



Technologies of Ohio, Inc.
Home of filePro * Development Software

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Version 6.1 Release Notes

`<LINK text = "click here" uri = "http://fpotech.com">`

- Optional: `underline = "off"`
- Optional: `color = "#0000FF"`
- There is a problem with the concept of "destination" for in-document links e.g. `dest = "page4"`. This would require pre-initializing all required pages before processing the FPML. Therefore, that functionality is not included. Only **HTTP** links are known to work.

Can now use: @wlf<letter>*

- Example: `@wlfT*`
- This will apply to any dummy/associated field that begins with 'T'.
- Overrides any other `@wlf*`

ddefine

- Can now optionally track changes made to filePro file layouts. This includes the name of the file, who changed it, and what fields were changed. Requires a logging configuration file to be added under the `./fp/logs` directory named `'ddefine.cfg'`. Format of the config file is the same as the `servlog.cfg` file that comes shipped with filePro.
- Example:
`ddefine.cfg: ROLLING,DEBUG,ddefine.log,60000`
- **ddefine** will now create new screens the same as **dscreen** does instead of mono

xx = FORMERROR

- Syntax: **xx = FORMERROR()**
- Returns: **errno** from last **FORM** of **FORMM** command. e.g. 2 = file not found, 13 = permission error.

Menus

- Validate menu script before prompting for removal
- Menu maintenance (makemenu) now asks if you wish to remove an unused menu script if the menu item is not used

dmoedef

- Added new option 'C' to F8 Extended Functions for dmoedef to show a list of all print codes on an output format. Selecting an item from the list will jump the editor to it.
- PDF printing should now honor the page length set in dmoedef.

TRIM command to remove spaces

- Left trim: **aa = ltrim(field)**
- Right trim: **aa = rtrim(field)**
- Both left and right trim: **aa = trim(field)**

PFIXGT can now be set in dxmaint F8 options

- This is backwards compatible, so if PFIXGT is still set in config, then it is honored by clerk *if true*. If false, the index header is checked for the flag.

ODBC mirroring

- Added additional checks and field verification for ODBC mirroring. This now attempts to handle invalid data in fields.

Added prelim support for MSSQL for ODBC mirroring

- `PFDODBC MSSQL = on` (default off)
- Setting the variable to on changed the internal handling of the SQL connection.

fPTransfer

- Windows fPTransfer now will accept wildcards.
- Encrypted transfers server-peer.

A compress-filePro routine: FPPACK

- Function: Remove deleted records from a filePro file, and then (optionally) rebuild all automatic indexes.
- Syntax: `FPPACK [filename | -] [-H heading] [-E] [-R] [-X] [-EX] [-C] [-M name | -MD | -MQ msg | -MA] [-BG] [-BS]`
 - `-H "heading"` custom title to display in box
 - `-E` don't actually pack the records, just give statistics
 - `-R` rebuild the automatic indexes even if no records were deleted
 - `-EX` skip statistics
 - `-C` skip continue and finished prompts
 - `-X` skip rebuilding the auto indexes
 - `-M name` qualifier file name to use
 - `-MD` ask for qualifier with default prompt
 - `-MQ "msg"` ask for qualifier with "msg" as the prompt
 - `-MA` use all qualified files and main file

UNIX/XENIX only

 - `-BG` work in the background
 - `-BS` suppress "completed in background" message

Added various enhancements to PDF engine

- See on-line or ~/fp/docs PDF documentation.

Added optional error message suppression and basic password auditing to filePro

- **PFERRSUPPRESS = ON** (default off)
- **PFPAUDIT = ON** (default off)
- Password auditing also requires a `./fp/logs/pwaudit.cfg` file. Same structure as `servlog.cfg`.
- Any error that would be sent to mail will still be mailed on unix/linux based systems.
- Errors reported in the background will still be suppressed. Including the program name.
- Invalid password and license errors will still be reported. Password errors omit the filename.
- dcabe and rcabe are exempt from the error suppression.

READLINE

- READLINE using "-1" for length to force read to EOL

show=pkeep retains position if brw format changes

- In a browse lookup with "**show=pkeep**", the browse was enhanced to allow the position to be retained, even if the browse format has changed.

Flags

- **-fp *report** flag would not report an error if the prc to use did not exist
- New **-SE *report** flag to allow report to edit/save a selection set
- Added new flag **-DM** to [dr]clerk to disable the Index Mode prompt from @ENTSEL. Only works when not in update mode.
- Added flag **-RH** to report to disable the automatic record number reporting in the middle of the screen. This enables placing text on the center of the screen without it being overwritten when the display updates.

Unlocking n bytes of file LOCK () and UNLOCK ()

- A new function to lock or unlock nbyte bytes of the file specified by the handle
 - **x = lock(handle, how [, nbyte])**
 - **handle**: an open handle to a file
 - **how**:
 - U | 0 : unlock bytes
 - L | 1: lock bytes
 - N | 2: lock bytes non-blocking
 - **nbyte**: How many bytes in the file to lock, if omitted, lock the billionth byte in the file (file does not have to be that large)
 - **x = unlock(handle [, nbyte])**
 - **handle**: an open handle to a file
 - **nbyte**: How many bytes in the file to lock, if omitted, lock the billionth byte in the file (file does not have to be that large)
- Returns “1” on success and returns negated system error on error.

New arguments for OPENDIR

- **n=OPENDIR2(mask, fpname|path, format_len, ext_len, name_len)**
 - Format length
 - Extension length
 - Fullname length

cabe

- ***cabe** lookup wizard will now honor **PFQUAL** and show qualified indexes
- Lookup Wizard in **cabe** now allows long vars as key
- Added alias and arrays to F6-D-L display in ***cabe**
- CABEBACKUP setting to only save changed PRC
- Partial lookup flag added to ***cabe** lookup wizard. **-O** on an exact lookup now does partial key matching. This kills a lookup once the beginning of the key value no longer matches the lookup key value.
- CABE F6 list files from F8 L-Load

GI/Web

- New GIadmin that will count GUI (GI or Web) sessions, ease of system and user configuration files and additional security
- Remote Licensing for GIserver and fileProWeb. Hardware tie-in no longer required with internet access
- **x = @GUI.PAUSE ()**
 - Pauses automatic screen updating while in GI/Web.
- **x = @GUI.RESUME ()**
 - Resumes automatic screen updating while in GI/Web.

FPML

- Added new FPML commands to control the appearance of underlines

RINSRT and INSTR

- RINSRT, and INSTR now allows negative positions for working backwards

Added PDF syntax as an option for printer maintenance (pmaint)

- Windows only

Environment Variables

- Added **SHOWPROGRESS**
- Added **PFPPFULLPATH** as an enhancement to **PDFPOSTPRINT** and added an **PFNEWPOSTPRINT** alias to name to **PDFPOSTPRINT**.
- Added **PFPPFULLPATH** to augment the filename passed to the post print handler, default ON, this causes the filename passed to the postprint script to contain the full path to the file, not just the file name. Set to OFF to revert to old behavior. **PFPOSTPRINTnnn** will now work with normal file destinations. Same rules as the old global **PFPOSTPRINT** but also supports PDF files.
- **CABEBACKUP ON|OFF** (on by default)
- **CABEBACKUPMINS n** (minutes between backups)
- **CABEBACKUPCT n** (backup files per process)
- Added new variable to ignore "Too many edits" error message.
 - **PFIGNTMEDS**, default OFF

Colors

- Updated color with new routines and corrected the shell escape codes

Dreport and rreport

- *report now allows one to use .outs from a pathed directory library
 - Example:
 - `form "myfile/formname"`

Commands

- SCREEN command can switch fields in a POPUP UPDATE -, provided no screen name is passed to the SCREEN command.
- Added BUSYBOX for times when filePro is processing under the hood and is a way to let the user know filePro is doing something and not ready for use.
 - Examples:
 - `BUSYBOX`
 - `BUSYBOX "my message"`
 - `BUSYBOX ("10", "10")`
 - `BUSYBOX ("10", "10") "my message"`
- REVERT processing command
 - Command: `revert lookup_name`
 - Will only work before a lookup is written to disk, or closed. Otherwise, it will fail silently.

System Edits

- MEMO EDIT now accept maxsize to limit the number of characters that can be entered into a memo field.
 - `memo NNN edit (row,col,lines,width,startLine,startcol,maxSize)`

dxmaint

- Added option 7 to dxmaint to clear qualifier

Dclerk and rclerk

- Added @EXIT label to ***clerk** processing. This is executed whenever a record is exited or broken out of. Events that trigger this are 'X' while not in update mode, 'BRKY' while not in update mode, and 'exit' in processing. It is the opposite of @entsel, and is the last thing executed when leaving a record. Assignment of real fields is not allowed, this is similar to @once in that the processing that is executed is NOT sitting on a record, but rather record '0'.
- *clerk will now allow a full path to a form when using the **FORM** and **FORMM** command in processing.
- Added the ability to show record locks from *clerk. Can also be used to terminate sessions directly. New option !L added to *clerk. Using !L will activate the new locked records list. Enter on a selected entry will give additional options to the user, including the ability to Kill or Terminate a locked process without having to go to the command line. Note: This option is only available on Unix/Linux/BSD

Associated fields

- Added new conditions for searching used for associated fields only
- New compare condition for Associated Fields
 - Added new selection set relational operators:
 - **AEQ** - **Associated field, all equal**
 - **ANE** - **Associated field, all not equal**
 - **ACO** - **Associated field, all contain**
 - These require ALL components of an associated field to match the comparison being done, rather than just one of its component fields.

Added Search all fields in a record for a value.

- You can now use "all" in short selection "Field Number" fields. "All" can also be mixed with real, associated, or other field types in the secondary criteria, or vice versa.

User defined functions

- Forward declare functions to be used:
 - `(function|func) [file.]name([dim|var] var1, [dim|var] var2, ...)`
 - Examples:
 - `function fplib.showlock(var pid)`
 - `function fplib.log(file, line, what)`
 - `function somefunc(dim myarray)`
- Call a function:
 - `[x=] [file.]name(var1, var2, ...)`
- Return a value from a function:
 - `return(value)`
- Can pass fields: real, dummy, longvar
- Can pass arrays: Alias and system arrays are copied to a non-aliased array. Non-aliased arrays are passed by reference.
- Function names must be at least 3 characters in length.
- Functions cannot modify values outside of its scope.
- Functions do not call automatic processing.
- Functions cannot modify real fields.
- Functions cannot be called unless they are declared.
- Functions can pass values by reference (changes made to the value will carry back out of the function, only to arrays).
- Functions can optionally return a value.
- Parameter names must be at least 3 characters in length.
- Parameters will be passed to the function using the name they were defined with in the declaration statement.
- Environment Variables:
 - **PFUNCDBG= (ON|OFF)** , default OFF.
 - If ON the debugger will be allowed to continue into the function call. If OFF the debugger will skip over user defined functions. NOTE: Debug statements inside of functions will still be able to be activated. If debug is set inside of a function, it will continue even after the function is left.

- Function Example:
 - Processing table for fibonacci:

```

1 -----
  . If:                                     ' Declare for future use
    Then: function fibonacci(nval);
2 -----
  . If:                                     ' Get the parameter
    Then: declare extern nval;
3 -----
  . If: nval le "1"                         ' Return the result
    Then: return(nval);
4 -----
  . If:                                     ' Return the result
    Then: return(fibonacci(nval-"1")+fibonacci(nval-"2"));

```

- Usage:

```

1 -----
  . If:                                     ' Declare for future use
    Then: function fibonacci(nval);
2 -----
  . If:                                     ' Call the function
    Then: n = fibonacci("9");
3 -----
  . If:                                     ' Display the result
    Then: msgbox "{n;                               ' Prints "34"

```

EXTERN and GLOBAL arrays

- DIM GLOBAL name(size)**
- DIM EXTERN name**
- Only non-aliased arrays can be declared GLOBAL/EXTERN.
- Functions similar to GLOBAL/EXTERN longvars.

Extended and short selection

- Will now check edits when leaving the field, provided that the relationship code is not CO. If the code is CO, the field will be treated as NOEDIT instead of its defined type.

Spool

- Print spool initialization move beyond a large chunk of processing which should remedy most if not all problems with the spool timeout.

NEW XLSX Mark-up language for creating XLSX files

- (see ~\fp\docs\xlsx_docs.pdf or on our website)
- https://www.fpotech.com/fpotech/pdf/xlsx_doc.pdf

Rebuilding Indexes

- Rebuild All Indexes on a file. item '8' on the dialog. Note: this is in the "extended" dialog which shows when a filename is not specified from the command line. Indexes can be selected individually, or all (with F7). Press SAVE, and rebuild begins

Ability to EXPLODE or SPLIT import data

- Usage:
 - **sz=SPLIT(array, string, delimiter)**
 - array is the array that the data will be placed into
 - string is the data to split
 - delimiter is the sequence of characters to split on
 - NOTE: The array being used must have the size defined for its elements and cannot be an alias.

UID mapping

- Added UID mapping to filePro, ddir/dprodir option F5. This allows for UIDs (User IDs) to be aliased to specific usernames. In the event that a login account is removed from your system, this can be used to maintain the link between the removed login's UID and those stored in filePro, effectively allowing system variables such as @CB and @UB to be maintained.
- Windows only:
 - This also has the added benefit of allowing @CB and @UB to function on Windows by linking a "pseudo" UID to a given username. These UIDs are automatically generated but can also be manually added. When a user opens filePro and their username does not exist in the UID map file, a UID will be generated for that user. filePro will find the next available UID in the list, starting from 2000, and assign it to that username.

- On all platforms, UIDs stored in this program must be unique and in the range 0-65535. Usernames can be duplicated on Unix and Linux platforms, but must be unique on Windows.
- Usernames are case-sensitive on Unix and Linux platforms and are case-insensitive on Windows platforms.
- Environmental Variables:
 - **PFUIDMAP = /path**
 - Alternate filePro UID map file. (Use full path)
 - Note: Must be set in the environment.
 - **PFUSEUIDMAP = ON** (Default is ON)
 - Allows filePro to do UID mapping. Also expands the maximum username length returned by @CB, @UB, and @ID to 32.

Functions

- All functions that take a position default to the first character in a field if not specified.
 - All "is" functions return "1" for true and "0" for false.
 - **x=isalpha(fld [, pos])**
 - Is the character at the position given a letter?
 - **x=isdigit(fld [, pos])**
 - Is the character at the position given a number?
 - **x=isalnum(fld [, pos])**
 - Is the character at the position given a letter or number?
 - **x=isspace(fld [, pos])**
 - Is the character at the position given a whitespace character? ' ', '\t', '\n', '\r', '\v', '\f'
 - **x=islower(fld [, pos])**
 - Is the character at the position given lowercase?
 - **x=isupper(fld [, pos])**
 - Is the character at the position given uppercase?
 - **x=isxdigit(fld [, pos])**
 - Is the character at the position given a hexadecimal character? '0'-'9', 'A'-'F'
 - **x=iscntrl(fld [, pos])**
 - Is the character at the position given a control character? ASCII codes 0x00 (nul) - 0x1f (US), and 0x7f (del)
 - **x=isprint(fld [, pos])**
 - Is the character at the position given a printable character? ASCII codes greater than 0x1f (US) not including 0x7f (del)
 - **x=ispunct(fld [, pos])**

- Is the character at the position given a punctuation character?
- **x=isgraph(fld [, pos])**
 - Is the character at the position given a character with a graphical representation? The characters with graphical representation are all those characters than can be printed (as determined by isprint) except for space.
- **x=tolower(fld [, pos])**
 - Return the character at the position given as a lowercase character.
- **x=toupper(fld [, pos])**
 - Return the character at the position given as an uppercase character.
- **str=strtolower(fld)**
 - Return the entire string converted to lowercase.
- **str=strtoupper(fld)**
 - Return the entire string converted to uppercase.
- Added new **DECLARED** function to check if an array or longvar is defined, meaning it is either declared LOCAL or GLOBAL or is declared EXTERN but has a matching GLOBAL definition.
 - **x = DECLARED(var)**
 - Where var is either a longvar or an array.
 - Where x is the return value.
 - Returns 0 if the variable is not fully defined.
 - Returns 1 if the variable is fully defined.
- Error functions for imports
 - **aa = geterrno()**
 - Get the last system errno.

Arrays

- Added new array size function to get the size of an array. Can be used with GLOBAL, EXTERN, LOCAL, and SYSTEM arrays.
 - **x = ARRAYSIZE(array)**
 - Where **array** is the name of the array.
 - Where **x** is the returned size of the passed array.

Debug

- Increased ACTION length in debugger from 60 characters to full 128.
 - Should now be the same as *cabe.

Defining a lookup

- Corrected an issue where a duplicate field warning could display while defining a lookup. Warning is now suppressed until saving the processing table.

Lockfiles

- Method to clear ALL lockfiles
 - New option F9 in ddir/dprodir to kill all lockfiles.

REPLACE() enhancement

- Now accepts null characters

Updated license file format

- Corrected some security issues with licensing.
- Requires a new download of a license file starting with version 5.8.03.36
- Make sure to download a new license file when upgrading.
- Updated fplmserver and fplmservice will still authenticate previous versions of filePro. New versions can no longer use the old fplmserver/fplmservice.

FORM WITHPROC

- **FORM WITHPROC "formname"**
- **FORMM WITHPROC "formname"**
- Added additional command switch to FORM and FORMM commands to allow the associated processing table to run while in input processing.
- Note: You cannot call the WITHPROC variant from within another form UNLESS the calling form is a processing only form.

Addqual Program

- Addqual allows you to easily add qualifiers to your files either interactively or through the command line.
- This runs interactively:
 - `addqual [filename]`
- This runs automatically:
 - `addqual filename -q <qualname>`
- as does this:
 - `addqual filename -q <qualname> -x <qual-to-copy-from>`
- The automatic commands will display graphics on errors. You can keep graphics off with "-s" and errors will be printed on the command line if they occur.
- Example:
 - `addqual filename -q <qualname> -s`
- List of switches:
 - `-q` qualifier to create
 - `-x` qualifier to copy indexes from
 - `-s` silent, no graphics
 - `-h` --help syntax help