operating systems dooroos

EMULATOR

dooroos.realtime

Build Guide

Manual

Manual

Document Number: DOOROO-DKBD-BG-2012-xxxx

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Version 0.1

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1. Overview

EMULATOR_SAMP has a high performance ARM9 Core and many Peripheral devices(Samsung S3C2410), and supports dooroos.realtime BSP(Board Support Package) and sample images.
This document is a guide for a new EMULATOR_SAMP user who use dooroos.realtime BSP. This document describes how to use Bootloader, build dooroos.realtime and download Image files.

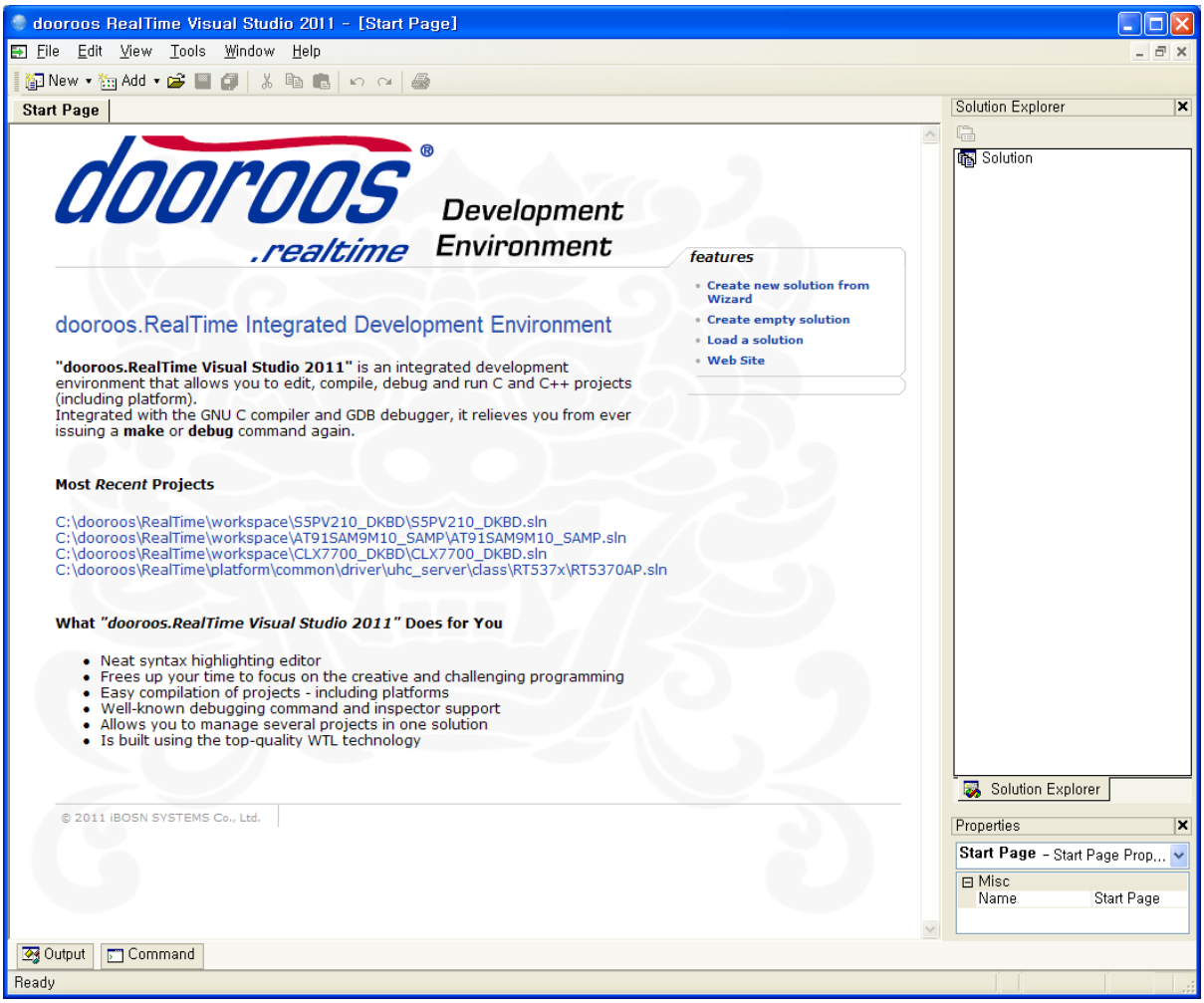
1.1. Development Environment

- Windows Desktop
- dooroos (jbosn) emulator on PC.
  refer the file "c:₩dooroos₩realtime₩emulator_manual.pdf" first and install the emulator and dooroos.realtime.
- dooroos.realtime visual studio, GCC compiler and images (download from dooroos.org)
  - http://www.dooroos.org/

2. Building Bootloader (j-boot)

EMULATOR_SAMP BSP Bootloader use J-boot as Bootloader. J-boot is the dooroos.realtime bootloader for ARM and stable bootloader. It was widely used, has various functions and has reliability by long time use.

2.1. Open the dooroos.realtime visual studio

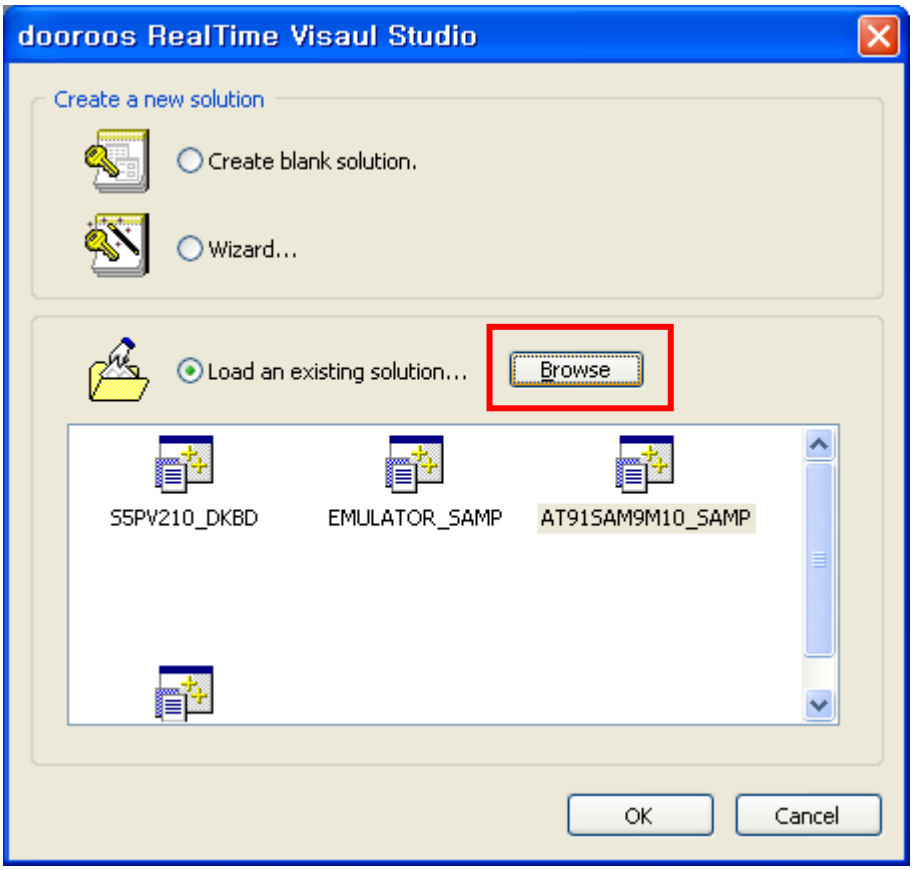


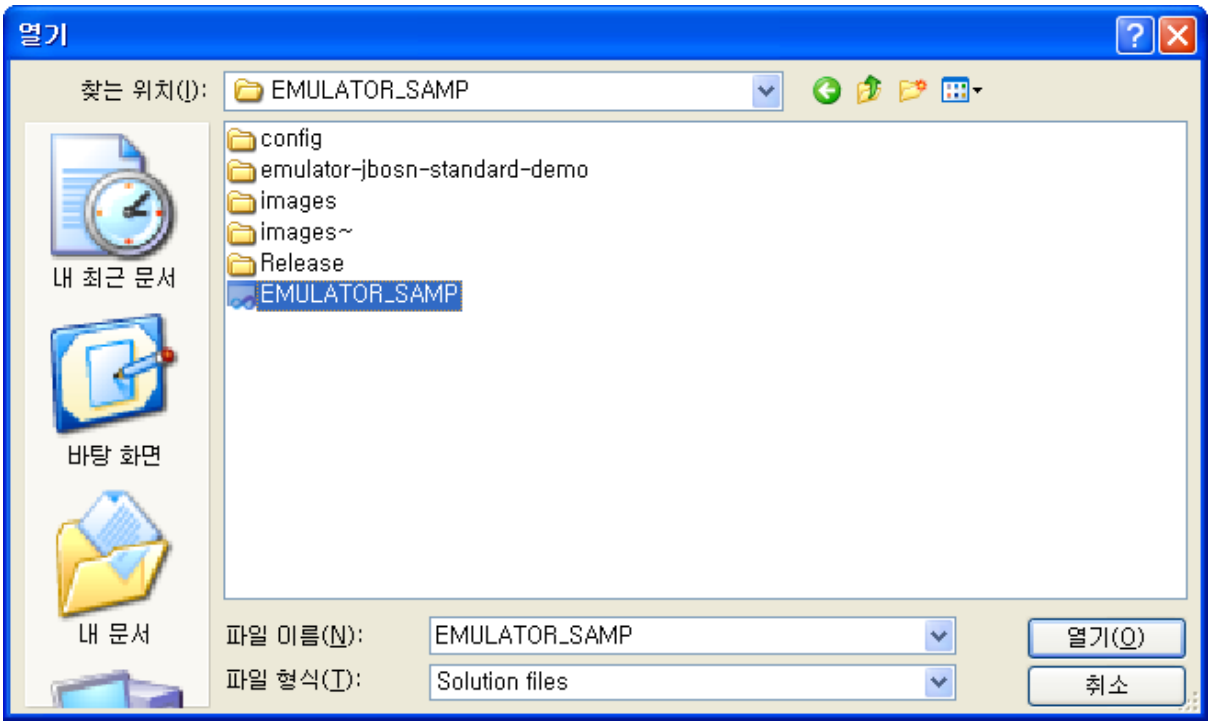
2.2. Open the solution

J-boot given is used on the EMULATOR_SAMP. The EMULATOR_SAMP is a dooroos emulator development board.

Opent the solution on c:₩dooroos₩workspace₩EMULATOR_SAMP solution as follows

[File->Open Solution]



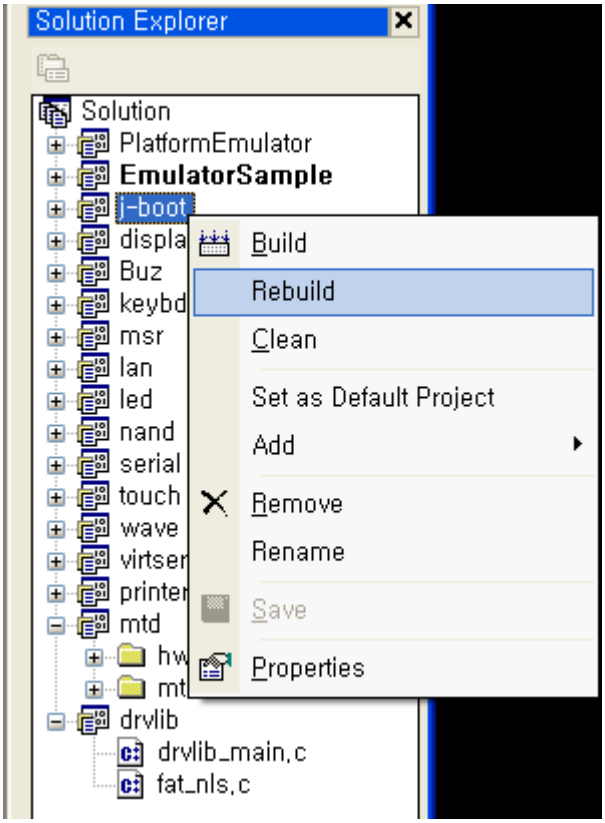


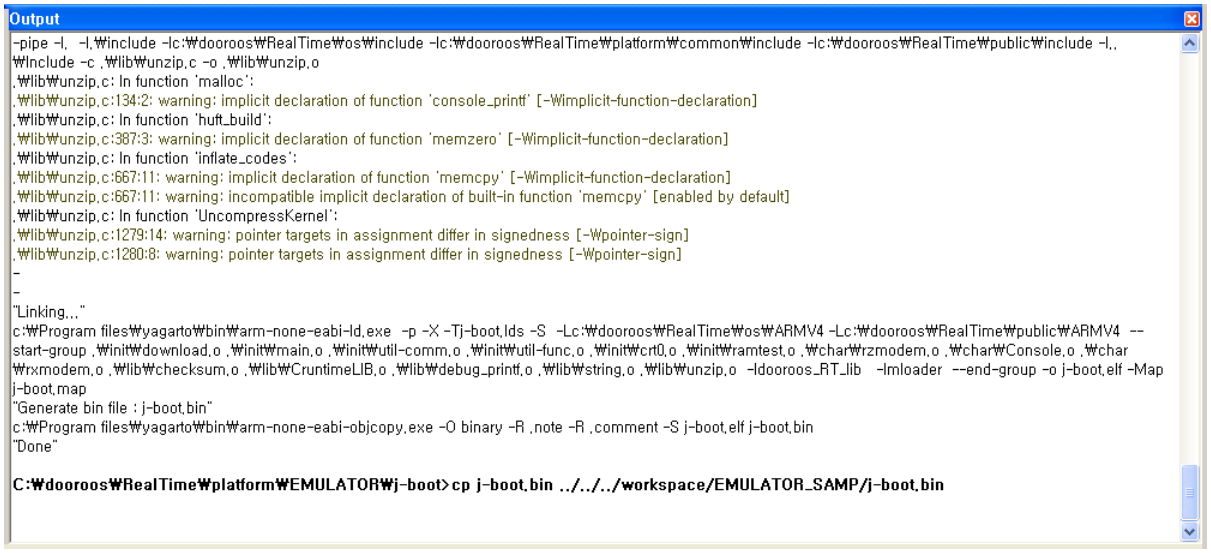
.

2.3. Build j-boot

The given dooroo-boot is used on the dooroos.realtime EMULATOR_SAMP package. EMULATOR_SAMP is a dooroos emulator development board.

Build it as followings.

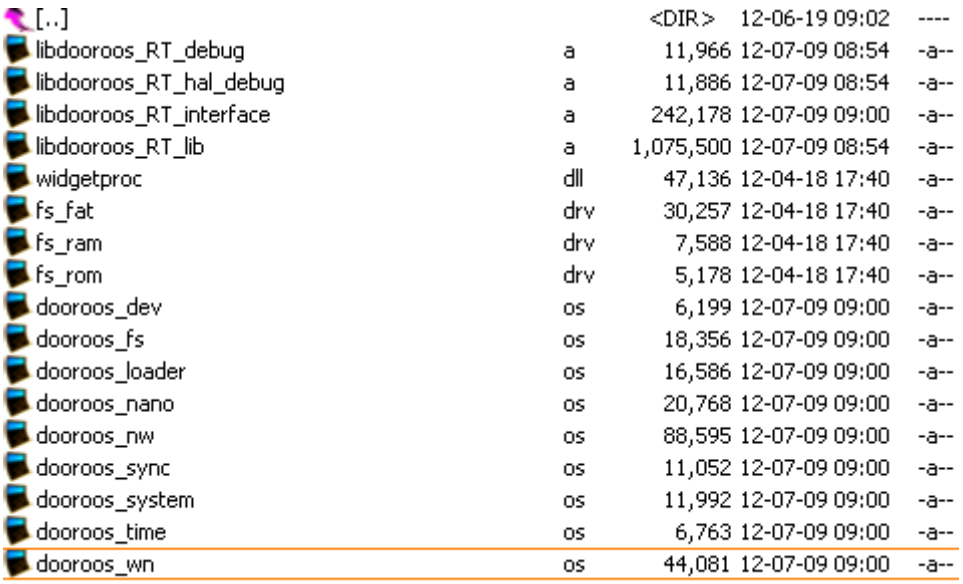




3. Building Image

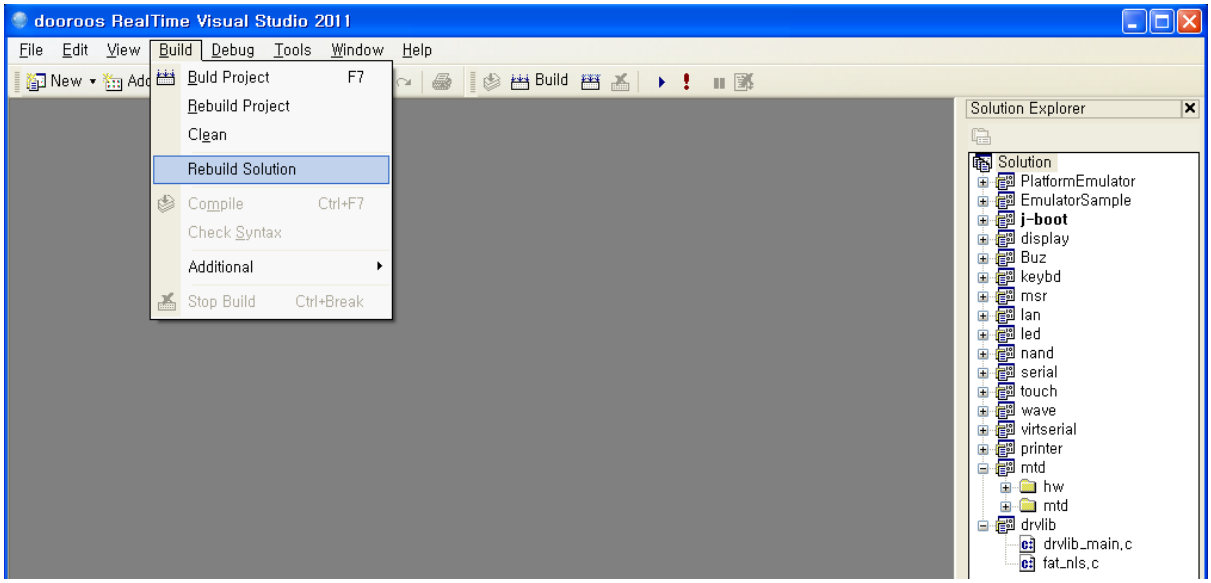
3.1. dooroos.realtime Image

dooroos.realtime Kernel is given by ".os" files format. See the OS directory (c:₩dooroos₩os).



[..]		<DIR>	12-06-19 09:02	----
libdooroos_RT_debug	a	11,966	12-07-09 08:54	-a--
libdooroos_RT_hal_debug	a	11,886	12-07-09 08:54	-a--
libdooroos_RT_interface	a	242,178	12-07-09 09:00	-a--
libdooroos_RT_lib	a	1,075,500	12-07-09 08:54	-a--
widgetproc	dll	47,136	12-04-18 17:40	-a--
fs_fat	drv	30,257	12-04-18 17:40	-a--
fs_ram	drv	7,588	12-04-18 17:40	-a--
fs_rom	drv	5,178	12-04-18 17:40	-a--
dooroos_dev	os	6,199	12-07-09 09:00	-a--
dooroos_fs	os	18,356	12-07-09 09:00	-a--
dooroos_loader	os	16,586	12-07-09 09:00	-a--
dooroos_nano	os	20,768	12-07-09 09:00	-a--
dooroos_nw	os	88,595	12-07-09 09:00	-a--
dooroos_sync	os	11,052	12-07-09 09:00	-a--
dooroos_system	os	11,992	12-07-09 09:00	-a--
dooroos_time	os	6,763	12-07-09 09:00	-a--
dooroos_wn	os	44,081	12-07-09 09:00	-a--

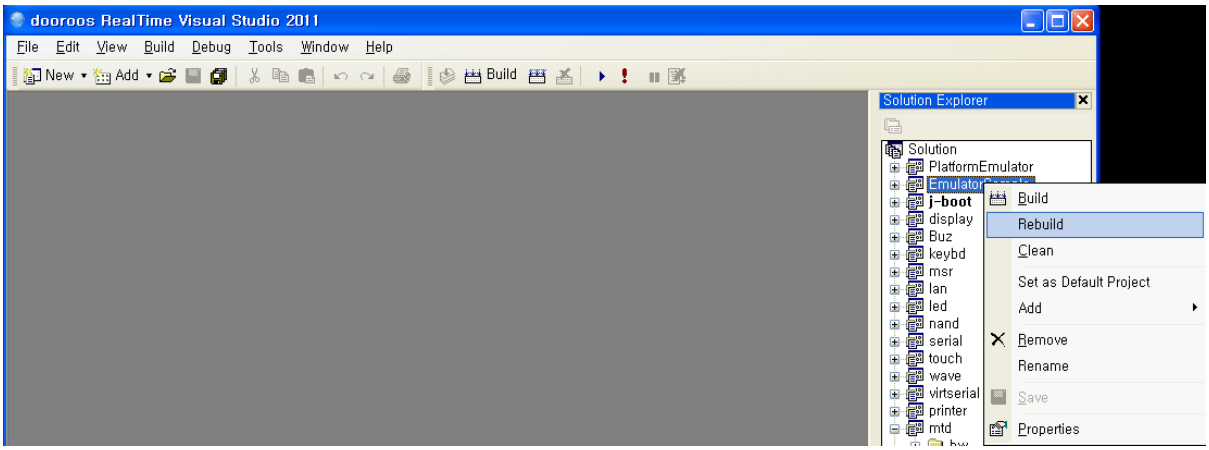
3.2. **Build Image**

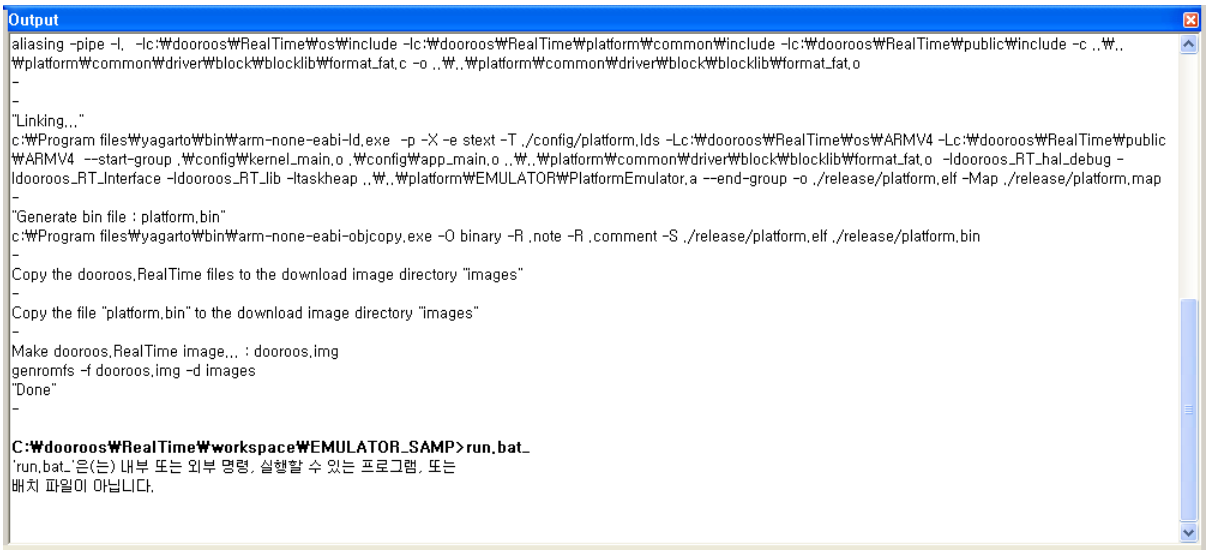


Build projects in the solution as the following procedure:

1. Use rebuild solution menu, then all the projects in the solution is rebuild
   → the drivers and dlls and libraries is generated and copied to the working directory.
2. Finally rebuild the EmulatorSample project again to make th download image (dooroos.img).
   → dooroos.img file is generated in the working directory.

3.


dooroos RealTime Visual Studio 2011
File Edit View Build Debug Tools Window Help
New Add Build
Solution Explorer
Solution
PlatformEmulator
Emulator
j-boot
display
Buz
keybd
msr
lan
led
nand
serial
touch
wave
virtserial
printer
mtd
Build
Rebuild
Clean
Set as Default Project
Add
Remove
Rename
Save
Properties


Output
aliasing -pipe -I. -Ic:₩dooroos₩RealTime₩os₩include -Ic:₩dooroos₩RealTime₩platform₩common₩include -Ic:₩dooroos₩RealTime₩public₩include -c .,₩..₩platform₩common₩driver₩block₩blocklib₩format_fat.c -o .,₩..₩platform₩common₩driver₩block₩blocklib₩format_fat.o
-
-
"Linking..."
c:₩Program files₩yagarto₩bin₩arm-none-eabi-ld.exe -p -X -e stext -T ./config/platform.lds -Lc:₩dooroos₩RealTime₩os₩ARMV4 -Lc:₩dooroos₩RealTime₩public₩ARMV4 --start-group ./config₩kernel_main.o ./config₩app_main.o .,₩..₩platform₩common₩driver₩block₩blocklib₩format_fat.o -ldooroos_RT_hal_debug -ldooroos_RT_Interface -ldooroos_RT_lib -ltaskheap .,₩..₩platform₩EMULATOR₩PlatformEmulator.a --end-group -o ./release/platform.elf -Map ./release/platform.map
-
"Generate bin file : platform.bin"
c:₩Program files₩yagarto₩bin₩arm-none-eabi-objcopy.exe -O binary -R .note -R .comment -S ./release/platform.elf ./release/platform.bin
-
Copy the dooroos.RealTime files to the download image directory "images"
-
Copy the file "platform.bin" to the download image directory "images"
-
Make dooroos.RealTime image... : dooroos.img
genromfs -f dooroos.img -d images
"Done"
-
C:₩dooroos₩RealTime₩workspace₩EMULATOR_SAMP>run.bat_
'run.bat_'은(는) 내부 또는 외부 명령, 실행할 수 있는 프로그램, 또는
배치 파일이 아닙니다.

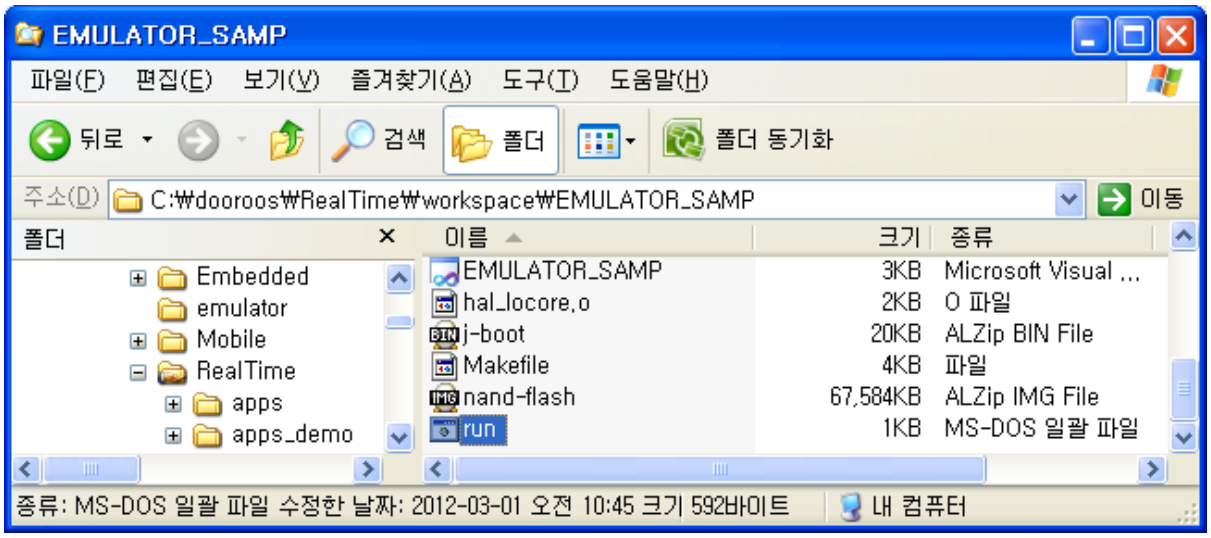
4. Running dooroos.realtime on Emulator

To run the dooroos.realtime on the PC emulator,

First you should install the dooroos emulator on your PC(please refer the emulator manual on c:₩dooroos₩emulator),

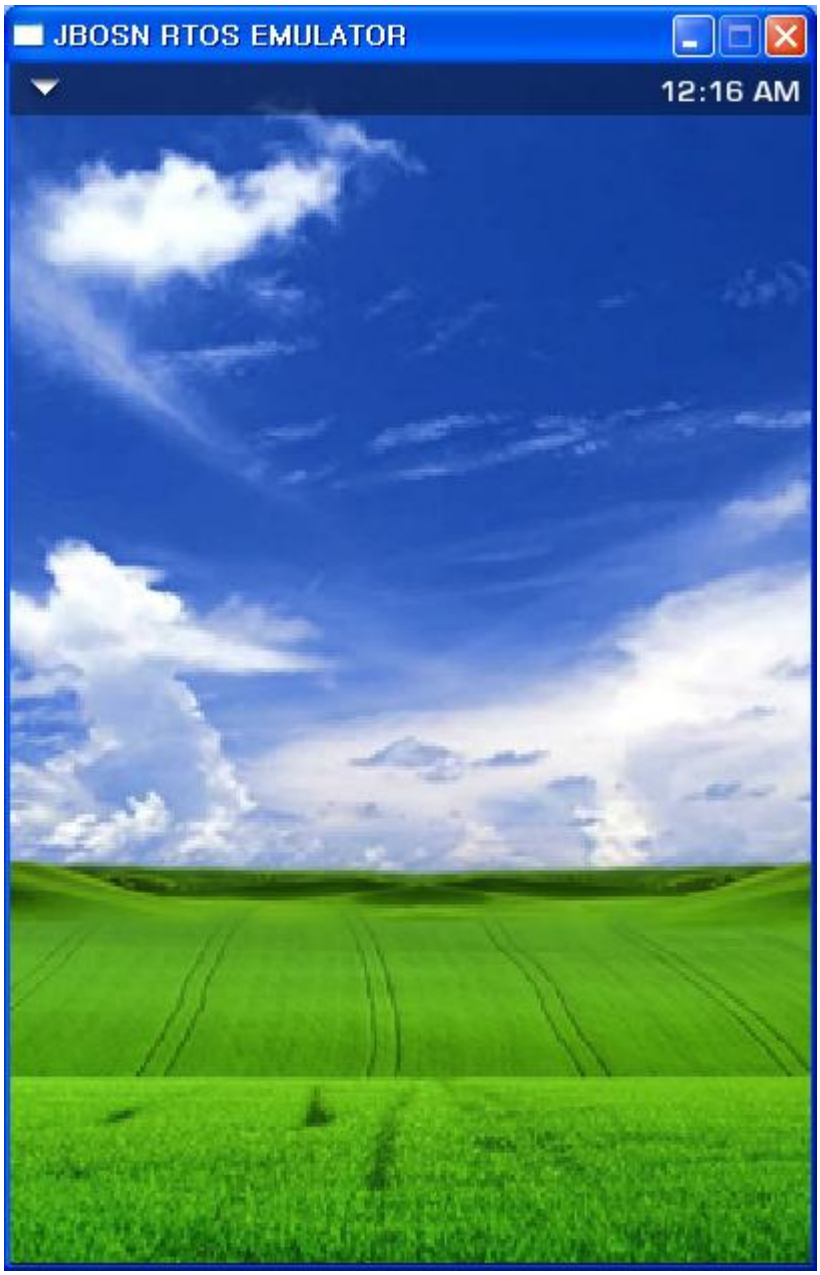
Second execute "run.bat".

4.1. Execture the "run.bat"



4.2. Touch dooroos.realtime

1. You can touch.



dooroos.realtime on your LCD
please touch them.

2. Debug message window.