

APP02

# The Netlabs EPM Distribution

Unleash the power of EPM on your system

# Overview

- What is E ? / Versions of EPM
- EPM architecture overview
- How to configure/recompile standard EPM
- The Netlabs EPM Distribution extensions
  - installation, dynamic configuration, extended directory structure
  - extended recompilation support, extended file type support
  - EPM window enhancements, NEPMD runtime API library
- Demo

What is E ?

# What is E ?

- E is a text mode editor coming from DOS
- All the following are *E* editors:
  - E for DOS
  - E for OS/2 (textmode version)
  - E for Windows (textmode version)
  - EPM for OS/2 V5.51 - part of OS/2 Warp 3
  - EPM for OS/2 V6.03 - part of OS/2 Warp 4 and eCS
  - even the »Tiny Editor« (TEDIT.EXE) on your boot disk !

# Versions of EPM

# Versions of EPM (I/III)

- EPM V5.51
  - coming as part of OS/2 Warp 3
  - several limits solved with V6.x
  - extensions for EPM V5.51 not compatible to EPM V6.x
- not supported by the Netlabs EPM distribution !

## Versions of EPM (II/III)

- EPM V6.03
  - coming as part of OS/2 Warp 4 or eComStation
  - new internal extension format
  - not supported by the Netlabs EPM distribution !

# Versions of EPM (III/III)

- EPM V6.03b (EPMBBS distribution)
  - available in the internet
  - needs to be installed manually ! ...
  - beware of old versions of the EPM executable and the E Toolkit runtime when installing !
  - includes E language macro sourcecode and the EPM macro compiler
  - this distribution is base for the Netlabs EPM distribution project (excluding E Toolkit runtime)



# EPM architecture overview

# EPM architecture overview (I/V)

- EPM consists of three major parts
  - the (E)PM frame program and the E Toolkit runtime
    - files: EPM.EXE, ETK603?.DLL and some more
    - this part can only be changed by IBM/the authors, as source is not available
  - the EPM executable extension modules
    - files: EPM.EX and other .EX files
    - many other files used by EPM extensions
    - this part can be changed, sources are available

## EPM architecture overview (II/V)

### The PM frame program

- frame program is quite small
- uses the E Toolkit runtime DLLs to open an EPM window
- Note: any application can use the E Toolkit runtime DLLs !

## EPM architecture overview (III/V)

### The E Toolkit runtime

- **The E Toolkit runtime DLLs**
  - are part of OS/2 and eComStation
  - implement all basic E(PM) commands
    - LOAD, SAVE, QUIT, LOCATE, REPLACE
  - implement hooks to allow external modules to add handlers for
    - new editor commands, mouse, keyboard and menu actions
  - implement load and execution of EPM extension modules
  - are not well documented

## EPM architecture overview (IV/V)

### The EPM extension modules

- All external EPM extension modules (\*.ex)
  - are searched via the PATH
  - are compiled binaries
    - sources are of the **E language**, being a REXX derivate
    - require the EPM macro compiler for compilation
    - are (theoretically) platform independant

## EPM architecture overview (V/V)

### The EPM extension modules

- Most important and required:
  - main extension module **EPM.EX**
    - defines menu, configuration constants, basic E routines
- Extensions can be made available to EPM by
  - compiling their sources directly into EPM.EX
    - beware of space limitations in string table !
  - linking a separately compiled module during runtime

# How to configure standard EPM

# Configure standard EPM (I/V)

- Configuration of EPM by
  - settings notebook
  - REXX profile (profile.erx)
  - E source code maintenance and recompile
- All three options
  - overlap concerning the settings that can be customized with it



# Configure standard EPM (II/V)

- The settings notebook of EPM
  - customizes certain settings via GUI
  - is the most user friendly configuration interface available
- cannot configure/activate/deactivate all components though

# Configure standard EPM (III/V)

- Configuration by REXX profile
  - can nearly customize all settings that are otherwise not be configurable via the settings notebook
  - requires already some little programming skills and EPM knowledge
  - does not require extra tools though (uses REXX of OS/2 or eComStation)
  - »REXX Profile Support« must be activated in the settings notebook !

# Configure standard EPM (IV/V)

- Configuration by E source code maintenance
  - configuration gets hardcoded part of EPM.EX
  - can customize all settings and set defaults for the settings notebook
  - requires more or less REXX programming skills
  - requires the E sourcecode of EPM.EX
  - requires the EPM macro compiler
  - requires rebuild and close/open of all EPM windows to activate changes

# Configure standard EPM (V/V)

- Main disadvantages of standard EPM configuration schemes (before NEPMD):
  - settings notebook cannot configure everything (not solved yet with NEPMD)
  - REXX profile support and E sourcecode maintenance require programming knowledge
  - E sourcecode maintenance required for parts of EPM due to hardcoded values !
  - no decent recompile support

# Recompile EPM

# Recompile EPM

- requires
  - E sourcecode of EPM.EX
  - the EPM macrocompiler (commandline tool)
- mostly required is
  - copy sample config file to mycnf.e
  - maintain hardcoded configuration constants
  - recompile and deliver resultant EPM.EX file

# Netlabs EPM Distribution extensions

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## An overview

# NEPMD extensions (I/VIII)

- Warpln installation package
  - no more manual installation !
  - easy-to-use installation program for a full-featured EPM !
- Dynamic configuration
  - loader executable loads extended environment for EPM process only
    - no CONFIG.SYS cluttered, no reboot required !
    - extended environment easily to maintain



## NEPMD extensions (II/VIII)

- Extended directory structure for source and configuration files
  - proper distinction between files
    - provided by the NEPMD: trees epmbbs and netlabs
    - user maintained files: tree myepm
  - easy backup of all user files !
  - easy transport of a complete user configuration to other/new systems !

## NEPMD extensions (III/VIII)

- Extended recompilation support
  - easy-to-use GUI to support dynamic recompile of EPM
    - supports direct jump to errant file
    - automatically reloads all open EPM windows on success
- but: in the future the Netlabs EPM distribution intends to make any recompile of EPM.EX **obsolete** by removing all hardcoded values !

# NEPMD extensions (IV/VIII)

- Extended filetype handling
  - NEPMD newly implements the **EPM mode**
    - used already with the new syntax highlighting concept
    - replaces the old hardcoded mechanism of determining the filetype by filename extension within the old E source code
    - the mode for a given file can be overridden by the new mode command (new mode stored as an extended attribute)
    - forthcoming releases will have a GUI for
      - creation of new EPM modes
      - addition of new filename extensions to existing EPM modes

# NEPMD extensions (V/VIII)

- Extended syntax highlighting concept
  - improved keyword file scheme
    - global color definition per keyword type
      - allows to have the same color for comments, literals, keywords for all kind of files
      - can be overridden per EPM mode though
    - keywords can be added by providing an additional new file
      - useful when adding keywords of an external library
  - is designed to support easy customization of color schemes in a GUI in forthcoming NEPMD releases

# NEPMD extensions (VI/VIII)

- Improvements for the EPM Editor window
  - reworked menu
  - reworked/additional keyboard commands
  - new keyboard shortcuts
  - new title and status lines (soon freely configurable)

# NEPMD extensions (VII/VIII)

- Implementation of the NEPMD API library
  - full documented API reference included in online help
  - replaces many of the older »Procedures in Standard EPM«, makes E coding much more convenient
    - includes (among other)
      - APIs for to access the NEPMD registry
      - EPM mode APIs
      - file and file EA handling APIs
      - Text Message File (TMF) API

# NEPMD extensions (VIII/VIII)

- Autolink feature for EPM extension modules
  - only required for modules to be loaded on startup of an EPM window, load all others dynamically !
  - place modules in myepm\autolink directory
  - loaded in alphabetic order
    - you can force a specific order only by renaming the module files (keeping the extension .ex)

# Current limitations



# Current limitations

- Yet no specific support for
  - completely replacing EPM V5.51 under OS/2 Warp 3
  - the Workplace Shell EPM object

# Next steps for future releases

## Next steps - usability

- Build configuration GUI (settings notebook) to allow all settings to be configured there
- Further extension of the **EPM mode** concept
  - attach more attributes to the EPM mode
  - extensions to the highlight concept (e.g. color schemes)
- Include more external packages into NEPMD, where applicable

# Next steps - programming support

- Implement more NEPMD library functions
  - replace more of the old »Procedures in Standard EPM«
- Read all configurable settings from the NEPMD registry
- Remove more hardcoded values within the E source code

# Demo of Netlabs EPM Distribution

**Where to get NEPMD ?**

# Where to get NEPMD ? (I/II)

- Package size is approx. 2.5 MB
- Currently downloadable from:
  - **<http://nepmd.netlabs.org>**
- Upcoming versions will be available also from
  - The Hobbes File Archive - <http://hobbes.nmsu.edu>
  - Hobbes mirrors
  - possibly other FTP sites

# Where to get NEPMD ? (II/II)

- Here on **Warpstock Europe 2002**:
  - download the most recent version to your notebook at the booth of

Team OS/2 Germany / Team OS/2 Ruhr e.V.



# The Netlabs EPM Distribution Project

- Homepage: <http://nepmd.netlabs.org>
- Current project members  
(in alphabetic order)
  - Christian Langanke, Andreas Schnellbacher
- Please help us by
  - testing our package and giving us feedback
  - contributing to the project and/or
  - become team member !

**Thank you very much  
for your attention !**

See  
The Netlabs EPM Distribution  
(and us) during  
Warpstock Europe 2002  
at the booth of  
Team OS/2 Germany