSAM02                               *
*****
* RESTRICTIONS:                                             *
* -----                                                 *
* THIS CODE IS PROVIDED AS AN EXAMPLE FOR MASC-ATO AND IS DISTRIBUTED *
* ON AN "AS IS" BASIS WITHOUT ANY WARRANTY EITHER EXPRESS OR IMPLIED. *
* THIS CODE IS NOT TO BE CONSIDERED SUPPORTED CODE OF MASC. ANY PROB- *
* LEMS ENCOUNTERED IN THE USE OF THIS SAMPLE CODE IS A USER RESPONSI- *
* BILITY.                                                  *
*****
* --- CHANGE DATA IN ISPF EDITOR VIA ISPF OPTION 3.4      *
*****
      PUTPRT TITLE=1,DATA='EDITOR CALL VIA 3.4'
      PUTPRT TITLE=2,DATA='-----'
      PUTPRT TITLE=3,DATA='
*
      PERFORM PROC=LOGON
MAP10  MAP
      FILL  LIN=02,COL=14,DATA='3.4'      * DS LIST UTILITY
      MAPEND
MAP15  MAP
      FILL  LIN=08,COL=23,DATA='USER.TSO.CNTL'
      MAPEND
      SCAN  DATA='DSLST',FOUND=OK15
      PUTPRT DATA='ERROR: DATASET NOT FOUND'
      PERFORM PROC=ERR08
OK15   MARK
MAP20  MAP
      FILL  LIN=06,COL=02,DATA='E'      * INVOKE EDITOR
      MAPEND
MAP25  MAP
      FILL  LIN=02,COL=15,DATA='S PROG01' * EDIT MEMBER
      MAPEND
MAP30  MAP
      FILL  LIN=02,COL=15,DATA='C IN-DATA INP-DATA ALL' * ADVANCE 1 PAGE
      MAPEND
      SCAN  DATA='CHARS 'IN-DATA' CHANGED',FOUND=OK30
      PUTPRT DATA='ERROR: NO CHANGES MADE'
      PERFORM PROC=ERR08
OK30   MARK
MAP35  MAP  KEY=PF3                      * QUIT EDITOR
      MAPEND
MAP40  MAP  KEY=ENT                      * ENTER, IF TSO-MSG
      MAPEND
      SCAN  DATA='AUTHORIZATION FAILED',NFOUND=OK40
      PUTPRT DATA='ERROR: UNAUTHORIZED WRITE ACCESS'
      MAP
      FILL  LIN=02,COL=15,DATA='CANCEL' * CANCEL MEMBER
      MAPEND
      PERFORM PROC=ERR08
OK40   MARK
      PERFORM PROC=LOGOFF
*

```

Figure 21. Edit in TSO with ISPF-Editor Part 1 of 2

```

*****
* PROCEDURES
*****
*-----*
* LOGOFF PROCEDURE FOR MINOR ERRORS
*-----*
ERR04  PROC
ERR041  MAP      KEY=ENT                * ENTER, IF TSO-MSG
        MAPEND
ERR042  MAP
        FILL     LIN=02,COL=15,DATA='X'
        MAPEND
ERR043  MAP
        FILL     LIN=02,COL=14,DATA='X'
        MAPEND
ERR044  MAP      LASTMAP=YES,RC=04      * LOGOFF
        FILL     LIN=03,COL=01,DATA=' LOGOFF '
        MAPEND
        PROCEND ERR04
*-----*
* LOGOFF PROCEDURE FOR SERIOUS ERRORS
*-----*
ERR08  PROC
ERR081  MAP      KEY=ENT                * ENTER, IF TSO-MSG
        MAPEND
ERR082  MAP
        FILL     LIN=02,COL=15,DATA='X'
        MAPEND
ERR083  MAP
        FILL     LIN=02,COL=14,DATA='X'
        MAPEND
ERR084  MAP      LASTMAP=YES,RC=08      * LOGOFF
        FILL     LIN=03,COL=01,DATA=' LOGOFF '
        MAPEND
        PROCEND ERR08
*-----*
* LOGON PROCEDURE
*-----*
LOGON  PROC
LOG010  MAP
        FILL     LIN=02,COL=01,DATA='#VAR1#' * ENTER USERID
        MAPEND
LOG015  MAP
        FILL     LIN=08,COL=20,DATA='#VAR2#' * PASSWORD TSO/E LOGON
        MAPEND
LOG020  MAP
        MAPEND
        PROCEND LOGON
*-----*
* LOGOFF PROCEDURE
*-----*
LOGOFF  PROC
LOGF10  MAP
        FILL     LIN=02,COL=15,DATA='X'      * EXIT ISPF
        MAPEND
LOGF15  MAP
        FILL     LIN=02,COL=14,DATA='X'      * EXIT MAIN MENU
        MAPEND
LOGF20  MAP      LASTMAP=YES,RC=00      * LOGOFF
        FILL     LIN=03,COL=01,DATA=' LOGOFF '
        MAPEND
        PROCEND LOGOFF
*****
* END OF PROCEDURES
*****
      EPILOG
      END

```

Figure 22. Edit in TSO with ISPF-Editor Part 2 of 2

4.3. TSO Example 3 (ISPF-Editor)

```

PROLOG  DIALOG=TSOSAM03,                                C
        NETNAME=NETAT03,                                C
        APPLID=TSO,                                     C
        LOGTERM=LOGON,                                  C
        LOGTIME=0,                                       C
        SUPPORT=NO                                       C
*****
*  ATO SAMPLE DIALOG: TSOSAM03                          *
*****
*  RESTRICTIONS:                                         *
*  -----                                              *
*  THIS CODE IS PROVIDED AS AN EXAMPLE FOR MASC-ATO AND IS DISTRIBUTED *
*  ON AN "AS IS" BASIS WITHOUT ANY WARRANTY EITHER EXPRESS OR IMPLIED. *
*  THIS CODE IS NOT TO BE CONSIDERED SUPPORTED CODE OF MASC. ANY PROB- *
*  LEMS ENCOUNTERED IN THE USE OF THIS SAMPLE CODE IS A USER RESPONSI- *
*  BILITY.                                              *
*****
*  --- EDIT A MEMBER WITH ISPF-EDITOR                    *
*****
        PUTPRT TITLE=1,DATA='EDIT MEMBER IN TSO/ISPF'
        PUTPRT TITLE=2,DATA='-----'
        PUTPRT TITLE=3,DATA='
*-----*
*--* LOGON PROCEDURE *-----*
*-----*
        PERFORM PROC=LOGON
*-----*
*--* INVOKE DATASETLIST (OPTION 3.4) *-----*
*-----*
MAP10    MAP
        FILL    LIN=02,COL=14,DATA='3.4'
        MAPEND
        SCAN DATA='INVALID OPTION',NFOUND=MAP15
        PUTPRT DATA='ERROR: INVALID OPTION INVOKED. PLEASE VERIFY'
        PERFORM PROC=ERR08
*-----*
*--* ENTER DATASET NAME *-----*
*-----*
MAP15    MAP
        FILL    LIN=08,COL=23,DATA='USER.TSO.CNTL' <-- CHANGE NAME
        MAPEND
        SCAN DATA='DATASET NOT FOUND',NFOUND=MAP20
        PUTPRT DATA='WARNING: DATASET NOT FOUND'
        PERFORM PROC=ERR04
*-----*
*--* MODIFY DATASET *-----*
*-----*
MAP20    MAP
        FILL    LIN=06,COL=02,DATA='M'
        MAPEND
*-----*
*--* DOES ATOTST EXIST ? *-----*
*-----*
MAP21    MAP
        FILL    LIN=02,COL=15,DATA='LOCATE ATOTST'
        MAPEND
        SCAN DATA='ATOTST',LIN=04,COL=12,NFOUND=CONT30
*-----*
*--* ATOTST EXISTS *-----*
*-----*
MAP25    MAP
        FILL    LIN=04,COL=02,DATA='D'
        MAPEND
*-----*
*--* LEAVE MODIFY PANEL *-----*
*-----*
CONT30   MARK
MAP30    MAP KEY=PF3
        MAPEND

```

Figure 23. Edit in TSO with ISPF-Editor Part 1 of 4

```

*-----*
*--* EDIT MEMBER ATOTST *-----*
*-----*
MAP35    MAP
        FILL    LIN=06,COL=02,DATA='E /(ATOTST)'
        MAPEND
*-----*
*--* RESET THOSE ISPF GARBAGE MESSAGES *-----*
*-----*
MAP36    MAP
        FILL    LIN=02,COL=15,DATA='RESET'
        MAPEND
*-----*
*--* INSERT FIRST LINE FROM INPUT *-----*
*-----*
MAP40    MARK
        GETRDR TO=LINE1,EOF=ENDDATA
        MAP
        FILL    LIN=03,COL=02,DATA='I'
        MAPEND
*-----*
*--* INSERT FIRST LINE FROM INPUT DATA *-----*
*--* AND ADVANCE 1 LINE *-----*
*-----*
MAP45    MAP    KEY=PF8,LIN=2,COL=16
        FILL    LIN=02,COL=15,DATA='1'
LINE1    FILL    LIN=04,COL=09,DATA='XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXC
        XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX'
        MAPEND
*-----*
*--* INSERT BLANK LINE *-----*
*-----*
MAP50    MARK
        GETRDR TO=LINEN,EOF=ENDDATA
        MAP
        FILL    LIN=03,COL=02,DATA='I'
        MAPEND
*-----*
*--* INSERT NEXT LINES FROM INPUT DATA *-----*
*--* AND ADVANCE 1 LINE *-----*
*-----*
MAP55    MAP    KEY=PF8,LIN=2,COL=16
        FILL    LIN=02,COL=15,DATA='1'
LINEN    FILL    LIN=04,COL=09,DATA='XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXC
        XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX'
        MAPEND
        GOTO MARK=MAP50
ENDDATA  MARK
        MAP    KEY=PF8
        FILL    LIN=02,COL=15,DATA='M'
        MAPEND
        SLEEP SEC=10
MAP60    MAP    KEY=PF3
        MAPEND

```

Figure 24. Edit in TSO with ISPF-Editor Part 2 of 4

```

*****
* PROCEDURES
*****
* -----
* LOGON PROCEDURE
* -----
LOGON      PROC
LOG01      MAP
           FILL    LIN=02,COL=01,DATA='#VAR1#'    <-- TSO USERID
           MAPEND
LOG02      MAP
           FILL    LIN=08,COL=20,DATA='#VAR2#'    <-- TSO PASSWRD
           MAPEND
LOG03      MAP
           MAPEND
           PROCEND LOGON
* -----
* LOGOFF PROCEDURE
* -----
LOGOFF     PROC
LOGF1      MAP    KEY=PF3
           MAPEND
           SCAN DATA='MASTER APPLICATION MENU',NFOUND=LOGF1
LOGF2      MAP
           FILL    LIN=02,COL=14,DATA='X'
           MAPEND
LOGF3      MAP
           FILL    LIN=03,COL=01,DATA='LOGOFF'
           MAPEND
           PROCEND LOGOFF
* -----
* LOGOFF PROCEDURE FOR MINOR ERRORS
* -----
ERR04      PROC
ERR041     MAP    KEY=PF3      * SKIP TO MASTER APPLICATION MENU
           MAPEND
           SCAN DATA='MASTER APPLICATION MENU',NFOUND=ERR041
ERR042     MAP                                * EXIT MAIN MENU
           FILL    LIN=02,COL=14,DATA='X'
           MAPEND
ERR043     MAP    LASTMAP=YES,RC=04      * LOGOFF
           FILL    LIN=03,COL=01,DATA='LOGOFF'
           MAPEND
           PROCEND ERR04
* -----
* LOGOFF PROCEDURE FOR SERIOUS ERRORS
* -----
ERR08      PROC
ERR081     MAP    KEY=PF3      * SKIP TO MASTER APPLICATION MENU
           MAPEND
           SCAN DATA='MASTER APPLICATION MENU',NFOUND=ERR081
ERR082     MAP                                * EXIT MAIN MENU
           FILL    LIN=02,COL=14,DATA='X'
           MAPEND
ERR083     MAP    LASTMAP=YES,RC=08      * LOGOFF
           FILL    LIN=03,COL=01,DATA='LOGOFF'
           MAPEND
           PROCEND ERR08
*****
* END OF PROCEDURES
*****
EPILOG
END

```

Figure 25. Edit in TSO with ISPF-Editor Part 3 of 4

5. MISCELLANEOUS APPLICATIONS

5.1. DIAL-IBM Example (PTF Ordering)

```
PROLOG DIALOG=DIASAM01,                                C
        APPLID=DCUZSVMP,                                C
        NETNAME=NETAT01,                                C
        LOGTERM=LOGON,                                    C
        SUPPORT=NO
*****
* DIAL-IBM SAMPLE: DIASAM01                               *
*****
* RESTRICTIONS:                                           *
* -----                                                *
* THIS CODE IS PROVIDED AS AN EXAMPLE FOR MASC-ATO AND IS DISTRIBUTED *
* ON AN "AS IS" BASIS WITHOUT ANY WARRANTY EITHER EXPRESS OR IMPLIED. *
* THIS CODE IS NOT TO BE CONSIDERED SUPPORTED CODE OF MASC. ANY PROB- *
* LEMS ENCOUNTERED IN THE USE OF THIS SAMPLE CODE IS A USER RESPONS- *
* BILITY.                                                  *
*****
        PUTPRT TITLE=1,DATA='PTF ORDERING VIA DIAL-IBM'
        PUTPRT TITLE=2,DATA='-----'
        PUTPRT TITLE=3,DATA=' '
*****
* LOGON TO INS                                           *
*****
        PERFORM PROC=LOGOINS
*****
* INVOKE DIAL-IBM FROM APPLICATION MENU                   *
*****
MAP05    MARK
        MAP
        FILL  LIN=24,COL=7,DATA='DIAL '
        MAPEND
*****
* IS PASSWORD REQUESTED ?                               *
*****
        SCAN DATA='ENTER PASSWORD',FOUND=MAP10
        PUTPRT DATA='*** MESSAGE: PASSWORD PROPAGATION MAY BE ACTIVE'
        GOTO MARK=MAP11
*****
* ENTER DIAL-IBM PASSWORD                               *
*****
MAP10    MARK
        MAP
        FILL  LIN=23,COL=1,DATA='DIALPW'    <--- DIAL-IBM PASSWORD
        MAPEND
*****
* IS IT DIAL-IBM MAIN MENU ?                             *
*****
MAP11    MARK
        SCAN DATA='DIAL-IBM - A COMPONENT OF IBMLINK',FOUND=MAP15
        PUTPRT DATA='*** ERROR: DIAL-IBM MAIN MENU NOT FOUND OR NEW D'C
        'IAL-IBM RELEASE MAY BE ACTIVE. PLEASE VERIFY'
        PERFORM PROC=ERR08
```

Figure 27. PTF ordering via DIAL-IBM Part 1 of 3

```

*****
* INVOKE CEPTF APPLICATION *
*****
MAP15  MARK
      MAP
      FILL  LIN=23,COL=7,DATA='CEPTF'
      MAPEND
*****
* IS IT CEPTF MAIN MENU ? *
*****
      SCAN DATA='CEPTF MAIN MENU',FOUND=MAP20
      PUTPRT DATA='*** ERROR: CEPTF MAIN MENU NOT FOUND'
      PERFORM PROC=ERR08

*****
* INVOKE PTF ORDERERERING DIALOG *
*****
MAP20  MARK
      MAP
      FILL  LIN=5,COL=14,DATA='3'
      MAPEND
*****
* ENTER PTF NUMBER (UP TO 16 POSSIBLE) *
*****
MAP25  MARK
      MAP
      FILL  LIN=5,COL=14,DATA='UY99999'  <- - PTF NUMBER
      MAPEND
*****
* ENTER REQUESTED ORDER INFORMATION *
*****
MAP30  MARK
      MAP
      FILL  LIN=5,COL=14,DATA='MVS'          < ENVIRONMENT
      FILL  LIN=8,COL=14,DATA='D'           < D, M OR I
      FILL  LIN=11,COL=14,DATA='PTF ORD VIA ATO' < COMMENT
      MAPEND
*****
MAP35  MARK
      MAP
      FILL  LIN=10,COL=14,DATA='N'          < BIN FOR PC
      FILL  LIN=13,COL=14,DATA='9600'      < LINE SPEED
      MAPEND
*****
MAP40  MARK
      MAP
      FILL  LIN=10,COL=14,DATA='750 FIFTH AVENUE' * STREET
      FILL  LIN=11,COL=14,DATA='NEW YORK CITY, NY 10012' * CITY
      FILL  LIN=13,COL=14,DATA='U.S.A.' * COUNTRY
      FILL  LIN=15,COL=14,DATA='MR. SMITH' * ATTN
      FILL  LIN=18,COL=14,DATA='3480' * DEVICE
      FILL  LIN=20,COL=14,DATA='6250' * DENSITY
      FILL  LIN=22,COL=14,DATA='N' * PRTY
      MAPEND
*****
* PTF ORDER SUBMITTED ? *
*****
      SCAN DATA='PTF ORDER HAS BEEN SUBMITTED',FOUND=OK40
      PUTPRT DATA='*** ERROR: PTF NOT ORDERED. PLEASE VERIFY'
      PERFORM PROC=ERR08
OK40  MARK
-----*
* EXIT CEPTF APPLICATION *
-----*
      PERFORM PROC=LFINS

```

Figure 28. PTF ordering via DIAL-IBM Part 2 of 3

```

*****
* PROCEDURES
*****
*-----*
* LOGON TO INS
*-----*
*****
* ENTER ACCOUNT, USERID AND PASSWORD
*****
LOGOINS  PROC
LOINS1   MAP
        FILL  LIN=21,COL=13,DATA='#VAR1#'      <--- INS-ACCOUNT-NR.
        FILL  LIN=21,COL=32,DATA='#VAR2#'      <--- INS-USERID
        FILL  LIN=21,COL=53,DATA='#VAR3#'      <--- INS-PASSWRD
        MAPEND
        PROCEND LOGOINS
*-----*
* LOGOFF FROM DIAL-IBM AND INS SERVICES
*-----*
LFINS     PROC
LFINS1    MAP  KEY=PF12
        MAPEND
        SCAN DATA='DIAL-IBM - A COMPONENT OF IBMLINK',NFOUND=LFINS1
LFINS2    MAP
        FILL  LIN=23,COL=7,DATA='LOGOFF'
        MAPEND
LFINS3    MAP  LASTMAP=YES,RC=00
        FILL  LIN=24,COL=7,DATA='RELEASE'
        MAPEND
        PROCEND LFINS
*-----*
* LOGOFF FROM DIAL-IBM AND INS SERVICES FOR MINOR ERRORS
*-----*
ERR04     PROC
ERR041    MAP  KEY=PF12
        MAPEND
        SCAN DATA='DIAL-IBM - A COMPONENT OF IBMLINK',NFOUND=ERR041
ERR042    MAP
        FILL  LIN=23,COL=7,DATA='LOGOFF'
        MAPEND
ERR043    MAP  LASTMAP=YES,RC=04
        FILL  LIN=24,COL=7,DATA='RELEASE'
        MAPEND
        PROCEND ERR04
*-----*
* LOGOFF FROM DIAL-IBM AND INS SERVICES FOR SERIOUS ERRORS
*-----*
ERR08     PROC
ERR081    MAP  KEY=PF12
        MAPEND
        SCAN DATA='DIAL-IBM - A COMPONENT OF IBMLINK',NFOUND=ERR081
ERR082    MAP
        FILL  LIN=23,COL=7,DATA='LOGOFF'
        MAPEND
ERR083    MAP  LASTMAP=YES,RC=04
        FILL  LIN=24,COL=7,DATA='RELEASE'
        MAPEND
        PROCEND ERR08
*****
* END OF PROCEDURES
*****
        EPILOG
        END

```

Figure 29. PTF ordering via DIAL-IBM Part 3 of 3

5.2. IBM Mail-Exchange

```

PROLOG DIALOG=DIASAM02,
        APPLID=DCUZZSVMP,
        NETNAME=NETAT01,
        LOGTERM=LOGON,
        SUPPORT=NO
*****
* DIAL-IBM SAMPLE: DIASAM02
*****
* RESTRICTIONS:
* -----
* THIS CODE IS PROVIDED AS AN EXAMPLE FOR MASC-ATO AND IS DISTRIBUTED
* ON AN "AS IS" BASIS WITHOUT ANY WARRANTY EITHER EXPRESS OR IMPLIED.
* THIS CODE IS NOT TO BE CONSIDERED SUPPORTED CODE OF MASC. ANY PROB-
* LEMS ENCOUNTERED IN THE USE OF THIS SAMPLE CODE IS A USER RESPONSI-
* BILITY.
*****
        PUTPRT TITLE=1,DATA='SEND A NOTE VIA IBM MAIL EXCHANGE'
        PUTPRT TITLE=2,DATA='-----'
        PUTPRT TITLE=3,DATA=' '
*****
* LOGON TO INS
*****
        PERFORM PROC=LOGOINS
*****
* INVOKE IBM MAIL EXCHANGE
*****
MAP05    MAP
        FILL  LIN=24,COL=7,DATA='MAILEXCH'
        MAPEND
*****
* IS IT MAIL EXCHANGE MENU ?
*****
        SCANB DATA='I B M   M A I L   E X',LIN=03,FOUND=MAP10
        PUTPRT DATA='*** ERROR: IBM MAIL EXCHANGE NOT INVOKED'
        PERFORM PROC=ERR08
*****
* ENTER MAILEX PASSWORD
*****
MAP10    MAP
        FILL  LIN=16,COL=60,DATA='#VAR2#'      <--- MAIL EXCH. PWD
        MAPEND
*****
* IS IT OK ?
*****
        SCANB DATA='SIGN-ON ACCEPTED',FOUND=OK10
        SCANB DATA='SYSTEM SIGN-ON SUCCESSFUL',FOUND=OK10
        PUTPRT DATA='*** ERROR: MAILEX SIGN-ON FAILED. PLEASE VERIFY'
        PERFORM PROC=ERR08
OK10     MARK
*****
* CREATE A NOTE
*****
MAP15    MAP
        FILL  LIN=24,COL=8,DATA='2'
        MAPEND
*****
* INSERT USERID OF RECEIVER
*****
MAP20    MAP
        FILL  LIN=5,COL=15,DATA='MAIL-ID'
        MAPEND

```

Figure 30. Messages via IBM Mail-Exchange Part 1 of 4

```

*****
* EDIT NOTE *
*****
MAP21      MAP    KEY=PF3
          MAPEND
*****
* ENTER TEXT *
*****
          GETRDR TO=LINE01,EOF=MAP25
          GETRDR TO=LINE02,EOF=MAP25
          GETRDR TO=LINE03,EOF=MAP25
          GETRDR TO=LINE04,EOF=MAP25
          GETRDR TO=LINE05,EOF=MAP25
          GETRDR TO=LINE06,EOF=MAP25
          GETRDR TO=LINE07,EOF=MAP25
          GETRDR TO=LINE08,EOF=MAP25
          GETRDR TO=LINE09,EOF=MAP25
          GETRDR TO=LINE10,EOF=MAP25
          GETRDR TO=LINE11,EOF=MAP25
          GETRDR TO=LINE12,EOF=MAP25
MAP25      MARK
          MAP
          FILL  LIN=7,COL=17,DATA='ATO VERSION 4.1.0'      * SUBJECT
LINE01     FILL  LIN=09,COL=2,DATA='XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
          XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX'
LINE02     FILL  LIN=10,COL=2,DATA='XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
          XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX'
LINE03     FILL  LIN=11,COL=2,DATA='XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
          XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX'
LINE04     FILL  LIN=12,COL=2,DATA='XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
          XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX'
LINE05     FILL  LIN=13,COL=2,DATA='XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
          XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX'
LINE06     FILL  LIN=14,COL=2,DATA='XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
          XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX'
LINE07     FILL  LIN=15,COL=2,DATA='XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
          XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX'
LINE08     FILL  LIN=16,COL=2,DATA='XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
          XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX'
LINE09     FILL  LIN=17,COL=2,DATA='XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
          XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX'
LINE10     FILL  LIN=18,COL=2,DATA='XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
          XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX'
LINE11     FILL  LIN=19,COL=2,DATA='XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
          XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX'
LINE12     FILL  LIN=20,COL=2,DATA='XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
          XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX'
          MAPEND
*****
* SEND AND FILE NOTE *
*****
MAP30      MARK
          MAP    KEY=PF9
          MAPEND
*****
* NOTE SENT ? *
*****
          SCAN DATA='DMDE218I NOTE SENT AND FILED',FOUND=OK30
          PUTPRT DATA='*** ERROR: NOTE NOT SENT. PLEASE VERIFY'
          PERFORM PROC=ERR08
*****
* EXIT MAIL EXCHANGE *
*****
OK30       MARK
          PERFORM PROC=LFINS

```

Figure 31. Messages via IBM Mail-Exchange Part 2 of 4

```

*****
* PROCEDURES
*****
*
*-----*
* LOGON TO INS
*-----*
*****
* ENTER ACCOUNT, USERID AND PASSWORD
*****
LOGOINS  PROC
LOINS1   MAP
        FILL  LIN=21,COL=13,DATA='#VAR1#'    <--- INS-ACCOUNT-NR.
        FILL  LIN=21,COL=32,DATA='#VAR2#'    <--- INS-USERID
        FILL  LIN=21,COL=53,DATA='#VAR3#'    <--- INS-PASSWRD
        MAPEND
        PROCEND LOGOINS
*-----*
* LOGOFF FROM MAIL-EX AND INS SERVICES
*-----*
*
LFINS    PROC
LFINS1   MAP  KEY=PF4
        MAPEND
        SCAN DATA='EXIT MENU',LIN=02,NFOUND=LFINS1
LFINS2   MAP  KEY=ENTER
        MAPEND
LFINS3   MAP  RECEIVE=ONLY
        MAPEND
LFINS4   MAP  LASTMAP=YES,RC=00
        FILL  LIN=24,COL=7,DATA='RELEASE'
        MAPEND
        PROCEND LFINS
*-----*
* LOGOFF FROM DIAL-IBM AND INS SERVICES FOR MINOR ERRORS
*-----*
*
ERR04    PROC
ERR041   MAP  KEY=PF4
        MAPEND
        SCAN DATA='EXIT MENU',LIN=02,NFOUND=LFINS1
ERR042   MAP  KEY=ENTER
        MAPEND
ERR043   MAP  RECEIVE=ONLY
        MAPEND
ERR044   MAP  LASTMAP=YES,RC=04
        FILL  LIN=24,COL=7,DATA='RELEASE'
        MAPEND
        PROCEND ERR04
*-----*
* LOGOFF FROM DIAL-IBM AND INS SERVICES FOR SERIOUS ERRORS
*-----*
*
ERR08    PROC
ERR081   MAP  KEY=PF4
        MAPEND
        SCAN DATA='EXIT MENU',LIN=02,NFOUND=LFINS1
ERR082   MAP  KEY=ENTER
        MAPEND
ERR083   MAP  RECEIVE=ONLY
        MAPEND
ERR084   MAP  LASTMAP=YES,RC=08
        FILL  LIN=24,COL=7,DATA='RELEASE'
        MAPEND
        PROCEND ERR08
*****
* END OF PROCEDURES
*****
        EPILOG
        END

```

Figure 32. Messages via IBM Mail-Exchange Part 3 of 4

```
//RUN.ATORDR DD *  
DEAR JOHN
```

```
I AM PLEASED TO ANNOUNCE THE NEW MASC-ATO VERSION 4.1. YOU WILL BE  
SUPRISED OF ALL THE NEW NICE FEATURES AS WELL AS ALL THE NEW COMMANDS.  
IF YOU WOULD LIKE A DEMO, PLEASE CALL ME NEXT WEEK IN ORDER TO FIX  
A DATE. ANYHOW, HOW IS YOUR WIFE. PLEASE SAY HELLO AND TELL HER THAT  
I ENJOYED STAYING AT YOUR HOME.
```

```
/*
```

Figure 33. Messages via IBM Mail-Exchange Part 4 of 4