Sccsid = @(#)bc_rel80.dc   80.6   03/02/15   SIGMA 8.0

==
   BuildersCAD V80 RELEASE NOTES
==
**** visit www.BuildersCAD.com for most recent updates ****

Core Technology inherited from ARRIS 80

 1. Text Fonts

    Text fonts are now referenced solely by name. The use of the
    font slots 0 and a to z has been discontinued. This eliminates
    the problems cause by different users assigning different fonts
    to the same slot and also removes the limitation on the number
    of fonts that can be used in a given drawing. It more
    closely conforms to the practice in most common software
    applications which do not utilize the concept of font slots.

 2. Attributal Repeated Items

    Major enhancements have been made in the definition, placement,
    and storage of attributes associated with repeated items. The
    Attribute application sub-menu has been eliminated and all
    attribute functions are now executed from the Repeated Items
    menu.

    The attribute definitions are now stored in the repeated item
    library together with the repeated items rather than in a
    separate '.at' file. The definitions will be automatically
    extracted from the '.at' file into the new format the first
    time a user selects any RI from a library that has a
    corresponding '.at' file as long as the user has write
    permission on the '.ri' and '.at' files. If that may not be
    the case, system administrators can update libraries by logging
    into a user with write permission and executing the ARRIS
    mneumnoic command 'mn_riatt2v71' which prompts for the name of
    the RI library. The '.at' files will be renamed to have the
    extension '.at_old' upon completion of the conversion process.

    Attribute definitions for repeated items are now set via the
    Draw/Edit RI menu called from the Repeated Items sub-menu.
    The Draw/Edit RI menu can be used to create a new RI or edit an
    existing one. The menu can be used to edit the attribute
    definitions without modifying the RI graphics or vice versa or
    to modify both. The Save and Save As buttons on the menu will
    save the graphics and will prompt whether to also save the
    attribute definition if any changes have been made.
    (THIS LAST PROMPT IS NOT YET IMPLEMENTED)
    There is now an Attributes Section on the Draw/Edit RI menu
    with two buttons - Define and Place. The Define button calls a
    large pop-up menu with columns for the attribute type (constant
    or variable), name, default value, prompt, display mode, and
    whether or not the RI scale and rotation are to be applied to
    the text placement. The menu contains functions to create new

attribute entries, delete attribute entries, and move
(re-order) the entries. There is also a Save function so that
the attribute definitions can be saved without re-saving the
graphics and a Reset function which discards any changes
made since the last Save.
The Place button is used to actually locate the attribute text
relative to the RI (which is, of course, displayed on the
screen). A selection menu listing all the attributes is
displayed, with the ones which are either already placed or not
displayable greyed out. The Text application sub-menu and status
menu are automatically loaded to facilitate setting the desired
text parameters. The text entities placed by this function
will display the string 'ATTRIB:ATTNAME' where ATTNAME is the
attribute name (eg. 'ATTRIB:employee' or 'ATTRIB:phone_number').
Their parameters and location can be modified using the standard
text editing functions. The text entities are, however, tagged
so that they will not be included as text when the RI graphics
are saved.
The Save function on the Define pop-up will issue an error
message and not execute if any displayable attributes have not
yet been placed.

Attribute placement is now invoked automatically by the
repeated item placement routines when the current RI has
associated attributes. Instead of prompting for the attribute
values one-by-one, there is now a pop-up menu which displays
the list of current values for the attributes associated with
the current RI and which can be used to change the values prior
to placement. The pop-up is displayed prior to each placement
(for grid or radial placement, the pop-up is displayed at the
first location prompt for each group). The pop-up can also be
invoked at any time if the current RI has attributes by
selecting the 'ATTR' button next to the RI name on the status
menu.

Attribute values can be edited after placement via a very
similar pop-up menu by either selecting the new Edit Attributes
function on the Repeated Items menu or by using the entity
select function to select the RI and display the Query/Edit
pop-up and then selecting the Chng button next to the message
'Attributes Attached' in the top section of the menu.

(THIS PROJECT IS STILL IN PROGRESS - FURTHER ENHANCEMENTS ARE
UNDER CONSIDERATION TO ALLOW RELATED GROUPS OF REPEATED ITEMS
TO SHARE A COMMON SET OF ATTRIBUTE DEFINITIONS AND TO IMPROVE
THE ROBUSTNESS OF THE CONNECTION BETWEEN A REPEATED ITEM AND
ITS ATTRIBUTES WITHIN THE DATABASE. ADDITIONAL ATTRIBUTE
EDITING, MANAGEMENT, AND REPORTING FUNCTIONS ARE ALSO BEING
CONSIDERED).

3. Edit Menu - Attributes and Zones

   Attributes and Zones have been added to the Edit and Copy
   pull-down menus. The non-standard Attribute and Zone Edit
   pop-up menus have been discontinued.
   Since attributes should only be copied along with the RI to

which they are attached, the Copy menu will switch an entity
filter selection of Attributes to Repeated Items. The
attribute ikon is greyed out on the Copy menu.

4. ARRIS Clipboard

   A "clipboard" has been implemented for entity copy and
   paste between database. This new clipboard is allocated
   in runtime for each individual user. It is host-unique,
   including remote xterm display hosts*.
   client*. The clipboard can be used to copy from the
   currently-loaded drawing to a subsequently-loaded drawing
   or from a drawing loaded in one ARRIS session to one loaded
   in another concurrent ARRIS session.

   BuildersCAD restrictes the copy of some "smart" entities such
   as Walls and Framing. BuildersCAD will warn you and prevent
   you from copying restricted entities by turning those layers
   off for edit.

   The 'Copy to Clipboard' and 'Paste from Clipboard' functions
   are located on the COPY pull-down menu. The Copy function
   uses the current entity filters and search method as set on
   that menu. The Paste function will place whatever is
   currently on the clipboard, using the current settings
   for scale, rotation, and layer retain. Layer retain is
   applied during the Paste operation. Layer information is
   always saved during the Copy operation regardless of the
   current Layer Retain setting.
   The clipboard is implemented by saving a temporary database
   within the swap directory. The database name includes the
   computer's hostname and the username.

   * in X11 terminology, the 'client' is the system where the
   application, i.e., ARRIS, runs and the 'server' is the
   display host (xterm) where user operates

5. Command Line Editing

   The ARRIS prompt window has been 'buffered' to enable command
   line editing with history. Features in the "DOSKEY" are
   emulated and it is available on all supported platforms.

   A vertical bar cursor has been introduced to indicate the
   current position within the line which may be set using the
   Left and Right arrow keys and the Home and End keys.
   The Backspace key will delete the character to the left of the
   cursor and the Delete key will delete the character to the
   right of the cursor. At any time, a carrage-return will
   execute the entire text string currently shown in the
   command prompt window, regardless of the location of the new
   vertical bar cursor.

   The Up and Down arrow keys can be used to scroll back and forth
   through previously-entered commands and responses. Only text
   entered from the keyboard is included. The old CONTROL-R that

recalls the last string executed from a menu pick remains
unchanged.

'CONTROL-V' has been modified to access the standard MsWindows
clipboard (not the ARRIS CLIPBOARD). It fetches the text
string or the filename that was last cut(^X) or copyied(^C) from
any other OLE compliant applications, and pastes it at the
vertical bar cursor in the command prompt window. This feature
is avaialable on Microsoft Windows only.

If a point input is currently requested and the cursor is on
the active screen area, the Left and Right arrow keys will
rotate the graphic cursor instead of moving the text cursor.
Moving the cursor over any menu will switch the focus of the
arrow keys to the command line.

6. Which Libraries?

The new mneumonic command 'which' is a multi-purpose finder.
If the name entered is a sigmac, repeated item, or menu,
the name of the respective sigmac file, RI library, or menu
library will be returned. If the name is a file, the full
path name of that file will be returned.
For sigmacs, repeated items, and menus, the name should be
entered without any extension (ie. '.gg', '.ri_', or '.md').
If the name contains an extension, the program will assume it
to be a filename. If a name without an extension is entered
and there is no sigmac, RI, or menu of that name, the command
will then try to find a file with that name.
If both a sigmac and a RI of a given name exist, both will be
displayed. Only currently loaded libraries are searched.
This command can be a useful diagnostic tool for users who
may have custom sigmac libraries and are experiencing
problems due to conflicts between the ARRIS version of the
sigmac and their customized version.

7. Move and Rotate in One Operation

The Move functions on the Edit and Entity Select menus now
apply the cursor rotation set by the Left and Right arrow
keys. The increment value for cursor rotation can be set on
the PREFERENCES menu.

8. Repeated Item Archive Merge - riar

A new option has been added to the 'riar' command which will
merge the contents of one ri library into another. If a
repeated item of the same name is included in both libraries,
the most recently modified one will be used (assuming the
dates are properly set on all your computers).
The command syntax is:
  riar u TARGET.ri SOURCE.ri
where TARGET is the library to be updated and source is the
library to update from. The source library will not be
modified by this function. Full path names must be used for
both libraries. smar and mnar have not been similarly enhanced.

9. Text Font and RI Library Auto-load

    Whenever a new text entity or repeated item is placed, the
    name of its respective LT file or RI library is now stored
    with that entity.
    If the layer containg that entity is subsequently loaded in a
    drawing or sheet which does not reference that file or
    library, it will be loaded automatically (if it can be found)
    by any operation that updates the display list for that entity,
    including Pack Data, Regenerate Display List, or any edit.
    A LT file will only be loaded into a font slot if there is
    currently no other LT file loaded into that slot.
    The Query/Edit menu now displays both the font name and
    letter in the Font parameter box for text entities.

10. Viewport Complex Border

    A complex border of any shape can be defined within the bounds
    of the rectangular border. Everything outside the complex
    border is masked out.
    The border is defined by selecting the new complex border ikon
    on the Viewport Layout Menu while in sheet mode. You are
    prompted to select the viewport to which the border is to be
    applied. If there is an existing complex border for that
    viewport, you will be prompted whether to delete that border
    before you can proceed to defining the new border.
    The procedure for border definition is similar to that used in
    the 3D slab definition which allows for point input or for
    'chasing' an existing graphic (a closed boundary of lines
    and/or arcs or a circle). You can draw the lines, arcs, or
    circle for the boundary and then delete them after chasing.
    Prior to defining the boundary, you are prompted as to whether
    the area you will define will represent the area to be displayed
    (included) or the area to be hidden (excluded).
    The complex border is visible in sheet mode (and when the sheet
    is plotted), but is not visible when working in the viewport in
    full-screen mode. The outline will be displayed when the Reset
    View function is selected when working in a viewport.
    The border definition is stored as part of the viewport
    definition (see Developers Notes below) and no line segments
    are generated.

11. Labels and Markers

    Labels and markers now use a pop-up menu instead of a series of
    prompts for setting the text strings. When selecting the page
    designation for a section or detail marker, there is now a MENU
    option which will present a list of pages as defined via the
    Page List Manager if a page list exists in the current project
    directory.

12. CAPS Lock

    The CAPS function which previously applied only to WYSIWIG
    text input is now implemented for dimension and label/marker

input and for text editing (including the mnemonic commands
'ctx' and 'cta'). The text is echoed in the proper case on
the prompt line.

13. Layer Modes Menu - Block Selection

Block selection mode has been implemented for layer clear and
layer remove functions.

14. Viewport Layers

The Apply Layer Modes function on the Modify Viewports menu
will now offer an option to include non-displayable layers as
well as displayable layers in the viewport layer list. These
layers will not plot or display as part of the viewport, but
will be available for reference and/or work when the viewport
is activated.

15. Viewport Workplane

A Set Workplane to Viewport function has been added to the
Modify Viewports menu which sets the workplane to match the
viewport rotation(s). This works for all orthagonal rotations
but not perspective viewports.

16. Layer Modes - Block Selection

The Layer Modes menu now permits block selection to be used for
assigning layer permissions and for loading and copying layers.

17. Solids Tools Menu

The Solids Tools Menu has been redesigned to better present
all the available function which were previously hidden under
layers of prompts.
In particular, the 'Projection onto Planes or Surfaces' group
has been created by combining the 'Drop Perp', 'Drop Vertical',
and 'Line/Arc->Survace' functions. They are now presented as
Projection Type options called 'Normal to Plane', 'Vertical to
Plane', and 'Vertical to Surfaces' respectively. The functions
have been enhanced by enabling selection of existing lines and
arcs in the 'to Plane' functions and point input in the
'to Surfaces' option.

18. Erase / Copy Trim
A trim option has been added to the Erase and Copy functions
called from the Edit and Copy menus respectively. If the
Search Method is 'Area Some In' and the Entity Filter is either
ALL, Lines and/or Curves, Walls, or Pattern, the special fence
options with include 'workplane box - trim' and 'workplane
complex - trim'.
On the Edit menu, if the Entity filter is ALL, 'Trim to Fence'
will be shown on the lower right box. This function will
trim an erase everything outside the fence.

The entities that will be trimmed to the fence boundary are
lines, curves, and patterns.

19. MS Windows/ACAD emulation - Control Keys

    Control key mapping can be set to emulate MS Windows (and Autocad) via
    Preferences Menu -> Miscellaneous -> MS WINDOWS CTRL KEY MAPPING.
    In this mode the key assignments are as follows:

    CTRL A axis on/off
    CTRL B snap on/off
    CTRL C copy - NOT YET IMPLEMENTED (Windows only - can't do it in UNIX)
    CTRL D co-ordinate logging on/off (does not apply in point input mode)
    CTRL E ASCII character pop-up menu
    CTRL F continuous object snap on/off - NOT YET IMPLEMENTED
    CTRL G grid on/off
    CTRL I xyf snap on/off (also by TAB key)
    CTRL K redraw menus
    CTRL L xyf on/off
    CTRL N new project/database/drawing/sheet
    CTRL O open drawing/sheet
    CTRL P plot/print
    CTRL W vport/winport cycle forward
    CTRL R repeat last command line
    CTRL S save current drawing/sheet
    CTRL T cursor on/off
    CTRL U clear command line
    CTRL V paste - NOT YET IMPLEMENTED
    CTRL W vport/winport cycle backward
    CTRL X cut - NOT YET IMPLEMENTED
    CTRL Y redo
    CTRL Z undo

    BREAK   interrupt (just like current CTRL C function)

20. MS Windows/ACAD emulation - mouse button #2 to support entity/object
snapping and gripping (IN PROGRESS)

The middle mouse button (B2) will now be mapped to point snapping option
menu. The behavior of entity selecting/snapping is now enhanced to pickup
end-points, mid-points, ... as the mouse moves and highlight the prospect
within the hit radius for easy determination.

21. An optional ACAD-like menu bar is available (for MsWindows only).
    (IN PROGRESS)

    The menu items are mapped to emulate ACAD for easy learning and
    transition.
    Upon each selection, a corresponding ARRIS function/menu will be
    triggered.

BuildersCAD

22. Middle mouse button help has been added for most BuildersCAD main menus
    and application sub-menus.

23. Open or load an existing database via the Job/Database/Sheet/Thumbnail
    Select menu. Go to the file cabinet icon in the upper right then Open to
    bring up this menu or select Open under Job on the Main BuildersCAD menu.
    View or load all databases including sheets and thunbnails.

24. Save/create Layer Styles of the currently loaded database using the Make
    Thumbnail option from the file cabinet icon pull down menu. This command
    saves an image of the current display. Also creates and saves a layer style
    by the same name. Afterward you can see a small (thumbnail) image of the
    layer style. Double click this image to load the database/layer style.

25. Select most entities with the left mouse button to display an Entity Edit
    pop-up menu. The menu varies depending on the BuildersCAD Application.

26. Walls Application: Select walls and Openings for layout or placement from
    the Select Pager Menus. Additional Wall Types have been added. To begin a
    layout select CCW (counter clockwise) or CW (clockwise) before beginning the
    layout. There will be no prompt to ask you the direction now. Using the Drag
    wall layout method, the second mouse pick will immediately place the wall,
    not bring up the Place Menu. Pick the middle mouse button to bring up the
    Place Wall menu to access Double Ref, Create Closure, etc.

    There are many subtle differences in the Wall Insert Tool functions now.
    After selection of a wall to insert from an arrow indicates the direction of
    the wall you are about to add. Calc (the Calculator) has been added to the
    wall length prompt line (Use the Calculator to figure the distance then
write
    the results to the prompt line.)

    Select any wall with a left mouse button pick to bring up all wall edit
    tools. These tools will allow you to trim, extend, reverse, move, bring up
    Alter Wall, or change the pen or color. The same is true for openings.
    Select an opening to bring up any of the opening edit tools.

    Access Framing Rules with the Framing Rules button on the Walls Application
    Main menu instead of with the clipboard icon on the Framing sub application
    menu. Note in Wall Framing Rules for Header a matrix has been added allowing
    the user to define up to 4 header sizes based on the rough opening width.

    Access Wall Extrude with the 3-D Walls button on the Place Walls sub
    application menu instead of with a button on the Walls Main Application
menu.
    Select All, next to 3-D Walls to extrude walls on all levels.

    On the Place Opening Sub Application menu select Schedule to generate an
    opening schedule. The Opening Schedule is saved on a unique system created
    layer. The schedule can include the openings on the current level or on all
    levels. Also when you create an Opening Schedule any existing schedule is
    removed.

27. Parts Application: Select Parts for placement from the Selection Pager
    menu. Also edit existing Parts and Create new Parts through the Edit button
    on the Selection Pager menu. Part edit utilities are now on the Place Parts
    sub application menu instead of on a separate application sub-menu.

Select a Part with the left mouse button to display the basic CAD entity edit
menu. These edits will work appropriately with Parts but will not affect the
Part label.

28. Roofs Application: Conceptually the BuildersCAD Roofs Application works
the same. The user outlines the area to be covered by a roof. Assigns Markers
that determine the roof plane parameters (such as pitch, overhang, heel
height, etc.), then generate the roof planes.

However the interface has been modified substantially. The Outline, Assign
Marker and Generate Planes functions have been combined on to one sub
application menu.

The term "Module" has been replace with the term "Roof" so that you can have
up to 26 "Roofs" on each Level. Each "Roof" has a letter designation from "a"
through "z" that is determined by the letter displayed under the "Roof" box
on the Status menu. When the user goes to draw and outline a prompt asks if
he/she wants to "make new roof", "add to existing roof" or "cancel".

To view the current "roofs" select on the Roof box on the status menu. This
will display the Colors for 3D Planes pop-up menu that includes a Display
Roofs button. This is the equivalent of the Module Display feature in
BuildersCAD 70v4.

A Quick Roof tool has been added that allows you to select a Marker before
you start to outline an area. As soon as you complete the outline the planes
automatically generate. This method will only allow the user to generate a
hip style roof unless the operator uses the Quick Roof Trace feature to
outline the walls. The "Trace" button, in the lower right corner of the Quick
Roof pop-up menu will automatically find and trace BuildersCAD EXTLB walls
and generate roof planes.

Find the outline tools under the heading Perimeter. Marker tools are under
Eave Properties and Plane tools are under Generate Roof and Utilities.

A Dormer tool has been added under Utilities. This feature allows the user to
set parameters that will determine the type of roof, the pitch and define the
walls for a dormer. Generate this dormer by selecting a location on an
existing roof plane.

Roof framing tools have been enhanced. Under Edges, and Assign Edge Board
Markers a matrix has replaced the old menu. All Roof Edge Types are listed
horizontally and below each Type there is a column where the user can select
and assign up to 4 edge board Piece Specifications to each Edge Type. Then
assign markers to all roof edges with one Place command.

29. Floors Application: Conceptually the Floors Application works the same.
The user outlines the plane and selects an edge perpendicular to the joists
(if you frame the plane). However in BuildersCAD 8.0 the outline, plane
creation, edit and view tools have been combined into one sub application
menu.

Floor framing tools have been enhanced. Under Edges, and Assign Edge Board
Markers a matrix has replaced the old menu. All Floor Edge Types are listed
horizontally and below each Type there is a column where the user can select
and assign up to 4 edge board Piece Specifications to each Edge Type. Then
assign markers to all roof edges with one Place command.

Winding and multiple landing u-shaped stairs have been added to the Stair
Generator. With the multiple landing stairs you can indirectly set the
landing height by modifying the number of risers on the upper or lower run.
Deck Railing is on a separate sub application menu. Stair railing must be
placed using the railing options on the Stairs sub application menu.

30. Elevations Application: A Level Selection button allows you to select
what 3D features BuildersCAD will include in the Elevation. After making
these selections users have an option on the prompt line after selecting the
Create button to create all four (Front, Right, Back and Left) elevations
with one command.