

The DataLoad 'dld' File Format

Introduction

The DataLoad "dld" file format is a simple text file containing data, commands, formatting and all other DataLoad options. This enables the user to save their DataLoad work for future use or to share files with other users. Because the sharing of DataLoad files is an important feature, DataLoad and the dld file format are written to be backward compatible. That is, older versions of DataLoad can open files written by the most recent version, and vice versa.

File Structure

The DataLoad file structure was designed to be as simple as possible. The file is arranged in sections that group together related information. For the file to be valid a minimum number of these sections must be present and in the correct order. Although DataLoad is tolerant of additional space, carriage returns and some spurious data in the dld file, the section names must be present and in the correct order. Furthermore, the section and variable names are case sensitive.

Each section starts with the word "begin[section name]" and ends with "end[section name]". For example, the delays section is delimited as follows:

```
begindelays  
enddelays
```

The section delimiters are case sensitive and should be the only data on that line. For DataLoad to be able to open a dld file the file must have the following sections:

delays	Specifies all DataLoad delay data.
header	Contains the column headings.
other	Holds any other information which does not have a dedicated section.
data	Tab delimited data to be loaded into the DataLoad grid.

Therefore, the simplest DataLoad file that is valid contains only the following data:

```
begindelays  
enddelays  
beginheader  
endheader  
beginother  
endother  
begindata  
enddata
```

While such a file is valid obviously no DataLoad options are set or data loaded and DataLoad will just contain a blank spreadsheet. Three further sections can be optionally used:

options	Contains settings for the options dialogue box.
format	Formatting information, such as column widths.
commands	Command aliases to allow dld file portability.

A dld file using these sections would contain the following delimiters after the data section:

```
beginoptions  
endoptions  
beginformat  
endformat  
begincommands
```

endcommands

At present an optional section can only be used if a prior section is also used. For instance, if commands is used then the options and format sections must also be used and in that order, while if format is required then options must precede it but commands may or may not be used after it. This restriction may be removed in a future version on DataLoad. Any data after 'endcommands' is always ignored.

Each of the dld file sections is now described in detail. Apart from the data, header and command sections, which contain tab delimited data, all sections contain records of the format

[Variable Name]=[data]

All records are optional, even in a required section, so it is valid to include no records or just the desired records in a section. Where records are included the Variable Name must be valid, bearing in mind that variable names are case sensitive. If DataLoad doesn't recognise a variable name then the record is ignored. Finally, the data included after the '=' must be of the correct format, that is it should be either number or character data as appropriate. Where number data is used it can be expressed in either integer or floating point notation and DataLoad will handle any required conversions.

Delay Data (delays section)

DataLoad delays are either built-in or command delays. The built-in delays cover all delays that aren't command delays and command delays exist for every DataLoad command. Prior to DataLoad V4.1 commands were built-in and couldn't be edited. Therefore the number of command delays was also constant. In V4.1 commands could be edited, added and deleted and the commands delays are therefore also variable. If one, more or all delays are not specified the delay will be set at its default in DataLoad. The following table lists all the delay variable names in their correct case, their meanings and the default values.

Delay Variable Name	Description	Default Value
DataDelay	Seconds to wait after data is sent by DataLoad.	0
CellDelay	Seconds to wait after any cell is processed.	0.2
FormDelay	Seconds to wait after a window is activated.	0.25
KeyHold	Milliseconds to hold a key down.	50
SystemHold	Milliseconds to hold a system key down. (Alt, Ctrl, Shift)	50
MenuCall	Milliseconds to wait when a menu is opened before a selection is made from the menu.	250
HourGlass	Milliseconds to sleep for when the target application's cursor is an hourglass.	1000
[Command Name]	Delay in seconds to wait after the command is executed.	0

Title Row Data (header section)

This section holds the column titles for all columns where a title is set. The titles are held in a single line of tab delimited data. The first piece of data is the title for the first column and each succeeding data item is interpreted as the next column's title. Therefore, even though a column may have no title, if a later column requires a title then the blank column(s) must be included.

Miscellaneous Data (other section)

This section holds all variables that don't have a dedicated section available. The following table lists the records that can be included in this section.

Variable Name	Description
Window	Current value for the Window Name list.
Description	DataLoad sheet description.
Command Group	Current value for the Command Group list.

DataLoad Options (options section)

This section holds the values for all options that can be set in the Options dialog box. The colour records hold number data which corresponds to Windows' colours, while the remaining records all hold boolean values ("true" or "false"). The following table lists each variable, its use and any default values.

Variable Name	Description	Default Value
HourGlass	Controls whether or not DataLoad waits while the target application's cursor is an hourglass.	false
AutoInsert	Turn on or off the automatic insert of commands.	true
ProgressBar	Controls whether or not the progress bar is displayed during a load.	true
TitleSize	Controls whether or not columns widths are automatically re-sized to fit the title.	false
DataColour	Colour of the data cells.	None (white)
CommandColour	Colour of the command cells.	None (white)
KeystrokeColour	Colour of the keystroke cells.	None (white)

Grid Formatting (format section)

This section stores all information about the formatting of the DataLoad grid. At present this is restricted to the column widths and column width data is held for all columns that are not at their default width. The records are of the form:

```
ColumnWidth[column number]=[column width]
```

The variable name is "ColumnWidth" suffixed with the number of the column whose width it holds. For example, the following sets the width of column 6 to 80.

```
ColumnWidth6=80
```

Column width definitions can exist for none, some or all columns in a grid.

DataLoad Commands (commands section)

Starting in DataLoad V4.1 DataLoad commands can added, edited and deleted. The default commands are stored in a file called "commands.dat", however to ensure portability of dld files the commands are also stored in this file. There are two main reasons for this:

1. Commands may be created or edited in a particular load but not saved to the "commands.dat" file. In that case the commands would be lost unless they were saved locally.
2. By saving commands in the dld file these files can be shared with other users without having to also swap and maintain multiple commands.dat files.

The commands.dat file is only used to populate commands where:

1. A new load is created.
2. A DataLoad file doesn't contain a commands section.
3. The commands section exists but is completely blank.

The commands section contains rows of tab delimited data. The first line contains the headings for the command columns, as shown in the following example:

```
Command      NCA    10SC   Other
```

Succeeding lines contain the command definitions. The first column is the command name while further columns contain the appropriate command definitions, as below:

```
TAB \{TAB} \{TAB} \{TAB}
```

The commands form will accommodate as many columns as are defined in the longest row of data in the commands section. However, because it is the first row of column titles which defines the DataLoad command groups, there is no benefit in rows having columns beyond the last title column because that data won't be in a command group.

Example File

The dld file format is provided primarily for reference information, however this could be used to generate a dld file containing only the bare minimum necessary information. A feeder system may produce a tab delimited data file containing data to load into Oracle forms. While DataLoad could open this file further work would be required to enter the window name and specify the correct delays, for example. An alternative would be to generate a dld file containing the required information.

Here is the text of a dld file that loads data into the Printers form:

```
begindelays
DataDelay=0.25
TAB=0.1
*NR=0.25
enddelays
beginheader
Printer      TAB      Type  TAB      Description *NR
endheader
beginother
Window=Printers
CommandGroup=NCA
endother
begindata
Findev      TAB      HPLJ3-A4      TAB      Development.      *NR
Test  TAB      HPLJ3-A4      TAB      Development.      *NR
AP1  TAB      HPLJ3-A4      TAB      Development.      *NR
AP2  TAB      HPLJ3-A4      TAB      Development.      *NR
enddata
beginoptions
AutoInsert=false
DataColour=65535
CommandColour=4259584
KeystrokeColour=16776960
endoptions
beginformat
endformat
begincommands
Command      NCA      10SC  Other
TAB \{TAB} \{TAB} \{TAB}
*NR \ %G{DOWN 3}{ENTER} \ +{DOWN}
endcommands
```

In addition to the tab delimited data it also defines the following:

1. Commands used in the load
2. Delays for those commands and a data delay
3. The title row
4. Window Name
5. Command group
6. Auto insert is turned off so that the dld file can't be accidentally changed by clicking into a command column.

7. Automatic colours are defined.

The colours and title row are obviously superfluous but they do aid the 'readability' of a load. Finally, although the only commands present are those actually used the only reason for doing this is to aid readability here.