

6 DETAILED DELIVERY CONTENTS

6.1 CODE

The code listed below resides in ClearCase and thus the directories reflect the ClearCase directory structure.

6.1.1 L3 Products PGE Production code

/vobs/L3_Products	
L3_A_OutputData.cpp	L3_A_OutputData.h
L3_A_Product.cpp	L3_A_Product.h
L3_C_AveragedOutput.cpp	L3_C_AveragedOutput.h
L3_C_AveragedProduct.cpp	L3_C_AveragedProduct.h
L3_C_ControlParamInput.cpp	L3_C_ControlParamInput.h
L3_C_DailyOutput.cpp	L3_C_DailyOutput.h
L3_C_DailyProduct.cpp	L3_C_DailyProduct.h
L3_C_DatabaseInput.cpp	L3_C_DatabaseInput.h
L3_C_FileLevelData.cpp	L3_C_FileLevelData.h
L3_C_InputData.cpp	L3_C_InputData.h
L3_C_OSPInput.cpp	L3_C_OSPInput.h
L3_C_PlottingOSPInput.cpp	L3_C_PlottingOSPInput.h
L3_C_Products_AI.cpp	L3_C_Products_AI.h
L3_C_Products_Algor.cpp	L3_C_Products_Algor.h
L3_Products_Main.cpp	L3_S_GMTUtility.h
L3_S_GMTUtility.cpp	L3_S_PlottingUtility.h
L3_S_PlottingUtility.cpp	L3_S_TemplateInterpreter.h
L3_S_TemplateInterpreter.cpp	Makefile.local.in

6.2 FILES

All files listed below also reside in ClearCase.

6.2.1 Control Files

```

/vobs/L3_Products/control_files
  setup_env
  L3_Products_def.dat
  L3_prodcut.pcf

```

6.2.2 Delivery Files

(symbolic links)

/vobs/L3_products/delivery

/bin

L3_Products_Main

libL3_Products.a

/control_files

L3_product.pcf

L3_Products_def.dat

setup_env

error_code.h

/control_files/im_config

coder.xml

configure.xml

english.xml

log.xml

thresholds.xml

type-solaris.xml

type.xml

colors.xml

delegates.xml

locale.xml

magic.xml

type-ghostscript.xml

type-windows.xml

/control_files/share

gmt.conf

/control_files/share/coast

binned_border

c.cdf

binned_border_l.cdf

binned_GSHHS_i.cdf

binned_river_c.cdf

binned_river_l.cdf

binned_border_i.cdf

binned_GSHHS_c.cdf

binned_GSHHS_l.cdf

binned_river_i.cdf

/control_files/share/cpt

GMT_cool.cpt

GMT_globe.cpt

GMT_jet.cpt

GMT_rainbow.cpt

GMT_seis.cpt

GMT_copper.cpt

GMT_gray.cpt

GMT_no_green.cpt

GMT_red2green.cpt



GMT_split.cpt
GMT_drywet.cpt
GMT_haxby.cpt
GMT_ocean.cpt
GMT_relief.cpt
GMT_topo.cpt
GMT_gebco.cpt
GMT_hot.cpt
GMT_polar.cpt
GMT_sealand.cpt
GMT_wysiwyg.cpt

/control_files/share/pslib

ISO-8859-10.ps
ISO-8859-1.ps
ISO-8859-5.ps
ISO-8859-9.ps
PSL_label.ps
Standard+.ps
ISO-8859-13.ps
ISO-8859-2.ps
ISO-8859-6.ps
ISOLatin1.ps
PSL_prologue.ps
ISO-8859-14.ps
ISO-8859-3.ps
ISO-8859-7.ps
ISOLatin1+.ps
PSL_text.ps
ISO-8859-15.ps
ISO-8859-4.ps
ISO-8859-8.ps
PS_font_info.d
Standard.ps

/control_files/share/time

br.d
cn2.d
dk.d
es.d
fr.d
hu.d
il.d
it.d
nl.d
pl.d
ru.d
sg.d
tr.d
us.d
cn1.d
de.d
eh.d
fi.d



gr.d
 ie.d
 is.d
 jp.d
 no.d
 pt.d
 se.d
 to.d
 uk.d

/MCF

TES.MCF
 TL3ACETM.006.MCF
 TL3ACETD.006.MCF
 TL3ATM.006.MCF
 TL3CH4D.006.MCF
 TL3COD.006.MCF
 TL3H2OD.06.MCF
 TL3HCND.006.MCF
 TL3HCNM.006.MCF
 TL3HDOD.006.MCF
 TL3O3D.006.MCF
 TL3ATD.006.MCF
 TL3CH4M.006.MCF
 TL3COM.006.MCF
 TL3H2OM.006.MCF
 TL3HDOM.006.MCF
 TL3O3M.006.MCF

/scripts

archive_target

/test

in
 L3_Products_test_run2147.sh
 L3_Products_def.dat
 out
 tmp

6.2.3 MCF Files

/vobs/L3_Products/MCF
 TES.MCF

(symbolic links)

TES.MCF
 TL3ACETM.006.MCF
 TL3ACETD.006.MCF
 TL3ATM.006.MCF
 TL3CH4D.006.MCF
 TL3COD.006.MCF
 TL3H2OD.06.MCF



TL3HCND.006.MCF
 TL3HCNM.006.MCF
 TL3HDOD.006.MCF
 TL3O3D.006.MCF
 TL3ATD.006.MCF
 TL3CH4M.006.MCF
 TL3COM.006.MCF
 TL3H2OM.006.MCF
 TL3HDOM.006.MCF
 TL3O3M.006.MCF

6.2.4 Test Files

/vobs/L3_products/test
 L3_Products_test_run2147.sh
 clean_test_dir.sh
 L3_Products_test_monthly_byMonth.sh
 L3_Products_test_daily_byRun.sh
 L3_Products_test_monthly_byRun.sh

(symbolic link)
 L3_Products_def.dat

/vobs/L3_products/test/in
 Aug06_CO_681hPa_monthly.asc
 run4413_CO_681hPa_daily.asc
 run4413_CO_681hPa_dot.asc
 run4413_CO_681hPa_triangles.asc
 valgrind.supp

(symbolic links)
 L3_product_pcf
 L3_Products_def.dat

6.2.5 Level 3 Operational Support Files (OSP)

For the following OSP tables, **#{L3_OSP_PATH}** designates **/vobs/Support/osp/L3**.
 The OSP files are delivered using scripts in **/vobs/Support/osp/L3/delivery/OSP-13.01.00**.

L3_Algorithm_OSP.asc	File contains the pre-computed constraints for O3 (Nadir)
L3_Color_Table_OSP.cpt	File contains the L3 plot color table parameters
L3_Plotting_OSP.asc	File contains the L3 pressure levels, VMRs, TATM and other pre-computed constraints and thresholds.
L3_TemplateNamingMap_OSP.asc	File contains the L3 file naming template parameters.

6.3 BUILD ENVIRONMENT

6.3.1 Environment Variables

Below is a table listing of the environment variables used to build and run for Release 15.00.00.

VARIABLE	VALUE
ORACLE_BASE	/pkg/ora10g/1020client
ORACLE_HOME	/pkg/ora10g/1020client
ORACLE_DOC	/pkg/ora10g/1020client/doc
ORACLE_PATH	/pkg/ora10g/1020client/bin
SID	<your id>
ORACLE_SID	<your oracle id>
DB_USER	<your db user id>
DB_PWD	<your db password>
L3_OSP_PATH	<path to L3 OSP files>
GMTHOME	<path to L3 control files/share directory>
FWErrorFile	./error file.dat
FFTWHOME	/pkg/local/fft3.1-32E4
PGSHOME	/pkg/pgs/SDPTK5.2.14v1
PGSLIB	/pkg/pgs/SDPTK5.2.14v1/lib/linux
MAGICK_CONFIGURE_PATH	<path to L3 control_files/share/im_config directory>
PGS_PC_INFO_FILE	“<dir_path where PCF resides>”
ErrorCodeFile	“<dir_path for error_code.h>” (found on dev. System at /vobs/Framework/Exception/error_code.h)
LM_LICENSE_FILE	“port@runtime IDL license server” (i.e. – 8200@BORGO)
DEVICE_NULL	YES (disables X display for parallel runs)
LD_LIBRARY_PATH	/pkg/lang/gcc-3.4.5_64/lib:/usr/lib:\$ORACLE_HOME/lib32:\$ORACLE_HOME/lib:/pkg/local/ImageMagick-6.3.2/lib

6.3.2 ClearCase Configuration Specification (Config Spec)

The following is how the configuration specification file should be set in order to view and access the directories and files needed for L3_Products PGE in ClearCase for R15.00.00.



Release 15.00.00:

```

#element * CHECKEDOUT

# Documents
element /vobs/doc/...          L3PR-15.00.00-Delivered

# Framework
element /vobs/Framework/...    FWXX-14.00.00-Delivered

# Shared libraries
element /vobs/Shared/...       ShFW-14.00.00-Delivered

# Operational Support Files
element /vobs/Support/osp/L3/... L3PR-13.01.00-Delivered

# MCF files
element /vobs/MCF/...          TESX-15.00.00-Delivered

# L3_Products PGE
element /vobs/L3_Products/...   L3PR-15.00.00-Delivered

#element * /main/LATEST

```

The following is how the configuration specification file should be set in order to view and access the directories and files needed for L3_Products PGE in ClearCase for R11.00.00.

Release 11.00.00:

```

#element * CHECKEDOUT

# Documents
element /vobs/doc/...          L3PR-11.00.00-Delivered

# Framework
element /vobs/Framework/...    FWXX-11.00.00-Delivered

# Shared libraries

```



```

element /vobs/Shared/...      ShFW-11.00.00-Delivered

# Operational Support Files
element /vobs/Support/osp/L3/...  L3PR-10.01.00-Delivered

# MCF files
element /vobs/MCF/...          TESX-11.00.00-Delivered

# L3_Products PGE
element /vobs/L3_Products/...    L3PR-11.00.00-Delivered

#element * /main/LATEST

```

The following is how the configuration specification file should be set in order to view and access the directories and files needed for L3_Products PGE in ClearCase for R10.02.00.

```

Release 10.02.00:

#element * CHECKEDOUT

# Documents
element /vobs/doc/...          L3PR-10.01.00-Delivered

# Framework
element /vobs/Framework/...    FWXX-10.00.00-Delivered

# Shared libraries
element /vobs/Shared/...      ShFW-10.00.00-Delivered

# Operational Support Files
element /vobs/Support/osp/L3/...  L3PR-10.01.00-Delivered

# MCF files
element /vobs/MCF/...          TESX-10.00.00-Delivered

# L3_Products PGE
element /vobs/L3_Products/...    L3PR-10.02.00-Delivered

#element * /main/LATEST

```



The following is how the configuration specification file should be set in order to view and access the directories and files needed for L3_Products PGE in ClearCase for R10.01.00.

Release 10.01.00:

```
#element * CHECKEDOUT

# Documents
element /vobs/doc/...          L3PR-10.01.00-Delivered

# Framework
element /vobs/Framework/...    FWXX-10.00.00-Delivered

# Shared libraries
element /vobs/Shared/...       ShFW-10.00.00-Delivered

# Operational Support Files
element /vobs/Support/osp/L3/... L3PR-10.01.00-Delivered

# MCF files
element /vobs/MCF/...          TESX-10.00.00-Delivered

# L3_Products PGE
element /vobs/L3_Products/...   L3PR-10.01.00-Delivered

#element * /main/LATEST
```

The following is how the configuration specification file should be set in order to view and access the directories and files needed for L3_Products PGE in ClearCase for R10.00.00.

Release 10.00.00:

```
#element * CHECKEDOUT

# Documents
element /vobs/doc/...          L3PR-10.00.00-Delivered

# Framework
element /vobs/Framework/...    FWXX-10.00.00-Delivered

# Shared libraries
element /vobs/Shared/...       ShFW-10.00.00-Delivered
```



```
# Operational Support Files
element /vobs/Support/osp/L3/... L3PR-10.00.00-Delivered

# MCF files
element /vobs/MCF/... TESX-10.00.00-Delivered

# L3_Products PGE
element /vobs/L3_Products/... L3PR-10.00.00-Delivered

#element * /main/LATEST
```

6.4 BUILD INSTRUCTIONS

6.4.1 Instructions for ClearCase (on TES test beds)

Set ClearCase view: `cleartool setview <user_view>`
(see ClearCase Cookbook)

Update ClearCase configuration setup: `cleartool edcs`
(see previous section 6.3.2)

6.4.2 Instructions for rebuilding Framework

Change directory to “Framework”: `cd /vobs/Framework`

Clean the vob: `clearmake -C gnu clean`

Run the top level make script by typing: `./buildFw_gmake`

6.4.3 Instructions for rebuilding the Shared subsystem

Change directory to “Shared”: `cd /vobs/Shared`

Build the Shared library: `./buildShared`

6.4.4 Instructions for building L3 Products PGE

Change directory to: `cd /vobs/L3_Products`



Compile the source code: `clearmake -c gnu -u lib`

Build L3_Products main program: `clearmake -c gnu -u HOW=opt main`

This will build the L3 Products PGE. Confirm existence of L3 Products file executable:

```
ls -l bin/L3_Products_Main
```

To run L3_Product PGE refer to “TES L3 Products PGE Specification” section 2.3.

6.4.5 Instructions for delivering L3 Products PGE to SIPS

After successfully building Framework, Shared, and L3_Products_Main PGE, create the delivery package.

Change directory to the L3 Products_Main delivery area:

```
cd /vobs/L3_Products/delivery/scripts
```

Run the recursive archival script by typing: `./archive_target`

Two new files are created:

```
/vobs/L3_Products/delivery/unpack_L3_Products  
/vobs/L3_Products/delivery/receipt_L3_Products
```

The archive receipt “receipt_L3_Products_receipt” is created during the archival process to allow version mapping of the files once they leave ClearCase. The file contains the subsystem name, date stamp, ClearCase config spec used, long listing of the source file used (showing which files were taken out of ClearCase via symlinks) and the target file listing (showing all the files on the delivery end without symlinks). Additionally, two files are generated in the “./docs” directory.

- 1) delivery_config_specs.txt – config spec used to create delivery package
- 2) PGE_config_records.txt – configuration record of delivered PGE executable

Transfer these files to the target machine, ensuring they reside in the same directory. Log into the target machine and change the working directory to that where the delivered files reside.

Unpacking the Archive



Transfer the delivery files to the target machine, ensuring they reside in the same directory. Log into the target machine and change the working directory to that where the delivered files reside.

Change directory to the working directory for SIPS.

```
cd <SIPS_working_directory>
```

Copy the following files to your directory on the testing system:

```
cp /vobs/L3_Products/delivery/15.00.00-Delivered/unpack_L3PR_R15.00.00  
./  
cp /vobs/L3_Products/delivery/15.00.00-Delivered/receipt_L3_Products ./
```

Then execute the `unpack_L3_Products` script to verify the build and unpack the archive:

```
./unpack_L3PR_R15.00.00
```

6.4.6 Instructions for delivering L3 Products OSP to SIPS

Change directory to the L3 OSP delivery area:

```
cd /vobs/Support/osp/L3/delivery/scripts
```

Run the recursive archival script by typing: `./archive_target`

Two new files are created:

```
/vobs/ Support/osp/L3/delivery/unpack_L3_OSP  
/vobs/ Support/osp/L3/delivery/receipt_L3_OSP
```

The archive receipt “`receipt_L3_OSP`” is created during the archival process to allow version mapping of the files once they leave ClearCase. The file contains the subsystem name, date stamp, ClearCase config spec used, long listing of the source file used (showing which files were taken out of ClearCase via symlinks) and the target file listing (showing all the files on the delivery end without symlinks). Additionally, two files are generated in the “`../docs`” directory.

- 3) `delivery_config_specs.txt` – config spec used to create delivery package
- 4) `PGE_config_records.txt` – configuration record of delivered PGE executable

Transfer these files to the target machine, ensuring they reside in the same directory. Log into the target machine and change the working directory to that where the delivered files reside.

Unpacking the Archive

Transfer the delivery files to the target machine, ensuring they reside in the same directory. Log into the target machine and change the working directory to that where the delivered files reside.

Change directory to the working directory for SIPS.

```
cd <SIPS_working_directory>
```

Copy the following files to your directory on the testing system:

```
cp /vobs/Support/osp/L3/delivery/unpack_L3_OSP ./  
cp /vobs/Support/osp/L3/delivery/receipt_L3_OSP ./
```

Then execute the unpack_L3_OSP script to verify the build and unpack the archive:

```
./unpack_L3_OSP
```

[NOTE: Ensure that the L3 OSP directory has been installed before continuing.]

```
ln -s <SIPS_working_directory>/OSP-14.00.00  
Verify that the L3 OSP directory has been installed.
```



APPENDICES



APPENDIX A RDD ACCEPTANCE CRITERIA

The following acceptance criteria shall be used in reviewing the RDD:

1. The RDD contains a description of all capabilities originally planned for this version. Any liens to the subsystem release plan are enumerated as well. Operations procedures, constraints, workarounds or other idiosyncrasies relevant to this release are clearly defined in the RDD.
2. All referenced test results and test reports are documented and have been catalogued in the configuration management system.
3. Machine-specific build requirements are specified in the RDD.
4. Runtime environment computer resources are specified in the RDD.



APPENDIX B TABLE OF FUNCTIONAL REQUIREMENTS

The table of Functional Requirements lists all requirements satisfied by L3 Products PGE for Release 15.0. The Requirements column contains the requirement number followed by a description of the requirement.

[Not Available]