SXDEV

COLLABORATORS

	TITLE : SXDEV	

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Contents

Chapter 1

SXDEV

1.1 Developing Doors

```
                                DEVELOPING DOORS AND UTILS FOR SYSTEM-X


              ~Structures~associated~with~SX~~~~~

              ~How~the~door~port~works~in~theory~

              ~List~of~XIM~functions~available~~~

              ~Communication~with~MCP~~~~~~~~~~~~
               .-------------------------------------------------------------------------.

 | System-X uses the XIM door port as its primary door port. This means  |
 | it's compatable with AmiExpress. If you are intending to write a door |
 | especially for System-X, use the XIM port, as it gives you the most   |
 | power.                                                                |
 `-----------------------------------------------------------------------'

 Note: if you find any developer/starter packs around for AmiExpress, they
       will work just fine with System-X. There are examples for AmigaE
       and heaps of ASM examples around. Developing doors for SX can also
       be done using any of the other door types, but XIM is the best for
       SX (has the most commands available).
```

1.2 Structures

```
 The structures are all in 'C' format, but in general:

WORD, short                 =        16 bit signed word UWORD
=        16 bit unsigned word int, long, LONG                =        32 bit
signed word ULONG                          =        32 bit unsigned word APTR
=        32 bit pointer

Any fields with an asterix "*" infront of them are pointers!
```

```
.--------------------------------------. | User.data or User structure in
memory | `--------------------------------------'

struct UserData {
        char        Name[31],
                Pass[9],
                Location[30],
                PhoneNumber[13];
        USHORT       Slot_Number;
        USHORT       Sec_Status,                /* access level */
                Sec_Board,                /* unused       */
                Sec_Library,                /* unused       */
                Sec_Bulletin,                /* unused       */
                Messages_Posted;
        ULONG        NewSinceDate,
                ConfRead1,
                ConfRead2,
                ConfRead3,
                ConfRead4,
                ConfRead5,
                ConfRead6,
                ConfRead7,
                ConfRead8,
                ConfRead9;
        char        Conference_Access[10];
        USHORT       Uploads,
                Downloads,
                ConfRJoin,
                Times_Called;
        long        Time_Last_On,
                Time_Used,
                Time_Limit,
                Time_Left;
        ULONG        Bytes_Download,
                Bytes_Upload,
                Daily_Bytes_Limit,
                Daily_Bytes_Dld;
        char        Expert;
        ULONG        ConfYM1,
                ConfYM2,
                ConfYM3,
                ConfYM4,
                ConfYM5,
                ConfYM6,
                ConfYM7,
                ConfYM8,
                ConfYM9;
        long    BeginLogCall;
        UBYTE        Protocol,
                UUCPA,
                LineLength,
                New_User;
        };

.-------------------------------------------. | User.Index or UserIndex
structure in memory | `-------------------------------------------'
```

```
struct UserIndexStruct {
        char handle[31];
        char realname[31];
        UWORD misc; };


.---------------------------. | User.SX file or in memory |
`---------------------------'

struct SXUserStruct {
        UWORD byteratio;
        UWORD fileratio;
        ULONG flags;
        UWORD freefiles;
        ULONG freebytes;
        ULONG ConfAccess[10];
        UWORD lastfilearea;
        char computer[24];
        char sentbyline[46];
        char password[16];
        long firstcall;
        char reserved[110]; };


.-----------------. | Prefs/Confs.DAT | `-----------------'

struct ConfStruct {
        char name[45];
        char path[55];
        char pass[16];
        char filepath[52];
        UWORD fileareas;
        UWORD uploadarea;
        UBYTE flf;
        UBYTE flags;
        char reserve[82]; };


.------------------. | Prefs/Serial.DAT | `------------------'

struct SerialStruct {
        char device[32];
        WORD unit;
        WORD misc;
        long minrate;
        long dcerate;
        UBYTE sevenwire;
        UBYTE shared;
        char ring[16];
        char connect[24];
        char answer[16];
        char initstr[48]; };


.-------------------. | SX:Prefs/Main.DAT | `-------------------'
```

```
struct MainStruct {
        char BBSName[64];
        char BBSPath[64];
        char BBSLoc[64];
        char Sysop[64];
        char DNPath[64];
        char ULPath[64];
        long nodes; };

.--------------------------------------. | SX:LogFiles/Download.LOG &
Upload.LOG | `--------------------------------------'

struct XferLog {
        UWORD        user_slot;
        UBYTE        conf,
                filearea;
        char        filename[32];
        long        size,
                baud,
                cps,
                time;
        UBYTE        node;
        char        res[7]; } Xfer;


.-------------------------. | SX:LogFiles/Callers.LOG |
`-------------------------'

Note: this file has a UWORD at the top before the first structure, which is
a pointer to the oldest entry in the log. (its a rotary log of 30)

struct CallerLog {
        UWORD        user_slot,
                node;
        long        time_login,
                time_logout,
                seconds_online,
                bytes_uploaded,
                bytes_downloaded;
        UWORD        files_uploaded,
                files_downloaded,
                messages;
        long        baud,
                flags;
        UBYTE        logout_mode;
        char        res[25]; };


.-------------------------------------------------------------. | NODE
STRUCTURE AS PASSED BY MCP-COMMAND-14 OR XIM-COMMAND-1505 |
`-------------------------------------------------------------'

struct node_struct {                                            /*
offset DEC        */
        APTR next;                              /*        0        */
        struct UserData *User;                      /*        4        */
        struct UserIndexStruct *UserIndex;      /*        8        */
```

```
        struct SXUserStruct *SXUser;                /*        12        */
        char *action;                                /*        16        */
        char *filename;                                /*        20
*/
        long baud;                                /*        24        */
        long loginsecs;                                /*        28
*/
        UWORD number;                                /*        32        */
        UBYTE actionnumber;                        /*        34        */
        UBYTE active;                                /*        35        */
        UBYTE useron;                                /*        36        */
        UBYTE misc;                                /*        37        */
};
```

1.3 Door Port

There are two ways to program doors for System-X. One is to use AEDoor.library, which is very easy, and the other is to use exec messages, which gives more control. Below is explained the exec message style of programming doors.

--- The message structure ---

```
struct JHMessage {
  struct Message Msg;    <----- msg structure
  char String[200];      <----- info buffer
  int Data;              <----- Read/Write & result indicator
  int Command;           <----- Command sent from door.
  int NODEID;            <----- reserved
  int LineNum;           <----- reserved
  unsigned long signal; <----- reserved
  struct Process *task;
  APTR *Semi; };
```

The port name is AEDoorPort%d , where %d is the node number. General in 'C' you'd do:

```
char portname[32]; struct MsgPort *port;

sprintf(portname, "AEDoorPort%d", atoi(argv[1])); port =
FindPort(portname);
```

See the examples/ directory for more information.

1.4 System-X XIM Functions

The following list is a list of all System-X HOST Commands which can be used in every program language to get/store information to the AmiExpress Host Port. With this Command you can get Information like BBSNAME, USERNAME etc. Click on the Buttons for more Information.

~JH_LI~~~~~~~~~~~~~<Func:~000>~

~JH_REGISTER~~~~~~<Func:~001>~

~JH_SHUTDOWN~~~~~~<Func:~002>~

~JH_WRITE~~~~~~~~~~<Func:~003>~

~JH_SM~~~~~~~~~~~~~<Func:~004>~

~JH_PM~~~~~~~~~~~~~<Func:~005>~

~JH_HK~~~~~~~~~~~~~<Func:~006>~

~JH_SG~~~~~~~~~~~~~<Func:~007>~

~JH_SF~~~~~~~~~~~~~<Func:~008>~

~JH_EF~~~~~~~~~~~~~<Func:~009>~

~JH_CO~~~~~~~~~~~~~<Func:~010>~

~JH_BBSNAME~~~~~~~<Func:~011>~

~JH_SYSOP~~~~~~~~~~<Func:~012>~

~JH_FLAGFILE~~~~~~<Func:~013>~

~DT_NAME~~~~~~~~~~<Func:~100>~

~DT_PASSWORD~~~~~~<Func:~101>~

~DT_LOCATION~~~~~~<Func:~102>~

~DT_PHONENUMBER~~~<Func:~103>~

~DT_SLOTNUMBER~~~~<Func:~104>~

~DT_ACCESSLEVEL~~~<Func:~105>~

~DT_RATIOTYPE~~~~~<Func:~106>~

~DT_RATIO~~~~~~~~~<Func:~107>~

~DT_COMPTYPE~~~~~~<Func:~108>~

~DT_MESSAGESPOSTED<Func:~109>~

~DT_UPLOADS~~~~~~~<Func:~110>~

~DT_DOWNLOADS~~~~~<Func:~111>~

~DT_TIMESCALLED~~~<Func:~112>~

~DT_TIMELASTON~~~~<Func:~113>~

~DT_TIMEUSED~~~~~~<Func:~114>~

~DT_TIMELIMIT~~~~~<Func:~115>~

~DT_TIMETOTAL~~~~~<Func:~116>~

~DT_BYTESUPLOAD~~~<Func:~117>~

~DT_BYTEDOWNLOAD~~<Func:~118>~

~DT_DAILYBYTELIMIT<Func:~119>~

~DT_DAILYBYTEDLD~~<Func:~120>~

~DT_EXPERT~~~~~~~~<Func:~121>~

~DT_LINELENGTH~~~~<Func:~122>~

~ACTIVE_NODES~~~~~<Func:~123>~

~DT_DUMP~~~~~~~~~~<Func:~124>~

~DT_TIMEOUT~~~~~~~<Func:~125>~

~BB_CONFNAME~~~~~~<Func:~126>~

~BB_CONFLOCAL~~~~~<Func:~127>~

~BB_LOCAL~~~~~~~~~<Func:~128>~

~BB_STATUS~~~~~~~~<Func:~129>~

~BB_MAINLINE~~~~~~<Func:~131>~

~RETURNCOMMAND~~~~<Func:~136>~

~ZMODEMSEND~~~~~~~<Func:~137>~

~ZMODEMRECEIVE~~~~<Func:~138>~

~SCREEN_ADDRESS~~~<Func:~139>~

~BB_TASKPRI~~~~~~~<Func:~140>~

~RAWSCREEN_ADDRESS<Func:~141>~

~BB_CHATFLAG~~~~~~<Func:~142>~

~DT_STAMP_LASTON~~<Func:~143>~

~DT_STAMP_CTIME~~~<Func:~144>~

~DT_CURR_TIME~~~~~<Func:~145>~

~DT_CONFACCESS~~~~<Func:~146>~

~BB_NODEID~~~~~~~~<Func:~149>~

~BB_CALLERSLOG~~~~<Func:~150>~

~BB_UDLOG~~~~~~~~~<Func:~151>~

~EXPRESS_VERSION~~<Func:~152>~

~BB_CHATSET~~~~~~~<Func:~162>~

~ENVSTAT~~~~~~~~~~<Func:~163>~

~NODE_DEVICE~~~~~~<Func:~503>~

~NODE_UNIT~~~~~~~~<Func:~504>~

~NODE_BAUD~~~~~~~~<Func:~505>~

~JH_MCI~~~~~~~~~~<Func:~507>~

~PRV_COMMAND~~~~~~<Func:~508>~

~BB_CONFNUM~~~~~~~<Func:~510>~

~BB_DROPDTR~~~~~~~<Func:~511>~

~BB_GETTASK~~~~~~~<Func:~512>~

~NODE_BAUDRATE~~~~<Func:~516>~

~BB_LOGONTYPE~~~~~<Func:~517>~

~BB_SCRLEFT~~~~~~~<Func:~518>~

~BB_SCRTOP~~~~~~~~<Func:~519>~

~BB_SCRWIDTH~~~~~~<Func:~520>~

~BB_SCRHEIGHT~~~~~<Func:~521>~

~BB_PURGELIN~~~~~~<Func:~522>~

~BB_PURGELINESTART<Func:~523>~

~BB_PURGELINEEND~~<Func:~524>~

~BB_NONSTOPTEXT~~~<Func:~525>~

~BB_LINECOUNT~~~~~<Func:~526>~

~DT_LANGUAGE~~~~~~<Func:~527>~

```
~DT_QUICKFLAG~~~~~<Func:~528>~

~DT_GOODFILE~~~~~~<Func:~529>~
    Below are functions that are System-X specific and DO NOT work ↩
        under
     AmiExpress or any AmiExpress clones.


~SX_PS~~~~~~~~~~~<Func:~1500>~

~SX_USERPO~~~~~~~<Func:~1501>~

~SX_USERPO2~~~~~~<Func:~1502>~

~SX_USERPO3~~~~~~<Func:~1503>~

~SX_VER~~~~~~~~~~<Func:~1504>~

~SX_NODES~~~~~~~~<Func:~1505>~

~SX_FUNCTION~~~~~<Func:~1506>~

~SX_ARG~~~~~~~~~~<Func:~1507>~

~SX_CONF~~~~~~~~~<Func:~1508>~

~SX_FILEATTACH~~~<Func:~1509>~

~SX_GETPATH~~~~~~<Func:~1510>~

~SX_FINDFILE~~~~~<Func:~1511>~

~SX_SHOWANSI~~~~~<Func:~1512>~

~SX_CONFACCESS~~~<Func:~1513>~

~SX_CONFNAME~~~~~<Func:~1514>~

~SX_HITRETURN~~~~<Func:~1515>~

 SX_MSGAREANUM   <Func: 1516>

Main
```

1.5 JH_LI <Func: 000>

```
JH_LI          Requests a string of information from the user with a
               default string.

               msg->Command = 0
               msg->String  = default result string
               msg->Data    = Maximum length of response.

               msg->Data will be set to a -1 if a loss carrier or console
               TIMEOUT occurs, otherwise MSG->Data will be 1
```

```
               msg->String will be the response string from the user.
(FUNCTION #: 0 )
```

1.6 JH_REGISTER <Func: 001>

```
 JH_REGISTER    Registers a door or XIM with the current node.

               msg->Command = 1

               This must be the first command issued to the express node.
               This increments the number of doors active for the current
               node. (FUNCTION #: 1 )
```

1.7 JH_SHUTDOWN <Func: 002>

```
 JH_SHUTDOWN   Tells the node that a door is shutting down, this decreases
              the number of active doors indicator , which once at 0,
              the AEDoorPort will close.

              msg->Command = 2
              msg->Data    = N/A (FUNCTION #: 2 )
```

1.8 JH_WRITE <Func: 003>

```
 JH_WRITE        Allows you to send a text string to the user.

                msg->Command = 3
                msg->String  = text
                msg->Data    = N/A (FUNCTION #: 3 )
```

1.9 JH_SM <Func: 004>

```
 JH_SM           Allows you to send a text string to the user.

                msg->Command = 4
                msg->String  = text
                msg->Data    = 1 or 0

                if msg->Data = 1, then a CR/LF combination will be sent.
(FUNCTION #: 4 )
```

1.10 JH_PM <Func: 005>

```
JH_PM           Allows you to prompt the user for a specified number of
                characters.

                msg->Command = 5
                msg->String  = prompt string
                msg->Data    = maximum response length.

                if msg->Data = -1, then a loss carrier has occurred or a
                TIMEOUT condition has occurred, otherwise msg->Data = 1.

                msg->String will be the user response. (FUNCTION #: 5 )
```

1.11 JH_HK <Func: 006>

```
JH_HK           Allows you to get a 1 character response from the user.

                msg->Command = 6
                msg->String  = text
                msg->Data    = N/A

                if msg->Data = -1, then a loss carrier has occurred or a
                TIMEOUT condition has occurred, otherwise msg->Data = 1.

                msg->String will be the result string. (FUNCTION #: 6 )
```

1.12 JH_SG <Func: 007>

```
JH_SG           Allows you to display a text file to the user.

                msg->Command = 7
                msg->String  = part file name.
                msg->Data    = N/A

                ie:

                msg->String = "BBS:Node1/Bull

                This would try to display BBS:Node1/BULL.TXT
                also takes into account language specifications.

                This also searches for the access level patterns, ie:

                Bull10.TXT, Bull100.TXT (FUNCTION #: 7 )
```

1.13 JH_SF <Func: 008>

```
JH_SF           Allows you to display a text file to the user.

                msg->Command = 8
```

```
                msg->String  = Complete pathname
                msg->Data    = N/A

                ie:

                msg->String  = "BBS:Node1/BULL.TXT"

                This would show the file if it exists. (FUNCTION #: 8 )
```

1.14 JH_EF <Func: 009>

```
 JH_EF           Allows you to use the internal msgbase editor to edit your
                own files.

                msg->Command = 9
                msg->String  = Complete pathname
                msg->Data    = 0

                if msg->Data = -1, then a loss carrier has occurred or a
                TIMEOUT has occurred, otherwise msg->Data will be 1.
(FUNCTION #: 9 )
```

1.15 JH_CO <Func: 010>

```
 JH_CO           Allows you to send text string to the console only.

                msg->Command = 10
                msg->String  = text
                msg->Data    = 1 or 0

                if msg->Data = 1, then a CR/LF combination will be sent in
                addition to the text. (FUNCTION #: 10 )
```

1.16 JH_BBSNAME <Func: 011>

```
 JH_BBSNAME       Allows you to retrieve the BBS Name.

                msg->Command = 11
                msg->Data    = N/A

                msg->String will be the BBS name. (FUNCTION #: 11 )
```

1.17 JH_SYSOP <Func: 012>

```
 JH_SYSOP         Allows you to retrieve the Sysop's Name.

                msg->Command = 12
```

```
                msg->Data    = N/A

                msg->String will be the Sysop name. (FUNCTION #: 12 )
```

1.18 JH_FLAGFILE <Func: 013>

```
 JH_FLAGFILE     Allows you to add files to the list of flagged files.

                msg->Command = 13
                msg->String  = FileName
                msg->Data    = N/A

                Adds the msg->String to the list of flagged files for
                downloading purposes,

                NOTE: The files must be in the download path for this to
                      work. (FUNCTION #: 13 )
```

1.19 DT_NAME <Func: 100>

```
 DT_NAME         Allows you to retrieve or change users name/handle

                msg->Command = 100
                msg->Data    = 1 or 0

                if msg->Data = 1, then msg->String will be the name.
                if msg->Data = 0, then name will be msg->String (FUNCTION #:
100 )
```

1.20 DT_PASSWORD <Func: 101>

```
 DT_PASSWORD     Allows you to retrieve or change users password

                msg->Command = 101
                msg->Data    = 1 or 0

                if msg->Data = 1, then msg->String will be the password.
                if msg->Data = 0, then the password will be msg->String.
(FUNCTION #: 101 )
```

1.21 DT_LOCATION <Func: 102>

```
 DT_LOCATION     Allows you to retrieve or change users location

                msg->Command = 102
                msg->Data    = 1 or 0
```

```
                if msg->Data = 1, then msg->String will be the location
                if msg->Data = 0, then the location will be msg->String
(FUNCTION #: 102 )
```

1.22 DT_PHONENUMBER <Func: 103>

```
 DT_PHONENUMBER  Allows you to retrieve or change users phone number.

               msg->Command = 103
               msg->Data    = 1 or 0

               if msg->Data = 1, then msg->String will be the phonenumber
               if msg->Data = 0, ten phonenumber will be msg->String
(FUNCTION #: 103 )
```

1.23 DT_SLOTNUMBER <Func: 104>

```
 DT_SLOTNUMBER  Allows you to retrieve users slot number

               msg->Command = 104
               msg->Data    = 1

               if msg->Data = 1, then msg->String will be the SLOTNUMBER.
(FUNCTION #: 104 )
```

1.24 DT_ACCESSLEVEL <Func: 105>

```
 DT_ACCESSLEVEL  Allows you to retrieve or change users access level.

                msg->Command = 105
                msg->Data    = 1 or 0

                if msg->Data = 1, then msg->String will be ACCESSLEVEL.
                if msg->Data = 0, then ACCESSLEVEL will be msg->String.
(FUNCTION #: 105 )
```

1.25 DT_RATIOTYPE <Func: 106>

```
 DT_RATIOTYPE    Allows you to retrieve or change users RatioType

                msg->Command = 106
                msg->Data    = 1 or 0

                if msg->Data = 1, then msg->String will be RatioType.
                if msg->Data = 0, then RatioType will be msg->String.
(FUNCTION #: 106 )
```

1.26 DT_RATIO <Func: 107>

```
 DT_RATIO        Allows you to retrieve or change users ratio

                msg->Command = 107
                msg->Data    = 1 or 0

                if msg->Data = 1, then msg->String will be ratio.
                if msg->Data = 0, then ratio will be msg->String. (FUNCTION
#: 107 )
```

1.27 DT_COMPTYPE <Func: 108>

```
 DT_COMPTYPE     Allows you to retrieve or change users ComputerTypes code

                msg->Command = 108
                msg->Data    = 1 or 0

                if msg->Data = 1, then msg->String will be ComputerTypes.
                if msg->Data = 0, then ComputerTypes will be msg->String.
(FUNCTION #: 108 )
```

1.28 DT_MESSAGESPOSTED <Func: 109>

```
 DT_MESSAGESPOSTED Allows you to retrieve or change users MESSAGESPOSTED

               msg->Command = 109
               msg->Data    = 1 or 0

               if msg->Data = 1, then msg->String will be MESSAGESPOSTED.
               if msg->Data = 0, then MESSAGESPOSTED will be msg->String.
(FUNCTION #: 109 )
```

1.29 DT_UPLOADS <Func: 110>

```
 DT_UPLOADS      Allows you to retrieve or change number of UserUploads.

                msg->Command = 110
                msg->Data    = 1 or 0

                if msg->Data = 1, then msg->String will be uploads.
                if msg->Data = 0, then uploads will be msg->String.
(FUNCTION #: 110 )
```

1.30 DT_DOWNLOADS <Func: 111>

```
 DT_DOWNLOADS   Allows you to retrieve or change number of UserDownloads.

                msg->Command = 111
                msg->Data    = 1 or 0

                if msg->Data = 1, then msg->String will be downloads.
                if msg->Data = 0, then downloads will be msg->String.
(FUNCTION #: 111 )
```

1.31 DT_TIMESCALLED <Func: 112>

```
 DT_TIMESCALLED  Allows you to retrieve or change number of UserCalls.

                msg->Command = 112
                msg->Data    = 1 or 0

                if msg->Data = 1, then msg->String will be TIMESCALLED.
                if msg->Data = 0, then TIMESCALLED will be msg->String.
(FUNCTION #: 112 )
```

1.32 DT_TIMELASTON <Func: 113>

```
 DT_TIMELASTON   Allows you to retrieve or change time user last called.

                msg->Command = 113
                msg->Data    = 1 or 0

                if msg->Data = 1, then msg->String will be TIMESCALLED.
                if msg->Data = 0, then TIMESCALLED will be msg->String.

                NOTE: This is not a date stamp, this is the number of
                      seconds since January 19something. (FUNCTION #: 113 )
```

1.33 DT_TIMEUSED <Func: 114>

```
 DT_TIMEUSED     Allows you to retrieve or change TIMEUSED today.

                msg->Command = 114
                msg->Data    = 1 or 0

                if msg->Data = 1, then msg->String will be TIMEUSED.
                if msg->Data = 0, then TIMEUSED will be msg->String.

                NOTE: This is in seconds. (FUNCTION #: 114 )
```

1.34 DT_TIMELIMIT <Func: 115>

```
 DT_TIMELIMIT    Allows you to retrieve or change TimeAllowed for a user.

                 msg->Command = 115
                 msg->Data    = 1 or 0

                 if msg->Data = 1, then msg->String will be TIMELIMIT.
                 if msg->Data = 0, then TIMELIMIT will be msg->String.

                 NOTE: Time in seconds. (FUNCTION #: 115 )
```

1.35 DT_TIMETOTAL <Func: 116>

```
 DT_TIMETOTAL   Allows you to retrieve or change total time remaining.
                for a user today.

                msg->Command = 116
                msg->Data    = 1 or 0

                if msg->Data = 1, then msg->String will be time remaining.
                if msg->Data = 0, then time remaining will be msg->String.

                NOTE: Time in seconds. (FUNCTION #: 116 )
```

1.36 DT_BYTESUPLOAD <Func: 117>

```
 DT_BYTESUPLOAD  Allows you to retrieve or change bytes uploads per user.

                 msg->Command = 117
                 msg->Data    = 1 or 0

                 if msg->Data = 1, then msg->String will be BYTESUPLOADED.
                 if msg->Data = 0, then BYTESUPLOADED will be msg->String.
(FUNCTION #: 117 )
```

1.37 DT_BYTEDOWNLOAD <Func: 118>

```
 DT_BYTEDOWNLOAD Allows you to retrieve or change bytes downloaded per
                 user.

                msg->Command = 118
                msg->Data    = 1 or 0

                if msg->Data = 1, then msg->String will be BYTESDOWNLOADED.
                if msg->Data = 0, then BYTESDOWNLOADED will be msg->String.
(FUNCTION #: 118 )
```

1.38 DT_DAILYBYTELIMIT <Func: 119>

```
 DT_DAILYBYTELIMIT Allows you to retrieve or change a users daily byte
                   download limit.

                   msg->Command = 119
                   msg->Data    = 1 or 0

                   if msg->Data = 1, then msg->String will be bytelimit.
                   if msg->Data = 0, then bytelimit will be msg->String.
(FUNCTION #: 119 )
```

1.39 DT_DAILYBYTEDLD <Func: 120>

```
 DT_DAILYBYTEDLD Allows you to retrieve or change daily bytes downloaded.

                 msg->Command = 120
                 msg->Data    = 1 or 0

                 if msg->Data = 1, then msg->String will be dailybytes.
                 if msg->Data = 0, then dailybytes will be msg->String.
(FUNCTION #: 120 )
```

1.40 DT_EXPERT <Func: 121>

```
 DT_EXPERT          Allows you to retrieve or change expert mode.

                   msg->Command = 121
                   msg->Data    = 1 or 0 (FUNCTION #: 121 )
```

1.41 DT_LINELENGTH <Func: 122>

```
 DT_LINELENGTH     Allows you to retrieve or change user LINELENGTH specs.

                   msg->Command = 122
                   msg->Data    = 1 or 0

                   if msg->Data = 1, then msg->String will be LINELENGTH.
                   if msg->Data = 0, then LINELENGTH will be msg->String.
(FUNCTION #: 122 )
```

1.42 ACTIVE_NODES <Func: 123>

```
 ACTIVE_NODES    Allows you to retrieve a string of active&inactive nodes.

                 msg->Command = 123
                 msg->Data    = N/A
```

```
                msg->String will be a string 10 bytes in length, with
                     'X's marking the active nodes.

                NOTE: This command will surely be changing, the current
                      limit is 9 nodes. (FUNCTION #: 123 )
```

1.43 DT_DUMP <Func: 124>

```
 DT_DUMP           Allows you to dump the user's data structure to a
                   specified file.

                   msg->Command = 124
                   msg->String  = FileName (FUNCTION #: 124 )
```

1.44 DT_TIMEOUT <Func: 125>

```
 DT_TIMEOUT        Allows you to retrieve or change the door TIMEOUT limit.

                  msg->Command = 125
                  msg->Data    = 1 or 0

                  if msg->Data = 1, then msg->String will equal TIMEOUT.
                  if msg->Data = 0, then TIMEOUT will equal msg->String.

                  NOTE: This time is in seconds. (FUNCTION #: 125 )
```

1.45 BB_CONFNAME <Func: 126>

```
 BB_CONFNAME       Allows you to retrieve or change the conference name.

                   msg->Command = 126
                   msg->Data    = 1 or 0

                   if msg->Data = 1, then msg->String will be name.
                   if msg->Data = 0, then name will be msg->String. (FUNCTION
#: 126 )
```

1.46 BB_CONFLOCAL <Func: 127>

```
 BB_CONFLOCAL    Allows you to retrieve or change the conference location.

                 msg->Command = 127
                 msg->Data    = 1 or 0

                 if msg->Data = 1, then msg->String will be location.
                 if msg->Data = 0, then location will be msg->String.
(FUNCTION #: 127 )
```

1.47 BB_LOCAL <Func: 128>

```
 BB_LOCAL          Allows you to retrieve the current BBS location.

                  msg->Command = 128
                  msg->Data    = N/A (FUNCTION #: 128 )
```

1.48 BB_STATUS <Func: 129>

```
 BB_STATUS         Allows you to retrieve the current status of the node.

                  msg->Command = 129
                  msg->Data    = N/A

                  msg->String will be 'OFFLINE' or 'ONLINE' depending on
                  whether a user is logged onto the node. (FUNCTION #: 129
)
```

1.49 BB_MAINLINE <Func: 131>

```
 BB_MAINLINE     Allows you to retrieve the menu prompt arguments prior to
                the door being entered.

                msg->Command = 131
                msg->Data    = N/A

                msg->String will be the menu prompt arguments. (FUNCTION #:
131 )
```

1.50 RETURNCOMMAND <Func: 136>

```
 RETURNCOMMAND    Allows you to specify an internal command to be executed
                 when the door is finished.

                 msg->Command = 136
                 msg->Data    = N/A

                 command to be executed will be msg->String. (FUNCTION #:
136 )
```

1.51 ZMODEMSEND <Func: 137>

```
 ZMODEMSEND      Allows you to send files to the user via Zmodem protocol.

                msg->Command = 137
                msg->String  = filename (complete pathname)
                msg->Data    = N/A
```

```
                result of transfer will be in msg->Data, where

                if msg->Data = 1 , then transfer successful.
                if msg->Data = -2, then user lost carrier.
                if msg->Data = 0 , then transfer unsuccessful. (FUNCTION #:
137 )
```

1.52 ZMODEMRECEIVE <Func: 138>

```
 ZMODEMRECEIVE    Allows you to receive batch uploads via Zmodem protocol.

                 msg->Command = 138
                 msg->String  = receive directory path
                 msg->Data    = N/A

                 result of transfer will be in msg->Data, where

                 if msg->Data = 1 , then transfer successful.
                 if msg->Data = -2, then user lost carrier.
                 if msg->Data = 0,  then transfer unsuccessful. (FUNCTION #:
138 )
```

1.53 SCREEN_ADDRESS <Func: 139>

```
 SCREEN_ADDRESS    Allows you to retrieve the screen address.

                  msg->Command = 139
                  msg->Data    = N/A

                  msg->String will be a string containing the hexadecimal
                  address of the Node screen. (FUNCTION #: 139 )
```

1.54 BB_TASKPRI <Func: 140>

```
 BB_TASKPRI    Allows you to retrieve the priority the node is running at.

              msg->Command = 140
              msg->Data    = N/A

              msg->String will contain the priority of the node. (FUNCTION
#: 140 )
```

1.55 RAWSCREEN_ADDRESS <Func: 141>

```
 RAWSCREEN_ADDRESS Allows you to retrieve the screen address of the node.

              msg->Command = 141
              msg->Data    = N/A

              msg->String will be a string containing the decimal address
                   of the express node. (FUNCTION #: 141 )
```

1.56 BB_CHATFLAG <Func: 142>

```
 BB_CHATFLAG       Allows you to retrieve the current chat setting.

                  msg->Command = 142
                  msg->Data    = N/A

                  msg->String will be "ON" or "OFF". (FUNCTION #: 142 )
```

1.57 DT_STAMP_LASTON <Func: 143>

```
 DT_STAMP_LASTON Allows you to retrieve a date string containing the date
                of when the user last logged on.

                msg->Command = 143
                msg->Data    = N/A

                msg->String will be the date string. (FUNCTION #: 143 )
```

1.58 DT_STAMP_CTIME <Func: 144>

```
 DT_STAMP_CTIME    Allows you to retrieve a current time string.

                   msg->Command = 144
                   msg->Data    = N/A

                   msg->String will be a current time string. (FUNCTION #:
144 )
```

1.59 DT_CURR_TIME <Func: 145>

```
 DT_CURR_TIME     Allows you to retrieve the current time in seconds since
                 January something.

                 msg->Command = 145
                 msg->Data    = N/A

                 msg->String will be the current time. (FUNCTION #: 145 )
```

1.60 DT_CONFACCESS <Func: 146>

```
DT_CONFACCESS     Allows you to retrieve the users conference access.

                  msg->Command = 146
                  msg->Data    = 1 or 0

                  if msg->Data = 1, then msg->String will be AREANAME.
                  if msg->Data = 0, then AREANAME will be msg->String.

(FUNCTION #: 146 )
```

1.61 BB_NODEID <Func: 149>

```
BB_NODEID         Allows you to retrieve the Node number for the current
                  node

                  msg->Command = 149
                  msg->Data    = N/A

                  msg->String will be the node number. (FUNCTION #: 149 )
```

1.62 BB_CALLERSLOG <Func: 150>

```
BB_CALLERSLOG     Allows you to add a line of text to the CALLERSLOG.

                  msg->Command = 150
                  msg->String  = text
                  msg->Data    = N/A (FUNCTION #: 150 )
```

1.63 BB_UDLOG <Func: 151>

```
BB_UDLOG          Allows you to add a line of text to the UDLOG.

                  msg->Command = 151
                  msg->String  = text
                  msg->Data    = N/A (FUNCTION #: 151 )
```

1.64 EXPRESS_VERSION <Func: 152>

```
EXPRESS_VERSION   Allows you to retrieve the current version string of
                  express.

                  msg->Command = 152
                  msg->Data    = N/A (FUNCTION #: 152 )
```

1.65 BB_CHATSET <Func: 162>

```
 BB_CHATSET     Allows you to retrieve or change the chat status.

               msg->Command = 162
               msg->Data    = 1 or 0

               if msg->Data = 1, then msg->String will be current status.
               if msg->Data = 0, then status will be msg->String. (FUNCTION
#: 162 )
```

1.66 ENVSTAT <Func: 163>

```
 ENVSTAT          Allows you to retrieve or change the current environment
                 stat variable code.

                 msg->Command = 163
                 msg->Data    = 1 or 0

                 if msg->Data = 1, then msg->String will be status.
                 if msg->Data = 0, then status will be msg->String.
(FUNCTION #: 163 )
```

1.67 NODE_DEVICE <Func: 503>

```
 NODE_DEVICE       Allows you to retrieve the node device name.

                  msg->Command = 503
                  msg->Data    = N/A

                  msg->String will be the device string. (FUNCTION #: 503 )
```

1.68 NODE_UNIT <Func: 504>

```
 NODE_UNIT         Allows you to retrieve the node unit number.

                  msg->Command = 504
                  msg->Data    = N/A

                  msg->String will be the current node number. (FUNCTION #:
504 )
```

1.69 NODE_BAUD <Func: 505>

```
NODE_BAUD    Allows you to retrieve the initialized baud rate of the node.

             msg->Command = 505
             msg->Data    = N/A

             msg->String will be the INIT baud rate. (FUNCTION #: 505 )
```

1.70 JH_MCI <Func: 507>

```
JH_MCI            Allows you to send MCI text to express.

                  msg->Command = 507
                  msg->String  = text
                  msg->Data    = N/A (FUNCTION #: 507 )
```

1.71 PRV_COMMAND <Func: 508>

```
PRV_COMMAND       Allows you to immediately execute an internal express
                  menu command.

                  msg->Command = 508
                  msg->String  = commandstring
                  msg->Data    = N/A (FUNCTION #: 508 )
```

1.72 BB_CONFNUM <Func: 510>

```
BB_CONFNUM     Allows you to retrieve the current conference number.

               msg->Command = 510
               msg->Data    = N/A

               msg->String will be conference number ranging from 0 to 8.
(FUNCTION #: 510 )
```

1.73 BB_DROPDTR <Func: 511>

```
BB_DROPDTR        Allows you to drop carrier on a user.

                  msg->Command = 511
                  msg->Data    = N/A (FUNCTION #: 511 )
```

1.74 BB_GETTASK <Func: 512>

```
 BB_GETTASK         Finds the current nodes task address.

                   msg->Command = 512
                   msg->Data    = N/A

                   msg->task will be the express task address. (FUNCTION #:
512 )
```

1.75 NODE_BAUDRATE <Func: 516>

```
 NODE_BAUDRATE      Allows you to retrieve the current users connect rate

                   msg->Command = 516
                   msg->Data    = N/A

                   msg->String will be the connect rate (FUNCTION #: 516 )
```

1.76 BB_LOGONTYPE <Func: 517>

```
 BB_LOGONTYPE       Allows you to retrieve the LOGONTYPE.

                   msg->Command = 517
                   msg->Data    = N/A

                   msg->Data will be:

                   0 = AWAIT_LOGON
                   1 = SYSOP_LOGON
                   2 = LOCAL_LOGON
                   3 = REMOTE_LOGON (FUNCTION #: 517 )
```

1.77 BB_SCRLEFT <Func: 518>

```
 BB_SCRLEFT       Allows you to retrieve the screen coordinates.

                  msg->Command = 518
                  msg->Data    = N/A

                  msg->Data will be the Node's Initial LEFTEDGE coordinate.
(FUNCTION #: 518 )
```

1.78 BB_SCRTOP <Func: 519>

```
 BB_SCRTOP         Allows you to retrieve the screen coordinates.

                  msg->Command = 519
                  msg->Data    = N/A
```

```
                msg->Data will be the Node's Initial TOPEDGE coordinate.
(FUNCTION #: 519 )
```

1.79 BB_SCRWIDTH <Func: 520>

```
 BB_SCRWIDTH       Allows you to retrieve the screen coordinates.

                  msg->Command = 520
                  msg->Data    = N/A

                  msg->Data will be the Node's Initial screen height.
(FUNCTION #: 520 )
```

1.80 BB_SCRHEIGHT <Func: 521>

```
 BB_SCRHEIGHT      Allows you to retrieve the screen coordinates.

                  msg->Command = 521
                  msg->Data    = N/A

                  msg->Data will be the Node's Initial screen width.
(FUNCTION #: 521 )
```

1.81 BB_PURGELIN <Func: 522>

```
 BB_PURGELIN   Allows you to abort serial input.

               msg->Command = 522
               msg->Data    = N/A

              aborts serial input and flushes the serial buffer and sends
              a request for more input. (FUNCTION #: 522 )
```

1.82 BB_PURGELINESTART <Func: 523>

```
 BB_PURGELINESTART Allows you to CLEAR the serial buffer and request more
                   serial input.

                  msg->Command = 523
                  msg->Data    = N/A (FUNCTION #: 523 )
```

1.83 BB_PURGELINEEND <Func: 524>

```
 BB_PURGELINEEND   Allows you to CLEAR the serial buffer.

                  msg->Command = 524
                  msg->Data    = N/A (FUNCTION #: 524 )
```

1.84 BB_NONSTOPTEXT <Func: 525>

```
 BB_NONSTOPTEXT    Allows you to change the NONSTOP text scrolling flag.

                  msg->Command = 525
                  msg->Data    = 1 or 0

                  if msg->Data = 1, then display text will not pause.
                  if msg->Data = 0, then display text will pause. (FUNCTION
#: 525 )
```

1.85 BB_LINECOUNT <Func: 526>

```
 BB_LINECOUNT   Allows you to retrieve or change the user's current number
               of lines viewed.

               msg->Command = 526
               msg->Data    = 1 or 0

               if msg->Data = 1, then msg->String will be current line.
               if msg->Data = 0, then current line will be msg->String.
(FUNCTION #: 526 )
```

1.86 DT_LANGUAGE <Func: 527>

```
 DT_LANGUAGE      Allows you to retrieve or change the current language
                 specifications.

                 msg->Command = 527
                 msg->Data    = 1 or 0

                 if msg->Data = 1, then msg->String will be language.
                 if msg->Data = 0, then language will be msg->String.

                NOTE: Languages need to be standardized, please what for
                      guidelines.

                ie:  Default language .TXT
                     English          .ENG
                     German           .GER

                     note that this only effects the menus, bulletins &
                     other screen text files. (FUNCTION #: 527 )
```

1.87 DT_QUICKFLAG <Func: 528>

```
 DT_QUICKFLAG      Allows you to change the QUICKTEXT flag.

                  msg->Command = 528
                  msg->Data    = 1 or 0

                  if msg->Data = 1, then the QuickFlag will be set.
                  if msg->Data = 0, then the QuickFlag will not be set.
(FUNCTION #: 528 )
```

1.88 DT_GOODFILE <Func: 529>

```
 DT_GOODFILE       Allows you to set the results of a tested file after
                  upload.

                  msg->Command = 529
                  msg->Data    = 1,0 or -1

                  if msg->Data is 1, then the file was not tested.
                  if msg->Data is 0, then the file passed the filetest.
                  if msg->Data is -1, then the file failed the filetest.

                  NOTE: This command is only useful with the SYSCmd door
                  called FILECHECK. (FUNCTION #: 529 )
```

1.89 System-X Only Print String

```
 SX_PS               Prints a string to the console/serial port.

               msg->Command = 1500
               msg->Data    = pointer to a string


               Note: no copying required and no length limit!


(FUNCTION #: 1500 )
```

1.90 Get UserStruct Pointer (UserData)

```
 SX_USERPO        Gives you the pointer to the User structure

               msg->Command = 1501


               returns the pointer in msg->Data

(FUNCTION #: 1501 )
```

1.91 Get UserStruct Pointer (SXUser)

```
 SX_USERPO2         Gives you the pointer to the SXUser structure

                 msg->Command = 1502


                 returns the pointer in msg->Data

(FUNCTION #: 1502 )
```

1.92 Get UserStruct Pointer (Index)

```
 SX_USERPO3         Gives you the pointer to the User Index structure

                 msg->Command = 1503


                 returns the pointer in msg->Data

(FUNCTION #: 1503 )
```

1.93 Get the System-X version

```
 SX_VER                 Gives you the version of SX

                 msg->Command = 1504

                 returns it in msg->String, eg: "1.00"

(FUNCTION #: 1504 )
```

1.94 Get a pointer to the node structures

```
 SX_NODES          Get a pointer to the node structures

                 msg->Command = 1505

                 returns it in msg->Data

                 For more information, see MCP Communication/Command 14.

(FUNCTION #: 1505 )
```

1.95 MCP

Communication with MCP is available through standard EXEC-MESSAGES.

The structure of the message is (you must allocate it)

```
struct MCPMessage {
        struct Message Msg;
        UWORD command;
        UWORD nodenum;
        long data1;
        long data2;
        long data3;
        long data4;
        long data5;
        long data6; };
```

UWORD's are 16-bit long's are 32-bit

If anything but an actual node wants to use this port, you must make nodenum equal 0 (zero) (that includes doors!).

MCP Commands Available

Note: Commands 1 to 5 are PRIVATE!!

6 - MENU POINTER

Ask MCP to give you a pointer to a menu structure

```
themsg.command = 6
themsg.data1   = pointer to the menu you want
                         eg: "Main_Menu"
```

returns

```
themsg.data2   = the pointer you wanted
themsg.data3   = size of the struct in bytes
```

8 - MD5 ENCRYPTION

This will ask MCP to encrypt a string for you, using MD5.

```
themsg.command = 8
themsg.data1   = pointer to the string to encrypt
themsg.data2   = pointer to 16 bytes to put the result in
```

10 - QUERY SYSOP

Find out if the sysop is available

```
                themsg.command = 10

                returns

                themsg.data1   = pointer to the reason for being away
                                 (if NULL, the sysop is available)


        12 - APPEND TO A FILE

                themsg.command = 12
                themsg.data1   = pointer to the filename string
                themsg.data2   = pointer to the buffer to append
                themsg.data3   = size of the append buffer


        14 - GET A POINTER TO THE NODE INFORMATION CHAIN

                themsg.command = 14

                returns

                themsg.data1   = the pointer to node 1's structure
                                 (use the NEXT field to browse through)

                the struct is as follows

                struct node_struct
                {                                       /* offset DEC
*/
                        APTR next;                       /*        0
*/
                        struct UserData *User;               /*        4
*/
                        struct UserIndexStruct *UserIndex;/*        8
*/
                        struct SXUserStruct *SXUser;        /*        12
*/
                        char *action;                        /*        16
*/
                        char *filename;                         /*        20
*/
                        long baud;                          /*        24
*/
                        long loginsecs;                         /*        28
*/
                        UWORD number;                        /*        32
*/
                        UBYTE actionnumber;                 /*        34
*/
                        UBYTE active;                        /*        35
*/
                        UBYTE useron;                        /*        36
*/
                        UBYTE misc;                          /*        37
*/
                };
```

```
.-------------------------------------. | Example 'C' program using MCP's
port | `-------------------------------------'

struct MCPMessage {
        struct Message Msg;
        UWORD command;
        UWORD nodenum;
        long data1;
        long data2;
        long data3;
        long data4;
        long data5;
        long data6; }; struct MCPMessage themsg; struct MsgPort *MyPort,
*MCPPort;

        MCPPort = FindPort("SX-MCP");
        if(MCPPort)
        {
                MyPort = CreateMsgPort();
                if(MyPort)
                {
                        themsg.Msg.mn_Length = sizeof(struct MCPMessage);
                        themsg.Msg.mn_ReplyPort = MyPort;
                        themsg.nodenum = 0;
                        themsg.command = 10;        /* 10 = QUERY SYSOP */
                        PutMsg(MCPPort, (struct Message *)&themsg);
                        WaitPort(MyPort);
                        DeleteMsgPort(MyPort);
                        if(themsg.data1)
                        {
                                PutStr("The Sysop is away because:\n\n");
                                PutStr((char *)themsg.data1);
                                PutStr("\n");
                        } else {
                                PutStr("The Sysop is available!\n");
                        }
                }
        }
```

1.96 Execute an internal SX Function

```
 SX_FUNCTION        Execute an internal SX Function (sxfunctions.doc)

                msg->data = pointer to this structure:

struct SXFuncStruct {
        UWORD        id;
        char        *string;
        UWORD        extra;
        UWORD        low;
        UWORD        high;
        char        *mainarg;
        char        *execarg; } *SXFunc;
```

```
               Must must allocate this structure and fill in all
               the fields, then pass it through msg->data.

(FUNCTION #: 1506 )
```

1.97 Obtain the pointer to the argument string

```
 SX_ARG                Obtain the pointer to the argument string


               msg->Data will be a pointer to the string.

               eg: If a user types "FR ?", then the argument
               is the "?" part.


(FUNCTION #: 1507 )
```

1.98 Obtain a pointer to the current Conference Struct

```
 SX_CONF                Obtain a pointer to the current Conference
Structure.


               msg->Data will be the pointer to this struct:
         struct ConfStruct {
        char name[45];
        char path[55];
        char pass[16];
        char filepath[52];
        UWORD fileareas;
        UWORD uploadarea;
        UBYTE flf;
        UBYTE flags;
        char reserve[82]; };

(FUNCTION #: 1508 )
```

1.99 File Attach

```
 SX_FILEATTACH              Tell System-X that you want to attach
                       a file to a message. This is for message
                       editor doors only.


                       Msg->String        should be the filename you
                                      want to attach (full path),
                                      it will be MOVED for you.

(FUNCTION #: 1509 )
```

1.100 Get Path

```
 SX_GETPATH                Msg->Data        file area
                         Msg->String        conf number (number to ascii)

                 returns:

                         Msg->String        the filepath for this conf/area

(FUNCTION #: 1510 )
```

1.101 Find the directory of a file

```
 SX_FINDFILE        Find the directory of a file

                         Msg->String        filename to search

                 returns:

                         Msg->String          path of string
                                            first byte is NULL if
                                            file was not found.

                 note: file should be in the current conference.

(FUNCTION #: 1511 )
```

1.102 Show an ansi file, with more control

```
 SX_SHOWANSI        Show an ansi file, with more control


                 Msg->String          filename to show
                 Msg->Data          flags, bits are:

                         BIT 0: Add a path to filename (SX:Screens/ etc)
                         BIT 1: Add an extention to filename (.ANS etc)
                         BIT 2: Check for access specific ansi, ie:
                                        filename.255.ans
                                        filename.ans
                         BIT 3: Check for a conference specific ansi
                         BIT 4: Pause after each full screen


                 If BIT 2 is set, BIT 1 must be set too.

(FUNCTION #: 1512 )
```

1.103 Get the users conference access

```
 SX_CONFACCESS        Get the users conference access

                returns:

                        Msg->Data        the first 32 conference's
                                        flags. 1 = AXS,  0 = NOT AXS.

                        Msg->Command        number of conferences on this
bbs.

(FUNCTION #: 1513 )
```

1.104 Get the current conference name

```
 SX_CONFNAME        Get the current conference name

                returns

                        Msg->String        conference name

(FUNCTION #: 1514 )
```

1.105 Wait user to hit return

```
 SX_HITRETURN                - Prints "Hit Return" message (Strings.XXX).

                        - Waits for user to hit return

(FUNCTION #: 1515 )
```

1.106 SX_MSGAREANUM

```
 SX_MASGAREANUM:           Retrive the current MessageBase Number in
                          msg->Data (=var.thismsgarea)
```