UHEXE$ - Execute READER.EXE

This routine is not normally required. READER.EXE will be automatically started by GLOBAL.EXE if the following registry setting is enabled:

Global\Clients\CreateProcess\AutoStartUHFReader=On

For GSM SP-32, and later, and GLOBAL.EXE V4.19b, and later, this routine has been reinstated to restart READER.EXE if it fails, and has to be restarted, during a Global session (i.e. this routine allows the reader to be restarted under application control **without** reloading the Global client).

UHOPN$ - Open Connection to READER.EXE

This routine is no longer required. The connection will be automatically made if the above registry setting is enabled.

UHCHK$ - Check Reader Interface

This routine can be used to check the Pipe interface to READER.EXE is available.

```
CALL UHCHK$
```

The following EXIT codes may be returned by UHCHK$.

EXIT code	$$COND	Description
None	0	READER.EXE was auto-started correctly and the pipe interface has been established. UHSTA$, UHSTP$ etc. can be called.
1	1	Error from CreateProcess. The attempt to auto-start READER.EXE failed.
2	2	Error from CreatePipe. The attempt to connect to READER.EXE failed.

UHSTA$ - Send START command to READER.EXE

This routine send the START command to READER.EXE.

```
CALL UHSTA$ USING ipaddr
```

where *ipaddr* is a PIC X(n) string containing a zero-terminated dotted-decimal IP address. For all versions of GSM prior to GSM SP-35, the length of the string must be **exactly** 16 characters, including the terminating binary-zero. For GSM SP-35, and later, the length of the string can be **variable, up to 40 characters**, including the terminating binary-zero. The longer string allows a port number to be appended to the IP address (e.g. 192.168.001.002:14150).

The following EXIT codes may be returned by UHSTA$.

EXIT code	$$COND	Description
1	1	Error from WriteFile. The attempt to send the "START" string failed. The SVC-61 error codes can be obtained by a subsequent call to UHGLE$.
2	2	Malformed IP address.
3	3	Error from WriteFile. The attempt to send the IP Address string failed. The SVC-61 error codes can be obtained by a subsequent call to UHGLE$.
4	4	Error from ReadFile. The attempt to read the result string failed. The SVC-61 error codes can be obtained by a subsequent call to UHGLE$.
5	5	READER.EXE returned as "FAILURE" result.
6	6	The result string returned by READER.EXE was neither "FAILURE" nor "SUCCESS". This should never happen!

This function must be called after a successful Open function (see above).

UHSTP$ - Send STOP command to READER.EXE

This routine send the STOP command to READER.EXE.

```
CALL UHSTP$ USING ipaddr
```

where *ipaddr* is a PIC X(n) string containing a zero-terminated dotted-decimal IP address. For all versions of GSM prior to GSM SP-35, the length of the string must be **exactly** 16 characters, including the terminating binary-zero. For GSM SP-35, and later, the length of the string can be **variable, up to 40 characters**, including the terminating binary-zero. The longer string allows a port number to be appended to the IP address (e.g. 192.168.001.002:14150).

The following EXIT codes may be returned by UHSTP$.

EXIT code	$$COND	Description
1	1	Error from WriteFile. The attempt to send the "STOP" string failed. The SVC-61 error codes can be obtained by a subsequent call to UHGLE$.

2	2	Malformed IP address.
3	3	Error from WriteFile. The attempt to send the IP Address string failed. The SVC-61 error codes can be obtained by a subsequent call to UHGLE$.
4	4	Error from ReadFile. The attempt to read the result string failed. The SVC-61 error codes can be obtained by a subsequent call to UHGLE$.
5	5	READER.EXE returned as "FAILURE" result.
6	6	The result string returned by READER.EXE was neither "FAILURE" nor "SUCCESS". This should never happen!

This function must be called after a successful Open function (see above).

UHCLS$ - Send EXIT command and stop READER.EXE

This routine is no longer required. READER.EXE will be automatically stopped by GLOBAL.EXE if required.

UHGLE$ - Get Last Error from SVC-61 Operation

This routine can be used to obtain the detailed SVC-61 result codes from a previous failed function.

```
CALL UHGLE$ USING result1 result2
```

where *result1* is a PIC 9(4) COMP variable into which the last DSRES result code will be returned; *result2* is a PIC (9) COMP variable into which the last DSRESW result code will be returned.

No exceptions are by UHGLE$.

This function should only be used after an SVC-61 exception. The following error codes may be returned in the *result1* field (i.e. from DSRES):

Code	Mnemonic	Description
222	DSRES_UHF_NO_FILES	No files are present in the .\uhf\ folder. This error code is suppressed by UHTAG$ routine – the *tag* string is set to SPACES.
223	DSRES_UHF_CANT_OPEN	A file was found in the .\uhf\ folder but it could not be opened. The Windows error code is returned in *result2* (i.e. from DSRESW). If the Windows error code is a Sharing Violation the open operation is retried 10 times with a 0.1 second delay between each retry.
224	DSRES_UHF_READ_ERROR	A file in the .\uhf\ folder could be opened but an error occurred when attempting to read the file.

225	DSRES_UHF_CANT_DELETE	A file in the .\uhf\ folder could be opened and read but an error occurred when attempting to delete the file.
226	DSRES_UHF_NO_FILES_MATCH	No matching files present in the .\uhf\ folder. This error code is suppressed by UHTAG$ routine – the *tag* string is set to SPACES.
227	DSRES_UHF_NO_HANDLE	This error code is reserved for future use.

UHTAG$ - Read Next Tag from UHF folder

READER.EXE creates a series of "tag files" in the "uhf" folder when a series of results are supplied by the reader. This routine extracts the Tag string from the next available "tag file". Each tag file is deleted once it has been processed by this function.

```
CALL UHTAG$ USING ipaddr tag
```

where *ipaddr* is a PIC X(16) string containing a zero-terminated dotted-decimal IP address; *tag* is a PIC X(24) string into which the tag is returned.

The following EXIT codes may be returned by UHTAG$.

EXIT code	$$COND	Description
1	1	Unexpected error from SVC-61. The SVC-61 error codes can be obtained by a subsequent call to UHGLE$.

A returned string of SPACES indicates that no more tag files are available.

The code to read a series of tags should be coded as follows:

```
DO
      CALL UHTAG$ USING IPADDR TAG
            ON EXCEPTION            * something has gone wrong!
* Use UHGLE$ to get error status
      END
      IF TAG = SPACES FINISH        * no more tags for this IP address
* Process tag information
ENDDO                               * back to get next tag
```