K9 Linux_2.4.19 移植

1.	准备工作		
	a) 交叉开发环境的安装 交叉开发环境,安装在位置/usr/local/arm/2.95.3/bin。		
	b) 内核原码的安装 源码程序 linux-2.4.19-rmk7, 拷贝到/usr/local/arm/k9l 下面, 并		
	且解压缩,得到内核源码		
	c) 安放 Uboot 工具 源码程序 k9uboot,拷贝到/usr/local/arm/k9s 下面。		
2.	预先设置		
	主要在内核原码中设置 makefile 文件,主要设置两个地方 ARCH 和 CROSS_COMPILE。		
	ARCH :=arm ;表示目标板为 arm		
	CROSS_COMPILE=/usr/local/arm/2.95.3/bin/arm-linux- ; 设置交叉编译工具的地址。		
3.	. 内核配置		
	在内核源码/usr/local/arm//k9l/ linux-2.4.19-rmk7下		
	make menuconfig , 菜单界面		
	或		
	make xconfig ; 图形界面,通常采用		
4.	. 内核编译		
	在内核源码/usr/local/arm//k9l/ linux-2.4.19-rmk7下		
	make clean		
	make dep		
	make		
5.	,建立内核的影象		
	在内核源码/usr/local/arm/k9l/ linux-2.4.19-rmk7下		
	make Image ; 形成 vmlinux		
	cp vmlinux /usr/local/arm/2.95.3/bin ; copy		
	在编译上具/usr/local/arm/2.95.3/bin 下		
	./arm-linux-objcopy -0 binary -S vmlinux linux.bin ; 形成 linux.bin		
	gzip -v9 linux.bin ; 形成 linux.bin.gz		
	cp linux. bin. gz /usr/local/arm/k9s/k9uboot/tools ; copy		
	在 k9uboot 的目求/usr/local/arm/k9s/k9uboot/tools 下		
	./mk1mage -A arm -0 11nux -C gz1p -a 0x20008000 -e 0x20008000 -d 11nux.bln.gz		
	ulmage ; 把 linux. bin. gz 义件受为取终的影家义件 ulmage		
	取旧, 位百 u1mage 八小, 八里ए u1mge 小丁 8*128=768 (NB)。		
	王LINUX 內核移植元成, 获旧生成 J linux-2.4.19-rmk/ 內核 for K9 的 linux 內核		
	宛与人件 umage。		

如何配置和裁剪 Linux 的内核 6.

在 Linux 下,用 make xconfig 或者 make menuconfig 进入配置的界面。在内核配置中, 一般有四种选择:Y(选种)、N(不选)、M(模块)和数字,用户可以根据裁剪需要进行 设置,最后配置完毕,选择是否对配置结果进行保存?图形配置界面如下:

ARM Linux Kernel Configuration			
Code maturity level options	Amateur Radio support	Console drivers	
Loadable module support	IrDA (infrared) support	Sound	
System Type	ATA/ATAPI/MFM/RLL support	Multimedia Capabilities Port drivers	
General setup	SCSI support	USB support	
Parallel port support	Synchronous Serial Interface	Bluetooth support	
Memory Technology Devices (MTD)	IEEE 1394 (FireWire) support (EXPERIMENTAL)	Kernel hacking	
Plug and Play configuration	I2O device support		
Block devices	ISDN subsystem		
Multi-device support (RAID and LVM)	Input core support	<u>Save and Exit</u>	
Acom-specific block devices	Character devices	Quit Without Saving	
Networking options	Multimedia devices	Load Configuration from File	
Network device support	File systems	Store Configuration to File	

Block Devices:

- → Network block device support : n
- \rightarrow -> Ramdisk support: y
- \rightarrow -> Default Ramdisk size: 15360
- \rightarrow -> Initial Ramdisk (initrd) support: y
- File System -> Network File systems:
- → NFS file system support : n
- \rightarrow -> NFS server support: n

Console drivers -> Frame Buffer Support:

- \rightarrow support for frame buffer devices (exp): y
- \rightarrow -> epson LCD/CR/TV controller support: y
- \rightarrow -> epson S1 D1 3806 support for AT91RM9200DK: y
- \rightarrow -> virtual frame buffer support (only for testing!): n
- \rightarrow -> advanced low level driver option: y
- \rightarrow -> 16 bpp packed pixeld support: y (others n)

USB Support:

- \rightarrow support for USB: y
- → -> AT91RM9200 OHCI- compatible host interface: y
- \rightarrow -> USB mass storage support : y
- \rightarrow -> USB Human Interface device (full HID) support: y
- \rightarrow -> HID input layer support : y

- # 好像不能自行改为 4096
- # 真实的 Ramdisk 大小在 Uboot ENV 里面配置

2

#K9 不支持 USB, 可选 n

#K9 不支持屏, 可选 n

K9

Kernel configuration when using NFS ramdisk:

Below the details of the parameters when typing: make xconfig:

General setup:

-> Default kernel string : Erase its contents

Block Devices:

- → Network block device support : y
- \rightarrow -> Ramdisk support: n
- File System:
- → Quota support: n
- \rightarrow -> Kernel automounter support: y
- \rightarrow -> DOS FAT fs support: y
- \rightarrow -> VFAT (Windows 95) fs support: y
- → -> Journalling flash file system v2 (JFFS2) support: 0
- \rightarrow -> /proc file system support: y
- \rightarrow -> /dev file system support (EXP): y
- \rightarrow -> Automatically mount a boot: y
- \rightarrow -> Second extended fs support: y

File System -> Network File systems:

- → NFS file system support : y
- \rightarrow -> provide NFSv3 client support: y
- \rightarrow -> root file system on NFS: y
- → NFS server support: n