

# Functional and Visual Differences between Ffenics v1.1 and DataEase

This document is intended for those wishing to migrate DataEase applications to Ffenics, and for those users it should be used in conjunction with the Ffenics migration tool guide. For those users it also includes some notes on relevant differences between earlier versions of DataEase and Ffenics.

It may also be used to compare the products by those evaluating which product to use.

Ffenics is a simpler product than DataEase, and is aimed primarily at users without specialised computing skills.

The User Interface is different in almost every respect. Menu options, dialogs, graphics, icons, status bar, help system, installation and so on are all different.

There are many terminological differences between Ffenics (Ff) and DataEase (DE), intended to promote easier understanding by the non-technical.

Ff will run only on Windows 2000 and later. It is fully compatible with XP Pro and all versions of Vista, but it should only be used 'single user' on XP Home. A minimum 800x600 screen resolution is recommended. With Win 2000 some slight mis-display may be noticed especially in conjunction with enhanced graphics G-cards and/or unusual screen resolutions, but the product remains fully functional.

Ffenics applications are not in any way interoperable with DataEase applications, or vice versa. (A link may be made via OLE DB, if required). Nor are the file formats compatible, although in some cases they are very similar.

## DataEase features not supported by Ffenics

- 1) \*DOS Actions (all those starting DOS something)
- 2) \*DOS Reports (all the features concerning opening, listing and processing the DBR type reports into DFW reports)
- 3) Migration of DFD 4.53 applications to Windows. (Removed from later versions of DFW anyway, due to adverse customer reaction)
- 4) Concept of 'Tables' separate from 'Forms'.
- 5) Data Entry forms (you can still use data-entry fields in DQL, but now they must be populated from Interactive Headers).
- 6) 'New type' (De7) import/export pre-definition
- 7) 'Form Using'.

- 8) Catalogue Help
- 9) 'New Style' system forms and 'Grid Control' features.
- 10) Relationships Diagram
- 11) \*OLE object
- 12) \*Graph Objects (either sort)
- 13) Export from Print Dialog
- 14) OLE DB Provider.
- 15) Keypads
- 16) Remove relationships dialog – always now opens form.
- 17) Form Only Virtuals
- 18) Application Variables
- 19) Compound / Multicol Indices
- 20) 'Ownership' and 'transferable' document concepts
- 21) Separate Online manuals and 'how to's
- 22) Menu Documents (these were removed in DE7 also, but are used widely in all DE versions up to and including 6.52)
- 23) \*The following Actions (and their equivalent Toolbar and pull-down menu items):
  - OLELinks
  - HelpMenu
  - HelpToolbar
  - HelpHowTo
  - HelpDQL
  - AppMigrate
  - HelpOnline
- 24) \* The following DQL commands:
  - Create Table As
  - Create Index
  - Delete Index
  - Application StatusAll the DFD5 'high level' commands which are:
  - View or Modify a Form
  - Delete a Form
  - QBE Menu
  - DQL Menu
  - Database Directory File List
  - Check Database Disk
  - Format New Disk
  - Operating System Backup
  - Operating System Restore
  - Import Menu
  - Transfer Data
- 25) The following DQL commands are parsed by the PSL script checker so need not be removed but do nothing:
  - Error Messages On
  - Error Messages Off
  - Connect
  - Disconnect

Tran On  
Tran Off

26) The following DQL commands work but are deprecated:  
db status - replaced by app info (with extra parameters)  
call menu – replaced by run document  
run procedure – replaced by run document  
record entry – replaced by run document

27) The following DQL commands work but are 'undocumented features'. Ffenics equivalents will be added then they also may be 'deprecated'  
create table like  
delete table.

\* = these items will need manual removal before migration. Other items will be automatically converted to the Ff equivalent (if any).

### **Specific New Features in Ffenics**

- 1) 15 significant digits
- 2) Radiused corners on button and box.
- 3) New current variables - User Type, Master Document, Session Id, computeruser etc.
- 4) 'Aspects'
- 5) Design Time locks
- 6) Aspect specifier in relationships
- 7) Aspect as target of 'Form Open Related'
- 8) Relationship security on navigation
- 9) .noitem statistical operator – used to not print item when DQL assumes its required (e.g. when doing a sort).
- 10) Option to not delete relationships when deleting form
- 11) New fields on relationships and user forms
- 12) Assorted new preference settings (and some removed)
- 13) Actions and functions separated in script editors and expression builders
- 14) Select color and width of cursor highlight
- 15) 'Layout Only Virtuals'
- 16) 'Interactive Headers'
- 17) Active Relational or Direct (ARD) Lookup (Outside of MultiView)
- 18) Pen and Voice support
- 19) Designer Convert facility to output to PDF, HTML, RTF and Excel
- 20) 'Report Variables'
- 21) New 'Long Text' fields (different than Memos, which are still there)
- 22) 'What's This' and new help navigation and display features.
- 23) Modal handling of windows in order to allow applications to be written as closed sequences of tasks or activities driven by user type.
- 24) 'Chain Documents'

- 25) User area on status bar for user help 'instant' display, messages from scripts etc.
- 26) Tooltips on status bar allow longer messages to be fully displayed.

### **Features radically changed.**

- 1) Locking. Heavily rewritten yet again to give greatly simplified network installation/maintenance.
- 2) Number type handling and comparisons made, as far as possible, type independent.
- 3) Catalog display
- 4) Tab Control (split into two Objects)
- 5) MultiBox (Also effectively split in two, DE type lookup choice and Access type ComboBox)
- 6) Import/Export definitions
- 7) Layout (on Procedure recompile) rewritten to allow for the new object types and to preserve the features of the existing layout in most circumstances.

### **Notes on additional changes for Migrators**

#### **Rounding :**

Contrary to popular opinion, there is no 'right' way to do rounding of decimal places. The most common, symmetric arithmetic rounding as taught in schools, is not necessarily the same approach used by accountants (who, in the US, use 'banker's rounding'), or statisticians, who use a number of different methods. Symmetric arithmetic rounding is the approach of truncating any number to one digit more than that required, and then rounding up if that digit is 5 or above, down if it is below 5.

DFD, DFW and Ffenics all use different rounding approaches. DFD and Ffenics use symmetric arithmetic rounding, but Ffenics uses specific algorithms to overcome some of the consequences of floating point arithmetic. It also applies these mechanisms specifically when data is output to screen or report, so a complex calculation can have its accuracy controlled by the app designer. It is unlikely that in simple cases differences will be observed between DFD and Ff rounding, but there may be differences in more complex calculations.

DFW uses 'digital rounding', i.e. it starts with the least significant digit and rounds up or down, then moves to the next least significant digit until the number is reduced to the required number of places. This can have noticeably different results to DFD and FF – example:

$$1.550140 * 35 = 54.2549$$

Result required to 2 decimal places.

Ff – truncate to 54.254, 4 is less than 5 , round down = 54.25

DFW - 9 is greater than 5, round up, = 54.255, 5 is equal to 5, round up = 54.26

So in a migrated application (especially from DFW) you may need to review the results of calculations to make sure they still meet customer requirements.

### **Numeric Precision:**

Ffenics is accurate to 15 digits. DFW and DFD have usually been billed as accurate to 14 digits. This is because cumulative errors in floating point arithmetic (and all arithmetic in both products is done in floating point) can result in the least significant digit becoming inaccurate. . We have implemented innovative algorithms in Ffenics to minimise these errors, and consequentially we permit an extra digit in all numeric fields.

Additionally, as mentioned above we also provide that any displayed value will be adjusted to its nearest real world value and that value will be used in further calculation. So the results of calculations should always reflect exactly what is visible on screen – this is not necessarily the case if the floating point value is used unadjusted in a chain of calculations. Again, this may result in slightly different calculated results between (in particular) DFW and Ff – mathematically, either approach is defensible, but we believe that the approach used in Ffenics is more readily understandable to a typical user.

### **Backup and Restore:**

Backup and restore can only be used on a fully migrated Ffenics application – it can no longer be used to bring in applications from previous versions as was the case in DataEase.

### **Memo and LongText:**

Ffenics supports the DE7 type memo field, which is purely a memo field type – it can be edited on screen, searched and printed, but it cannot be modified in a query. However, there is a new field type in Ffenics, LongText, which attempts to provide the best of the DFD long:text fields and the DFW5/6 type memo field, in particular in that it allows the field data to be processed in 256 character 'chunks'.

### **Networking:**

Ffenics has a new multi-user implementation. No adjustments to the server or workstation registry are normally required, and all that is needed is to set the copy of Ffenics installed on the workstation to the same locking strategy as the application.

No special ini file settings or batch files are required to run multiple sessions or to share local databases, the setting of the locking strategy will be respected regardless of the location of the application or the number of users.

An application set for single user will be locked once a user has opened it

Additional 'current' fields have been added to help the management of multiple users – you can discover what workstation they are using, what their unique session ID is, etc. etc. This will be especially helpful in managing any intermediate work forms used in producing complex reports.

## **Menus:**

Ffenics (like De7) does not support menu documents. Menu documents in migrated apps will be converted to forms and flagged as 'old style DE menus'.

While we recommend using the Windows style pull down menus in preference to DOS-style hierarchical menus, if you wish to use that kind of menu note that Forms and Aspects in Ffenics should have at least one 'real' field on them – however this can be current computer name or user name or whatever. If creating this style of menu you may wish to identify them with some naming convention. If you are used to DFD note that this kind of 'menu' does not wait for a given option to complete – the user can use the 'window' option to go back to the menu and open other documents or take other actions.

Ffenics will migrate old-style Chain menus also, and supports Chain Documents as a special kind of Aspect. Chain Documents (and Control Procedures) **will** wait for an opened document to close before continuing with the next Action.