TPF Users Group
Grapevine Texas

IBM

IBM Software Group

IBM TPF Toolkit
Updates and Demos
Development Tools Subcommittee

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October 2004

Agenda:

- Interim Fix Updates
  - Interim Fix v2.0.2
  - Interim Fix v2.0.3
  - Future updates

- Demos
  - MakeTPF support for z/TPF
  - Loading on z/TPF
  - Debugging on z/TPF

Interim Fix updates

- Announced on TPF Toolkit website, newsgroup and mailing list
  - http://www.ibm.com/software/awdtools/tpftoolkit/
- List of fixes and enhancements posted on the website
- Use Update Manager to check for latest updates
  - Help > Software Updates > New Updates
- Since the previous TPF Users Group...
  - Interim Fix v2.0.2 in June 2004
  - Interim Fix v2.0.3 in September 2004
- Interim Fixes are cumulative
  - Update Manager applies the latest Interim Fix and all the pre-reqs

Interim Fix v2.0.2

- Released in June 2004
- List of fixes and enhancements available on website
  - www.ibm.com/support/docview.wss?rs=1068&context=SSWHWV&uid=swg21170721
- Mostly fixes
  - Remote Assemble and Remote Compile commands
  - Migration Tool
  - MakeTPF
  - TPFTool command line interface
  - Build script wizards and properties pages

Interim Fix v2.0.3

- Released in September 2004
- List of fixes and enhancements available on website
  - www.ibm.com/support/docview.wss?rs=1068&context=SSWHWV&uid=swg21180782
- Fixes and enhancements include...
  - IDE updates
  - Editor updates
  - Migration Tool updates
  - Help updates
  - TPFTool command line interface updates
  - Interim Fix update process updates
- Service.html lists fixes and migration instructions

Future Interim Fixes and updates

- **Interim Fix v2.0.4**
  - Targeting February 2005
  - Fixes and enhancements

- **TPF Toolkit v3.0**
  - Targeting mid 2005
  - Based on Eclipse v3.x
  - New features
  - New look and feel
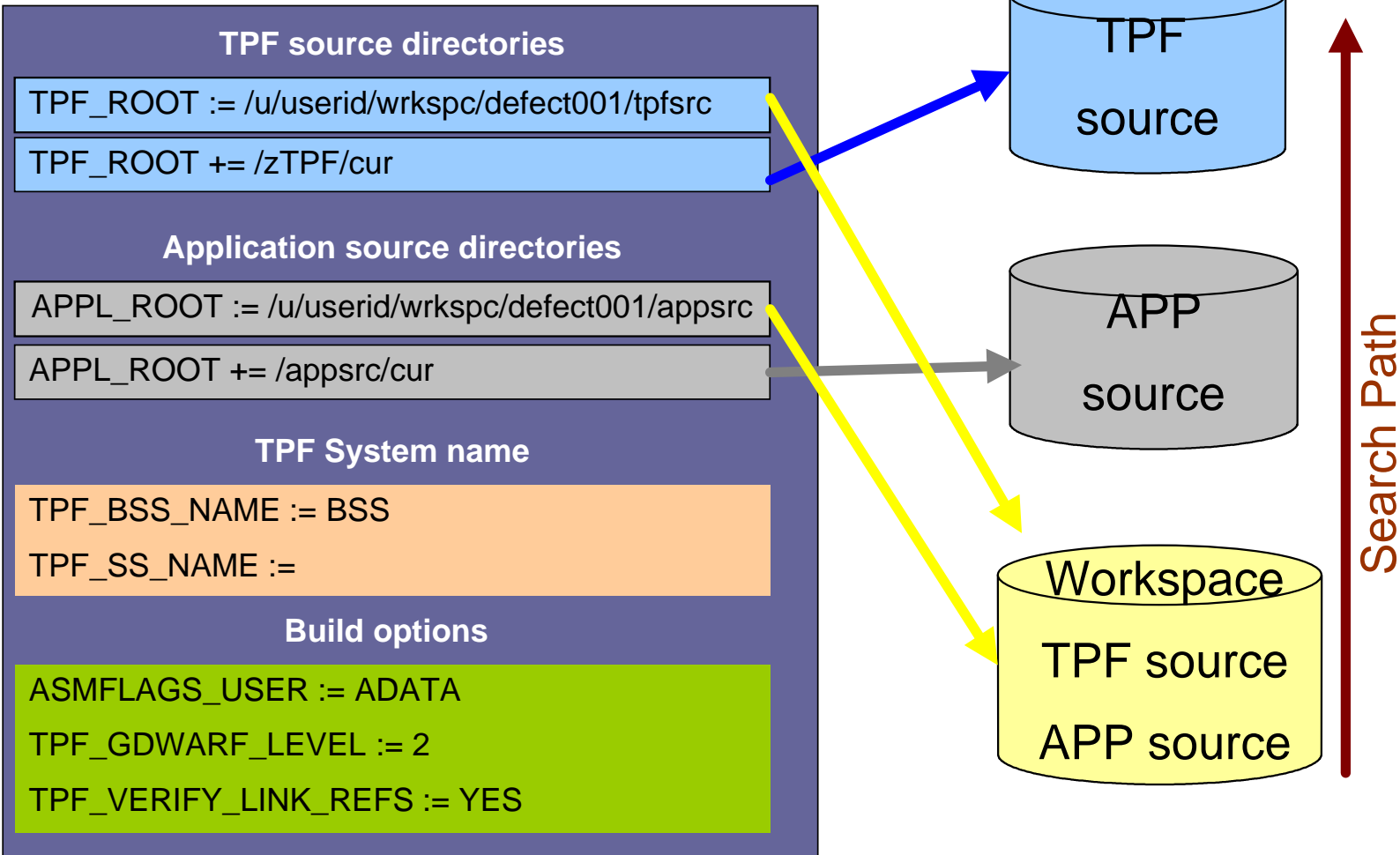
MakeTPF build tools

- Make-based utility to build TPF programs
- Based on schema that utilizes the GNU make
- Compile, assemble, link TPF programs
- Customized to support the TPF source code HFS structure
  - Supports concatenating multiple source code directories
  - Search order hierarchy
- Config file (maketpf.cfg) to define build space
- Makefiles (*.mak) to defines program to build
- Control file (maketpf.cntl) to define build control list

MakeTPF config file (maketpf.cfg)

- Define the build space for the maketpf and bldtpf tools

- TPF system name

- Root directories to be searched in the build
  - TPF source directories
  - application source directories
  - workspace directories

- Build options (ASM, C, C++)

- Located in the TPF project's remote working directory

MakeTPF Config file (maketpf.cfg)

TPF source directories

TPF_ROOT := /u/userid/wrkspc/defect001/tpfsrc

TPF_ROOT += /zTPF/cur

Application source directories

APPL_ROOT := /u/userid/wrkspc/defect001/appsrc

APPL_ROOT += /appsrc/cur

TPF System name

TPF_BSS_NAME := BSS

TPF_SS_NAME :=

Build options

ASMFLAGS_USER := ADATA

TPF_GDWARF_LEVEL := 2

TPF_VERIFY_LINK_REFS := YES

TPF
source

APP
source

Workspace
TPF source
APP source

Search Path

MakeTPF makefiles

- Only one primary target program

- Type of program (Archive, APP, CIMR, etc)

- List of source segments (*.asm, *.c, *.cpp)

- Special build options (assembly, compile, and link)

Makefile

Program information

APP := QT00

APP_EXPORT := ENTRY

APP_ENTRY := QT00

Environments for this program

maketpf_env += tpfdf

maketpf_env += base_rt

maketpf_env += system

Source segments

C_SRC := qt00.c

C_SRC += qt01.c

C_SRC += qt02.c

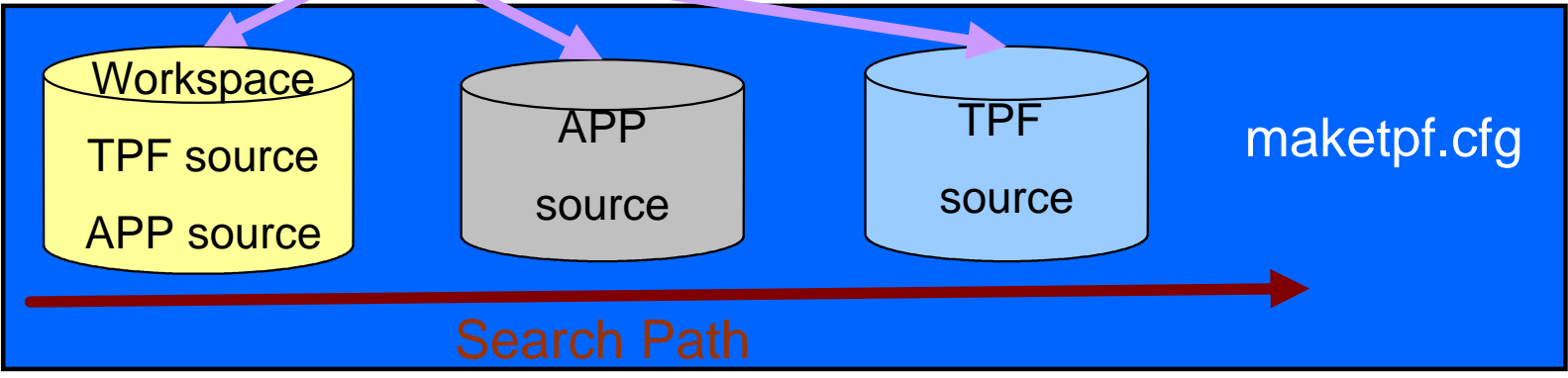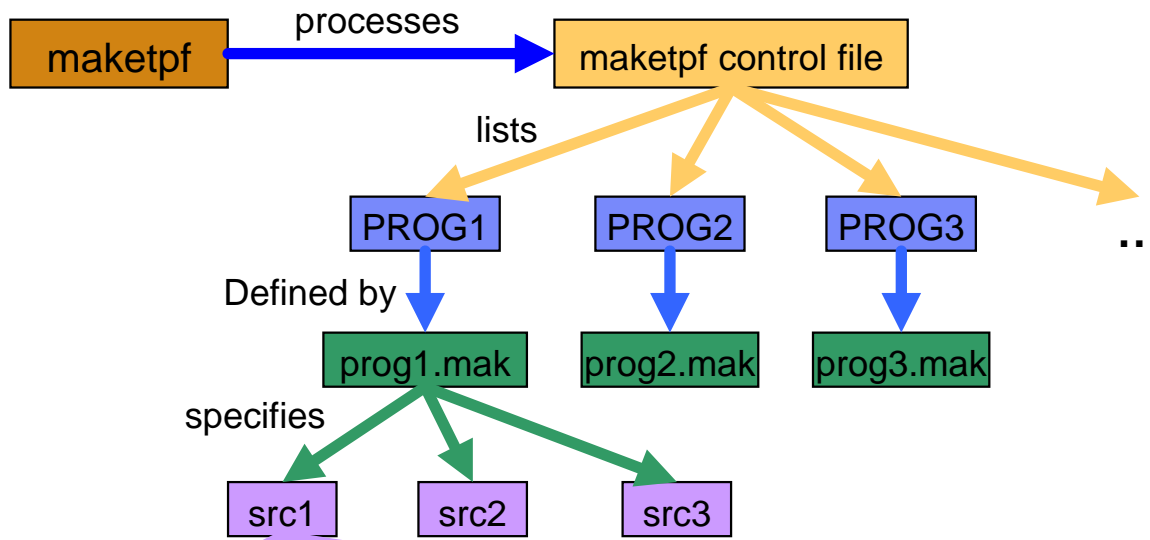**Include statement**

include maketpf.rules

MakeTPF control file (maketpf.cntl)

- List of programs to build

- Each entry define
  - Program to build
  - Makefile to use to build the program
  - System load attributes
  - 32 semi-colon delimited list of values

- Order of entries also define the build order

- Located in the TPF project's remote working directory

MakeTPF in action…

maketpf — **processes** → maketpf control file

lists

PROG1   PROG2   PROG3   …

Defined by

prog1.mak   prog2.mak   prog3.mak

specifies

src1   src2   src3

Workspace

TPF source

APP source

APP source

TPF source

maketpf.cfg

Search Path

Loading to z/TPF – loadtpf tool

- loadtpf command based on maketpf
- loadtpf command can load using
  - Load deck (for e.g. /u/mypath/loaddeck.txt)
  - Control file (for e.g. maketpf.cntl)
  - Program name (for e.g. PROG1)
  - Shared object file name (for e.g. /u/mypath/prog1.so)
- ftp loadset to TPF test system
- Demo

Debugging on z/TPF

- Debugging a TPFDF application

- Customized Debugger perspective

- Registers

- Variables

- Monitoring Storage

- Mapping storage using XML layout definition

- Demo

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