

Introduction to Vaucanson

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Vaucanson, a C++ generic library for weighted finite state machine.

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Overview

Firstly initiated by Jacques Sakarovitch in 2000, Vaucanson is a project developed by the Ecole Nationale Supérieure des Télécommunications [1] and the EPITA Research and Development Laboratory (LRDE) [2].

The goal of this library is to enable the development of C++ programs in an abstract and general way with, at the same time, a large specialization power. Indeed, on the one hand, we can write algorithms working on every automaton with weights over any semirings and with words from any free monoids. And on the other hand, a particular algorithm can be specialized for a particular data structure implementing only a pseudo behaviour.

Yet, Vaucanson is an ongoing development project. Therefore algorithms, data structures and the general architecture are not totally stable and well tested.

In the `doc/help` directory, you can find a short howto to start programming with Vaucanson. The `src` directory contains several demonstrations, but you can also look at the `include/vaucanson/algorithms` to be introduced to the basics of Vaucanson.

Please send any question or comments to `vaucanson@lrde.epita.fr`, and bug reports to `vaucanson-bugs@lrde.epita.fr`.

Installation

See the documentation file `INSTALL.txt` for installation instructions.

¹ <http://www.enst.fr>

² <http://www.lrde.epita.fr>

See Also

There are other sources of interest in the distribution.

- Headline news about the project can be found in the file `NEWS` at the root of the source tree.
- Documentation about the XML I/O subsystem can be found in the `doc/xml` subdirectory.
- The library reference manual, generated by [Doxygen](#), is located in `doc/ref`. It comes distributed as an archive of HTML files called `ref.tar.gz`.
- Information about the test suite generation mechanism can be found in the file `src/tests/test-suites/README`.
- There are some demonstration programs distributed with the project. See the `src/demos` subdirectory. Some of these are noteworthy:
 - Usage examples in subdirectories `src/demos/samples` and `src/demos/xml/samples`.
 - Vaucanson-FSM (`src/demos/fsm/README.txt`) is aimed at providing an emulation of the FSM toolbox [3].
 - Vaucanswig (`src/demos/vaucanswig/doc/README.txt`) is aimed at providing a dynamic language interpreter to the Vaucanson library.

Licence

Vaucanson is released under the GNU Lesser General Public Licence. See the file `COPYING` (at the root of the source tree) for details.

Contacts

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³ <http://www.research.att.com/~mohri/fsm/>

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