

NAME

grl2lnt – GRL to LNT translator

SYNOPSIS

grl2lnt [**-print** *pp_file.grl*] [**-silent** | **-verbose**] [**-version**] [**-about**] [**-ignore**] [**-warnings**] [**-merge**] [**-sync**] [**-warning**] [**-showall**] [**-onlyroot**] [**-force**] [**-relabel**] [**-root** *system*] *filename.grl*

DESCRIPTION

GRL (GALS Representation Language) is an imperatively styled specification language for GALS systems. The **grl2lnt** program translates a GRL specification to a LNT specification.

The input to **grl2lnt** is a GRL file, which must have the extension **.grl**. If the user does not specify the extension **.grl** on the command line, it will be appended automatically and **grl2lnt** will read *filename.grl* as input.

The principal output of **grl2lnt** is a LNT specification named *filename.lnt*. An auxiliary file can also be generated if external C code is required, namely *filename.fnt*, which contains C code for interfacing external data types and functions.

To avoid clashes between generated files and user-written files, **grl2lnt** writes a special tag at the beginning of each generated file. This tag is a comment containing the name and the version of **grl2lnt** that generated the file. **grl2lnt** uses this tag to prevent **grl2lnt** from overwriting a file that was not generated by itself: if the output file already exists but has no special tag or has an invalid tag indicating that the file was not generated by the right tool, **grl2lnt** issues an error message and stops.

OPTIONS**-print pp_file.grl**

Perform syntax and semantic analysis of *filename.grl*, prints an indented form of the file in *pp_file.grl* and stops execution.

-silent

Execute silently, reporting only errors. This is the opposite of **-verbose**. The default option is **-verbose**.

-verbose

Report activities and progress, including errors, to the user's screen. This is the opposite of **-silent**. The default option is **-verbose**.

-version

Display the tool version and exit.

-about

Display information about the tool.

-ignore

Do not stop execution after an error is issued, force the generation of an LNT file (possibly with errors).

-warnings

Stop execution when a warning is issued and exit with status 1.

-merge

Use merge mode. It simulates the merge of transitions with adding a special merged transition and hiding everything else.

-sync

Use synchronous mode. It enables the generation of merged transitions. The option should be used only on synchronous programs.

-warning

No warning is issued.

-showall

Show all transitions.

-onlyroot

Translate only root system.

-force

Overwrite the output files, even if they were edited by the user or do not need to be updated.

-relabel

Generate a rename file to match formal definition of LTS labels (required by other tools).

-root instantiation

where *instantiation* can take two different forms: **system**, or a character string of the form "*system* (*X1*, ..., *Xn*)" where *X1*, ..., *Xn* are values of the constant parameters of the system. It is highly recommended to type given parameters using syntax *of type*.

If the option is specified, only the system **system** will be treated. **grl2lnt** will generate a Main process calling the process of the root system in the LNT specification. By default, if the **-root** option is absent, it is assumed that there is only one system in the program or that there exists a system called **Main**.

OPERANDS

<i>filename.grl</i>	GRL specification (input)
pp_file.grl	GRL code (optional output)
<i>filename.lnt</i>	LNT code (output)
<i>filename.fnt</i>	C code (optional output)
<i>filename.ren</i>	rename file (optional output)

ENVIRONMENT VARIABLES**\$GRL_LOCATION**

Needed. The path of directory where GRL is installed.

FILES

\$GRL_LOCATION/lnt/GRL_V1.lnt	GRL predefined library (LNT code)
\$GRL_LOCATION/incl/GRL_V1.h	GRL predefined library (C code)

EXIT STATUS

If the translation was successful the exit status is 0. If any error occurred during translation, the exit status is 1 and error messages are issued.

AUTHORS

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SEE ALSO

grl(LOCAL), **grl.open(LOCAL)**, **lnt.open(LOCAL)**, **lnt2lotos(LOCAL)**, **caesar.adt(LOCAL)**, **caesar(LOCAL)**.

Additional information is available from the CADP Web page located at <http://cadp.inria.fr>
Directives for installation are given in files **\$GRL_LOCATION/INSTALLATION**.

Recent changes and improvements to this software are reported and commented in file **\$GRL_LOCATION/VERSION**.

BUGS

Some incorrect GRL programs may be accepted by **grl2lnt** and translated into LNT. However, errors will be detected by the LNT and LOTOS compilers **lnt2lotos**, **caesar** and **caesar.adt**.

Please report any bug to cadp@inria.fr