Laser-Scan Ltd.

CONVERT PACKAGE

LSLIMI Reference

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CONTENTS

LSLIMI - Change Record

Version 1.0   S Townrow 17-June-1991

        Module LSLIMI   - Reorganised package documentation.

CHAPTER 1

LSLIMI TRANSLATION MENU

Introduction

The LSLIMI translation menu allows the user to read data from magnetic
tape or disk file into Informap, and to write from Informap to tape or
file, the following formats:

o OSTF - the OS transfer format, sometimes also called DMC

o NTF - the UK National Transfer Format for spatially referenced
  data. Currently, level 1 is supported, and level 2 is partially
  supported, as specified in the current version of the standard -
  between versions 1.0 and 1.1.

The menu system allows the user to specify what is to be read or
written, and then runs the appropriate programs.

The environment assumed

LSLIMI is intended for a system running Informap. It does not require
a Laser-Scan LAMPS environment, and if one is present, it is used
independently of that environment.

The only parts of LAMPS that are relevant are the following modules
from the CONVERT package:
o the LSLIMI module - LSLIMI_MENU.COM, LSLIMI_LSLINI.COM, an
  optional menu initialisation command file, and various parameter
  files
o the IFFIMAP module - I2IMAP.EXE and IMAP2I.EXE
o the IFFOSTF module - I2OSTF.EXE, OSTF2I.EXE and OSTFINDEX.EXE
o the IFFNTF module - I2NTF.EXE and NTF2I.EXE

Where things are

The directories used by LSLIMI are all to be found in STI_ROOT:[LSL].
The following directories are used:

o STI_ROOT:[LSL.COM]
  This directory contains the command files LSLIMI_MENU.COM,
  LSLIMI_LSLINI.COM and an optional menu initialisation file.
  LSLIMI_MENU.COM is the menu system itself, and LSLIMI_LSLINI.COM
  sets up the environment required by the menu system. The optional
  menu initialisation command file allows users to tailor the menus
  for a particular job. LSLIMI_LSLINI.COM defines the logical name
  LSL$COM to point to this directory.

o STI_ROOT:[LSL.LOOKUP]
  This directory contains the translation parameter files used by
  the menu system. LSLIMI_LSLINI.COM defines the logical name
  LSL$LOOKUP to point to this directory.

o STI_ROOT:[LSL.DATA]
  This is the directory in which OSTF and NTF files are read or
  written, when transfer is not to or from magnetic tape. If files

are to be read by the system, they must be in this directory, with
extension .OSTF or .NTF respectively. LSLIMI_LSLINI.COM defines
the logical name LSL$DATA to point to this directory.

o STI_ROOT:[LSL.TEMP]
This is the working directory for the menu system. Temporary
files are created here, and then deleted again. LSLIMI_MENU
defines the logical name LSL$IF to point to this directory. If
LSL$IF previously pointed elsewhere, it will reset it when it
exits.

o STI_ROOT:[LSL.EXE]
This directory contains the images (.EXE files) of the translation
programs used by the menu system. LSLIMI_LSLINI.COM defines the
logical name LSL$EXE to point to this directory.

Using the menus

In general, the menus are self-explanatory. However, it is worth
explaining some things about their use.

Special characters

There are three special characters when using the menu system. These
are <CTRL/Z>, <CTRL/Y> and "?".

o <CTRL/Z> is used to move back a level. It is only meaningful in
response to a prompt. If used in response to the

          Choose the option you want:

prompt, it will cause a return to the current menu's parent menu,
or (in the case of the TOP-LEVEL menu) exit the menu system. At
the bottom of each menu display there is always a line specifying
the action of <CTRL/Z> when used in this manner.

If used in response to other prompts, <CTRL/Z> is treated as a
reply of <CR>.

o <CTRL/C> is used to interrupt the current operation. If used
within a menu, it will cause a return to the TOP-LEVEL menu. If
used during input or output, it will terminate the transfer. A
line is always displayed specifying the action of <CTRL/C>.

o ? may be used in response to the

          Choose the option you want:

prompt to cause the current menu to be redisplayed. It has no
other use.

Choosing an option

Each menu provides a list of options that may be selected. The user
can select an option by typing the option name in response to the
"Choose the option you want" prompt. For instance in the NTF main
menu, the options are:

        IN   - read NTF data into Informap
        OUT   - write Informap data to NTF

so the user could respond with either IN or OUT. The menu does not
distinguish the case of the answer, so upper and lower cases may be
freely mixed. Also, options may always be abbreviated to their first
two characters without fear of ambiguity.

Choosing a value for an option

When deciding what to input or output, the user is presented with a
display of the options relevant to the operation. For each option,
where applicable, the current and default values are shown. For
instance, figure 4 shows the initial OSTF input/output menu for
OUTPUT. The value associated with an option can be changed in two
ways:

1. The user can select an option by name:

                Choose the option you want: **DENSITY<CR>**
                Density to write output tapes at:

    The user can then either reply with <CR> to accept the default
    value, or can specify the value required.

2. Alternatively, the user can specify the new value for an option
    immediately:

                Choose the option you want: **DENSITY 800<CR>**

In either case, if the value specified is acceptable, the menu will be
drawn again with the appropriate value inserted. If the value is not
acceptable, the user will be prompted for a correct value, as in case
(1).

It should be noted that all values (with the exception of the Informap
drawings selected for output) are global to the menu system - that is,
once they have been selected, they are selected for all menus in which
they are applicable. For instance, if the WHAT option is set to file
input or output, then it will be so set in all of the input/output
menus.

Selecting OSTF sheets for input

When inputting data from OSTF, it is possible to select which sheets from the input dataset are required.

If the OSTF data possesses a sheet index at its start, this may be inspected with the OSTF input menu SHOW option. The SELECT option may then be used to specify a list of the sheets required, by their number in the dataset. This selection list is in the normal DEC VMS format. For instance,

        1:3,5,7

selects the first, second, third, fifth and seventh sheets from the tape or file.

Specifying drawings to be output

When outputting data from Informap, the drawings to be output must be specified. This is done using the DRAWING option in the appropriate menu. More than one drawing may be selected:

1. The user can be prompted for the drawings required - the list is ended with a reply of <CR>:

            Choose the option you want: **DRAWING<CR>**
            First drawing to output: **SV1234NE<CR>**
            Drawing 1 is SV1234NE
             Next drawing to output: **SV1234SE<CR>**
            Drawing 2 is SV1234SE
             Next drawing to output: **<CR>**

2. Alternatively, drawings may be added to the list one at a time:

            Choose the option you want: **DRAWING SV1234NW<CR>**
            Drawing 3 is SV1234NW

3. The two methods may be intermingled - drawings will be added to the list until the menu is exited with <CTRL/Z> or <CTRL/C>

The number of drawings currently selected is displayed in the menu display. To see the names of the drawings selected, use the SHOW option.

The "Press <RETURN> to continue" prompt

The highlighted prompt

        Press <RETURN> to continue:

is used for two purposes:

1. To ensure that the user has a chance to see the contents of the
    screen, before it is replaced by a menu. The three common example
    are when the SHOW option is used (to allow the user to see the
    result), after an input or output operation has completed (for the
    same reason), or after an error has occurred (to allow the user to
    see the error messages).

2. To allow the user to complete some operation before allowing the
    menu system to continue.   The main example of this is when the
    user is requested to mount a magnetic tape - the process pauses to
    allow this to be done.

Locking of the temporary directory

Since all input and output translations use the temporary directory
STI_ROOT:[LSL.TEMP] as workspace, only one LSLIMI menu may perform
translation at any one time. To enforce this restriction, the menu
locks the directory before translation starts, and only unlocks it
when it has deleted its working files from there.

The locking is accomplished by creating a text file called
DIRECTORY_IS_IN_USE.ALREADY in the temporary directory. If such a
file exists, the menu will not proceed, but instead prints out the
contents of the file - this states who is using the directory and for
what purpose - and returns to the input/output menu.

Technical matters

This section is intended for people who may have to amend or maintain
the LSLIMI system. The two things that might require altering are the
default values used by the system (for the input/output menus) and
whether an initialisation file is read. If any changes are made, they
should be recorded in the Modifications section at the start of the
file.   This will allow them to be reproduced in new releases of the
menu command file.

Default values

The default values used for the input/output menus are all defined as
local symbols at the start of LSLIMI_MENU.COM, in the section flagged
        $!
???
                $! INITIALISATION OF DEFAULTS

Each symbol is of the form IMAP$d_xxx where 'xxx' describes the
purpose of the symbol.   It is expected that each site may need to
change some of the default values to match their own environment - in
particular, the following values:
 o IMAP$d_drive - the name of the default tape drive
 o IMAP$d_schema - the name of the default Informap schema
 o IMAP$i_params - the name of the translation parameter files. Note
    that this is an *initial* value, not a default - the default
    parameter file name is always the same as the schema name.   This
    value allows that assumption to be changed.

     o IMAP$d_ntf_donor - the name of the site, to be used as the {DONOR} for NTF output.

Menu initialisation file

If the logical name LSL$IMENU_INITIALISE is defined, then LSLIMI assumes that it points to a command file which will pre-define some of the option values used in the input/output menus. This is mainly useful for debugging purposes, as normally the default values will be set correctly for menu use. Documentation for the use of the initialisation file is to be found within the CHECK_INIFILE subroutine in LSLIMI_MENU.COM, and an example (LSLIMI_MENU_INI.COM) is supplied with the LSLIMI module.

                 Laser-Scan Informap/NTF/OSTF translation menu
                       (version 0.9, 24 October 1988)

               Defining the LSL INFORMAP translation environment

                                  Figure 1
                          The introductory banner

An introductory banner of this form is displayed when LSLIMI_MENU is invoked,
and is replaced by the TOP-LEVEL menu display.

*TOP-LEVEL_menu*_____

```
     OSTF  -  OSTF data transfer
     NTF   -  NTF data transfer
     MENU  -  set menu options
```

<CTRL/C> will redisplay the TOP-LEVEL menu
<CTRL/Z> will exit the menu system

Choose the option you want:

Figure 2
The TOP-LEVEL menu

This is the first menu presented by the system, and allows the user to choose
what format of data is to be manipulated. The MENU option allows the user to
set the screen width, etc.

*OSTF_main_menu*_____

         IN   - read OSTF data into Informap
         OUT - write Informap data to OSTF

<CTRL/C> will return you to the TOP-LEVEL menu
<CTRL/Z> will return you to the TOP-LEVEL menu

Choose the option you want:

Figure 3
The OSTF main menu

This menu allows the user to choose whether to read or write OSTF data.

*OSTF_input/output_-_OUTPUT_menu*_____

        WHAT   - Tape drive or file   Tape drive   (default Tape drive)
        NAME   - Use tape drive   MTA0:   (default MTA0:)
        DENSITY - Write at density   1600   (default 1600)

        VERSION - OSTF version   3   (default 3)
        CID   - OS contractor ID   0   (default 0)
        CHAR   - Character set   ASCII   (default ASCII)
        BLOCK   - Block size   1800   (default 1800)

        DRAWING - Specify drawings   none selected
        SCHEMA - Schema name   BG   (default BG)
        PARAMS - Translation parameters BASEMAP   (default BG)

        OUTPUT - output the drawings to tape
        SHOW   - the drawings to be output

<CTRL/C> will return you to the TOP-LEVEL menu
<CTRL/Z> will return you to the OSTF main menu

Choose the option you want:

Figure 4
OSTF input/output menu for output to a magnetic tape

This is the OSTF output menu as it is initially entered. It assumes that output
is to be to magnetic tape. Note that no drawings have yet been specified.

*OSTF_input/output_-_OUTPUT_menu*_____

```
        WHAT    - Tape drive or file      Tape drive    (default Tape drive)
        NAME    - Use tape drive          MTA0:         (default MTA0:)
        DENSITY - Write at density        1600          (default 1600)

        VERSION - OSTF version            3             (default 3)
        CID     - OS contractor ID        2             (default 0)
        CHAR    - Character set           ASCII         (default ASCII)
        BLOCK   - Block size              1800          (default 1800)

        DRAWING - Specify drawings        1 selected
        SCHEMA  - Schema name             BG            (default BG)
        PARAMS  - Translation parameters  BASEMAP       (default BG)

        OUTPUT  - output the drawings to tape
        SHOW    - the drawings to be output
```

<CTRL/C> will return you to the TOP-LEVEL menu
<CTRL/Z> will return you to the OSTF main menu

Choose the option you want:

Figure 5
The OSTF output menu after one drawing has been specified

The user has specified the first drawing to be output to OSTF.   They can now
either select more drawings, SHOW the current drawing, modify the other values
shown, or OUTPUT the data.

*Drawings_selected_for_output*_____

<CTRL/C> will return you to the OSTF input/output - OUTPUT menu

OSCODES

Press <RETURN> to continue:

Figure 6
The result of the SHOW option when outputting

Selecting the SHOW option in an output menu will show the drawings currently
selected for output. In this case, there is only one.

*OSTF_output*_____

<CTRL/C> will terminate the output operation

%DCL-I-ALLOC, _MTA0: allocated
Insert the magnetic tape in MTA0:
Press <RETURN> to continue: **<CR>**
%MOUNT-I-MOUNTED, mounted on _MTA0:

Writing data from Informap to the intermediate directory

Schema   : BG
Parameter file   : STIROOT:[LSL.LOOKUP]BASEMAP.IMAP2I_PAR
Informap drawing   : OSCODES
IFF output file   : LSL$IF:OSCODES.IFF
Offsets   : 409483.89, 425480.59

 ELAPSED: 0 00:00:45.52 CPU: 0:00:19.25 BUFIO: 368 DIRIO: 332 FAULTS: 251

Writing OSTF data to MTA0:

- OSTF output to magtape MTA0:
- writing in ASCII, 1800 characters per block, at 1600 bpi
- output is OSTF version 3 (OSTF)

Processing file: LSL$IF:OSCODES.IFF;0

50 blocks output to magnetic tape MTA0:

 ELAPSED: 0 00:00:24.21 CPU: 0:00:11.12 BUFIO: 24 DIRIO: 200 FAULTS: 106
End of transfer

Press <RETURN> to continue:

Figure 7
Outputting OSTF data to magnetic tape

This is an example of the information output when OSTF data is output to
magnetic tape.   Note the way the user has to inform the menu system that the
magnetic tape is ready for mounting.

*OSTF_input/output_-_INPUT_menu*_____

```
        WHAT    - Tape drive or file      Tape drive   (default Tape drive)
        NAME    - Use tape drive          MTA0:        (default MTA0:)

        CHAR    - Character set           ASCII        (default ASCII)
        BLOCK   - Block size              1800         (default 1800)
        TEXT    - Text sizes are          mm/10        (default mm/10)

        SELECT  - Select sheets           All sheets   (default All sheets)
        SCHEMA  - Schema name             BG           (default BG)
        PARAMS  - Translation parameters  BASEMAP      (default BG)

        INPUT   - read the data from the tape
        SHOW    - the OSTF index from the input
```

<CTRL/C> will return you to the TOP-LEVEL menu
<CTRL/Z> will return you to the OSTF main menu

Choose the option you want:

Figure 8
OSTF input/output menu for input from magnetic tape

This is the initial state of the OSTF input menu - again, assuming that it will
read OSTF from magnetic tape.

*OSTF_index*_____

<CTRL/C> will return you to the OSTF input/output - INPUT menu

%DCL-I-ALLOC, MTA0: allocated
Insert the magnetic tape in MTA0:
Press <RETURN> to continue: **<CR>**
%MOUNT-I-MOUNTED, mounted on MTA0:
There is 1 sheet in MTA0:
Sheet   1 from   409484, 425481 to   410014, 426011
Press <RETURN> to continue: **<CR>**

Figure 9
The SHOW option for OSTF input

This shows the result of the SHOW option when OSTF is being read from magnetic
tape.   If the OSTF data did not contain a sheet index, a message to that effect
would have been produced.

*OSTF_input*_____

<CTRL/C> will terminate the input operation

%DCL-I-ALLOC, MTA0: allocated
Insert the magnetic tape in MTA0:
Press <RETURN> to continue: **<CR>**
%MOUNT-I-MOUNTED, mounted on MTA0:

Reading the OSTF data from MTA0:

Input file: MTA0:
ROtation output for all features except lines
Output IFF file to contain HIstory and type 2 Map Descriptor
Text heights read as tenths of a millimetre
Input is in ASCII
Assuming blocksize of 1800

Index of maps – there is   1 map listed
Map   1 from   409484, 425481 to   410014, 426011

Writing sheet   1 to IFF file LSL$IF:SE0925SW.IFF
 ELAPSED: 0 00:00:48.88 CPU: 0:00:26.39 BUFIO: 17 DIRIO: 205 FAULTS: 130
Writing data from the intermediate directory to Informap

Schema   : BG
Parameter file   : STIROOT:[LSL.LOOKUP]BASEMAP.I2IMAPPAR
IFF input file   : STIROOT:[LSL.TEMP]SE0925SW.IFF;1
Informap drawing : SE0925SW
Offsets   : 409484.00, 425481.00

 ELAPSED: 0 00:00:46.29 CPU: 0:00:18.81 BUFIO: 107 DIRIO: 322 FAULTS: 297

End of transfer

Press <RETURN> to continue: **<CR>**

                              Figure 10
                 Reading from OSTF data on magnetic tape

This is an example of the output produced when reading OSTF data from magnetic
tape into Informap.

*NTF_input/output_-_OUTPUT_menu*_____

```
        WHAT     - Tape drive or file       Tape drive   (default Tape drive)
        NAME     - Use tape drive           MTA0:        (default MTA0:)
        DENSITY  - Write at density         1600         (default 1600)

        RECIP    - Recipient of data        none defined
        DONOR    - Sender of data           "British Gas          "
        LEVEL    - NTF level                1            (default 1)
        SERIAL   - Volume serial number     0            (default 0)
        ETC      - Other output details

        DRAWING  - Specify drawings         none selected
        SCHEMA   - Schema name              BG           (default BG)
        PARAMS   - Translation parameters   BASEMAP      (default BG)

        OUTPUT   - output the drawings to tape
        SHOW     - the drawings to be output
```

<CTRL/C> will return you to the TOP-LEVEL menu
<CTRL/Z> will return you to the NTF main menu

Choose the option you want:

Figure 11
NTF input/output menu for OUTPUT to magnetic tape

This is the NTF output menu as it is initially entered. Note that the user must
specify the RECIPIENT name, as well as the Informap drawings to be output.

*NTF_input/output_-_OUTPUT menu*_____

```
        WHAT     - Tape drive or file        Tape drive   (default Tape drive)
        NAME     - Use tape drive            MTA0:        (default MTA0:)
        DENSITY  - Write at density          1600         (default 1600)

        RECIP    - Recipient of data         "TJ Ibbs           "
        DONOR    - Sender of data            "British Gas        "
        LEVEL    - NTF level                 1            (default 1)
        SERIAL   - Volume serial number      0            (default 0)
        ETC      - Other output details

        DRAWING  - Specify drawings          1 selected
        SCHEMA   - Schema name               BG           (default BG)
        PARAMS   - Translation parameters    BASEMAP      (default BG)

        OUTPUT   - output the drawings to tape
        SHOW     - the drawings to be output
```

<CTRL/C> will return you to the TOP-LEVEL menu
<CTRL/Z> will return you to the NTF main menu

Choose the option you want:

Figure 12
After the RECIPIENT has been specified

This is the NTF output menu after the RECIPIENT name has been specified, and one
drawing has been selected for output.

*NTF_input/output_-_INPUT_menu*_____

          WHAT   - Tape drive or file   Tape drive   (default Tape drive)
          NAME   - Use tape drive   MTA0:   (default MTA0:)

          SCHEMA   - Schema name   BG   (default BG)
          PARAMS   - Translation parameters BASEMAP   (default BG)

          INPUT   - read the data from the tape

<CTRL/C> will return you to the TOP-LEVEL menu
<CTRL/Z> will return you to the NTF main menu

Choose the option you want: **WHAT<CR>**
Is input from file? [NO] **YES<CR>**

Figure 13
The NTF input/output menu for input

The user is selecting to read from a file, rather than from magnetic tape.

*NTF_input/output_-_INPUT_menu*_____

          WHAT   - Tape drive or file   File   (default Tape drive)
          NAME   - Use file   INFORMAP   (default INFORMAP)

          SCHEMA - Schema name   BG   (default BG)
          PARAMS - Translation parameters BASEMAP   (default BG)

          INPUT   - read the data from the file

<CTRL/C> will return you to the TOP-LEVEL menu
<CTRL/Z> will return you to the NTF main menu

Choose the option you want:

Figure 14
The NTF input/output menu for input from a file

This is the menu as it stands after the user has selected input from a text
file, rather than from magnetic tape.

*OPTIONS_menu*_____

```
        WIDTH   - change screen width
        MENUS   - display menus
        NOMENUS - don't display menus
        DEFAULT - put all options back to the normal values
```

<CTRL/C> will return you to the TOP-LEVEL menu
<CTRL/Z> will return you to the TOP-LEVEL menu

Choose the option you want:

Figure 15
The MENU options menu

This menu can be used to change the width of the terminal screen in use, and to
select whether menus are to be displayed or not. The latter option is preferred
by some users - the banner heading for each menu, and any prompts, are
displayed, but not the actual menu itself. The user can always use the "?"
response to show the current menu.