

## Introduction

American Innovations (AI) is pleased to announce version 7.7.2 of our Pipeline Compliance System (PCS) software. This document includes information for the following items:

- *PCS 7 Best Practices Reminder*
- *PCS 7.7.2 Improvements* (page 2)
- *Release History* (page 3)
- *Product Support and Training* (page 18)

If you have questions or need additional information, contact PCS Technical Support at [pcstechservices@aiworldwide.com](mailto:pcstechservices@aiworldwide.com).

## PCS 7 Best Practices Reminder: Protection from Data Loss or Corruption

Despite our best efforts to prevent and protect PCS data from corruption or loss, data loss will always remain a possibility. PCS may be used in ways that were not anticipated, data sets may become more complicated than we predicted or tested against, machine or network failures may corrupt the PCS database, and users may accidentally change or delete vital information.

There are simple measures you can take to protect your company's data.

- **Backup your database regularly** — it is important that you backup your database on a regular basis so the database used for recovery or restoration contains recent data. In addition, we recommend that you backup your database under these scenarios:
  - *Upgrades*: Before upgrading PCS 7.
  - *Bulk Data Changes*: Before performing a bridge import or synchronizing your database.
  - *Considerable Data Updates*: After making a lot of changes to PCS 7 data.

Refer to either the *PCS 7 Installation* document or the *PCS Version 7.7 User and Administrator Guide* for instructions detailing how to backup the PCS database.

- **Backup your .dat files** — before importing data from a field computer, we recommend you save a copy of your .dat files on your computer to serve as a backup. If an error occurs during the field computer import, the .dat file backup can be used to identify the cause of and fix the error.

Refer to *Copy a PS Survey to a Computer* in the *Allegro User Guide* for detailed instructions.

## PCS 7.7.2 Improvements

Software fixes available in PCS 7.7.2 include the following:

- **Site numbers correction** — A defect was discovered that may impact .DAT files created and exported by PCS 7.7.1 when using multiple scheduling facility types. During the export file creation, if a single facility is included multiple times (the facility is due more than once in the defined time period) it will associate the inspection values with an incorrect site number. Version 7.7.2 of PCS resolves this defect and, before importing the data into the database, will verify that any .DAT file being used to import data via *Field Computer Receive* has not been impacted by this defect.

If you need to import an impacted .DAT file, please contact AI Technical Support at [pcstechservices@aiworldwide.com](mailto:pcstechservices@aiworldwide.com) or 1-512-249-3453.

- **Compatibility with the Allegro QX version 6.1 and MX 5.3** — A defect was discovered that resulted in incorrect data entered in new reading fields if multiple new sites of the same facility type were imported from the Allegro QX 6.1 or Allegro MX 5.3. This defect only exists when using PCS 7.7.1 with the Allegro QX or MX versions 6.1 or 5.3 and is corrected in 7.7.2.
- **Performance when selecting data** — Selecting large data sets that includes scheduling data had poor performance and occasionally resulted in an error message. The performance when using large data sets in PCS has been improved in 7.7.2 and the errors were eliminated.
- **Error handling for invalid survey months** — If the *First Survey Month* was set to 0 (an invalid value), PCS 7.7.1 could not perform scheduling calculations and resulted in an error. This was fixed in 7.7.2 so now *First Survey Month* values of 0 are corrected to become 1 (January).

## Release History

### PCS 7.7.1 / Aug 2016

Software enhancements and fixes available in PCS 7.7.1 include those described in the following list:

- **Field Computer Send Changes** — The following features were added to *Field Computer Send* to create prompts that will aid in navigating between survey records on the Allegro:
  - *Odd/Even Addresses in Sorting Themes* — A new *Sort By* option is available when creating a new Sorting Theme that sorts even address numbers before odd address numbers. This new sort allows an Allegro user to complete surveys without having to cross the road after each site. Look for **Address (Odd/Even)** in the *Sort By* dropdown.
  - *Selectable Sorting Themes in Field Computer Send Prompts* — Multiple sorting themes can now be sent to the Allegro, allowing the Allegro user to change the sort order of the sites to one of the included sorting themes while using the field computer. If Selectable Sorting Themes are not defined in the Field Computer Send prompt definition, the PCS user will only be able to select a single sorting theme when sending data to the Allegro. For more information about Selectable Sorting Themes, refer to the *Field Computer* section of the *PCS User and Admin Guide*.
  - *Searchable Fields in Field Computer Send Prompts* — Field Computer Send prompt definitions now include searchable fields. Searchable fields allow an Allegro user to search for a survey based on values in searchable fields while using the field computer. For more information about searchable fields, refer to the *Field Computer* section of the *PCS User and Admin Guide*.

**IMPORTANT:** To use these new features with a field computer, the prompt definitions must be sent to an Allegro MX with version 5.3 or newer installed or to an Allegro QX with version 6.1 or newer installed.

### PCS 7.7 / Aug 2015

Software enhancements and fixes available in PCS 7.7 include those described in the following list:

- **Bridge Import**
  - Filtering in the Bridge Preview has been improved and the ability to export the filtered preview is now supported.
  - Legend buttons in the Bridge Preview now include a record count, showing the total number of records for each filter display.
  - Imports from spreadsheets can now map headers in spreadsheets to column names.
  - Precision handling has been improved for Milepost-based matches.
  - General improvements have been made for importing Microsoft Excel .xlsx files.

- Column names that contain special characters in .xlsx, .xls, and .csv files are now allowed for import-only bridges.
  - The rules for importing anodes and negatives now match the rules established for editing data in the grid. The shunt factor, shunt rating, and shunt resistance for anodes and negatives are blocked when setting up an inspection import. To import these fields, use the associated information level import.
- **General Reporting**
- The *Exception Filter* field value is no longer truncated to 50 characters in the report output.
  - The *Structure Readings Meet Criteria* field will now return null (blank) for any non-Test Point data.
  - Summations can now be reordered in Summary themes. To reorder a summation, click the **up** or **down arrow** to the left of the summation.
  - Filtering on *Indicate Survey* in Comparison Reports is now allowed, but it is still not recommended. A better filter for this purpose would be to use the *Inspection Date* range or higher level filters.
  - The *Calendar view* in the PCS Schedule Report no longer returns an error.
- **Delinquency Date Reporting**
- *Delinquency Date* filters no longer block records that cross module boundaries.
  - Multiple scheduling types are now supported.
  - Changes to the calculations for Time Between Surveys, using new Effective Dates, have been implemented.
  - The column list and report options have been improved to provide better organization and clearer instructions when creating reports.
  - Date values that are earlier than January 1, 1752 are now automatically changed to January 1, 1952 to prevent crashes during calculations.
- **Scheduling**
- Improvements have been made to the calculations used for Time Between Surveys.
  - Inheritance rules for *Scheduling Type Inspected* can now be defined via the *Default Schedule Facility Type Inspected* column in *Edit Schedule Settings*.
    - A new defined expression called *Survey Text contains Annual Survey* was created for the Annual Rectifier scheduling type. This expression controls when the Annual Rectifier scheduling type as the default *Scheduling Type Inspected* rather than the Periodic Rectifier and relies upon the new *Survey Text* calculated field.


- Additional expressions can be defined and installed expressions for Annual Rectifier can be overridden.
- The defined rule to be used for Scheduling Type Inspected is determined based on the following:
  - The inheritance in *Schedule Type Inspected* is based on the lowest priority Schedule Type.
  - The highest priority Schedule Type that is both defined and evaluates to true is used.
  - The lowest priority type is used if either no expressions are defined or no expressions evaluate to true.
- **Synchronization**
  - Extra changelog records are no longer created when using the Add dialog.
  - Synchronizations were optimized to allow synchronization of a larger number of changes for an individual record.
  - Memo files in the master and replica can now be packed manually, using a new **Pack Memo Files** option, or automatically between replicas and after synchronization is complete.
  - Validation of folder paths are now performed prior to building replicas.
- **Data Entry**
  - Inherited values are now displayed in a grid search when no overriding value is defined.
- **General Improvements**
  - For clients that use Series, the installed sorts in **Field Computer > Send** now use the *Relative Milepost*, rather than *Milepost*.
  - File exports now handle numeric overflows by setting out of range numbers to the minimum or maximum allowed value, similar to general reporting.
  - Negative and Anode Names can now contain up to 20 characters.
  - Memo files can now be packed manually using a new **Pack Memo Files** option in the File menu.

## PCS 7.6 / May 2014

Software enhancements and fixes available in PCS 7.6 include those in the following list:

- **All PCS Modules**
  - *Custom Facility Types in PCS Installed Modules*: PCS installed modules now support custom facility types. Use Custom Module Management to add or remove a custom facility type (Module > Custom Module Management). For example, adding a custom facility type labeled Pig Run in the ICM module provides data entry grids and other functionality such as routing, reporting, and scheduling.

**Note:** A PCS installed module is a module that has been installed during the PCS software installation. These include CPDM, ISM, VM, ACM, ILIM, ICM, PCM, PLSM, LSM, and PIM.

- *Mini-Grid Data View:* Clicking the  data view button in the title bar of a mini-grid opens the Data View window where you can choose which fields to include or exclude in a mini-grid. For example, you can now choose which fields to include in the Scheduling Facility Types mini-grid when working in the Information data grid. This feature also applies to the mini-grid in the PIM module as well as those in the CPDM module.
- *Inherited Values:* Inherited values is a feature that simplifies data input when entering data in PCS data entry grids. It allows a user to select an item in a drop-down list for one field, and then have PCS automatically populate another field with an inherited value. Each item available for selection in the drop-down list maps to a specific inherited value. Property settings for inheritance include mapping of two fields in Field and UDF Customizations and then setting inheritance properties for these fields in Validation Tables.
- *Long Name Support:* Hierarchy name, ROW Code, and ROW Name support up to 100 characters.
- *Import Data (File Menu):* Using the File menu command Import Data now imports data correctly.
- *Edit Data by Schedule:* The following message displays when data changes are made in the "Scheduling Facility Types" mini-grid of "Edit Data by Schedule" (Data Entry > Edit Data by Schedule):  
You have changed Scheduling Facility Types settings. Please click "Generate" to refresh the generated schedule.
- *Scheduling Facility Types Mini-Grid:* The mini-grid does not display "green bars" if the latest information record is not selected or the facility is inactive.
- *Scheduling Facility Type Inspected (inspection field):*
  - Displays an inherited value showing the internally calculated default value.
  - Displays "<error>" when the field value links to a "Scheduling Type" that no longer exists.

#### ■ All PCS Modules, continued

- *Scheduling:* The data grid fields "Days Until Delinquent" and "Delinquent Date From Schedule" calculate properly when the field Installation Date is used in the calculation.
- *Define Routes Import, Export:* Define Routes supports Microsoft® Excel® file formats Excel Workbook (\*.xlsx) and Excel 97-2003 Workbook (.xls) when importing and exporting a route.
- *Delete ROW:* A "Confirm Delete" message displays prior to deleting a ROW. The message identifies close interval surveys associated with the ROW to be deleted.
- *Dynamic Forms:* Text boxes are now larger by a few pixels to allow for correct display of text that includes underscores, such as "My\_Form\_Label". For existing forms, resize text boxes using the form editor to take advantage of changes made in text box sizing.

- **Reports:**
  - *Facility Inspections vs Time Graph Report:* Supports the following grouping types with one type per page: Facility (default), Milepost, Inhibitor Injection Point, or Pipeline. Set a grouping type in the Options page of the report.
  - *Export:* Supports Microsoft Excel file formats Excel Workbook (\*.xlsx) and Excel 97-2003 Workbook (.xls).
  - *PCS Delinquency Report:* When changes are made to the inspection interval for Months Between Surveys, the appropriate inspection interval is now used to determine delinquencies.
  - *Columnar Reports:* An error no longer occurs when one or more values are out of range.
  - *Rectifier Reports:* Displaying data for “Rectifier Current Distributions” or “Linked Facility Readings Inspections” when no current distributions or linked readings are defined now functions properly.
- **Field Computer:**
  - *Send Survey/Route - Export List, Exported List:* Supports Microsoft Excel file formats Excel Workbook (\*.xlsx) and Excel 97-2003 Workbook (.xls).
  - *Receive Data:* Receiving data from the Allegro functions properly.
  - *CeFileXfer.exe:* Interface file for sending/receiving Periodic Survey (PS) data between PCS and the Allegro Field Computer has been updated
  - *wToCmd.exe:* Interface file for importing Allegro CeCi close interval survey data in PCS has been updated.
- **All PCS Modules, continued**
  - **Bridge:**
    - *Excel Transition Files:* Select the .xlsx file format when creating an import transition file using Excel 2007 or later. For software versions prior to Excel 2007, select the .xls file format. PCS supports up to 100,000 rows of records when using the Excel .xlsx file format and up to 64,000 rows of records when using the Excel .xls file format.
    - *Import, Print Preview:* Bridge import and print preview function correctly.
    - *Import, Export:* Supports Microsoft Excel file formats Excel Workbook (\*.xlsx) and Excel 97-2003 Workbook (.xls). Now uses the same third party utility as PCS Axis® to read and write Excel Workbook (\*.xlsx) files.
    - *Bridge Log and Bridge Preview Print Grid:* A numeric overflow error no longer occurs. Data is now truncated to fit allowed data length.
  - **Synchronization:**
    - *Hierarchy Reorganization:* Reorganizing the hierarchy on the master and/or replicas, then synchronizing, functions properly on the master and/or replicas.

- *Logging Activity*: Logging synchronization activity functions properly.
- *Internal Corrosion Manager (ICM)*:
  - *New Multi-Select Field "Inhibitor Injectors"*: New field available for use in the ICM Coupons, Samples, and Probes data entry grids. Clicking the field's ellipsis button (...) opens a dialog box with available selections.
  - *Inhibitor Injection Links*: Field now shows all currently selected links regardless of Selected ROWs as well as available links when based on Selected ROWs.
- *Indirect Survey Manager (ISM)*:
  - *CI Survey Graph*: More than five close interval (CI) surveys can be graphed at one time.
  - *Test Point Graphing*: Graphing test points functions properly.
  - *Rubber Banding*: Handles partial-foot value points properly.



## PCS 7.5.1 / January 2014

Software enhancements and fixes available in PCS 7.5.1 include those in the following list:

### ■ **PCS Application, Data Folder/Database, and Documentation Installation:**

- Based on the target computer (32- or 64-bit), the PCS application installs in the following location by default unless changed during the installation:
  - 32-bit computer installation path: *C:\Program Files\PCsv7\*
  - 64-bit computer installation path: *C:\ Program Files (x86)\PCsv7\*
- By default the PCS installation creates a data folder labeled "PCS 7 Data" in "My Documents" with an empty database in the following location unless changed during the installation:  
*C:\My Documents\PCS 7 Data\.*
- A single PCS installer now installs the application, database, and documentation. A separate installer for installing documentation is no longer required. PCS installs documentation in the following location on your computer:
  - 32-bit computer documentation path: *C:\Program Files\PCsv7\manuals*
  - 64-bit computer documentation path: *C:\ Program Files (x86)\PCsv7\manuals*

### ■ **Routes:**

*Linked Rectifiers:* Deactivating a pipeline segment with a linked rectifier that is included in a route no longer removes the linked rectifier from all routes.

### ■ **Synchronization:**

- *Routes:* Facilities added to an existing route for a pipeline segment not previously included in the route now process correctly during synchronization. Facilities are no longer rejected during synchronization and subsequently omitted during Sync & Verify.
- *Server Mode:* A timing issue that resulted in the displayed message "Record Out of Range" when attempting to log conflicts during Sync & Verify has been fixed.
- *Replica Database:* An issue with the replica database structure causing problems during synchronization has been fixed. The replica database structure is now created correctly when generating a backup.

**IMPORTANT:** Users with a previous version of a replica database prior to PCS v7.5 that have not synchronized with the master database should create a backup or get a new backup from the master database.

- **Bridge Import:** An issue with Bridge Import incorrectly creating new ROW Links when using an External ID and Series has been fixed.
- **X-axis in Test Point Graph Report:** An issue with rectifier events not showing on the X-axis of a test point graph has been fixed. PCS v7.5.1 corrects this issue for rectifier, bonds, and mag beds when graphing test point data.

## PCS 7.5 / September 2013

**IMPORTANT NOTICE:** If the server and replica(s) are installed with PCS Hotfix v7.4.1, uninstall the hotfix before installing PCS v7.4.4. Delete the file labeled *\_pcs.app* in the CPDM executable directory (typically at *C:\CPDM\\_pcs.app*) to uninstall PCS Hotfix v7.4.1.

Software enhancements and fixes available in PCS 7.5 include those in the following list:

### ■ **New ZIP Utility:**

Previous issues with “Backup Data” and “Restore Data” have been resolved with a new third-party ZIP utility. Other system features using the new utility include: Import Data, Export Data, Synchronization, Replica backups, and exporting to IMP/RIPL.

### ■ **Synchronization:**

- *Synchronize and Verify:* An improved method is now used to resolve conflicts between the master and replica databases when a field is out-of-sync. If a replica change log record is found showing the last change was made on the replica, the master database is updated.
- *Error Related to Change History Archives:* It is no longer necessary to rename, delete, or create archives in order for some synchronizations to function properly.
- *Error message “Field COMID Does Not accept Null Values”:* This error was due to a rectifier link not set to a pipe. The system now detects the condition and works without an error.

### ■ **Replica:**

- *Generating Replica Backups:*
  - New dialog box provides users the option of selecting whether to include or exclude change history data (changlog and arcchlog) when generating a replica backup.
  - Generating a replica backup is now faster.
  - “Replica Management” window no longer needs to be closed after generating a replica backup.
  - A deleted custom module on the master no longer causes an error during generation.
  - Saving the replica backup to a path with spaces now places the file in the correct location.
  - A replica can no longer modify the “range checking” flag in “Field and UDF Customizations”. The flag creates associated min/max fields as needed, which is not a valid operation on a replica and caused an error during synchronization.
- *Data Modification Utility:*

Running “Mass Create” from a replica no longer displays a message about missing “Base Effective Date” records. These records are now created by the Data Modification Utility (DMU).

#### ■ System Settings:

- *Duplications / System Lockup*: To prevent system lockups, existing databases with duplicate records will need to be cleaned up manually.

This update changes how synchronization handles config table records. Synchronization is now based on the setting key instead of an ID. This prevents duplications seen in previous software versions due to the conversion creating mismatched IDs on the master and replicas.

#### ■ Bridge Import:

- *Performance*: Some Bridge imports will see speed improvements of up to 10 times faster than in previous software versions.
- *Import Voltage Conversion*: The setting for "Import Voltage Conversion" is no longer lost when clicking back to transition fields and modifying selections.
- *Perform Range Checking & Perform Criteria Checking Options*: Setting up a Bridge import file includes two new options you can apply to each data item in the import file. When these options are enabled, the Bridge Error Log identifies imported values that are outside established range values as well as those that are below protection criteria. When these options are disabled, the Bridge import process does not verify whether imported values are out of range or below protection criteria; entries are also not included in the Bridge Error Log. The Bridge Import options override property settings in the Editing tab of System Settings for "Warn user when outside of established range values" and "Warn when below protection Criteria".
- *Preview Option*: Bridge wizard includes a new option labeled "Show preview when bridge is run manually". When enabled, preview windows display showing "raw data" and "processed data". When disabled or Bridge is run in server mode, preview windows are not available and the import process functions the same as in previous software versions.

**IMPORTANT:** Using the Bridge Preview option with a large import when running Bridge can exceed system limits. In these cases a message displays stating the file is too large and changes to the database cannot be retracted. The message displays with large import files that include more than 150,000 rows of facility data or more than 750,000 rows of continuous data. These limits are also affected by available system resources (memory). Row limits are less if other memory intensive programs are running. Before running a large import file, first make a backup of the database. This allows you to restore the database to a state prior to running a large import if unexpected changes occur in the database.

- *Preview Windows of "Raw Data" and "Processed Data"*: The first preview window is a "raw data preview" displaying the content of the import file. The second preview window is a "processed data preview". It includes filters for displaying new records, existing records, and records that cannot be imported.
- *Bridge Log*: When all or part of a Bridge import is cancelled when using the Preview window, the Bridge log includes the words "Cancelled" or "Partial" to indicate the final state for those Bridge imports. If errors occur during the Bridge import, the log includes the word "Errors" instead of "Cancelled" or "Partial".

## Bridge Import, continued

- *Additional External ID Fields:* In addition to selecting character and numeric user defined fields (UDFs) as an external ID, the fields "Facility ID" and "Facility.facid" can also be used as an external ID.
- *Compress Matching:* "Pipe Code" and "Series Number" are now matched using the compress method used with "ROW Code". For example, having "1 " and one-space in the import file will match to "1" and space-one.
- *Base Effective Date Records:* Bridge no longer uses the data integrity check internally (audit) to build "Base Effective Date" records. It now creates these records instead. Previously this caused an issue with replicas because replicas are blocked from creating "Base Effective Date" records in an audit.
- *Blank Required Fields:* A blank "ROW Code", "Milepost" or other required field in the import file no longer causes an error when bridging data. These fields are now marked as "rejected" and can be viewed in the "Bridge Preview" window.
- *New Bridge Setup Option "Match to existing inspections/maintenance on date only":* The new option is available for matching data using only the date and not the time in the field "Inspection Date and Time". It applies when importing inspection, maintenance, and sub-grid inspection data such as negatives.
- *Bridge Setup Options "Assign inspections to an Annual Survey" and "Assign inspections to a Periodic Survey":* These options are no longer visible when they do not apply to the import. Previous versions showed these options as disabled.
- *Bridge Log Errors:* Errors previously dismissed during import are now included in the log.
- *Unmapped Default Location Format:* Bridge no longer encounters an error when the field "Default Location format" is not mapped and the import file includes different milepost formats. Long series of duplicated record numbers are also not logged.
- *Column Names with Spaces or Special Characters:* Import files with spaces or special characters in column names trigger a rule violation. The rule violation displays when using the Bridge wizard and when running the Bridge.
- *Caching of Large Import Files:* Import files selected for import in the Bridge wizard and when running a Bridge import are now cached. Import files are only re-cached when they have changed (newer date/time stamp).
- *Column Names with "ON" Heading:* Having a column named "ON" in the import file no longer causes a system error message. It now generates a rule violation in the import file which subsequently prevents running the import file.
- *Excel File Read Error Message:* A more informative message now displays when PCS is unable to read an Excel file. The message now identifies possible causes of the error, such as a missing Excel "Sheet1" worksheet.
- *Importing Mixed Case Hierarchy Levels:* Running a Bridge import of hierarchy levels 2 through 5 that includes hierarchy level names with mixed case letters no longer causes an error. These are now converted to all uppercase letters.

■ **Bridge Import and Export:**

- *Scheduling Facility Type Inspected:* Data in this column is now bridge-able.
- *Bridge Log:* The log is now synchronized. The “View Log” window also includes information that identifies who was logged in when Bridge was executed and the replica (or master) that Bridge was executed from.
- *Bridge Export:* Exporting too many columns no longer causes an error. This event is now listed in the Bridge Error Log.

■ **Allegro Field PC:**

- *Filters in Send to Allegro:* Customizing filters no longer causes problems. Filter content is now based on what is saved in the filter definition.
- *Pipeline Current On/Off:* These fields are now flagged as an on/off pair for the Allegro.

■ **Reports & Graphs:**

- *Blank Custom Report Name:* A custom report without a defined name no longer causes an error in PCS. It is labeled as “<Blank Menu Caption>” in the menu item's caption. A message also displays notifying the user of the problem and where to find the report each time the user accesses the menu.
- *Graphing CIS Native:* Can now include “Remarks” when graphing “CIS Native” data. This improvement also allows remarks to be included with other fields such as “Structure IRF”.
- *CIS Catalog Report:* Exporting large surveys no longer causes an error during the export process. A similar improvement was applied in “Survey Maintenance” to the field “Number of Readings in Survey”.
- *Current Density Analysis & Summary Reports:* Calculations are now performed on the “Left” currents if adjusted, otherwise “Found” values are used.

■ **Define Routes:**

A rectifier linked to an active ROW and an inactive ROW is no longer removed from routes.

■ **Attached Documents / Olelink 2GB Limit:**

Olelink memo files are now packed each time a linked document is viewed.

■ **Export Data (File menu):**

A ROW-level memo type user defined field no longer causes an error during the export process.

■ **Software Installer:**

Click-through license has been updated.

■ **PCS Version 6 to 7 Conversion:**

The time conversion in the field “Inspection Date and Time” is no longer damaged during conversion.

### PCS 7.4.4 / October 2012

**IMPORTANT NOTICE:** If the server and replica(s) are installed with PCS Hotfix v7.4.1, uninstall the hotfix before installing PCS v7.4.4. Delete the file labeled `_pcs.app` in the CPDM executable directory (typically at `C:\CPDM\_pcs.app`) to uninstall PCS Hotfix v7.4.1.

#### Defect Resolution:

- *Backup/Restore Issues in Newer Operating Systems:* The executable file `pkzipc.exe` has been updated with the latest PKWARE version. The updated file resolves issues when running PCS Backup, Restore, or Import on newer operating systems, such as Vista and Windows 7.
- *Range Checking Modifications on a Replica Cause Synchronization Errors:* Modifications to "System-Range Checking" in Field & UDF Customizations on a replica have been updated to resolve issues causing synchronization errors. Range checking is now disabled on replicas and can only be modified on stand-alone and master databases.

### PCS 7.4.3 / April 2012

*Synchronization:* A synchronization initialization timing issue has been fixed.

**IMPORTANT NOTICE:** If the server and replica(s) are installed with PCS Hotfix v7.4.1, uninstall the hotfix before installing PCS v7.4.3 or v7.4.2. Delete the file labeled `_pcs.app` in the CPDM executable directory (typically at `C:\CPDM\_pcs.app`) to uninstall PCS Hotfix v7.4.1.

### PCS 7.4.2 / March 2012

#### ■ Bridge:

- Using Bridge to export and import data in the In-line Inspection Manager module (ILIM) completes successfully.  
(TFS 3905, 3908)
- Creation of change log records during Bridge imports process more efficiently.  
(TFS 8434)
- Bridge imports with the option "Create new record for each import record" process correctly.  
(TFS 9257)

#### ■ Synchronization:

- Performance enhancement for processing large datasets.  
(TFS 8432)
- Messaging improvements during sync and verify.  
(TFS 8430)
- A synchronization error that occurred during verification when a change log record was retrieved from an archived change log has been corrected. Archived change log files no longer need to be renamed to allow for a successful sync and verify. Any archived change logs that have been renamed can now be renamed back to their original name.  
(TFS 8520)

### Synchronization, continued:

- An error no longer occurs when a field value is changed and then changed again to the original value.  
(TFS 8504)

#### ■ **PCS Hotfix v7.4.1:**

If the server and replica(s) are installed with PCS Hotfix v7.4.1, the hotfix must be uninstalled before installing PCS v7.4.2. Uninstall the hotfix by deleting the file labeled *\_pcs.app* in the CPDM executable directory (typically located at *C:\CPDM\\_pcs.app*).  
(TFS 8457)

### **PCS 7.4.1 Hotfix / February 2012**

#### Synchronization:

- Synchronization no longer fails when a ROW is removed from a replica definition.  
(TFS 8429)
- A misnamed property no longer generates an error message when the master database or replica is zipping a synchronization file.  
(TFS 8433)
- The message *Server Busy Error* displays and the synchronization log reports the messages *Server Abnormal Termination and Program: Changlog*.  
(TFS 8431)

### **PCS 7.4.0.4 / January 2012**

- **Sync and Verify:** Sync and verify in Two-Synchronization works correctly when Export Setting fields in System Settings are disabled or enabled.
- **Linked Documents:** The grid field Facilities Linked Documents now supports file names with up to 240 characters.

### **PCS 7.4.0 / November 2011**

- **Archive Change Log Records:** Automatically archive all archivable records for the master database at a user-defined time.
- **Inspection GPS Fields:** Added the following new fields in grids, reports, Bridge, and field computer prompts: Inspection Latitude, Inspection Longitude, Inspection Elevation, and Inspection GPS Accuracy.
- **RFID Field:** Added RFID field to support RFID data in Periodic Survey file transferred from Allegro MX.
- **Reduction in Change Log Record Creation:** The process for detecting and managing change log records during replica synchronization with the master database has been optimized.

- **Schedule Report Customization:** The report layout can be customized when scheduling facilities by ROW; select from a list of report fields in the Selected Fields pane of the Layout tab.
- **Database Cleanup:** Instead of logging each shunt reset performed during the Database Integrity Check, the message Reset # invalid readings to null is added in the audit log when the conversion process is completed.
- **Bridge:**
  - *Importing in ISM:* Mandatory fields populate correctly when generating a Bridge import in ISM for a continuous survey.
  - *Importing with Facility Location Format Overrides:* Syntax error no longer occurs when importing Facility Location Format overrides.
  - *Import/Export Scheduling:* Scheduling Bridge to automatically run between 12:00pm and 12:59pm executes correctly.
  - *Importing Data in an Excel File:* Supports Microsoft Excel 2010 file formats in a Windows 7 32-bit and 64-bit environment.
- **Email Notification:**
  - *Event Reports:* When an event is assigned to sections of the hierarchy with no schedulable facility types, an error no longer occurs when the Email Notification process returns zero results.
  - *Event Assignment Scheduling:* An issue with Email Events scheduled to automatically run between 12:00pm and 12:59pm has been fixed.
  - *Reports:* Email Notification reports sort in ascending in the following manner: Range Violation report sorts by Date; Pending Due Dates report sorts by Due Date; Delinquency Dates report sorts by Delinquency Date; Criteria and Range Violations sort by Inspection Date and Time.
- **Reports/Graphs:**
  - *Graph Reports:* WiGraf executable (wigraf98.exe) has been updated to allow for driverless operation on any Windows system running PCS graph reports.
  - *Summary Reports:* The report supports a Count summation for open maintenance items when the report is set up to include the optional setting, Summation Filter for the fields Repair Corrected Date and Is missing.
- **Synchronization:** The command *Syntax error in Server Mode* has been corrected; master database and replica(s) synchronize data successfully.
- **Version 6 to 7 Database Conversion Fixes:**
  - *Event Assignments in Email Notification:* Event Assignment is included in the topmost hierarchy level (typically Company Name) when all ROWs are assigned the same Event Assignment.



**Version 6 to 7 Database Conversion Fixes, continued:**

- *Rectifier Anode Conversion:* Rectifier anodes convert correctly.
- *Rectifier Negative Conversion:* Rectifier negatives convert correctly.
- *ROW Schedule Settings:* All ROW Schedule Settings in Edit Schedule Settings transfer correctly and link to the correct facility type. Schedule definitions in Define Schedules do not convert and should be redefined after the database conversion.
- *Schedule Facility Type Conversion:* Schedule settings for all facility types in Edit Schedule Settings transfer correctly.
- *Facility Information Grid/Scheduling Facility Types:* Facility schedule settings in the Scheduling Facility Types mini-grid of the Information grid in Edit Data by Facility transfer correctly.
- *Shunt Ratings and Factors:* All shunt ratings and shunt factors update in a v6 to v7 database conversion.
- *Population Classifications:* Population Classifications for PLSM facilities now transfer to blue Facility Population Classification fields.

## Product Support and Training

If you have a suggestion, question, feature request, or a bug to report-your feedback would be appreciated. Also if you have a training need for your organization or would like to know more about upcoming PCS training classes, use any of the following contact information to reach PCS Technical Services:

Support E-mail:[pcstechservices@aiworldwide.com](mailto:pcstechservices@aiworldwide.com)

Support Telephone:1-800-229-3404

American Innovations:<http://www.aiworldwide.com>