

Chief Architect Ver 9.0 – Details of the New and Enhance features

The following list of new and enhanced features in Chief Architect version 9.0 was correct at the time this document was created (11/12/02). ART Inc reserves the right however, to add to, delete from, or modify the function of any of the items in this list at it's sole discretion at anytime prior the public release of Chief Architect 9.0.

3D Views:

- Inbuilt support for additional high-level rendering using the POV-Ray advanced rendering engine (POV-Ray automatically installs with Chief 9.0). The radiosity capabilities in ROV-Ray finally give Chief the ability to correctly show 'real world' lighting, shadows, transparency, opacity, and reflections. Even the standard images of trees, people, etc, included with Chief are now able to cast shadows, giving the most photo realistic rendering available in CAD today.
- You have the ability to set sunlight settings (ambient, direct) in Radiosity mode, and adjust the brightness/contrast levels in the final image.
- POV-Ray will allow you to create images of any size and pixel density, and incorporates three levels of anti-aliasing for the sharpest detail yet.
- Objects may be inserted in perspective, isometric, and section/elevation views.
- Objects may be inserted and/or edited in Chief Architect render views.
- All perspective and section/elevation/render views can be saved and reactivated.
- Objects may be copied in 3D views using drag copy and click copy methods.
- New Dialog controls for adjusting added lights may be found in 3D pull down menu.
- New Glass House™ render view provides a full translucent view of the interior and exterior simultaneously.
- 'Auto Detailing' for elevation/cross-section views. The feature uses your wall details and some new information to help you automatically detail your cross-section and elevation views.
- Drag and drop insertion of hardware items onto cabinets/doors has been enabled in 3D views.
- The Material Painter now works in standard 3D views as well as in render views.
- Optimizations were added to improve the generating speed of 3d views.
- You now have the added ability to convert any elevation/section view into a CAD detail automatically.
- Sinks and countertop items may be placed in 3D views.
- High resolution and low-resolution Chief Architect render views are available, low resolution being intended as a quick editing mode.
- A new "adjust lights" dialog has been added to allow access to all lights in a scene. In this dialog, all lights in the plan may be shown, can be accessed in any view, shows which lights are being used in the render view, and allows lights to be turned on/off from the dialog rather than having to change each light manually.
- The texture painter has been changed to a material painter.
- Move increments in 3D/render views may be set to 1mm when CTRL key is pressed and held.
- Electrical items may be resized/moved from 3D views.
- All walls are now capped in 3D 'roof off' overviews.
- Added ability to double click on custom countertops and slabs in 3D and open the specification dialog.

Chief Architect Ver 9.0 – Details of the New and Enhance features

Cabinets:

- Cabinets can be inserted while in Section view.
- New material assignment capabilities for cabinet doors/drawers/hardware have been added.
- Fill colour information has been added to the cad block page of the cabinet portion of the Symbol Wizard.
- Cabinet hardware is specified in the Hardware tab of the Cabinet Specification dialog. It includes door and drawer handles, or pulls, and hinges. Handles can be obtained from the library or there are several system supplied handles.
- Handle position can be set horizontally in from the door edge and down from the door top for base cabinets and lower doors on full height cabinets. It is instead positioned up from the door bottom for wall cabinets and the upper doors of full height cabinets.
- Hinge types are hidden, standard and Library. Nothing shows in 3D for hidden, but they will appear in the materials list. 'Standard' produces a system-supplied hinge while 'Library' allows a hinge to be selected from the library. Three hinges are supplied for each door over three feet (900 mm) in height. Otherwise two hinges are used. The distance of the vertical center of the top and bottom hinges from the door top and bottom can be specified.
- Cabinetry and objects derived from cabinetry (fixtures/furniture) can be group selected and blocked. The block may be inserted into a library.
- Dynamic defaults for cabinet doors and cabinet hardware are now available. Cabinets that have been saved in the library browser with the use default setting will get their items from the current active plan's default cabinet.
- The "Architectural Block Specification" dialog has been added. The controls in the dialog are "Display bounding Box" and "Use Block Layer" which sets the child objects to be drawn using the blocks layer.
- The components dialog for grouped cabinets will list the components of all sub-cabinet objects. Similar to group select.
- Custom counter tops now create a bottom surface.
- Cabinetry may be added in 3D views.

Cad Blocks/Details:

- Optimizations have been made to allow CAD details and plot lines to generate much faster.
- CAD blocks may now be renamed in the CAD block management dialog, and nested blocks can be added to the Cad Block library.
- 32k limit on number of CAD items in a block has been removed.

CAD Tools:

- Arcs and splines may now also carry arrowheads, at either end or both.
- 32k limit on number of CAD items has been removed.
- CAD blocks may be renamed in the CAD block management dialog.
- CAD objects may be reversed using new "reverse object" edit toolbar button.
- CAD objects may be moved to front using new 'move to front' edit toolbar button.
- Polylines may be converted to object polylines using the new "convert polyline" edit button.

Chief Architect Ver 9.0 – Details of the New and Enhance features

CAD Tools (cont):

- 'Object' polylines may be converted to ordinary polylines using the new "convert to plain polyline" button.
- New added function for creating vertical polyline solids.
- Many new tools have been added to improve efficiency and ease of use. These include Move, Rotate, Resize, Reflect, Replicate, Move-to-Front, Reverse direction, etc.
- Molding polylines, custom counter tops and all terrain objects may be converted to splines.
- Many CAD related dialogs have been modified or added to improve efficiency and use.
- Special polylines (cabinet countertops, etc.) may be converted back to normal polylines.
- Added function to flip direction (start/end) of lines and polylines.
- Selecting a heterogeneous set of CAD items now brings up a generic set of edit buttons rather than edit attributes of the first item selected.

Dialogs:

- Many dialogs in the architectural and cad areas of the program have been modified or rewritten to update the interface and provide a clearer, more consistent interface.

Dimensions:

- New added function to dimension between any two arbitrary points.
- Added functionality to fully specify length of extension lines.
- Dimensions may be group selected to change layers and other settings.
- Dimensions retain selection after editing for further moves/edits.
- Single click now goes to the same mode as double click did before.
- The move handle is positioned where you click. It avoids the other handles if there is a conflict.
- Double click brings up the 'Dimension Edit' dialog.
- New added function to facilitate baseline (cumulative) dimensioning.
- Dimensioning engine has been completely re-written to use full floating-point math, which means that dimension runs will now always add up. Dimensioning the same item in different ways will obtain the same results as long as the item being dimensioned is placed in the model with the same accuracy as the precision of the dimension lines.
- Added function to produce aligned dimensions for off angle walls, lines, etc.
- Added a compatibility mode for dimension rounding.
- Added a preference to set the size of the dimension handle. The size is number of pixels from the center of the handle to 1 side. Allowed range is 1-10. Default is 3.

Chief Architect Ver 9.0 – Details of the New and Enhance features

Doors:

- Sills on exterior doors may be turned on/off.
- Hardware (locksets, knobs, hinges) from symbol libraries can be attached to doors. New door hardware includes interior/exterior handles, interior/exterior bolt locks and hinges. There are system-supplied items for each of these: several for the handles, and one lock and one hinge are supplied. Other handles, locks and hinges can be obtained from the library. All these, plus their positioning on the door, are specified in the Hardware tab of the Door dialog.
- The handle specified in the Handle combo box appears on both sides of a door unless Ext. Handle is checked. Then it appears only on the interior of an exterior door or on one side of an interior door. To place a handle on the other side, specify it in the second, Ext. Handle, combo box. The handle position can be specified in from the door edge, which also specifies the lock horizontal position, and up from the floor.
- Both interior (sometimes a thumb latch) and exterior separate locks can be specified. Their position in from the door edge is set with that for the handle. The position up from the floor, usually higher than for the door handle, can be specified.
- For hinges to look right, it is best to have at least a 6 mm reveal for the interior, or hinge side doorframe. If this is not provided the hinge is still placed, and carves out a portion of the frame. 'In from Top/Bottom' specifies the distance to the vertical hinge center from the door top and bottom. Two hinges are placed in an interior door, and three in an exterior door. Hinges can be placed only into swing doors.
- Door hardware displays in all 3D views. Door specification dialog has been updated to account for new capabilities. Door hinge side will change when the door swing is adjusted.
- Dialogs: "New Plans" preference allows user control of prototype (profile) plan. "New Plans" preference allows user control of default save/open directories. Materials list polyline dialog box has been redesigned with new line/fill controls.

Exporting & Importing:

- Hatched or filled areas export with the hatch or fill maintained.
- Import of DWG/DXF has option to specify units. Import wizards remember the last filename along with the path for previously imported file.
- JPEG file import/export support has been added.
- PNG file import/export support has been added.
- EMF file export support has been added.
- New 'Export Entire Plan' feature attaches all external graphics files used in the plan to the export.
- Support for text alignment on import/export has been added, as has support to import/export text font name and whether it is bold, italic or both.
- Support has been added to export multiple line text blocks as a single entity rather than exporting individual lines of text.
- Support has been added to export filled areas. These show up in AutoCAD as 2D Solid entities. There are also two additional check boxes on the export DXF/DWG dialog that control whether pattern lines and filled areas are exported.
- Added an option to specify units on DWG/DXF import and export including '2D/3D open symbol dialog', and 'Create Symbol' Wizard.

Chief Architect Ver 9.0 – Details of the New and Enhance features

Edit Tools:

- Appropriate tools have been added to edit grouped cabinets and sub-cabinets.
- Floor, Ceiling, and roof framing can be edited in 3D views.
- New edit dialogs have been implemented in many architectural and cad areas.
- 3D editing has been extended to corner boards and quoins.

Electrical & Lights:

- Light properties may be specified with light symbols.
- Electrical objects may be inserted and/or edited in 3D and render views.
- Electrical 'lighting symbols may be set up to mount under cabinetry.
- Multiple light sources may be added to a light fixture.
- Electrical connections are editable.
- Replicate Object tool is now working with electrical items.
- Any electrical item may be placed on any 'CAD layer' or 'User layer'. The only 'Architectural layer' that an electrical item may be placed on is the default electrical layer.
- Added ability to have multiple lights associated with a service. These lights can be edited from the service edit dialog.
- Service lights also have the following new features:
 - Soft shadows for ray tracing
 - Ability to specify direction and offset from base independent of service symbol, and of other lights
 - Ability to specify offsets in X/Y direction for each light - along/up wall for wall lights. These offsets rotate with the light if you're doing a floor/ceiling service
 - Ability to specify that a light is used only in real-time or ray trace modes, or used in both
- Electrical items now show in a preview pane when opened for specification.
- Electrical items can have labels.

Framing:

- Each framing member can have unique attributes for color and material to isolate and highlight special purpose structural members.
- Nogs for blocking/bracing (linear and/or staggered) may be included/inserted for walls, joists and rafters.
- Underlay specification facilities have been added for multiple floor material specification.
- Materials may be applied to platform edges.
- Wall framing displays for short walls/knee walls more reliably.
- New framing specification and post specification dialogs have been included for new post/beam framing tools.
- Floor, ceiling and roof framing are editable in 3D views. Wall framing is edited in the wall detail view.
- 'I' joists will display properly as 'I' joists, when "Type" for a framing item in either the Build Framing dialog or the Framing Specification dialog is set to I-joist.

Chief Architect Ver 9.0 – Details of the New and Enhance features

General:

- Objects remain selected after movement/editing so that further operations can be carried out on the same object without having to re-select it.
- AVI file format has been added for walkthrough files.
- Corner trim/quoin start and end heights are now fully definable.
- Corner quoin control has been improved for staggered or mirrored quoins.
- Corner quoin starter course and direction is definable in a new "corner trim/quoin" dialog
- A new "match properties" tool has been added to allow similar objects to be found within a plan.
- A new "load properties" tool has been added to allow chosen properties of one object to be applied to other objects.
- Edit area limitation of 100 selectable objects has been removed.
- Selection sets (single and multiple selected items) are retained when zooming.
- Undo/auto-save files are now saved in separate directories allowing enhanced performance options.
- Plan databases may be created for organization, catalog and retrieval of plan files. Thumbnails may be made from plans or views and used for fast preview.
- A new "template" system has been established to choose profiles for plan and layout files.
- Many new accelerator key combinations have been added for improved efficiency and speed.
- The default directory for plan files can be set in preferences under "new plans".

Hardware:

- Door hardware (lock sets/ hinges) can be applied and display in 3D views
- Cabinet knobs and pulls may be applied and display in 3D views.

Layers:

- Any cabinet based object may be moved to any layer. Ibis includes base, wall, and full height cabinets, soffits, shelves, partitions, and cabinet based symbols (fixtures, furniture, hardware, millwork, and geometric shapes)
- Added new items to include in the 3D 'show items' dialogs.
- Added 'Show Items' Architectural entry for room plan fill.

Layouts:

- Layout template files containing title blocks and borders can be saved and recalled as required.
- Plans/views may be assigned to a specific non current layout page when sent to layout,
- All associated plans save when a layout is saved.
- Line attributes color/line, style/line weight for layout view port borders can be changed.

Chief Architect Ver 9.0 – Details of the New and Enhance features

Library Browser:

- New categories have been added to the library browser: Fixtures (Exterior), Furnishings (Exterior), Geometric Shapes, Hardware, and Millwork. Many existing libraries have been renamed. Over 800 new 3D symbols have been added to the 'Premium' content libraries.
- The library browser is now dockable. Control key override allows browser window to be located on second display in multiple display systems.
- The library browser now has a horizontal layout option for docking on top/bottom of screen.
- The new library search engine allows user to search libraries for symbols.
- A search button has been added to main library tools.
- Image and texture names now show in library browser.
- Display of symbol names may be toggled on or off.
- Scroll bars have been added to browser window to facilitate navigation of the libraries.
- Copyright information is now stored in the libraries.
- Menu and status bars may be toggled on or off in the library browser.
- Modal (object specific) library browser access from object specification dialogs.
- Entire library trees may be expanded or contracted as desired.
- Library contents may be copied and pasted into a text editor to create symbol lists/catalogs.
- Added the ability to rotate an imported DWG/DXF by 90 degrees and -90 degrees about any primary axis.
- The arrow keys now change the selection in the selection pane Men in scrollable list view. The page will scroll so that the item is centered on the page.
- Status bar messages for the library browser menu and toolbar items have been added.

Library Objects:

- Library structure has been enhanced for efficiency.
- Several new libraries have been added. (List from symbol development)
- When making a library object, a plan block may be automatically generated from the 3D object.
- Existing symbols may be overwritten/replaced.
- A material definition page has been added to the Symbol Wizard, allowing materials to be applied to new symbols as they are created.
- The Integrated Symbol Developer now has options to edit item type, apply "hangs from ceiling" to fixture symbols, "fits under wall cabinet" to furniture symbols, "metric", "imperial", and "materials list names" attributes to all symbols.
- 3D Library objects may be assembled and blocked together, and then inserted into a library as a block.
- Door and drawer handles have been added to the library.
- New symbols may be added to libraries directly from the Symbol Wizard.
- Library doors may have independent exterior and interior materials.
- Customised cabinetry can be blocked together and the resultant block added to a cabinet library.

Chief Architect Ver 9.0 – Details of the New and Enhance features

Library Objects (cont):

- Library objects can be scaled and rotated when created.
- An unlimited number of materials may be assigned to a symbol.
- Default materials may be assigned to symbol layers.

Materials List:

- New columns have been added for equipment, unit costs, % markup, and labor.
- Spreadsheet has been updated/improved.
- Preferences for the materials list have been augmented and updated to allow extended user control. Alternating colour schemes for spreadsheet cells may be defined, along with many new options.
- Materials list report styles can be changed while the materials list is active.
- Materials lists can now be saved and recalled for editing and comparison.
- All text fields in the materials list can be modified.
- The materials list polyline now has standard fine layer, edit and fill capability.
- Materials lists may be built from materials polylines using the new "build list" edit tool button.
- Materials list will export directly in XLS and HTML formats.
- Materials list may be set up to export using version 8 (old) column format for backward compatibility with 3rd party estimating packages.
- The materials list toolbar has been enhanced, containing several new tool buttons for opening the master list, generating materials lists from plans and areas, managing saved materials list, and creating/editing materials
- Master list line items may be deleted as desired.
- Materials list entries may be moved to other ID areas. For example, framing entries may be moved to show in the foundation area.
- Materials list polylines can have line type and fill style set individually.
- Items that differ in manufacturer, supplier, etc. will show in the materials list as separate items.
- Master materials list cell information may now be copied and pasted into other cells.
- Items shown in the master materials list may be deleted using a new "delete" tool button.
- A new "use" column has been added to the components area for doors/windows to indicate what items belonging to the select object will be sent to the materials list. Use for pre-hung doors, window assemblies.
- Changed locations that displayed the check boxes for which columns are displayed to use a scrolling list of check boxes. The places affected are the material and master list show Items dialog columns tab and preferences Report Style and Master List items.
- Added the ability to change the order of columns. The check box list shows the items in the order that they will display. "Move Up" and "Move Down" move the selected items up or down in the list. You can select multiple items in this dialog using the selection mechanisms that windows supports for list views. These include CTRL click, shift click and drag selection.
- Add the ability to edit the names by clicking twice on the item. Double click will toggle the check box.

Chief Architect Ver 9.0 – Details of the New and Enhance features

Materials:

- Materials can be defined for deck rim joists.
- Default material definitions have been added for cabinet door panels and styles, hardware and molding.
- Materials defaults now display in tree structure for clarity and added detail.
- Material defaults have been added for custom counter tops when used without cabinets below, cabinets and doors.

Menus:

- Many menu changes have been made to improve usability.
- 'Change units' facility to select either 'Imperial' or 'Metric' operating methods has been replaced by profile plan assignment capability in the "New Plans" preference dialog.
- Number of recently opened files display has been increased/made user definable.
- Activate camera command is now available on the context menu.

Moldings:

- Moldings may be added to lines and polylines in both elevation and plan views.
- Room molding polylines have been added, to allow editing of molding path/height
- Cabinet moldings will accept separate materials for each molding.
- Molding polyline tool has been added.
- Molding line tool has been added to compliment the molding polyline tool.
- Corner trim can now be edited from any 3D view.
- Moldings may now be placed on custom countertops.
- Custom moldings on windows and doors can have material set for each applied molding.

Patterns:

- Patterns will be suppressed when dragging filled polylines for improved performance.

Preferences:

- The number of recent files displayed at the bottom of the file pull down menu is now a definable preference and may be set.
- Function has been added to set a fixed handle size for selected objects.

Railings:

- Newels and balusters may be assigned for a railing.
- Railing panel styles stored in libraries may be inserted between posts/newels.
- Stairs and railings can now use a molding for the rail.
- Baluster size is no longer connected to rail thickness and may be set independently

Chief Architect Ver 9.0 – Details of the New and Enhance features

Render View:

- Objects may be inserted and edited in the CA render views.
- Textures for mirrors are automatically generated.
- Textures can now be rotated to any angle without making a separate copy of the texture image
- Truss properties may be edited in render view. Library door and cabinet doors styles may be assigned in render view. Support for POV-Ray Rendering has been added for production of high quality ray trace renderings incorporating shadows and reflections in a premium render view. Render backgrounds may be set to wrap 360d.

Roads and Sidewalks:

- Function has been added to produce roads, road medians, curbs, gutters, and sidewalks Function has been added to produce road striping along with the ability to change stripe width. Boolean driveway properties have been added to roads to prevent automatic sidewalk generation Separate surface types are available for roads, sidewalks and curbs. Terrain features, roads, sidewalks, road markings and elevation data may be added to libraries Road and sidewalk centers and edges will display and are dimensionable.

Roofs / Gutters / Skylights:

- Roof plane dialog materials capability has been augmented and enhanced. Separate materials may now be defined for ceilings, fascia, gutters, roofs, and soffits/eaves. Skylight frame and glass may now have separate materials applied. Skylight glass material controls have been improved to allow flexibility for glass properties.

Rooms:

- Platform thickness may be set room by room. Attributes for platforms may be set in the room specification dialog. Default ceiling materials can be assigned in the profile (prototype) plan. Room specification settings have been enhanced to improve control and add flexibility. Plan view colors and pattern fills for rooms may now be set. A new "attic room" allows flexibility for storage areas/cape cod designs. "Select same" tool may be used to find rooms with selected attributes in common. Floor finishes/coverings may be defined independently of underlying structural elements.

Schedules:

- Schedules can now be made for cabinets, fixtures, furniture, and electrical items. Fixture schedules can be used to generate appliance, plumbing fixture, HVAC schedules, etc. Schedules may be converted to text for editing or copied to spreadsheet programs. Schedules may be moved into cad detail windows. Glass sliding doors may be put into window schedules. Defaults have been added for each schedule type.

Stairs:

- Handrails will be placed along walls for stairs against walls. Railings on custom landings are optional. Balusters and newels may be chosen and applied to Stair railings from libraries. Baluster type for both stair rails and landings can be set to "Square", "Round", or "Library". The selected library newel or baluster is automatically resized both in height and diameter to the same as for a non-library post.
- Balusters are shorter near the front of a tread than at the back, because it is less distance up to the bottom of the railing. Normally, balusters are cut off at the bottom to compensate, so that any pattern in a symbol baluster will "Flow down the stairs". Check "Cut_Baluster Top" to cut the tops instead. This might be done for a symbol baluster that is smooth, with no pattern or design, in its top area.
- The width, or diameter, of the post or newel is set by the new "Newel Width" entry. Post type can be set to "Square", "Round", or "Library". The newel height can also be set, but takes effect only if "Post to Rail" is not checked.

Chief Architect Ver 9.0 – Details of the New and Enhance features

Stairs (cont):

- Add newels at the start of the first tread, and at the corner of a landing where two stair sections meet when the staircase changes angle by checking "First Tread Posts". These and any newels for the landing railing have their heights set by "Newel Height" or will run up to the railing underside and be cut off if "Post to Rail" is checked.
- Newels may be placed on inside corners for angled stairs.
- Stair runners may be set and display in views.
- Railings will now turn corners properly with appropriate corner pieces.
- Handrail profiles and brackets may be specified.

Symbols:

- A new "Outdoor Objects" symbol library has been added.
- Materials may be mapped to surfaces when creating symbols.
- Symbol doors may have separate materials for exterior and interior door surfaces.
- Hardware symbols (door handles/locks, cabinet knobs/pulls, etc.) have been added.
- Window accessory libraries have been added.
- Many existing libraries have been updated or reorganized.

Terrain:

- Terrain elevation regions can be specified.
- A New 'Terrain Import' Wizard has been added.
- Terrain data may be imported in tabular form.
- Sun Shadows automatically update after terrain is built.
- Separate materials can be applied to the terrain skirt
- Elevation lines or terrain features may be multiple selected and edited as a group.
- Terrain objects may be grouped and added to libraries.
- All terrain, terrain features, and roads will recognize and cut for polyline holes.
- Fencing can now be drawn which will follow terrain (stepped or sloped).

Toolbars:

- A 'hold position' edit button has been added to Edit Area All Floors to improve control when copying structures from plan to plan.
- Many new tool buttons have been added to improve usability. (the final list unavailable at this time)
 - House Wizard: Room box tools.
 - Cad: Enable Advanced Spline Editing Mode, Rotate Object, Replicate Object, Reverse Object, Move object, Reflect Object, Reverse Direction

Chief Architect Ver 9.0 – Details of the New and Enhance features

Trusses:

- Trusses may be edited in 3D/elevations
- Material specification has been added for trusses.

Walk Through:

- AVI format has been added for walkthroughs.

Walls:

- Walls may now be drawn at any angle.
- Platforms may be set to butt to walls
- Curved wall radius may be specified after the wall is made tangent to intersecting walls.
- Curved wall ends may be locked while editing.
- Wall tops and sides are now capped in 3D 'roof off' views.
- Walls may be drawn from existing walls using new "duplicate wall type" edit tool.
- Wall materials may be specified for individual walls, overriding global wall definitions.
- Pony Wall tool button allows pony walls to be drawn directly. Pony Wall defaults may now be set. Wall types are now listed in alphabetical order and wall types in the wall type dialog may be copied. Wall elevation "slabs" may now be drawn using polylines on elevation. Group selected walls may be aligned with walls on another floor if within wall snap distance. New tools have been included to directly draw exterior walls, interior walls, foundation walls, pony walls, fencing, curved walls, and set wall definitions directly.

Windows:

- New libraries for window coverings and exterior accessories have been added.
- Curtains and blinds may be applied to window interiors
- Skylight frame and glass materials are now editable, and frame width and height may be specified.