15.8 The Assignment Routine, ASSIG$

The ASSIG$ system routine can be used to establish or modify a unit assignment, or determine the unit address currently assigned to a unit-id. The routine can also delete a specified assignment or, more drastically, purge all but the initial permanent assignments set up by the $CUS Permanent Unit Assignments option. You may need to use the purge facility if an assign request signals the exception which indicates that the assignment tables have become full. This routine can also be used to return the full assignment table.

15.8.1 Invocation

You can assign a unit address to a unit-id by coding a CALL statement of the form:

    CALL ASSIG$ USING unit-id unit-address

where unit-id is a 3-character variable or literal specifying the unit-id to be assigned, and unit-address is a 3-character variable or literal containing the unit address to which it is to be assigned. If the unit address is not an integer in the range 110 to 999 or a LAN address consisting of a letter and two digits and if it does not contain "?bb" (as described below) an exception will be generated. If the unit-id is already assigned the old assignment will be changed. Otherwise a new assignment is made and an exception is signalled if this is not possible due to the assignment tables being full.

You can determine the unit address currently assigned to a unit-id by coding a CALL statement of the form:

    CALL ASSIG$ USING unit-id unit-address

where unit-id is a 3-character variable or literal specifying the unit-id whose assignment you wish to determine, and unit-address is a 3-character variable, initially containing "?bb", where b represents a space, in which the unit-address will be returned, overwriting "?bb". If the unit-id is not assigned an exception will be generated.

You may delete an assignment by coding a CALL statement of the form:

    CALL ASSIG$ USING unit-id

where unit-id is a 3-character variable or literal specifying the unit-id to be deleted. An exception will be generated if the unit-id was not assigned.

You may purge the assignment tables, reducing them to the size initially established by the $CUS Permanent Unit Assignments option by coding a parameterless CALL:

    CALL ASSIG$

You can determine the full assignment table by a call of the form:

    CALL ASSIG$ USING "? " uat

where uat is the full assignment table as follows:

```
01 UAT
 02 UATID OCCURS 30 PIC X(3) * Unit-ids
 02 UATAD OCCURS 30 PIC X(3) * Equivalent addresses
```

If all the entries are not used then the entry following the last entry will be set to LOW-VALUES. Note that the structure of the assignment table is not guaranteed for any future releases of System Manager and may be changed.

15.8.2 Exception Conditions

Exception condition 1 will be signalled if the unit address supplied is not "?bb", a number in the range 110 to 999 or a LAN address consisting of a letter followed by two digits.

Exception condition 2 will be signalled if an attempt is made to make a new assignment when the assignment tables are full.

Exception condition 3 will be signalled if an attempt is made to determine or delete the assignment of a unit-id which is not assigned.

Exception condition 4 will be signalled if the assignment table cannot be found on the system.

15.8.3 Programming Notes

ASSIG$ can be used to find the unit address currently associated with an assigned unit-id, and this in turn can be used to determine the device type, as implied by the first character of the address:

Unit Address	Device Type
1xx	local discrete direct access device on non-separated systems
2xx	local direct access domain or subunit on non-separated systems
3xx	reserved
4xx	reserved
5xx	Printer
6xx	direct access domain or subunit on the master computer on a network or separated system
7xx	reserved
8xx	remote discrete direct access device
9xx	remote direct access domain or subunit
cxx	discrete direct access device on network or separated system - the system or computer designated by the initial letter
Cxx	direct access domain or subunit on a network or separated system - the system or computer designated by the initial letter

Table 15.8.3 - Unit Addresses and Device Types

You should note that the purge operation simply reduces the assignment tables to the size they initially occupied as a result of the use of $CUS Permanent Unit Assignments. Providing none of the permanent assignments has been modified or deleted this will restore the assignment tables to their initial state, just as if $E were run. However, if the permanent assignments have been altered in any way, the result of the purge operation is not easy to predict. Generally, of course, permanent assignments will not be modified.