TPF Users Group Spring 2008
Title: z/TPF Loaders Update
Subtitle: Preview of works in progress

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Venue: Hot Topic

AIM Enterprise Platform Software
IBM z/Transaction Processing Facility Enterprise Edition 1.1.0

Items to discuss

- **Program control information**

  - Information already provided

  - New information

  - ZDMAP and ZOLDR changes

- **Other loader changes**

- **Discussion**

Disclaimer

- **The following includes material that is directional in nature and does not imply any product plan commitment on the part of IBM.**

Program control information already provided

- **Shared object version code in maketpf.cfg**

  - USER_VERSION_CODE := KX

  - VERSION_CFTP := KW

  - Shown in displays

- **Object comment in maketpf.cfg**

  - TPFOBJPP_COMMENT := PJ32232

  - Stored in each object; shown in ZDMAP display

Current ZDMAP

```
zdmap cftp i-lpath
CSMP0097I 07.31.16 CPU-B SS-BSS  SSU-HPN  IS-01
DMAP0003I 07.31.16 LINK MAP DATA DISPLAY
                    CFTPKW ACTIVE IN LOADSET BASE IN SUBSYSTEM BSS
                    PROGRAM ADDRESS                        0000000390E02D60
                    PROGRAM SIZE                                   0000A45C


/ztpf/aparbld/PJ32232/base/obj/cftp1.o      - OBJ FILE AT ADDR 0000000390E02D60
  OBJECT FILE SIZE                                              000058A4
  COMPILER INFO -  GCC: (GNU) 4.1.2 20060724 (prerelease) (GNUPro 06r1)  _
  COMPILED ON 2007/09/19 AT 10.42.31
  COMMENT - PJ32232


/ztpf/bld/base/obj/cftp3.o                   - OBJ FILE AT ADDR 0000000390E08604
  OBJECT FILE SIZE                                              00000610
  COMPILER INFO -  GCC: (GNU) 4.1.2 20060724 (prerelease) (GNUPro 06r1)
  COMPILED ON 2007/02/05 AT 13.26.15 _
  COMMENT - PUT3


  NAME - /ztpf/aparbld/PJ32232/base/obj/bld-PJ32232.o _
  OBJECT FILE SIZE                                              00000000
  COMPILED ON 2007/09/19 AT 10.42.42
  COMMENT - PJ32232
```
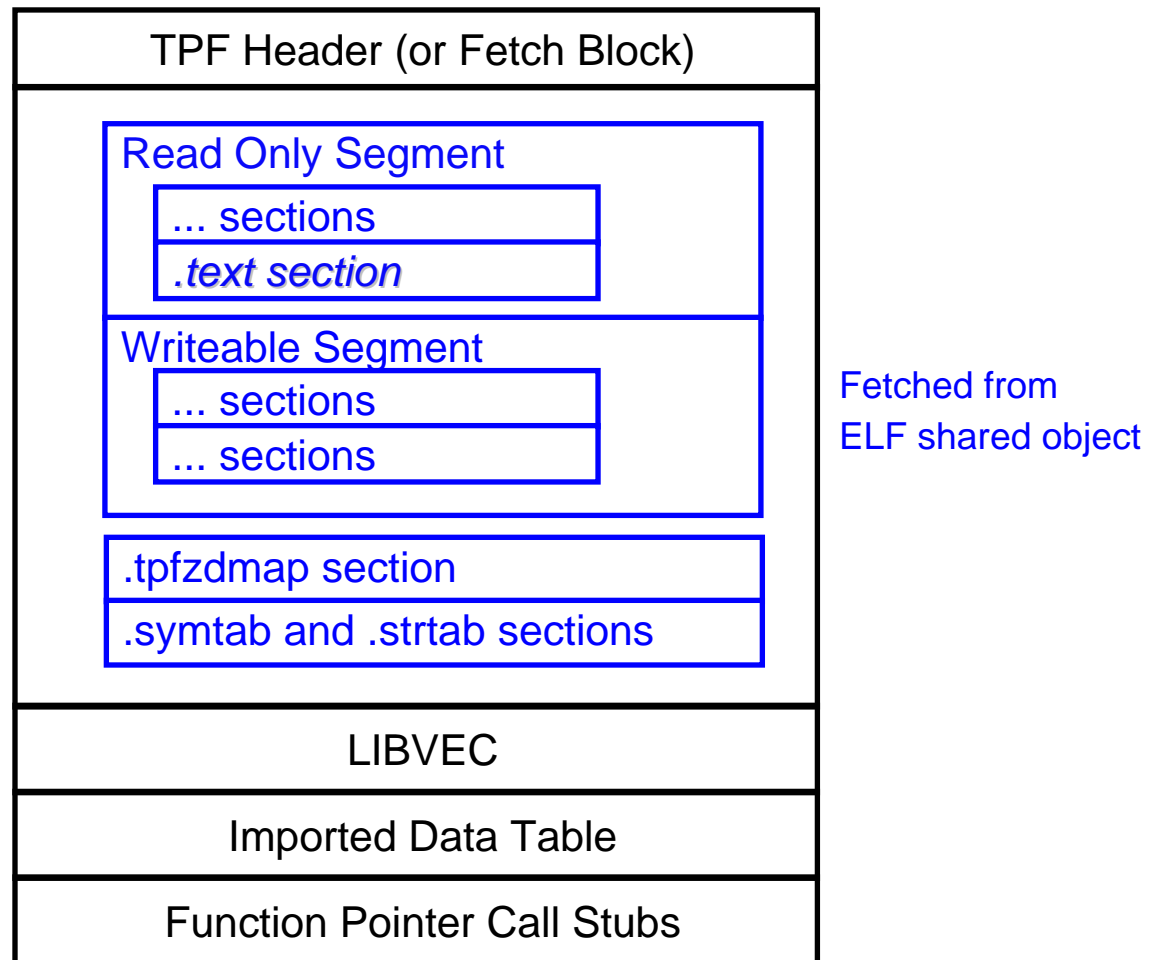
New program control information

- **Additional information in maketpf.cfg**

  - TPFOBJPP_COMMENT2 := "Defect 17123 fix"

  - TPFOBJPP_COMMENT3 := /home/andrson/17123

- **Stored in each object; shown in ZDMAP display**

- **Not used by IBM – just displayed**

- **Not filled in automatically**

  - Only used if non-blank

Realtime Program in memory

TPF Header (or Fetch Block)

Read Only Segment
- ... sections
- *.text section*

Writeable Segment
- ... sections
- ... sections

.tpfzdmap section

.symtab and .strtab sections

LIBVEC
Imported Data Table
Function Pointer Call Stubs

Fetched from
ELF shared object
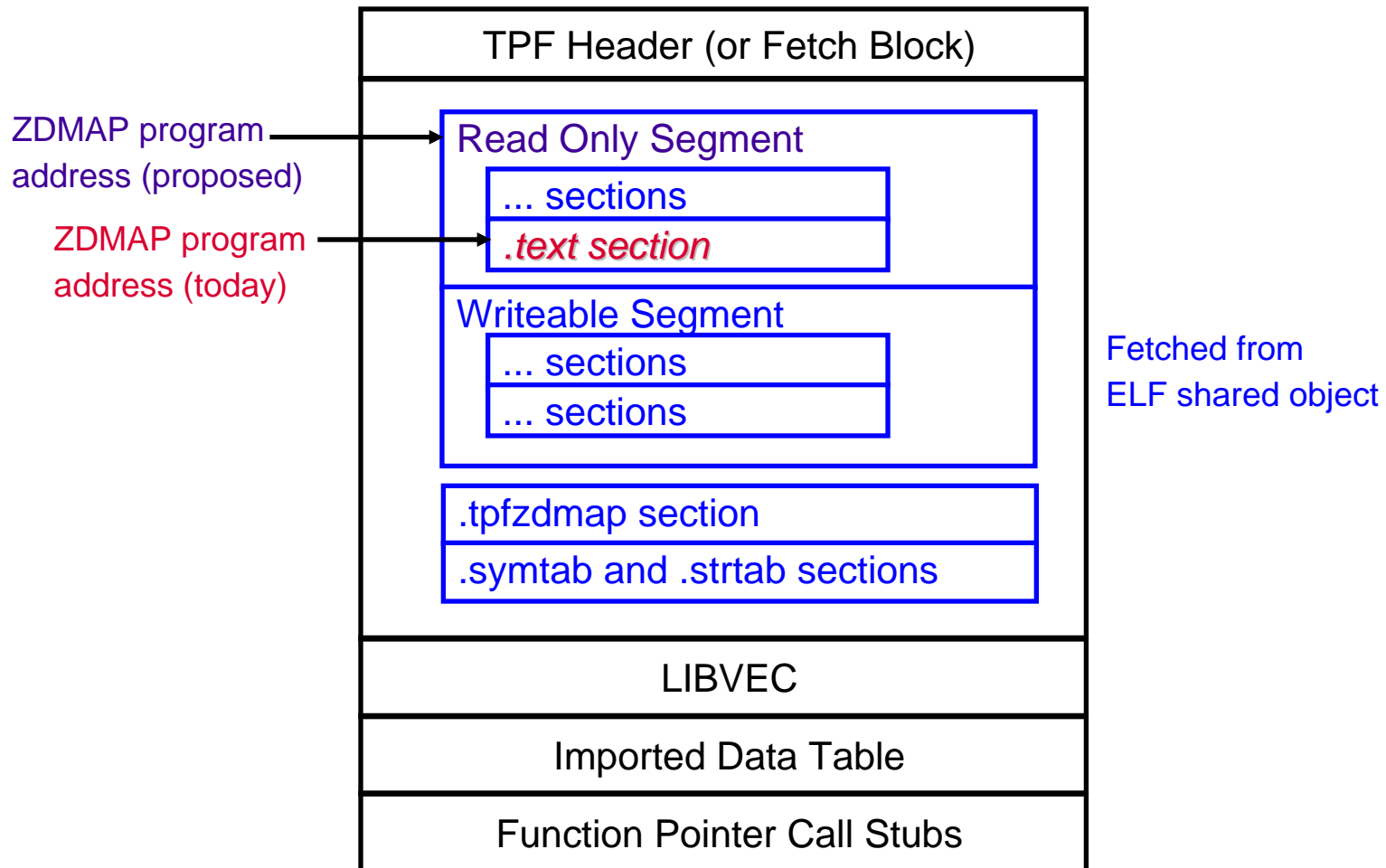
ZDMAP changes for program control

- **Ability to display inactive versions**

- **ZDMAP PROG OFFSET-xxxx option**

- **Add breakdown of Core Resident Program Area:**

  - Address of TPF Header (or Fetch Block)

  - Address of read only segment

  - Address of writeable segment

  - Address of .tpfzdmap section

  - Address of LIBVEC

- **Add start of .text section & size of .text section**

Realtime Program in memory

ZDMAP program address (proposed)

ZDMAP program address (today)

Fetched from ELF shared object

TPF Header (or Fetch Block)
Read Only Segment
... sections
.*text section*
Writeable Segment
... sections
... sections
.tpfzdmap section
.symtab and .strtab sections
LIBVEC
Imported Data Table
Function Pointer Call Stubs

ZOLDR changes for program control

- **Loadset comment (<= 100 characters)**

  - New control statement for offline loader

  - Shown in ZOLDR DISPLAY LOADSET

  - Ability to alter comment online

Other Loader Changes

- **ZIMAG COPY of CIMR components to enabled image**

- **ZOLDR ACCEPT option to force completion**
  - Ignore long running ECBs

- **Only recycle daemons when necessary**
  - Not every time system activation number changes

- **Remove restriction for running ALDR on z/OS**

Discussion

- **What other program control information is needed?**

- **Where else should program control information be displayed?**

- **Comments on priorities of items?**

References

- **TPFUG Fall 2007 conference hot topic: Code Flow and Versioning by Brian Laferriere**
    - http://ibm.com/tpf/tpfug/tgf07/tgf07q.pdf

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