Using RoilaLib

# What is RoilaLib?

RoiliaLib is a Java library designed to make it easy to build software solutions that use ROILA ([www.roila.org](http://www.roila.org).) It is split up into two main parts: speech recognition and speech synthesis. The speech recognition software used is called SPHINX, and the speech synthesis software used is called Festival.

# Pre-requisites

RoilaLib requires Java Runtime Environment version 6 or later. It also requires Festival to be installed on the system, which is currently only supported on Linux. SPHINX is written in Java and is packaged inside RoilaLib, so isn’t required.

RoilaLib will still work on Windows for speech recognition. This could still be used with another speech synthesis library or program outside of RoilaLib.

# How to use: Recognition

The package you will need to use is org.roila.Sphinx. The main functions exposed to you are:

* Sphinx(): The standard constructor
* Sphinx(String location): Alternate constructor allowing you to specify the location of roila.config.xml
* String Listen(): Will listen for infinite length of time until a phrase is recognised. Will return a string.
* String Listen(int milliseconds): Will listen for a set period of time (milliseconds) or until a phrase is recognised. Will return a string, null if timeout.
* Boolean Init(): will initialise the listener. If you don’t invoke this manually, it will be invoked the first time you run Listen() or Listen(int). This gives you greater control of when to prompt the user to speak.
* String Listen(int milliseconds, Boolean debug): Same as String Listen(int milliseconds) except with a debug flag. When set to true, debugging messages will be output to the standard output.

## Sample Code

Below is a sample on how to use this library.

# How to use: Synthesis

You will need to have Festival speech recognition installed on the machine you are trying to use. Both the commands “festival” and “text2wave” in the terminal should work and be available in the PATH.

The library will check that you have Festival installed before each call to the Festival portion of the library. If it is not installed an exception will be thrown.