Ladybug Player 7

version 7.0.0

Neatware

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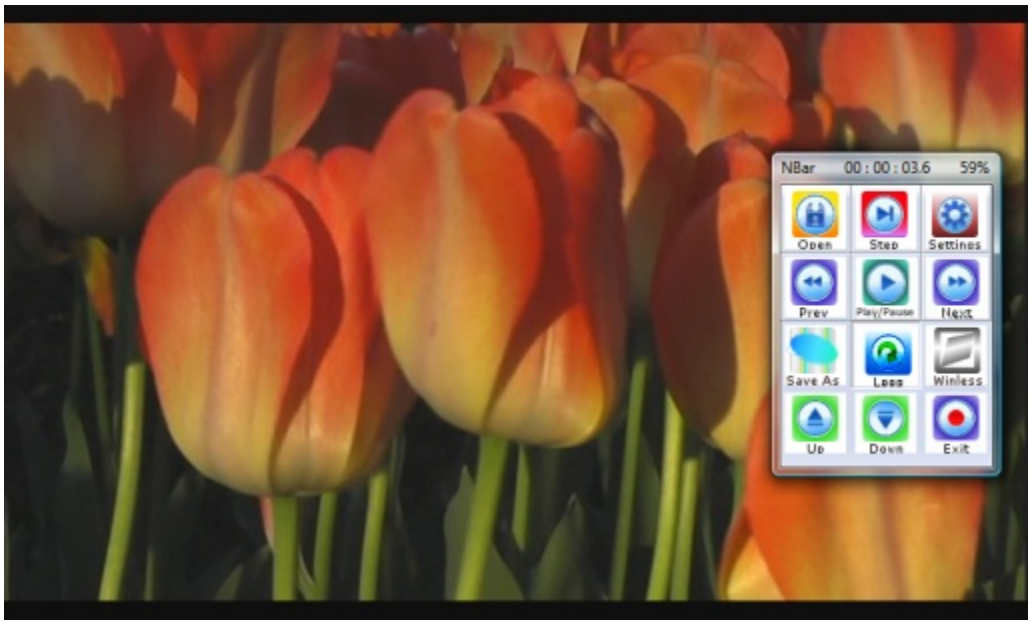
Chapter 1. Introduction

Review

Ladybug Player 7 is a small, fast, and vivid media player. Being optimized for Windows 7, Ladybug Player 7 can apply the hardware acceleration for Windows 7/Vista/XP even on netbook and display Full HD 1080p video in vivid and clarity. It can be used for applications like digital signage, video presentation, and mobile video.



Ladybug Player 7 is consist of a control panel and a video viewer. The control panel called Nbar is a set of 2D ribbon buttons. The viewer can be windowless or windowed. The Nbar and viewer can be put on different monitors. Unlike Windows Media Player, Ladybug Player 7 can operate the control panel on the LCD screen of a laptop while display video on projector for the better effects of video presentation.

Ladybug Player 7 also supports hardware video acceleration for Windows 7, Vista, and XP. Therefore any codec that follows Windows' DXVA1/2 standard can worked with Ladybug Player 7 to achieve the best performance.

Finally, Ladybug Player 7 can run on any x86 processors that support Windows whether they are 32-bit or 64-bit, Atom or , Pentium, Core 2 Duo or Xeon. That is to say Ladybug Player 7 is going to work on any PCs from netbook, desktop, to server.

Features

The key features of Ladybug Player 7 are

1. Rich media format support

Support almost all media formats as MP4, WMV, AVI, JPG, MP3

2. All Windows support best for Windows 7

Show video in vivid and clarity on Windows 7/Vista/XP

3. HD video with hardware acceleration

Take advantages of DXVA1/2 to play HD video with hardware acceleration

4. Multi-player and multi-screen

Multiple Ladybug Player 7 can be run simultaneously on multiple screens

5. Movable windowless for zoning videos

User can display multiple videos on screen in the form as Picture-in-Picture

6. Customization by SQL database

Modify *.npm database file to customize player

7. Video presentation support on netbook

Media control panel on netbook and video display on projector

8. Playlist for continuous playback

Add, delete, and reorder media in playlist

Chapter 2. Architecture

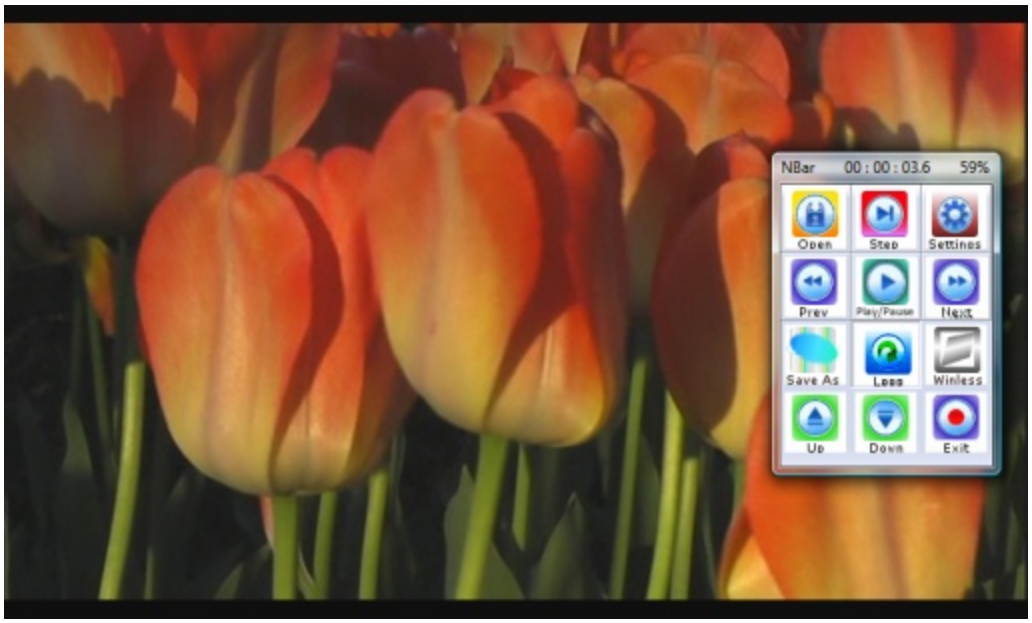
Technologies

One technology used in the Ladybug Player 7 is to access the hardware acceleration for video processing. Another technology is to implement the multiple player. Third technology is to use SQL database for player management.

This snapshot shows three Ladybug Player 7, one in fullscreen, another two in picture-in-picture on Windows 7.

GUI

Ladybug Player 7 is consist of a control panel and a video viewer. The control panel called Nbar is a set of 2D ribbon buttons. The viewer can be windowless or window. The Nbar and viewer can be put on different monitors.



Mouse is a device to control media playback on viewer.

Double clicking the left mouse button on the viewer surface, the video can be resized from normal display to fullscreen or in reverse. User can also drop and move the view window to anywhere even if the view is in windowless.

Clicking the right mouse button on the viewer surface, user can show/hide Nbar.

Here is the Nbar snapshot.

The title bar displays the elapsed time of a video in the format hours : minutes : seconds. ms and the elapsed time vs the total duration in percentage.

There are four rows of control buttons.

- The first row includes Open, Step, and Settings buttons.

  Open button allows you to select mp4 video, mp3 audio, or jpg image from an Open File Dialog.

  Step button allows you to step forward video in one frame.

  Settings button allows you to set controls in more details. We are talking about the settings later.

- The second row includes Previous, Play/Pause, and Next buttons.

  Previous button allows you to go backward to the previous media in the playlist.

  Play/Pause button allows you to play or pause video. While video is playing, press this button will pause the playback. While video is paused, press this button is going to play the video again.

  Next button allows you to go forward to the next media in the playlist.

- The third row includes Save As, Loop, and Windowless buttons.

  SaveAs button allows you save current configuration of the player such as windows size,

position, and form to a *.npm file. Later you can launch Ladybug Player 7 by double clicking *.npm file to restore the player to current state.

Loop button allows you to enable or disable the playback of a playlist in loop.

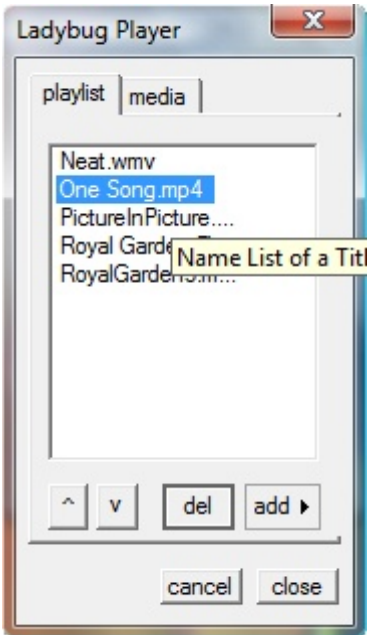
Windowless button allows you to set window in normal or in windowless (without border).

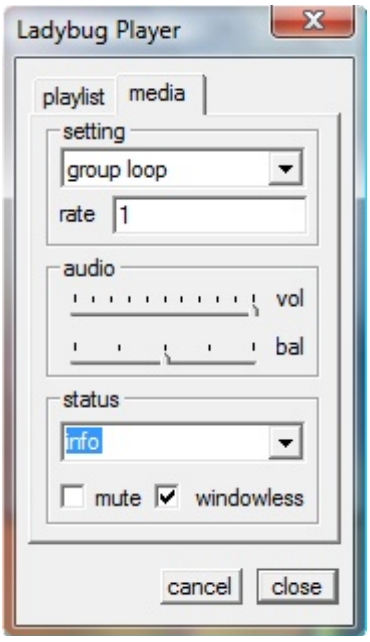
- The last row includes Up, Down, and Exit buttons.

  Up button allows you to increase the volume a little bit.

  Down button allows you to decrease the volume a little bit.

  Exit button allows you to exit the player. If the player was launched alone with a *.npm database file, after exiting, the *.npm file will be upgraded to the last status of the player. While the player was launched by itself, there are no any files to be saved.





Here are two pages of the settings: playlist and media.

Playlist page allows user to add and delete a media file into the playlist. User can also use the up and down button to change the position of a media item in the playlist.

Media page allows user to set loop, rate, volume, balance, mute, and windowless. Furthermore user can click info drop down button to display the media information. The value of rate is ranged from 0.033333333 to 200. The regular value is 1.0. So you can watch the speed video by setting rate to 2.0 and watch the slow video by setting rate to 0.06.

Customization

You can customize player and store the configuration in a .npm file. You can also double click the .npm or launch it in a command line in the following format:

"FullPath**Ladybug Player.exe**" ["FullPath**myconfig.npm**" | "FullPath**mymedia.***"]

This command line means that run Ladybug Player without parameter or with parameter myconfig.npm, or mymedia.*.

If there are no parameters Ladybug Player 7 will be launched with default configuration. You can launch as many Ladybug Player 7 as your computer resources are not exhausted.

*.npm represents Neatware Player Media.

In the case that the first parameter is a *.npm file, Ladybug Player 7 is going to launch the player by setting the configuration from the *.npm file. *.npm is a Sqlite 3 database file that is an open standard. You can read and modify *.npm files by any Sqlite Database Managers free or commercial. Usually we use an added-on called Sqlite Manager for FireFox browser.

In the case that the first parameter is a media file, Ladybug Player 7 is going to launch the player and display the media file instantly.

More than one parameters are reserved for future use.

Keyboard Control

Ladybug Player 7 supports the use of keyboard for media player control. Here is the list of keyboard control:

Key name	Operation	Description
F1	Help	Display this PDF file
F2	Play/Pause	Play/pause toggle
F3	Step	Show one frame
F4	Loop	Play media in loop or not
F5	Open	Insert one or a set of media into playlist and start current
F6	Settings	Set playlist or media
F7	Save As	Save .npm file in Ladybug Player folder
F8	Windowless	Toggle windowless and frame
<-	Previous media	Play previous media
->	Next media	Play next media
^	Volume up	Increase volume
v	Volume down	Decrease volume
ESC	Exit	Exit player

Chapter 3. Applications

Ladybug Player 7 can be used for Netbook, Digital Signage, and Mobile Video.

Intel's second generation Atom platform integrated a CPU and a GPU in one chip package. It is suitable for small devices that require low power consumption such as MID (Mobile Internet Device) and touch media pad. Its GPU includes a hardware acceleration for video that supports DXVA2 for windows 7/Vista. Ladybug Player 7 can apply this capability to display vivid video in mobile device.

Intel's new Core i5/i7 processor also includes GPU inside. Intel's GMA4500HD include double HD hardware acceleration cores and support DXVA2 for windows 7/Vista. This is suitable for the multi-player function of Ladybug Player 7.

Ladybug Player 7 can work with Nvidia's and AMD's GPU because of their capability to support DirectX and DirectShow in Windows 7, Vista, and XP.

Appendix

About Neatware

Neatware, an Independent Software Vendor (ISV), designs and implements software for video processing and applications. The customers and partners of Neatware are world-wide.

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