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RELEASE NOTES

N7.19

Document Number:	18_06_08_03778
Version:	1.0
Status:	APPROVED
Approval Authority:	Integration Project Leader
Creation Date:	May 19, 2006
Last changed:	May 19, 2006 by TI User
File Name:	CS_nucleus_7_19_release_notes_18_06_08_03778.doc

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Change History

Date	Changed by	Approved by	Version	Status	Notes
17/5/2006	Eric ARMENGAUD	Isabelle BIFFI	0.1	DRAFT	1
19/5/2006	Eric ARMENGAUD	Isabelle BIFFI	1.0	APPROVED	2

Notes:

1. Initial version
2. Changes due to inspection

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1 Introduction

1.1 Scope

This document is the Release Notes of the Texas Instruments Calypso and Calypso Lite platform software program release N7.19.

This document replaces all previous versions of this document.

1.2 Important Notice

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2 Release Content

2.1 Important Information

- Since the previous release, the long image names have been kept unchanged

2.2 Configurations

The configurations supported by this release are listed in the following table.

Table 2-1: Configurations of release N7.19

Variant Name	Platform	WAP	TTY	MMI	GSM/GPRS	MMS	Release
pdt_1012em	leonardo rev4	no	no	bmi	GSM	no	N7.19
pdt_2012em	leonardo + rev2	no	no	bmi	GSM	no	N7.19
pdt_2091	leonardo + rev2	no	no	aci	GPRS	no	N7.19
pdt_2092	leonardo + rev2	no	no	bmi	GPRS	no	N7.19
pdt_2111	leonardo + rev2	no	yes	aci	GPRS	no	N7.19
pdt_2112	leonardo + rev2	no	Yes	bmi	GPRS	no	N7.19
pdt_2132	leonardo + rev2	yes	no	bmi	GPRS	no	N7.19
pdt_2152	leonardo + rev2	yes	yes	bmi	GPRS	no	N7.19
pdt_2272	leonardo + rev2	yes	yes	bmi	GPRS	yes	N7.19
pdt_3012em	dsample	no	no	bmi	GSM	no	N7.19
pdt_3032em	dsample	no	yes	bmi	GSM	no	N7.19
pdt_3091	dsample	no	no	aci	GPRS	no	N7.19
pdt_3092	dsample	no	no	bmi	GPRS	no	N7.19
pdt_3011	dsample	no	No	aci	GSM	no	N7.19
pdt_3111	dsample	no	yes	aci	GPRS	no	N7.19
pdt_3112	dsample	no	yes	bmi	GPRS	no	N7.19
pdt_3132	dsample	yes	no	bmi	GPRS	no	N7.19
pdt_3152	dsample	yes	yes	bmi	GPRS	no	N7.19
pdt_3272	dsample	yes	yes	bmi	GPRS	yes	N7.19

All the configuration settings are stored in the xml files located in \g23m\system\busyb\...

It is highly recommended not to change any value in the files in \g23m\system\busyb\... without requesting help of your TI entry point.

2.3 Components

The software program release N7.19 is made of the sub-systems and components listed in the following table.

Table 2-2: Component Release Content

Sub System	Component	Version Number or Major Label Identification
Nucleus		NUCLEUS_1.3.1
GPF		U_GPF_1.20.0_IF_GPF_1.20.0
Riviera		20060308_N7X
layer 1		TCS_2.1.1_L1_1453_BERLIN_P1 + TCS_2.1.1_L1_1454_0
L23-ACI		G23M_L23ACI_S6 83
BMI		BMI_N7.X_R7 4.0
dvr_core		TCS_2.1.1_L1_1454_0
drv_app		20060308_N7X
BusyBConfig	BusyB XML common files	TCS2.1_SYSTEM_BUSYB_I3 1
BusyBConfig	Configuration files	TCS2.1_SYSTEM_BUSYB_I3 1
services		20060308_N7X
system		20060308_N7X
system	bootloader	20060308_N7X
system	init_common	20060308_N7X
system	Rtlib	RTS_122E_1.0.4
Tools		G23M_ITM_S4

*the labels in **bold font** have changed since the previous release.

All the source code corresponds to the internal baseline of 2006 week 19.

2.4 Packages

The software program release N7.19 is delivered on Conquest server.

Deliveries are stored in an entry name **n7_19**.

The delivery corresponding to the release N7.19 contains some of the following files packages:

- binaries
- full source
- mixed source object
- documentation
- Nucleus libraries (TI usage only)
- 3rd party products (TI usage only).

2.5 Documents

All the documentation of the N7 platform program release N7.19 is gathered into a documentation package. The sub-system release notes are part of this package.

Table 2-3: Sub-system Release Notes

Documents	Comments
TCS_2.1.1_L1_1454_0_release_note	Layer 1 release notes (unchanged)
n7_19_n11_11_L23_del_notes	Layer 23 release notes
N7_19_N11_11_BSP_del_notes	BSP release notes
N7_19_N11_11_MMI_del_notes	BMI release notes

2.6 Main tools

Table 2-4: List of tools

Tool	Version	Comments
Riviera tracer	1.2	
Trace Multiplexer	1.3	
Fluid	2.31	Flash Loader Utility Independent of Device
ETM	1.13	Enhance Test Mode

To have more details, see the dedicated documentation.

3 Prerequisites

3.1 Build Environment

Refer to Appendix “Getting Started Build Environment” to install the build environment.

In order to build an image, the following third party products are required:

Table 3-1: Build Environment

Product	Version	Remark
OS-Nucleus	1.3	We have modified some files for feature development
Windows OS	Windows 2000 Windows NT Windows XP	Running on 200MHz minimum recommended
ActivePerl	5.6.1.630	
Cygwin		
Java	1.4.2 or newer	

NOTE: The above-mentioned products are not Texas Instruments products and NOT part of the Texas Instruments delivery.

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In addition, the following compiler and linker have been used:

Table 3-2: Additional Build Environment

Tool	Version
TI Compiler TMS470	1.22e
TI Visual linker	1.9902

4 Compatibility

4.1 HW Compatibility

Table 4-1: HW Compatibility

HW Type	Revision	Comments /Delta Description
D-sample board	Rev 3	Calypso / Iota / Clara
Leonardo + board	Rev 2	Calypso / Iota / Rita

5 Memory Usage Information

Table 5: Memory Usage Information

This table depicts the usage of RAM and FLASH.

	pdt_2272		pdt_3272	
	RAM	FLASH	RAM	FLASH
RESERVED (TOTAL)	1879172	4592656	1880536	4594532
USED	-	-	-	-
RESERVED - USED	-	-	-	-
RUN IN RAM	112416		113168	
	DETAILS			
TRAMPOLINE	1472	3584	1472	3584
HOLE [fill = 00000000]	0	4	0	4
HOLE [fill = 00000001]	0	4	0	4
abb.lib	0	984	0	984
aci.lib	57236	549632	57236	549584
aci_dti_mng.lib	44	2336	44	2336
aciext.lib	16	772	16	772
alr.lib	7832	72852	7832	72852
atp.lib	196	25804	196	25804
audio.lib	212	62844	212	62844
audio_bgd.lib	4	968	4	968
bmi.lib	276956	321912	276956	321912
bootloader.lib	40	5036	40	5036
buzzer.lib	0	196	0	196
cc.lib	1144	39872	1144	39872
ccd_na7_db.lib	2304	31156	2304	31156
ccddata.lib	7064	126180	7064	126180
cci.lib	8	2136	8	2136
comlib.lib	44	5592	44	5592
config_gprs_fl.lib	121264	848	121264	848
config_gprs_ir.lib	97652	700	97652	700
cst.lib	184	6148	184	6148
dar.lib	20	8048	20	8048
dar_gbl_var.lib	3316	0	3316	0
dl.lib	960	19052	960	19052
drivers_flash.lib	2008	7716	2008	7716
dti.lib	0	8440	0	8440
etm.lib	884	15588	884	15588
fad.lib	32	9364	32	9364
ffs.lib	2688	25368	2688	25368
ffs_drv.lib	8392	6920	8392	6920
ffs_pcm.lib	1372	2324	1372	2324
frame_na7_db_fl.lib	1552	25396	1552	25396
frame_na7_db_ir.lib	8	14052	8	14052
gdi.lib	996	27036	996	27036
gmm.lib	1212	55768	1212	55768
grlc.lib	7608	49476	7608	49476
grlc_ir.lib	4	1096	4	1096
grr.lib	37732	143548	37732	143548
icn.lib	0	717884	0	717884
kpd.lib	1180	10012	1180	10012
l1_custom_ext.lib	4	5368	4	5368
l1_custom_int.lib	2888	7364	2904	7904
l1_ext.lib	15632	161032	15632	161020

l1_int.lib	5312	61936	5312	61936
l1_pei.lib	96	624	96	624
l2r.lib	2904	16780	2904	16780
lcc.lib	276	12548	276	12548
llc.lib	3244	70468	3244	70468
lls.lib	76	1376	76	1376
main.lib	1116	3992	1116	3968
mfw.lib	9788	121564	9788	121564
mic.lib	3948	366084	3948	366084
misc_na7_db_fl.lib	92	1080	92	1080
misc_na7_db_ir.lib	0	112	0	112
mks.lib	44	2400	44	2400
mm.lib	1168	54704	1168	54704
mms.lib	6352	28892	6352	28892
mmsClient.lib	13004	381112	13004	381112
nexgen.lib	2504	40948	2504	40948
nucleus_flash_nodbg.lib	128	5820	128	5820
nucleus_int_ram_nodbg.lib	1652	9088	1652	9088
osx_na7_db.lib	92	1136	92	1136
power.lib	4	324	4	324
ppp.lib	552	33732	552	33732
ppp_ir.lib	768	3028	768	3028
r2d_drv_custom_flash.lib	16	229420	16	229420
r2d_drv_flash.lib	572	24980	572	24980
r2d_drv_int_ram.lib	78332	12396	78332	12396
ra.lib	144	8368	144	8368
remu_na7_db.lib	4204	4252	4204	4252
riviera_core_flash.lib	14640	36824	14640	36824
riviera_cust_flash.lib	147972	3264	147972	3264
rlp.lib	7816	20336	7816	20336
rr.lib	7744	120288	7744	120288
rtc_drv.lib	652	3240	652	3240
rts16le_flash.lib	2568	13840	2568	13840
rts16le_int_ram.lib	72	4948	72	4948
sim_b_lib.lib	304	22528	304	22528
sim_drv.lib	676	6468	676	6468
sm.lib	5916	15520	5916	15520
sms.lib	1272	48288	1272	48288
sndcp.lib	17764	61644	17764	61644
socket_lib.lib	0	4852	0	4852
spi_drv.lib	8	2612	8	2612
ss.lib	160	4660	160	4660
str2ind.obj	4	24	4	24
t30.lib	212	21900	212	21900
tcpip.lib	81372	14704	81372	14704
tif_na7_db_fl.lib	724	7080	724	7080
tif_na7_db_ir.lib	24	1108	24	1108
tpudrv.lib	148	5092	744	6512
tty.lib	4	1584	4	1584
uart_b_lib.lib	1596	30420	1596	30420
uart_drv.lib	5656	10380	5656	10380
wapmic.lib	665872	52004	665872	52004

6 Solved Issues

6.1 Issues solved in Layer 1

The issues solved in layer 1 are described in the document: TCS_2.1.1_L1_1454_0_release_note

6.2 Issues solved in Layer 23

The issues solved in layer 23 are described in the document: N7_19_N11_11_L23_del_notes.

6.3 Issues solved in BMI

The issues solved in BMI are described in the document: N7_19_N11_11_MMI_del_notes.

6.4 Issues solved in BSP

The issues solved in BSP are described in the document: N7_19_N11_11_BSP_del_notes.

6.5 Issues solved in Drivers files

There is no issue solved as the driver label is keep unchanged for the release N7.19.

6.6 Issues solved in BusyB files

The following table provides an overview of the “BusyB files” issues solved for the release N7.19

OMAPS00074321	Busyb.pl help message uncorrect (clearmake not used anymore)
---------------	--

7 Test Results

Test results are available in a separate document.

8 List of Open Issue Reports

For an up-to-date list of all open Issue Reports for N7 please refer to ClearQuest. Use Personal Queries possibilities to see the appropriate issues with their status.

Appendices

Acronyms

ABB	Analog Base Band	MM	Mobility Management
ACI	Application Control Interface	MMC	Multi Media Card
AEC	Audio Echo Cancellation	MMI	Man Machine Interface
AG	Audio Gateway	MMS	Multimedia Messaging Service
ALR	Adaptation Layer	MUX	Multiplexer
AMR	Adaptive Multi Rate	N/A	Not Applicable
ANR	Ambient Noise Reduction	OE	Open End
API	Application Programming Interface	OPC	Object Push
AQI	Audio Quality Improvement	OPS	Object Push Server
ATA	Anite Test Automation	PM	Power Management
ATP	Agnostic Transport Protocol	PPP	Point to Point Protocol
AUDIO	Audio Services	PTT	Push To Talk
BMI	Basic MMI	PWR	Power Management
DAR	Diagnose And Recover	R2D	Graphical Library
DBB	Digital Base Band	RA	Rate Adaptation
DCFG	Data Configuration	RGUI	Riviera Graphics User Interface (widgets)
DCM	Data Connection Manager	RIV	Riviera
DL	Data Link	RLP	Radio Link Protocol
DM	Device Manager	RNET	TCP/IP general
DMA	Direct Memory Access	RNET_RT	TCP/IP board target
DMG	Dynamic Memory manager	RNET_WS	TCP/IP PC target
DRV	Driver	RR	Radio Resource Management
DSP	Digital Signal Processor	RRLP	Radio Resource Location Protocol
DTI	Data Transfer Interface Library	RTC	Real Time Clock
EAP	Enhanced Application Program	RTEST	Test SW entity
EMS	Enhanced Messaging Service	RTOS	Real Time Operating System
ES	Echo Suppressor	RVF	Riviera Frame
ETM	Enhance Test Mode	RVM	Riviera Manager
FD	Fax and Data	RVMMI	Riviera MMI
FFS	Flash File System	RVMUX	Riviera Trace Multiplexer
FIR	Finite Impulsive Response	RVT	Riviera Trace
FLUID	Flash Loading Utility	RVTEST	Test System
FTS	File Transfer Server	RVTOOL	Riviera Simulator Tool
GMM	GPRS Mobility Management	RVTRACER	Riviera Tracer
GPRS	General Packet Radio Service	SDK	Software Development Kit
GRR	GPRS Radio Resource	SDP	Service Discovery Profile
GSM	Global System for Mobile Communication	SIM	Subscriber Identity Module
GSM-PS	GSM Protocol Stack	SM	GPRS Session Management
HF	Hand free	SMBS	Short Message Bearer Service
HSP	Headset Profile	SMS	Short Message Service
I2C	Inter Integrated Circuit	SPP	Serial Port Profile
IIR	Infinite Impulsive Response	SRV	Service
IP	Internet Protocol	SWE	Software Entity
ITF	Interface	TBC	To be confirmed
JAM	Java Application Manager	TBD	To be defined
KPD	Keypad	TESTFWK	Test Framework
L2R	L2 Relay	TI	Texas Instruments
LC	Location Controller	TTREE	TTCN3 Test Tool
LC2	LoCosto-2M Platform	TTY	Telecommunications Device for the Deaf
LC4	LoCosto-4M Platform	UART_DRV	UART Driver
LLC	GPRS Logical Link Control	UIM	User Interface Module
LLS	Low Level Services	USB	Universal Serial Bus
MDC	Melody Converter	WAP	Wireless Application protocol
MDL	Melody Download		
MFW	MMI Framework		
MFWS	MFW Service		

Getting Started Build Environment

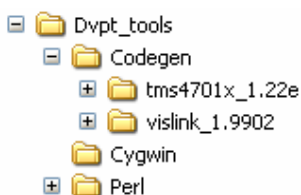
The purpose of this section is to describe briefly the required PC software environment to build a software release.

Software Required on Windows environment

You should have the following tools on your PC in order to build a software release:

- Windows OS (NT, 2000, XP)
- TI Compiler TMS470 release 1.22e
- TI Visual linker version 1.9902
- ActivePerl Package version 5.6.1.630
- Cygwin (Unix like environment for Windows)
- Java 1.4.2 or newer
- Nucleus libraries only for customers external to TI.

You should respect the following directory structure for the installation of the build environment.



Compiler TMS470 1.22e

- You should have a license for this product
- The installation is launched by running the **setup.exe** command from the compiler package
- Install path should be: C:\Dvpt_tools\Codegen\TMS470x_1.22
- Set the system environment variables:
- **PATH_CC_1_22e** must be set to the location of the 1.22 compiler
C:/Dvpt_tools/Codegen/TMS470x_1.22e/NT (for example:
C:/dvpt_tools/codegen/TMS4701x_1.22e/NT)
- Be careful to the following points:
 - Use slash (/) and not back-slash
 - It is as well case-sensitive

Visual Linker 1.9902

- You should have a license for this product
- The installation is launched by running the **VLSetup.exe** command from the compiler package
- Install path should be: C:\Dvpt_tools\Codegen\Vislink_1.9902
- Copy *vlnk.exe* file into the install directory and rename this new file to **vlnk470.exe**
- **PATH_LNK_1_9902** must be set to the location of the 1.22 compiler (for example:
C:/dvpt_tools/codegen/vislink_1.9902)

Microsoft Visual C++ 6.0 required to generate the ccddata_dll.dll

- The build automatically create the ccddata_dll.dll (dll used for debugging).
- Microsoft Visual Studio 6.0 is required only if you want to generate the ccddata_dll.dll file. If this software is not installed, you will have a warning message only.
- You should have a license for this product
- Assuming that the install path of Microsoft Visual C++ is C:\Program Files\Microsoft Visual Studio, you need the following environment variables:
- **include**=C:\Program Files\Microsoft Visual Studio\VC98\at\include;C:\Program Files\Microsoft Visual Studio\VC98\mf\include;C:\Program Files\Microsoft Visual Studio\VC98\include
- **lib**=C:\Program Files\Microsoft Visual Studio\VC98\mf\lib;C:\Program Files\Microsoft Visual Studio\VC98\lib
- And in **PATH**, you must add C:\Program Files\Microsoft Visual Studio\Common\Tools\WinNT; C:\Program Files\Microsoft Visual Studio\Common\MSDev98\Bin; C:\Program Files\Microsoft Visual Studio\Common\Tools; C:\Program Files\Microsoft Visual Studio\VC98\bin;

ActivePerl

- You should have the ActivePerl version 5.6.1 package 629 or 630
- Respect Perl instructions for installation
- Install path should be: C:\Dvpt_tools\Perl

Cygwin

- Download the latest package release from <http://www.cygwin.com>
- Install path should be: C:\Dvpt_tools\Perl
- Run setup.exe
- Select "Install from Internet". Click on "Next" button
- Use C:\Dvpt_tools\Cygwin as root directory
- "Default text file type" must be set to "Unix"
- Click on "Next" button twice
- Packages to install:
 - In *Admin* select everything
 - In *Base*, select everything
 - In *Devel*, select everything
 - In Maths, select bc
 - In Perl, select **uninstall**
 - In Shells, select tcsh
- Use default settings for everything else
- Disable the creation of shortcuts on desktop and in start menu. Click on "Next" button.
- In C:\Dvpt_tools\Cygwin\bin:
 - copy **make.exe** two times;
 - rename one copy in **gmake.exe**
 - and the other one in **gnumake.exe**
 - rename **link.exe** in **link_nok.exe**

Add C:\Dvpt_tools\Cygwin\bin to your system environment variable path at first position

Java

Respect Java instructions for installation

Add the `installdir\Java\j2re1.4.2\bin` to the system environment variable ***path***

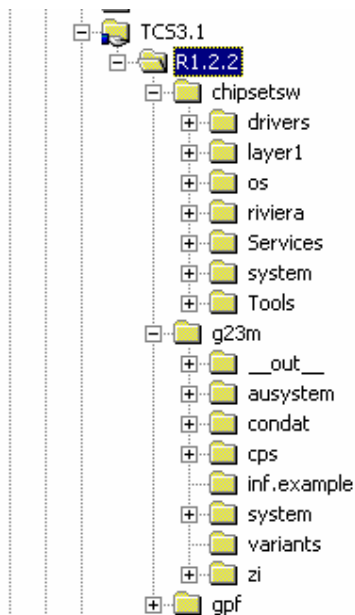
Nucleus libraries

- Customer must have a source code license for Nucleus product.
- Customer has to build the Nucleus libraries. These libraries must be in:
 - `\chipsetsw\os\nucleus\...` for version 1.03

Start Building

Prepare Your Workspace

Once you install the release package, you can see that the software is split several directories which contains the different subsystems.



Launch Unified BusyB script

To use it:

- Open a Command Window in your workspace\g23m directory
- Enter the following command
\g23m> perl nds_busyb.pl -f system\busyb\productdefs\variant.xml

For instance: **perl nds_busyb.pl -f system\busyb\productdefs\pdt_3272.xml**

All build output (target images, libs, etc.) are generated in directory "`\g23m__out__\<target-name>\...`"
Generated makefiles are stored in \g23m folder