IBM

Program Directory for

IBM COBOL and CICS Command Level

Conversion Aid for OS/390 & MVS & VM

V02.01.00

Program Number 5648-B05

FMID H09F210

for Use with
OS/390 and MVS/ESA

Service Updated

Document Date: May 2003

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┌─ Note! ──────────────────────────────────────────────────────────────────────┐
│                                                                               │
│  Before using this information and the product it supports, be sure to read the general information under "Notices" on page  vi. │
│                                                                               │
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1.0 Introduction

This Program Directory is intended for the system programmer responsible for program installation and maintenance. It contains information concerning the material and procedures associated with the installation of IBM COBOL and CICS Command Level Conversion Aid for OS/390 & MVS & VM. This publication refers to IBM COBOL and CICS Command Level Conversion Aid for OS/390 & MVS & VM as CCCA.

The Program Directory contains the following sections:

- 2.0, "Program Materials" on page 4 identifies the basic and optional program materials and documentation for CCCA.

- 3.0, "Program Support" on page 7 describes the IBM support available for CCCA.

- 4.0, "Program and Service Level Information" on page 8 lists the APARs (program level) and PTFs (service level) incorporated into CCCA.

- 5.0, "Installation Requirements and Considerations" on page 9 identifies the resources and considerations required for installing and using CCCA.

- 6.0, "Installation Instructions" on page 18 provides detailed installation instructions for CCCA. It also describes the procedures for activating the functions of CCCA, or refers to appropriate publications.

Before installing CCCA, read the *CBPDO Memo To Users* and the *CBPDO Memo To Users Extension* that were supplied with this program softcopy as well as this Program Directory and then keep them for future reference. Section 3.2, "Preventive Service Planning" on page 7 tells you how to find any updates to the information and procedures in this Program Directory.

CCCA is supplied in a Custom-Built Product Delivery Offering (CBPDO, 5751-CS3). The Program Directory is provided softcopy on the CBPDO tape which is identical to the hard copy provided with your order. Your CBPDO contains a softcopy preventive service planning (PSP) upgrade for this product. All service and HOLDDATA for CCCA are included on the CBPDO tape.

Do not use this Program Directory if you are installing CCCA with a SystemPac or ServerPac. When using these offerings, use the jobs and documentation supplied with the offering. This documentation may point you to specific sections of the Program Directory as required.

1.1 CCCA Description

As supplied, CCCA helps you convert COBOL source:

- From one level of COBOL to another
- To include the Millennium Language Extensions (MLE)

1.1.1 Converting from one level of COBOL to another

CCCA helps you convert COBOL source from:

Source language	Version	Release	Program number
DOS/VS COBOL	1	3	5746-CB1
OS/VS COBOL	1	2	5740-CB1
VS COBOL II	1	1, 2, or 3	5668-958
Any COBOL with CMPR2 compiler option			

to:

ANSI 85 target language	Version	Release	Program number
VS COBOL II	1	4	5668-958
COBOL for VSE/ESA[1]	1	1	5686-068
COBOL for MVS & VM[1]	1	2	5688-197
COBOL for OS/390& VM[1]	2	1	5648-A25
COBOL for OS/390& VM[1]	2	2	5648-A25
Enterprise COBOL for z/OS and OS/390[1]	3	1	5655-G53
Enterprise COBOL for z/OS and OS/390[1]	3	2	5655-G53

Note:

1. MLE conversion option can be used.

Figure 1. COBOL source and target levels that CCCA can convert.

CCCA identifies COBOL language elements and CICS statements in the input source programs that are:

- Not supported by the target language

or

- Supported in a different manner

then:

- Converts them to the equivalent in the target language

or

- Removes them

or

- Flags them

1.1.2 Including Millennium Language Extensions (MLE)

You can select an option within CCCA so that your COBOL programs You can select an option within CCCA so that your COBOL programs are converted to include MLE.

If you do choose this option, CCCA will perform the MLE conversion *in addition to* any other conversion required for converting to a different level of COBOL. The level of COBOL to which you are converting must support MLE.

If your program has been written using a level of COBOL that *supports* MLE but the program source does not *include* MLE, you can use CCCA to perform the MLE conversion only. This applies to the following levels of COBOL:

*   COBOL for VSE/ESA
*   COBOL for MVS & VM
*   COBOL for OS/390 & VM
*   Enterprise COBOL for z/OS and OS/390

(In this case, you specify the same level of COBOL for both the source and target languages and select the MLE conversion option.)

1.2 CCCA FMIDs

CCCA consists of the following FMIDs:

H09F210

2.0 Program Materials

An IBM program is identified by a program number and a feature number. The program number for CCCA is 5648-B05.

Basic Machine-Readable Materials are materials that are supplied under the base license and feature code, and are required for the use of the product. Optional Machine-Readable Materials are orderable under separate feature codes, and are not required for the product to function.

The program announcement material describes the features supported by CCCA. Ask your IBM representative for this information if you have not already received a copy.

2.1 Basic Machine-Readable Material

The distribution medium for this program is magnetic tape or downloadable files. It is installed using SMP/E, and is in SMP/E RELFILE format. See 6.0, "Installation Instructions" on page 18 for more information about how to install the program.

Information about the physical tape for the Basic Machine-Readable Materials for CCCA can be found in the *CBPDO Memo To Users Extension*.

Figure 2 describes the physical tape.

> ── **NOTE!** ─────────────────────────────────
>
> If CCCA was shipped to you in a CBPDO, you will need to reference the CBPDO Memo To Users Extension for the physical tape layout of the Basic Machine-Readable Materials.

Figure 3 on page 5 describes the file content.

Figure 2. Basic Material: Program Tape				
Medium	**Feature Number**	**Physical Volume**	**External Label**	**VOLSER**
6250	5801	1	CCCA MVS	09F210
3480	5802	1	CCCA MVS	09F210
4mm Cart	6200	1	CCCA MVS	09F210

Figure 3 on page 5 describes the program file content for CCCA. You can refer to the *CBPDO Memo To Users Extension* to see where the files reside on the tape.

Notes:

1. The data set attributes in this table should be used in the JCL of jobs reading the data sets, but since the data sets are in IEBCOPY unloaded format, their actual attributes may be different.

2. If any RELFILEs are identified as PDSEs, ensure that SMPTLIB data sets are allocated as PDSEs.

Name	O R G	R E C F M	L R E C L	BLK SIZE
Figure 3. Program File Content				
SMPMCS	SEQ	FB	80	6400
IBM.H09F210.F1	PDS	FB	80	8800
IBM.H09F210.F2	PDS	VB	1028	8800
IBM.H09F210.F3	PDS	U	0	6144
IBM.H09F210.F4	PDS	FB	80	8800
IBM.H09F210.F5	PDS	FB	80	8800
IBM.H09F210.F6	PDS	FB	80	8800
IBM.H09F210.F7	PDS	FB	80	8800
IBM.H09F210.F8	PDS	FB	80	8800
IBM.H09F210.F9	PDS	FB	80	8800
IBM.H09F210.F10	PDS	FB	80	8800

2.2 Optional Machine-Readable Material

No optional machine-readable materials are provided for CCCA.

2.3 Program Publications

The following sections identify the basic and optional publications for CCCA.

2.3.1 Basic Program Publications

Figure 4 identifies the basic unlicensed program publications for CCCA. One copy of each of these publications is included when you order the basic materials for CCCA. For additional copies, contact your IBM representative.

Figure 4. Basic Material: Unlicensed Publications	
Publication Title	**Form Number**
COBOL and CICS Command Level Conversion Aid for OS/390 & MVS & VM User's Guide	SC26-9400
COBOL and CICS Command Level Conversion Aid for OS/390 & MVS & VM Licensed Program Specifications	GC26-9407

2.3.2 Optional Program Publications

No optional publications are provided for CCCA.

2.4 Program Source Materials

No program source materials or viewable program listings are provided for CCCA.

2.5 Publications Useful During Installation

The publications listed in Figure 5 may be useful during the installation of CCCA. To order copies, contact your IBM representative or visit the IBM Publications Center on the world wide web at: http://www.elink.ibmlink.ibm.com/applications/public /applications/publications/cgibin/pbi.cgi

Figure 5. Publications Useful During Installation	
Publication Title	**Form Number**
IBM SMP/E for z/OS and OS/390 User's Guide	SA22-7773
IBM SMP/E for z/OS and OS/390 Commands	SA22-7771
IBM SMP/E for z/OS and OS/390 Reference	SA22-7772
IBM SMP/E for z/OS and OS/390 Messages, Codes, and Diagnosis	GA22-7770

3.0 Program Support

This section describes the IBM support available for CCCA.

3.1 Program Services

Contact your IBM representative for specific information about available program services.

3.2 Preventive Service Planning

Before installing CCCA, you should review the current Preventive Service Planning (PSP) information. If you obtained CCCA as part of a CBPDO, there is HOLDDATA and PSP information included on the CBPDO.

If the CBPDO for CCCA is more than two weeks old when you install it, you should contact the IBM Support Center or use S/390 SoftwareXcel to obtain the current "PSP Bucket".

For access to RETAIN, visit http://www.ibmlink.ibm.com/ on the Internet.

PSP Buckets are identified by UPGRADEs, which specify product levels, and SUBSETs, which specify the FMIDs for a product level. The UPGRADE and SUBSET values for CCCA are:

Figure 6. PSP Upgrade and Subset ID		
UPGRADE	**SUBSET**	**Description**
CCCA210	H09F210/0321	CCCA for OS/390 & MVS & VM

3.3 Statement of Support Procedures

Report any difficulties you have using this program to your IBM Support Center. If an APAR is required, the Support Center will provide the address to which any needed documentation can be sent.

Figure 7 identifies the component IDs (COMPID) for CCCA.

Figure 7. Component IDs			
FMID	**COMPID**	**Component Name**	**RETAIN Release**
H09F210	5648B0500	CCCA for OS/390 & MVS & VM	210

4.0 Program and Service Level Information

This section identifies the program and any relevant service levels of CCCA. The program level refers to the APAR fixes incorporated into the program. The service level refers to the PTFs integrated.

This program is at Service Level 0313.

4.1 Program Level Information

No APARs have been incorporated into CCCA.

4.2 Service Level Information

PTFs containing APAR fixes against this release of CCCA have been incorporated into this product tape. For a list of included PTFs, examine the ++VER statement in the product's SMPMCS.

- FMID H09F210

UQ74040	UQ54842	UQ39973
UQ70093	UQ50962	UQ32366
UQ69494	UQ49815	UQ37076
UQ67908	UQ46455	UQ37664
UQ66754	UQ43952	UQ24303
UQ66708	UQ43040	UQ26859
UQ64405	UQ41582	UQ21976
UQ63722	UQ40794	UQ20148
UQ62518		

5.0 Installation Requirements and Considerations

The following sections identify the system requirements for installing and activating CCCA. The following terminology is used:

- *Driving system*: the system used to install the program.

- *Target system*: the system on which the program is installed.

In many cases, the same system can be used as both a driving system and a target system. However, you may want to set up a clone of your system to use as a target system by making a separate IPL-able copy of the running system. The clone should include copies of all system libraries that SMP/E updates, copies of the SMP/E CSI data sets that describe the system libraries, and your PARMLIB and PROCLIB.

Some cases where two systems should be used include the following:

- When installing a new level of a product that is already installed, the new product will delete the old one. By installing onto a separate target system, you can test the new product while still keeping the old one in production.

- When installing a product that shares libraries or load modules with other products, the installation can disrupt the other products. Installing onto a test system or clone will allow you to assess these impacts without disrupting your production system.

5.1 Driving System Requirements

This section describes the environment of the driving system required to install CCCA.

5.1.1 Machine Requirements

The driving system can run in any hardware environment that supports the required software.

5.1.2 Programming Requirements

Figure 8. Driving System Software Requirements	
Program Number	**Product Name and Minimum VRM/Service Level**
Any **one** of the following:	
5647-A01	OS/390 V2.09.00 or higher
5694-A01	z/OS V1.01.00 or higher
5655-G44	IBM SMP/E for z/OS and OS/390 V3.01.00 or higher

5.2 Target System Requirements

This section describes the environment of the target system required to install and use CCCA.

CCCA installs in the z/OS (Z038) SREL.

5.2.1 Machine Requirements

The target system can run in any hardware environment that supports the required software.

5.2.2 Programming Requirements

5.2.2.1 Mandatory Requisites: A mandatory requisite is defined as a product that is required without exception; this product either **will not install** or **will not function** unless this requisite is met. This includes products that are specified as REQs or PREs.

Figure 9. Mandatory Requisites	
Program Number	**Product Name and Minimum VRM/Service Level**
5655-042	ISPF Version 4.2 or higher
	A SORT program capable of being used in conjunction with the SORT verb of VS COBOL II Release 4 for making the conversion management reports.
Any **one** of the following:	
5688-022	VS COBOL II Library V1R4 or higher
5688-198	Language Environment/370 V1 or higher
5647-A01	Language Environment for OS/390 Version 2 or higher
5694-A01	Language Environment for z/OS Version 1 or higher

5.2.2.2 Functional Requisites: A functional requisite is defined as a product that is **not** required for the successful installation of this product or for the basic function of the product, but **is** needed at run time for a specific function of this product to work. This includes products that are specified as IF REQs.

Figure 10. Functional Requisites		
Program Number	**Product Name and Minimum VRM/Service Level**	**Function**
5740-CB1	OS/VS COBOL Compiler Release 2.3 or higher	Converting EXEC CICS statements
5688-023	VS COBOL II Compiler V1R4 or higher	Converting EXEC CICS statements
5688-197	COBOL/370 R1 or higher	Converting EXEC CICS statements

5.2.2.3 Toleration/Coexistence Requisites: A toleration/coexistence requisite is defined as a product which must be present on a sharing system. These systems can be other systems in a multisystem environment (not necessarily sysplex), a shared DASD environment (such as test and production), or systems that reuse the same DASD at different time intervals.

CCCA has no toleration/coexistence requisites.

5.2.2.4 Incompatibility (Negative) Requisites: A negative requisite identifies products which must *not* be installed on the same system as this product.

CCCA has no negative requisites.

5.2.3 DASD Storage Requirements

CCCA libraries can reside on all supported DASD types.

Figure 11 lists the total space required for each type of library.

Figure 11. Total DASD Space Required by CCCA	
Library Type	**Total Space Required**
Target	735
Distribution	727

Notes:

1. IBM recommends use of system determined block sizes for efficient DASD utilization for all non-RECFM U data sets. For RECFM U data sets, IBM recommends a block size of 32760, which is the most efficient from a performance and DASD utilization perspective.

2. Abbreviations used for the data set type are:

   U Unique data set, allocated by this product and used only by this product. To determine the correct storage needed for this data set, this table provides all required information; no other tables (or Program Directories) need to be referenced for the data set size.

   S Shared data set, allocated by this product and used by this product and others. To determine the correct storage needed for this data set, the storage size given in this table needs to be added to other tables (perhaps in other Program Directories). If the data set already exists, it must have enough free space to accommodate the storage size given in this table.

   E Existing shared data set, used by this product and others. This data set is NOT allocated by this product. To determine the correct storage needed for this data set, the storage size given in this table needs to be added to other tables (perhaps in other program directories). This existing data set must have enough free space to accommodate the storage size given in this table.

If you currently have a previous release of this product installed in these libraries, the installation of this release will delete the old one and reclaim the space used by the old release and any service that had been installed. You can determine whether or not these libraries have enough space by deleting the old release with a dummy function, compressing the libraries, and comparing the space requirements with the free space in the libraries.

For more information on the names and sizes of the required data sets, please refer to 6.1.6, "Allocate SMP/E Target and Distribution Libraries" on page 20.

3. Abbreviations used for the HFS Path type are:

   N   New path, created by this product.
   X   Path created by this product, but may already exist from a previous release.
   P   Previously existing path, created by another product.

4. All target and distribution libraries listed have the following attributes:

   - The default name of the data set may be changed.
   - The default block size of the data set may be changed.
   - The data set may be merged with another data set that has equivalent characteristics.
   - The data set may be either a PDS or a PDSE.

5. All target libraries listed have the following attributes:

   - The data set may be SMS managed.
   - It is not required for the data set to be SMS managed.
   - It is not required for the data set to reside on the IPL volume.
   - The values in the "Member Type" column are not necessarily the actual SMP/E element types identified in the SMPMCS.

6. All target libraries listed which contain load modules have the following attributes:

   - The data set may be in the LPA.
   - It is not required for the data set to be in the LPA.
   - The data set may be in the LNKLST.
   - It is not required for the data set to be APF authorized.

The following figures describe the target and distribution libraries and HFS paths required to install CCCA. The storage requirements of CCCA must be added to the storage required by other programs having data in the same library or path.

Note: The data in these tables should be used when determining which libraries can be merged into common data sets. In addition, since some ALIAS names may not be unique, ensure that no naming conflicts will be introduced before merging libraries.

Figure 12. Storage Requirements for CCCA Target Libraries								
Library DDNAME	Member Type	Target Volume	TYPE	ORG	RECFM	LRECL	No. of 3390 Trks	No. of DIR Blks
SABJSAM1	SAMP	ANY	S	PDS	FB	80	51	2
SABJSAM2	Data	ANY	S	PDS	VB	1028	203	1
SABJMOD1	LMOD	ANY	S	PDS	U	0	51	5
SABJCLST	CLIST	ANY	S	PDS	FB	80	36	2
SABJPLIB	PNL	ANY	S	PDS	FB	80	61	5
SABJMLIB	MSG	ANY	S	PDS	FB	80	4	1
SABJLCP	Source	ANY	S	PDS	FB	80	314	18
SABJSLIB	SKEL	ANY	S	PDS	FB	80	14	1
SABJTLIB	Table	ANY	S	PDS	FB	80	1	1

Figure 13. Storage Requirements for CCCA Distribution Libraries						
Library DDNAME	TYPE	ORG	RECFM	LRECL	No. of 3390 Trks	No. of DIR Blks
AABJSAM1	S	PDS	FB	80	51	2
AABJSAM2	S	PDS	VB	1028	203	1
AABJMOD1	S	PDS	U	0	43	8
AABJCLST	S	PDS	FB	80	36	2
AABJPLIB	S	PDS	FB	80	61	5
AABJMLIB	S	PDS	FB	80	4	1
AABJLCP	S	PDS	FB	80	314	18
AABJSLIB	S	PDS	FB	80	14	1
AABJTLIB	S	PDS	FB	80	1	1

The following figures list data sets that are not used by SMP/E, but are required for CCCA to execute.

Figure 14. Shared VSAM data sets		
VSAM DSN	**TYPE**	**Cyls 3390**
<tarprfx>.MESSAGE.ABJ	S	2
<tarprfx>.DRIVEN.ABJ	S	5
<tarprfx>.TABLE.ABJ	S	1
<tarprfx>.LCPWORDS.ABJ	S	1

Note: In the above table, *<tarprfx>* is the prefix to the shared VSAM datasets.

Figure 15. Private VSAM datasets		
VSAM DSN	**TYPE**	**Cyls 3390**
<hlq>.TOKEN.ABJ	U	2
<hlq>.CONTROL.ABJ	U	2
<hlq>.CHANGE.ABJ	U	1
<hlq>.DRWORK.ABJ	U	1
<hlq>.LCPWORK.ABJ	U	1

Note: In the above table, *<hlq>* is the prefix to the private VSAM datasets.

Before starting the installation process, check with your system programmer to verify the following assumptions for VSAM and ISPF files:

- All data set names (VSAM and non-VSAM, work or permanent) use ISPF standard naming conventions (three-level names). In the CCCA Environment Options panel, you may specify a multi-level prefix.

- Any programmer may convert COBOL programs, and accordingly each programmer has a set of private VSAM and non-VSAM files for that purpose.

  These files are prefixed by the userid and are not to be shared; they are used for each conversion in read and write mode. Multiple simultaneous uses could give unpredictable results.

  The conversions are to be run one at a time for each userid, but conversions prefixed by different userids may run simultaneously.

- One group of files is created with the reference shared files; the prefix of this group is *<hlq>* and may be overridden.

  This group contains, for example, the LCP source, the LCP intermediate text (the DRIVEN file), the MESSAGE file, the reserved word table. These files should be protected against unauthorized use.

- If other programmers will be using the CCCA, private files will be allocated for each new userid via the environmental setup panel within CCCA.

These files are:

        <hlq>.TOKEN.ABJ
        <hlq>.CONTROL.ABJ
        <hlq>.CHANGE.ABJ
        <hlq>.DRWORK.ABJ
        <hlq>.LCPWORK.ABJ

Each user of this product require their own private copy of the following non-shared VSAM datasets. The *<hlq>* will need to be changed to be unique to each user of this product.

TOKEN

This file contains the program tokens and should be tailored for the largest conversion (including the expansion of copy modules).

You can assume that the average number of tokens on a COBOL program line is 10. However, if there is a large number of REMARKS and NOTEs, the size of the token file should be increased. For example, if the largest program in the installation contains 20,000 lines of COBOL statements, including the expansion of the COPY statements, the token file should be at least 200,000 records (52 bytes). The dataset name is *<hlq>*.TOKEN.ABJ

CONTROL

This file contains the options used to run the conversion. It also contains statistics about programs, files, copy, and calls in the programs.

The size of this file is dependent on a number of variable factors. The size is approximately the total of:

- The number of programs to be converted
- The number of files in these programs
- The number of COPY statements in these programs
- The number of CALLs in these programs
- An additional 20%.

The dataset name is *<hlq>*.CONTROL.ABJ

CHANGE

This file contains the changes to be performed to the source program During phase 3 of conversion, it is merged with the old source code of the program. The dataset name is *<hlq>*.CHANGE.ABJ

DRWORK

The work file used during conversion.

The dataset name is *<hlq>*.DRWORK.ABJ

The DRWORK file is used to hold tokens (qualifiers) from the Date Identification File (DIF) for the program currently being converted. The size of this file is specified in the target library SABJSLIB(ABJSETS). The initial allocation limits the number of qualifiers in the DIF for this program to 3000 (where, for example, A OF B OF C is three records). You can increase this value to cater for a greater number of qualifiers.

The DRWORK file definition is held in the skeleton ABJSETS in the target library SABJSLIB. To increase the size of this file:

1. Edit the skeleton ABJSETS in the target library SABJSLIB

2. Locate the string **(name(&ABJVSPR..DRWORK.ABJ) +**

3. Following this string change the value in the RECORDS parameter to a larger value.

LCPWORK   The work file for the LCP Compiler. The dataset name is *<hlq>*.LCPWORK.ABJ

The sizes of the following shared VSAM files do not need to be changed.

ABJRPDRV   Intermediate text produced by the LCP Compiler. The dataset name is *<hlq>*.DRIVEN.ABJ

ABJRPTBL   The reserved word table formed by the merging of OS/VS-DOS/VS COBOL and VS COBOL II reserved word tables. The dataset name is *<hlq>*.TABLE.ABJ

ABJRPLWD   The table of LCP Compiler reserved words. The dataset name is *<hlq>*.LCPWORDS.ABJ

ABJRPMSG   The diagnostic messages. The dataset name is *<hlq>*.MESSAGE.ABJ

The following figure lists the storage requirements for the work files required for each user. These are temporary files created during conversion and are deleted at the end of the job.

Figure 16. Storage Requirements for CCCA Work Data Sets					
Data Set Name	TYPE	ORG	RECFM	LRECL	No. of 3390 Trks
TMPSRC	S	PS	FB	96	15
POINTER	S	PS	FB	20	15

5.3 FMIDs Deleted

Installing CCCA may result in the deletion of other FMIDs. To see what FMIDs will be deleted, examine the ++VER statement in the product's SMPMCS.

If you do not wish to delete these FMIDs at this time, you must install CCCA into separate SMP/E target and distribution zones.

Note: These FMIDs will not automatically be deleted from the Global Zone. Consult the SMP/E manuals for instructions on how to do this.

5.4 Special Considerations

CCCA has no special considerations for the target system.

6.0 Installation Instructions

This chapter describes the installation method and the step-by-step procedures to install and to activate the functions of CCCA.

Please note the following:

- If you want to install CCCA into its own SMP/E environment, consult the SMP/E manuals for instructions on creating and initializing the SMPCSI and the SMP/E control data sets.

- Sample jobs have been provided to help perform some or all of the installation tasks. The SMP/E jobs assume that all DDDEF entries required for SMP/E execution have been defined in the appropriate zones.

- The SMP/E dialogs may be used instead of the sample jobs to accomplish the SMP/E installation steps.

6.1 Installing CCCA

6.1.1 SMP/E Considerations for Installing CCCA

This release of CCCA is installed using the SMP/E RECEIVE, APPLY, and ACCEPT commands. The SMP/E dialogs may be used to accomplish the SMP/E installation steps.

6.1.2 SMP/E Options Subentry Values

The recommended values for some SMP/E CSI subentries are shown in Figure 17. Use of values lower than these may result in failures in the installation process. DSSPACE is a subentry in the GLOBAL options entry. PEMAX is a subentry of the GENERAL entry in the GLOBAL options entry. Refer to the SMP/E manuals for instructions on updating the global zone.

Figure 17. SMP/E Options Subentry Values		
SUB-ENTRY	**Value**	**Comment**
DSSPACE	300,150,250	Space Allocation for SMPTLIB data sets
PEMAX	SMP/E Default	IBM recommends using the SMP/E default for PEMAX.

6.1.3 SMP/E CALLLIBS Processing

CCCA uses the CALLLIBS function provided in SMP/E to resolve external references during installation. When CCCA is installed, ensure that DDDEFs exist for the following libraries:

- ISP.SISPLOAD
- CEE.SCEELKED

Note: The DDDEFs above are used only to resolve the link-edit for CCCA using CALLLIBS. These data sets are not updated during the installation of CCCA.

6.1.4 Sample Jobs

The following sample installation jobs are provided as part of the product to help you install CCCA:

Job Name	Job Type	Description	RELFILE
ABJRECV	RECEIVE	Sample RECEIVE job	IBM.H09F210.F1
ABJALLOC	ALLOCATE	Sample job to allocate target and distribution libraries	IBM.H09F210.F1
ABJDDDF	DDDEF	Sample job to define SMP/E DDDEFs	IBM.H09F210.F1
ABJAPLY	APPLY	Sample APPLY job	IBM.H09F210.F1
ABJFILES	VSAM Files	Sample job to allocate VSAM data sets	IBM.H09F210.F1
ABJACPT	ACCEPT	Sample ACCEPT job	IBM.H09F210.F1

Figure 18. Sample Installation Jobs

You may copy the jobs from the tape or product files by submitting the job below. Use either the //TAPEIN or the //FILEIN DD statement, depending on your distribution medium, and comment out or delete the other statement. Add a job card and change the lowercase parameters to uppercase values to meet your site's requirements before submitting.

```
//STEP1    EXEC PGM=IEBCOPY
//SYSPRINT DD SYSOUT=*
//TAPEIN   DD DSN=IBM.H09F210.F1,UNIT=tunit,
//         VOL=SER=volser,LABEL=(x,SL),
//         DISP=(OLD,KEEP)
//FILEIN   DD DSN=IBM.H09F210.F1,UNIT=SYSALLDA,DISP=SHR,
//         VOL=SER=filevol
//OUT      DD DSNAME=jcl-library-name,
//         DISP=(NEW,CATLG,DELETE),
//         VOL=SER=dasdvol,UNIT=SYSALLDA,
//         SPACE=(TRK,(10,2,5))
//SYSUT3   DD UNIT=SYSALLDA,SPACE=(CYL,(1,1))
//SYSIN    DD *
    COPY INDD=xxxxIN,OUTDD=OUT
/*
```

In the sample above, update the statements as noted below:

> If using TAPEIN:
>> **tunit** is the unit value matching the product tape
>> **volser** is the volume serial matching the product tape
>> **x** is the tape file number where the data set name is on the tape
>> Refer to the documentation provided by CBPDO to see where IBM.fmid.Fy is on the tape.
> If using FILEIN
>> **filevol** is the volume serial of the DASD device where the downloaded files reside.
> OUT
>> **jcl-library-name** is the name of the output data set where the sample jobs will be stored
>> **dasdvol** is the volume serial of the DASD device where the output data set will reside
> SYSIN
>> **xxxxIN** is either TAPEIN or FILEIN depending on your input DD statement.

You can also access the sample installation jobs by performing an SMP/E RECEIVE and then copying the jobs from the relfiles to a work data set for editing and submission. See Figure 18 on page 19 to find the appropriate relfile data set.

6.1.5 Perform SMP/E RECEIVE

Perform an SMP/E RECEIVE for CCCA.

Having obtained CCCA as part of a CBPDO, use the RCVPDO job found in the CBPDO RIMLIB data set to RECEIVE the CCCA FMIDs as well as any service, HOLDDATA, or preventive service planning (PSP) information included on the CBPDO tape. For more information, refer to the documentation included with the CBPDO.

You can also choose to edit and submit sample job ABJRECV to perform the SMP/E RECEIVE for CCCA. Consult the instructions in the sample job for more information.

Expected Return Codes and Messages: This should issue a return code of zero and no error messages.

6.1.6 Allocate SMP/E Target and Distribution Libraries

Edit and submit sample job ABJALLOC to allocate the SMP/E target and distribution libraries for CCCA. Consult the instructions in the sample job for more information.

Expected Return Codes and Messages: This should issue a return code of zero and no error messages.

6.1.7 Create DDDEF Entries

Edit and submit sample job ABJDDDF to create DDDEF entries for the SMP/E target and distribution libraries for CCCA. Consult the instructions in the sample job for more information.

Expected Return Codes and Messages: This should issue a return code of zero and no error messages.

6.1.8 Perform SMP/E APPLY

Edit and submit sample job ABJAPLY to perform an SMP/E APPLY CHECK for CCCA. Consult the instructions in the sample job for more information.

To receive the full benefit of the SMP/E Causer SYSMOD Summary Report, do *not* bypass the following on the APPLY CHECK: PRE, ID, REQ, and IFREQ. This is because the SMP/E root cause analysis identifies the cause only of **ERRORS** and not of **WARNINGS** (SYSMODs that are bypassed are treated as warnings, not errors, by SMP/E).

Once you have taken any actions indicated by the APPLY CHECK, remove the CHECK operand and run the job again to perform the APPLY.

Note: The GROUPEXTEND operand indicates that SMP/E apply all requisite SYSMODs. The requisite SYSMODS might be applicable to other functions.

Expected Return Codes and Messages from APPLY CHECK: This should issue a return code of zero and no error messages.

Expected Return Codes and Messages from APPLY: This should issue a return code of zero and no error messages.

6.1.9 Perform SMP/E ACCEPT

Edit and submit sample job ABJACPT to perform an SMP/E ACCEPT CHECK for CCCA. Consult the instructions in the sample job for more information.

To receive the full benefit of the SMP/E Causer SYSMOD Summary Report, do *not* bypass the following on the ACCEPT CHECK: PRE, ID, REQ, and IFREQ. This is because the SMP/E root cause analysis identifies the cause only of **ERRORS** and not of **WARNINGS** (SYSMODs that are bypassed are treated as warnings, not errors, by SMP/E).

Before using SMP/E to load new distribution libraries, it is recommended that you set the ACCJCLIN indicator in the distribution zone. This will cause entries produced from JCLIN to be saved in the distribution zone whenever a SYSMOD containing inline JCLIN is ACCEPTed. For more information on the ACCJCLIN indicator, see the description of inline JCLIN in the SMP/E manuals.

Once you have taken any actions indicated by the ACCEPT CHECK, remove the CHECK operand and run the job again to perform the ACCEPT.

Note: The GROUPEXTEND operand indicates that SMP/E accept all requisite SYSMODs. The requisite SYSMODS might be applicable to other functions.

Expected Return Codes and Messages from ACCEPT CHECK: This should issue a return code of zero and no error messages.

Expected Return Codes and Messages from ACCEPT: This should issue a return code of zero and no error messages.

If PTFs containing replacement modules are being ACCEPTed, SMP/E ACCEPT processing will linkedit/bind the modules into the distribution libraries. During this processing, the Linkage Editor or Binder may issue messages documenting unresolved external references, resulting in a return code of 4 from the ACCEPT step. These messages can be ignored, because the distribution libraries are not executable and the unresolved external references will not affect the executable system libraries.

6.1.10 Run REPORT CROSSZONE

The SMP/E REPORT CROSSZONE command will identify requisites defined for products that have been installed in separate zones. This command will also create APPLY and ACCEPT commands in the SMPPUNCH data set which you can use to install those cross-zone requisites it identifies.

After you have installed CCCA, it is recommended that you run REPORT CROSSZONE against the new or updated target and distribution zones. REPORT CROSSZONE requires a global zone with ZONEINDEX entries describing all the target and distribution libraries to be reported on.

For more information on REPORT CROSSZONE, see the SMP/E manuals.

6.1.11 Create Shared VSAM Data Sets

Edit and submit sample job ABJFILES to define shared VSAM data sets for CCCA. Consult the instructions in the sample job for more information.

Expected Return Codes and Messages: This should issue a return code of zero and no error messages.

6.2 Activating CCCA

The following sections detail customization steps that may be required.

Customization consists of:

* Making CCCA libraries available for use under ISPF/PDF

- Making CCCA available through an ISPF/PDF option menu.
- Making run-time library and COBOL compiler available.
- Making DB2* Libraries available if required.
- Informing all CCCA users of required details.
- Verifying storage requirements for "Private" data sets.

Note: In this section *<tarprfx>* refers to the value for Non-VSAM Shared Data sets.

6.2.1 Make CCCA libraries available for use under ISPF/PDF

The member *<tarprfx>*.SABJCLST(ABJSPF) contains the names of libraries that are required to run the application under ISPF/PDF. Include the identified libraries in your current TSO Library concatenation for ISPF applications or have them allocated using ISPF LIBDEFS.

```
/*****************************************************/
/*    TABLE LIBRARY ALLOCATION           DD(ISPTLIB) */
/*****************************************************/

          '<tarprfx>.SABJTLIB'

/*****************************************************/
/*    PANEL LIBRARY ALLOCATION           DD(ISPPLIB) */
/*****************************************************/

          '<tarprfx>.SABJPLIB'

/*****************************************************/
/*    MESSAGE LIBRARY ALLOCATION         DD(ISPMLIB) */
/*****************************************************/

          '<tarprfx>.SABJMLIB'

/*****************************************************/
/*    SKELETON LIBRARY ALLOCATION        DD(ISPSLIB) */
/*****************************************************/

          '<tarprfx>.SABJSLIB'

/*****************************************************/
/*    LOAD MODULE LIBRARY ALLOCATION     DD(ISPLLIB) */
/*****************************************************/

          '<tarprfx>.SABJMOD1'

/*****************************************************/
/*    CLIST LIBRARY ALLOCATION --- CHECK IF THE      */
/*    INSTALLATION IS FORMAT FB OR VB    DD(SYSPROC) */
/*****************************************************/

          '<tarprfx>.SABJCLST'
```

Notes:

1. The data set *<tarprfx>*.SABJCLST is distributed in fixed block format. If this is incompatible with your systems CLISTs, you may have to change it to variable blocked to concatenate it with your systems CLISTS.

2. If the Run-time Library and COBOL compilers to be used are not currently available in your standard MVS search sequence, they will need to be included in the STEPLIB concatenation of the TSO LOGON procedure. The run-time libraries and compilers are:

   - The VS COBOL II Release 4.0 Library or LE/370

   - If programs to be converted contain CICS/VS Command Level statements and use the BLL Linkage Mechanism, the following compiler must be made available:

     – OS/VS COBOL Compiler

6.2.2 Make CCCA available through an ISPF option menu.

Either the ISPF/PDF Foreground Selection panel or an alternative selection panel must be modified to include the CCCA option. Using an editor modify panel ISRFPA (or other) which is in your site's PDF panel library. Figure 19 on page 25 is an example of an ISRFPA panel modified in two identified locations to include the CCCA option. If you add (or change) an option in the upper portion of the panel definition, you must also add (or change) the corresponding line in the lower portion of the panel.

```
⋮
)ATTR
  ! TYPE(TEXT) INTENS(LOW)
  ¢ TYPE(TEXT) INTENS(HIGH)
  $ TYPE(INPUT) INTENS(HIGH)
)BODY
%---------------------- FOREGROUND SELECTION PANEL -------------------------
%OPTION ===>_ZCMD                         +
%
%  1 +- Assembler H            %*10 +- VS COBOL II interactive debug
%  1A+- Assembler XF           %*10A+- COBOL interactive debug
%  2 +- VS COBOL II compiler   %*11 +- FORTRAN interactive debug
%  2A+- OS/VS COBOL compiler    %12 +- Member parts list
%  3 +- VS FORTRAN compiler    %*13 +- C/370* compiler
%  4 +- PL/I checkout compiler  %14 +- PL/I PLITEST
%  5 +- PL/I optimizing compiler %15 +- INSPECT for C and PL/I
%  6 +- VS PASCAL compiler      %16 +- REXX compiler
% *7 +- Linkage editor          %17 +- CCCA  1
%  9 +- SCRIPT/VS
+
+              %*+- No packed data support
+
+SOURCE DATA PACKED       %===>_ZFPKED+ (YES or NO)
!ENTER SESSION MANAGER MODE¢===>$ZSMG  ! (YES or NO)
+
)INIT
  VGET (ZSESS) PROFILE
  IF (&ZSESS = 'Y')
    &ZSMG = TRANS(TRUNC(&ZSMMODE,1),Y,YES,*,NO)
  IF (&ZSESS = 'N')
    .ATTRCHAR(!) = 'INTENS(NON)'
    .ATTRCHAR($) = 'TYPE(OUTPUT),INTENS(NON)'
    .ATTRCHAR(¢) = 'INTENS(NON)'
    &ZSMG = NO
  .HELP = ISR40000
  &ZFPKED = TRANS(TRUNC(&ZFPKED,1),Y,YES,*,NO) /* DATA FORMAT CHECK  */
)PROC
  &DSN    = ' '        /*INITIALIZE DATA SET NAME FIELD          */
  &ZORG   = ' '        /*INITIALIZE DATA SET ORGANIZATION VARIABLE */
  &ZSMG   = TRUNC(&ZSMG,1)
  VER (&ZSMG,NB,LIST,Y,N)
  &ZSM    = TRANS(TRUNC(&ZSMG,1),Y,YES,N,NO)
  &ZSMMODE = TRANS(TRUNC(&ZSM,1),Y,Y,N,N)
  &ZFPKED = TRUNC(&ZFPKED,1)
  VER (&ZFPKED,NB,LIST,Y,N)              /*  Y = EXPAND PACKED DATA  */
  &ZFPKED = TRANS(TRUNC(&ZFPKED,1),Y,YES,N,NO)
  &ZFPACK = TRANS(TRUNC(&ZFPKED,1),Y,YES,N,NO)
```

Figure 19 (Part 1 of 2). Example of an ISPF/PDF Foreground Selection Panel Definition (ISRFPA)

```
    VPUT (ZSM,ZSMG,ZSMMODE,ZFPACK,ZFPKED) PROFILE
    IF (.RESP = END )
       &ZSMG = NO
       &ZSM = NO
    &ZSEL = TRANS( TRUNC (&ZCMD,'.')
              1,'PGM(ISRFPR) PARM((ISRFP01) 1) NEWPOOL'
             1A,'PGM(ISRFPR) PARM((ISRFP01A) 1A) NEWPOOL'
              2,'PGM(ISRFPR) PARM((ISRFP02) 2) NEWPOOL'
             2A,'PGM(ISRFPR) PARM((ISRFP02A) 2A) NEWPOOL'
              3,'PGM(ISRFPR) PARM((ISRFP03) 3) NEWPOOL'
              4,'PGM(ISRFPR) PARM((ISRFP04) 4) NEWPOOL'
              5,'PGM(ISRFPR) PARM((ISRFP05) 5) NEWPOOL'
              6,'PGM(ISRFPR) PARM((ISRFP06) 6) NEWPOOL'
              7,'PGM(ISRFPR) PARM((ISRFP07) 7) NEWPOOL'
              9,'PGM(ISRFPR) PARM((ISRFP09) 9) NEWPOOL'
             10,'PGM(ISRFPR) PARM((IGZTPIN2,ISRFP10) 10) NEWPOOL'
            10A,'PGM(ISRFPR) PARM((ISRFP10A) 10A) NEWPOOL'
             11,'PGM(ISRFPR) PARM((AFFFP11,DDBFP11,ISRFP11) 11) NEWPOOL'
             12,'PGM(ISRFPR) PARM((ISRFP12) 12) NEWPOOL'
             13,'PGM(ISRFPR) PARM((EDCFP13,ISRFP13) 13) NEWPOOL'
             14,'PGM(ISRFPR) PARM((AQAINM3A) 14) NEWAPPL(AQA)'
             15,'PGM(ISRFPR) PARM((EQAINM3A) 15) NEWAPPL(EQA)'
             16,'PGM(ISRFPR) PARM((FANFP14) 14) NEWPOOL'
             17,'PANEL(ABJ@M2) NEWAPPL(ABJ)'   2

              ' ',' '
              *,'?' )
    )END
    ⋮
```

Figure 19 (Part 2 of 2). Example of an ISPF/PDF Foreground Selection Panel Definition (ISRFPA)

Figure 19 on page 25 indicates the modifications made to the selection panel. The statements are identified as follows:

1   The CCCA option is added to the upper portion of the panel by entering:

```
%17 +- CCCA
```

2   The corresponding line in the)PROC portion of the panel is added by entering:

```
17,'PANEL(ABJ@M2) NEWAPPL(ABJ)'
```

where ABJ@M2 is the name of the CCCA invocation panel. ABJ@M2 is included in the ABJPLIB panel library, which contains the ISPF panel definitions for CCCA.

6.2.3 Modifying an ISPF/PDF Tutorial Panel

The tutorial panel for the selection panel modified to include the CCCA option must also be modified to include the CCCA tutorial. Using an editor, modify panel ISR40000 (or other) which is in your site's PDF panel library. Figure 20 on page 28 is an example of the ISR40000 panel, modified in two identified locations to include the CCCA tutorial. If you add (or change) an option on the upper portion of the selection panel definition, as shown in Figure 19 on page 25 you must change the corresponding tutorial panel definition in the same way. Similiarly, if you add (or change) the corresponding numbered entry on the lower half of the selection panel definition, you must also add (or change) the corresponding numbered entry on the tutorial panel definition.

```
   ⋮
%TUTORIAL --------------- FOREGROUND PROCESSING -------------------- TUTORIAL
%OPTION  ===>_ZCMD                                +
+
%                     --------------------------------
                      |    FOREGROUND PROCESSING     |
                      --------------------------------
+
   The foreground processing option allows certain processing programs to
   be executed in the foreground under ISPF. The foreground selection panel
   which is displayed when option%4+is entered on the primary option panel
   allows the selection of one of these processing programs.

 The following topics are presented in sequence, or may be selected by number:

%0 +- Foreground general information
%1 +- Assembler H      %  5 +- PL/I optimizing      % 11 +- FORTRAN debug
%1A+- Assembler XF     %  6 +- VS PASCAL            % 12 +- Member parts list
%2 +- VS COBOL II      %  7 +- Linkage editor       % 13 +- C/370
%2A+- OS/VS COBOL      %  9 +- SCRIPT/VS            % 14 +- REXX/370
%3 +- VS FORTRAN       % 10 +- VS COBOL II debug    % 15 +- ADA/370
%4 +- PL/I checkout    % 10A+- OS/VS COBOL debug    % 16 +- AD/Cycle C/370
                                                    % 17 +- CCCA     1
)PROC
   &ZSEL = TRANS(&ZCMD
                0,ISR40010
                1,ISR41A00            /*                        @O1A*/
               1A,ISR41000            /*                        @O1A*/
                2,ISR42A00            /*                        @O2A*/
               2A,ISR42000            /*                        @O2A*/
                3,ISR43000
                4,ISR44000
                5,ISR45000
                6,ISR46000
                7,ISR47000
                9,ISR49000
               10,ISR4AA00            /*
              10A,ISR4A000            /*
               11,ISR4B000
               12,ISR4C000
               13,ISR4D000            /*
               14,ISR4E000            /*
               15,ISR4F000            /*
               16,ISR4G000            /*
               17,ABJTUT     2
                )
   &ZUP = ISR00003
)END
   ⋮
```

Figure 20. Example of an ISPF/PDF Foreground Tutorial Panel Definition (ISR40000)

Figure 20 indicates the modifications made to the tutorial panel to relect the changes made in the selection panel. The statements are identified as follows:

1   The CCCA option is added to the upper portion of the panel by entering:

`% 17 +- CCCA`

2   The corresponding line in the)PROC portion of the panel is entered by entering:

`17,ABJTUT`

where ABJTUT is the name of the primary panel of the CCCA tutorial. ABJTUT is included in the ABJPLIB, which contains the ISPF panel definitions for CCCA

6.2.4 Make run-time library and COBOL compiler available

If the run-time library and COBOL compiler to be used are not currently available in your standard MVS search sequence, then they will need to be included.

You will need to check the names of the COBOL, CICS, LE/370, and DB2 libraries, in *<tarprfx>*.SABJCLST(ABJNMES), to ensure that they match the names in use at your installation.

6.2.5 Inform all CCCA users of required details

All users of CCCA will need to be provided with the following information:

* The two high level qualifiers used for target libraries

* The option panel from which to select the CCCA master menu

* The procedure used to make the required libraries available from their TSO session

The two high level qualifiers required by users are:

Non-VSAM Shared data sets The installation Common Parameter *<tarprfx>*

VSAM Shared data sets   The installation Common Parameter *<tarprfx>*

The two high level qualifier can be provided as defaults by modifying the ISPF panel *<tarprfx>*.SABJPLIB(ABJSETP). Replace the current default value ABJ.COBCONV with the values used during the installation.

6.3 Verifying a Successful Installation

This section steps you through the use of the Conversion Aid converter and use of the LCP Development Aid. You are strongly recommended to run the installation verification procedure to set up the ISPF environment.

Note: In this section *<hlq>* is the value defined for Non-VSAM Private Data sets on the Dialog Variable Maintenance and Data set Creation panel. *<tarprfx>* is the Common Parameter used during the installation procedure for shared non VSAM data sets.

To begin verification, you must:

- Log on to TSO

- Access CCCA via the menu option provided as a result of the Installation Customization. If you have not been made aware of the option, contact the systems programmer who installed the product.

6.3.1 Options and Environment Setup.

The first step in the Installation Verification process is to create the required Dialog Variables and Private data sets.

1. The Dialog Variables and required data sets are created by using the Environment Options menu which is available from the Options panel:

   a. Select option **O** (Options) from the Master menu to bring up the Options menu.

   b. Select option **1** (Environment) from the Options menu to bring up the Environment Options panel.

2. Enter values in each of the fields or accept the defaults.

3. Press the Enter key to update the options. Press PF3 to see the generated JCL.

4. You will now be presented with generated JCL that will create the Private VSAM data sets (see Figure 15 on page 14). Edit the JCL to provide the required substitutions and then SUBMIT the job.

5. Press Enter to exit the panel.

6.3.1.1.1 Setting options: Select option **3** from the Options menu to display the Conversion Options panel 1.

1. Initialize the parameters as follows:

Lines per report page	Set according to your site's installation standards.
Resequence source lines	Y
Sequence number increment	0010
Reserved word suffix	Any 2-digit field. The default is 74.
Generate new program	Y
Generate new copy members	Y
Replace like-named copy members	N
Print old source lines	Y
Print copy members	Y
Print diagnostics of level >=	00
Report heading	SAMPLE RUN
Generate tokenization listing	N

2. Press Enter to update the options. Press PF3 to return to the main menu.

6.3.2 Running the converter

When running the converter for the first time, avoid using a split screen, because this may prevent you from viewing the bottom lines of the screen.

6.3.2.1.1 Batch conversion

1. Select option **2** from the Options menu.

   CCCA displays the Language level panel.

2. Enter a value of 3 for the Source language level.

3. Enter a value (1, 2, 3, or 4) for the Target language level.

4. Press Enter.

   CCCA updates the options.

5. Press PF3 twice to return to the CCCA Master menu.

6. Select option **1** (CONVERT).

   CCCA displays the Converter menu.

7. Select option **2** (CONVERT PROGRAM).

   CCCA displays the Conversion job statement information panel.

8. Enter your job statement information.

9. Enter the output class in the **SYSOUT class** field.

10. Press Enter.

    CCCA displays the Conversion selection panel.

11. Enter your data set names and options in the following fields:

CICS	N
Program source	*<tarprfx>*.SABJSAM1
Member	ABJIVP01
Copy libraries	*<tarprfx>*.SABJSAM1
Output source (program)	*<hlq>*.NEWVS.ABJ
Output source (copy)	*<hlq>*.NEWCPY.ABJ

    Leave the options set to their default values (∗, N, N, N)

    Note: You must create NEWVS.ABJ and NEWCPY.ABJ before running the verification batch conversion.

12. Press Enter.

    CCCA generates JCL to convert the ABJIVP01 sample COBOL program, and then displays the Conversion submission panel.

13. Press Enter.

    CCCA redisplays the Conversion selection panel.

14. Enter the following value:

    Member ABJIVP02

    Leave all the other fields on the screen the same.

15. Press Enter.

    CCCA generates JCL to convert the ABJIVP02 sample COBOL program, and then displays the Conversion submission panel.

16. Press Enter.

    CCCA redisplays the Conversion selection panel.

17. Enter the following values:

    Member   ABJIVP03

    CICS   Y

    Leave all the other fields on the screen the same.

18. Press Enter.

    CCCA generates JCL to convert the ABJIVP03 sample COBOL program, and then displays the Conversion submission panel.

19. Press PF3.

    CCCA submits the conversion jobs and exits from the panel.

20. Check the list output from the conversion jobs by selecting any one of the options **3** through **8** from the Converter menu.

6.3.3 Testing the LCP Development Aid

Select option **2** from the Master menu to display the LCP Development Aid menu.

6.3.3.1.1 Compile one LCP: Select option **2** to display the Batch LCP Compilation panels that allow you to submit a compile job for an LCP. The first of these panels is the CCCA LCP Compiler job statement information panel.

1. Update the Job statement information.

2. Press Enter.

    CCCA displays the LCP Compiler selection panel.

3. Enter DELETE in the **Member** field.

4. Press Enter.

    CCCA generates JCL to compile the DELETE LCP, and then displays the LCP Compiler submission panel.

5. Press PF3.

    CCCA submits the job, exits from the panel, and returns to the LCP Development Aid menu.

6. This job should end with a return code of zero.

6.3.3.1.2 Test DEBUG/DELETE option

1. Select option **3** from the LCP Development Aid menu that allows you to:

    - Delete LCPs from the LCP library
    - Activate or deactivate debugging for each LCP

2. Scroll the table forward to OBJECT-COMPUTER.

3. Enter DEL in front of OBJECT-COMPUTER and press PF3 to delete the LCP.

6.3.3.1.3 Generate an LCP directory

1. Select option **4** from the LCP Development Aid menu to generate a directory of the LCP library.

6.3.3.1.4 Display message

1. Select option **5** from the LCP Development Aid menu to display the Messages panel.

2. Enter ABJ6115 in the **Message ID** field and press Enter.

    The return code is 00 and the message text is SYSTEM NAME CHANGED TO IBM-370.

    Note: ABJ6115 is the message for the OBJECT-COMPUTER LCP. It may be deleted because the OBJECT-COMPUTER conversion is no longer mandatory.

3. Press PF3.

    CCCA returns to the LCP Development Aid menu.

Reader's Comments

Program Directory for IBM COBOL and CICS Command Level Conversion Aid for OS/390 & MVS & VM May 2003

You may use this form to comment about this document, its organization, or subject matter with the understanding that IBM may use or distribute whatever information you supply in any way it believes appropriate without incurring any obligation to you.

For each of the topics below please indicate your satisfaction level by circling your choice from the rating scale. If a statement does not apply, please circle N.

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┌─ RATING SCALE ─────────────────────────────────────────────────┐
│                                                                 │
│   very                          very         not               │
│  satisfied  <====================>  dissatisfied  applicable   │
│     1       2       3       4       5            N             │
│                                                                 │
└─────────────────────────────────────────────────────────────────┘
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	Satisfaction					
Ease of product installation	1	2	3	4	5	N
Contents of Program Directory	1	2	3	4	5	N
Installation Verification Programs	1	2	3	4	5	N
Time to install the product	1	2	3	4	5	N
Readability and organization of Program Directory tasks	1	2	3	4	5	N
Necessity of all installation tasks	1	2	3	4	5	N
Accuracy of the definition of the installation tasks	1	2	3	4	5	N
Technical level of the installation tasks	1	2	3	4	5	N
Ease of getting the system into production after installation	1	2	3	4	5	N

How did you order this product?

___ CBPDO
___ CustomPac
___ ServerPac
___ Independent
___ Other

Is this the first time your organization has installed this product?

___ Yes
___ No

Were the people who did the installation experienced with the installation of z/OS products?

If yes, how many years? __

If you have any comments to make about your ratings above, or any other aspect of the product installation, please list them below:

_____

_____

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Please provide the following contact information:

_____

Name and Job Title

_____

Organization

_____

Address

_____

Telephone

Thank you for your participation.

Please send the completed form to (or give to your IBM representative who will forward it to the IBM COBOL and CICS Command Level Conversion Aid for OS/390 & MVS & VM Development group):

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