Appendix D   Programming Problem 19

Create a program that will rotate text on a layer named "Text", spinning around a center point and capturing an image every five degrees so that you will take 72 images in the 360 degree circle. Place the center of the rotating word or initials on the 0,0,0 point. In Figure D.1, we show the 3D letters WCC which were made by tracing the letters with a Polyline and extruding the letters.

Use the following coded example to help in building your program.

```
(while (< counter 72)
    (command "rotate" ss1 "" "0,0" "-5")
    (c:render "am_plan")
    (c:saveimg (itoa file) "tiff")
    (setq counter (1+ counter))
    (setq file (1+ file))
)
```

Add a material to each solid letter, add a light and render the letters before running the program to be sure that the color and shadows are to your liking.

Figure D.1 – Rotating Text

* World Class CAD Challenge 04-19* - Within two hours, create a new AutoCAD file where you display the text and then open the Visual AutoLISP editor and code the problem using the Motion coding method. Save the code the problem as motion2.lsp.

Send your copy of your code for verification to the authors of these problems to have your name and location posted. See the web site for instructions at:
www.worldclasscad.com

D

Programming Problem 20

Create a program that will rotate a solid part on a layer named "Part", spinning around a center point and capturing an image every five degrees so that you will take 72 images in the 360 degree circle. Place the center of the rotating part on the 0,0,0 point. In Figure D.2, we show the 3D solid which was made for a Casting Fundamentals project. We can use any 3D solid for this animation.

Use the following coded example to help in building your program.

```
(while (< counter 72)
    (command "rotate" ss1 "" "0,0" "-5")
    (c:render "am_plan")
    (c:saveimg (itoa file) "tiff")
    (setq counter (1+ counter))
    (setq file (1+ file))
)
```

Add a material to the solid, add a light and render the part before running the program to be sure that the color and shadows are to your liking.
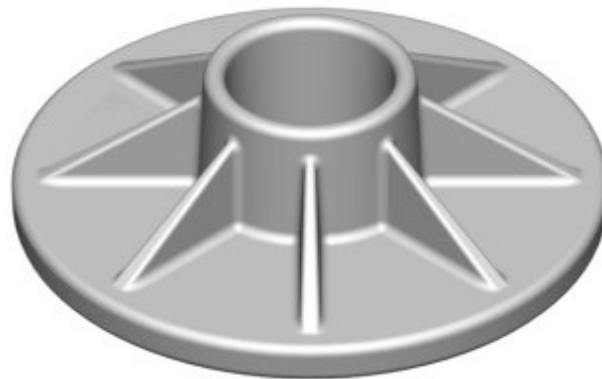

Figure D.2 – Rotating Part

* World Class CAD Challenge 04-20* - Within two hours, create a new AutoCAD file where you display the text and then open the Visual AutoLISP editor and code the problem using the Motion coding method. Save the code the problem as motion3.lsp.

Send your copy of your code for verification to the authors of these problems to have your name and location posted. See the web site for instructions at:
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Appendix D Programming Problem 21

Create a program that will rotate around the Footstool Assembly, spinning around a center point and capturing an image every five degrees so that you will take 72 images in the 360 degree circle. Place the center of the rotating part on the 0,0,0 point. In Figure D.3, we show the 3D assembly which was made for a External Reference project. We placed a point on a layer called "Camera" that is located at "0,65, 44" and this node will represent the camera's position.

Use the following coded example to help in building your program.

```
(setq tpt (list 0 0 0))
(while (< counter 72)
    (command "rotate" ss1 "" "0,0,0" "-5")
        (setq cpt (cdr (assoc 10 (entget (ssname (ssget "x" '((8 . "camera"))) 0)))))
        (setq cam (strcat (rtos (car cpt)) "," (rtos (cadr cpt)) "," (rtos (caddr cpt))))
        (setq dist (distance cpt tpt))
        (command "dview" "all" "" "po" "0,0,0" cam "d" (rtos dist) "cl" "" "")
    (c:render "am_plan")
    (c:saveimg (itoa file) "tiff")
    (setq counter (1+ counter))
    (setq file (1+ file))
)
```

Add a wood material to the solid, add a light and render the part before running the program to be sure that the color and shadows are to your liking.

Figure D.3 – Rotating Around the Footstool Assembly

* World Class CAD Challenge 04-21* - Within two hours, create a new AutoCAD file where you display the Footstool Assembly and then open the Visual AutoLISP editor and code the problem using the Motion coding method. Save the code the problem as motion4.lsp.

Send your copy of your code for verification to the authors of these problems to have your name and location posted. See the web site for instructions at:
www.worldclasscad.com