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$!=====
$! WRITE AMIRA SCRIPT
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$! October 23, 2010
$!
$! Generates a Tcl command to open
$! an aim file in Amira
$!=====
$
$
$ IPL_AIM = P1
$ HEADER = P1 - F$PARSE(P1,, "VERSION") - ".AIM" + ".TXT"
$ AMIRA = HEADER - ".TXT" + ".HX"
$ FILENAME = F$PARSE(P1,, "NAME")
$
$ AIX == "$UT:D3_IO_EXAMINE.EXE -L"
$
$ DEFINE SYS$OUTPUT 'HEADER'
$ AIX 'IPL_AIM'
$ DEASSIGN SYS$OUTPUT
$
$!=====
$! GET DIMENSIONS
$!=====
$ PIPE AIX 'IPL_AIM' | SEARCH SYS$PIPE "!> dim"| (READ SYS$INPUT LINE ; DEFINE/JOB
LINE_LOG &LINE)
$ LINE_SYM = F$TRNLNM("LINE_LOG")
$ DIMX = F$EDIT(F$EXTRACT(36,4, LINE_SYM), "TRIM, COMPRESS")
$ DIMY = F$EDIT(F$EXTRACT(44,4, LINE_SYM), "TRIM, COMPRESS")
$ DIMZ = F$EDIT(F$EXTRACT(52,4, LINE_SYM), "TRIM, COMPRESS")
$
$!=====
$! GET HEADER OFFSET
$!=====
$ PIPE AIX 'IPL_AIM' | SEARCH SYS$PIPE "!% Image Data"| (READ SYS$INPUT LINE ;
DEFINE/JOB LINE_LOG &LINE)
$ LINE_SYM = F$TRNLNM("LINE_LOG")
$ OFFSET = LINE_SYM - "!% Image Data starts at byte offset"
$ OFFSET = F$EDIT(OFFSET, "TRIM, COMPRESS")
$
$!=====
$! GET DATA TYPE
$!=====
$ PIPE AIX 'IPL_AIM' | SEARCH SYS$PIPE "!> Type of data"| (READ SYS$INPUT LINE ;
DEFINE/JOB LINE_LOG &LINE)
$ LINE_SYM = F$TRNLNM("LINE_LOG")
$ TYPE = F$EDIT(F$EXTRACT(30,5, LINE_SYM), "TRIM, COMPRESS")

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$ IF TYPE .NES. "Short" THEN TYPE = "byte"
$ IF TYPE .EQS. "Short" THEN TYPE = "short"
$
$!=====
$! GET VOXEL SIZE IN MICRONS*10
$!=====
$ PIPE AIX 'IPL_AIM' | SEARCH SYS$PIPE "!> element size" | (READ SYS$INPUT LINE ;
DEFINE/JOB LINE_LOG &LINE)
$ LINE_SYM = F$TRNLNM("LINE_LOG")
$ VOXX = F$EDIT(F$EXTRACT(36,4,LINE_SYM), "TRIM, COMPRESS")
$ VOXY = F$EDIT(F$EXTRACT(44,4,LINE_SYM), "TRIM, COMPRESS")
$ VOXZ = F$EDIT(F$EXTRACT(52,4,LINE_SYM), "TRIM, COMPRESS")
$
$!=====
$! CALCULATE BOUNDING BOX
$!=====
$ MAXX = (DIMX - 1)*VOXX
$ MAXY = (DIMY - 1)*VOXY
$ MAXZ = (DIMZ - 1)*VOXZ
$
$ LOOP:
$ IF F$LENGTH(MAXX) .LT. 5
$ THEN
$   MAXX = "0" + F$STRING(MAXX)
$   GOTO LOOP
$ ENDIF
$ IF F$LENGTH(MAXY) .LT. 5
$ THEN
$   MAXY = "0" + F$STRING(MAXY)
$   GOTO LOOP
$ ENDIF
$ IF F$LENGTH(MAXZ) .LT. 5
$ THEN
$   MAXZ = "0" + F$STRING(MAXZ)
$   GOTO LOOP
$ ENDIF
$
$ MAXX = F$EXTRACT(0,F$LENGTH(MAXX)-4,MAXX) + "." + F$EXTRACT(F$LENGTH(MAXX)-
4,F$LENGTH(MAXX),MAXX)
$ MAXY = F$EXTRACT(0,F$LENGTH(MAXY)-4,MAXY) + "." + F$EXTRACT(F$LENGTH(MAXY)-
4,F$LENGTH(MAXY),MAXY)
$ MAXZ = F$EXTRACT(0,F$LENGTH(MAXZ)-4,MAXZ) + "." + F$EXTRACT(F$LENGTH(MAXZ)-
4,F$LENGTH(MAXZ),MAXZ)
$
$
$!=====
$! WRITE AMIRA FILE

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$!=====
$ OPEN/WRITE FILE 'AMIRA'
$ WRITE FILE "# Amira-Script-Object v3.0"
$ WRITE FILE "load -raw ${SCRIPTDIR}/${FILENAME}.AIM little xfastest ''TYPE' 1 ''DIMX'
''DIMY' ''DIMZ' 0 ''',MAXX'"" 0 ''',MAXY'"" 0 ''',MAXZ'"" -header ''OFFSET'"
$ CLOSE FILE
$
$ EXIT
```