Release Notes
uM-FPU64 IDE Release 402

New Features

- added support for manually typing debug commands in the Serial I/O window. If the *Enable Manual Input* check box is selected, all keys typed when the Serial I/O window is selected are sent to the FPU debug monitor. This is mainly intended for diagnostic purposes.
- system target files are now installed with the IDE software
- system target files are loaded from the following folder:

  ~\Program Files\Micromega\uM-FPU64 IDE rxxx\Target Files

  (where *rxxx* is the IDE software revision number)
- user target files are now loaded from the following folder:

  \My Documents\Micromega\Target Files
- added procedure call for DEVIO using same symbols as #ASM

  e.g.

```
DEVIO(ASYNC, ENABLE, D0, RX+BAUD_4800)
DEVIO(LCD, HOME)
```

Changes

- if a *.fpu* file is edited, the file is saved as *.fp4* by default
- when *Find* or *Replace* menu item is selected, the focus moves to the *Find* field
- the IDE now displays TRACEREG register values as hex, long, and float
- added CS_LOW and CS_HIGH definitions to DEVIO,SPI
- added support to DIGIO for D0-D22 symbols to specify pins
- 64-bit constants are now used in 64-bit expressions
- *Tools>Add Target Folder…* menu item has been removed
- *Tools>Add Target File…* menu item has been removed
- *Tools>Remove Target File* menu item has been removed
- optimized the code generated for many common expressions
- the current selection is copied to Number Converter when the window is activated
- in #ASM, added name of label to undefined label error message
- added support for DWRITE and DREAD

Bug Fixes

- in #ASM, LWRITE0, LWRITE, LWRITEA, and #LONG where not accepting negative numbers
- in #ASM, fixed problem with the following multi-byte instructions inside functions

  e.g.

  ```
  MOP, SAVE_AR
  MOP, LOAD_RA
  MOP, LOAD_RB
  MOP, LOAD_RC
  MOP, LOAD_BA
  MOP, LOAD_CA
  MOP, SAVE_AR
  MOP, SAVE_AB
  MOP, SAVE_AC
  DEVIO, device, WRITE_NBYTE
  ```
- fixed problem with some multiple byte opcodes for BS2 and PICAXE

  e.g. DEVIO,FIFO1, READ_REG32

  EVENT,ENABLE+TIMER1, blinkOff
- using symbolic register names caused crash in code generator
- in #ASM, strings were not being handled properly for SEROUT,1 and SEROUT,5
- float variables were generating code for writeLong instead of writeFloat
- fixed handling of strings in code generators
- corrected definition of INC symbol for SETIND instruction
- fixed code generation for Basic Stamp and PICAXE