Core Image Loader
January 20, 1966

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                        ***     HDNG    1130 CORE IMAGE LOADER-CARD            CIL  000
                        *                                                       CIL00010
                        *               CORE IMAGE LOADER                       CILO0020
                                ABS                                             CILO0030
02EE                            ORG     0                                       CILO0040
                        *                                                       CILOC050
                        *                                                       CIL00060
0000                    ZERO    EQU     0                                       CILOC070
0000 0  7005            TEMP    MDX     START                                   CILOC080
0001 0  1004            MOVE    DC      /1004                                   CIL0C090
0002 0  0000            MASK    DC      /0000                                   CIL00100
0003 0  0020                    DC      /0020                                   CIL00110
0004 0  002C            READ    DC      CHECK                                   CIL0C120
0005 0  0000                    DC      /0000     A REGISTER BELOW              CIL00130
0006 0  COFC            START   LD      MASK+1   0000 0000 0010 0000            CIL00140
0007 0  1002                    SLA     2        0000 0000 1000 0000            CIL00150
0008 0  DCFA                    STO     MASK+1   0000 0000 1000 0000  =MASK+1   CILJ0160
0009 0  1002                    SLA     2        0000 0010 0000 0000 -          CILJ0170
000A 0  D0F5                    STO     TEMP     0000 0010 0000 0000  =TEMP     CIL00180
000B 0  801D                    A       SETUP    0110 0010 0001 1111            CILC0190
000C 0  D01C                    STO     SETUP    0110 0010 0001 1111  =SETUP LD CIL00200
000D 0  801E                    A       CHECK    0111 0010 0111 1111            CIL00210
000E 0  D01D                    STO     CHECK    0111 0010 0111 1111  =CHECK MD CIL00220
000F 0  9038                    S       AB+1     0111 0010 0000 0001            CIL00230
0010 0  D037                    STO     AB+1     0111 0010 0000 0001  =AB+1  MD CIL00240
0011 0  8019                    A       LOOP          1101 0010 0000 0111      CIL00250
0012 0  D018                    STO     LOOP          1101 0010 0000 0111      CIL00260
0013 0  8033                    A       AB            1101 0010 0010 1011      CILC0270
0014 0  8032            J       A       AB            1101 0010 0010 1011      CIL00280
0015 0  D031                    STO     AB            1101 0010 0100 1111      CIL00290
0016 0  C0E9                    LD      TEMP     0000 0010 0000 0000           CIL00300
0017 0  80E9                    A       MOVE          0001 0010 0000 0100      CIL00310
0018 0  D0EC                    STO     READ+1        0001 0010 0000 0100      CIL00320
0019 0  80E6                    A       TEMP          0001 0100 0000 0100      CIL00330
001A 0  80E8                    A       MASK+1        0001 0100 1000 0100      CIL00340
001B 0  90E5                    S       MOVE     0000 0100 1000 0000           CILUC350
001C 0  D0E6                    STO     MASK+1   0000 0100 1000 0000  =MASK+1   CIL00360
001D 0  1801                    SRA     1        0000 0010 0100 0000           CIL00370
001E 0  80E1                    A       TEMP     0000 0100 0100 0000           CIL00380
001F 0  8CE1                    A       MOVE          0001 0100 0100 0100      CIL00390
0020 0  D0E0                    STO     MOVE          0001 0100 0100 0100      CIL00400
0021 0  802B                    A       SENSE         0001 0101 0000 0111      CIL00410
0022 0  80DD                    A       TEMP          0001 0111 0000 0111      CIL00420
0023 0  D029                    STO     SENSE         0001 0111 0000 0111      CIL00430
0024 0  C0DD                    LD      MASK                                   CILOC440
0025 0  18D8                    RTE     27                                     CIL00450
0026 0  1004                    SLA     4                                      CIL00460
0027 0  18C5                    RTE     5                                      CIL00470
0028 0  D0D9                    STO     MASK                                   CIL00480
0029 0  601F            SETUP   LDX     31       LOADS INDEX 2 WITH 31         CILO0490
002A 0  C01F                    LD      FIXIT    LOAD  INTER.ROUTINES ADDR.     CIL00500
002B 0  6006            LOOP    DC      /6006     = STO 2  7 PLACE IRA IN WDS   CILOC510
002C 0  1060            CHECK   DC      /1060    =MDX 2 -1 THEN SKIPS OVER BRN  CIL00520
002D 0  70FD                    MDX     LOOP     BRNCH BACK TO LOOP            CILOC530
002E 0  0803                    XIO     MASK     ALLOWS INTER.LEVELS 0-15       CIL00540
002F 0  0800            CARD    XIO     MOVE-1   STARTS CARD MOVING            CIL00550
0030 0  70FF            WAIT    MDX     WAIT     WAIT FOR INTER.,ALSO USED AS   CIL00560
0031    0001            INTER   BSS     1        INTER. PROCESSING ROUTINE      CIL00570
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0032 0  0819                      XIO      SENSE-1 GET DEVICE STATUS WORD          CILOC5
                          *                                                        CILOC5
                          *       THESE INSTRUCTIONS WILL BE OVERLAID DURING       CILOC6
                          *       EXECUTION OF THE CIL. THIS AREA IS CALLED        CILO C6
                          *       THE INPUT BUFFER.                                CILOC6
                          *                                                        CILO66
0033 0  4828                      BSC      Z+          IF BIT ZERO OF DSW IS ON,SKIP CILOC6
0034 0  7004             GO       MDX      COLM        BRNCH TO COLM IF HAVE COL REQ CILOC6
0035 0  1002                      SLA      2                                       CILOC6
0036 0  4828             EXIT     BSC      Z+                                      CILOC6
0037 0  70FF             ME       MDX      ME          BRANCH TO ME,HAVE ERROR     CILCC6
0038 0  7015                      MDX      CARD2       NO ERROR,GO EXECUTE CARD JUST CILOC6
0039 0  08CA             COLM     XIO      READ        READ IN A COLUMN            CILOC7
003A 0  C011                      LD       EVEN                                    CILO67
003B 0  4804                      BSC      E           NO                          CILOO7
003C 0  7005                      MDX      PACK         GO TO PACK                 CILO67
003D 0  1801                      SRA      1                                       CILO07
003E 0  DOOD                      STO      EVEN                                    CILO67
003F 0  COEC                      LD       CHECK       GET COLUMN WORD JUST READ IN CILO07
0040 0  DOE8                      STO      SETUP       SAVE IT IN SETUP            CILO67
0041 0  7007                      MDX      RESET        GO TO RESET                CILOC7
0042 0  1C01             PACK     SLA      1                                       CILOO79
0043 0  D008                      STO      EVEN                                    CILO68C
0044 0  COE7                      LD       CHECK       GET COLUMN WORD             CILCC8
0045 0  1808                      SRA      8           SHIFT IT INTO POSITION      CILO68
0046 0  8CE2                      A        SETUP       ADD ODD COLM WORD TO GET CORE CILO68
0047 0  0024             AB       DC       /0024       STO 2 79                    CILO684
0048 0  OOFE                      DC       /OOFE  7121                             CILO68
0049 0  4878             RESET    BOSC     +-Z                                     CIL
004A 0  0031             FIXIT    DC       INTER       INTER IS INTER ROUTINE ADDR. CIL
004B 0  70FF             SELF     MDX      SELF        WAIT FOR INTERRUPT          CILOC88
004C 0  0032             EVEN     DC       /0032                                   CILOC89
004D 0  OOC3             SENSE    DC       /OOC3                                   CILO99
004E 0  4878             CARD2    BOSC     +-Z                                     CILO091
                          *                                                        CILO92
                          *                                                        CILO091
                          *       DATA IN CARD 2 STARTS IN 004F                    CILO094
                          *                                                        CILO095
                          *                                                        CILO096
004F 0  0005             SW1      DC       5           DECREMENT COUNTER TO        CILO097
0050 00 74FF004F                  MDX   L  SW1,-1      READ IN ALL BOOTSTRAP       CILO098
0052 0  70DC                      MDX      CARD           CARDS                    CILO099
                          *                                                        CILO1CC
                          *       THE SECTION BELOW MOVES DATA                     CILO101
                          *       FROM LOCATION /OCD6 TO /0008                     CILO102
                          *                                                        CILO103
0053 0  622E             CON      LDX      2 29+17                                 CILO104
0054 00 C60000D5                  LD    L2 ONE+1                                   CILO105
0056 0  D203                      STO      2 J-17                                  CILC106
0057 0  72FF                      MDX      2 -1                                    CILO107
0058 0  70FB                      MDX      CON+1                                   CILO108
0059 0  1C00                      NOP                                              CILO109
005A 0  1C00                      NOP                                              CILO110
005B 0  7017                      MDX      CD                                      CILO110
005C 0  0085             CK       DC       CK1                                     CIL    20
005D 0  0080             FIX      DC       INT                                     CILO130
                          *                                                        CILO140
                          *       END OF INPUT BUFFER                             CILO150
                          *                                                        CILO160
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005E                            ORG      /70                                      CILO11
0070 0  0000    CITST  DC       0          COL. INT. TEST INDICATOR              CILO11
0071 0  1402    CFEED  DC       /1402      IOCC TO FEED CARD                     CILO11
0072 0  0000    ER     DC       0                                                CILO12
0073 0  085E    CD     XIO      SCRP2-1    READER READY LOOP                     CILO12
0074 00 4C040073        BSC   L *-3,E                                            CILO12
0076 0  1003           SLA      3                                                CILO12
                *                                                                CILO12
                *                                                                CILO12
                *                 DATA IN CARD 3 STARTS IN /0077                  CILO12
                *                                                                CILO12
                *                                                                CILO12
0077 00 4C10007B        BSC   L *+2,-                                            CILO12
0079 0  08F6           XIO      CFEED-1    LAST CARD FEED OUT                    CILO13
007A 0  70F8           MDX      CD                                               CILO13
007B 0  1810           SRA      16         RESTORE COLUMN INT.                   CILO13
007C 0  D0F3           STO      CITST      TEST INDICATOR                        CILO13
007D 0  0882           XIO      MOVE-1     START CARD MOVING                     CILO13
007E 0  3000    WAIT3  WAIT                                                      CILO13
007F 0  70F3           MDX      CD                                               CILO13
                *                                                                CILO13
                *        INTERRUPT SERVICE                                       CILO13
                *                                                                CILO13
0080    0001·   INT    BSS      1          ENTRY                                 CILO14
0081 0  0850           XIO      SCRP2-1    SENSE DSW WITH RESET                  CILO14
0082 0  4828           BSC      Z+         TEST FOR COL. INT.                    CILO14
0083 0  7011    GO1    MDX      COLM1      YES - SERVICE COLM.                   CILO14
0084 0  1002           SLA      2          NO -                                  CILO14
0085 0  4828           BSC      +Z                                              CILO14
0086 0  DOEB           STO      ER         SET ERROR INDICATOR                   CILO14
                *                                                                CILO14
                *        OP COMPLETE PROCESSING                                  CILO14
                *                                                                CILO14
0087 0  C035    EOC1   LD       LAB+3      INITIALIZE COLUMN                     CILO15
0088 0  D017           STO      GOB+5      INTERRUPT ROUTINE                     CILO15
0089 0  904A           S        ONE                                             CILO15
008A 0  DC0D           STO      LOOP1+1                                         CILO15
                *                                                                CILO15
                *                 RESTORE COLUMN INTERRUPT                       CILO15
                *                 SERVICE ROUTINE                               CILO15
                *                                                                CILO15
008B 0  C046           LD       RTEXX                                           CILO15
008C 0  D00E           STO      GOB                                             CILO15
008D 0  D00B           STO      GOB-2                                           CILO16
                *                                                                CILO16
008E 0  C0E3           LD       ER         GET ERROR TEST INDICATOR             CILO16
008F 0  7098           MDX      FDCHK                                           CILO16
0090 0  00B5    RED    DC       CK1                                             CILO16
0091 0  1204           DC       /1204                                           CILO16
                *                                                                CILO16
                *        READER ERROR STOP                                       CILO16
                *                                                                CILO16
0092 0  DCDF    ERSTP  STO      ER         RESET ERROR INDICATOR                CILO16
0093 0  3000           WAIT                                                     CILO17
0094 0  7033           MDX      EOP-2                                           CILO17
                *                                                                CILO17
                *        COLUMN INTERRUPT PROCESSING                             CILO17
                *                                                                CILO17
                *        THIS ROUTINE SERVICES COLUMN INTERRUPTS AND             CILO17
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                        *       PACKS 4 COLUMNS INTO 3 WORDS.                   CIL01760
                        *       IT FILLS THE BUFFER CALLED INPUT                CIL01770
                        *                                                       CIL01780
0095 0   08FA           COLM1 XIO      RED                                      CIL01790
0096 0   D0D9                 STO      CITST       SET COL. INT. TEST IND.      CIL01800
0097 00  C4000032        LOOP1 LD    L INPUT-1                                  CIL01810
0099 0   1800                 RTE      16                                       CIL01820
009A 0   C01A                 LD       CK1                                      CIL01830
009B 0   1800           GOB   RTE      16                                       CIL01840
009C 00  D4800098             STO    I LOOP1+1                                  CIL01850
009E 0   1800                 RTE      16                                       CIL01860
                        *                                                       CIL01870
                        *                                                       CIL01880
                        *               DATA IN CARD 4 STARTS IN 009F           CIL01890
                        *                                                       CIL01900
                        *                                                       CIL01910
009F 00  D4000033             STO    L INPUT                                    CIL01920
00A1 00  74FC009B             MDX    L GOB,-4                                   CIL01930
00A3 0   C0F7                 LD       GOB                                      CIL01940
00A4 0   F009                 EOR      SENS1                                    CIL01950
00A5 00  4C1800B0             BSC    L NEW,+-                                   CIL01960
00A7 00  74010098             MDX    L LOOP1+1,1                               CIL01970
00A9 00  740100A0             MDX    L GOB+5,1                                  CIL01980
00AB 00  74040099             MDX    L GOB-2,4                                  CIL01990
00AD 0   4878           WAIT1 BOSC     +-Z                                      CIL02000
00AE 0   18C0           SENS1 DC       /18C0                                    CIL02010
00AF 0   70CE                 MDX      WAIT3       WAIT FOR NEXT INT            CIL02020
00B0 00  7410009B       NEW   MDX    L GOB,16                                   CIL02030
00B2 00  74F40099             MDX    L GOB-2,-12                                CIL02040
00B4 0   70F8                 MDX      WAIT1                                    CIL02050
                        *                                                       CIL02060
                        *       STORES BUFFER TO CORE                           CIL02070
                        *                                                       CIL02080
00B5 0   0000           CK1   DC       0           COLUMN BUFFER (FROM CARD)    CIL02090
00B6 00  C4000035       DAT   LD     L INPUT+2     GET TYPE AND COUNT           CIL02100
00B8 0   E00B                 AND      N           REMOVE COUNT                 CIL02110
00B9 0   D001                 STO      LAB+1       STORE COUNT IN NEXT INST.    CIL02120
00BA 00  66000000       LAB   LDX    L2 *-*        LOAD IR2 WITH COUNT          CIL02130
00BC 00  C4000033             LD     L INPUT       GET LOADING ADDRESS          CIL02140
00BE 0   9015                 S        ONE                                      CIL02150
00BF 0   D003                 STO      LOOP3+3     SET UP DATA STORE INSTR.     CIL02160
00C0 00  C6000035       LOOP3 LD     L2 INPUT+2    GET DATA WORD                CIL02170
00C2 00  D6000000             STO    L2 *-*        STORE DATA WORD              CIL02180
00C4 0   72FF           N     MDX      2 -1        DECR IR2 BY 1,IF COUNT=0 SK  CIL02190
00C5 0   70FA                 MDX      LOOP3       CONTINUE LOADING FROM INPUT  CIL02200
                        *                                                       CIL02210
                        *                                                       CIL02220
                        *               DATA IN CARD 5 STARTS IN 00C7           CIL02230
                        *                                                       CIL02240
                        *                                                       CIL02250
00C6 00  C4000035             LD     L INPUT+2     GET TYPE                     CIL02260
00C8 00  4C500004             BOSC   L BSIXX,-     END-OF-PROGRAM TEST          CIL02270
00CA 00  67800067       EOP   LDX    I3 INPUT+52   YES - SET IR-3 TO TV ADDR.   CIL02280
00CC 0   0805                 XIO      SCRP2-1     LAST CARD TEST               CIL02290
00CD 0   1C03                 SLA      3                                        CIL02300
00CE 0   4828                 BSC      +Z                                       CIL02310
00CF 0   08A0                 XIO      CFEED-1     YES - FEED OUT               CIL02320
00D0 00  4CC00068             BOSC   I INPUT+53    GO TO EXECUTE                CIL02330
00D2 0   1800           RTEXX RTE      16          CONSTANT FOR REST. RTE       CIL02340
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0003 0  1703        SCRP2 DC      /1703       IOCC TO SENSE DSW        CILO2.5
0004 0  0001        ONE   DC      /0001                                CILO236
0005 0  709D              MDX     CD                                   CILO   7
0006                      ORG     /4                                   CILO
                    *                                                  CILO239
                    *     THIS SECTION WAS LOADED INTO CORE INITIALLY  CILO240
                    *     AT LOC. /0006.  IT IS MOVED TO PROPER ADDRESS CILO241
                    *     DURING EXECUTION OF PROGRAM LABLED CON.      CILO242
                    *     THIS CODING PROCESSES CHECK SUMS, HANDLES    CILO243
                    *     PROGRAM STOP, ACCOMODATES ERRORS, AND        CILO244
                    *     SETS UP THE INTERRUPT TV.                    CILO245
                    *                                                  CILO246
0004 0  4001        BSIXX BSI     LEV5        SET RETURN ADDRESS       CILO247
0005 0  706D              MDX     CD                                   CILO248
0006 0  0000        LEV5  DC      0           LEVEL 5 ENTRY            CILO249
0007 0  7006              MDX     *+6         CONTINUE LEVEL 5         CILO250
0008 0  0080              DC      INT                                  CILO251
0009 0  0000              DC      0                                    CILO252
000A 0  0000        IOCCX DC      0           IOCC TO SENSE            CILO253
000B 0  3F00              DC      /3F00       CONSOLE STATUS           CILO254
000C 0  C080              DC      INT                                  CILO255
000D 0  0006              DC      LEV5                                 CILO256
000E 0  D0FB              STO     IOCCX       SAVE ACCUMULATOR         CILO257
000F 0  08FA              XIO     IOCCX       SENSE CONSOLE STATUS     CILO258
0010 0  4828              BSC     Z+          TEST FOR PROGRAM STOP    CILO259
0011 0  3000              WAIT                YES - STOP               CILO260
0012 0  C0F7              LD      IOCCX       RESTORE ACCUMULATOR      CILO261
0013 00 4CC00006          BOSC  I LEV5        RESTART NEW CARD         CILO262
0015 0  C01E        CKSUM LD      INPUT+1     TEST CARD CHECK SUM      CIL   3
0016 00 4C1800B6          BSC   L DAT,+-      IF ZERO, LOAD IMMEDIATELY CIL 4
0018 00 74010026          MDX   L CDCNT,1     INCR CARD COUNT BY ONE   CILO265
001A 0  6236              LDX   2 54                                   CILO266
001B 0  C00A              LD      CDCNT       ADD CARD COUNT PLUS      CILO267
001C 00 8600D032    OTTO  A    L2 INPUT-1     54 WORDS (72 COLUMNS)    CILO268
001E 0  4802              BSC     C           IF CARRY,                CILO269
001F 0  8007              A       ONE4        ADD ONE                  CILO270
0020 0  72FF              MDX   2 -1                                   CILO271
                    *                                                  CILO272
                    *                 DATA IN CARD 6 STARTS IN /00EF   CILO273
                    *                                                  CILO274
0021 0  70FA              MDX     OTTO                                 CILO275
0022 0  9C04              S       ONE4        MAKE TWOS COMPLEMENT     CILO276
0023 00 4C1800B6          BSC   L DAT,+-      TEST FOR ZERO            CILO277
0025 0  3000        CK3   WAIT                NO - CHECK SUM ERROR     CILO278
0026 0  0000        CDCNT DC      0                                    CILO279
0027 0  0001        ONE4  DC      1                                    CILO280
0028 00 4C180015    FDCHK BSC   L CKSUM,+-    BRANCH IF NO READER ERROR CILO281
002A 0  C045              LD      CITST       GET COL. INT. INDICATOR  CILO282
002B 00 4C200030          BSC   L *+3,Z       TEST FOR ANY COL. INTS.  CILO283
002D 00 74FF0026          MDX   L CDCNT,-1    NO, REDUCE CARD COUNT FOR CILO284
002F 0  1000              NOP                 RE-READ OF CARD IN FEED  CILO285
0030 0  1810              SRA     16          YES, CLEAR ACCUM.        CILO286
0031 0  7C60              MDX     ERSTP                                CILO287
                    *                                                  CIL   0
                    *                                                  CIL
0033                INPUT EQU     51          INPUT BUFFER ADDRESS     CILO29 0
0032 0  0000              END     TEMP                                 CILO2 10
    NO ERRORS
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