Overview **umFish** linkable object modules for **xBase++**
(www.ftComputing.de/xbase.htm)
(*by r.nooteboom2@chello.nl*)
for w9x and XP

  The package : *umFish_xBase.zip* is a big collection of ready to use xBase++ driver modules for controlling all the Fischer Technik Interfaces and the MultiFace-interface from Knobloch-GmbH. At the bottom of this document is a table with all available xBase++-wrappermodules for the different fischer technik-interfaces. The initialization and bookkeeping of the interface-configuration is always done by a function in the modules with the syntax: *Ft<x>Init(....)* This routine always also has an optional parameter: *lAskValues* if it's value is TRUE then a hybrid-console&GUI window(*XbpCrt()*-window) is opened and all interface parameters are asked via data-entry from the user , if *lAskValues* is not TRUE then no XbpCrt-window is created and the interface is initialized silently. Of course can the main application window created in the xbase-*Appsys()* routine be a full GUI-*XbpDialog()* window. The *Ft<x>Init()* routines return an interfacehandle(*iHandle*) or a portnumber(COM<n>,LPT<n>). Once this handle or portnumber is available the controlling functions can be called for example : *FtRMotorLeft(iHandle,nMotorNr,nSpeed)*. It is a good habit to always close the application and interface-bookkeeping with a call to : *Ft<x>CloseAll.* For compilation besides the xbase++ & xbToolsIII system (version 1.90 or higher) all drivers need the generic library consisting of *noot.obj(.prg)* and the header file: *noot.ch*(included in the package).   To control the universal MultiFace-LPT-interface from Knobloch GmbH I have used the LPT-IO kernel driver *inpout32.dll* for from *www.logix4u.net* this dll makes direct parallel-port IO possible from within W9x and WINNT operating systems.
  A sample application demo : *TrafficLight ,* complete with sources,screenshots and a photo is also contained in *umFish_xBase.zip*.
  Now follows an overview of all modules and files of this package(see next pages) :

module	uses dll	interfaces	ports	remark
ft30520.obj (compiled with v1.90b331)	**umFish30.dll** (umFish30.prg umFish30.ch)	30520	LPT1-3	uses polling, pollinterval adjustable
ft30402.obj (compiled with v1.90b331)	**umFish30.dll** (umFish30.prg umFish30.ch)	30402 RoboPro in II-mode	COM1-8	uses polling pollinterval adjustable
ftroboii.obj (compiled with v1.90b331)	**umFish40.dll** (*umFish41.zip!*) (umFish40.prg umFish40.ch)	30402 RoboPro RoboPro IO Ext. RF Data Link	COM1-4 USB	uses polling fixed pollinterval = 10mS
mface.obj (compiled with v1.90b331)	inpout32.dll (via io.prg)	multiface	LPTx	AD not supported
ftcom.obj (compiled with v1.90b331)	xbTools III (serial com library)	30402 RoboPro in II-mode	COMx(1-22)	
ftlpt.obj (compiled with v1.90b331)	inpout32.dll (via io.prg)	30520	LPTx	

(next pages : file overview)

file overview :

umFish30.ch	header file with umFish30 constants
umFish40.ch	header file with important umFish40 constants
umFish30.prg	functions for (un)loading umFish30.dll
umFish40.prg	functions for (un)loading umFish40.dll
ft30520.prg(with function summary at top of file)	**source code for ft30520.obj**
ft30402.prg(with function summary at top of file)	**source code for ft30402.obj**
ftroboii.prg(with function summary at top of file)	**source code for ftrobii.obj**
mface.prg(with function summary at top of file)	**source code for mface.obj**
ftcom.prg(with function summary at top of file)	**source code for ftcom.obj**
ftlpt.prg(with function summary at top of file)	**source code for ftlpt.obj**
ft.ch	important generic ft header file with all fischer techniek constants
appsys.prg	creates a generic XbpCrt()-window
dbesys.prg	an empty dbesys() :no dbf-creation
ftcomtst.prg	diagnostics program using ft30402.obj
ftlpttst.prg	diagnostics program using ft30520.obj
ftritest.prg	diagnostics program using ftroboii.obj
mfacetst.prg	diagnostics program using mface.obj
ftcomtst.ch	preprocessor header file for ftcomtst.exe
ftlpttst.ch	preprocessor header file for ftlpttst.exe
mfacetst.ch	preprocessor header file for mfacetst.exe
mface.ini	optional ini file for mface.prg
ft30402.ch	preprocessor header file for ft30402.prg
ft30520.ch	preprocessor header file for ft30520.prg
ftroboii.ch	preprocessor header file for ftroboii.prg
ftlpt.ch	preprocessor header file for ftlpt.prg

ftlpt.ini	optional ini file for ftlpt.prg
ftcomtst.xpj	project builder file for ftcomtst.exe
ftlpttst.xpj	project builder file for ftlpttst.exe
ftritest.xpj	project builder file for ftritest.exe
mfacetst.xpj	project builder file for mfacetst.exe
ftcomtst.arc	resource file for ftcomtst.exe
ftlpttst.arc	resource file for ftlpttst.exe
ftritest.arc	resource file for ftritest.exe
mfacetst.arc	resource file for mfacetst.exe
ft.ico	icon resource for exe's
mface.ico	icon resource for exe
inpout32.dll	LPT-IO kernel driver for w9x&xp
io.prg	wrapper for *inpout32.dll*-functions
noot.ch	generic necessary constants see noot.prg
noot.prg	generic function library , necessary
TrafficLight.*	all sources,pictures ,modules an example

(note: xbase++&xbTools III v.1.90(build 331) or greater&higher version needed to compile&link !)