

6. u-boot C routine 2/2

```

        가 .

.

u-boot C
가 가 .

- tftpboot( tftp): .( ?.....^^)
- bootm [ ....]

tftp host tftp server가 ,
ipaddr serverip .

.

가 . 가 가
ipaddr, tftp serverip printenv ...
saveenv ipaddr 192.168.1.2

saveenv . flash code가

. ethernet 가
가 vmlinux.img

tftp 100000 vmlinux.img

0x100000 .

bootm 100000 ( ppc405 ).

smdk2410 가 0x30000000 ?
ram 가 0x33000000 . smdk2410.h
CFG_LOAD_ADDR , .

가 uImage

tftp 33000000 uImage
bootm 33000000

0x30008000
( Appendix A(?) 가 )

가 ram relocation u-boot ?
board/smdk2410/config.mk .

, u-boot + arm x86 zImage ?

, zImage asm 가 .
sel-extract .

u-boot C .
? ㅎㅎ

zImage asm 2 .

u-boot . u-boot
....TT.TT ^^

bootm . common/cmd_bootm.c
boot_os_Fcn .

, bootm
u-boot , netbsd, vxwork, rtems, qnx
.

extern boot_os_Fcn do_bootm_linux;

```

```

static boot_os_Fcn do_bootm_linux;      가 static ppc
extern lib_arm/armlinux.c .

do_bootm() . tftp smdk2410 uImage .
zImage가 . zImage + . u-boot
mkimage .( Appendix A(?) 가 )

, ' 가 .

entry point .

.

addr = load_addr;

boom
가 CFG_LOAD_ADDR .

addr = simple_strtoul(argv[1], NULL, 16);

bootm 33000000

.

uImage가 image header + strip
memcpy (&header, (char *)addr, sizeof(image_header_t));

.

data = (ulong)&header;
crc .
crc32 (0, (char *)data, len) != checksum
print_image_hdr (hdr); data = addr + sizeof(image_header_t);

.

switch case
switch (hdr->ih_type) {
가 .
IH_TYPE_KERNEL 가 IH_TYPE_MULTI
+ramdisk .

disable_interrupts
switch (hdr->ih_comp) {
. IH_COMP_GZIP
?

printf (" Uncompressing %s ... ", name);
. ( ?....ㅎㅎ)
가 . ㅋㅋ 가 가
...

```

```

^^
...~~~~

        c                                     가

.
(void *)ntohl(hdr->ih_load)

        . 2410      30008000      mkimage      가      -a

        가

switch (hdr->ih_os) {
    가
        가      os      IH_OS_LINUX가
arm      lib_arm/armlinux.c      do_bootm_linux()
        argc

(
tftp 33000000 uImage
bootm 33000000
)
        argc가 2      ramdisk      ( if(argc >= 3)... )
        ramdisk

tftp 33000000 vmlinux.img

tftp 30800000 ramdisk.uboot

        ramdisk      bootm 33000000 30800000
(ramdisk      가      parameter tag
swl-patch kernel      .... ?.--;)

        do_bootm_linux      ramdisk      가

        do_bootm_linux()
ramdisk      tag      3000100

...ㅋㅋ

.
theKernel = (void (*)(int, int))ntohl(hdr->ih_ep);

        .      entry point      . mkimage      -e      가
-a      . 2410      30008000

        가

        theKernel      cating

addr = simple_strtoul(argv[2], NULL, 16);      bootm      argument

bootm 33000000 30800000

        magic number      crc      .
        ( )      if (data) {

ramdisk가      가

initrd_start = data;
initrd_end = initrd_start + len;

```

```

#if defined (CONFIG_SETUP_MEMORY_TAGS) || \
    .
    smdk2410.h
    ramdisk
    0x30000100
    (
    ramdisk
    가
    )
    setup_start_tag()
params = (struct tag *)bd->bi_boot_params;
C
    board_init()
    bi_boot_params
    30000100
    .
    parameter
    blob
    strongarm
    tag
    .
    do_bootm_linux
    가
printf("\nStarting kernel ...\n\n");
cleanup_before_linux();(==> cpu/arm920t/cpu.c: I/D cache turn-off & I/D cache flush)
.
theKernel(0, bd->bi_arch_number);
.
    가
    0
    bi_arch_number
    start
    .
    가
    cpu(
    )
architecture dependent
=====
.
    ,
    S3C2800
    2410
    가
    Linux virtual memory
    가
    .
    (
    )
    가
    ....
    .
    ,
    가
    network
    (irq & dma)
    (sound
    )
    .
    가
    .(
    .
    ....
    가
    ...ㅎㅎ
    ?..
    가
    ..--;)
    ....
    ps>
    ,
    ...
    (
    )

```