

CAGE Code 81205

Cabin Services System (CSS)  
Airline Configuration Database Generator (ACDG) Requirements: ACDG Host

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Abstract

The Cabin Services System (CSS) for the 787 and 747 airplanes uses two types of databases to define its functionality and its configuration: the Health Management Database (HDB) and the Configuration Database (CDB). The Airline Configuration Database Generator (ACDG ) Tool builds CDBs and is intended for use by both Boeing and the airlines. The ACDG Tool comprises the ACDG Host and the ACDG Plug-In. The ACDG Host is the application which allows the ACDG Plug-In to be used. This document defines the requirements for the ACDG Host.

# 1.0 Introduction

The Cabin Services System (CSS) for the 787 and 747 airplanes uses two types of databases to define its functionality and its configuration: The Health Management Database (HDB) and the Configuration Database (CDB). The HDB identifies the available screens for the CAPs, defines cabin functionality, and provides health management information for the LRUs and peripherals. The CDB is used to build a custom database to match the airline-unique interior configuration using the functions defined by the HDB and the Operational Program Software (OPS) installed in the CSS.

There are two tools available for building the two types of databases. The first tool is the Configuration Database Generator (CDG) Core Tool. Provided by Panasonic, the CDG Core Tool gives the user the ability to build both HDB Loadable Software Airplane Parts (LSAPs) and CDB LSAPs. The CDG Core Tool is intended for the sole use of Pansonic and Boeing. Although Boeing has access to the CDG, only Panasonic can modify the tool itself. The second tool is the Airline Configuration Database Generator (ACDG) Tool, which is provided by Boeing and which allows the user to only build CDB LSAPs. The ACDG Tool is intended for use by both Boeing and the Airlines.

## 1.1 Purpose

The ACDG Tool comprises the ACDG Host and the ACDG Plug-In. The ACDG Host is the application which allows the ACDG Plug-In to be used. The ACDG Plug-In performs the following functions: Editor, Consistency Checker, Converter, Report Generator, Importer/Exporter, and Updater. Included with the ACDG Plug-In is supporting data, such as default data and library data. The various documents which support the ACDG Tool are shown in Figure 1.1-1.

The System Data Tables (SDTs) are in the SDT ICD, D620Z012-20. The SDT ICD defines the system data tables and data ranges as well as the schema used for importing and exporting data to and from the ACDG Tool.

This document describes the requirements for the ACDG Host. In general, the requirements for the ACDG Host apply to both the 747 and the 787 models. Note, however, that until the 787 CSS has implemented the ACDG Host, this document is primarily for the 747 CSS. The applicability of the requirements to the 787 will be reviewed and updated in future releases of this document.



Figure 1.1-1: Documents in Support of the ACDG Tool

The following terminology defines the applicability of each provision in this document:

a. 'shall' is used to express a requirement that is binding on the supplier.

b. 'will' is used to express a declaration of intent.

c. 'should' and 'may' are used to express recommended or allowed actions.

# 2.0 General Information

## 2.1 CDG Core Tool versus ACDG Tool Description

The elements of the CDG Core Tool, which is a ground support engineering software tool built by Panasonic, are shown in Figure 2.1-1. This tool contains HDB Tables and CDB Tables, which are used to build HDB LSAPs and CDB LSAPs.

Figure 2.1-2 illustrates the elements of the ACDG Tool. The ACDG Tool, built by Boeing, is a ground support engineering software tool which will be used to build CDB LSAPs. The ACDG Tool also contains Panasonic-supplied software. The Panasonic software performs consistency checks on the CDB Tables, builds CDB LSAPs, and exports CDB CSV files.

There are two main table structures which make up the ACDG Tool:

a. Tables based on the SDT ICD (SDTs)

The SDTs contain high level physical and functional configuration data. They are used to generate the lower level CDB Tables.

b. CDB Tables

The CDB Tables in the ACDG Tool are identical to the CDB Tables in the CDG Core Tool. These tables are used by both the CDG Core Tool and the ACDG Tool to generate CDB LSAPs. The structure of the CDB Tables is controlled by Panasonic. If any changes are made to the table structure in the CDG Core Tool, then Panasonic will need to supply Boeing with updated software for the ACDG Tool.

The Editor, Report Generator, Importer/Exporter, and Consistency Checker functions all operate at the data level defined in the SDT ICD. The Converter translates the data from the SDT ICD level to the CDB Tables level (CSV files).



Figure 2.1-1: CDG Core Tool Architecture

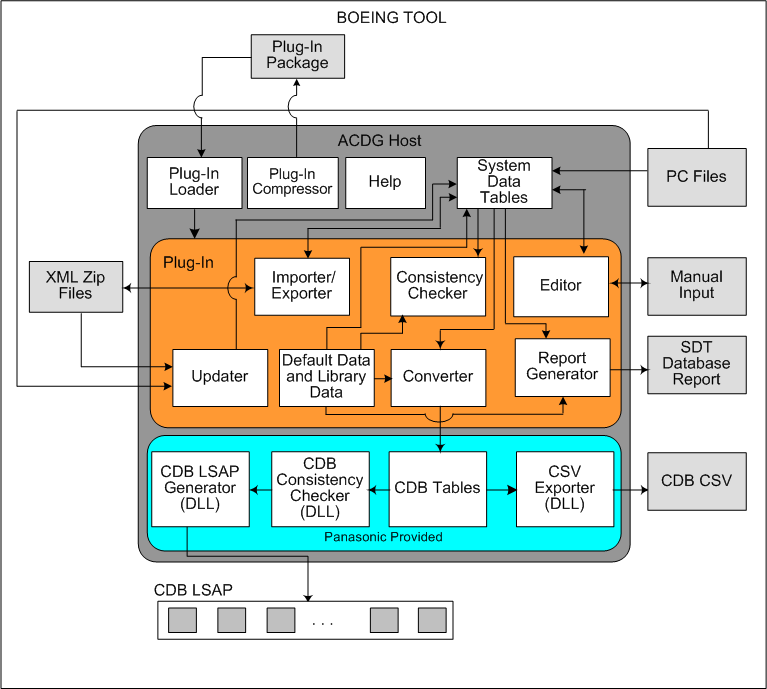


Figure 2.1-2: ACDG Tool Architecture

## ACDG Tool Overview

The ACDG Tool is made up of the ACDG Host and ACDG Plug-In. The Host, which should seldom change, represents the platform for executing the Plug-In. The Plug-In is designed to be flexible so that it can allow the user to configure a CDB which incorporates new functionality made in the HDB. The Host allows the user to manage the Plug-In, including the loading of the Plug-In itself into the ACDG Tool.

The Plug-In allows Boeing to make updates to the Editor, Consistency Checker, Importer/Exporter, Report Generator, Converter, and Updater as well as provide the ability to up-convert data from previous data files.

### ACDG Host

The ACDG Host allows access to the functions and features of the Plug-In. The ACDG Host is comprised of the following elements:

1. File Management

Manages the database files used for building configuration databases.

2. Plug-In Compressor

Builds a Plug-In package, which is comprised of all the Plug-In functions (i.e., Editor, Reporter, Consistency Checker, etc.).

3. Plug-In Loader

Loads the Plug-In to be used with the Host.

4. SDTs

Contain the configuration information.

5. CDB LSAP Generator

Builds LSAP files from the data contained in CDB Tables using Panasonic-supplied software.

6. CDB Consistency Checker

Performs data validation at the CDB Table level (i.e., Panasonic defined Tables). (This is Panasonic-supplied software).

7. CDB Tables

Contains low level configuration data used to build CDB LSAPs. The structure of the tables is defined by Panasonic.

8. CSV Exporter

Exports CDB CSV files using Panasonic-supplied software.

9. Help

Provides Help screens for using the ACDG Tool.

### 2.2.2 ACDG Plug-In

The ACDG Plug-In is composed of the following functions, which utilizes data from the SDTs.

1. Editor

Provides PC-based screens for entering/editing data for the purpose of constructing a CDB.

2. Consistency Checker (SDT)

Performs integrity and consistency checks on the data entered into the ACDG Tool.

3. Report Generator

Allows the user to prepare two types of reports: CDB Reports, which detail what is configured in a CDB, and Difference Reports, which compare the differences between two CDBs.

4. Converter

Transforms and distributes the high level physical and functional cabin configuration data (i.e., SDT level) to lower level CDB Tables (i.e., Panasonic CSV level data). The CDB tables are used to build the CDB LSAP.

5. Importer/Exporter

Allows the user to directly import configuration data from XML files (per the SDT ICD) for use by the ACDG Tool. It also allows the user to export the configuration data from the ACDG Tool into XML files. The purpose of the Importer/Exporter function is to reduce the amount of time required to enter data in a production environment.

6. Updater

Automatically modifies older database (that is, PC) files and imports XML files so that they can be compatible with the current ACDG Plug-In.

7. Default Data

Defines the minimal data required for the Editor, Report Generator, and Converter to start building a database.

8. Library Data

Provides a single source for data which is used across multiple functions (e.g., Converter, Report Generator, Editor).

### 2.2.3 External Files

1. PC Files

Contains all the data needed to build an LSAP.

2. XML Zip Files

Contains the XML files in a zip file format. These files have the configuration data which is used in the SDTs.

3. Plug-In Package

Contains the software which the Host uses for executing the Plug-In functions.

4. License File

Contains license file \*TBD\*

## 2.3 Document Structure

The ACDG Host provides a Graphics User Interface (GUI) which is used to access the different functions provided in the ACDG Plug-In. It also provides file management capability for the files being used to revise or build configuration databases. The ACDG Tool is used for building or revising the configuration databases and is not loaded on the airplane.

The requirements in this document are organized as follows:

Section 3: General ACDG Host Requirements.

Section 4: Specific Screen Requirements for the GUI.

Section 5: GUI Screen Error and Warning Dialog Boxes.

Section 6: ACDG Host Data Flow Requirements.

# 3.0 General ACDG Host Requirements

## 3.1 Part Number

a. ~~The Part Number shall have the following characteristics:~~

~~1. At least 1 character~~

~~2. No more than 16 characters~~

b. The Boeing and Airline versions shall each be assigned a unique Part Number.

1. The Boeing Part Number shall be 620Z012-09B.

2. The Airline Part Number shall be 620Z012-09A.

c. The ACDG Host shall pass its Part Number1 (as identified in items b-1 and b-2) above and its version number to the Panasonic DLL during the Build LSAP process.

d. The version number shall be per the following format (major.minor.build.release):

* *major* is the major release version
* *minor* is the minor release version
* *build* is a number that denotes the number of builds that were performed

*release* is the release of that version (typically bugfixes will increment this)Note 1: Currently, the part number is reference-only information that is used in the Panasonic release notes file.

## 3.2 Installation Procedures

~~a. An automatic installation procedure shall be provided for the Host software.~~

### 3.2.1 Software Build Procedures

a. The ACDG shall be built into the following installation packages:

1. A Boeing only installation package

2. An Airline installation package

b. The Boeing only installation package shall contain all available ACDG Functions and Features without restriction or licensing.

Note: Licensing is not necessary on a Boeing controlled tool

c. The Airline installation package shall contain a Boeing defined subset of available ACDG Functions and Features

### 3.2.2 Software Installation Procedures

a. The ACDG installation procedure shall automate the extraction and installation of software components from the installation package to a users machine

Note: Automate means to perform without any user action. In this case a user will not extract or copy any required files themselves

a. The ACDG installation procedure shall allow for user selection of installation location

b. The ACDG installation procedure shall package any required external libraries into the installer to be installed on the users machine as part of the automated installation process

~~b. The installer shall provide separate installer keys, one for Boeing and one for the Airlines. See the CSS ACDG Design Group for the specific installer keys.~~

## 3.3 Execution

~~a. The Host software shall run on Windows 10.~~

~~b. The Host software shall not require special (non-standard) equipment for operation.~~

~~Note: non-standard equipment includes external software applications and tools~~

a. The Host software shall execute on the following software environment:

1. Windows Operating System with .NET Framework v4.6 minimum

2. Panasonic DLL’s environmental requirements as Defined in 810006-301

b. The Host software shall execute within the following hardware environment:

1. 64-bit x86 CPU architecture

The Host software shall be self-contained, relying only on libraries and runtimes installed and managed with the Host.

~~c. The Host software shall~~~~be capable of running as a 32 bit application.~~

~~d. Supporting software used by the Host shall support 32 bit operations.~~

~~Note: This includes Dynamic Linked Libraries (DLLs) used by the Host.~~

~~e. The underlying database application that the Host is built upon shall support 32 bit operations.~~

~~f. (Delete)~~

## 3.4 Operation

a. The Host shall be invoked with a single command.

b. The Host functions shall be invoked from a menu.

c. (Deleted)

d. The Host shall use “pull-down” menus for all operations and menu selections.

e. The ACDG Host Primary Screen File New shall operate as defined in Figure 6.1-1.

f. The ACDG Host Primary Screen File Open shall operate as defined in Figure 6.1-2.

g. The ACDG Host Primary Screen File Save shall operate per Figure 6.1-3.

h. The ACDG Host Primary Screen File Save As shall operate per Figure 6.1-4.

i. The ACDG Host Primary Screen Config Info shall operate per Figure 6.1-5.

j. The ACDG Host Primary Screen File Close shall operate per Figure 6.1-6.

k. The ACDG Host Primary Screen Exit shall operate per Figure 6.1-7.

l. The ACDG Host Primary Screen Import XML shall operate per Figure 6.1-8.

m. The ACDG Host Primary Screen Build LSAP Files shall operate per Figure 6.1-9.

n. The Default Starting Path for the following screens shall be "My Documents":  
4.2.2 File Open Screen  
4.2.3 File Save Screen  
4.2.4 File SaveAs Screen  
4.2.6 Plug-In Packages Screen  
4.2.9 Import XML Screen  
4.2.10 Export XML Screen  
4.2.11 SDT Conversion Screen  
4.2.13 Export CDB

## 3.5 Screen Display

a. (Deleted)

b. (Deleted)

c. The following ACDG Host screens shall be modal:

1. Plug-In Loader

2. Import XML

3. Export XML

4. SDT Conversion

5. CDB Consistency Check

6. Export CDB CSV Files

7. Compress Plug-In Package

d. Each Host screen or window shall have a Title Bar at the top.

1. All screens shall have the ACDG Logo and the word ACDG on the Title Bar; unless otherwise stated in Section 4
2. The Editor (GUI) screens’ Tile Bar shall also include the following:

* The PC File Name and the PC File Revision Number. For example, CDB44-0000-0001 (R003).

e. The Host screens shall allow a user to construct a complete Configuration Database using only the keyboard, without requiring the use of a mouse or other equivalent pointing devices. See Paragraph 3.12 for keyboard requirements.

## 3.6 Components

The following items shall be elements of the Host Tool:

a. File Management

b. CDB LSAP Generator

c. SDT to CSV Converter

d. CSV Exporter

e. Help Screens

f. Selection/execution of the Plug-In package, which includes the following Plug-Ins:

1. XML File Importer/Exporter

2. Consistency Checker (SDT)

3. Editor

4. Report/Difference Report Generator

5. Converter

g. CDB Consistency Checker

h. Plug-In Compressor

## 3.7 Characteristics/Performance

a.. The Host shall build a 665-3 compliant part in no more than 5 minutes.

b. The Host shall be able to perform the following within the times listed in Table 3.7-1, based on a typical production airplane configuration.

Table 3.7-1: Performance Times

|  |  |
| --- | --- |
| **Function** | **Time (Seconds)1** |
| File open/close | 30 |
| File save | 30 |
| Import/export system tables | 60 |
| Convert system table versions | 120 |
| Consistency check system tables | 60 |
| Configuration report (all sections) | 60 |
| Difference report (all sections) | 150 |

Notes:

1. The times listed above are based on the minimum processor performance of Intel® Core-i5® 2520 M processor, 2.5Ghz, 4.00GB of RAM.

## 3.8 Load Database Information

a. Loading a new .PC file shall clear all information from the previous database (i.e., SDT and CDB table data).

b. Importing a XML file shall be per D620Z012-17, Table 3.2-1, item 9.

## 3.9 PC File Data

a. The PC file shall contain all the data needed to build an LSAP.

b. The PC file shall contain the consistency check status.

c. The PC file shall contain the SDT IVN level.

d. The PC file shall contain the Plug-In IVN.

e. The PC file shall contain the database description.

f. The PC file shall contain the release notes.

g. The PC file shall identify the airplane model.

h. The PC file shall contain the ARINC 665-3 LSAP part number.

i. The PC file shall contain the date/time stamp of when the database edits were last accepted.

j. The PC file shall contain a Revision Number.

1. The PC file Revision Number shall start at 1.

2. The PC file Revision Number shall increment when data has been changed and saved.

k. The PC file shall contain the Host ACDG Part Number and Version Number.

l. The PC file shall contain the Panasonic CDG Tool Part Number

m. The PC file shall contain the current Plug-in Part Number and Plug-in Version Number

n. The ACDG shall update the Tool and Plug-In Part Numbers and Version Number in the PC file (as identified in items k, l and m) per the following conditions:

1. Data has changed and Save has been executed.

2. Data has been Imported and Save has been executed.

3. Save As has been executed.

## 3.10 File Management

a. The Host shall have a File Management feature with the following functions: File New, File Open, File Save, File Save As; Config Info, File Close, and Exit.

b. The Host shall provide the ability to build a Red Label/Black Label part number or a Blue Label part number.

c. The ARINC 665-3 LSAP part number shall default to the Red Label/Black Label part number.

d. The PC file name shall

1. be the corresponding ARINC 665-3 LSAP part number.

2. have a .pc extension.

## 3.11 Plug-In Interface

a. The Host shall be able to interface with a Plug-In which incorporates the intent of the following documents:

1. D620Z012-13 Cabin Services System (CSS) Airline Configuration Database Generator (ACDG) Plug-In Requirements: Editor

2. D620Z012-14 Cabin Services System (CSS) Airline Configuration Database Generator (ACDG) Plug-In Requirements: Consistency Checker

3. D620Z012-15 Cabin Services System (CSS) Airline Configuration Database Generator (ACDG) Plug-In Requirements: Converter

4. D620Z012-16 Cabin Services System (CSS) Airline Configuration Database Generator (ACDG) Plug-In Requirements: Report Generator

5. D620Z012-17 Cabin Services System (CSS) Airline Configuration Database Generator (ACDG) Plug-In Requirements: Importer/Exporter

6. D620Z012-19 Cabin Services System (CSS) Airline Configuration Database Generator (ACDG) Plug-In Requirements: Updater

b. The Host shall perform software Integrity of the Plug-In each time

1. a Plug-In is added.

2. a Plug-In is selected

3. the ACDG Tool is started.

## 3.12 Plug-In Management

a. The Host shall provide the following items for Plug-In Management:

1. Add a plug-in

2. Select a plug-in

3. Delete a plug-in

4 Model Selector

a) The Model Selector shall contain the following models: 747-8, 787 and 777.

## 3.13 Keyboard

a. The Host screen shall allow navigation of Host elements using only the keyboard, without requiring the use of a mouse or other equivalent pointing devices.

1. The Host shall use standard Windows short-cut keys (Ctrl+Keyboard) (e.g., Ctrl-C, Ctrl-V, etc.) and navigation keys (e.g., PgUp, PgDn, etc.).

a) Selected lower level menu commands shall be able to be invoked with short-cut keys.

2 All data entry fields and buttons shall be accessible with the Tab key and appropriate arrow keys.

3. Accessing fields with the Tab key shall not alter the value contained in the field.

## 3.14 Mouse

a. The ACDG screen shall support mouse input where appropriate (e.g., check box and list box selection).

b. The ACDG screen shall support selection of field text with a mouse.

1. The left mouse button shall always select or invoke the windows object pointed to by the mouse pointer when clicked.

## 3.15 Menu Bar

a. The ACDG screen shall display a single menu bar to allow the user to invoke commands from the keyboard or mouse.

1. The top level menu commands shall be actuated by toggling the "Alt" key and pressing the appropriate access key shown as an underlined letter in the menu bar.

2. Lower level menu items shall be accessible with access keys or by using the keyboard arrow keys.

## 3.16 Data Protection

~~a. Any underlying tables/databases used to store database information shall be password protected.~~

a. Underlying data storage mechanisms shall allow access to only the ACDG Tool and users with special administrative permissions

## 3.17 Status Screens

a. The Status Screen shall have the following characteristics:

1. The Status Screen shall have a Title Label.

2. The Status Screen shall have a scrolling message box.

3. The Status Screen shall have a progression bar that indicates how much of the current task is completed and how much more there is to complete.

4. The Status Screen shall have a View button.

5. The Status Screen shall have a Save button.

6. The Status Screen shall have a Print button.

7. The Status Screen shall have a Cancel/Close button.

b. The Status Screen will be used for the following menu options. Refer to reference documents for screen behavior.

1. IVN Update (D620Z012-19)

2. Consistency Check (D620Z012-14)

3. SDT Conversion (D620Z012-15)

4. Import XML (D620Z012-17)

5. Export XML (D620Z012-17) NOTE: For Export XML only the Cancel/Close button will exists.

6. Export CDB CSV (Section 4.2.13 in this document) NOTE: For Export CDB CSV Files only the Cancel/Close button will exists.

## 3.18 External Libraries

as

b. The ACDG Host shall interface with a Boeing licensing tool via a software library as defined in TBDXXX – need to create an interface document (TBD)

## 3.19 Tool Licensing (TBD – Provisioned)

There is a growing need for the ability to have an airline customer configure their own database. In order to support Boeing’s business need, the tool will be available as a licensed option. This means that Boeing needs to control and track the usage of the ACDG tool.

Since CSS is a very flexible system, allowing some customers the usage of options not available to others, the tool will need to reflect the configuration of the customers airplanes. For example, the customer cannot configure an option they have not paid for in the tool.

In order to support the ability to manage the ACDG tool outside the Boeing company, a feature to support accepting and managing customer licenses will be added. This includes obtaining a new licenses, updating an old one and removing/invalidating a license. These capabilities must be done in a secure and reliable manner, ensuring the information in the license cannot be compromised or faked.

Note: The licensing feature only applies to the Airline version of the tool. The Boeing tool will not contain the licensing feature as all features will be available.

In order to keep the ACDG Tool focused on it’s job of creating databases, a separate licensing tool will be used to manage and control licenses of Boeing software. This tool also allows the flexibility of managing multiple Boeing provided tools.

~~The ACDG Tool shall interface with a Boeing licensing tool via a software library as defined in TBDXXX – need to create an interface document~~

Th ACDG Tool shall establish communication with the license tool on application launch

If communication is not detected between ACDG and the license tool the ACDG host shall display an appropriate error message in an ACDG pop-up window

The ACDG Tool shall utilize information provided by the license tool to determine if the ACDG application is allowed to launch

The ACDG Tool shall utlize information provided from the license tool to determine which ACDG Functions the user will be allowed to access

If an ACDG Function or Feature is not allowed access to a specific user ACDG shall prevent a user from accessing the feature and hide it from the users view

# 4.0 Host Screen Requirements

The requirements for the Primary Screen (that is, top level screen) of the Host are described in Section 4.1. This menu structure allows the user to navigate to the desired features of the Host. The underlined letter in a menu name defines the applicable hot key. With hot keys, it is possible to navigate the GUI screens without having to use a mouse. To use a hot key, the user first needs to select the Alt button on the keyboard and then select the applicable hot key letter.

The requirements for the sub-screens and windows which are called from the Host screen are described in Section 4.2.

## 4.1 Primary Screen

The Primary Screen of the Host provides the basic menu selection for all the available features used in building a CDB. These features include the ability to perform file management, modify databases, generate reports, run consistency checks, build LSAPs, and select plug-in packages.

This screen allows the user to navigate to different features of the Plug-In. Based on what has been loaded into the Host, some menu items will not be available. For example, if a plug-in has not been loaded into the tool, then the user will not be allowed to select the menu items File/Open or File/New.

**Requirements:**

a. The ACDG Host Primary Screen controls shall be as defined in Table 4.1-1.

b. The ACDG Host Primary Screen File Menu Tree shall be as defined in Table 4.1-2.

c. The behavior of the ACDG Host Primary Screen shall be per Table 4.1-3.

d The operation checks for the ACDG Host Primary Screen shall be per Table 4.1-4.

Table 4.1-1: ACDG Host Primary Screen – Components

| **Item #** | **Label** | **Type** | **Range** | **Details** | **Availability** | **Tab Order** | **Model Unique** |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  |  |  |  |  |  |  |  |
| 1 | File | Menu | See Table 4.1-2 |  | Always enabled. | 1 |  |
| 2 | Data | Menu | See Table 4.1-2 |  | Enabled only when a database has been loaded.  Otherwise, always visible, not selectable. | 2 |  |
| 3 | Report | Menu | See Table 4.1-2 |  | Enabled when a Plug-in has been selected.  Otherwise, always visible, not selectable. | 3 |  |
| 4 | Utilities | Menu | See Table 4.1-2 |  | Always enabled. | 4 |  |
| 5 | Advanced | Menu | See Table 4.1-2 |  | With Boeing ACDG Host, always enabled.  With Airline ACDG Host, not visible. | 5 |  |
| 6 | Help | Menu |  |  | Always enabled. | 6 |  |
| 7 | Load Part Number | Label |  |  | Always visible, not editable. | N/A |  |
| 8 |  | TextBox |  | Part Number of the database | Visible only when a PC file has been loaded, not editable. | N/A |  |
| 9 |  | TextBox |  | PC File Revision Number1 | Visible only when a PC file has been loaded, not editable. | N/A |  |
| 10 | CDB Description | Label |  |  | Always visible, not editable. | N/A |  |
| 11 |  | TextBox |  | CDB Description text | Visible only when a PC file has been loaded, not editable. | N/A |  |

Notes:

1. For example, (R003).

Table 4.1-2: ACDG Host Primary Screen – Menu Tree

| **Item #** | **1st Menu** | **2nd Menu** | **2nd Menu Availability** | **Model Unique** |
| --- | --- | --- | --- | --- |
| 1 | File | File New | Enabled when a Plug-In has been selected.  Otherwise, always visible, not selectable. |  |
| 2 | File Open | Enabled when a Plug-In has been selected.  Otherwise, always visible, not selectable. |  |
| 3 | File Save | Enabled only when a database has been loaded.  Otherwise, always visible, not selectable. |  |
| 4 | File Save As | Enabled only when a database has been loaded.  Otherwise, always visible, not selectable. |  |
| 5 | Config Info | Enabled only when a database has been loaded.  Otherwise, always visible, not selectable. |  |
| 6 | File Close | Enabled only when a database has been loaded.  Otherwise, always visible, not selectable. |  |
| 7 | Exit | Always enabled. |  |
| 8 | Data | See D620Z012-13, Section 4.0 | Enabled only when a database has been loaded.  Otherwise, always visible, not selectable. |  |
| 9 | Report | Report | Enabled only when a database has been loaded.  Otherwise, always visible, not selectable. |  |
| 10 | Difference Report | Enabled when a Plug-In has been selected.  Otherwise, always visible, not selectable. |  |
| 11 | Utilities | Consistency Check | Enabled only when a database has been loaded.  Otherwise, always visible, not selectable. |  |
| 12 | Build LSAP Files | See Table 4.1-3. |  |
| 13 | Plug-In Packages | Always enabled. |  |
| 14 | Advanced | Import XML | Enabled when a Plug-In has been selected.  Otherwise, always visible, not selectable. |  |
| 15 | Export XML | Enabled only when a database has been loaded.  Otherwise, always visible, not selectable. |  |
| 16 | SDT Conversion | See Table 4.1-3. |  |
| 17 | CDB Consistency Check | See Table 4.1-3. |  |
| 18 | Export CDB CSV Files | See Table 4.1-3. |  |
| 19 | Help | Help CDG | Always enabled. |  |
| 20 | About | Always enabled. |  |

Table 4.1-3: ACDG Host Tool Primary Screen - Behavior

| **Item #** | **Tool Behavior** | **Activated On** | **Result** | **Model Unique** |
| --- | --- | --- | --- | --- |
| 1 | Imports an XML file | Import XML | Build LSAP is disabled. |  |
| 2 | SDT Conversion will be disabled. |  |
| 3 | CDB Consistency Check will be disabled. |  |
| 4 | Export CDB CSV files will be disabled. |  |
| 5 | Tool contains unsaved changes. |  |
| 6 | Creates a new PC file | File New | Build LSAP is disabled. |  |
| 7 | SDT Conversion will be disabled. |  |
| 8 | CDB Consistency Check will be disabled. |  |
| 9 | Export CDB CSV files will be disabled. |  |
| 10 | Tool contains unsaved changes. |  |
| 11 | Opens a PC file AND Updater is not executed AND Consistency check passed from PC file. | File Open | CDB Consistency Check will be disabled. |  |
| 12 | Export CDB CSV files will be disabled. |  |
| 13 | SDT Conversion will be enabled. |  |
| 14 | Build LSAP is enabled. |  |
| 15 | Opens a PC file AND Updater is not executed AND Consistency check status failed from PC file. | File Open | CDB Consistency Check will be disabled. |  |
| 16 | Export CDB CSV files will be disabled. |  |
| 17 | SDT Conversion will be disabled. |  |
| 18 | Build LSAP is disabled. |  |
| 19 | Opens a PC file AND Updater is executed. | File Open | Build LSAP is disabled. |  |
| 20 | SDT Conversion will be disabled. |  |
| 21 | CDB Consistency Check will be disabled. |  |
| 22 | Export CDB CSV files will be disabled. |  |
| 23 | Tool contains unsaved changes. |  |
| 24 | Closes the loaded PC file. | File Close | Build LSAP is disabled. |  |
| 25 | SDT Conversion will be disabled. |  |
| 26 | CDB Consistency Check will be disabled. |  |
| 27 | Export CDB CSV files will be disabled. |  |
| 28 | Accepts changes in the Editor | Accept data changes in Editor | Build LSAP is disabled. |  |
| 29 | SDT Conversion will be disabled. |  |
| 30 | CDB Consistency Check will be disabled. |  |
| 31 | Export CDB CSV files will be disabled. |  |
| 32 | Tool contains unsaved changes. |  |
| 33 | Modifies the database description | Accept changes in Config Info | Tool contains unsaved changes. |  |
| 34 | Fails Consistency Check with at least 1 critical error | Consistency Check | Build LSAP is disabled. |  |
| 35 | SDT Conversion will be disabled. |  |
| 36 | CDB Consistency Check will be disabled. |  |
| 37 | Passes Consistency Check with 0 Critical errors | Consistency Check | Build LSAP is enabled. |  |
| 38 | SDT Conversion will be enabled. |  |
| 39 | Completes SDT Conversion | SDT Conversion | CDB Consistency Check will be enabled. |  |
| 40 | Export CDB CSV files will be enabled. |  |
|  |  |  |  |  |

Table 4.1-4: ACDG Host Primary Screen - Operation Checks

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Item #** | **Consistency Check Rule** | **Activated On** | **Result** | **Model Unique** |
| 1 | Check for unsaved changes. | File New, File Open, File Close, Exit | Displays warning dialog box per Table 5.1-1, item 1. |  |
| 2 | Check for unsaved changes. | Build LSAP Files | Displays warning dialog box per Table 5.1-1, item 9. |  |
| 3 | Check if Updater was executed on file open. | File Save | Displays warning dialog box per Table 5.1-1, item 2. |  |
| 4 | Check if PC file name already exists in that location. | Save file AND Browse for folder | Displays warning dialog box per Table 5.1-1, item 3. |  |
| 5 | Check that the file being opened is compatible with the currently selected Plug-In. | File Open  Import XML | See Table 2-1 in D620Z012-19 |  |
| 6 | (Deleted) | (Deleted) | (Deleted) |  |
| 7 | Promt the user when opening an incompatible File. See Table 2-1 in D620Z012-19 for compatibility. | File Open  Import XML | Displays warning dialog box per Table 4-1, item 2 in D620Z012-19 |  |
| 8 | (Deleted) | (Deleted) | (Deleted) |  |
| 9 | Check if the PC File is Read-only | File Save | Displays warning dialog box per Table 5.1-1, item 10. |  |

## 4.2 Sub-Screens

The ACDG Host sub-screens are described in this section.

The File sub-screens are described in sections 4.2.1 through 4.2.5; Utilities sub-screens in sections 4.2.6 and 4.2.7; Advanced sub-screens in sections 4.2.8 through 4.2.13; and Help sub-screens in sections 4.2.14 and 4.2.15.

### 4.2.1 File New Screen

a. The File New Screen controls shall be as defined in Table 4.2.1-1.

Table 4.2.1-1: File New Screen - Components

| **Item #** | **Label** | **Type** | **Range** | **Details** | **Availability** | **Tab Order** | **Model Unique** |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 1 | New Configuration Database | Label |  | Screen Title; bold, underline | Always visible, not editable |  |  |
| 2 | Load Part Number | TextBox |  |  | Always visible, not editable |  |  |
| 3 | … | Button |  | See Table 4.2.1-2 | Enabled | 1 |  |
| 4 | Configuration Database Description | TextBox | 1 min to 40 max Characters  ASCII characters a-z A-Z 0-9 ` ~ ^ , . : ; ? ! \_ # - + / \* = % $ @ \ | ) ( ] [ } { [space] |  | Always editable | 2 |  |
| 5 | OK | Button |  | See Figure 6.1-1 | Enabled | 3 |  |
| 6 | Cancel | Button |  | See Figure 6.1-1 | Enabled | 4 |  |

b. The File New Load Part Number screen shall be defined in Table 4.2.1-2.

Table 4.2.1-2: File New Load Part Number Screen

| **Item #** | **Label** | **Type** | **Range** | **Details** | **Availability** | **Tab Order** | **Model Unique** |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 1 | Load Part Number contents | Label |  | Screen Title; bold, underline | Always visible, not editable |  |  |
| 2 | Select label type: | Label |  | Heading | Always visible, not editable |  |  |
| 3 | Blue label | Radio Button |  |  | Always selectable; mutually exclusive with item 4 | 2 |  |
| 4 | Red/Black label | Radio Button |  |  | Always selectable; mutually exclusive with item 3 | 1 |  |
| 5 | Part Number Format: | Label |  | Heading | Always visible, not editable |  |  |
| 6 | MMMCC-SSSS-SSSS | Label |  | Sub-heading; bold | Always visible, not editable |  |  |
| 7 | Field |  |  | Column Heading 1 |  |  |  |
| 8 | Description |  |  | Column Heading 2 |  |  |  |
| 9 | Characters |  |  | Column Heading 3 |  |  |  |
| 10 | MMM | Textbox | Three upper case alphanumeric characters | Column Heading 1 text = MMM  Column Heading 2 text = Three upper case alphanumeric characters |  | 3 |  |
| 11 | SSSS | Textbox | Four upper case alphanumeric characters but not I, O, Q, or Z | Column Heading 1 text = SSSS  Column Heading 2 text = Four upper case alphanumeric characters but not I, O, Q, or Z |  | 4 |  |
| 12 | SSSS | Textbox | Four upper case alphanumeric characters but not I, O, Q, or Z | Column Heading 1 text = SSSS  Column Heading 2 text = Four upper case alphanumeric characters but not I, O, Q, or Z |  | 5 |  |
| 13 | CC | TextBox |  | This field calculates the CC per ARINC 665-3 | Always visible, not editable |  |  |
| 14 | Load Part No. | TextBox |  | This field displays the Load Part Number per ARINC 665-3 | Always visible, not editable |  |  |
| 15 | OK | Button |  | See Figure 6.1-1 | Enabled | 6 |  |
| 16 | Close | Button |  | See Figure 6.1-1 | Enabled | 7 |  |

### 4.2.2 File Open Screen

a. The File Open Screen shall have the following characteristics:

1. The Open Screen shall be provided by the Operating System

2. The Open Screen shall only allow browsing of directory folders and the selection of .pc files.

3. The Open Screen shall remember the file path of the parent directory of the last opened .pc file for the current program session.

4. The Open Screen’s starting file path shall be the Default starting file path.

### 4.2.3 File Save Screen

a. The File Save Screen shall have the following characteristics:

1. The Save Screen shall be provided by the Operating System.

2. The Save Screen shall only allow browsing of directory folders.

3. The Save Screen shall remember the file path of the parent directory of the last opened .pc file for the current program session.

4. The Save Screen’s starting file path shall be the Default starting file path.

### 4.2.4 File SaveAs Screen

a. The File SaveAs Screen controls shall be as defined in Table 4.2.4-1.

Table 4.2.4-1: File SaveAs Screen - Components

| **Item #** | **Label** | **Type** | **Range** | **Details** | **Availability** | **Tab Order** | **Model Unique** |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 1 | PC File Save As | Label |  | Screen Title; bold, underline | Always visible, not editable |  |  |
| 2 | PC File Directory | TextBox |  |  | Always editable | 1 |  |
| 3 | … | Button |  | A standard Windows OS Browse For Folder screen is used to select the file directory.  The browser starting file path shall be the Default starting file path.  The browser shall remember the file path of the parent directory of the last opened .pc file for the current program session.  NOTE: additionally contains a Make New Folder button | Enabled | 2 |  |
| 4 | New Load Part Number | TextBox |  |  | Always visible, not editable |  |  |
| 5 | … | Button |  | See Table 4.2.1-2 | Enabled | 3 |  |
| 6 | Configuration Database Description | TextBox | 1 min to 40 max Characters  ASCII characters a-z A-Z 0-9 ` ~ ^ , . : ; ? ! \_ # - + / \* = % $ @ \ | ) ( ] [ } { [space] |  | Always editable | 4 |  |
| 7 | OK | Button |  | See Figure 6.1-4 | Enabled | 5 |  |
| 8 | Cancel | Button |  | See Figure 6.1-4 | Enabled | 6 |  |

### 4.2.5 Configuration Information Screen

a. The Config Info Screen controls shall be as defined in Table 4.2.5-1.

Table 4.2.5-1: Config Info Screen - Components

| **Item #** | **Label** | **Type** | **Range** | **Details** | **Availability** | **Tab Order** | **Model Unique** |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 1 | Configuration Informations | Label |  | Screen Title; bold, underline |  |  |  |
| 2 | Configuration Database Description | Label |  | Underline | Always visible, not editable |  |  |
| 3 | Configuration Database Description | TextBox | 1 min to 40 max Characters  ASCII characters a-z A-Z 0-9 ` ~ ^ , . : ; ? ! \_ # - + / \* = % $ @ \ | ) ( ] [ } { [space] |  | Always editable | 1 |  |
| 4 | Airplane Model | Label |  | Displays the airplane model of the PC File | Always visible, not editable | 2 |  |
| 5 | Time Stamp | Label |  | Displays the creation date and time of the PC File | Always visible, not editable |  |  |
| 6 | Revision | Label |  | Displays the revision number of the PC File | Always visible, not editable |  |  |
| 7 | CDG Part Number | Label |  | Displays the part number of the Panasonic CDG Tool when the PC File was created | Always visible, not editable |  |  |
| 8 | Plug-in Package Name | Label |  | Displays the plug-in package used when the PC File was created | Always visible, not editable |  |  |
| 9 | Plug-in Version Number | Label |  | Displays the plug-in version number | Always visible, not editable |  |  |
| 10 | Load Part Number | Label |  | Displays the ARINC 665-3 LSAP part number of the PC File | Always visible, not editable |  |  |
| 11 | ACDG Host Part Number | Label |  | Displays the host part number | Always visible, not editable |  |  |
| 12 | Product Version Number | Label |  | Displays the product version number | Always visible, not editable |  |  |
| 13 | OK | Button |  | See Figure 6.1-5 | Enabled | 2 |  |
| 14 | Cancel | Button |  | See Figure 6.1-6 | Enabled | 3 |  |

### 4.2.6 Plug-In Packages Screen

a. The Plug-In Packages Screen controls shall be as defined in Table 4.2.6-1.

Table 4.2.6-1: Plug-In Packages Screen - Components

| **Item #** | **Label** | **Type** | **Range** | **Details** | **Availability** | **Tab Order** | **Model Unique** |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 1 | Plug-In Loader | Label |  | Screen Title; bold, underline | Always visible, not editable |  |  |
| 2 | Airplane Model | DropBox | B787 B747-8 |  | Always selectable | 1 |  |
| 3 | Selected Plug-In Package | TextBox |  | Displays the name of the currently selected Plug-In Package | Always visible, not editable |  |  |
| 4 | Plug-In Package | ListBox |  | Highlight the currently selected Plug-In Package | Always selectable | 2 |  |
| 5 | Time Stamp | Label |  | Displays the creation date and time of the currently selected Plug-In Package | Always visible, not editable |  |  |
| 6 | Name | Label |  | Displays the name of the currently selected Plug-In Package | Always visible, not editable |  |  |
| 7 | Description | Label |  | Displays the description of the currently selected Plug-In Package | Always visible, not editable |  |  |
| 8 | Select | Button |  | See Table 4.2.6-2 | Enabled | 3 |  |
| 9 | Add | Button |  | A standard Windows OS open file screen is used to select a Package File (\*.gz)  The browser starting file path shall be the Default starting file path.  The browser shall remember the file path of the parent directory of the last opened .pc file for the current program session. | Enabled | 4 |  |
| 10 | Delete | Button |  | See Table 4.2.6-2 | Enabled | 5 |  |
| 11 | Detail | Button |  | See Table 4.2.6-2 | Enabled | 6 |  |
| 12 | Close | Button |  |  | Enabled | 7 |  |
| 13 | Package Number | Label |  | Displays the package number of the currently selected Plug-In Package | Toggles from visible to not visible per Detail button selection |  |  |
| 14 | Platform Number | Label |  | Displays the platform number of the currently selected Plug-In Package | Toggles from visible to not visible per Detail button selection |  |  |
| 15 | SDT IVN | Label |  | Displays the SDT IVN of the currently selected Plug-In Package | Toggles from visible to not visible per Detail button selection |  |  |
| 16 | LSAP IVN | Label |  | Displays the LSAP IVN of the currently selected Plug-In Package | Toggles from visible to not visible per Detail button selection |  |  |
| 17 | HDB Part Number | Label |  | Displays the HDB Part Number of the currently selected Plug-In Package | Toggles from visible to not visible per Detail button selection |  |  |
| 18 | Plug-In / Version | Matrix |  | Display the version of each the following Plug-Ins:  SDT Import  GUI  Consistency Check  SDT Converter  Report | Toggles from visible to not visible per Detail button selection |  |  |

b. The behavior of the Screens shall be per Table 4.2.6-2.

Table 4.2.6-2: Plug-In Packages Screens - Behavior

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Item #** | **Screen Behavior** | **Activated On** | **Result** | **Model Unique** |
| 1 | Deletion of a currently selected plug-in will cause the tool to select the next available plug-in package. | Plug-In Delete | Deletes currently selected Plug-In |  |
| 2 | Display only Plug-In packages associated with applicable airplane model. | Selected Plug-In airplane model | Limits plug-ins listed |  |
| 3 | Deleting Plug-In package only allowed if no database is loaded. | Plug-In Delete | Displays warning dialog box per Table 5.1-1, item 4. |  |
| 4 | Prompt user when deleting a non-selected Plug-In package. | Plug-In Delete | Displays warning dialog box per Table 5.1-1, item 5. |  |
| 5 | Prompt user when deleting the currently selected Plug-In package. | Plug-In Delete | Displays warning dialog box per Table 5.1-1, item 5. |  |
| 6 | A Plug-In cannot be deleted if it is the only Plug-In available. | Plug-In Delete | Displays warning dialog box per Table 5.1-1, item 7. |  |
| 7 | Cannot change Plug-In if database is loaded. | Plug-In Select | Displays warning dialog box per Table 5.1-1, item 8. |  |
| 8 | The lower portion of the screen becomes visible | Detail Button | Toggles from visible to not visible. |  |
| 9 | Promt the user when adding an incompatible Plug-In package. See Table 4.2.6-3 for compatibility. | Plug-In Add | Displays warning dialog box per Table 5.1-1, item 10. |  |

c. The Host to Plug-In compatibility shall be per Table 4.2.6-3.

Table 4.2.6-3: Plug-In Compatibility Matrix Table

|  |  |  |  |
| --- | --- | --- | --- |
| **Item #** | **Host IVN** | **Plug-In IVN** | **Model Unique** |
| 1 | 1.12.x.x | 2.3 | 747 |
| 2 | 1.12.x.x | 2.4 | 747 |
| 3 | 1.13.x.x | 2.5 | 747 |
| 4 | 1.13.x.x | 2.6 | 747 |
| 5 | 1.14.x..x | 2.5 | 747 |
| 6 | 1.14.x.x | 2.6 | 747 |
| 7 | 1.14.x.x | 1.1 | 787 |
| 8 | 1.15.x.x | 1.1 | 777x |

### 4.2.7 Build LSAP Screen

Note: The Build LSAP functionality is provided in code (DLL file) supplied by Panasonic.

a. The Build LSAP Screen shall have the following characteristics:

1. The Screen shall have “Release Information” as the Title Label.

2. The Screen shall have a scrollable, editable text box.

3. The Status Screen shall have an OK button.

4. The Status Screen shall have a Cancel button.

b. The behavior of the screen shall be as follows:

1. Opening the Screen shall display the saved Release Information stored in the PC file.

2. Pressing OK button shall save, and overwrite, the Release Information to the PC file data and initiate the SDT Conversion function. (Refer to Table 6.1-9.)

3. Pressing Cancel button shall return to the Primary Screen without saving the Release Information.

### 4.2.8 Compress Plug-In Package Screen

a. The Compress Plug-In Package Screen controls shall be as defined in Table 4.2.8-1.

Table 4.2.8-1: Compress Plug-In Package Screen - Components

| **Item #** | **Label** | **Type** | **Range** | **Details** | **Availability** | **Tab Order** | **Model Unique** |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 1 | Compress Plug-In Package | Label |  | Screen Title; bold, underline | Always visible, not editable |  |  |
| 2 | Plug-In Package Number | TextBox |  |  | Always editable | 1 |  |
| 3 | Airplane Model | DropListBox | B787, B747-8 | Default to B747-8 | Always selectable | 2 |  |
| 4 | Airline Packaging | CheckBox |  | Default is unchecked | Always selectable | 3 |  |
| 5 | Plug-In Package Name | TextBox |  |  | Always editable | 4 |  |
| 6 | HDB Part Number | TextBox |  |  | Always editable | 5 |  |
| 7 | DLL Directory | TextBox |  |  | Always editable | 6 |  |
| 8 | … | Button |  | A standard Windows OS Open File screen is used to select a directory where the dll files are stored | Enabled | 7 |  |
| 9 | SDT Converter Version | TextBox |  | Version number | Always editable | 8 |  |
| 10 | TextBox |  | SDT Converter name and location | Always editable | 9 |  |
| 11 | … | Button |  | A standard Windows OS Open File screen is used to select a dll file (\*.dll) | Enabled | 10 |  |
| 12 | SDT Consistency Checker Version | TextBox |  | Version number | Always editable | 11 |  |
| 13 | TextBox |  | SDT Consistency Checker name and location | Always editable | 12 |  |
| 14 | … | Button |  | A standard Windows OS Open File screen is used to select a dll file (\*.dll) | Enabled | 13 |  |
| 15 | SDT Report Generator Version | TextBox |  | Version number | Always editable | 14 |  |
| 16 | TextBox |  | SDT Report Generator name and location | Always editable | 15 |  |
| 17 | … | Button |  | A standard Windows OS Open File screen is used to select a dll file (\*.dll) | Enabled | 16 |  |
| 18 | SDT Importer/Exporter Version | TextBox |  | Version number | Always editable | 17 |  |
| 19 | TextBox |  | SDT Importer/Exporter name and location | Always editable | 18 |  |
| 20 | … | Button |  | A standard Windows OS Open File screen is used to select a dll file (\*.dll) | Enabled | 19 |  |
| 21 | SDT Editor Version | TextBox |  | Version number | Always editable | 20 |  |
| 22 | TextBox |  | SDT Editor name and location | Always editable | 21 |  |
| 23 | … | Button |  | A standard Windows OS Open File screen is used to select a dll file (\*.dll) | Enabled | 22 |  |
| 24 | Workspace Directory | TextBox |  |  | Always editable | 23 |  |
| 25 | … | Button |  | A standard Windows OS Open File screen is used to select the Workspace directory | Enabled | 24 |  |
| 26 | HELP file | TextBox |  | Help file name and location | Always editable | 25 |  |
| 27 | … | Button |  | A standard Windows OS Open File screen is used to select a Help file (HELP\_ACDG.chm) | Enabled | 26 |  |
| 28 | Image file directory | TextBox |  | Image file location | Always editable | 27 |  |
| 29 | … | Button |  | A standard Windows OS Browse For Folder screen is used to select the file directory | Enabled | 28 |  |
| 30 | Resource directory | TextBox |  | Resource location | Always editable | 29 |  |
| 31 | … | Button |  | A standard Windows OS Browse For Folder screen is used to select the directory | Enabled | 30 |  |
| 32 | CDG Platform Number | TextBox |  |  | Always editable | 31 |  |
| 33 | System Data Table IVN | TextBox |  | Major number | Always editable | 32 |  |
| 34 | TextBox |  | Minor number | Always editable | 33 |  |
| 35 | TextBox |  | SDT IVN name and location | Always editable | 34 |  |
| 36 | … | Button |  | A standard Windows OS Open File screen is used to select a database file (\*.accdb) | Enabled | 35 |  |
| 37 | CDB IVN | TextBox |  | Major number | Always editable | 36 |  |
| 38 | TextBox |  | Minor number | Always editable | 37 |  |
| 39 | Plug-In IVN | TextBox |  | Major number | Always editable | 38 |  |
| 40 | TextBox |  | Minor number | Always editable | 39 |  |
| 41 | Description | TextBox |  | Large TextBox | Always editable | 40 |  |
| 42 | Compress | Button |  |  | Enabled | 41 |  |
| 43 | Close | Button |  |  | Enabled | 42 |  |

### 4.2.9 Import XML Screen

a. The Import XML Screen shall have the following characteristics:

1. The Screen shall be provided by the Operating System.

2. The Screen shall only allow browsing of directory folders and the selection of .zip files.

3. The Screen shall remember the file path of the parent directory of the last opened .zip file for the current program session.

4. The Screen’s starting file path shall be the Default Import XML starting file path.

b. The behavior of the screen shall be as follows:

1. Pressing the Open button with a ZIP file specified shall start the Import XML process using the specified Zip file.

2. Pressing the Cancel button shall return to the Primary Screen without importing a Zip file.

### 4.2.10 Export XML Screen

a. The Export XML Screen shall have the following characteristics:

1. The Screen shall be provided by the Operating System.

2. The Screen shall only allow browsing of directory folders.

3. The Screen shall remember the file path of the parent directory where the last ZIP file was created for the current program session.

4. The Screen’s starting file path shall be the Default Export XML starting file path.

5. The Screen shall allow the user to make a New Folder at the specified directory.

b. The behavior of the screen shall be as follows:

1. Pressing the New Folder button shall create a new folder at the specified directory.

2. Pressing the Open button with a directory specified shall start the Export XML process.

3. Pressing the Cancel button shall return the focus to the Primary Screen without exporting a Zip file.

### 4.2.11 SDT Conversion Screen

a. The SDT Conversion Screen shall have the following characteristics:

1. The Screen shall use the format of the Status Screen (section 3.17)

2. Pressing the Save button shall open a browser folder provided by the Operating System.

3. The browser folder shall remember the file path of the parent directory of the last opened .zip file for the current program session.

4. The browser folder’s starting file path shall be the Default starting file path.

### 4.2.12 CDB Consistency Check Screen

Note: The CDB Consistency Check functionality is provided in code (DLL file) supplied by Panasonic.

a. The CDB Consistency Check Screen shall have the following characteristics:

1. The Screen shall use the format of the Status Screen (section 3.17).

2. The Screen shall call the Panasonic provided CDG DLL file to start the CDB Consistency Check process.

b. The behavior of the screen shall be as follows:

1. Pressing Cancel button shall stop the CDB Consistency Check and return to the Primary Screen.

### 4.2.13 Export CDB

Note: The Export CDB functionality is provided in code (DLL file) supplied by Panasonic.

The Export CDB process uses two screens: the folder browser and the Status Screen.

a. The Export CDB folder browser shall have the following characteristics:

1. The Screen shall be provided by the Operating System.

2. The Screen shall only allow browsing of directory folders.

3. The Screen shall remember the file path of the parent directory chosen for the last export during the current program session.

4. The Screen’s starting file path shall be the Default Export CDB starting file path.

5. The Screen shall allow the user to make a New Folder at the specified directory.

b. The behavior of the Export CDB folder browser shall be as follows:

1. Pressing New Folder button will create a new folder at the specified directory.

2. Pressing OK button with a directory file specified shall open the Export CDB Status screen.

3. Pressing Cancel button shall return to the Primary Screen without exporting CSV files.

c. The Export CDB Status Screen shall have the following characteristics:

1. The screen shall use the Status Screen (section 3.17) as its base.

2. The Title Label shall be “Export Status”.

3. The scrolling message box shall display when the host starts and finishes exporting each CDB table.

4. The screen shall have only a Close button.

d. The behaviour of the Export CDB Status Screen shall be as follows:

1. Pressing Close shall close the Export CDB Status screen and return the user to the ACDG Host screen.

### 4.2.14 Help ACDG Screen

a. Shall use a standard Windows OS Help screen.

b. The Help screen shall display the user manual.

### 4.2.15 About ACDG Screen

a. The About ACDG Screen controls shall be as defined in Table 4.2.15-1.

Table 4.2.15-1: About ACDG Screen - Components

| **Item #** | **Label** | **Type** | **Range** | **Details** | **Availability** | **Tab Order** | **Model Unique** |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 1 | Airline Configuration Database Generator (ACDG) | Label |  | Screen Title; bold, underline | Always visible, not editable |  |  |
| 2 | ACDG Host Part Number | TextBox | Part Number per Section 3.1.b |  | Always visible, not editable |  |  |
| 3 | ACDG Host Version | TextBox | The Version Number of the ACDG Host Part Number |  | Always visible, not editable |  |  |
| 4 | PAC CDG Part Number | TextBox | The Panasonic CDG Part Number |  |  |  |  |
| 5 | Copyright © 2012 - <current year>The Boeing Company. All rights reserved. | Label |  |  | Always visible, not editable |  |  |
| 6 | Close | Button |  |  | Enabled |  |  |

# 5.0 ACDG Host Screen Error/Warning Dialog Box

When an action desired by the user requires further input, a dialog box with a message will display. A dialog box is a modal window; that is, the user must take the appropriate action in order to clear the dialog box and continue.

## 5.1 ACDG Host Primary Screen

The dialog box requirements are described in this section. All dialog boxes will have a title, action buttons, and message.

The requirements for the dialog boxes shall be per Table 5.1-1.

Table 5.1-1: Screen Generated Error/Warning Dialog Boxes

| **Item #** | **Error/Warning Number** | **Message Text** | **Dialog Box Buttons** | **Resulting Action** | **Model Unique** |
| --- | --- | --- | --- | --- | --- |
| 1 | 1 | Do you want to save the PC file? | Yes, No | Yes – Saves Data and continues the requested operation  No – Executes the requested operation without saving the file |  |
| 2 | 2 | Do you want to override the old PC File? | OK, Cancel | OK – Saves the data on the existing PC File.  Cancel – Returns to Main Screen without saving. |  |
| 3 | 3 | Do you want to override the PC File? | OK, Cancel | OK – Saves the data on the existing PC File.  Cancel – Returns to Main Screen without saving. |  |
| 4 | 4 | Cannot delete Plug-In package because a database is open. | OK | OK – Returns to previous screen without deleting. |  |
| 5 | 5 | You are about to Delete Plug-In Package [plug-in name]. Do you want to continue? | Yes, No | Yes – Deletes the plug-In package.  No – Returns to previous screen without deleting.  NOTE: If the deleted plug-in package was the currently selected one, the tool selects the next highest plug-in package. |  |
| 6 | (Deleted) | (Deleted) | (Deleted) | (Deleted) |  |
| 7 | 7 | The last Plug-In Package cannot be deleted. | Ok | OK – Returns to previous screen without deleting. |  |
| 8 | 8 | Cannot change Plug-In package because a database is open. | OK | OK – Returns to previous screen without changing. |  |
| 9 | 9 | Current database needs to be saved before the LSAP build process can be performed. Do you wish to Save? | Yes, No | See Figure 6.1-9. |  |
| 10 | 10 | [file name]. This file is read-only. | OK | OK – Returns to Main Screen without saving. |  |
| 11 | 11 | [Plug-In name] is not compatible with the host. Cannot be added. | OK | OK – Returns to previous screen without adding. |  |

# 6.0 ACDG Host Data Flow Requirements

This section depicts the data flow used in the design requirements described on Section 4 of this document.

The legend for the shapes in the data flow diagrams are per Figure 6.0-1 below.



Figure 6.0-1: Data Flow Diagram Legend

## 6.1 ACDG Host Primary Screen

The data flow requirements for the Primary Screen (that is, top level screen) of the ACDG Host are described in this section.



Figure 6.1-1: ACDG Host Primary Screen – File New



Figure 6.1-2: ACDG Host Primary Screen – File Open



Figure 6.1-3: ACDG Host Primary Screen – File Save



Figure 6.1-4: ACDG Host Primary Screen – File Save As



Figure 6.1-5: ACDG Host Primary Screen – File Config Info



Figure 6.1-6: ACDG Host Primary Screen – File Close



Figure 6.1-7: ACDG Host Primary Screen – Exit



Figure 6.1-8: ACDG Host Primary Screen – Import XML



Figure 6.1-9: ACDG Host Tool Primary Screen – Build LSAP Files

# Glossary

ACDG Airline Configuration Database Generator

CDB Configuration Database

CDG Configuration Database Generator

Config Configuration

CSS Cabin Services System

CSSC CSS Controller

GUI Graphic User Interface

HDB Health Management Database

LRU Line-Replaceable Unit

OPS Operational Program Software

# References

The following documents contain the requirements for the Cabin Services System (CSS) and the Airline Configuration Database Generator (ACDG).

**Boeing Documents**

S417U920 747-8 Intercontinental Cabin Services System (CSS) Specification Control Drawing (SCD)

S823Z101 Cabin Services System (CSS) Specification Control Drawing (SCD) (for 787)

D620Z012-11 CSS Functional Requirements

D620Z012-12 Cabin Services System (CSS) Health Management Database (HDB) Definition

D620Z012-13 Cabin Services System (CSS) Airline Configuration Database Generator (ACDG) Plug-In Requirements: Editor

D620Z012-14 Cabin Services System (CSS) Airline Configuration Database Generator (ACDG) Plug-In Requirements: Consistency Checker

D620Z012-15 Cabin Services System (CSS) Airline Configuration Database Generator (ACDG) Plug-In Requirements: Converter

D620Z012-16 Cabin Services System (CSS) Airline Configuration Database Generator (ACDG) Plug-In Requirements: Report Generator

D620Z012-17 Cabin Services System (CSS) Airline Configuration Database Generator (ACDG) Plug-In Requirements: Importer/Exporter

D620Z012-18 Cabin Services System (CSS) Airline Configuration Database Generator (ACDG) Default Data and Library Data

D620Z012-19 Cabin Services System (CSS) Airline Configuration Database Generator (ACDG) Plug-In Requirements: Updater

D620Z012-20 Cabin Services System (CSS) Configuration Database Generator (CDG) System Data Tables ICD

**Panasonic Documents**

810006-301 INTERFACE CONTROL DOCUMENT for Configuration Database Generator

# Revision Record

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| **Changes in this Revision** | This document is a complete revision. It was revised to include the Emergency Evacuation function to support the Master Change for BEJ RCO66. All other changes between this revision and the previous revision (Rev New) are function refinements/clarifications and editorial changes. | | | | | |
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# Revision Record

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