

NEW FEATURES GUIDE

ProGen Plus Release 8.01+.
For iSeries and AS/400.

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ProGen PlusTM

The iSeries 400 Application Generator & Report Writer!

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System Requirements

ProGen Plus requires an RPG compiler and a minimum of V4R4 of the OS/400 operating system. ProGen Plus will initially occupy approximately 100 MB on your iSeries or AS/400, and about twice that during the install and until the install libs are removed from your system.

Acknowledgments

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C H A P T E R 1

Introduction to ProGen Plus Release 8

Overview

ProGen Plus Release 8 is a major new release of the software. Release 8 includes numerous new features and enhancements, as well as many fixes for issues encountered in previous releases.

Read Chapter 2 of this guide for instructions on how to upgrade to ProGen Plus Release 8 from a previous version of the software. Chapter 3 includes detailed descriptions of all the changes and new features.

If you have any questions about this documentation, or about ProGen Plus 8, please contact our Technical Support group. You can reach them by phone at (250) 655-1766 [7:30-5:00 PST] or by email, at excel@excelsystems.com.

Summary List of New Features

The new features and enhancements included in this version span many different areas of the product. Below is a summary list of these changes:

Reports:

- ❑ New option to create HTML reports.
- ❑ Support for Unit of Measure printer file override.

Actions Editor:

- ❑ SQL support added in the form of two new actions, SQLEXEC and SQLQUERY.
- ❑ Shortcuts added for all actions and structures. For example, UR for UPDRCD.
- ❑ New EXCCMD action allowing you to execute commands. Support variables.
- ❑ New totally free-format actions line: USRSRC action.
- ❑ Support for variables in the SNDMSG action.
- ❑ New MULT and DIV actions, both supporting half-adjust.
- ❑ Added a 'clear before' option to the ADD and SUB actions.
- ❑ Added option to the EVAL and free-format IF actions to turn off validation entirely.
- ❑ New option to lock data areas on the GETDTAARA/UPDDTAARA actions.

Field Validation:

- ❑ Ability to attach more than one validation module to a field.
- ❑ Ability to attach conditions to the validation modules attached to a field.
- ❑ New default validation module source type selection.

Work Fields:

- ❑ Support for longer work field names and descriptions. Names increased to 10 characters, descriptions to 40 characters.
- ❑ Support for longer work field lengths (ILE only). Increased to 32767 from 256.
- ❑ New work field class: *LIKE.
- ❑ New support for &w from any field prompt, to create any class of work field on the fly.

Miscellaneous:

- ❑ Ability to generate SECURE/SHARE (*YES) at the definition level. To be set at the Files and Relations panel.
- ❑ New System Defaults for edit codes.
- ❑ Ability to optionally remove *PSSR routine, available by Designer or definition.
- ❑ Support for adding a Help Text link that executes a call.
- ❑ Allow definition level field renames (used to be repository level only).
- ❑ New ZCRTOBJ option: USRPRF.
- ❑ Added a sequence number and description positioning to the Work with Conditions panel.
- ❑ Support ability to change data area names within a definition.
- ❑ Enhancements to ZWRKPGMFLD to clarify working with the two different ILE program field members.
- ❑ Updated modification log.

Release 8 also includes several fixes to software limitations encountered at previous releases. Some of the highlights include:

- ❑ Greatly improved file deletion process. When you delete a file from a definition, a much more thorough usage check is first performed, and no orphaned remnants are left behind (such as in conditions, equations, or link work fields).
- ❑ Fix for problem where copied definitions with *LIMIT parms were losing same.
- ❑ Many fixes for missing elements in the ZPRTPDF *DOC reports, including parameters, file relations, lookups, etc.
- ❑ Enhanced validation on the UPDFLD action.
- ❑ Subroutine name support upgraded from 6 to 10 characters.

C H A P T E R 2

Upgrading to ProGen Plus 8

Overview and Requirements

These upgrader's instructions are intended for existing users of ProGen Plus who are upgrading from Release 7.0x to Release 8.0x/ILE 3.0x.

Note The "x" next to the product release level denotes any interim version of the release, such as 7.05, the latest interim release of ProGen Plus release 7.0.

You should read this chapter if you are responsible for loading ProGen Plus 8.0x and converting the software.

Current ProGen Plus Release

The install program for upgrader's is designed to upgrade a minimum release of 7.01 or higher to Release 8.0x. If you are not currently at Version 7.01 or higher, please contact BCD for the appropriate instructions on how to upgrade to Release 7.0 before proceeding with the upgrade instructions included in this guide.

Operating System

ProGen Plus Release 8 is available for RISC systems only, and requires a minimum release level of V4R4.

What this document contains

This document contains the following information:

- ❑ Overview of the upgrade process
- ❑ How to Upgrade to Release 8.0x
- ❑ Post Installation Review

IT IS IMPORTANT THAT YOU READ EVERYTHING IN THIS DOCUMENT BEFORE PROCEEDING

Overview of the Upgrade Process

The upgrade process to Release 8.0x will be performed without impacting the contents of your existing 7.0x library. If for any reason the installation process fails, your existing ProGen Plus library will still be available and ready to use. Any objects you may have created and placed in GN#LIB (generated source, programs and validation modules) are retained following installation.

Below is an outline of the steps performed to upgrade to Release 8:

- ❑ You restore the BCD product installation library BCDINSTALL to your system. Then execute the command BCDINSTALL/BCDINSTALL. You are then prompted to restore the Release 8.0x installation library called GN#INST to your system. This library contains the necessary installation and conversion programs. It also contains the product library for ProGen Plus 8.0x.
- ❑ Your current release of ProGen Plus resides in a library called GN#LIB. Your existing ProGen Plus library is renamed during the install. During the install, you are prompted for the name of this library; the default is GN#LIBOLD. If you have upgraded before, GN#LIBOLD may already exist on your system. If so, delete this library or choose another name. In order to rename the library, no users can be using GN#LIB, and it must not exist in the library list of any active session or job.
- ❑ ProGen Plus Release 8.0x is restored from a save file into library GN#LIB.
- ❑ If requested, the ProGen Plus demonstration library is restored from a save file.
- ❑ The technical support library BCDSUPPT is restored, if it does not already exist on your system.
- ❑ The conversion process converts your product library from 7.0x to version 8.0x.

Product Library Conversion

All data areas are moved from GN#LIBOLD to GN#LIB

The following files are copied and converted if necessary.

- ❑ GN#USRC - User-calcs entered through via the USRCOD action
- ❑ GN#VSRC - Validation modules source
- ❑ GN#CSRC - Source members for equations
- ❑ GN#FHFF - Central repository: File descriptions
- ❑ GN#FDFE - Central repository: Field descriptions
- ❑ GN#DSNRF- Designer ID file
- ❑ GN#DSPRF- Designer ID style protection file
- ❑ GN#FPPF - Program fields file - copied and merged
- ❑ GN#CNTXF- Program contexts file - copied and merged
- ❑ GN#HTHF - Help text header file
- ❑ GN#HTDF - Help text detail file
- ❑ QRPGSRC - RPG source file

- ❑ QRPGLESC - RPGLE source file
- ❑ QDDSSRC - DDS source file
- ❑ QCLSRC - CL source file

The final conversion step is to copy all non-ProGen Plus objects from library GN#LIBOLD to GN#LIB. These are objects you may have placed in the Release 7.0x library (objects such as generated programs, display files, validation modules, generated source etc.).

Copying and Converting Program Definitions and Environments

After the product library is converted the program definitions found in GN#LIBOLD are copied and converted to Release 8.0x format. Following the conversion of GN#LIBOLD, a search is done on your system for ProGen Plus 7.0x environment libraries. A list of these libraries is presented. Each 7.0x environment library that is in active use should be converted to 8.0x format. Environment libraries can be converted interactively or in batch. The GN#* files in each environment are saved to a save file ENVLIBSAVF prior to conversion. This save file exists in the converted environment library and can be used for recovery purposes. See the "Post Installation Review" section for more information.

Follow the information on the panels as the installation is progressing

Instructions to Upgrade to the Latest Release of ProGen Plus 8.0x

Install Steps

To upgrade to the latest release of ProGen Plus 7.0x from an earlier release of ProGen Plus, do the following:

1. Allow 1 to 2 hours to complete the install, depending on the relative performance of your iSeries, the size of your existing ProGen Plus library and the number of environment libraries.
2. Ensure that you have up to date system backup including GN#LIB and all ProGen Plus environment libraries.
3. Sign on as QSECOFR.
4. Make sure no-one on the system is using library GN#LIB. This library name must not exist in any session's library list. Run the command WRKOBJLCK QSYS/GN#LIB *LIB to ensure no locks exist.
5. Load the CD containing the software on the appropriate device on your iSeries or AS/400.
6. Ensure that the library GN#INST does not exist on your system. If it is found, delete it.

BCD uses a generic install library called BCDINSTALL for all its products. If you have previously installed other software from BCD from the current tape or CD, check if the library BCDINSTALL still exists on your system. If it does, continue with step 11. If you have just received new media, delete the library BCDINSTALL (if it already exists on your system), and continue with step 7.

7. To restore the installation library from the CD, type (replace OPT01 with the appropriate device name, if necessary):

```
RSTLIB SAVLIB(BCDINSTALL) DEV(OPT01) OPTFILE('/AS400LIB/BCDINST.LIB')
```

8. When the library has been restored, type the following at an iSeries command line:BCDINSTALL/BCDINSTALL
9. A panel appears displaying a list of products available for installation. Type 1=Select next to ProGen Plus 8.0 and press Enter. Next, you will be prompted for the device to install from. Enter the appropriate device name (the same as you specified in step 7) and press Enter.
10. The installation process will restore the library GN#INST, the ProGen Plus install library. Once restored, the installation process will automatically continue with the next steps, described below.
11. A panel appears with summary information about the install process. You will be prompted for the name that your existing product library (GN#LIB) should be renamed to, and if you want to install the demonstration applications. Type Y=Yes to restore the demonstration library called GN#DEMOLIB.
12. When the installation and conversion of GN#LIB is complete, a list of ProGen Plus environment libraries will be displayed. Each active 7.0x environment should be selected for conversion. This process is described in more detail below.
13. Following the environment library conversion(s) the installation is complete.

Post Installation Review

7.0x to 8.0x Upgrades: Converting Program Definition Environment Libraries

If program definition environment libraries exist on your system, they will need to be converted to Release 8.0x format if you intend to use those program definitions with Release 8.0x. Environment libraries can be converted following the conversion of the product library GN#LIB, as part of the install. A panel appears showing a list of environment libraries. Select the ones you wish to convert from release 7.0x to 8.0x.

Prior to the conversion of each environment library, a save file called ENVLIBSAVF is created in each environment library containing ProGen Plus release 7.0x environment files. When the conversion is complete a new set of files will exist in the environment library containing program definitions in Release 8.0x format.

A file containing the list of environment libraries and their conversion status exists in library GN#INST and can be maintained by program GN#ENV. The program GN#ENV is called by the conversion process to present these libraries for conversion. If you exit this program without completing the conversion of environment libraries, you can resume this process by calling GN#ENV (no parameters necessary). Ensure that the library GN#INST is in your library list when running GN#ENV.

After all environment libraries are converted, the entire installation and conversion process is complete.

To Sign on to Release 8.0x

When the installation is complete you can sign on ProGen Plus as in the past, using the ZWRKPDF *PGMR command (or using your own Designer ID). Any Designer IDs created with your previous release will still be available.

Shell Source File Libraries

Each Designer ID references a shell source library. The default library will be GN#LIB. If you have changed the referenced library for this parameter it will be necessary to replace the shell source file GN#FSRC in this library with the current version of this file shipped with release 8.0x. Optionally you may wish to change this library reference back to GN#LIB. You can verify if any of your Designers are referencing different versions of the shells using option 2 from the list of designers presented by the ZWRKDSN command.

Updating GN#FSRC in another library

If you have another library specified as the shell source library and you wish to replace that file with the 8.0x version then follow the steps below:

- Rename GN#FSRC in that library to another name.
- Execute the ZWRKDSN command, select 2=Change next to your designer ID.

- Press Enter through the panels. The ZWRKDSN command will check the shell source library you have specified for the file name GN#FSRC, when not detected a new copy of that file will be loaded from GN#LIB.

Note If you have made custom modifications to the shells of your previous release, you will need to reapply these changes to your most current release. Use SEU to scan the shell source members for change dates to help with this process.

Upgrading from ProGen ILE

If you are also upgrading ProGen ILE, follow the steps above but change the source file GN#FLES in addition to GN#FSRC.

Reconciling Actions Editor Program Contexts

If you have created new copies of the ProGen Shell Source files, it is possible that you did so because you wanted to add new program contexts to this file, or that you modified GN#FSRC and/or GN#GSRC in GN#LIB. If so, you should review the contexts in the latest release of ProGen Plus 8.0x prior to re-inserting those contexts into the shell source. Program contexts are added on an on-going basis, and since release 7.0x we may have added the program contexts you needed to the distribution versions of the shells.

The installation and conversion process is able to merge your 8.0x data file containing program contexts with the program contexts shipped with the latest release of 8.0x (records maintainable via the ZWRKPGMCTX command). It is not capable however, of merging context "tags" added to shell source members in the source files GN#GSRC or GN#FSRC. To do this you must review the 7.0x copy of members in these source files to determine which contexts you have added, and ensure that these contexts are added to the 7.0x shells if they are not already there.

Upgrading from ProGen ILE

If you are upgrading ProGen ILE, follow the steps above but change the source file GN#FLES in addition to GN#FSRC and GN#GLES in addition to GN#GSRC.

You can build (ZBLDPSD) and review (ZWRKPSD) program structure diagrams for each program style which will indicate the program contexts, and the subroutine they can be found in. See Chapter 18 of the ProGen Plus User's Guide for additional information on working with your program structure diagrams.

Reconciling Program Fields

It is possible that you created new program fields using the ZWRKPGMFLD command with your current release of 7.0x. The installation and conversion process is able to merge your existing data file containing program fields with the program fields file shipped with 8.0x. It is not capable however, of merging shell source additions and enhancements which may exist to support these new program fields. Many of the program fields are defined in a subroutine common to all program styles called \$PGMFS. This routine exists as a source member in the file GN#LIB/GN#GSRC with the member name GN#\$PGMF. If new program fields were added, you may need to review this source member to determine if changes or additions were made. After the installation you can locate the 7.0x version of this member in GN#LIBOLD/GN#GSRC. Changes made to this member should be migrated to the same member in GN#LIB/GN#GSRC.

Upgrading from ProGen ILE

If you are upgrading ProGen ILE, follow the steps above but change the source file GN#GLES in addition to GN#GSRC.

Note For ILE, there are two program field source members: GN#\$PGMF and GN#\$PGMF2. Which of these two members is used for your generated source depends on whether you compile with a conversion option of *DATETIME or *NONE. Any modifications you make to your program fields should be applied to both members.

Final Cleanup Tasks

Once you have successfully completed the steps outlined in this document, and you have a current backup, you can delete these objects, if still present on your system:

- ❑ GN#INST - Install library for previous releases (release 3.5 and prior).
- ❑ GN#LIB50, GN#LIB60 - Renamed Release 5.0x and 6.0x libraries.
- ❑ GN#LIBOLD - Renamed Release 7.0x library or 6.0x library (note library name given to rename your existing version of ProGen specified on the install panel).
- ❑ GN#I400, GN#I450 - Release 4.0x and 4.5x installation libraries.
- ❑ GN#OLD - pre-release 3.5 install library.
- ❑ GN#DEMO, GN#DEMO40 or GN#DEMO45 - older release demo libraries.
- ❑ GN#ILEOLD - release 1.2x of ProGen ILE.
- ❑ ENV40SAVF save files in each environment library - these contain release 4.0x definitions and can be deleted.
- ❑ ENV45SAVF save files in each environment library - these contain release 4.5x definitions and can be deleted.
- ❑ ENVLIBSAVF save files in each environment library - these contain release 7.0x definitions and can be deleted after confirming the installation of release 8.0x was successful.

Additional Assistance

If you any questions concerning the installation of ProGen Plus Release 8.0x, please call or fax technical support at the following numbers:

- Phone: 250-655-1766
- Fax: 250-655-1733
- E-mail: excel@excelsystems.com

Additional, more detailed Technical Support information is available in the Technical Support Guide, which has been shipped to you with the product documentation.

C H A P T E R 3

ProGen Plus Release 8 New Features

This chapter includes detailed descriptions of all the enhancements and new features included in ProGen 8. Please refer to Chapter 1 for a summary list of all enhancements.

Actions Editor

The ProGen Actions language is a core feature of the software, and as a result is significantly expanded and enhanced in every release. ProGen 8 is no exception; below are descriptions of the new features included in this release.

Support for Message Variables with SNDMSG

This has been an oft-requested feature in the past, and for Release 8 it finally made the final cut. As of this release, you can use variables in the SNDMSG action.

The way this has been implemented is that you can now select 3 types of error messages: text, error message file, and a field. The field must be alpha and if it is greater than 78 characters the contents of the field are truncated. The field can be a data base file field, work field or program field. The loading of the field is left to the user and can be done with a simple eval, for example:

```
'Error: 'Library ' + %trimr(LIBNAME) + ' is not found'
```

Another simple way to build the error message field is using a *CONCAT work field. Using a field for your message text enables you to build messages using other fields.

MULT and DIV Actions

Two new actions, MULT and DIV, have been added to supplement the existing ADD and SUB.

'Clear Before' Option on ADD and SUB Actions

The ADD and SUB actions now include a 'Clear Before' option, similar to the UPDFLD. Selecting this option changes the ADD/SUB operations to Z-ADD/Z-SUB in the generated source.

Option to Turn Off all Validation on IF and EVAL Actions

The free-format IF and EVAL actions now include an option that allows you to turn off all validation on the statement you enter. When the validation is turned off, no validation on the statement is performed at all, and it is entirely up to you to ensure that you enter a valid statement. This feature enables you to directly reference fields or arrays, for example, that you have defined at programmer tags or in User Code.

Lock Option on GETDTAARA & UPDDTAARA

A new option, to lock the data area, has been added to the actions GETDTAARA and UPDDTAARA.

USRSRC Free-Format Actions Entry

The new USRSRC action allows you to enter free format source lines via the Actions Editor. You can enter entry specifications of F (File description), D (Definition), I (Input), E (Extension) or C (Calculation). Each specification, with the exception of the Calculation specifications, is placed under the appropriate specification entry regardless of the Actions Editor program context you enter it in at. The Calculation specifications are the only entry type that are generated directly in the context selected.

To select a specification type change the 'Entry Specification Type' option. In addition the format line will adjust to the specified format type as a guide for the specification entry.

From the USRSRC action entry you can place fields from the fields window. Note that once placed the field names are not validated. The free format line has no validation or syntax checking. This allows for absolute freedom when entering source statements. This also means that it is your responsibility to ensure that the statements you enter are syntactically correct or you will get compile errors.

EXCCMD Action (ILE Only)

The new EXCCMD action allows you to execute and prompt commands. This replaces the workaround we have suggested in previous releases of making calls to QCMDEXEC.

The EXCCMD command prompt also supports the use of variable. The variables need to be specified with a '&' (&@WK001, &fieldname). To use ProGen program fields specify the program field name without the '*' preceding the name (etc &USER).

The EXCCMD action generates a call to QCMDEXC with the command specified. The variables are added to the command string generated.

New Actions Shortcuts

This feature was a suggestion by a veteran Actions Editor programmer, who after typing 'UPDRCD' for the seventy seven thousandth time, wondered whether there might not be an easier way to do this.... In addition, rather than having to take the extra step of typing an 'I' on the prompt line to insert an UPDRCD (or any other action), he wondered if he could not type an 'UR' in the options column to immediately present the UPDRCD prompt.

Both features have been added to release 8: There is now a 2 character shortcut for every action, which can be keyed at the actions prompt window, or in the options column directly, when inserting a new action.

These are the shortcuts for each action and structure:

ADD - AD

CALLPGM - CP

CALLFNC - FN

CALLSBR - CS

CLRFLD - CF	CLRRCD - CR
CMDLIN - CL	COMMENT - CM
COMMIT- CO	CMPWKF - CW
DATDEC - DC	DATDIF - DF
DATINC - DI	DELRCO - DL
DFTFLD - DF	DIV - DV
EVAL - EV	EXTPGM - EP
GETDTAARA - GD	GETRCO - GR
MAPRCO - MR	MULT - ML
POSRCO - PS	POSSF - PS
PRINT - PR	REFRESH - RF
RLDSFL - RS	ROLLBACK - RB
SETCSR - SC	SNDMSG - SM
SNDPRM - SN	SUB - SB
SHWPNL - SP	TIME - TM
UPDFLD - UF	UPDDTAARA - UD
UPDRCO - UP	USRCOD - UC
WRTRCO - WR	ZDSTSPLF - ZD

These are the shortcuts for the structures:

CASE - CA	DOCASE - DC
DUNTIL - DU	DOWHILE - DW
ELSE - EL	END - EN
FORRCOSET - FR	IF - IF
LEAVE - LV	OTHER - OT

SQL Support

We have added 2 new actions added to ProGen to support SQL: SQLEXEC and SQLQUERY. These actions allow you to directly add SQL queries and execution statements. Once added, ProGen will generate the correct SQL tags etc.

In addition, the source compile is modified to include the SQL precompiler. The source is generated to include a flag for the ZCRTOBJ command to use the SQL precompiler. The action entry is free format and not validated. This means that you need to enter correctly formatted SQL statements.

Usage of these statements does not change the definition flow or logic (this is not a template that uses SQL for file access).

Finally, from the SQL action entry you can place fields from the fields window. Once placed the field names are not validated.

Reports

The report generator also includes two enhancements requested by clients.

HTML Report Option

You can now select an option to create an HTML report. To do this, select the 'Create HTML report' option from the definition 'Report Options'. Then you also need to type the destination path in the IFS. These options can also be set at the designer level (option 10 from ZWRKDSN).

Selection this option will modify the generated CL to include the statements to create the HTML document and write it to the IFS. The generated CL requires that you have source file GN#HTMLF in your library list. By default, on the install ProGen will attempt to add this file to both GN#LIB and BCDSUPPT.

The generated HTML will by default appear exactly like the printed report, unless you add your own HTML to the report to enhance it's appearance.

New UOM (Unit of Measure) OVRPRTF Parameter

For the OVRPRTF parameter 'measurement method' we have added the corresponding parameter UOM (Unit of measure). This has been added to the list of existing options, in the same format.

You can set up defaults for this new parameter from your designer ID (ZWRKDSN option 10). The allowed values are *INCH and *CM.

Validation

There have also been a number of new features added for working with and attaching validation modules to your fields. These are listed below:

Attaching Multiple Validation Modules to a Field.

ProGen Plus 8 allows you to select multiple validation modules for a field. The selected validations are displayed in a subfile format. The generation of the validations will occur in the same sequence as the validations are selected.

Associating Conditions with Validation Modules

In previous releases there has been no way to take advantage of the power of validation modules while also making the module execution conditional. This has been addressed in version 8. From the screen where you work with the validation modules attached to a field there is also an option to attach a condition to each module.

Default Validation Module Source Type

If the target platform is ILE, when you create a validation module it will now default to ILE module.

Work Fields

ProGen 8 also includes a new work field type (*LIKE) and several other work field enhancements. These are listed below.

Longer Work Field Names and Descriptions

The allowed work field name length has been increased to 10 characters in ILE. Previously the work field names were only allowed to be a length of 6 characters in both ILE and RPG. The work field descriptions length has also been increased from 20 to 40 characters in both ILE and RPG.

Support for Longer Work Field Lengths

The maximum work field length in ILE has been changed from 256 to 32767. This is validated in *RPG400 to 256.

*LIKE Work Field

A new work field class, *LIKE, has been added. *LIKE work fields allow you to define a like relationship to a work field or database field. The generated source will be a simple 'like' declaration. In the definition any changes to the based on fields (both data base and work fields) will ripple through to any *LIKE work field.

Support for &W from Any Field Prompt

ProGen has for some time supported the ability to create *PANEL fields on the fly, from any field prompt, using the &P tool. As for release 8, you can now also be use the &W shortcut to create any class of work field on the fly, from any screen that has a field prompt. This includes conditions, equations, parm lists and even the screens for creating other work fields.

Miscellaneous Other Features and Enhancements

Ability to Generate Secure/Share(*YES) at the Definition Level

This was a client request. With previous release you could change the secure option, but only at the Designer ID level. The SECURE and SHARE option are now set from the files and relations panel. Both of these options are designer defaults and can be set from the ZWRKDSN (option 9) command.

The SECURE and SHARE are used on the OVRDBF command. ProGen definitions uses this command with all files including the primary file override F@@UPDAT. The primary file SECURE and SHARE options will be duplicated for the F@@UPDAT override. The SECURE option when set to *YES protects the file from the effects of any file override commands that were previously called. The SHARE option specifies whether the open data path (ODP) is shared with other programs in the same routing step. When an ODP is shared, the programs accessing the file share facilities such as the file status and the buffer.

System Defaults for Edit Codes

ProGen 8 includes new system defaults that allow you to specify edit codes for numeric fields with and without decimals.

This is defined in the System Defaults area for each designer ID (ZWRKDSN option 9). When you create a new definition or place file fields, the fields will reflect the designer defaults. The value for the edit code default will be set to (4) and the default for the edit code with decimals will be set to (J). This will be consistent with the current hard coded standards. This will be added to all there designer ID's during the install of ProGen 8.0.

Option to Remove the *PSSR (Error Handling) Routine.

In ProGen Plus-generated programs we generally include an error-handling routine called *PSSR. The inclusion of this routine has now been made optional, as a designer default at ZWRKDSN (option 9). This option can also be set at the definition level by going to the exit panel and selecting an option 2 for 'Generate/Create Options'. Then select function 'F10= Additional Creation Parm's'. From this panel you can select Y=Yes (selected the definition will be created as it is now) or N=No (selected all references to *PSSR are removed).

When the option to remove *PSSR routine is selected both the file level and subroutine will be removed from the generated source. This will stop the ProGen error panel from being presented in the case of an error. This is especially useful for report and batch programs as they are typically submitted and the *PSSR routine can mask errors in the JOBLOG.

Support Help Text that Executes a Program Call

In addition to the 4 types of help text already supported in ProGen Programs (ProGen, Display File, UIM and Office/400) we have added the ability to add a program call for help text. The new help text call is available for both panel and field level help text.

You can select this type of help in the same fashion as existing help text. From the panel to define the call you can press F7 to access the parameter list for the call. There are no required parameters for this form of help.

Style H Changed to Style D

In our continuing pursuit of simplifying the design tool options, Style H has been merged with Style D. The reason for this was that the Style H window lookup program had a number of limitations (including how the subfile was handled, and support for conditional attributes). And with the subfile style programs supporting window lookups (since the previous release) the features that made the Style H unique were no longer so.

Style H has for now been left at the list of Styles presented when you create a new definition, but on entry to the design session, you are switched to a Style D. Existing style H definitions will still function the same. The generated source for an existing style H definition will not change; you will still be able to generate a Style H as you did before, though you will also be able to copy it to a Style D, if you wish to take advantage of the more robust feature set supported by Style D.

Support for Definition-Level Field Renames

This is another request that has been made several times in the past, and which has finally made the cut. You can now get to the field rename screen from the Files and Relations screen within a definition via the F6=Repository function. Previously you could access the rename screen but were not allowed to rename fields without exiting the definition and running the ZWRKRPS command.

New ZCRTOBJ option: USRPRF

A new parameter, USRPRF, has been added to the ZCRTOBJ command. This option is available directly from the ZCRTOBJ command and from the F10 function on the Exit Design panel.

This option specifies whether the authority checking done while this program is running includes only the user who is running the program (*USER) or both the user running the program and the program owner (*OWNER). The profiles of the program user or both the program user and the program owner are used to control which objects can be used by the program, including the authority the program has for each object. Only the program owner or a user with QSECOFR authority can change the user profile attribute.

Enhancements to the Work with Conditions Panel

The Work with Conditions panel has been made much more user-friendly, with the addition of a visible sequence number for positioning the list, as well as the ability to sort/position by condition description.

Support for Renaming Data Area References in a Definition

ProGen Plus 8 allows you to rename your data area references in a definition. In previous releases, if a data area name was changed, you had to add a new entry for it in your definition, then find and change all the existing reference.

When you change a data area name, all the detail records are also renamed.

CMP Enhancements to Prevent Accidental Definition Deletion

ProGen Change Management is built around the concept of creating environment ‘definitions’ which have a number of associated settings which you can define once, then forget about. This feature means that you can have multiple definitions of a single environment library, allowing you to customize your processes for each developer or application, without proliferating the number of environment libraries.

However, this approach has also posed one significant gotcha, which has bitten a few people over the last year: that you can set up a change management process to move or copy a program definition from one environment to another, where the underlying environment library is actually the same one. And if you set your process up to move or copy and replace the definition, the result is that ProGen checks for the definition in the target environment, and if it’s there, deletes it, and because the originating environment is in fact the same one, you are left definitionless.

While there are still situations when you might want to use a CMP within a single environment library, we have now added validations and error messages to prevent you from deleting your definitions.

Work with Program Fields Enhancements

The Work with Program Fields panel (ZWRKPGMFLD command) has been modified to clearly display the separate program field members for ILE (GN#\$PGMF, GN#\$PGMF2). There is now also a prompt panel presented when you select option F7 to work with ILE source members. From the prompt you can select which source member to work with for each Conversion Type (*DATETIME, *NONE).

Program Modification Log Enhancements

The program modification log has been redesigned to allow you to type in text continually, wrapping around to the next line, etc. We have also added access to the modification log from the Work with Program Definition screen, so you no longer have to go into the Definition to see the changes.

Default DSPF Name Lengthened

ProGen has generally defaulted to naming your program display file by appending ‘FM’ to the first 6 characters of your program name. This has now been increased to the first 8 characters of your program name, plus ‘FM’.

Field Renames Accessible from Work with Files Screen

In previous releases the feature to rename the fields in a file, for ProGen’s usage, was only available via the ZWRKRPS command. As of Release 8, you can also access this feature from the Work with Files panel, when you press F6 to add a new repository file to your definition.