

Visilab Research Lab University of Messina – Italy

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FireVox (<http://www.firevox.clcworld.net/>) is an open source, freely available talking browser extension for the Firefox web browser. Thanks to this software, blind men and visually impaired people can read the content of a web page using the popular browser released by Mozilla Foundation.

FireVox has been originally developed by Charles L. Chen (help@clcworld.net). The software can use various voice interfaces, like SAPI 5, Java FreeTTS, Orca, Emacspeak and Mac TTS.

FireVox is based on CLC-4-TTS JavaScript library (<http://clc4tts.clcworld.net/>). The source code is released under the terms of GPL license vers. 2.1

Unfortunately, the original version of FireVox doesn't support the italian language.

For this reason, Filippo Battaglia (filbattaglia@libero.it), a researcher of Visilab Research Center of the University of Messina, has modified the original version of the software, in order to integrate that with ML-FreeTTS library (<http://visilab.unime.it/~filippo/MLFreeTTS/MLFreeTTS.htm>).

The result is **ML-FireVox**, a free screen reader for italian users. The program can use both FreeTTS english voice and ML-FreeTTS italian voice without differences.

Compatibility

ML-FireVox is compatible with any version of Firefox, including 3.6.3, 4.0, 5.0, 6.x, 7.x, 8.x and 9.x.

ML-FireVox is still FireVox

ML-FireVox is just a modified version of the original source code written by Charles L. Chen. So, you can use all functionalities that are present in the original FireVox engine.

If you want to read the engine documentation, see the [user manual](#) that is provided by the original author of the software.

Installation

Firefox users can install *ML-FireVox* directly from their browser, using a wizard that is provided by Visilab website [here](#). Simply, follow the several steps of the online installation.

The online installation has two important steps:

- installation of the .jar libraries that contain mlfreeetts voice engine;
- installation of the .xpi extension in the Firefox browser

For the Windows users: Remember to configure JRE using the instructions of the following paragraph, before starting the browser for the first time.

For the Linux users: the installation of ML-FireVox in Ubuntu Linux distribution is more difficult than in Windows environment. You can follow a special procedure described [here](#).

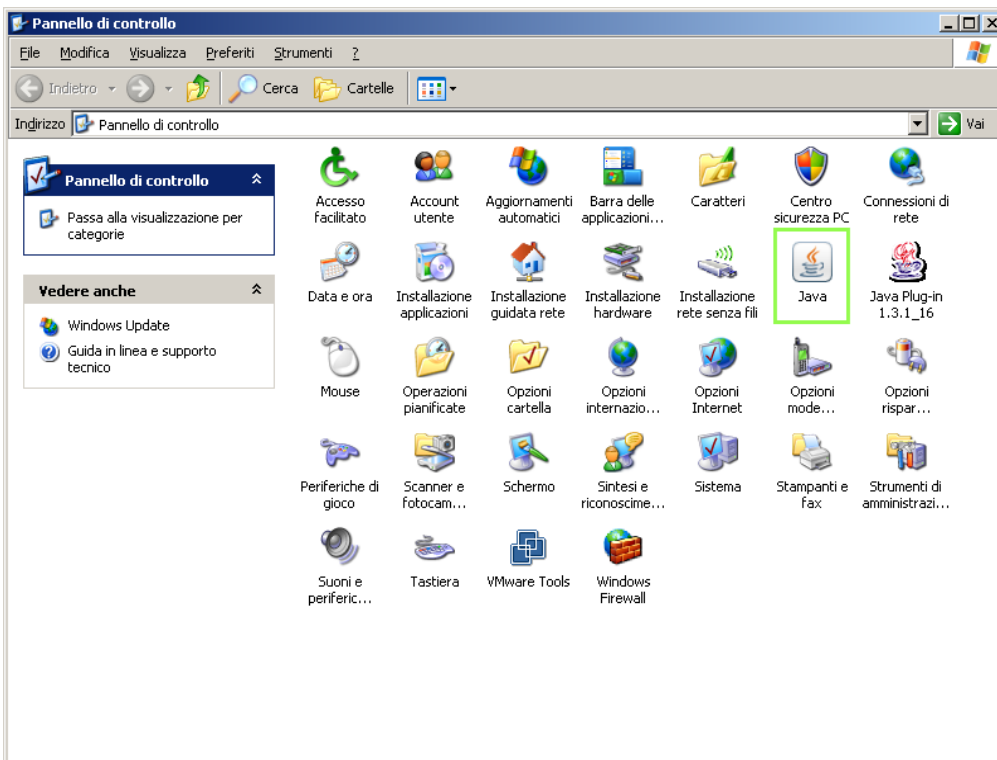
Configure JRE before starting Firefox

After installing the ML-FireVox through the online wizard provided by Visilab website, you must reconfigure your Java Runtime Environment (JRE). In fact, since ML-FireVox requires a large amount of memory to work, it is necessary that JVM is configured to reserve the required memory.

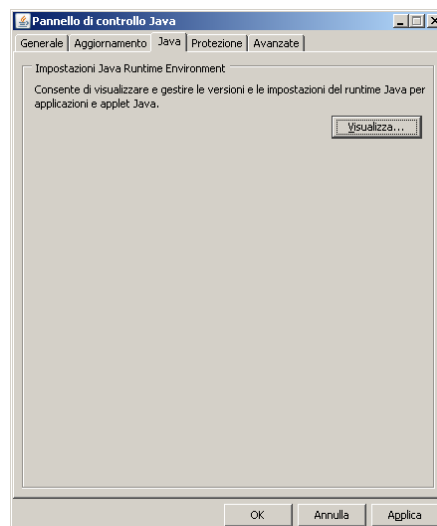
The changes would be done before starting Firefox/ML-FireVox for the first time.

Instructions for Windows users

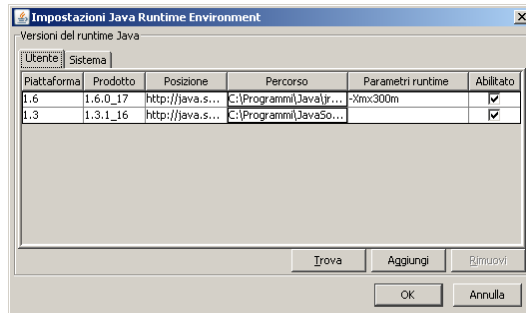
Go to **Control Panel** and select the icon **Java**:



Go to tab **Java** and select **Show**:



The following dialog box shall appear:



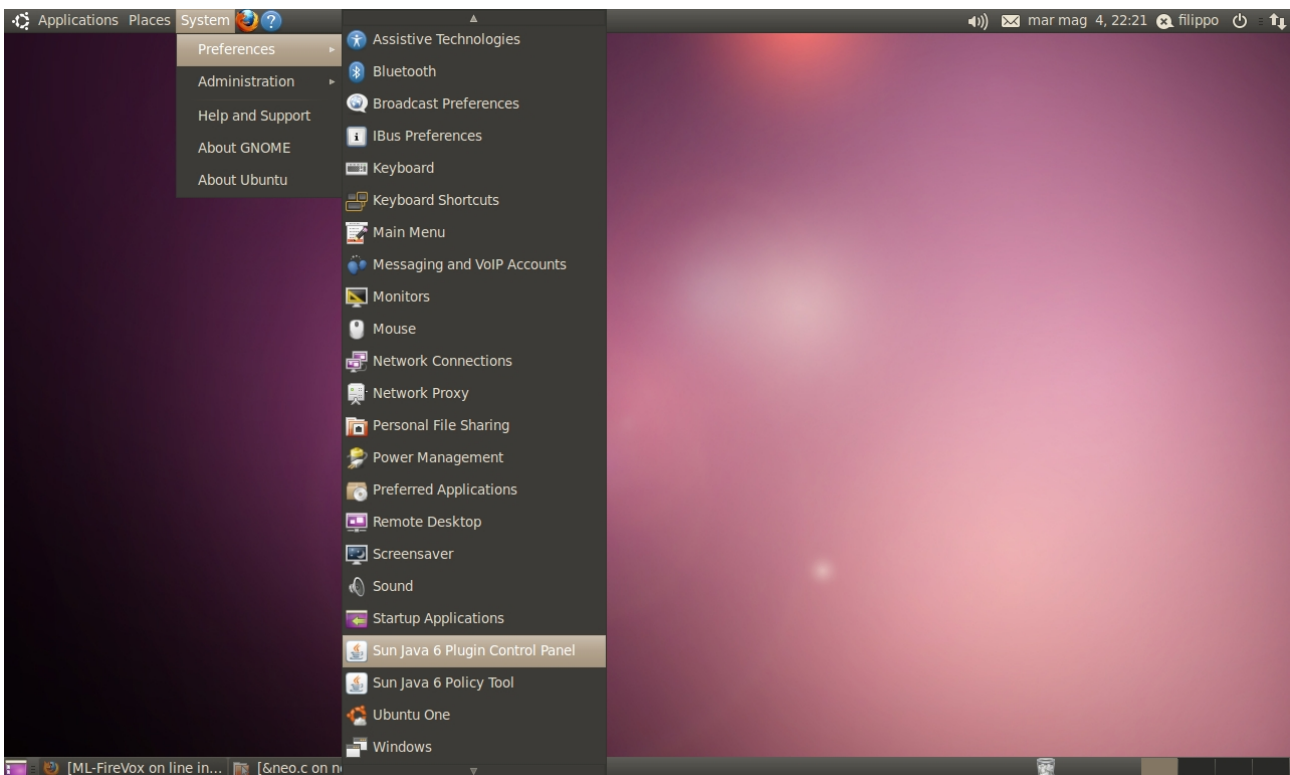
Go to tab **User**. Add the directive **-Xmx300m** to the **Runtime parameters** of the current JRE engine. Go to tab **System** and repeat the operation.

Click on **Ok button** and after on **Apply**. The work is finished. Now you are ready to start your Firefox browser with voice support.

Instructions for Linux Ubuntu users

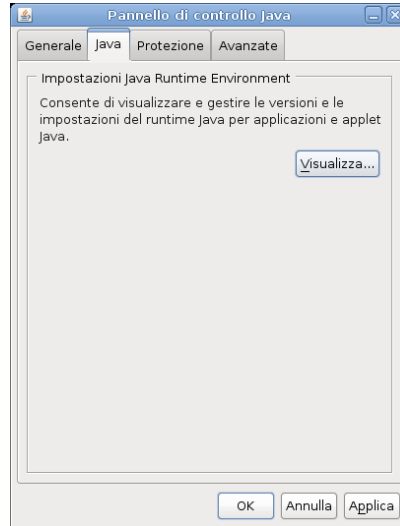
In Linux Ubuntu you can use the **Java Control Panel** that works in a way that is analogous to the Windows counterpart.

In Linux Ubuntu 10.X, installing the packets **Sun Java JRE** and **Java Plug-in** through **Synaptic Package Manager**, a new voice in the system menus will appear.



Go into the **Preferences** menu and choose the item **Sun Java 6 Plugin Control Panel**. This shall start the JRE control panel.

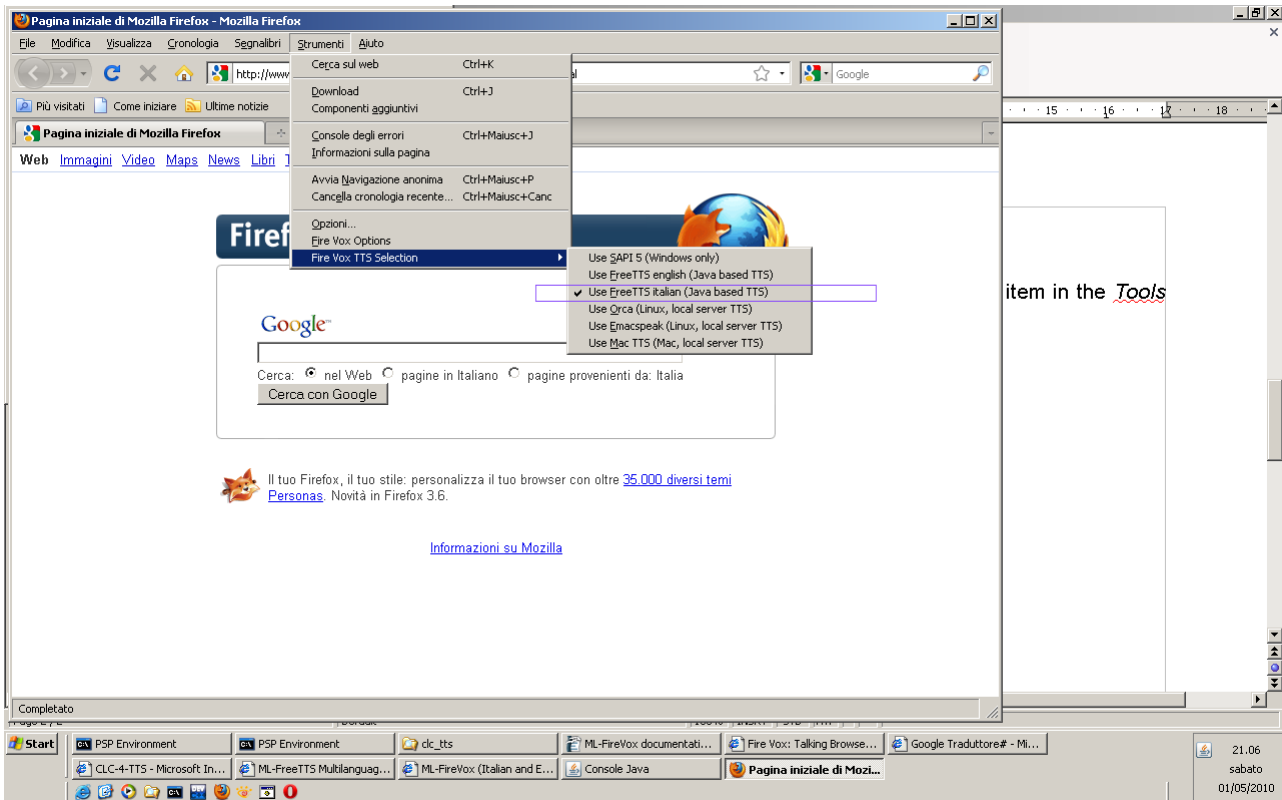
The Control Panel is the same that we have seen in Windows:



Proceed as we have seen in the previous paragraph and click on **Apply** to finish the work.

Start ML-FireVox for the first time

After the installation of ML-FireVox, and the configuration of JRE, reboot the browser and you'll see this new item in the **Tools** menu.



Go into **FireVox TTS Selection / Use FreeTTS italian (Java based TTS)**.
The new voice will become operative in 2 seconds.

How can ML-FireVox use the ML-FreeTTS voices ?

The standard CLC-4-TTS JS component used a Java library called **CLC4TTS_Java.jar**, that started (during the execution of the browser) the JRE (Java runtime environment) and recalled the methods of the standard library **freetts.jar**. This last component normally provided the *english FreeTTS voice*. **CLC4TTS_Java.jar** was written by Charles L. Chen.

In ML-FireVox, instead, Filippo Battaglia has introduced two new Java libraries, called **CLC4TTS_IT_Java.jar** e **CLC4TTS_UK_Java.jar**, that provide the same API of the original Chen's library, but using **mlfreetts.jar** instead. In this way, it is possible to use the italian and the english voices supplied by the Visilab library inside the browser.

Both **CLC4TTS_UK_Java.jar** and **CLC4TTS_IT_Java.jar** are automatically copied in the folder

<Java system folder>\jre6\lib\ext ^[1]

by the installer of **Java libraries for ML-FireVox** during the step 1 of the online wizard provided by Visilab website.

¹ Under Windows, *Java system folder* usually is C:\Programmi\Java

Where can I find the source code of the various components ?

The source code of the 3 Javascript libraries making up **ML-FireVox** (*clc-firevox*, *clc-4-tts*, and *clc-utils*) can be found... in the same **.xpi** file used for redistribution!

In fact, we redistribute ML-FireVox using the **.xpi** file format only because, in this way, Firefox can recognize and automatically install the screen reader, who is seen by the browser like an extension.

However, **.xpi** is only a zip file with a replaced extension. So, opening the **.xpi** file and exploring the content, you'll be able to find the sources that interest you.

You can open a **.xpi** file using a program like [7-zip](#).

The source of the Java libraries *CLC4TTS_IT_Java.jar* and *CLC4TTS_UK_Java.jar*, can be found at Visilab website [here](#)

License

ML-FireVox is free software. It is released under the terms of GNU General Public License as published by the Free Software Foundation (GPL version 2).

With this document, Visilab Research Center recognizes to Charles L. Chen all rights that are connected to his source code and its intellectual property: we have only modified the original Chen's code in order to introduce the support for italian voice.

CLC4TTS_IT_Java and *CLC4TTS_UK_Java* libraries have been written by Filippo Battaglia and they are released under GPL 2 license too.

We report here, for your convenience, the text of GPL license vers. 2:

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ChangeLog

01/05/2010 Version 1.0

(CLC-4-TTS vers. ML 3.6; CLC-FireVox vers. ML 6.1; CLC-Utilities vers. ML 4.5)

01/05/2011 Version 1.0.1

(CLC-4-TTS vers. ML 3.6.1; CLC-FireVox vers. ML 6.1.1; CLC-Utilities vers. ML 4.5.1)

Added support for Firefox 4.0/Gecko 2.0 engine in install.rdf/chrome.manifest files

15/05/2011 Version 1.0.2

(CLC-4-TTS vers. ML 3.6.1; CLC-FireVox vers. ML 6.1.2; CLC-Utilities vers. ML 4.5.1)

New CLC.dll library compatible with Gecko 2.0 engine for Microsoft SAPI support

10/09/2011 Version 1.0.3

(CLC-4-TTS vers. ML 3.6.2; CLC-FireVox vers. ML 6.1.3; CLC-Utilities vers. ML 4.5.2)

Added compatibility with Firefox web browser versions 5.x and 6.x

03/10/2011 Version 1.0.4

(CLC-4-TTS vers. ML 3.6.3; CLC-FireVox vers. ML 6.1.4; CLC-Utilities vers. ML 4.5.3)

Added compatibility with Firefox web browser versions 7.x

30/12/2011 Version 1.0.5

(CLC-4-TTS vers. ML 3.6.4; CLC-FireVox vers. ML 6.1.5; CLC-Utilities vers. ML 4.5.4)

Added compatibility with Firefox web browser versions 8.x and 9.x

Sponsors

ML-FireVox has been developed by CECUM (*Centro di calcolo Università di Messina*) in collaboration with VISILAB (*Computer Vision and Human-Computer Interaction Lab, University of Messina*) with the support of the governmental project "*Innovazione nell'Area dello Stretto*", sponsored by CNIPA (*Centro Nazionale per l'Informatica nella Pubblica Amministrazione*), Italy.

Contacts and maintainers

ML-FireVox is a software hosted by Visilab Research Center of the University of Messina (<http://visilab.unime.it/~filippo/index.htm>).

The maintainer of the project is Filippo Battaglia. For any kind of information about this product, you can write to filbattaglia@libero.it.