



Software Changes Document: CADmep+

MAP Software Version: 2.40.062 SP3 Version LOK Code : 19 Release Date : 30/09/2010

New Patterns\Enhancements

Pattern Enhancements

- CID 2160 (Circular Branch on Straight) - Now supports inlet/outlet options.

Application Fixes

Database

- Fixed duplicate specification/material entries when importing new services (caused by initialised rotary size on gauges).

Design Line

- Fixed an issue with 4 way reducers in design line getting the reducer on the wrong output.

Flange Graphics

- Improved the display of flange graphics in ISO views by making all edges visible.

Spooling

- Creating spools to a layout or drawing was crashing if the reports used the fields Item Connector Location Z Top or Bottom print objects.
- Issue fixed with spooling out to DWG files in AutoCAD 2011 causing the graphics screen to become unstable, (i.e. cursor not present inside the drawing area).

Sub Assemblies

- Fixed sub assembly editor prompting the user two times for Cancel.
- Now allow dimensions not covered by product data to be assigned by a dynamic sub assembly.

Pattern Fixes

Pattern Fixes

- CID 970 (Circular Reducer + Holes) - Was not using the diameter type option.
- CID 1144 (TriProDamper) - Increasing the handle length caused it to offset inward instead of outward.
- CID 839 (Circular Box on Straight) - Reducer end diameter was not adjusted with DW/Insulation applied.



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MAP Software Version: 2.40.059 SP2 **Version LOK Code :** 19 **Release Date :** 31/08/2010

New Features

Commands

- 2 New commands, "IsolateObjectsInXrefVP" and "HideObjectsInXrefVP" (or IOIXVP and HOIXVP). These commands allow selecting objects in an xref and either Hide or Isolate through the Paperspace VP, changes to the XREF are saved back to disk.

Data Links

- Add "Data Links" menu to right click context menu for items selected that have links added

Renumber Command

- Allow Renumber command to be called as a Lisp function so it pauses lisp routine until command has finished, allowing user to run additional lisp functions after renumber, function name is MAPRenumber

Application Fixes

Combined Straight

- Fixed pattern 866 Option #15 Override, user was not able to cycle through the various types.

Design Line

- Fixed an issue with 4 way reducers in getting the reducer on the wrong output.
- Fixed supports not filling in correctly when bounded by offset nodes.

Drop into Fall

- Not tidying up run correctly either side of added fitting
- Drop into Fall was not allowing 0 from the list of available entry angles and bend angles, i.e. the first entry

Graphical Pattern View

- Re-introduced Graphical Pattern View for Worksheets, was missing from the 2.40 builds.

Item Folders

- Fixed create sub folder off 'item folders' actually adding the new folder as a root element, not a child of item folders.

Lisp

- Fixed "unhandled exception" error using (settext) lisp command and only passing in 3 values. i.e. (settext (ssget) 1 "off")

Profiles

- Prevention of having the wrong database loaded when opening multiple drawings drawn in different Profiles.

Straight (Cut)

- Fixed pattern 1 Option #1 Straight Type, 4 parts was naming the last part development incorrectly.

Units

- Fixed the entering of dimensions using feet, changed so no inch value required.



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Pattern Fixes

Pattern Fixes

- CID 523, 2523 (Circular Bend) - when Centreline Input enabled, outside insulation was not drawing correctly.
- CID 1, 35, 866 (Rectangular Straights) - Hole developments in certain scenarios were missing when using offsets. e.g. 2L part developments.



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MAP Software Version: 2.40.052 SP1 **Version LOK Code :** 19 **Release Date :** 05/08/2010

New Features

Annotation leaders

- 1. New command TOGGLELEADER, turns leader display On/Off
- 2. New command RESETLEADERLANDING or RLL, resets the leader landing position back to default (none)
- 3. SetText Lisp command, new last parameter to Toggle Leader Display if set to 1.
- 4. ListMapText now reports out Leader visibility

New Patterns\Enhancements

Pattern Enhancements

- CID 846 - (Oval Tap on Straight) - Now supports right reducer (as per CID 1115/6)

Application Fixes

AppInfo

- Ensure the Active Profile Name is reported in the APPINFO dialogue and Title bar when the application is initially loaded.

Cost Breakdown

- Changed Cost Breakdown dialogue so uses fixed spacing and also changed the font to Lucida Console.

Create2D

- Create2D (or explodetext) on Text aligned to Length at 330 degrees was exploding to a rotated angle.

Database Reading + Conversion

- Using ITM files with STRICT matching enabled was forcing the specification to be added to the database multiple times, if the master database had a Default Material assigned to the spec.

Design Line

- Implemented a work-around for AutoCAD 2011; when drawing design lines and changing constraints would lose focus when moving over the drawing area.
- Fixed Source fittings failing to Fill in 3D (failed matching sizes).

Dialogs

- Fixed pressing Escape on dialogs that have 3D Viewers, stopped them closing when the user just presses Esc. to cancel selection.

Drop Into Fall

- Stopped drop into fall splitting the item above when placing the Cut-In fitting.

Fixer

- Fixer dialog on drainage bends being taken off uphill, would apply the settings selected but the wrong end would adjust.



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Insulation Specs

- Fixed insulation specifications applying the wrong library of connectors to transitional items.

Invalid connectors

- Fixed takeoff using invalid data for unused connectors.

Item Reports

- Fixed the "Available" filter.

Materials

- Fixed insulation material links so that when selecting insulation in a drop down, the link to the insulation database appears as it should.
Fixed a crash if current material deleted from the material link.
Made changes to fix the way new or deleted material acts, for example; when prompting to copy/remove entries relating to all materials.

Multi Point Fill

- Was not always using the correct sized fittings.

Multiple Item Properties

- Fixed an item having invalid insulation stopping Multiple Item Properties working at all.

Price\Times Editors

- Fixed potential crash in product listed price/times table editors if prodinfo columns are shown that have blank data.

Print Objects

- Fixed Object Connector Location Z Top\Bottom crashing reports.

Profiles

- Fixed Insulation and Hanger specifications to convert when creating extra profiles. Also introduced fix for Fabrication, Installation and Price Lists tables so they too are not deleted.

Setup Services

- Fixed editing a new button in the Service template editor reloading & losing the button just added.

Specifications

- Fixed dialogue that prompted to delete entries in the specification. Was deleting the entries for that material regardless of selecting No.

Spooling

- When plotting objects with a colour override, (e.g. spool colour), the objects were being plotted in the parent layer colour, unless the "Use Objects Colour for Hidden Detail" was set to Yes, now corrected to only obey the switch when plotting with hidden detail.

Sub Assemblies

- Assemblies containing different sized ends were not carrying over the correct size to the Out end, it was carrying over the In end size resulting in the wrong sized part being auto attached as the next item.
Additionally, when taking off a sub assembly with different sized ends, it was being "flipped" when auto attached and connecting by the wrong end.

Takeoff

- Fixed missing connector/seam numbers in Takeoff views. This now displays with the number for example "C1=DM25 500x400" previously displayed without the number "C=DM25 500x400".



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Pattern Fixes

Pattern Fixes

- CID 2938 (Circular Bend on Straight) - C5 connector now enabled.
- CID 1111 (Tee Coupling) - If Len1 is the same value as Len2 then Connectors C1 and C2 become active and can be used as "cut in" to pipe runs.
- CID 988 (Oval Branch on Flat) - Fixed so that it uses Rectangular Specs instead of Oval.

MAP Software Version: 2.40.039

Version LOK Code : 19

Release Date : 24/06/2010

Application Fixes

Stiffeners

- Fixed users not seeing Ancillary Materials assigned to stiffeners if the Costing option was not enabled on their dongle but the Estimating option had been.



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MAP Software Version: 2.40.036

Version LOK Code : 19

Release Date : 15/06/2010

New Features

ADDREPORT

- Option added to AddReport to "Copy Existing" when making new report.

Application loading

- Optimised the application initialisation when executing with non-global active profiles.

Cost Breakdown

- Added "Cost Breakdown" command to context menus and allow pre selected objects.

Costing Database

- Added the ability to use a Specification custom filter when creating Fabrication and Installation times tables.

Database Filtering

- New feature that enables users to filter out data from collapsable databases such as Connector and Seam databases. Users can Right Click any of the header fields and select Filter.

Design Line

- Snapping to MAP 3D objects when drawing in design line now disabled by default, (snaps get in the way when Dynamic filling) unless forced by holding CTRL Key.
- GUI: Auto elevation update button has now been amended to insert automatic offset lines when changing fixby position. Change in line position is relative to working width/depth.
- Filling with CID 1107, 1174 (Partition Wall, Partition Corner) now supported.
- Terminal styles database list now shows additional information about the terminal style, i.e. flex button code, flex min & max lengths and the flex through nodes option.
- Auto elevation updates button has now been amended to insert automatic line offset lines when changing fixby position. Change in line position is relative to working width/depth.
- Changed Fitting Node dialogue to appear as toolbar. Also amended the command so the edit dialogue appears initially.
- Dummy terminals should now reduce or shape-change as necessary.

Fill 2 Ends

- Added new fill two ends command, available as FILL2ENDS2 or F2E; includes totals for Weight, Area and Cost for each solution.

HASP Notice

- IMPORTANT: Changes to MAP licensing now only allows HL type keys to be used when running this version and future releases of the software. We have now dropped support for HASP4 and Parallel keys and users are reminded that for information on Swapping out their keys, they should be contacting their local distributor/dealer.

Please be aware that this update will install the SRM Drivers associated with these HL keys in order for you to obtain access to the latest version of the software.

Hyperlinks

- New command "AppendItemsLink" or "AIL" to copy the hyperlinks stored on ITM files to ACAD hyperlinks, for access in AutoCAD and Navis.

Item Numbers

- Added new option to Item Numbers; allows the user to Discard leading Zero's when re-numbering.



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ITM Links

- Add ability to add links to item files; can only be setup via scripting and appears as a separate "links" tab in item folders.

Mapfilter

- Add options selection set to Lisp MapFilter as last parameter (mapfilter "#code=??" 1 1 0 (ssget))

Model Space Text Size

- Option added to display text in Model Space when the switch "Only Display Text in PAPER Space Viewports" is enabled. If the Model Space Text Size is > 0, it will display at the entered size in the model (Annotative Text).

Multi Service Fill

- Working in CAM with a Service Layout.
Working in CAD with a selection of items.

New Print Object

- "Item Fitting Type" added to list of Print Objects for AddReport text (can be used to filter).

OpenGL

- Removed depreciated non-OpenGL drawing code - OpenGL is now a minimum requirement.

Print Objects

- Additional print objects for tie rod/bolt/material/corners (per stiffening position).

Product Lists

- Revamped product lists so that dim/option columns don't use visible indexes - this means unlocked dims can be skipped and fixes issues with new dims added on patterns with holes.
We now no longer reload catalogue lists all the time (use console command 'reloadprods' to force reload on old jobs). We cache similar lists instead of discarding them.

IMPORTANT NOTE: This change breaks all forwards compatability - product definitions will be lost to old versions if items are saved in this version.

Reports

- Each report now has the option to Override the default Printer assigned. Useful for creating a duplicate report and saving one as PDF. Available by Options interface of each report.
- Added "Item Insulation Nett Cost" and "Item Insulation Gross Cost" to Exporting Item Data.

Scripting

- Added item.canrotary() and item.rotarynest = true/false to the scripting references

Sections

- Implemented new option for Retrofit % onto Section properties.

Service Editor

- Optimised the service template editor to be quicker at initialising; so it doesn't copy every template, just in case the user cancels, it copies them as and when needed.

Service Information Print

- Users can now print out Service information such as Service Template name, Button Mappings, Layering information and Offset rules applicable to each service.

SETTEXT



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- Extend Lisp (SETTEXT) functionality, can now pass additional parameters so the text On/Off works per viewport, allowing user to turn On or Off any text per viewport:
(settext (ssget) 2 "on" 1) will turn on Size in "this" viewport only
(settext (ssget) 127 "Off" 1) will turn all text off on the selected objects in "this" viewport only

Shift - Right Click menu

- Updated the Shift - Right Click menu to use new Fill 2 Ends command and added Output to Viewer.

Spooling

- Spool names are now sorted alphanumerically in the "Select" for processing dialogue.
- Now allow Spool "Frames" to exist in multiple spool layouts.

Step Down connectors

- Support added to draw step down rectangular connectors in Takeoff views (CAD and CAM) and in the 3D job Viewer (CAM,EST).

Stiffeners

- Revamped stiffeners to include breakpoint tables for ancillaries and rod data. Now allows advanced configuration to comply with specifications.

Takeoff Views

- New Takeoff Views introduced to provide the user with more flexibility and advanced settings on annotation, graphical elements, views, colour and textures.

Textures

- New setting in facings to control how textures are applied to the model (By Face or By Model).

Trimble Export

- New TrimbleLayoutAPI_MEP.DLL for 32 and 64 bit (_MEPx64.dll) builds.
New file extension supported (*.MEP) that supports LINE entries when using sleeves, CID 149, 972 and 1972, the node points are extended by 6" (150mm) so the machine can track the points if the wall is moved.
- Added an option to hanger pattern to include the drop rod diameter in the description of the item in the export file for the trimble layout unit (*.mep & *.cnx only).

Wrap pattern

- Now allow the Wrapper pattern to work with Electrical Only dongle.

New Patterns\Enhancements

New Patterns

- CID 1179 (Taper + Bend 2 Way)
- CID 1180 (Linear Radius Diffuser)
- CID 1172 (Radius Bend - Angled ends)
- CID 1165 (Cabinete)
- CID 1168 (SinkTop)
- CID 1135 (Door)
- CID 1169 (Rectangular Windows)
- CID 1170 (Tubular Truss)
- CID 1168 (Sink Top)
- CID 1171 (Rectangular Angled Straight)
- CID 1178 (Ductboard Sarajevo Taper)



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- CID1173 (Circular Branch On Bend) - Allows branch to be positioned anywhere on the segmented bend.
- CID 1107 (Partition Wall)
CID 1169 (Rectangular Windows)
- CID 1174 (Partition Corner)
- CID 1176 (Structural Camber)
- CID 1166 (Rectangular Sloped Elbow)
- CID 1167 (Rectangular Triple Offset Tee)

Pattern Enhancements

- CID 838 (Hanger) - New type added "J2".
- CID 838 (Hanger) - Type "V Bottom Clevis" now support seismic rods.
- CID 965/2965 (Circular Tee Reducer) - Added centre-line and option for left/right lengths to include extensions.
- CID 1119 (Oval 3 Way) - Added support for collars to develop separately from reducers parts; added C6 between reducers and body.
- CID 929 (Kymen Macro) - Added a new dimension for the back holes' offset; front/back options to offset from top instead of "centre".
- CID 910 (Girder) - Type Half: Added separate top and bottom turnover options and options to allow angled ends.
- CID 2965 (Circular Tee with Reducers) - Branch length now taken from the pipe axis when using the Centreline Input option.
- CID 2326 (Circular Branch on Bend) - Added a CAD node at the intersection point of the branch and bend centre lines (when branch only).
- CID 838 (Hanger: Clevis) - Added clevis seismic rod options.
- CID 521 (AHU pattern) - Amended holes' (unused) collar allowance option to allow select hole type as normal, or doors or a directional arrow.
- CID 838 (Hanger) - Added arrow draw to wrap-round & clipped flat strap types.
- CID 2881/2/3/5 (Radius Branches) - Now allow collars to be stretched.
- CID 916 (Waste Trap) - Added OpenGL annotation and a new dimension for C2 (different inner diameter whilst not affecting pipe diameter).
- CID 910 (Girder) - New option for minimum size connector (stopped drawing a rectangle around 'I' shape ends).
- CID 59 (Segment) - Added option to enter by Central or End Diameter dimension.
- CID151 (Rectangular Angled Taper) - Now supports double wall.
- CID 933 (Circular Offset Reducer Cross) - Added support for the development of reducer collars.
- CID 397 (Insulation Cladding Valve Box) - Now supports add hole.
- CID 1152 (Arch) - Now includes keystone (Dim. D & E).
- CID 838 (Hanger) - Types "J" and "J2" now support seismic rods.
- 1135 (Door) - Now allows window area to be partitioned into 2/4/6/8 smaller windows; window horizontal offset from left/right option removed (always from left now); options to fill windows for panelling effects.
- CID 6, 330 (Reducing Offset, Radius 2-way Offset) - Now support stiffeners.
- CID 900 (Cable Riser) - Added new type Vertical Elbow.
- CID 399 (Rectangular Drop Bend) - Now supports Splitters.
- CID 878 (Cable Bend) - Added option for Outside or Inside Width when set to Horizontal option type.
- CID 900 (Cable Riser) - Added new option for Outside or Inside Width.
- CID 399 (Rectangular Drop Cheek Bend) - Now supports splitters.
- CID 2326 (Circular Branch On Bend) - Now allows different top/bottom body diameters.
- CID 394 (Circular Elbow) - Added option to define the number of splitters.
- CID 878 (Cable Bend) - Added new type Horizontal Elbow.
- CID 877 (Electrical Straight) - Now supports "Add Hole" (Type "Closed" only)
- CID 472 (Rectangular Double Offset) - New option & dimension to input middle width.
- CID 1158 (MultiWall) - Now supports Takeoff as Cut-In using CID 1152 (Arch).



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Application Fixes

3D Viewer crash

- Fix for AutoCAD 2009 when using 3DViewer with Object Text turned on.

Change Object(s) Properties

- Fixed issue with multiple item selection when having items with insulation and double wall/materials settings that vary; was not obeying/reporting "Mixed Values" consistently.
- Fixed template couplings inserted by stretch not being converted to catalogues, which stopped Change Object(s) Properties allowing the material to be changed.

Compact Database

- Fixed "compact database" wiping out hanger and insulation specifications.

Connectivity

- Fixed Takeoff as Cutin not picking up Connectiviting field if connector in a separate group.

Connectors

- User can now multiple select connectors by using isolated selection using the CTRL key and also for block selection using the SHIFT key. Now gives the user the ability to edit more than one connector at a time.

Create2D

- "Step Down" and "Blank End" rectangular connectors were not creating lines for the "Create2D" command (and Hide).

Design Line

- Terminal styles - no flex option on a terminal style was sometimes adding random fittings.
- Flow-sized terminals were not being reduced when needed.
- Fix implemented for when using offset lines that are not orientated perfectly. Positions were incorrect and could fill in 3D cutting out parts of the duct in certain situations (u type runs).
- a) Fixed hangers on "dropper lines" placing the hanger on the line rather than the expanded fittings (floating elevation).
- b) Shape changing in a round spigoted terminal on a Rectangular line was placing a Rect-to-Oval rather than Rect-to-Round.
- a) Stopped hangers being filled where offset rules have been applied.
- b) Fixed the filling of offsets using two bends when using non-centreline fixbys.
- Design line straight filling was missing or using incorrect couplings where multiple straights are required.
- Design line hangers and offset rules filled with 2 elbows: hangers were getting placed on the line when the fittings don't follow the line.
- Combine command was leaving combined design lines behind, amended to erase them.
- Enhanced dynamic fill, was producing gaps and re-filling when it wasn't necessary.
- Terminal styles: fixed some issues with flex not working between the min & max ranges correctly.
- Fixed Line Editor > Change Constraints dialog, was only listing a maximum of 20 constraints.
- Stopped a crash when no service active in design line mode.
- Fixed an issue with 'redbend' expansions where the bend required a shape change and is a riser. The shape change e.g. a square-to-round onto a rectangular riser would go in with the width/depth misaligned to the riser line.
- Fixed an issue with hangers not getting sized correctly on design line, when using specs that have different OD sizes to nominal sizes.
- Line elevation tool snap points defaulted to midpoint, has been amended to use near, end and midpoints.

Explode connectors

- Added support for rectangular and round connectors, now explode down to faces.

IFC



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- Fixed importing some Revit IFC step format files.

Pickbox (AutoCAD 2011 only)

- In AutoCAD 2011 using "Takeoff As Cut In" was not activating the drawing window, so the cursor was not set to a "select object" pickbox.
Also applied when adding terminals and fittings to design line, now fixed.

Report filters

- Fixed report filter 'not' duplication bug, optimised job contents for large jobs; fixed job contents section filter 'none' not working.

Ribbon

- Lock Document when using IMPORTSYS so the Ribbon Bar activates after the command.

Save As Icon

- Stopped the user from being prompted where to save the icon file to when using Save As Icon (defaults to the same location as the ITM file).

Takeoff

- Fixed crashes in takeoff with product listed wrapped items, dimensions not being preserved and the model column not working within the product list editor.

Trimble Export

- Now outputs points for all Seismic drop rods.

Pattern Fixes

Pattern Fixes

- CID 959, 1178 (Rectangular Taper SE, Rectangular Taper Sarajevo KD) - Fixed missing CAD nodes.
- CID 879, 901 (Cable Tee & Cable Reducer) - Fixed certain dimensions making rung intersections fail.
- CID 73, 99, 100, 863, 869 (Circular Breeches) - Fixed double wall not drawing correctly when using "Auto" collars.
- CID 2326 (Circular Branch on Bend) - Fixed the branch not drawing correctly; due to not being fully intersected with bend.
- CID 37, 185, 835 (Rectangular Drop Junction) - Fixed double wall for radiused heel bends; left/right height was not being adjusted.
- CID 1115 (Oval Conical Tee Cross with Reducer) - Fixed Double Wall adjusting the right extension dimension.
- CID 395 (Reducer + Mitred Branch) - Fixed branch not being inset correctly, added missing CAD nodes.
- CID 33 (Straight + Shoes) - Connector 1 required flipping (was causing the patterns alignment to be flipped opposite to the alignment indicator).
- CID 1174 (Partition Corner) - Angle annotation was incorrect.
- CID 2965 (Circular Tee Reducer) - Fixed incorrect pattern annotation when setting the body diameter; from "Auto" to a value different from the top diameter.
- CID 1172 (Rectangular Angled Straight) - Stopped allowing certain invalid configurations (now prompts "Geometry Is Invalid" warning).
- CID 927 (Filter Box) - Added CAD nodes.
- CID 988 (Oval Branch on Rectangular) - Was adding the insulation thickness to the Collar of the Skin when double wall or insulation applied.
- CID 326, 327, 1173, 2326 (Circular Branch on Bend) - Added support for full 3D branch/bend intersections; so no restriction on branch diameter or number of segments straddled by.
- CID 883 (Pump) - Fixed X/Y Rotate options not being applied.
- CID 330 (Rectangular Radius Offset) - Seam cutbacks were not being applied correctly dependant on sides offsets.



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- CID 906 (Oval Saddle On Straight) - Fixed the display of the the branch`s curved intersected sides; was only drawing one central triangle for each side.

MAP Software Version: 2.38.221

Version LOK Code : 18

Release Date : 08/04/2010

Application Fixes

Annotation

- Length Dimensions were displaying Chinese characters (only affected version 2.38.217)

Carry Over Insulation

- Stopped carrying over insulation if carry over insulation is off, but carry over double wall is on and double wall isn't being used.

Multiple Item Properties

- Fixed multiple item property (with dims enabled) showing adjusted (skin) size for double wall if entering by skin size, not main body. When user clicked ok we then stored the skin size as the main body size and increased the size!
- Stopped forcing the redevelopment of items when using multiple items properties, if user doesn't change the dimensions.

Stiffeners

- Fix introduced to enable stiffening at the end positions regardless of whether set to be stiffened centrally. Had not being getting these stiffeners previously if central had external assigned.

Pattern Fixes

Pattern Fixes

- CID 912 (Tank) - Holes added were positioned incorrectly when option "Branches Inset Centrally" and dim Inset "Top/Bottom".



Software Changes Document: CADmep+

MAP Software Version: 2.38.217

Version LOK Code : 18

Release Date : 02/03/2010

Application Fixes

Associated Blocks

- Now preserve associated blocks and reports on items (level, ctext), Copy/Paste across databases maintains blocks and report formats when pasted.

Design Line

- Hangers were not sizing correctly if Inside Insulation was on.

Insulation Specifications

- Fixed insulation specs not always adjusting the skin size properly.

Rise/Fall Symbols

- Symbols for Round were not obeying service overrides, only using the main database settings.

Splitters

- Splitter holes are now set to zero if the inset value \geq half the splitter length to stop resulting in negative spacing.

Pattern Fixes

Pattern Fixes

- CID 996 (Terminal) - Fixed the round end takeoff carrying over the patterns rectangular size.



Software Changes Document: CADmep+

MAP Software Version: 2.38.214

Version LOK Code : 18

Release Date : 03/02/2010

Application Fixes

Airturn Calculations

- Changed the number of banks calculations to check Minimum Length against Duct Depth not Vane Length, to agree with DW specifications.

Design line

- Dynamic fill: fixed an issue with lines not being filled - particularly when an existing run had been tee'd into.
- Fix memory leaks stretching straights / filling design lines.
- Stopped crashes occurring when there were loop backs in the design line.

Drop into Fall

- Fixed certain item combo's not filling correctly.

Locked Layers

- Fixed selection windows, they were not always being initiated if using imported underlay's and locked layers.

Pattern Groups - CID 985

- Re-assigned CID 985 (Beam Strut) to allow use when Standard Parts or Structure is dongle enabled.

Pattern Fixes

CID 14 (Rectangular Breeches)

- Removed the incorrect display of left & right height dimensions.



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MAP Software Version: 2.38.212

Version LOK Code : 18

Release Date : 25/01/2010

Application Fixes

Design line

- Hangers on "dropper lines" issue: was placing the hanger on the line rather than the expanded fittings at the floating elevation. Fixed shape changing for a round spigot terminal on a rectangular line; was placing a rect-to-oval rather than rect-to-round.

Invalid Dimensions

- Fixed a problem with internal dimensions not working (wrong/bad dims) if they relied on dependant (calculated) dimensions.

MAP.ini

- Fixed paths being made absolute if using "../" reference to move back a directory.

Memory leak

- Fixed a memory leak in the valve pattern (CID 868).

Product List Takeoff

- Fixed takeoff product lists not allowing takeoff sizes by their opposite end (eg. list a 600x300 taper sized for a 300 takeoff - issue only affected version 2.38.210)

Takeoff Colours

- Colours = None now only displays for the dimension background colour which was previously shown in the viewers.



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MAP Software Version: 2.38.210

Version LOK Code : 18

Release Date : 12/01/2010

New Features

ADDREPORT

- Added Seam Print object to ADDREPORT (Spool Reports).

Annotation (risers)

- Added option to all text (except ctext) to control whether to hide the display in a vertical view, i.e. riser situation, defaults to Yes.

CSVEXPORT

- LISP function: CSVEXPORT will now accept a Selection Set as the 2nd parameter, if supplied the user is not prompted to select objects.

Database ID

- Now allow Database ID to be displayed in Folders view, will not display for Product Lists which have multiple entries.

Design Line

- Improvements made to "Custom Resistance Configuration", so that rules can be enabled or disabled without having to delete and recreate.
- New feature which displays a warning message if Terminals have no flow rates applied, the warning gives the user the option to set the flow.
- CID 1122 (Drop Cheek Bend) is now supported.
- Pressure Drop Rules: during 3D Fill of design line, if a node has a single item, and that item has a non auto rule, apply the rule to the item. Allows several items using same pattern to use different rules to look up resistance tables.

Dialog

- Now allow messages dialogs with expandable details to resize.

IFC Export

- Added colours to the IFC (step) export.

Item Folders/Attacher

- Store the Item Path when using Attacher so when "Folders" command is entered, it opens at the location of item.

Item Scripting

- Added print object and scripting access to Item Decoiler Beading so can view whether set to Yes or No.

Level Text

- Support for reporting Elevations from "other" end by holding the TAB key when using the ELEVS command,

MAPUSER

- New entry added "Edit Sections", which only allows editing of the Sections Database without access to Service Database or Full Database.

Profiles

- New option added to EDITMAP and CAD/CAM Message Prompts for Switch Profiles. Allows the user to control whether a prompt appears when the software attempts to revert to the profile the drawing was completed in.

Rise/Fall Symbols



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- New option to assign the drawing of Rise Fall symbols on any Item, "TRFSD" or "TOGGLERFSYMDISPLAY" commands. It selects between C1 end, C2 end and Off
Also available from context sensitive menu, "Rise-Fall Symbols" -> C1 End, C2 End, Off
- 1. Add Rise Fall drawing support to CID 12, 802 Cap Ends when in Rises negating the need for Elbows top/bottom.
2. Option added to the Cap Ends to suppress "cross" drawing, else it interferes with Rise/Fall symbols.
- 1. New Styles added to Rise/Fall Symbols, None, Supply, Extract and Exhaust
2. Control over which Rise Fall styles to use have been added to service database, last Tab.

Services

- Change applied to allow renamed IEZ's to import without prompting any error.

Spooling

- New option when creating Spools to position the COG (Centre Of Gravity) marker for each spool, if the COG block exists in the drawing.
Can be disabled by setting AddCOGMarker=0 in spool.ini
- Added new option for saving the SPOOL,.INI file to a user specified location, stored in the registry:
HKEY_CURRENT_USER\Software\MAPLTD\CadDuct\SpooliniFolder.

Takeoff

- Added the ability to toggle between Metric and Imperial using the F11 key on the pattern takeoff view.

Textures

- Added Textures folder to MAP.INI. Revamped MAP.INI processing - removed support for importing ancient MAP.CFG.

New Patterns\Enhancements

New Patterns

- CID 1150 (Splitter Damper Blade)
- CID 1152 (Structural Steel Arch)
- CID 1153-1155 (Ductboard Rectangular Reducers)
- CID 1156 (Ceiling Panel - Including developments for manufacturing)
- CID 1157 (Stairs)
- CID 1159 (Partial Grille)
- CID 1177 (Conical Branch)
- CID 1180 (Linear Radius Diffuser)
- CID 4522 (Rectangular Coupler) - Allows rectangular items to be coupled together in the same way as Round and Oval, based on connectivity matching.

Pattern Enhancements



Software Changes Document: CADmep+

- CID 7 (Rectangular Shoe) - Now supports "Add Hole", skin will be applied to hole if "Double Wall" enabled.
- CID 8, 29 (Square to Round) - New option added to the Options list of the Square to Round called "V Notch Rectangular Extension". When Notch for Connector Split from Pattern Options > Notches is set to None, this option can be used to separate the Rectangular Connector extension on the Seam.
- CID 51, 71, 162, 2051, 2071, 3051 (Circular Reducer) - Diameter dimensions renamed to "Diameter In" & "Diameter Out".
- CID 68, 107, 111 (Round Offset, Oval Bend, Oval Offset) - New option added "Automatic nest break if oversize".
- CID 78 (Register) - Added separate dimensions for top and bottom hole types.
- CID 115, 117, 887, 906 (Oval Saddle On Straight) - Now supports double wall and Auto extensions (increased pipe's default length so the DW branch will fit).
- CID 8 & 29, 382, 893 (Square to Round, Rectangular Grille Box, Angled Grille Box)) - Now support "Add Hole".
- CID 501, 502, 509, 533 & 914 (Damper Patterns) - New control type added: Option #2 "Knob".
- CID 1102 (Toilet) - New options added "Square" or "No Box" for cistern and options to set downward output pipe.
- CID 1115 & 1116 (Oval Tap(s) on Straight) - Added Connector #5 where the body meets the reducer. Added the ability to change to Round branches which also triggers the connector type; Branch Depth field is required to be set to Round or else the pattern keeps the Oval connector types.
- CID 1115 (Oval Conical Tee Cross with Reducer) - Skin Calculations were adjusting the right extension dimension when "Auto", resulting in a very long reducer skin extension; fixed.
- CID 1133 (Damper Box) - Added dimension field for Damper Inset: Central or a value available.
- CID 149, 1049 (Wall Sleeve) - Now enabled for use if the dangled option Standard Parts is enabled.
- CID 166 (Rectangular Canvas Connection) - New options to define the 2D line detail spacing, enables input of either quantity or spacing.
- CID 2, 27, 253, 342, 440, 441 (Rectangular Taper) - Allow holes to be rotated.
- CID 2326 (Stab-In on Round Elbow) - Now allows different top diameter from bottom diameter; branch is specified using X/Y offsets.
- CID 2881 (Radius Branch) - Now reports branch centre line length in the graphical view and included option for Branch Centreline Length with Collar Yes or No.
- CID 2938 (Wye + Bend) - Added option to specify branch insets to the ends of the branch bends extension.
- CID 1114, 2821, 2899, 2326, 2044, 2938 (Urinal, Reducing Radius Tee, Straight + Bend, Stab-In on Round Elbow, Straight + Branch, Wye + Bend) - Options added to define inlet & outlet numbers.
- CID 2965 (Round Tee with Reducers) - Now supports centreline input.
- CID 838 (Hanger) :
 - New type added "Double Profile Bearer".
 - Added Oval to the Profile when Type Profile Bearer, Stirrup (Half Oval) and Split Ring (Full Oval) are selected.
 - Added area of influence circles for Z and Flat Strap hanger types.
 - New options added to draw arrow, when configured as either "Wrap Round" or "Clipped Flat Strap".
- CID 857 (Pressed Bend + Branch) - New option to set the branch as rectangular or oval.
- CID 868 (Valve) - New options to define inlet & outlet numbers.
- CID 916 (Waste Trap) - Added OpenGL annotation, additional dimension for C2 (different inner diameter whilst not affecting pipe diameter).
- CID 985 (Beam Strut) - Added CAD nodes and now supports stretching.
- CID 996 (Terminal) - Added 2 new draw types: Lines and Square, set via option #1 "Type". Lines draws a series of parallel lines, Square draws rectangular hatch pattern, the spacing is taken from option #8.
- CID 519, 533, 556 (Rectangular Straight, Rectangular Damper, Circular Coupler) - Added new Option: Draw Type "Cross Talk Attenuator".

Application Fixes

CID 838 (Hanger)

- When "Cutting In" Product Listed Hangers on Pipework with outer Insulation enabled, the Hanger was not taking into account the Pipe OD for upsizing to the correct Hanger.

Colours

- Fixed issue with material colour defaulting to colour of insulation if insulation removed from the item at a later stage. Occured when previewing or printing Worksheets and Labels.



Software Changes Document: CADmep+

Convert3DModel

- When using Convert3DModel, a colour override was being assigned to the converted object based on the colour of the original model, causing it to be displayed in this colour rather than the Service colour in Orbitor viewer.

Coupler logic

- Changed coupler logic to load Rectangular/Oval couplers when the width and depth are equal, was only loading round.

DBX/ARX loading

- If the DBX is loaded, the ARX is now prevented from loading on 2010 64bit system.

Design Line

- Fixed an issue with Service Terminal Styles not appearing in the Terminal Styles drop down (when button type is set to Terminal). Issue occurs when accessing button properties through Edit Service Template dialog.
- Pressure Drop Configuration Tables
 1. Ensure dimensions names are not repeated if the configuration contains a CID value more than once.
 2. Ensure all dimension names are unique.
- When services required couplings between pipes and bends; if a line only just fitted two bends and any required couplings, a slight gap could cause an odd pipe length to be inserted that overlapped one of the bends, now fixed.
- Fixed an issue with the bridging pattern (CID 1101) as used in design line ('Exception Fitting') reporting negative areas.
- Changes made to complex node filling. Now resolved issue with straights no longer overlapping complex fittings.
- Added logic to allow unfilled complex nodes to be filled by a bridging pattern if there is one available. Other fixes introduced for how complex nodes behave between sessions.
- Bridge Pattern change which now has the option to draw bounding box face around area of fitting in place of line detail alone.

Drop Into Fall

- It was possible this process i.e. the item cut-in to the main run, would also cut/break the item directly above (if existed); now fixed.

Dropper Lines

- Fixed an issue with filling dropper lines which occurs when multiple mappings are attempted for the expansion. The various mappings having different effective offsets.

EDITMAP

- Fixed absolute paths being converted to relative paths on Save.

Fill routines (Renumber)

- Fixed the renumber command when using the 'Same Number for Identical Parts', new items produced using the fill routines should now re-number correctly.

IFC

- Changed MAP's IFC property set name to MAP_General (not pset_map_general - the pset prefix is reserved), added PresentationMode to the header.

Import Services

- Selecting the "Browse" button was not updating the list of services to show the ones read from the newly selected file.

Insulation Specification

- Resolved inconsistencies when changing insulation specs.

Item Entry Number

- Re-Implemented Item Entry Number assignment when creating a Job files, these are always reset when recreating the file.

Item Reports

- Fixed colours of the header sections also affecting body of the report.



Software Changes Document: CADmep+

Services

- Fixed the dialogue that appears when adding a new item to a service button. Dialogue now provides an even 50/50 split by default for the folder structure and item files.

Stretch

- If "Restrict to use Items from Same Tab" was enabled, and the item being stretched did not exist in ANY tab, i.e. a 3rd party drawing, Stretch and stretch type actions (CHSPEC command) would not break down into standard straight lengths.

Sub Assembly

- Fixed sub assembly form not closing properly if in orbit command.
- Product listed sub assemblies now uses takeoff to allow user to configure product definitions of the assembly.
- Fixed potential OpenGL leaks closing down the sub assembly editor.

Terminal Styles

- Fixed an issue with Service Terminal Styles not appearing in the drop down box when the Button Fitting Type is of type Terminal. Issue occurred when accessing Button Properties from the Edit Services Template dialogue.

V Notch Marking

- Reinstated the option to use a cutting tool to mark the position of fold line ends on ductboard patterns with a V notch, reverted this change as it was stopping V Notches appearing in metal part developments.

Pattern Fixes

Pattern Fixes

- CID 6 (Rectangular Offset) - Resolved issues with incorrectly angled holes if the item's offset height was a negative value, developed hole positions were positioned incorrectly.
- CID 28 (Square to Round - Angled) - Amended the length dimension annotation so it displays through the centreline of the isometric view.
- CID 31, 19, 21, 26, 382, 956 (Rectangular Grille Box) - Disabled options for number of parts and notch angle for lids. Ensured dimensions/options were made consistent throughout all patterns. Enabled multiple hole types (Round, Oval, Rectangular) and the ability to develop collars for the holes.
- CID 33 (Straight + Shoes) - Resolved issue with pattern's connector 2 direction being inverted, this resulted in the item attaching incorrectly.
- CID 73, 99, 100, 863, 869 (Circular Breeches) - Fixed CAD nodes being removed when double wall enabled.
- CID 127 (Plate with Holes) - Fixed hole positioning not allowing the hole to be within 25mm of the plate edge.
- CID 134 (Rectangular to Oval) - Fixed annotation line so displays correct length.
- CID 385, 842, 843 (Oval Straight with Branches) - Fixed dimensions being reported after recently added reducer dimensions on pattern 839.
- CID 802 (Rectangular End Cap) - Resolved an issue with added holes when configured as Oval, the connectors were being applied incorrectly.
- CID 835 (Breeches 2 Way) - Resolved inner arcs developing incorrectly.
- CID 988 (Flat Oval Branch) - Double wall now includes the branches extension.
- CID 1104, 1117, 1118 (Branch on Oval) - Resolved issue with incorrect positioning of "Fold Lines" on developments.
- CID 1110 (Auxiliary Box) - Fixed not adding added items correctly.
- CID 2148 (Multi Tap Mixed Branches) - Fixed branch insets by adding extra dimension fields. Annotation also adjusted to match relevant dimension references including a new center line field.
- CID 2326 (Stab-In on Round Elbow) - Fixed occasions when the top diameter was the same as the bottom diameter. Fixed the branch was not drawing correctly due to not being fully intersected with bend (branch outer end being partially within the bend).
- CID 2882, 2883, 2885 (Swept Branches) - Branch extension now draws centreline.



Software Changes Document: CADmep+

MAP Software Version: 2.38.200

Version LOK Code : 17

Release Date : 12/01/2010

New Features

Export Service Database

- New command to export the service database with Group, Service Name, Service Type, Layer Tag 1, Layer Tag 2 and Colour to Excel for documentation (*.csv). EXPORTSERVICEDATABASE or EXPSDB.

Application Fixes

Shortcut Keys

- CTRL+D now selects the dimension field for product listed items when Takeoff Product Lists by Dimension is enabled from the Main Database > Configuration dialogue.

Spooling

- When Spooling to Layout Tabs and selecting "Tags" they were only being displayed if either execute script, reports or export item data was also turned on.

Pattern Fixes

CID 887 (Easy-Hard-Circular Branches on Hard-Circular Pipe)

- Fixed branch #1 connector using the dimensions from branch #2 .

CID 988 (Flat Oval Branch)

- Fixed double wall being drawn offset from the wrong end (C1).



Software Changes Document: CADmep+

MAP Software Version: 2.38.197

Version LOK Code : 17

Release Date : 07/12/2009

New Features

Folders.ini

- Folders.ini now loads/saves to install path by default (still uses the working directory 'Start-In' path, if it exists).

Step Down Connectors

- Added support to draw Step Down Connector types in Takeoff views and the 3D Viewer.

Application Fixes

Convert3dModel

- Fixed an issue with hidden detail lines appearing away from the converted model.

Converted model list

- Converted model list items were not displaying edge lines when "Only show edges of round in Wireframe models" was on.

Design Line

- Sized Nodes when placed in the model were losing their size. Fixed so that sizes are filled correctly when generating the 3D.
- Fixed Access panels reverting to the last size entered. Product listed Access Panels when entered, if the size exists in the product list, will be drawn at the correct size.

Regen (Xrefs)

- Fixed an issue resulting in excessive regen times, was caused by functionality added to support xref drawings with invalid symbols in the names, now optimised.

Saving with Compression

- Fixed errors when saving jobs or items when they are opened in read only and compression is turned on from the User Interface.

Scripting

- Fixed item.qty scripting variable which was being treated as a string, not a value (calculations when using this had been failing).

Specifications

- Fixed editing an item file applying carry over specifications to the item being edited.

Stretching Ladder (non-standard lengths)

- Stretching a ladder type straight with the "Use Spacing" option set to Yes was resulting in non-standard lengths models not being drawn when using pattern caching.

Sub Assembly

- Items within Sub Assemblies were having their Qty incremented when collecting identical items for Job Contents/Reporting/Cam.

Takeoff Views



Software Changes Document: CADmep+

- Takeoff views now represent whether Airturns, Splitters etc are displayed or not. Previously the view was not updated if disabling these options.

Template Items

- Introduced service button conditions for template items (non-product listed) and also the ability to swap out items based on the initial carry over value.

Pattern Fixes

CID 1101 (Bridging/Exception Pattern)

- Resolved issue with the Bridging Pattern causing the application to crash when manually adding into a drawing via takeoff.

CID 150 (Rectangular Branch on Straight)

- Fixed problem when developing this part with the 2 Parts = Yes/No option enabled. Added holes were being developed twice in certain instances.

CID 2051 (Pipework Circular Reducer)

- Resolved development of insulation when enabled and with the option for Length Includes Extensions set to Yes. The insulation length was previously greater than the body of the reducer.

CID 2965 (Round Tee with Reducers)

- 1.Fixed insulation prompting an unnecessary invalid dims warning.
2. Fixed Auto collars (caused extremely large collar value).

CID 4, 17 (Radius, Reducing Bend)

- Fixed Double Wall when inner radius at zero or less than skin size.



Software Changes Document: CADmep+

MAP Software Version: 2.38.186

Version LOK Code : 17

Release Date : 03/11/2009

New Features

Scripting

- Added item.catalogue to scripting references. Will return a 1 if Catalogued and 0 if a Template item.

New Patterns\Enhancements

CID 2881 (Swept Branch)

- 1. Allow stretching the collar value when product listed
- 2. Able to draw centre lines the full length of the collar
- 3. Don't draw the lines where the collar joins the branch

CID 2881, 2882, 2883, 2885 (Radius Branches)

- Radius Branch patterns now allow stretching on end nodes which in turn increases the collar lengths; 2881 draws center line for branch collar.

CID 2965 (Round Tee with Reducers)

- Now ensure C2/C3 cad nodes are at outer ends of any reducers; removed CAD nodes of internal C4/C5; added centre-line.
- The Body Diameter now sets its OD from C2 end rather than the Branch Connector end.

Application Fixes

Insulation Specification

- Fixed crash when having Insulation Spec set to Off and attempting to save job.

Item Folders

- Fixed corrupt patterns causing the crash of item folders during fill. Will now report non-fatal errors on selection.

Services Database

- Fixed being able to sort by columns within the Sections dialogue of the Services database.

Pattern Fixes

CID 32 (Straight & Branches)

- Fixed crash if more than one hole had been added when opening in Release 2.38.179.

CID 580 (Round Access Panel)

- Round Access panel type changed from Flat Oval to Round. This now becomes a successful 3D Fill when using Design Line.



Software Changes Document: CADmep+

MAP Software Version: 2.38.181

Version LOK Code : 17

Release Date : 20/10/2009

New Features

Main Database

- Add Access to Material Entries, when accessing the Database with FullDbEdit enabled.

Application Fixes

COG

- Update COG command to report out the total weight for items that are set to Cost By Length, i.e. straights, instead of the weight per M/ ft

Insulation

- Fixed locked insulation and double wall settings being over-ridden by insulation carry over if enabled.

Scripting

- Fixed IF and ELSEIF statements reporting errors.
- Out of Memory error fixed when processing some scripts.

Swap In

- Improvements made to "Swap In" command to resolve issues with item positioning when option is selected to "Swap all Instances". Item Number, Notes and Custom Test values and positions are maintained when item is swapped (positions relative to original item).

Pattern Fixes

CID 18 (Side Branch)

- Resolved issue with incorrect placement of connectors on holes added to item



Software Changes Document: CADmep+

MAP Software Version: 2.38.179

Version LOK Code : 17

Release Date : 13/10/2009

New Features

Rectangular Coupling

- Added Rectangular Coupling CID 4522, allows rectangular items to be coupled together in the same way as Round and Oval, based on connectivity matching.

Application Fixes

Attacher

- Increase the accuracy of the attacher arrow to fix displaying Blue/Green (up/down) on very shallow falls it was drawing Red (1:480 in Imperial).

Renumber

- Reverted Renumber to omit leading 0's

Spooling

1. When inserting spool reports using tables and Report_Position/Report_Width blocks, the tables is no longer SCALED between the 2 points, its width is set so the text heights are as per the table settings
2. USR command to update a report now uses the original table width rather than scaling between block points.

Straights (Auto)

- Reverted this change, was causing issues: Fix straights when placed in drawing with the length set to a value instead of "Auto" and subsequently stretching/filling the straight, if stretched passed "auto" length, it was not setting the value to auto.

Text objects - Rotate after Positioning

- If using "Rotate after Positioning" for Text objects, if aligned to Length or Connector and ESC pressed for the Rotation Angle (to get the default alignment), this was storing a 0 degree override and if then the UCS was changed and objects aligned, the text would honor the 0 rotation, causing a discrepancy (twisted text). Would not happen if the Rotate switch was turned Off.

Pattern Fixes

CID 2882 (Swept Branch(s) + Pipe)

- Fixed when taken off as 'Cut In', it will now correctly break the pipe and auto couple (issue existed when configured with double branch).

CID 3, 7 (Rect. Bend & Rect. Branch)

- Fixed invalid dims warning if enabling double wall/insulation when extensions 0 or less than the skin size.



Software Changes Document: CADmep+

MAP Software Version: 2.38.177

Version LOK Code : 17

Release Date : 29/09/2009

New Features

Scripting

- 1. Add "WEIGHTLOCK" to scripting (item.weightlock = TRUE or FALSE)
- 2. Allow scripting to write to the "WEIGHT" field item.weight = 123.456

Application Fixes

Design Line

- Fixed an issue with terminal style filling.
Issue: adds a coupling to the terminal item and leaves a gap between the flex & straight.
Issue only occurred when flexing through bends (flex hits it's maximum length and couplings are used for the straights to fittings).

Services

- Fixed service combo not being initialised to carry over service when opening drawings (affected drawings opened 2.38.174, would always initialise the Structural or Pipework service).

Sub Assemblies

- Fixed the carry over of dimensions for product listed sub assemblies not working.
- Fixed sub assemblies not being handled correctly with pattern cacheing enabled.



Software Changes Document: CADmep+

MAP Software Version: 2.38.174

Version LOK Code : 17

Release Date : 17/09/2009

New Features

3D Model List

- Support added for creating and displaying Product Listed converted 3D models by importing multiple M3D Objects. Command is accessible from the "Folders" interface, right clicking on the background > New > 3D Model List.

CONVERT3DMODEL

- Convert3DModel automatically uses Block name for objects instead of "Structure", when converted, so the objects can be reported on with meaningful names.

CTEXT

- New options added to control the colour of Text, Blocks & Leader Lines on CTEXT. Options are located in the ADDREPORT dialog.

CTEXT: Fall Gradient

- Added new Print object to CText Reports, "Fall Gradient" this will report out the fall of an item in the following format:
Metric 1:?? where ?? is the fall rate
Imperial 1/?" where ? is fraction of inch
Should be used with a block so it can report out as
"Slope = 1/8" per Ft" or "Fall = 1:50"

Dampers

- New Draw Type added "Simple", which just draws the the shaft, could be used to show electrodes on fused welded pipework. Fixed problem creating a "new" damper that was setting the Shaft Length to -1001.
- Added option to specify the damper shaft thickness.

Design Line

- Added support for CID 2881 (Swept Branch) to be added as a Centre Line Branch
- Constraints now have the option to sort in a user defined order, new buttons have been added to the Service Database interface to move individual entries up or down in the list. The "Design Line Editor" will display the constraints in the user defined order.
- Introduced the ability to display the units of the entries when adding fields for Design Line Restrictions in Constraints to distinguish between Total Pressure Drop and Pressure Drop per length
- Added the ability to edit prompted lengths in the line editor dialog.
- The following patterns now support the filling of Complex nodes, CID 10 (2 Way Tee), 18 (Side Branch), 30 (Mitred Offset), 31 (Grille Box Cross), 1120 (Ductboard - Multi Way), 1121 (Drop Cheek Breeches).

Elevation Text: Formatting and Zero Suppressions

- Elevation Text new options to set the Formatting and Zero Suppressions so it does not rely on the current AutoCAD settings for Units and Dimzin.

Elevations: Report from "other" end

- Support for reporting Elevations from "other" end, same as you do for SIZES - (ELEVS command > Select object - hold TAB > execute).

Elevations: Rounding to Nearest

- Implemented "Rounding to Nearest" value on reported Elevations, set in the CAD database, for example in Metric could be set to 5 and a TOD at 2998 would report as 3000, in Imperial, with 1 rounding, 9'-6 1/4" would report out as 9'-6".
Note the cursor tooltip reports the actual elevations

IFC Support

- New command added, IFCATTR allows users to configure which attributes are saved in IFC export files.



Software Changes Document: CADmep+

- Aligned the CADmep+ IFC Export Commands with Constructicad, that is renamed EXPORTIFCS to IFCEXPORT (or IFCE).
- Implemented read/write of IfcElementQuantity types {similar to IfcPropertySets}.

IFCEXPORT

- IFCEXPORT command added to the CADmep+ Right Click menu (CADmep+ > Utilities > Export as IFC)

IMPORTRUN Command

- "IMPORTABS" command renamed to "IMPORTRUN" and made available in the Viewer's Command list.
- Allow ImportRun command to ignore SubType from file, if blank.

Item Reports

- Added the ability to access Job Custom Data inside of Item Reports

Item Scripting

- Added access to Item Centre Line Length via item.length and connector size through item.connector[].width/depth

JOBCOLLISIONS

- New JOBCOLLISIONS command and Dialogue for loading, isolating and marking collision sets from CAJ files after being processed in uCADMAP.exe (ConstructiCAD).
The Block Names used for marking the problem areas are MAP_Collision, MAP_OpenEnd, MAP_FDuplicate, MAP_PDuplicate, MAP_ConnMisMatch and MAP_SizeMisMatch and should be present in the current drawing.

Object Text

- New option to control the graphics of the "set" arrow by using the leader arrow setup in a named dimension style.
- New options added to allow Alias and Sets text to be rotated immediately after positioning.
- Switches added to individually control the rotation of Sizes and Elevation.

Output to Viewer

- When using the CAJOUT or CAJUPDATE commands, ("Output to Viewer" and "Update Viewer Output"), if the SHIFT is pressed when the command is executed the user is prompted to "select objects", this allows a sub set of the model to be extracted for viewing.

Print Objects

- Added new Print Objects, "Duct End Size 4" & "Item Connector 4" to report out on the Item's end 4 size and connector name respectively
- Print Object "Flow Type" added to CTEXT & ADDREPORT.

Profiles

- Import & Export Profile commands added to the CADmep+ Right Click menu (CADmep+ > Profiles > Import, CADmep+ > Profiles > Export)

Size Text

- New feature to enable custom blocks to be added to "Size Text", a block with 1 attribute for Round and 2 attributes for Rectangular labels must be created and then referenced in the Service Database

Spooling

- When using "Takeoff as Cut In" into Items that are Spooled, the item being cut in, the cloned pipe and any couplings now adopt the existing items SpoolName and colour.
- 2 new commands added for updating reports in tables for spooled items:
UPDATESPOOLREPORT (USR)
UPDATEALLSPPOOLREPORTS (UASR)
The USR command will update all reports within the active layout with items whose spool name matches the layout name.
The UASR command will iterate over all layouts and update all tables with items that match the layouts name.
- When "Cutting In" to Spooled runs, the visibility flags of viewports are now inherited from the parent item so it is not necessary to re create the layout spools.



Software Changes Document: CADmep+

- Access to Job Information from within Spool Dialogue, via button.

SysScrReport

- SYSSCRREPORT command will now default to creating a CSV file instead of an MDB as Microsoft Access JET support is not available in 64 bit windows. The user can still choose MDB if desired, it's an option in the file types.

Title - Powered By

- Display the "Powered By - CAD-Mech" if the dongle is only enabled for Electrical Library (CAD-Elec).

Translation

- Changes for dictionary: CAD-Duct to CADmep+

Trimble

- 1. Output single entries to Trimble files for one sided "Z" Wrapper.
2. Output 2 points for "double profile bearer"
- Support for TrimbleExport on 64 bit build added with the addition of the new TrimbleLayoutAPIx64.dll from Trimble.

New Patterns\Enhancements

CID 11 (Double Bend)

- Now supports the Rise/Fall symbol.

CID 1111 (Tee Coupling)

- New option to add a handle for the top branch.
- New option added to configure as a Cross, i.e. draws double tap.

CID 1111, 57, 840 (Tee Coupling , A P Saddle)

- Tee Coupling: added option for handle on top branch.
A P Saddle: added branch's collar length dim, and option to develop it; fixed bug: attacher didn't show on C2.

CID 1124, 1125 (Twin Bends)

- Modified both Twin Bend patterns, each individual bend now has its own bottom extension dimension entry.

CID 1127 (Reducing Bend & SqrToRnd)

- Added option to not replace join connector sides with join seam.

CID 114 (Oval Branch on Straight)

- Increased MAKEPAT branch lengths to stop invalid dims when double wall enabled.

CID 1146, 1147 (Rectangular Hood)

- New patterns added 1146 (Rectangular Double Hood) & 1147 (Rectangular Single Hood)

CID 1148 (Rectangular Sarejevo Taper)

- New pattern Sarajevo Taper which allows the input of extensions of different length on each side of top and bottom panels.

CID 115 (Oval Saddle)

- Now supports double wall.

CID 1151 (Socket Reducer)

- New pipework reducer pattern.



Software Changes Document: CADmep+

CID 1163 (Circular Bend with angled top extension)

- New pattern.

CID 123 (Oval to Round)

- Now supports double wall.

CID 140, 377 (Oval Crosses)

- Now supports double wall.

CID 24 (Shoe on Flat)

- Added option to not display internal lines.

CID 2523 (Pipework Bend)

- Added option for center line length to include extensions.

CID 2938 (Wye + Bend)

- Added option to specify branch heights to ends of branch + bend.
Added option to specify branch insets to ends of branch + bend + extension.

CID 3071, 3386 (electrical versions of CID 71 Reducer & CID 2386 Offset Reducer)

- Electrical conduit: reducer and offset reducer patterns.

CID 311, 379, 886 (Saddle Tee T2, Combined Saddle Cross, Saddle no Pipe)

- Now support double wall.

CID 33 (Straight + Shoes)

- New options added to position the branch insets from "C1 to branch Centre Line" and from "C2 to branch Heel".

CID 3386 (Electrical conduit - Circular Offset)

- Conduit pattern assigned the pattern group Pipework for specifications.

CID 382 (Grille Box Variable Hole)

- Added new option to switch the hole size dimensions if necessary, according to holes positioning.

CID 3873 (Electrical Flex)

- New pattern based on Pipe Flex for Electrical Flex.

CID 42 (Circular Branch on Straight)

- Removed the minimum limit for pipe diameters.

CID 57 (A P Saddle)

- Added branch collar length dimension and collar development option.

CID 57, 840 (Circular Box on Straight)

- Added branch's collar length dim, and option to develop it; fixed bug: attacher didn't show on C2.

CID 62 (Saddle Tee)

- Added missing annotation.
- From centerline was affecting branch 1 offset instead of length.
- Now supports double wall.

CID 7 (Rect Shoe)



Software Changes Document: CADmep+

- Now allow damper holes to exist even if the damper is not cut.

CID 73, 99, 100, 863, 869 (Breeches (various), Trouser)

- Double Wall representation fixed on variations of Circular Breeches.

CID 818 (Circular Box Shoe on Straight)

- Connector 5 added for the reducer to join to body of the fitting.

CID 838 (Hanger)

- Wrap-round type: new dimensions added to configure the rod as rectangular bar, if width, depth and length supplied.
- 1. new Hanger option to draw single sided "Z" strap and support output to Trimble.
2. new Hanger option "double profile bearer" and support output to Trimble.
- New options added to CID 838 to enable the display of "Siesmic Rods". When the pattern's "Type" option is set to "Cleviss Hanger", new option fields are displayed to show/hide the item's Front, Back, Left & Right "Seismic Rods".
- New options added to CID 838 to enable the display of "Siesmic Rods". When the pattern's "Type" option is set to "Profile Bearer", new option fields are displayed to show/hide the item's Front, Back, Left & Right "Seismic Rods".
- Support added for new types: stirrup (half oval), split ring (full oval), double profile bearer.
- Option added to disable export to Trimble files, so it can be used for other things without exporting.
- Wrap-round circular type; added a rect. box option on top of rod, which creates a CAD node for the top center of box.

CID 839 (Circular Box on Straight)

- Added reducer options to apply onto the main body and a connector 5 for joining.

CID 845 (Elliptical Reducer)

- Now supports double wall.

CID 859 (Cowl)

- Added connector (didn't have any).

CID 879 (Electrical Cable Tee)

- Option added to draw the Throat Type as Radius or Flat when configured as Wire.

CID 894 (Hard Offsetting Cross)

- Removed branch width/depth limit (minor<major), enabled double wall.

CID 898 (Cabinet)

- Added the ability to orbit in the takeoff dialogue.

CID 914 (Rect Smoke Damper)

- Added option for chevron(s) i.e. option to display in plan & elevation views.
Fixed annotation wrongly positioned if dims sides/bottom/top (K/L/M) not zero, as were the various symbols on its sides, and certain handle types.

CID 935 (Circular Offset Reducer Cross)

- Now allows branch 2 zero diameter/length to disable, added branch rotations.

CID 970 (Round Reducer)

- Pattern now uses Min and Max Transition stretch settings.

CID 985 (Beam Strut)

- Option added to input total length.



Software Changes Document: CADmep+

Application Fixes

3D Object Viewer

- Resolved issue in AutoCAD 2010 displaying a "Filled" Green circle in 3D Object Viewer

ADDREPORT

- Resolved issue with "Total Row" not displaying when "Calculate Total" selected for report fields.

Ancillary Reports

- Resolved issue to enable Ancillary Reports (File Extension .ARP) to be viewed in CADmep+

Auto Backup Job

- Fix auto backup job at key points being disabled.

Centre of Gravity (COG)

- Improvements to the accuracy of the COG (Centre of Gravity) command.
- Centre of Gravity command was reporting out some Valves incorrectly, 0 area faces were affecting the calculated points.

Connector Blocks

- Connector blocks in product lists. Now allows support for sizes up to 2 decimal places - matches block by size up to a maximum of 2 decimal places. Previously wasn't allowing for any decimal places so size 1.5 would use the same connector block as 1.0.

Custom Text

- Resolved issue with leader line end point moving location when HIDE or PLOT with hide are used.

Database permissions

- CadDuct Setting page of the Database was always being saved when the user selected OK even when they had restricted access, i.e. no permissions set with mapuser.
This was only an issue if using the TOGGLEPOSITION command to modify the position for text, it would get saved if the database was edited.

Design Line

- Fixed program error when using the command PRDROPS.
- Fixed issues with offset rules and electrical offsets where they had been filled the wrong way round
- Fixed issue with not being able to select access panels or hanger type nodes.
- Improvements to the use of the "Flex Filled" line mode in "Design Line" when combining with lines drawn using "Normal Line" mode.
- Improvements made to "Terminal Style" filling.
- Resolved issue with placement of Oval "Cap Ends" on Rectangular runs.
- Fixed an issue with eol tee's that use straight, shoe, cap end type combination. Was failing to place product listed cap ends - was still doing straight & shoes though.
- Resistance Configuration Link Tables - fixed the link tables dialog not updating after deleting a link, it now displays the next valid link in the list.
- Pressure Drop Calculations - ensure that if a node matches a pressure rule that contains the same pattern number more than once, use the correct item for the dimensions passed to the look up tables.
- CID 1108, 2108, 3108 (Hosepipe) - fixed this pattern causing the software to lock up - only experienced the issue with design line filling.
- Fixed crash in design line if item flex adjoined to is invalid.
- Offset rules: was incorrectly placing back-to-back rectangular elbows on oval lines.



Software Changes Document: CADmep+

- Pressure Drop Calculations - fixed resistance rules not mapping to items at node. If the node had more items than the rule, the rule was mapping to each items single rule.
- Fix for dummy terminal logic, should now be able to add a riser starting at an existing cad node.
- Add riser logic amended - so that lines are added correctly.
- Fixed placement of hangers on "dropper lines".
Added support for CID 2881 (Swept Branch - no Pipe) as a centre line shoe type fitting.
- Applied fixes for how complex nodes behave particularly between sessions.
Added logic to allow unfilled complex nodes to be filled by a bridging pattern if there is one available.
- Fixed issue with complex nodes not filling in correctly. Fix introduced to stop the straights overlapping the complex fittings.
- Fixed bug causing the program to hang when working on offset rules.
Terminal styles: fixed an issue that was producing long lengths of flex when a terminal is added to a run using the ceiling height.
- Hangers and cap end placement on "dropper lines" wasn't working correctly, ie where the line's fittings have been allowed to be displaced by e.g. an offsetting tee.
- Amended multiple reducer logic to avoid reversing fittings. Was resulting in an over-reduction in size such that a reversed reducer would be needed to increase the size up again.
The limit for multiple reducers has also been increased from 6 to 10.
- Fixed RedInLine not placing Tapers correctly when dimensions set to values, rather than "Central".

IFC Support

- Make standard IFC Export use less memory by writing directly to a file rather than Memory. Additional fix issue of crashing when more than 1000 objects selected.

Insulation Specification

- Fixed inconsistencies in changing insulation specs.
Implement change specs in 3d viewer.
- Fixed inconsistencies in changing insulation specifications and the redevelopment failing.
- Fixed Insulation Specifications being carried over from catalogue items with Insulation Specifications locked against them.
- Fixed insulation specs carrying over locked values from catalogue items.

Item Area & Weight

- Fixed issues with refresh after editing item areas and weights. Values had previously not been getting updated.

Item Reports

- Rectified issue with Item Sealant print object properties showing multiple indexes, this now only has the 1 sealant per item as it should.

Item Scripting

- Resolved issue when developing Rectangular Taper patterns using the item.update()

JobContents

- Allow JobContents command to display items that have previously been output to Cam when prompting for a selection.

OPENJOB

- Resolved Issue with OPENJOB Command not displaying MAJ files for selection.

Output to Viewer

- Improvements made to performance when outputting large complex models to viewer (UCADVIEW), that contain objects that have been created using CONVERT3DMODEL command.

Pattern Icons

- Fixed potential issue where icons didn't get refreshed properly in job contents / job browser / item folders when combinations open at the same time.

Pattern Takeoff



Software Changes Document: CADmep+

- Rectified memory issue when developing or redrawing Segment bend patterns

Print Preview

- Fixed program crash when doing a Print Preview; if closing preview dialog, then closing drawing.

Product lists with "Auto" length

- Product listed items using "Auto" for length were filling in the "Auto" value with the length from the specification, which meant when changing spec or size which dictated a different length, the pattern was not updated to the new value. Applies to Pipe and Duct.

Profiles

- Ensure the correct Profile is active and saved when creating Spool Drawings.
- When forced to switch Profiles by opening a DWG by double clicking to load AutoCAD or opening without first loading the application, the wrong SYSSCR.MAP could be loaded, this caused the incorrect service templates to be associated with the service, and caused LOK errors when trying to edit the service template, additionally the Folders Directory listing would be incorrect.

Report printing

- Fixed memory leak in report printouts that are grouped into tables.

Scripting

- Scripting enhancement to stop erroring out when using "EndLocation" method and requesting an invalid connector number. (i.e. CID 891 Connector 5)
- Fixed potential crash in scripting where expression (xx+yy+) did not report an error.

Size text

- Size text was displaying the Plan text (200x100) on objects when the connector was parallel to the view direction, it now displays the front text (100x200)

Stretch / Fill

- Fixed an issue with stretch/fill on hub-spigot type straights. Was leaving a gap where more than one straight fitting was needed.

Sub Assemblies

- Fixed product listed sub assemblies not drawing correctly for sub-items that use Pipe OD's (spec not being applied to sub items)
- Fixed sub assemblies including wrapped items not displaying in the takeoff dialog (and possibly in AutoCAD).
- Resolved issue with sub assemblies with holes when a new dimension added. Now changed the dimension reference to work from the UID rather than indexes.

Swap In

- Fixed only checking the model geometry and not the name or description, so a H42 would be swapped for H47 in error.

Text Alignment

- When using Blocks with Levels, Item Numbers or Custom Text, if aligned to Length or Connector and the UCS was rotated, then the view aligned to the UCS, the text block would display out of alignment, it was not taking into account the Viewport Twist Angle.

Trimble

- TrimbleExport was missing points if the objects layer name was empty when exporting to a CNX file.

View Menu

- Fixed View menu being disabled in takeoff, not just for standard parts.

Viewer Output

- Stopped the viewer output trying to convert non MAP objects when their visibility is off, i.e. have been hidden.



Software Changes Document: CADmep+

Pattern Fixes

CID 1104, 1117, 1118 (Oval Tees)

- All 3 patterns had same connector assignment which was only valid for 1104. Fixed connector assignment for 1117, 1118 and in 1118 this now uses C4 and C5 at joints between main pipe and reducers

CID 1115 (Oval Straight with Branches)

- If branch slope angle 0, develops with collar attached, not separate, and reversed direction of branch tilt (whilst maintaining compatibility).

CID 1115, 1116, 1118 (various: Oval branches on oval)

- Minor corrections to reducer connectors, fixed 1118 incorrect double wall when dimensions were calculated.

CID 1118 (Oval Tee with Splitters and Reducers)

- Fixed connectors 4 & 5 were getting sizes of connectors 1 & 2, fixed showing Dimensions/Options for all 4 branches when only one enabled.

CID 1119 (Oval Breeches)

- Fixed the ability to have an angle less than 45 degrees.

CID 1129 (Twin Straights)

- Add method to ensure that the parent item has decoiler info, to prevent crash on Accept following console command "makepat 1129"

CID 127 (Plate with Holes)

- Fixed hole positioning away from the plate edge; now allows you to position holes using the X, Y Offset, the minimum value is the radius of the plate holes.

CID 134 (Oval to Square with Extension)

- Fixed length annotation value to coincide with length entered

CID 14 (Breeches Piece)

- Resolved issue with pattern's extension being double the input value.

CID 18 (Side Branch)

- Fixed inside insulation, was being drawn using two points from outer wall instead of the inner.

CID 2097 (Circular Bend)

- Fix in place for when using centerline input on this pattern. Was causing center radius to report negative value as was not using diameter type = nominal. Was using Outer diameter and therefore being drawn incorrectly.

CID 2882 (88-Curved-Branch + Access)

- Fixed bad dimension annotation if collar 'Auto'.

CID 2938 (Twisted Cross)

- Fixed twist angles that were previously getting converted into imperial measurements

CID 31, 382, 956 (Grille Boxes)

- Fixed Item Connector Duct Depth #2 being displayed as 1000000 in Job Contents Items view if hole type is set to Round.

CID 324 (Twisted Angled Offset Square to Round)



Software Changes Document: CADmep+

- Fixed initial MAKEPAT dimensions.

CID 328 (Rect. Trousers)

- Fixed the incorrcet display/development of double wall.

CID 330 (Radius 2 Way Offset)

- Fixed Depth Out dimension which was incorrectly adding as annotation as opposed to a dimension

CID 360 (Oval 3 Way)

- Amended the initial 'makepat' dimensions; stops the "Invalid dims" warning when applying the double wall option.

CID 365 (Tap on Oval Elbow)

- Fixed hole development position when opting for Oval Tap or changing the seam position.

CID 398 (Sliced Lagging Tee)

- Fixed flat branch sections creating problems with the model views and developments.

CID 65 (Branch on Round)

- Resolved issue with CID 65's dimension placement for the "Right Exrension"

CID 7, 9, 44, 875 (Circular Branch on Straight)

- Amended the branch lengths MAKEPAT dims, so ok if double wall enabled.

CID 835 (Breeches 2 Way)

- Fixed bad dimensions when small right height and large right radius (arcs joined faces passed outside/below inner arc).

CID 838 (Hanger)

- Stirrup and oval depth dimension is now total depth (oval diameter instead of radius); removed cad nodes for both left & right straps.
- Grip points added at each end of the top strap when used in the "Z-Strap" configuration. This now ensures that when output to Trimble Devices the hanger's central (1) and top (2) node positions are output.

CID 842 (Oval Cross Offsetting)

- Fixed connector #2 using connectors from the Circular group, now uses the correct Oval group
Added option to enable branches to rotate onto flat of Oval.

CID 866 (Decoiled / Plasma Cut Straight)

- Add method to ensure that the parent item has decoiler info, to prevent a crash on Accepting following the console command "makepat 866".

CID 895 (Easy Offsetting Saddle)

- Removed branch width/depth limit (minor<major), branch double wall sometimes missed intersections resulting in only a single branch (giving bad dims error).

CID 925 (Oval Reducer + Branches)

- Resolved issue with this pattern causing the application crash when opening.

CID 926 (Plenum Box)

- Resolved issue with holes added to pattern's left & right side, not using offset value.

CID 927 (Filter Box)

- Not all seams had the angle applied to them, was missing some seam cutback from connectors.
- Fixed seam cutback on connectors which now has the angle applied.



Software Changes Document: CADmep+

- Pattern Developments with Angled Seams.
Added an optional validity check, used when pattern developments set angled seam start/ends, to prevent possibility of seam angles being wrongly applied to a previous section.
- In "Edit Developments" the extents area was over 20000000000; fixed by ensuring the developments contain no empty sections; is only fixed after an edit pattern and redevelopment.

CID 946 (Ductboard Rectangular Breeches)

- Fixed throat development length which was not compensating for material thickness.

CID 970 (Circular Reducer (Add Hole))

- Rectangular branches had no cad nodes, oval/rect branches width/depth dims swapped, was also losing connectors when saved/reloaded, moved oval/circ cad nodes from branch base to end.

Pattern developments

- Oval branches on oval: fixed the development of branch parts/seam positions to account for oval branch's flats having had extra points inserted; used by CID's 1104, 1115, 1116, 1117, 1118.

Stretch

- Resolved issue with straight not applying "Auto" length on stretch. Issue occurred when non standard length straight stretched past "Auto" length, value was not being set to "Auto".



Software Changes Document: CADmep+

MAP Software Version: 2.38.089

Version LOK Code : 17

Release Date : 29/05/2009

New Features

CID 866 (Combined Straight)

- Added new option to CID 866 to override the Cut Type that is assigned from the "Straight Database", which allows additional control from scripting.

Scripting

- Support for a delay to pass to (executescript) function to suppress the progress bar. The format is (executescript "script" selectionset delay) or (executescript "script" delay). The delay is in milliseconds.

Application Fixes

2D Hidden detail

- Improved the display in 2D hidden mode of CID 2899 (pipe work straight with integral reducer + branch bend) by not showing the bend segment lines.

ADDREPORT

- Only Add Tables to the drawing if it's not empty (addreport), was previously adding tables with just title and heading rows.

CadDuct Solids BSS settings

- CadDuct Solids BSS settings page of the Main Database was always being saved when the user selected OK, even when they had restricted access, i.e. no permissions set with mapuser.
This was only an issue if using the TOGGLEPOSITION command to modify the prompt flag for text, it would get saved if the database was edited.

Carry Over Specification (Pressure Class)

- When setting the attacher onto an object, the carry over Specification (Pressure Class) was not being updated.

Connectors

- Swage Set Back adjust on round connectors was not working with REAL numbers (numbers with decimal points), the number was being rounded to a whole number, i.e. 0 1 or 2, was noticeable in Imperial database when the setback would either be 0" or 1".
- Fix very old problem of Rectangular Connector hidden detail being displayed in the colour of the "Hidden" Layer when set to 256 in the Main Database.

CREATE2D (Hangers)

- Stopped "Area of Influence" circles on the top of hangers creating 2 semi circles when CREATE2D was run.

CTEXT

- Custom Text would realign itself to the Alignment specified in the actual report rather than obey the override applied to the text on the item set by "AlignTextL" "AlignTextC" commands, after a drawing was re-opened.

IFC Import/Export

- Fixed all imperial IFC import/export files to scale the contents of the file so they are always metric (mm).

Input Units



Software Changes Document: CADmep+

- Fixed toggling the units in pattern takeoff not converting the dimensions.

JOBCONTENTS

- Jobcontents command was not displaying the data columns correctly; their widths were being set to 0.

Levels label (Auto)

- Auto Elevations were not taking into account Flat Top or Bottom transition parts, so did not report an automatic elevation change.

Object Text

- If configured to align to Length or Connector and using blocks with attributes, fixed not aligning correctly in ISO views, there was a slight rotation.

Offset label

- Relaxed the check when comparing ends to ascertain if a set is equal or setting up/down, the original check was causing patterns that differed by only 0.0001 to stop displaying the text when in multiple viewpoints.

Scripting

- Elevation Scripting objects that reported Top and Bottom were not taking into account Pipe OD's.

Spooling

- Issues resolved when Spooling to DWG files, was leaving the new drawings locked, causing a "Command in Progress" message when trying to plot.

Stiffeners

- Stiffener drawing on Rectangular duct was not obeying the Linetype set up in the Stiffener database, it would sometimes display one of the lines in the linetype of the "Hidden" layer when Hiding.

Straights (Stiffener Qty)

- Fixed small length straights getting the wrong stiffener qty costed for normalisation (was using full un-decoiled length, not broken down lengths to calculate).

Sub Assembly

- Fixed sub assembly editor not allowing user to change item properties in item folders, fixed crashes in item folders when they are edited (especially from outside the program), fixed drag/drop item folders.

SysScrReport

- SysScrReport command does not work on 64 bit machines (Microsoft JET 4.0 is not supported), now exits gracefully when cannot create the file.

Takeoff

- Fixed toggling units in takeoff resetting altered dimensions to the previous values, unless the redraw command was used.

Pattern Fixes

CID 10, 18 (3 Way Tee, Side Branch)

- Fixed some dimensions causing some 3D faces to overlap, which caused erroneous lines to be drawn in AutoCAD.

CID 1118 (Oval Conical On Oval)

- Fixed bad geometry by calculation (e.g. $C = F+100$) when changed from metric to imperial.

CID 1122 (Ductboard Drop Cheek Bend)



Software Changes Document: CADmep+

- Area calculation was being doubled up due to error in a general routine used to convert metal cheek developments to ductboard. Also affects CID's 944, 946, 950, 951, 1121, 1131.

CID 1141 (Castellated Bend)

- Segments only had castellation on each segments' first part when the cross break option was greater than one.

CID 18 (Side Branch)

- Fixed issue where the inside insulation was being drawn using two points from outer wall instead of inner.

CID 33 (Straight + Shoes)

- Fixed missing Connectors on the Straight (version 2.38.076 dropped connectors).

CID 356, 359 (Oval Straight with Round Branch(s))

- The round connectors were being displayed as oval with depth of 0. Now include missing branches connector annotation.

CID 378, 1116 (Oval Cross Shoes, Oval Shoe Cross with Reducer)

- If pipe is oval and "Allow Branches On Flats" option was set to Yes, branch holes development was positioning the holes incorrectly.

CID 802 (Cap End)

- Now allows "Mirror" option as per CID 12.

CID 866 (Combined Straight)

- After adding holes, the hole options were being lost when the item was saved and reopened.



Software Changes Document: CADmep+

MAP Software Version: 2.38.079

Version LOK Code : 17

Release Date : 22/04/2009

New Patterns\Enhancements

CID2899 (Pipe with Integral Bend & Reducer)

- Improvements made to pattern's segment bend lines, when displayed in 2D hidden view.

CID802 (Cap End)

- New option added to enable the item to "Mirror" when fixing

Application Fixes

Auto Elevations

- Resolved issue with reporting out "Auto Elevations" when placing a Flat Top or Bottom transition piece into the run, elevation changes were not being reported out.

Connectors (Swage Set Back)

- Swage Set Back adjust on round connectors was not working with REAL numbers (numbers with decimal points), the number was being rounded to a whole number, i.e 0, 1 or 2. Was noticeable in Imperial database when the setback would either be 0" or 1".

Job Contents

- Resolved problem with "Job Contents" view not displaying correctly, column widths were being set to 0.

Scripting

- Application fix to resolve issue with scripting objects that reported Top and Bottom of items, were not taking into account Pipe OD's.

Set Text

- Relax the check when comparing ends to ascertain if a set is equal or setting up/down, the original check was causing patterns that differed by only 0.0001 to stop displaying the text when in multiple viewports.

Specifications (Pressure Classes)

- Resolved issue with the "Carry Over" Specification not being updated when the Attacher Arrow was placed on an item.

Pattern Fixes

Area Calculations

- Fixed area calculations on Ductboard patterns CID 1122, 944, 946, 950, 951, 1121 and 1131.

CID 33 (Straight + Shoes)

- Resolved issue with pattern missing connectors.

CID378 & 1116 (Oval + Shoe)



Software Changes Document: CADmep+

- Resolved issue with pattern's hole developments being incorrectly positioned.

CID521 (AHU Pattern)

- Dimension checking relaxed, holes can now be positioned off the main body of the pattern.

CID866 (Dual Purpose Straight)

- Resolved issue with adding holes to pattern, the settings were not displayed when the item was saved and then re-opened.

MAP Software Version: 2.38.077

Version LOK Code : 17

Release Date : 09/04/2009

New Features

Item Scripting

- 1. Added scripting option to report Top and Bottom of objects end position `item.endlocation("Top")` `item.endlocation("Btm")`
- 2. Added scripting option to report items section levels `item.level("Floor")` `item.level("Soffit")`

New Patterns\Enhancements

CID866 (Dual Purpose Straight)

- New option added to draw the Model at the entered length (Lengths Include Connector Adjust) when using "Step Down" connectors, the development still includes the full turnover, the 3D model will shorten the length by Line4 allowance.

Application Fixes

Service Database

- Resolved issue with "Lineweight" display in services editor, was defaulting to metric (mm) after selecting an imperial value.

Pattern Fixes

CID 521(AHU Pattern)

- Relax new Dimension checks for CID 521, in 2.38.076 latest release it was not allowing holes/openings to be positioned off the main body.

CID134 (Square to Oval)

- Resolved issue with annotation line displaying at the incorrect length.



Software Changes Document: CADmep+

MAP Software Version: 2.38.076

Version LOK Code : 17

Release Date : 07/04/2009

New Features

Annotation

- New option for Size and Level text when in Auto mode to only add to model if different from last text displayed.

Annotation Leader Lines

- All annotation leaders now have additional Grip point for positioning a leg line, represented by a green diamond grip. Leader positions are now calculated more accurately around the text or block.

Attacher Arrow

- Reduced the size of the attacher arrow from a minimum of 50mm to 15mm diameter, when displayed on small bore pipe.

Collision Detection

- New option added to database for collision detection to control if the viewer dialogue is displayed when a run time collision is detected, additionally control added for the colour of the collision marks.

Collision Marker

- New option added to control the size of the Collision Detect Marker (Circle), as a percentage of the screen size.

Custom Snap Points (Convert3dModel)

- New option to include custom snap points into the model when using "Convert3dModel".
If a Block is included in the selection called "SnapPoint", its insertion point will be added to the model as a "end" snap, multiple blocks can be inserted and selected to create many additional snap points on the converted model.

Design Line

- Option added to annotation settings to display the parameter's units after the values when showing the text on Design Lines
- Optimisation of Design Line Pressure Drop calculations to improve efficiency.
- Pressure Drop Dialog: Added facility to apply a source pressure to evaluate real flows for circuits.
- Pressure Drop Calculations: Added a 'Calculate Actual Flows' option, with this ticked the non-index run circuit flows are adjusted to balance the pressure losses in the index run. This will increase the flows in the terminals so that each circuit has the same pressure loss as the index run. A side effect of this is that the index run pressure drop will increase because of the increase in source flow.
Use of dampers on the non-index run circuits to limit the flow on the other terminals will restore the original index run pressure loss.
- Added the ability to add eccentric reducers to form part of a non-centre line tee.
- Added "Auto Elevation" update mode.
With this enabled on the Design Line interface changes in fixby to or from centreline amend the working elevation automatically.
- New feature added to Hanger Specifications for use with Design Line, option added to apply before and/or after joint positions.
- Now allows end of line couplings that are configured as reducers to be filled at end of line - in a similar way to cap ends.
- Constraints Editor now displays the current units, the entered values are displayed in the converted units
- New feature added to "Button Properties" dialog to set a "Prompt for Length" attribute. When the fitting is taken off to apply to Design Line, a dialog is displayed to prompt the user to enter the fitting's length. This overrides the fitting's default length.

Main Database

- Default the "Restrict to Same TAB " to OFF when updating.
- New option to draw the Centre Line of round items on the 3D Layer instead of the Centre Line layer, when the setting "Only show Edge Lines if Pipe Diam > value" is active.



Software Changes Document: CADmep+

- Fill 2 Ends now supported in the feature to "Stretch Existing Items for Fill Tools" option on the CAD-Duct Solids BSS page of the Main Database. With this option selected, existing Straight Items are stretched rather than adding new pieces.

Menu Groups

- Included the "ACA" Menu Group name to list of names the Toolbar and Menu get added to automatically when loading AutoCAD.

MoveTextVP and RotTextVP

- Two new commands added to command stack (command line) and Toolbars, MoveTextVP and RotTextVP, for moving and rotating text in current viewport only (paper space).

Object Centre of Gravity

- New command "ADDCOGMARKER" or "COG" which will report the Centre of Gravity for the selected objects.

NOTES

If a block is defined in the current drawing called "COG", this will be inserted at the CG point. If the block contains attributes, the 1st will be filled in with the total weight, the 2nd with the co-ord, the block can contain 0 1 or 2 attributes.

Object Colour per Viewport

- Enabled an option previously remmed out to support different colours for the same object in different Viewports (for 2010 build only) i.e. Layer Colour override per viewport.

OPENJOB

- Support added for internal shells created by importing underlays into uCADMAP, PM, i.e. structural IFC files, when opening jobs (CAJ, EST or MAJ) via OPENJOB command.

Pattern Type

- Pattern Type of "Rectangular Duct" added to the following CID's
 - CID 1120 (Taper + 2 Bends)
 - CID 1130 (2 Bends)
 - CID 1131 (Taper + Bend)

Price Lists

- Added support to convert SET for per qty and REEL for per ft/m as recognised tags when updating price lists.

Print Objects

- New print objects added for Item material, Skin and insulation colour.

Service Database

- New options added to add default lineweight when creating Layers.
- New option added to "Service Database" to enable user to apply which Status fields can be output to ESJ/MAJ files, when executing the export to CAM function.

Splitter Tabs

- Splitters now support the addition of "Tabs" on developments, options added to splitter setup in Pattern Database to set tab width, length and quantity. Note: CAD-Duct users can access this in Full Database Edit mode.

Spool Reports (ADDREPORT)

- When using Spool Reports (ADDREPORT) TOTALS can now be reported, set from the check box in the column Tab.

Spooling

1. New options added to "Execute Script" and "Export Item Data" for each spool created, either from a DWG or to a Layout Tab.
2. Job Name now updated to reflect the spool name, even in each layout, for reporting.
3. When spooling to DWG, all viewports are zoomed to the spools extents.

Sub Assembly

- Improved support for "Sub Assemblies" in Design Line.



Software Changes Document: CADmep+

USEVPTWISTANGLE

- New command allowing the user to set whether the Viewport Twist Angle is used for Text Alignments when aligned to View, for Version 1 text only (setting is saved per Drawing).

New Patterns\Enhancements

CID 1111 (Mechanical Tee)

- 2 new options added, Fix Relative and Rotate. With Fix Relative set to Yes, it behaves like a centre line branch when positioned in design line, with Rotate set to Yes the branch aligns to the small arrow when Auto Attaching.

CID 32 (Straight + Branches)

- Now supports double wall.

CID 328 (Trouser Piece)

- Now supports double wall.

CID 33 (Straight + Shoes)

- Now supports double wall.

CID 836 (Radius Double Offset)

- Now supports double wall.

CID 838 (Hanger)

- Oversized option added to the Support pattern allowing it to be configured to span multiple pipe runs (Width can be set when "Pipework" option is set to Yes).
- New option added to the hanger pattern to draw a circle at the top of the drop rods representing the "Area of Influence", i.e. no go zone, the symbol is drawn onto the 2D layer.

CID 996 (Terminal)

- Added option to suppress all Symbols drawing on CID 996 (set Option 0 to "None").

CID1133 (Rectangular Straight + Integral Reducer)

- New Rectangular Ductwork Pattern, options include: setting angle of damper blade, item developments which include fixing holes for blade.

CID1141 (Segment Bend + Spacing Tabs)

- Round segment bend made in single segments with options to add small spacing tabs along the connector and seam edges.

CID1142 (Ellipse)

- Ellipse pattern

CID12 (Rectangular Cap End)

- New Option added to pattern to enable the part to be mirrored, this ensures that it will always attach to the straight.

CID183 (Lagging Straight + Cut Out)

- Added new option to enable the addition of a hole with angled sides.

CID521 (AHU Pattern)

- New option to draw an Attenuator symbol on item.

CID764 (Filter Box)



Software Changes Document: CADmep+

- New "Filter Box" pattern.

CID765 (Louvre Box)

- Louvre Box pattern.

Ductboard

- New pattern CID 1136, Plenum Box, based on current pattern 926

New Pattern

- Added new pattern CID 1144 TriPro Damper
- Added new pattern CID 1145, Duct Board Slot Plenum

Application Fixes

Calculated Dim Fields

- Fix change not to show hidden dimensions on pattern dim calcs breaking calcs + show correct annotation when drawing part developments for skin + don't show bad C3/C4 annotation for double wall connectors in takeoff views

CTEXT Reports

- CText fields that require the CADMatrix3D for the calculations of positions (Connectors, Centre of Gravity) were not updating as the object was being moved, it required a rebuild or edit to update, now it is automatic.

Design Line

- Resolved issue regarding the defining of the "Source Point" on the Design Line, placing an item with a button code of "Source" eliminates the need to position manually.
- Resolved issue with "Overridden" bends not filling when placed on a "Flex Filled" Design Line.
- Resolved issue with Design Line "Auto Fill Hangers" feature, updating the job. This was effectively causing a regen each time.
- Fill in 3D
Design line failing to fill bends when template bends have locked angles even with very slight differences. Tolerances have now been relaxed to allow filling to be consistent with the way that product listed bends or catalogues are filled.
- Velocity Annotation
Fixed an issue with velocity annotation on the line not using the rounded sizes for the velocity calculations - an issue with multiply constrained lines.

Terminal Logic

Fixed an issue with template terminal logic creating invalid models, then also using incorrectly sized flex. Work-around for this is to setup carry-over dimensions on the terminals to be bigger than the required spigot sizes.

- Improvement to Design Line fill routine for inline tees, will result in less branches bridging over more than one straight length.
- Resolved issue with Design Line placing an incorrect shaped Cap End into the system.
- Resolved issue with Change Units option on terminal from wiping out the unit description.
- Resolved issue with "OffsetShapeChange" node being generated incorrectly.
- Improved shoe placements in Design Line, particularly for angled branches and non centre line tee junctions.

Double Wall (Straights)

- Fixed Double Wall straights when set to Auto length, ending up with different skin / body finished lengths if the connector turnover' allowances were different.

Drop Into Fall

- Resolved issue which was causing Swept Branches/Tees being inserted at the incorrect angle.

Ductboard



Software Changes Document: CADmep+

- Fixed a typo causing Ductboard seam islands to still be wrongly included in the area calculation.
- Fixed area calculations possibly appearing doubled with some ductboard tool settings.

ExplodeText & ExplodeTextPS

- ExplodeText and ExplodeTextPS Elevation Text, second line of text was in the wrong position, Elevation blocks were not exploded correctly, position or rotation.
- Version 2 Set Text was not exploding correctly.
- Using ExplodeText(PS) on Item Numbers was offsetting the text slightly with Version 2 Text.
- ExplodeText and ExplodeTextPS commands were always aligning the Item Number Box incorrectly.
- ExplodeText and ExplodeTextPS commands were always aligning the Text in the +X direction, regardless of UCS or Rotation.

Flexible Hose (CID 2108)

- Allowed normal nodetypes to be created at the junction between flexible & normal lines types.
Fixed a drawing issue that was omitting edge lines for hose patterns that were using different NSCs than the global NSC (via option).

Item Takeoff View

- Fixed issue with insulation/double wall using the CAD-Type colour defined in the Service Database. The item now uses the "Faces" colour defined in item's takeoff properties.

Length Dimension Rotation

- Allow Dimension (length) text to be rotated using the ROTTEXT command, this will depend on the Dimension Styles settings, if set to "Aligned with dimension line", then it can only be rotated 0 and 180 degrees.

Level and CText blocks

- Fixed issue with colours displayed when plotting, sometimes the text and geometry colours would appear to be swapped, it now displays as per the objects colour, if set to ByLayer, then it will use the layers colour.

MAP Backup

- Improved error reporting when selecting zip file to restore, now prompt auto-popup browse dialog if not zip not found. Added support for profiles and new import/job file types.

Output to Viewer

- When exporting to a CAJ file (Viewer), ADT Secion_Lines were being converted to objects with 0 faces, causing the extents in the viewer to incorrect, so Zoom to Fit failed.

Pattern Dependencies

- When applying a Dependency to a dimension, restrict the list of available dimension descriptions to the ones used by the pattern, instead of all dimensions used by the Master pattern.

Print Objects

- Resolved issue with "Dimension List" object not obeying "Show Real Values" switch, for example if Straight pattern is set to "Auto", switch displays item's actual length value in reports.

Rise/Fall Symbols

- Resolved issue with rectangular "Rise & Fall" symbols changing orientation when the Paper Orientation of the plot was changed.

Rotated Item Number Blocks when Exploded

- If using item number block, explodetext, explodetextPS and create2d, would sometimes create the block rotated from the original orientation.

Scripting

- Resolved issue with application crash when script file was re-using a variable that was getting deleted.

Spool Drawings



Software Changes Document: CADmep+

- Fixed bug when creating Spool Drawings
 1. Custom Data Field values were not being cloned from the original drawing.
 2. Custom Data Fields were only being cloned if an "Update Title with Report" was being used.

Spool Reports with Sub Assemblies

- Option to "Expand Sub Assemblies" when using Spool Reports was not enabled in the dialogue, now user has option to expand or not. Expanded will report each item within the sub assembly on a new line. (unless collected).

Worksheets

- Fixed scaling issue and print quality when printing from Worksheets.

Xrefs

- When xrefing a drawing with a name that is not valid for a layer name (i.e. contains a comma ,) AutoCAD will prompt for a substitute name for the reference, this was not being picked up as a valid layer name to draw the text and edge line onto, so xrefs were missing detail (text, clines, edge lines etc).

Pattern Fixes

CID 1 (Straight (Cut))

- Fixed bug that was not cutting holes in insulation when applied to this pattern.

CID 1120, 1130, 1131 (Ductboard 2/3 Way)

- Fixed cheek developments so that they are no longer too large by thickness in Y direction. Added error check for bottom extension less than thickness.

CID 1129 (Twin Straight)

- Auto-length was not functioning.

CID 183 (Lagging Straight with cut-out)

- Fixed this patterns development; being split into two unequal-sized parts.

CID 2882 (88-Curved-Branch x 2)

- Fixed missing second branch since implementing proper intersections.

CID 3 (Square Bend)

- Fixed holes being positioned incorrectly when offset around the bend's corner and using double wall.

CID 33 (Straight + Shoes)

- Fixed the right hand side hole development being positioned incorrectly (offset).

CID 37 (Drop Cheek Breeches Piece)

- Bottom cheek development reported break down when should have been break up.

Note: issue only occurred in versions 2.37.163 to 2.38.050

CID 382 (Grille Box Variable Hole Options)

- Did not have correct hole position limiting, was unable to place holes touching the face edge.

CID 382 (Grille Box Variable Hole)

- The default hole was using just the hole width dim for its width and depth, now supports the depth dimension to allow for Rect, Round, and Oval holes.



Software Changes Document: CADmep+

CID 45, 46, 943, 954 (Ductboard Bends)

- Fixed mitred throat developments generating fold lines as per the radius throat.

CID 7 (Rectangular Shoe)

- Double wall (skin and dims inside) lower end was not cut back, made to match top end.

CID 93, 325 (Bullnose Tee)

- Removed C4 connector annotation from pattern views.
- Fixed problem when developing part using the Option to develop in 2 Parts = Yes and when showing marking lines on development screen.

CID 947 (Ductboard Branch)

- Fixed Pen Mark seam edge development when made in 2 or 3 parts.

CID 952 (Ductboard - Square Bend)

- Fixed Pen Mark seam edge development when made in 3 parts.

CID 957 (Grille Box Side Entry)

- Added holes' inset/offset bad dimension check (previously would allow holes of the side of the pattern).

CID 96 (Lagging Dome)

- Pattern fix to resolve problems with segment development when adding fixing holes and making extensions as separate parts. Resolved issue with holes being placed off the item and placing on top of each other.

CID 996 (Swirl Diffuser)

- Relaxed the dimension checking errors when pattern 996 is configured as a Swirl Diffuser. It now allows the Width and Depth to be 0 x 0 (No plate).

CID1115 & 1116 (Oval + Branches)

- Resolved issues with CID1115 & 1116 developing incorrectly if body of item was set to round.

CID121 (Oval Branch)

- Resolved issue with CID121 displaying incorrectly when double wall settings were applied.

CID184 (Circular Bend on Straight)

- Resolved issue with item not displaying centre radius and angle annotation on takeoff view.

CID326 (Segment Bend + Round Tap)

- Resolved issues with incorrect hole positions and application crash when part was developed.

CID365 (Oval Bend + Round Tap)

- Resolved issue with CID363 developing incorrectly when tap size was equal to the body size.

CID889 (Oval Branch on Straight)

- Resolved issue with pattern being adjusted for "Double Wall" if the branch width/depth/length was set to zero, this resulted in an extra skin being created.

CID931 (Sliced Box Tee)

- Fixed application crash if CID 931 was developed with branch parts set to 2 and marking lines on.

Ductboard

- All Ductboard patterns now have following pattern types: Rectangular/Ductboard. Dongle type of all Ductboard patterns now = Ductboard.



Software Changes Document: CADmep+

- CID 1124, 1129 (Ductboard –Twin bend & Parallel Straight): added Patterns Connector Split-Dims, so patterns select gauge using split connector sizes (bottom connector's individual elements size, not connectors full size).
- Added lengths for fold lines on "Throat Wrapper".
- Added fold line's angle and extra development lengths for folding.

Ductboard Part - Area calculation

- Use theTool selected in Pattern Database Ductboard Setup, when checking for ductboard seam islands, to calculate Duct Area

Ductboard Patterns

- Recent change to include ductboard seams in costing caused possible multiple section annotation texts which were superimposed and unreadable, added ductboard tool numbers to sections to enable create section annotation texts for the first island only.

Ductboard Patterns - Area calculation

- Fixed typo causing ductboard seam islands to be wrongly included in area calculations.

Grille Box (CID 31)

- Dimension checking for Holes was allowing invalid positioning, the Hole Inset and Offset were incorrect.

Insulation and Edge Lines

- Insulation and edge line fixes for the following patterns: 46, 189, 317, 347, 348, 349, 350, 351,352, 353, 369, 390, 828.

Pattern Change

- CID 184 (Segment Bend on Tee)
Bend height annotation was being measured incorrectly from the bend centre instead of from the pipe center