

SNiFF+TM

Version 3.2 for Unix and Windows

Integrating ILOG VIEWS



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Credits

The first version of Sniff was developed at the Informatics Laboratory of the Union Bank of Switzerland. Its development was considerably facilitated by the public domain application framework ET++.

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Integrating ILOG VIEWS

Introduction

This paper gives instructions on how to integrate the ILOG tool suite—ILOG VIEWS with SNIFF+. If the necessary makefiles are not part of your SNIFF+ installation, please contact TakeFive Software at the email addresses given in [Feedback — page 5](#).

Version and Compatibility information

This integration was implemented and tested with SNIFF 3.0.x and ILOG VIEWS 3.0.

Assumptions made in this paper

This paper should be read by anyone intending to use one of the ILOG tools with SNIFF+'s workspace and make support features. It is assumed that the reader is familiar with the basic concepts of both sides of this integration—with the ILOG tool the reader intends to use and with SNIFF+'s workspace and make support features. Furthermore it is assumed that both tools have already been installed and set up.

Feedback

Your feedback is always welcome. If there are aspects of this document that are unclear to you, or if you have any questions or comments concerning SNIFF+'s integration with the ILOG tool suite please send an e-mail to the addresses listed below:

TakeFive Support

Europe:

sniff-support@takefive.co.at

USA:

sniff-support@takefive.com

Other Useful links

SNIFF+ web pages:

- SNIFF+ Users Mailing List

<http://www.takefive.com/support/sniff-list.html>

- SNIFF+ Users Mailing List Archive

<http://www.takefive.com/sniff-list>

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- Frequently Asked Questions

<http://www.takefive.com/support/faq.html>

- Customer Newsletter

http://www.takefive.com/news/customer_newsletter.htm

ILOG Views

What does this integration allow me to do?

The ILOG Views integration allows you to make use of SNIFF+'s entire make support, including support for using make in a shared environment. The entire build process can be done using SNIFF+'s GUI. Furthermore, you can use SNIFF+'s edit, browsing, code comprehension and debugging features with ILOG Views.

When you generate code with ILOG Views, SNIFF+ is notified when source files have been modified or newly created. SNIFF+ then automatically updates the project description files and/or Symbol Table files.

Furthermore, you can browse the complete interface to the ILOG Views libraries by setting up SNIFF+ projects for your ILOG Views projects.

Setting up automatic notifications to SNIFF+

In order for ILOG Views to send notifications to SNIFF+, you need to recompile `ivstudio` with:

- the `main.cc` source modified by ILOG Germany and TakeFive Software provided with this integration
- a new `studio.cmd` provided with this integration

To recompile `ivstudio`:

- copy the `main.cc` file provided by TakeFive Software to
`/usr/ilog/views30/studio/src`
 and `studio.cmd` to
`/usr/ilog/views30/studio/data`
- Change to `/usr/ilog/views30/studio/<your_platform>` and run
`make ivstudio`

To be able to invoke `ivstudio` directly from the SNIFF+ GUI, you might want to define a custom menu in the Project Editor. To define the custom menu, enter the following lines of code in your custom menu file:

```
^Project Editor
shell "Start ivstudio.." "ivstudio &"
```

For details about defining custom menus in SNIFF+, please refer to the *Reference Guide*.

Working with ILOG Views and SNIFF+

Creating file types for the ILOG Views application

In order for ILOG Views to send automatic notifications to SNIFF+ projects when files are generated in it, you must create SNIFF+ file types for the ILOG Views application and panel description files.

The signatures of the files types must map to the signatures of the ILOG Views panel description files:

- *.ilv
- *.iva

We recommend that you create a subdirectory in your SNIFF+ project directory for data files of these file types. Then, enter the name of this directory in the **Directory** field of both file types. The files generated by ILOG Views will then be automatically added to your SNIFF+ project.

Furthermore, make sure that ILOG Views generates the source and header files in the SNIFF+ project directory, and the data files in the subdirectory for data files.

Browsing code generated with ILOG Views in SNIFF+

If you intend to generate code with ILOG Views which you later plan to browse in SNIFF+:

1. Start SNIFF+.
2. Use the custom menu to start `ivstudio`.
3. Open the SNIFF+ project to which the generated code files are to be added. If the generated files are not newer versions of files that are already part of the SNIFF+ project, you will have to add them to the project.

Note

If you are adding new files to the SNIFF+ project, first check out its project description file!

4. If the generated files are to override local files that have already been checked in with SNIFF+, check out these files to your Private Working Environment.

You are now ready to generate code with ILOG Views. When you generate code, SNIFF+ will:

- add the generated files to the SNIFF+ project
- reparse the generated files if identically-named files already exist in the project
- update the project's make support files

If your include path specification is no longer up-to-date, press the **Generate...** button in the project's make attributes to regenerate the include directives.

Setting up the make support for ILOG Views

The ILOG Views include and library directories need to be defined in your platform-specific makefile. SNIFF+ will then use these macros when generating the SNIFF+ project's makefile. To define the ILOG Views include and library directories:

1. Enter the following definitions in your

\$SNIFF_DIR/make_support/\$PLATFORM.mk file:

```
# ILOG Views home directory
ILV_HOME = $(ILVHOME)
# binary, library and include directories
ILV_BINDIR = $(ILV_HOME)/bin/$(ILB_SYSTEM)
ILV_LIBDIR = $(ILV_HOME)/lib/$(ILB_SYSTEM)
ILV_INCDIR = $(ILV_HOME)/include
```

2. Insert the include path macro (defined in the platform-specific makefile) in the **Include Directive(s)** section of the project makefile.

```
# Include directive(s)
INCLUDE = $(SNIFF_INCLUDE) -I$(ILV_INCDIR)
```

If the project's target is an executable, enter

```
$(ILV_LIBS)
```

in the field to the right of the **Executable** field in the project's make attributes. The ILOG Views libraries will be linked to the project's executable.

If the project's target is a relinkable object, enter

```
$(ILV_LIBS)
```

in the field to the right of the **Relinkable Object** field in the project's make attributes. The ILOG Views libraries will be linked to the project's relinkable object.

Exploring the ILOG Views libraries

In order to extract symbol information from the ILOG Views libraries, you will have to create a SNIFF+ project that contains the header files describing the interface to the libraries.

Furthermore, when creating the SNIFF+ project, you should specify a destination directory for SNIFF+ – generated files. Since the ILOG Views include directory is generally read-only for most users, having SNIFF+ store its generated files in it is not advisable.

To create an **ILOG Views interface** project, please complete the following steps:

1. Create a directory for the SNIFF+ – generated files (e.g., PDFs and `.sniffdir`). Make this directory read-only for all members of your development team (except yourself):

```
mkdir ilv_lib
```

2. In SNIFF+'s Launch Pad, choose **New Project... > with Defaults...** from the **Project** menu.
3. In the Directory dialog that appears, select the directory containing the ILOG Views header files.

Example:

```
/usr/ilog/views30/include/ilviews
```

The **General** view of Attributes of New Project dialog appears.

4. Make sure that the new project is an absolute project (specified by the **Project Type** attribute).
5. In the **Destination Directory** field, enter the absolute path of SNIFF+ – generated files director - you created in step 1.) above.

Example:

```
/<anywhere_in_your_file_system>/ilv_lib
```

6. Under the **General** node, select **Advanced**.
7. Enter the same path from the previous step in the **Generated Files Directory**. Make sure that the **Tool Status Files** are also saved there (default).
8. Select the **Parser** node.
9. Enable the **Use Standard Header Dependencies** check-box.
10. Enable the **Preprocess Source Code before Parsing** check-box.
11. If necessary, select **Directives** under the **Build Options** node and enter preprocessor directives in the **Preprocessor Directive(s)** field.
12. Press the **Ok** button at the bottom of the view to generate the project.

SNIFF+ will now generate the project. SNIFF+ immediately opens the project after it has been generated.

13. Open the Project Attributes dialog for the project.

-
14. Select **Directives** under the **Build Options** node and press the **Generate...** button.

The include directives for the project will be generated. In most cases, the include path for ILOG Views is:

-I . .

15. Press the **Ok** button to save the project attributes.
16. In the Project Editor, force reparsing the project by choosing the **Force Reparse** command in the **Project** menu.

The project will be reparsed with the correct include path for the preprocessor. All symbols in the project can now be properly displayed in SNIFF+.
17. Open the Project Attributes dialog for the project.
18. Enable the **Read Only** check-box in the **General** view to make the project read-only and press the **Ok** button to save the project attributes.
19. In the Launch Pad, choose the **Save Project *project-name*** command from the **Project** menu to save the project.
20. Make this project a subproject of your ILOG Views-SNIFF+ project.

You can now browse the entire interface to the ILOG Views library.