User's Manual

Display Control Software NovaStudio

Rev 3.3.0 NS130100004

Statement

Dear users:

Welcome to use Nova's Products. We are pleased to offer this manual to help you understand and use the product. In the preparation of the manual, we try to make it accurate and reliable. Nova may revise and alter the contents of the manual at any time without notice. If you have any problems in the use, or you have any suggestions, please inform us in accordance with the contact provided in this manual. For the problems you encounter in the use, we will do our best to provide support. For your suggestions, we would like to express our thanks and make assessment as soon as possible for adoption.

Copyright

Copyright of this manual is reserved to Xi'an NovaStar Tech Co., Ltd. Any individual or organization is not allowed to copy or extract all or any part of the contents in any form without written approval.

Trademark

NOVASTAR is the registered trademark of Nova.

Definitions of Identifiers

	ATTENTION:Identifies information that requires special attention.
	TIPS:Identifies advice or hints for the user.

Content

1 OVERVIEW..... 1

1.1 FUNCTIONS..... 4

1.2 RUN ENVIRONMENT..... 6

1.3 MEDIA TYPES SUPPORTED..... 9

2 INSTALLATION OF NOVASTUDIO..... 14

3 PLAY PROGRAM..... 15

3.1 EDIT MODE SETTING..... 15

3.2 SIMPLE PLAYER PROGRAM..... 16

3.2.1 Edit Player Program..... 18

3.2.2 Preview and play..... 23

3.3 PROFESSIONAL BROADCAST PROGRAM..... 23

3.3.1 Play Program Dispatch Rule..... 29

3.3.2 Edit Play Program..... 33

3.3.3 Preview and Play of Play Program..... 60

3.4 PRIORITY PROGRAM OF THE PAGE..... 64

3.4.1 Edit play program..... 64

3.4.2 Preview and Play..... 72

4 IMMEDIATE NOTIFICATION..... 72

5 EMERGENCY INSERTED PLAY..... 76

6 MONITORING..... 79

7 REMOTE DISPLAY SCREEN MANAGEMENT..... 80

7.1 PREPARATIONS..... 80

7.2 ADD DISPLAY SCREEN..... 81

7.3 SEND PROGRAMS/FILES..... 82

7.4 SEND THE ORDER..... 89

7.5 TIMING..... 89

7.6 ACQUIRE SCREENSHOT..... 90

7.7 SEND NOTICE..... 90

7.8 SEND EMERGENT INSERTED PLAY..... 91

8 SETTINGS..... 93

8.1 DISPLAY WINDOW SETTING..... 93

8.2 START SETTING..... 95

8.3 POWER SETTINGS..... 96

8.4 PLAY SETTING..... 97

8.4.1 Log Setting..... 98

8.4.2 Play Setting..... 98

8.4.3 Preview Setting of Media..... 99

8.5 LOAD SETTINGS..... 100

9 COMPUTER LOCKING..... 101

10 DISK PLAY..... 104

11 BACKUP..... 106

12 SYNCHRONAL PLAYING FUNCTION..... 109

13 DISPLAY TEMPERATURE AND HUMIDITY..... 111

14 WEATHER INFORMATION SETTING WINDOW..... 113

15 SCREEN PARAMETERS SETTINGS..... 113

16 LED SCREEN ZOOM SETTINGS..... 114

17 RECORD CONTROL..... 115

17.1 ADD MEDIA..... 116

17.2 RECORD CONTROL..... 117

17.3 ASYNCHRONOUS MODE OF PLAY..... 120

18 PLAY STREAMING MEDIA..... 120

19 OTHER FUNCTIONS..... 121

19.1 RESUME FROM FAULT..... 121

19.2 PPT SHOWING..... 121

19.3 TOOL MANAGEMENT..... 123

19.4 LOG PLAT..... 125

19.5 Background Play....128
19.5.1 Background Play....128
19.5.2 Cancel Background Play....129
20 NOTES AND FAQ....130
20.1 Some conflicts between decoders may cause media play error....130
20.2 Do not use low performance computers for running NovaStudio....130
20.3 NovaStudio launch error due to the language support of the operation system....130
20.4 Unable to play files of Microsoft Word and Excel....131
20.5 What to do if characters in a table of a Microsoft Word file are slit?....131
20.6 Why NovaStudio does not run?....131
20.7 Why Flash files cannot be added?....132
20.8 Error message as below is shown when running NovaStudio....132
20.9 Why NovaStudio can't load media sources which it can before?....133
20.10 In IE6 environment, use the keyboard arrow keys to move the display position of the web media (do not use the mouse wheel)....134
20.11 Video Capture Card played instability in Win7, please use Windows XP....134
20.12 Please set the graphic card work under extend monitor mode if the play window of the LED screen is big in size. And please use advanced rendering mode for video playback. Part of the play window may be black if normal rendering mode is use....134
20.13 Please use advanced rendering mode if text is be put on top of video. There could be flashing on the text if normal rendering mode is used....134
20.14 Turn off Vertical Refresh Sync of the graphic card when use NovaStudio for pictures playback. Vertical Refresh Sync may cause influent picture playback effects under Win7 and Win8....134
20.15 For videos of format of .rmvb and those can not be loaded by NovaStudio, please convert the video format to mpeg4. Format converting tool can be download from www.novastar-led.com 135
21 DOCUMENT VERSION STATEMENT....136

1 Overview

Released in 2011, NovaStudio is powerful software, professionally designed for the LED display media play application. Features of NovaStudio are as follow.

✧ **Capable of mulTIPSle LED displays application**

NovaStudio is capable of feeding media data (video/text) for mulTIPSle LED displays at the same time with each of the these LED displays has its own play program and mapping area (area for showing the media data)

✧ **Remote display screen management**

Operate the remote control and release playing programs to the display screen via NovaStudio on a computer;

✧ **Multi-date multi-period scheduling function**

Play different content at different date and time segment ;

✧ **MulTIPSle page**

A play segment can have mulTIPSle pages on which the layouts of the windows for media display are different from each other. Refer to **2.1 Play Program Structure** for the concept of the term page.

✧ **Pages with mulTIPSle windows**

Each page of a play segment can have mulTIPSle windows for media display. The positions and sizes of these windows can be set individually.

✧ **Rich in the types of media supported**

Media types supported include videos, audios, pictures, Flashes, text, analog clocks, digital clocks, countdown timers, weather info, video devices, web pages, humiture, streaming media , RSS, digital count timer, vista clock...

✧ **Complete media properties setting**

The media properties can be set include the background color, background picture, transparency, volume of sound, display scale, animation for entrance/exit(in/out), animation speed and color, effects, font, style, transparency for texts.

✧ **Rich in effects for text/picture displaying**

Altogether, there are over 40 different effects for text/pictures displaying. With special data processing design, they are efficient and smooth.

✧ **Stuck prevention**

Due to problems from decoders or computers, video could be stuck during being played. Stuck prevention function is designed for NovaStudio to escape from that kind of situation. NovaStuio2012 can recover by itself and begin to play next media when the video or sound being played is suck for certain time (normally 10 seconds).

✧ **Fluently switching between pages**

No black screen will appear during switching between two program pages with different layouts;

✧ **The effect of transparency**

Media sources of the types of clock, countdown timer, text, office file, weather info can be shown with transparency effect.

✧ **Web page supported**

Real-time display of designated area of the web page;

Quick preview function

Do quick preview of play program in different rate.

✧ **Timing and cycle inserted segment**

Play program may include the timing and cycle inserted segments, which can play alone or play with the current common segment;

✧ **Synchronal playing**

Realize the synchronal playing of mulTIPSle remote display screens;

✧ **PPT files supported**

✧ **Emergency inserted play and notification function**

✧ **Security measure – computer locking**

NovaStudio can lock the computer for security. The key board and the mouse will not work after locking.

✧ **Self-recover from severe error**

✧ **Software auto run and media play auto start**

✧ **High efficient video format support with embedded decoder**

The embedded decoder is capable of long term working. And the decoder can be updated for better performance.

✧ **Easy log management**

Play log can be recorded, check, statistic and exported to Microsoft Excel files, which makes log management become very easy and flexible.

✧ **Play program backup**

By creating a copy of the play program files, together with all the media files involved and storing the copy in the hard disk, play program backup can be achieved for security.

✧ **USB disk plug and play function**

Monitoring the insertion of the USB disk, and automatically play the play program file on USB disk.

✧ **Programs exported to USB flash disk; Bind MAC address**

Programs exported to USB flash disk can only be safely and reliably plugged and played on computers with the MAC address being bound.

1.1 Functions

✧ Includes time frame priority program and page priority program.

✧ Setting of screen count, location and size.

✧ Play program creation, opening, saving, saving as, backup and application.

✧ Play, pause and stop of play program.

✧ Add, delete and set properties of common segment.

- ✧ Add, delete and set properties of inserted segment.
- ✧ Add, delete, edit, move up or move down of the pages, windows and media sources of a play program.
- ✧ Pages properties setting. The properties include the background color, background picture, showing modes (show the picture periodically, according to time duration or by times), displaying scale, transparency, color and effects for text and so on.
- ✧ Detailed dispatching time can be checked as per time or window;
- ✧ Properties setting and previewing of media sources.
- ✧ Drag previewing of videos and flash files.
- ✧ Super impose transparent words on videos and flashes;
- ✧ Play streaming media files;
- ✧ Display temperature and humidity.
- ✧ Media sources finding, moving and properties setting for all.
- ✧ Quick preview or normal preview of page or segment.
- ✧ View the scheduling information of play program.
- ✧ Opening of the newly accessed play program files.
- ✧ NovaStudio auto run after the computer startup.
- ✧ Set the play program to be launched when the software starts.
- ✧ Play notification.

- ✧ Play emergency inserted content.
- ✧ Backstage media playing.
- ✧ Restart on time.
- ✧ Set the days for play log storage.
- ✧ Delete the out of date play log files automatically.
- ✧ View，statistic and export to Excel file of play log.
- ✧ Computer locking
- ✧ Convert PPT files to pictures.
- ✧ Tool management.
- ✧ MulTIPSle languages supported.
- ✧ USB export and instant plug and play;
- ✧ Remote display screen management: send file, video playing scheme, order, time tick, screenshot, remote inserted play and notice;
- ✧ Media synchronization broadcast;

1.2 Run Environment

- ✧ Tests passed on the OSs of Windows XP \ Windows2000\ Windows7(32-bit)\ Windows7(64-bit)\ Windows8(32-bit);
- ✧ CPU Frequency >= 1.6GHZ，Host Memory >= 1G, Graphic Card Memory >512M

	TIPS: With a computer not match the requirements, NovaStudio may work abnormally. The problems could be shift playing or low loading speed. The shown text could be jittering if the graphic card memory is less than 512M.

✧ To open and show .doc or excel files, Microsoft Office should be installed first.

	TIPS: .doc or excel files could not be loaded if Microsoft Office is not installed.

✧ To open and show flash files, Flash OCX should be installed first.

✧ To open and play video files, it is required that

➢ DirectX9 is supported by the graphic card.

	TIPS: NovaStudio cannot play videos without a graphic card supporting DirectX9.

➢ DirectX features are activated

To activate DirectX features, open DirectX Diagnostic Tool (type in **dxdiag** in the Run dialog and click OK, as shown in Fig.1-1) and enable all DirectX features on the Display page, as shown in Fig.1-2.

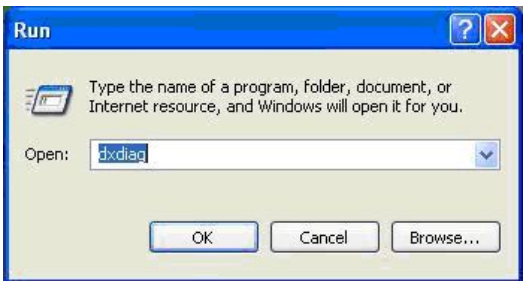


Fig.1- 1Run dialog

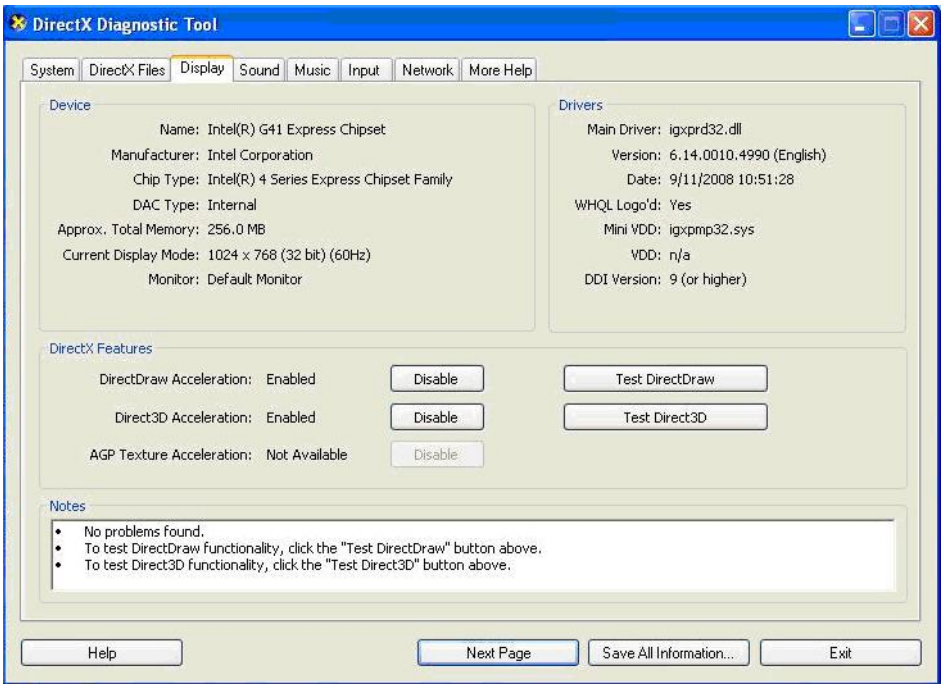


Fig.1- 2 Display page

⚠	**Attention:** Do not install the universal decoders or decoder packages similar to the universal decoder. Conflicts between the decoders within these packages may cause failure in media playing. Please contact us for special media formats supporting.

1.3 Media Types Supported

Media	Format or Definition	Display Properties
Picture	bmp, jpeg, ico, png, gif	background color, background picture, background music, transparency, entrance/exit animation, animation speed, displaying scale, displaying duration
Video	wmv, asx, asf, mpeg1, mpeg2, mpeg4, h.264, DVD, VCD, xvid, divx, mov, mp4, rmvb、avc1、QTRLE	background color, background picture, sound volume, displaying scale，overlay Text
Flash	swf	background color, background picture, transparency, displaying scale, overlay Text
Office files	docx, doc, xls, xlsx, txt	displaying scale, displaying duration, transparency, color inversion, duration for each screen content
Audio	mp3, wma	background color, background

		picture, sound volume, transparency
Complex Text	Text with customized content, font, color and style. Size, background color, foreground color and style for each character are settable.	background color, background picture, transparency, entrance/exit animation, animation speed, duration for one screen of content
Static Text	Text for static display	background color, background picture, transparency, font, font color, line spacing, character spacing, font style, align, display duration
Single Line Text	Text that is arranged in one line and can be de divided into parts to shown on the display at different frames with specified effects.	background color, background picture, transparency, font, font color, font style, entrance/exit effects, duration for one screen of content
Scrolling Text	Text that is shown repeatedly.	background color, background picture, transparency, font, font color, font style, repeating speed, duration

Analog Clock	Clock with panel and hands of hour, minute and second.	background color, background picture, transparency, time mark style and color, date, weekday, lunar calendar, label, duration
Digital Clock	Clock that gives time information of year, month, date, hour, minute and second in digital number.	background color, background picture, transparency, font, font color, font style, year, month, date, am/pm, lunar calendar, hour, minute, second, weekday, duration
Countdown Timer	Keep time or countdown according to the time duration being set; display day, hour, minute and second.	Transparent display, background color, background picture, font, font color, font style, keeping time, countdown, starting date and time, time duration, displaying day, displaying hour, displaying minute, displaying second
Digital count Timer	Decrease or accumulate according to the starting time or target time being set; display hour, minute and second.	Transparent display, background color, background picture, transparency, seconds counter type, color of the number, starting

		time, target time
Vista clock	Display a clock with dial plate, hour hand, minute hand and second hand, with the style and color of the dial plate, hour hand, minute hand and second hand being editable.	Transparent display, background color, background picture, transparency, style of the clock, time duration, styles of hour hand, minute hand and second hand, border colors of hour hand, minute hand and second hand, blending modes of hour hand, minute hand and second hand, internal and external border colors of the clock center, blending mode of the plate surface, glass style, angle of glass style, background picture, internal and external border color, blending mode of border
Weather Info	Display weather information of the designated city, including weather, temperature, wind force, humidity, air, UV	Transparent display, background color, background picture, city, updating time, time duration, basic display (font, font color, text effect, multi-line, static or rolling, displaying weather, temperature, wind force, humidity and current

		temperature, setting of words) user-defined display layout (new style, imported style)
Web Pages	Web pages at world wide web of given website address or local web pages of given path.	Website address, area of a web page to be shown, transparency, duration
External Devices	Standard steam media devices such as USB camera, TV boxes	Video device, audio device, video in, channel, display scale, duration
External program	All .exe executable programs in the local computer	Display the windows, background color, background image, coordinate and duration of view
Streaming	All major formats supported	Volume, playing duration
Temperature and Humidity	Current ambient temperature and humidity acquired by temperature and humidity probe	Background, font, text effect, unit, duration, period
RSS	Network information (.xml) and Rss files (.xml) on local disk	Background, transparency, play duration, update cycle, display mode, and display style

Table.1- 1 Media Types

2 Installation of NovaStudio

The installation of NovaStudio is the same as other common software applications.

TIPSs: If the installation process is blocked by any anti-virus or firewall application, please select the option that allows the installation operation to do what it needs to do. Because what is blocked is usually the installation or update operation of the serial ports driver.

NovaStudio supports three edit modes in play program (see details in the next chapter). There is an option called **Select software editing interface mode** during the installation of NovaStudio. The mode can be selected specifically or randomly for the feasibility of mode switching after installation (see **3.1 Edit Mode Setting** for the operating steps).

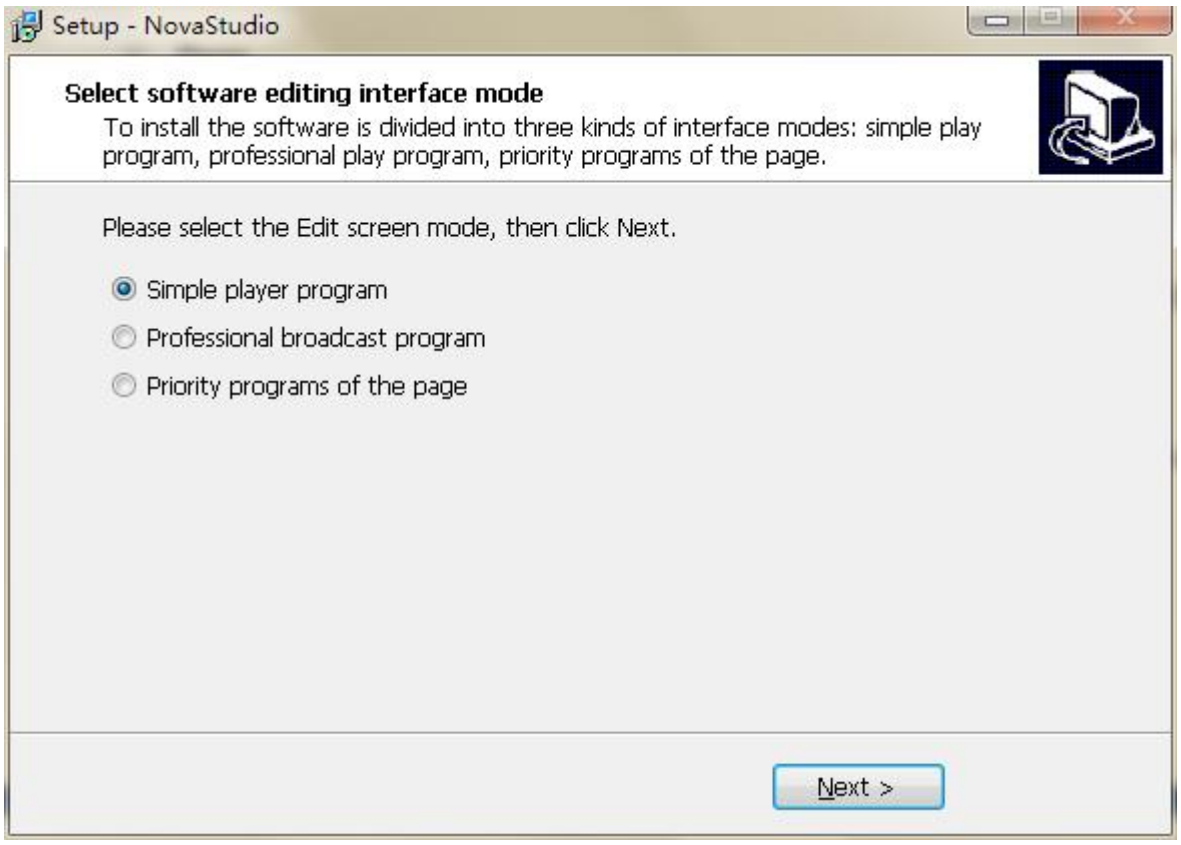


Fig. 2- 1 Select software editing interface mode

3 Play Program

In NovaStudio, the display is playing in programs. Each program can be applied to only one display.

The program includes three edit modes, which are **simple player program**, **professional broadcast player** and **priority programs of the page**.

There are many pages in simple player program, and they can be played on loops from top to bottom.

The professional broadcast is edited according to segments. The segment in the program can be added into pages.

There are many pages in priority programs, and they should be set respectively about the play time and play frequency.

3.1 Edit Mode Setting

Click "Settings" → "Edit Mode Setting" to select the mode, then click "OK".

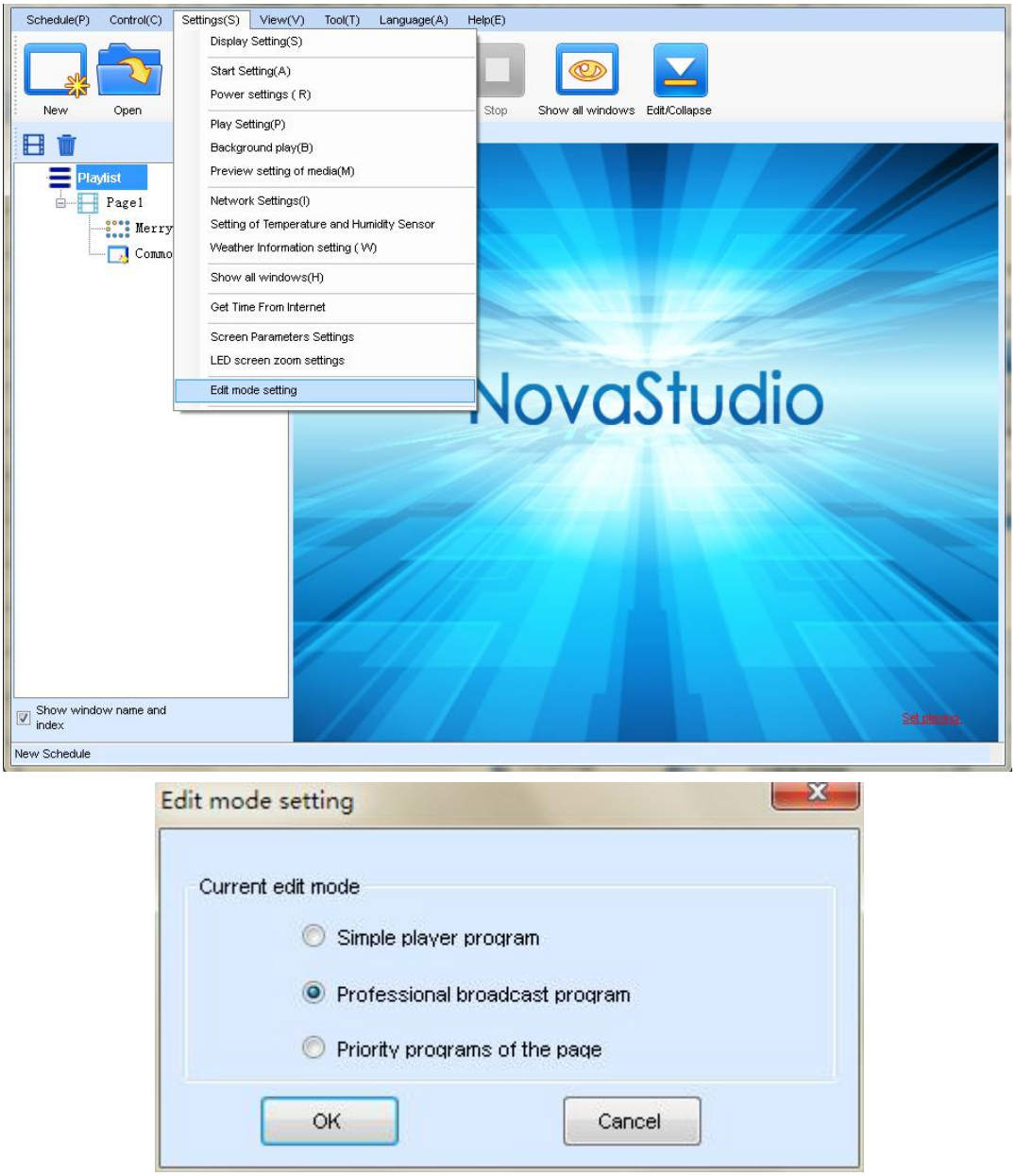


Fig. 3- 1 Edit mode setting

3.2 Simple Player Program

The playlist contains many pages, and the windows can be added into each page.

Notice (instant message) and emergent playing are not supported in this program.

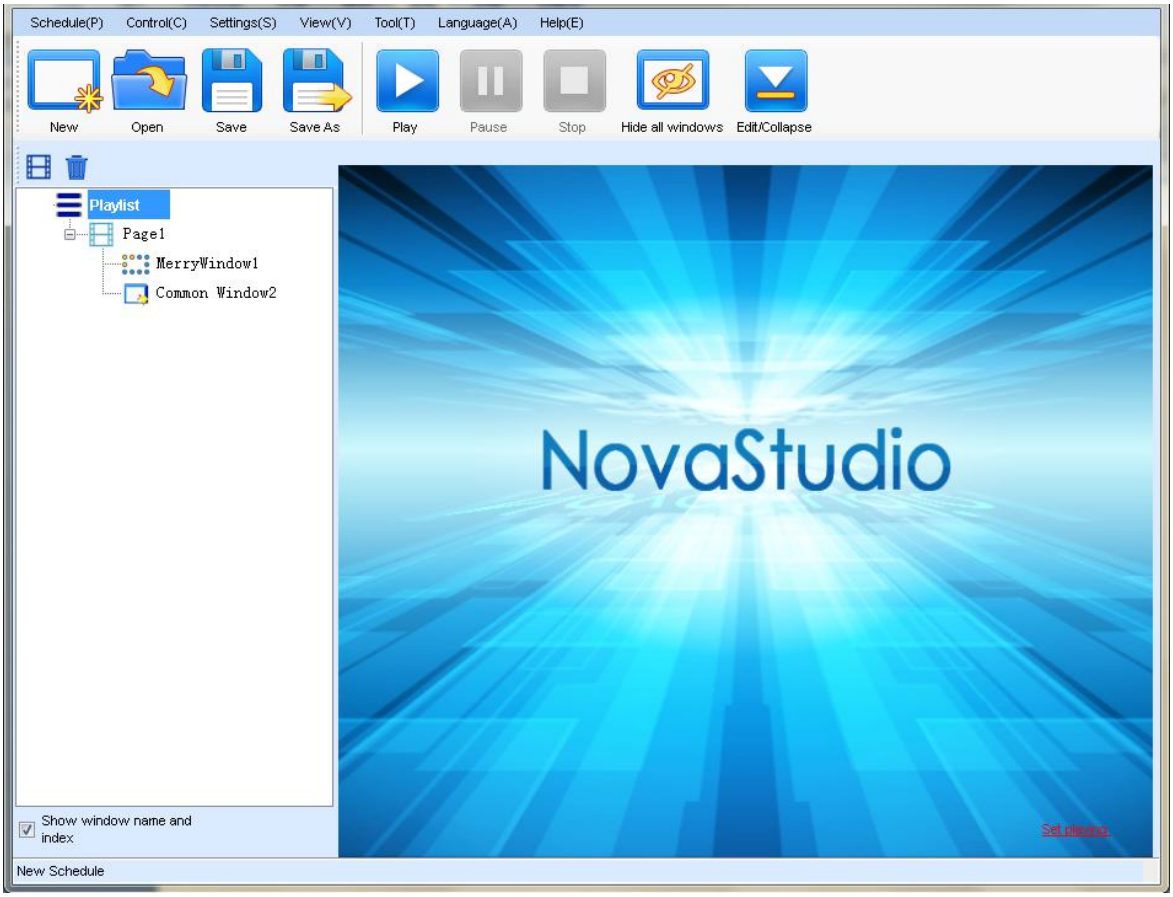


Fig. 3- 2 Simple Player Mode Setting

✧ **Page**

A page is an area on the computer display screen that is mapped to a LED display for showing visible media sources (such as videos, pictures and text) on the LED display.

Multiple windows can be added into a page, and each page could have its own window layout.

Pages can be played on loops from top to bottom.

✧ **Window**

A window, also named a play window, is an area of a page in which visible media sources will be show. Note that any window must be affiliated to a page.

- **Common Window**

A common window could have its own media sources list and thus different types of media

sources can be played in it in the list order.

- **Scroll Text Window**

A window that is only for showing scrolling text.

- **Clock Window**

A window that is only for analog or digital clocks.

- **Countdown Timer Window**

A window that is only for showing information from a time meter.

- **Video Device Window**

A window that is used only for showing videos from an external video device.

- **Weather Window**

A window that is only for showing weather information.

- **Temperature and Humidity Window**

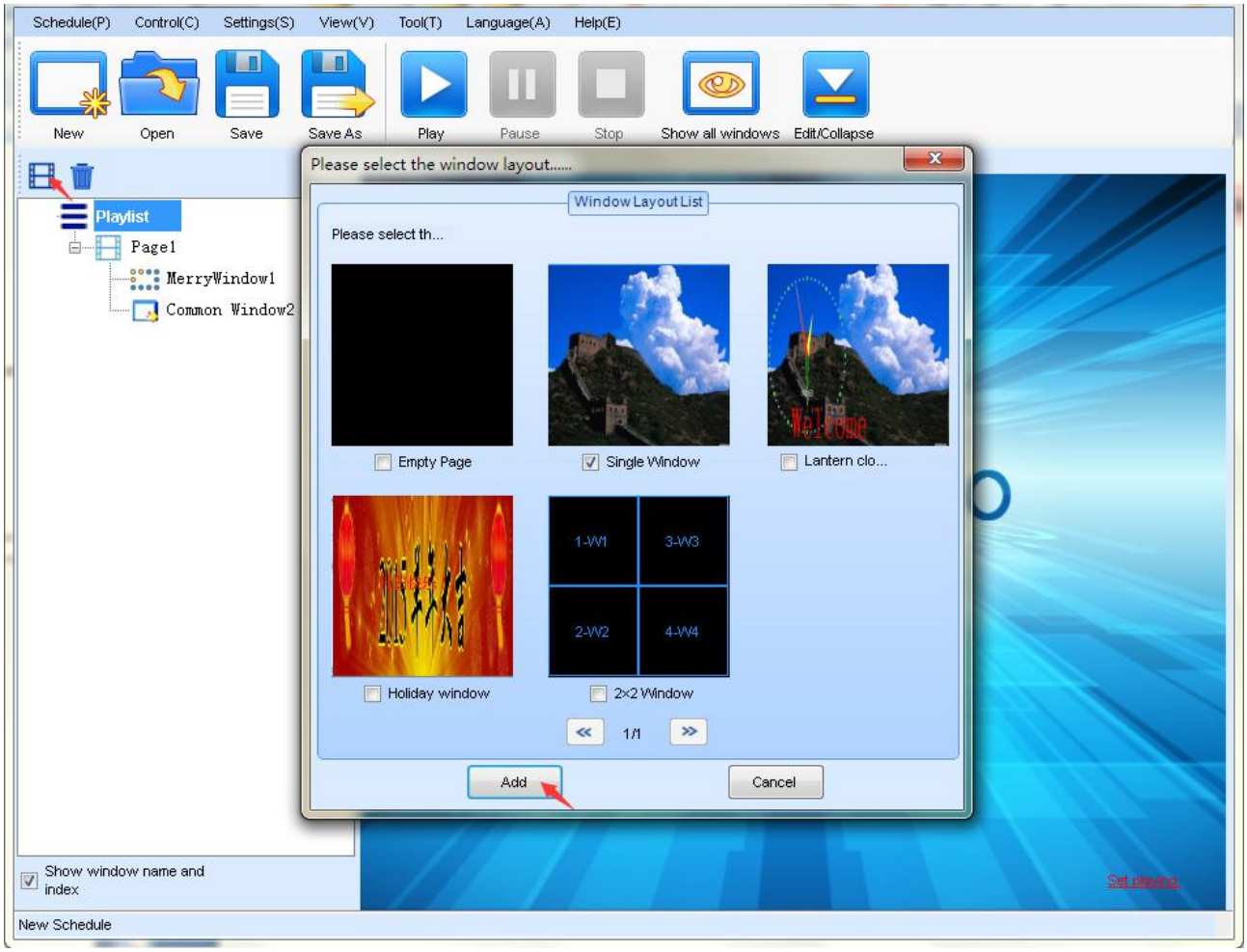
A window that is only for showing ambient temperature and humidity.

3.2.1 Edit Player Program

The simple player program has a new play program by itself, and with a page which contains a scrolling text window and a common window, user can edit the program on this basis.

The main operating steps which include the editing of pages, windows and media are basically the same with the professional broadcast program. So brief introductions are given in this section. See more details in 3.3.2.3 Page Editing , 3.3.2.4 Window Editing , 3.3.2.5 Media Editing.

1) Page editing: add page and set the window layout, then edit the page properties.


Schedule(P)
Control(C)
Settings(S)
View(V)
Tool(T)
Language(A)
Help(E)
New
Open
Save
Save As
Play
Pause
Stop
Show all windows
Edit/Collapse
Playlist
Page1
MerryWindow1
Common Window2
Please select the window layout.....
Window Layout List
Please select th...
Empty Page
Single Window
Lantern clo...
1-W1
3-W3
2-W2
4-W4
Holiday window
2×2 Window
1/1
Add
Cancel
Show window name and index
New Schedule

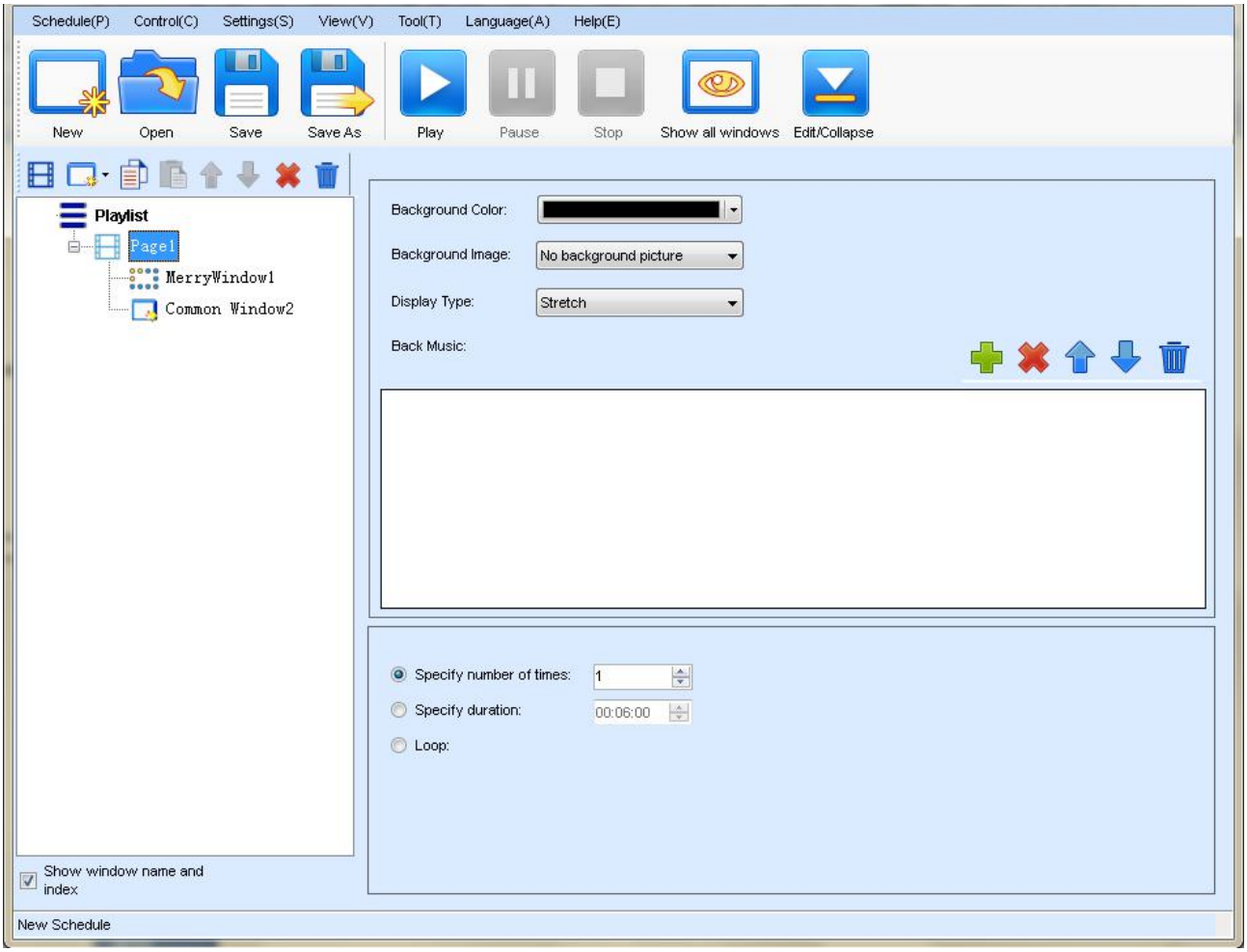
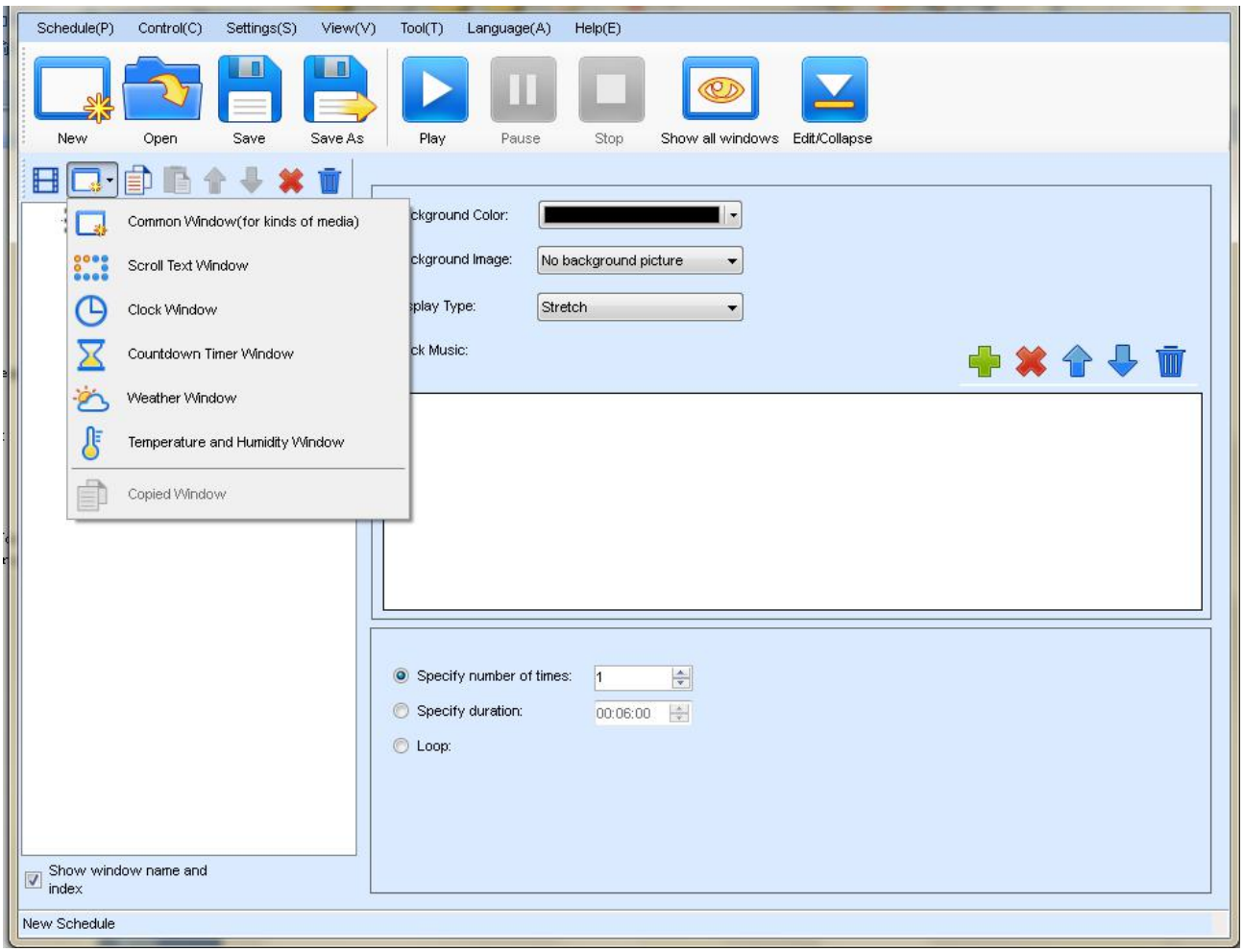


Fig. 3- 3 Page Editing

2) Window editing: add media window to the page and edit the properties.


Schedule(P)
Control(C)
Settings(S)
View(V)
Tool(T)
Language(A)
Help(E)
New
Open
Save
Save As
Play
Pause
Stop
Show all windows
Edit/Collapse
Common Window(for kinds of media)
Scroll Text Window
Clock Window
Countdown Timer Window
Weather Window
Temperature and Humidity Window
Copied Window
ckground Color:
ckground Image:
No background picture
play Type:
Stretch
ck Music:
Specify number of times:
1
Specify duration:
00:06:00
Loop:
Show window name and index
New Schedule

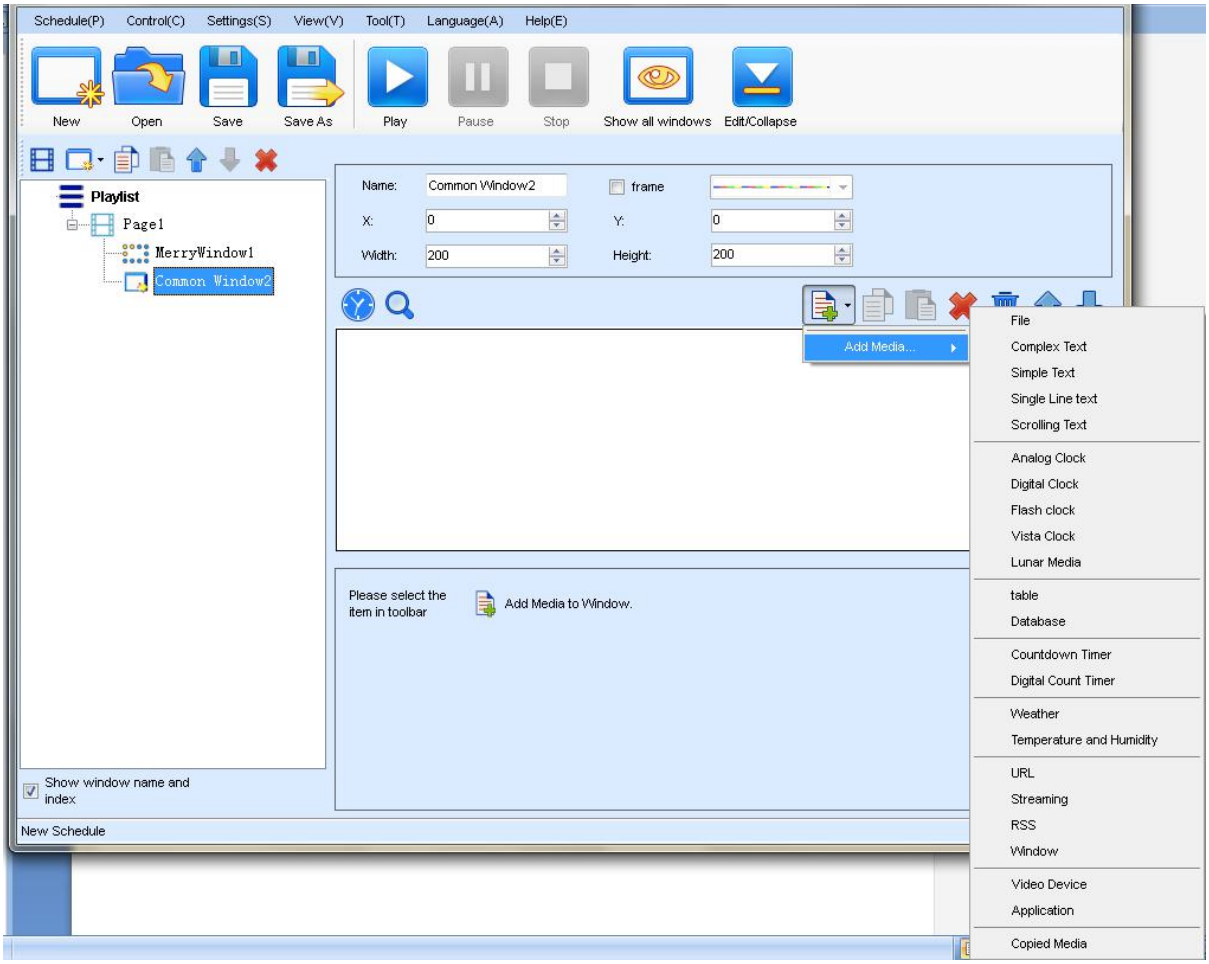


Fig. 3- 4 Window Editing

3) Media Editing

Multiple media can be added and edited through window.

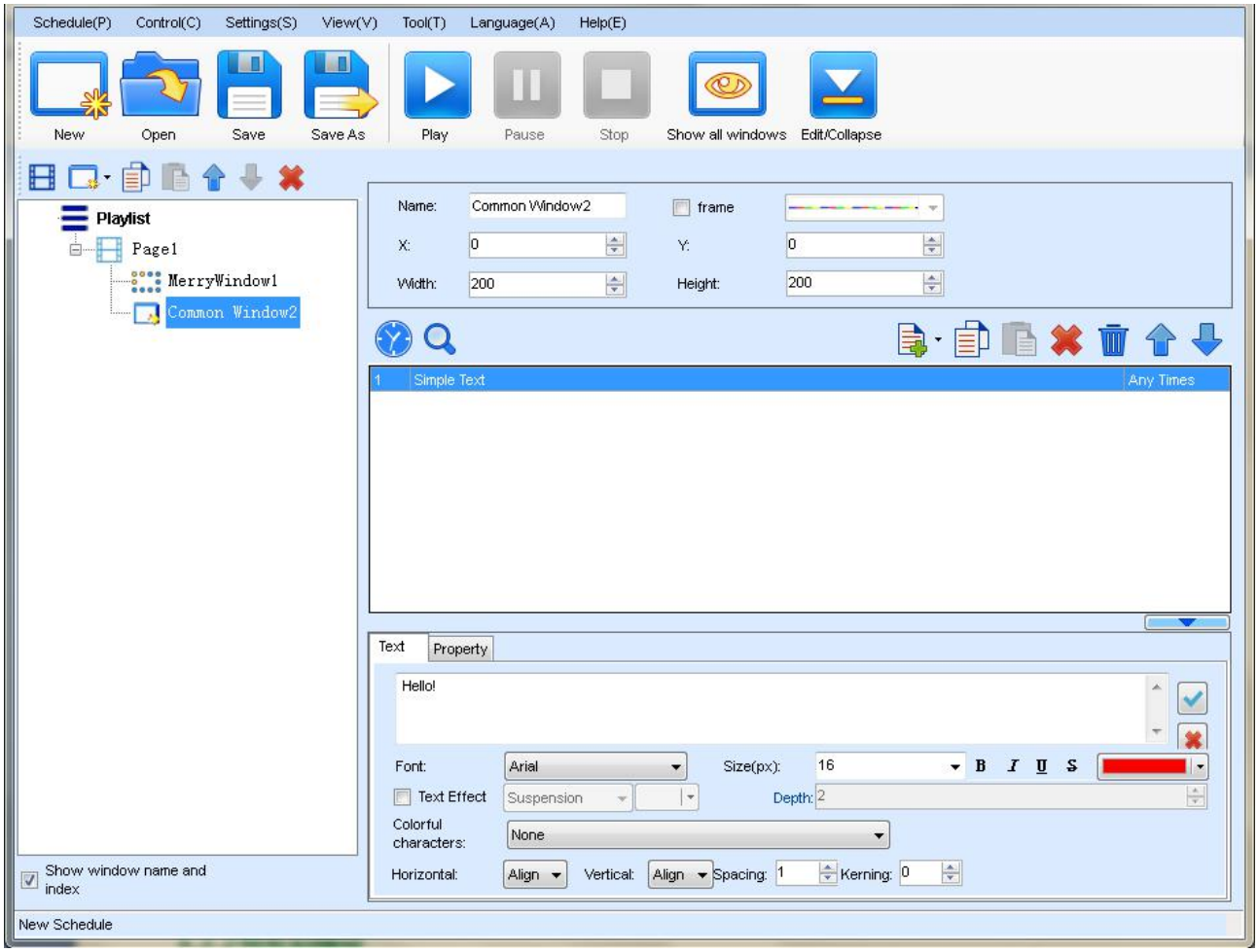


Fig. 3- 5 Media Editing

3.2.2 Preview and play

After editing, choose one page to preview the effect in the play window.

Click

to play it on a loop from top to bottom. Click

to quit playing.

3.3 Professional broadcast program

Play program can save as the file which extension is **.plym**, it is composed by several common segments, otherwise, it can also contain one or more inserted segments. The common segment and inserted segment is composed by one or more pages, and each page is composed by one or more windows. The window can be divided into **Common Window,**

Clock Window, Scroll Text Window, Countdown Timer Window, Weather Window and Video Device Window. The **Common Window** can contain one or more different types of media. One example of play program structure is shown as Fig.3-6

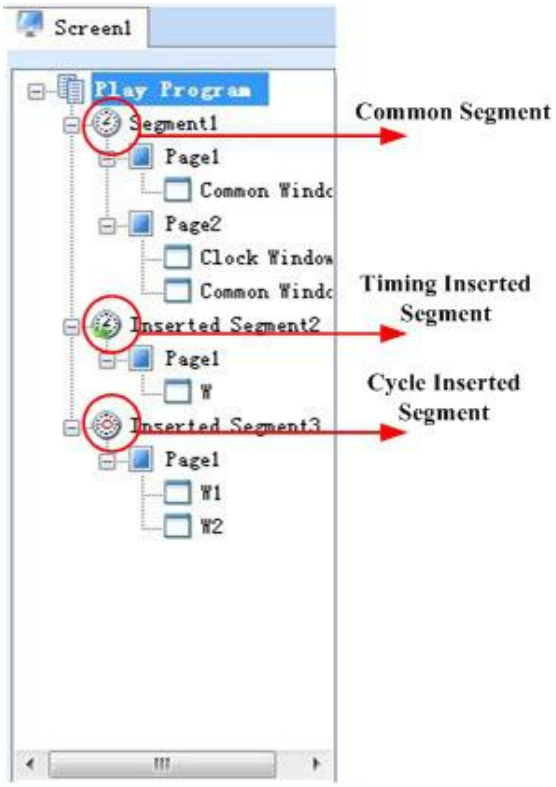


Fig.3- 6 Example of play program

✧ **Common Segment**

The segment has these time properties: **Effective Date, Effective Days of the Week, Effective Time of the Day**.

For Example: The common segment **Segment1**, from Oct. 16, 2015 to Oct. 20, 2015, every Monday, Wednesday, Friday, played from 8:00 to 12:00, as shown in Fig.3-7

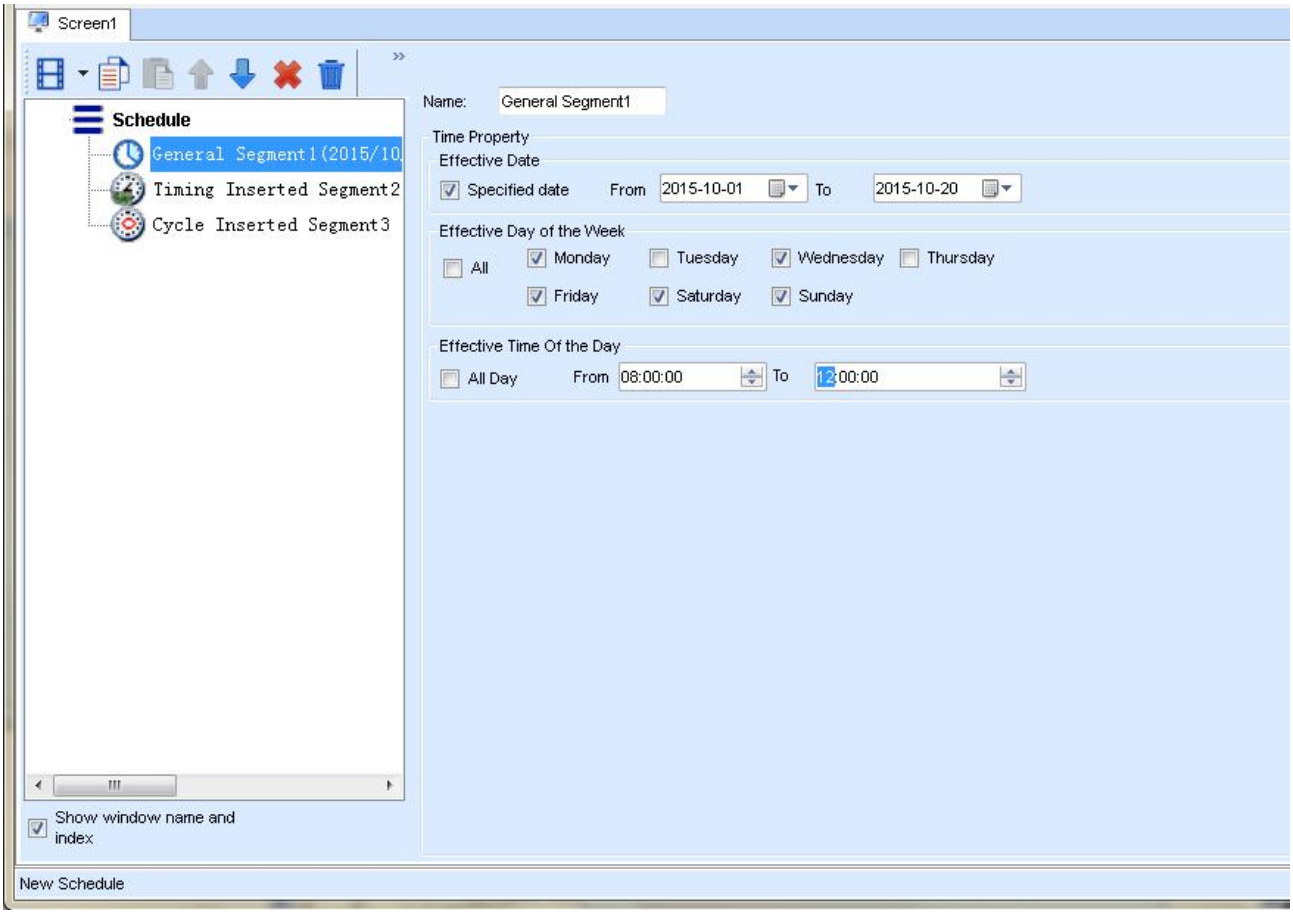


Fig.3- 7 Common segment**Segment1**

✧ **Timing Inserted Segment**

The segment is started to play for specific times or duration at a specific time point in effective days of effective date. It has these time properties: **Effective Date, Effective Days of the Week** and several **Specific Time Points**.

For Example: Timing inserted segment **Segment2**, from Oct. 16, 2015 to Oct. 20, 2015, every Monday, Wednesday, Friday, played at 8:30 for 1 times, as shown in Fig.3-8.

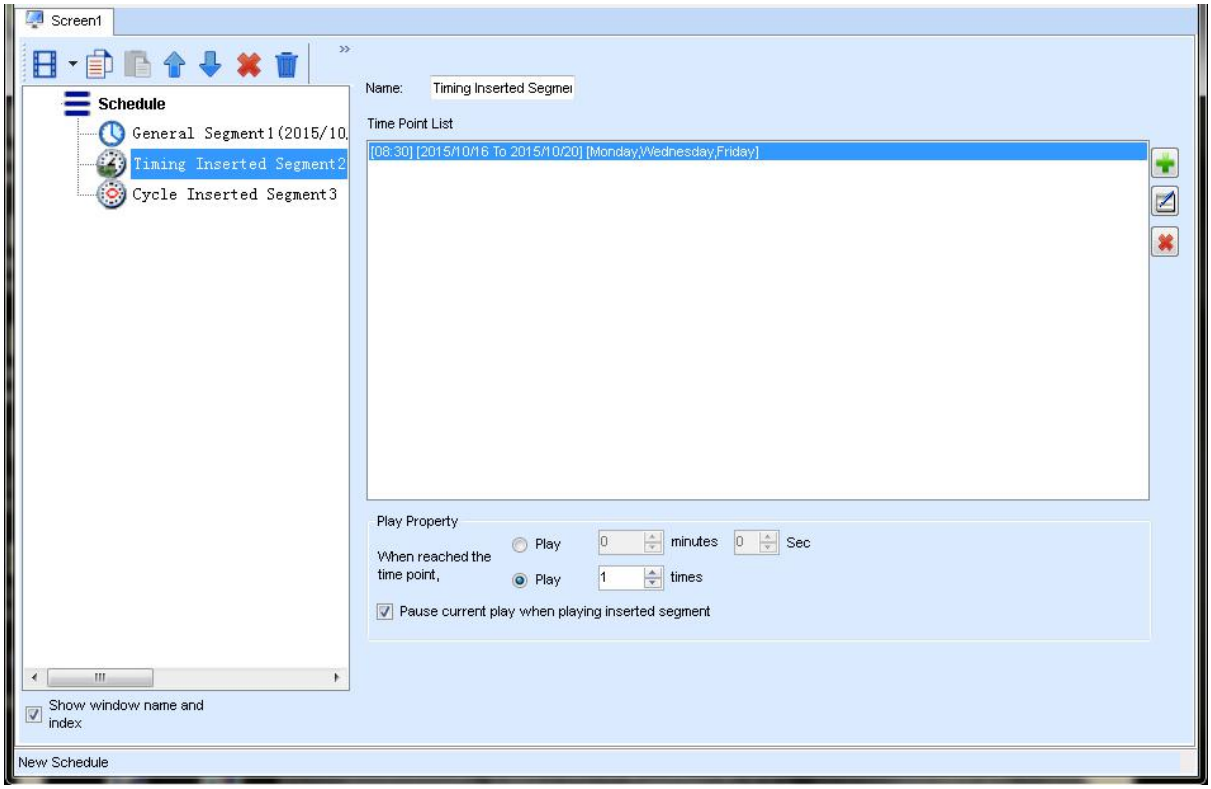


Fig.3- 8 Timing inserted segment **Inserted Segment2**

✧ Cycle Inserted Segment

The segment is played for specific times or duration at regular intervals in effective time of effective days of effective date. It has these time properties: **Effective Date, Effective Days of the Week, Effective Time of the Day** and **Play Intervals**.

For Example: Cycle inserted segment **Segment3**, from Oct. 16, 2015 to Oct. 20, 2015, every Monday, Wednesday, Friday, from 12:00 to 18:00, played one time every 30 minutes, shown as Fig.3-9.

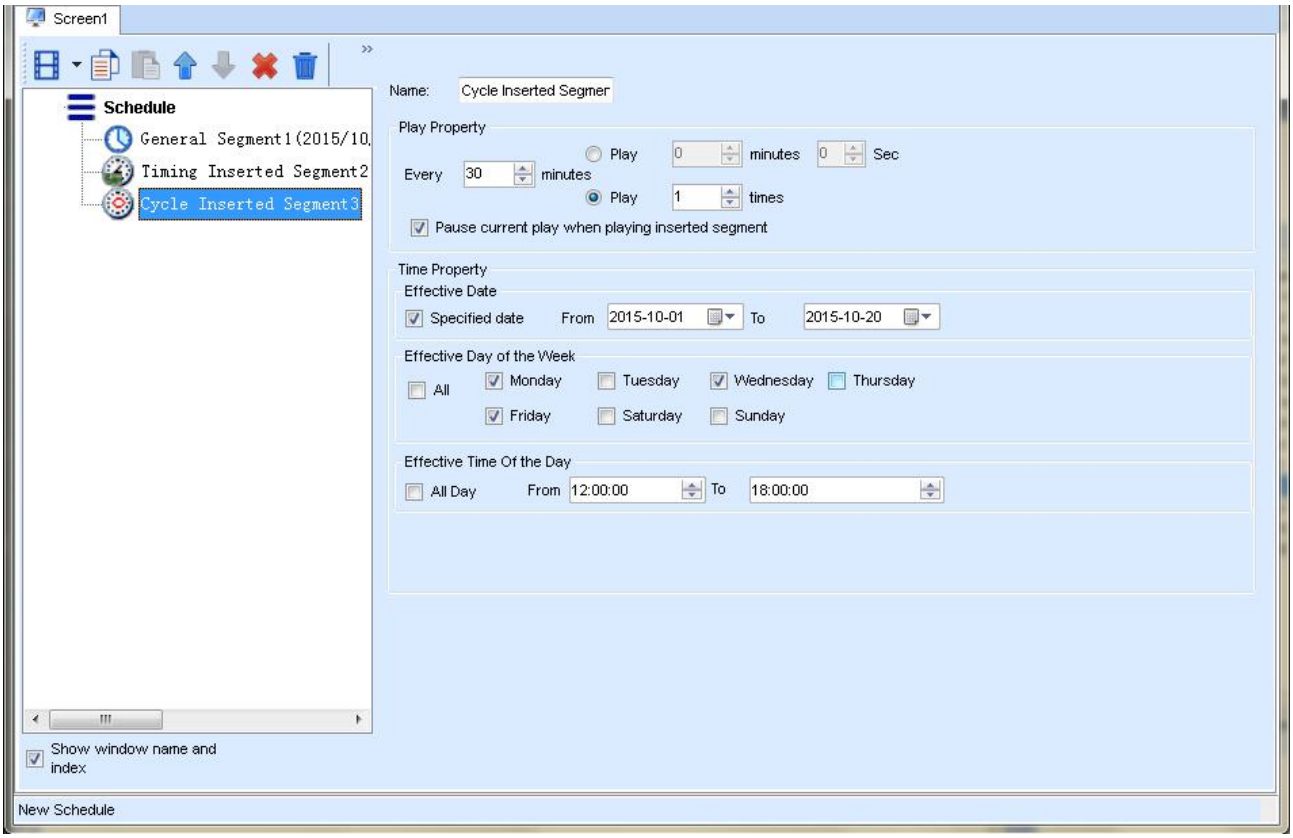


Fig.3- 9 Cycle inserted segment **Inserted Segment3**

✧ Page

A page is an area on the computer display screen that is mapped to a LED display for showing visible media sources (such as videos, pictures and text) on the LED display.

- **Global page**

Global page is a special the basic program page that it always stays on the front of all other the basic program pages. In the case that the basic program pages of different window layout are needed while a window at a fix position is also required (such like that for clock, weather info or scrolling text), putting the fix position window in a global page is the best way for the window layout design. But if only one the basic program page is needed, a global page may not be necessary as the fix position window can be set directly to the position required.

- **The basic Program Page**

A the basic program page can have mulTIPSle windows and the layout of the windows can be customized. A segment can have mulTIPSle pages. And of course, the window layouts of these the basic program pages can be different from each other. The the basic program pages will be shown in the order they are listed in the segment. Normally, one the basic program page is enough for a segment.

✧ **Window**

A window, also named a play window, is an area of a page in which visible media sources will be show. Note that any window must be affiliated to a page.

- **Common Window**

A common window could have its own media sources list and thus different types of media sources can be played in it in the list order.

- **Scroll Text Window**

A window that is only for showing scrolling text.

- **Clock Window**

A window that is only for analog or digital clocks.

- **Countdown Timer Window**

A window that is only for showing information from a time meter.

- **Video Device Window**

A window that is used only for showing videos from an external video device.

- **Weather Window**

A window that is only for showing weather information.

- **Temperature and Humidity Window**

A window that is only for showing ambient temperature and humidity.

3.3.1 Play Program Dispatch Rule

If there are conflicts between the playing times of segments, follow the below rules:

1) **The back one has the higher priority for the same type segments.**
2) **If the timing inserted segment has the same playing time point as the cycle inserted segment, play the timing inserted segment.**

You can view the dispatching result between different dates in the **Play Program Editing Area**.

For example:

✧ **Common Segment**

Suppose time properties of segment A and segment B are set as follow:

A	B
From Oct. 19, 2015 to Oct. 25, 2015	From Oct. 19, 2015 to Oct. 25, 2015
Every day in a week	Every day in a week
From 8:00:00 to 15:00:00 in each day	From 8:00:00 to 12:00:00 in each day

- If B is at the back of A in the play program, then B has the priority to be played on time confliction. The dispatching results will be shown as Fig3-10 (In Oct 19, 2015).

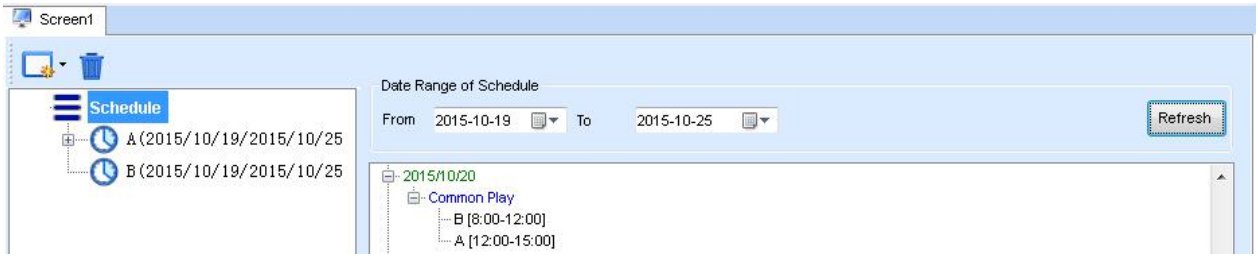


Fig.3- 10 B has higher priority than A

- Otherwise, if A is at the back of B in the play program, then A has the priority to be played on time confliction. The dispatching results will be shown as Fig3-11 (In Oct 19, 2015).

Fig.3- 11 A has higher priority than B

✧ Timing Inserted Segment

Suppose time properties of timing inserted segment C and timing inserted segment D are set as follow:

C	D
From Oct 19, 2015 to Oct 25, 2015	From Oct 19, 2015 to Oct 25, 2015
Every day in a week	Every day in a week
At 8:00, 15:00	At 9:00, 15:00

- If D is at the back of C in the play program, then D has the priority to be played at the

same time point (15:00). The dispatching results will be shown as Fig3-12 (In Oct 19, 2015).

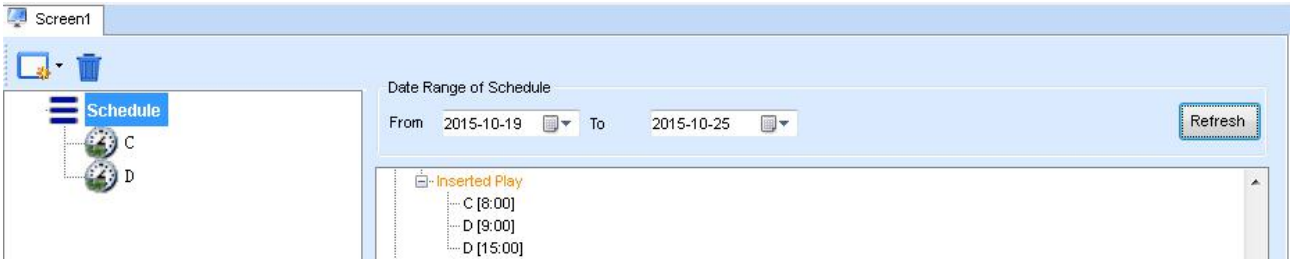


Fig.3- 12 D has higher priority than C

- Otherwise, if C is at the back of D in the play program, then C has the priority to be played at the same time point(15:00). The dispatching results will be shown as Fig2-8 (In June 24, 2012).

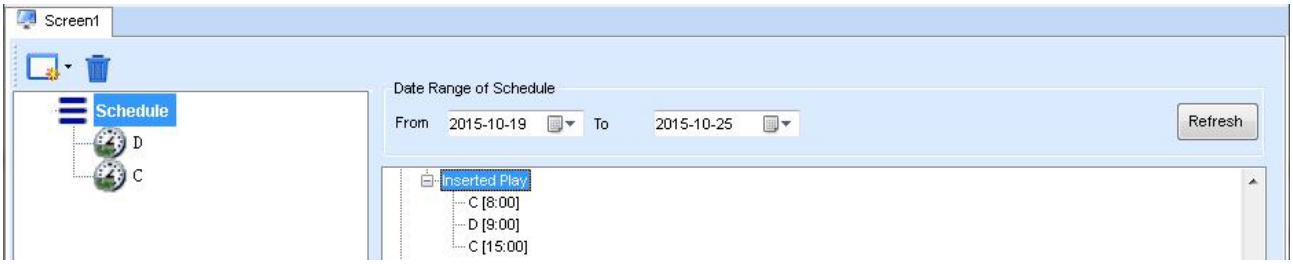


Fig.3- 13 C has higher priority than D

✧ Cycle Inserted Segment

Suppose time properties of cycle inserted segment E and cycle inserted segment Fare set as follow:

E	F
From Oct 19, 2015 to Oct 20, 2015	From Oct 19, 2015 to Oct 21, 2015
Every day in a week	Every day in a week
Play Interval: 30 minutes	Play Interval: 30 minutes

- If F is at the back of E in the play program, then F has the priority to be played on time confliction. The dispatching results will be shown as Fig3-14.

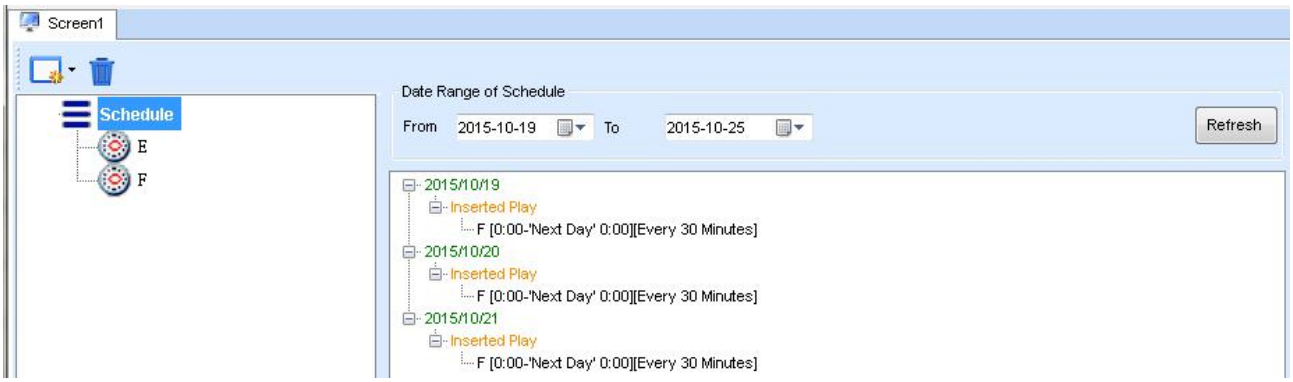


Fig.3- 14 F has higher priority than E

- Otherwise, if E is at the back of F in the play program, then E has the priority to be played on time confliction. The dispatching results will be shown as Fig3-15.

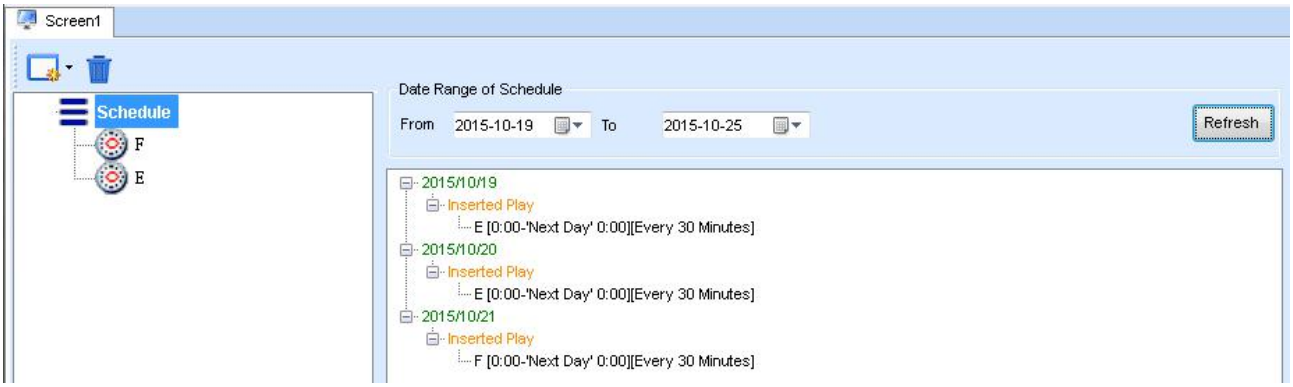


Fig.3- 15 E has higher priority than F

Note: If there is no confliction between two cycle inserted segments, but they has the same playing time point, still follow the same dispatch rule(the back one has higher priority).

For Example, suppose time properties of G and H are set as follow:

G	H
From Oct 24, 2015 to Oct 25, 2015	From Oct 24, 2015 to Oct 25, 2015

Every day in a week	Every day in a week
Play Interval: 20 minutes	Play Interval: 10 minutes

If H is at the back of G, H will be played at 00, 20, 40 minutes of every hour. Otherwise, play G.

If one time point of timing inserted segment is the same as one playing time of cycle inserted segment, play timing inserted segment.

For example, suppose time properties of cycle inserted segment I and timing inserted segment L are set as follow, it would play L when arrived at 10:30.

I	**L**
From Oct 24, 2015 to Oct 25, 2015	From Oct 24, 2015 to Oct 25, 2015
Every day in a week	Every day in a week
Play Interval: 30 minutes	At 10:30

3.3.2 Edit Play Program

3.3.2.1Display Window Setting

Before editing a play program,, the mapping area of the current physical LED display on the computer display should be specified first. The position and size of the mapping area can be set through the Display Window Setting dialog shown in Fig.3-16. To open the Display Window Setting dialog, select **Settings** ->**Display Setting** form the main menu.

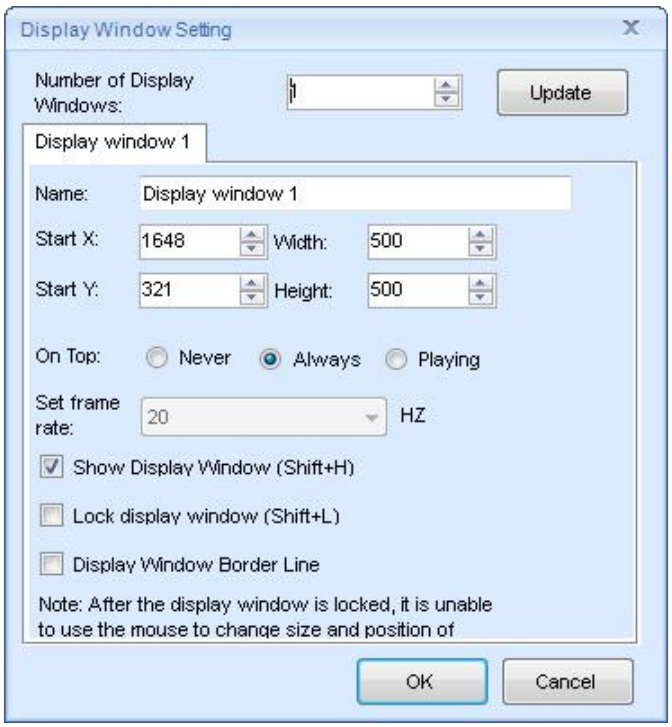


Fig.3- 16 the Display Setting dialog

	Note： The width and height of publishing window can be set over the size of the current display screen. The width×height should be simply meet the requirement of lower than nine million pixels.

3.3.2.2 Edit Segment

1) Create

Click the button on the toolbar of **Play Program Editing Area**, or right-click on the **Play Program** Node, or right-click on the screen, a menu pops up shown as Fig.3-17 for adding new segment.

Fig.3- 17 Add segment

2) Editing Properties of Segment

You can edit the properties at the **Segment Editing Area** after adding the common segment or inserted segment. Shown in Fig.3-18, Fig.3-19, and Fig.3-20 is the corresponding property page.

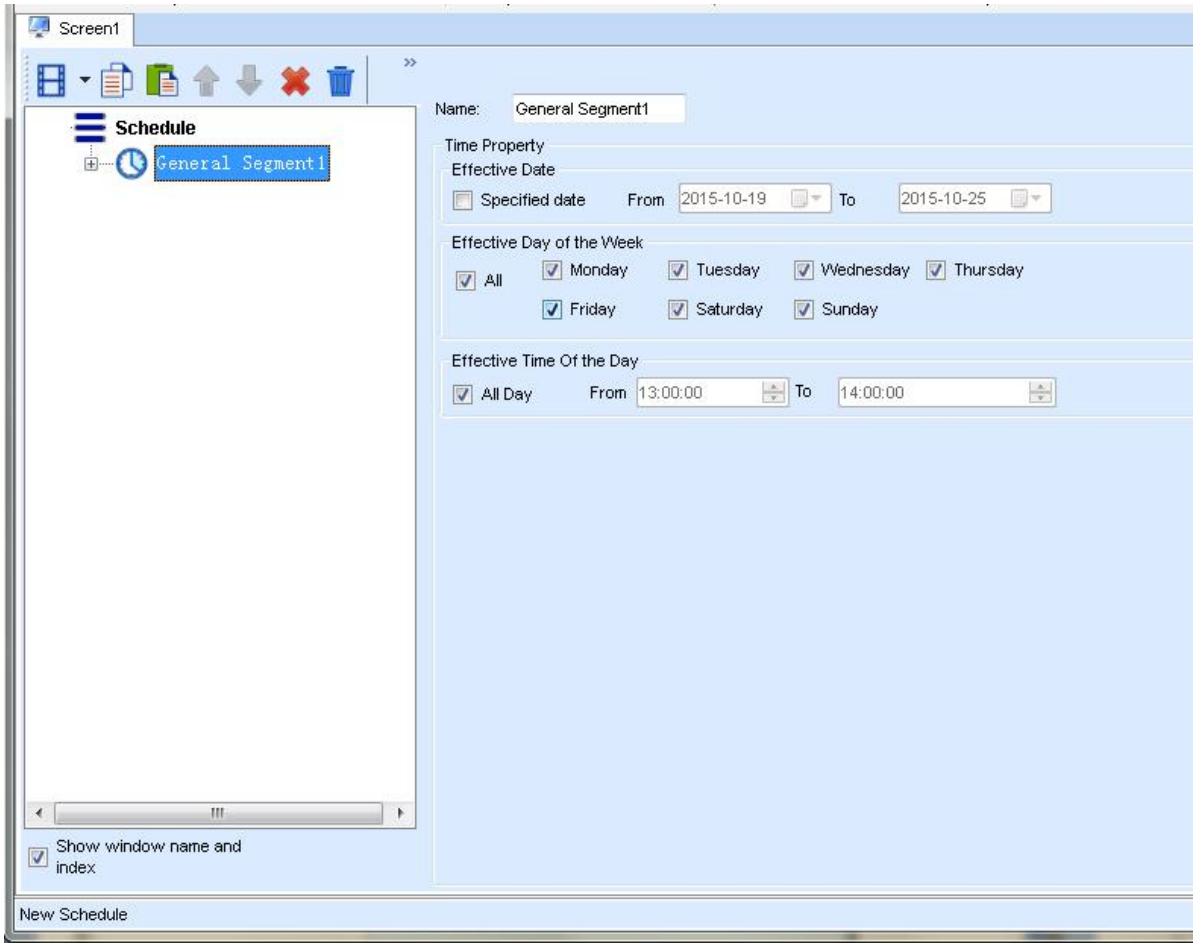


Fig.3- 18 Properties page of common segment

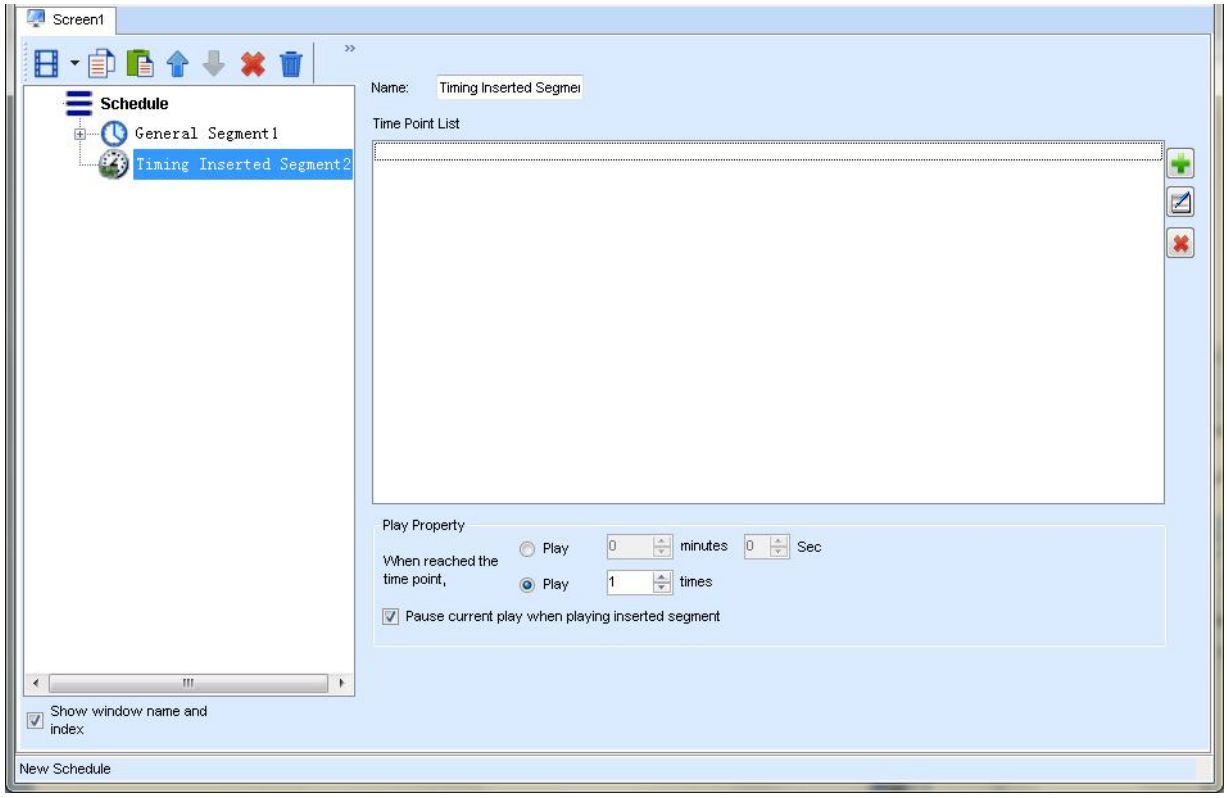


Fig.3- 19 Properties page of timing inserted segment

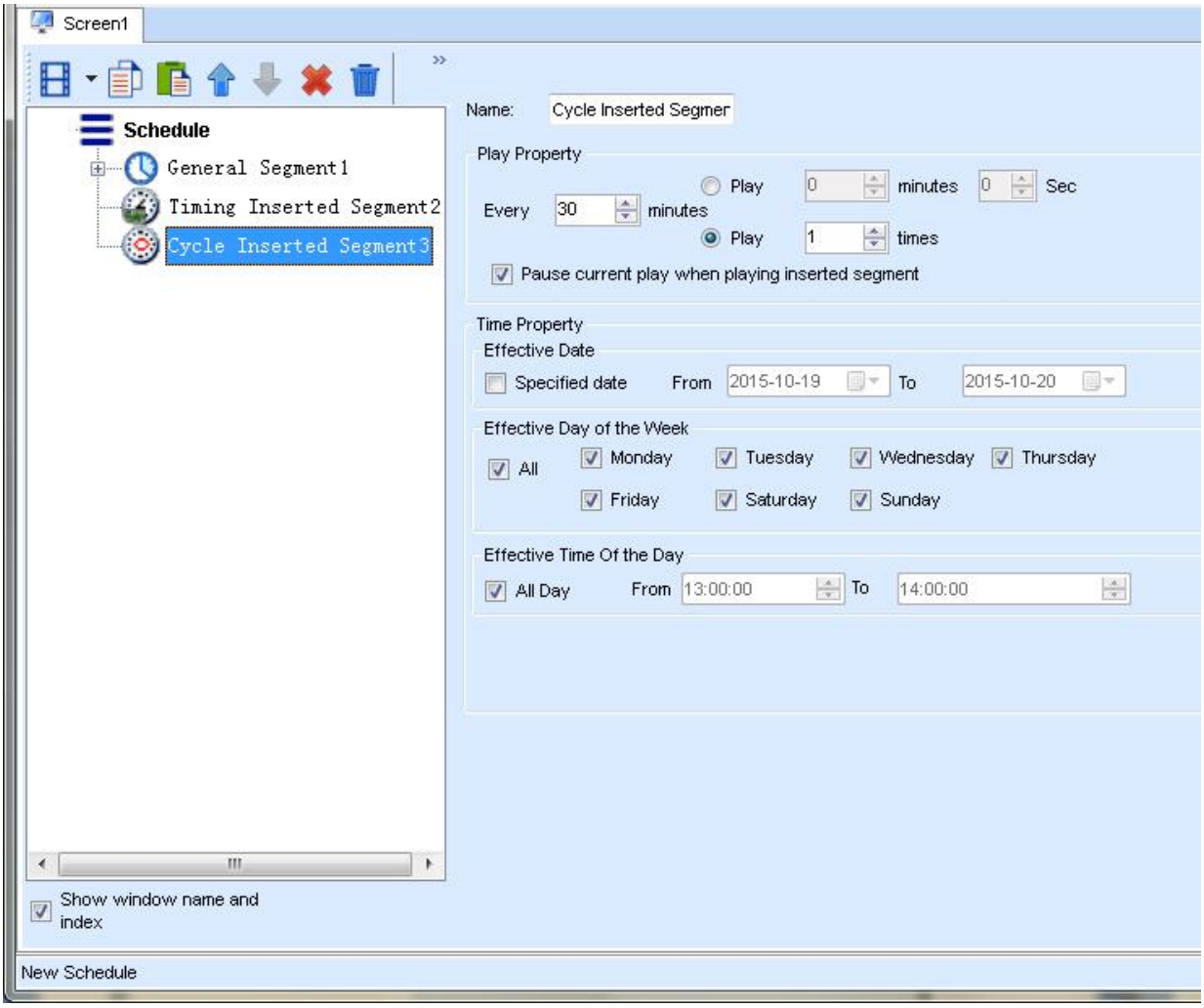
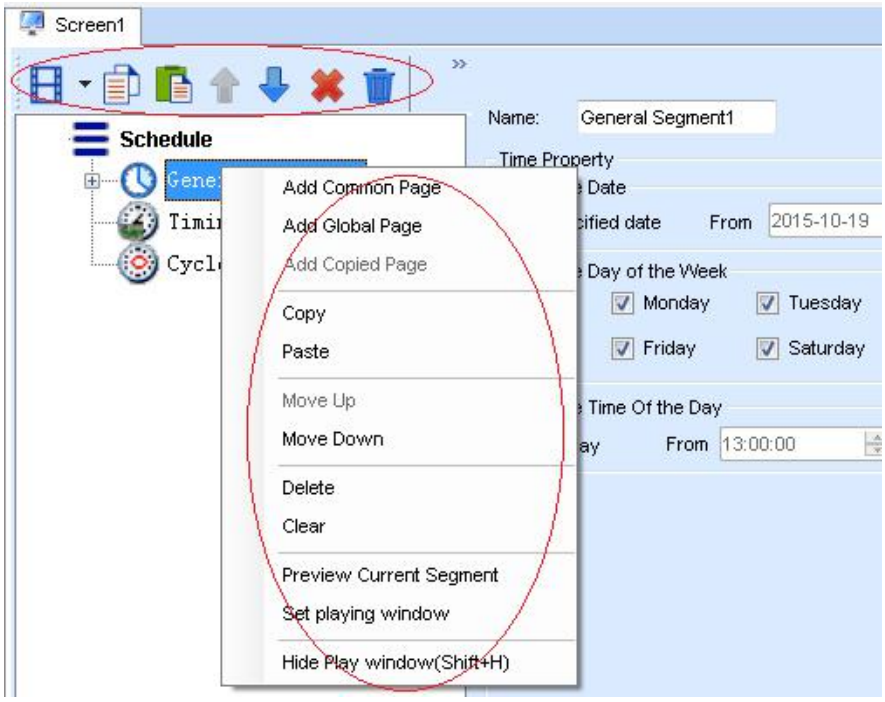


Fig.3- 20 Properties page of cycle inserted segment

You can add one or more playing time point for the timing inserted segment.

For inserted segment, if **Pause current play when playing inserted segment** is selected, the current common segment play (If has) would be paused and hide if begin to play inserted segment, otherwise, the inserted segment and the current common segment would be played together.

Use the toolbar on the right or right-click menu, you can copy, paste, move or delete the selected segment. The toolbar and menu is shown as Fig3-21.



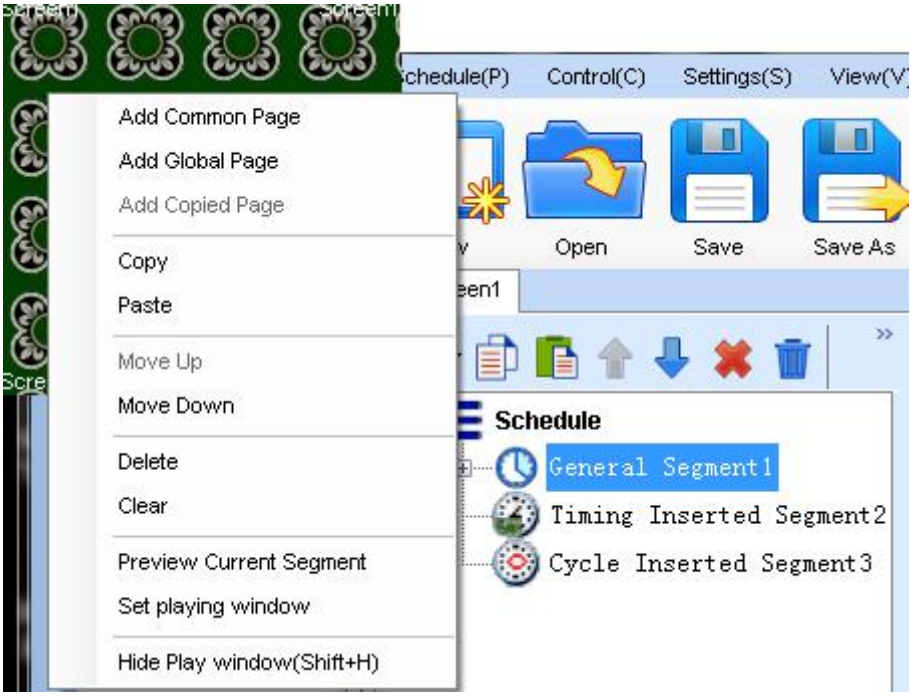
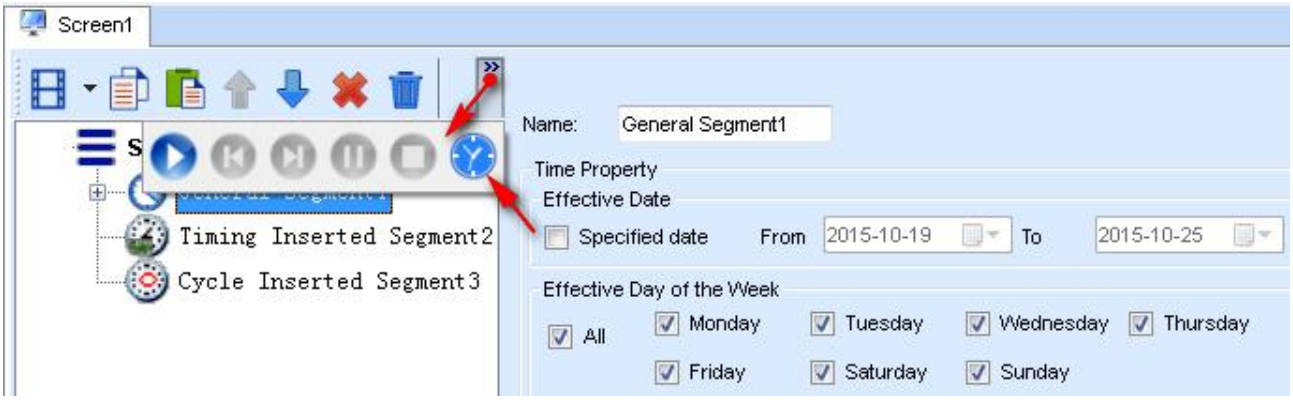


Fig.3- 21 Menu of segment

3) Statistics of the time duration

Select the time frame of the playing scheme; click » → to check time-consuming by the pages.



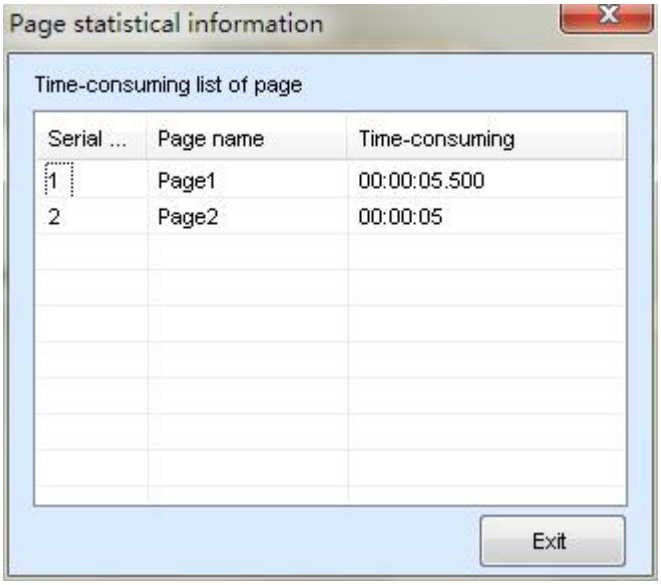


Fig.3- 22 Page statistical information of time-consuming

3.3.2.3Page Editing

1) Create a new page

Click the button on the toolbar at **Segment Editing Area** to add a **The basic program page** or **Global Page**, as shown in Fig.3-23.

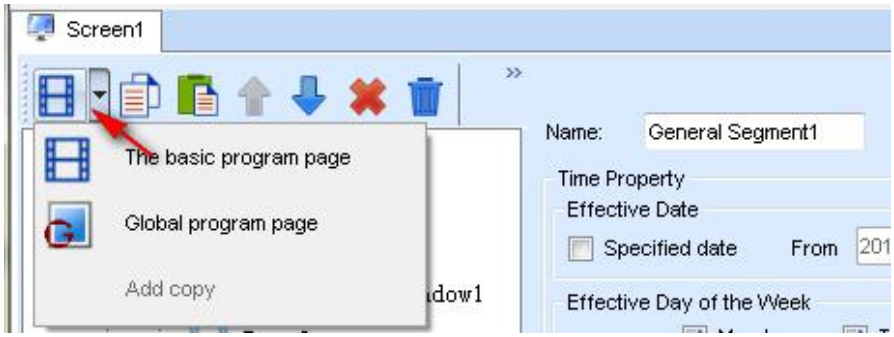


Fig.3- 23 Add page

2) Properties Setting

The properties of the added page can be set through the property panel. Shown in Fig.3-24 is the property panel.

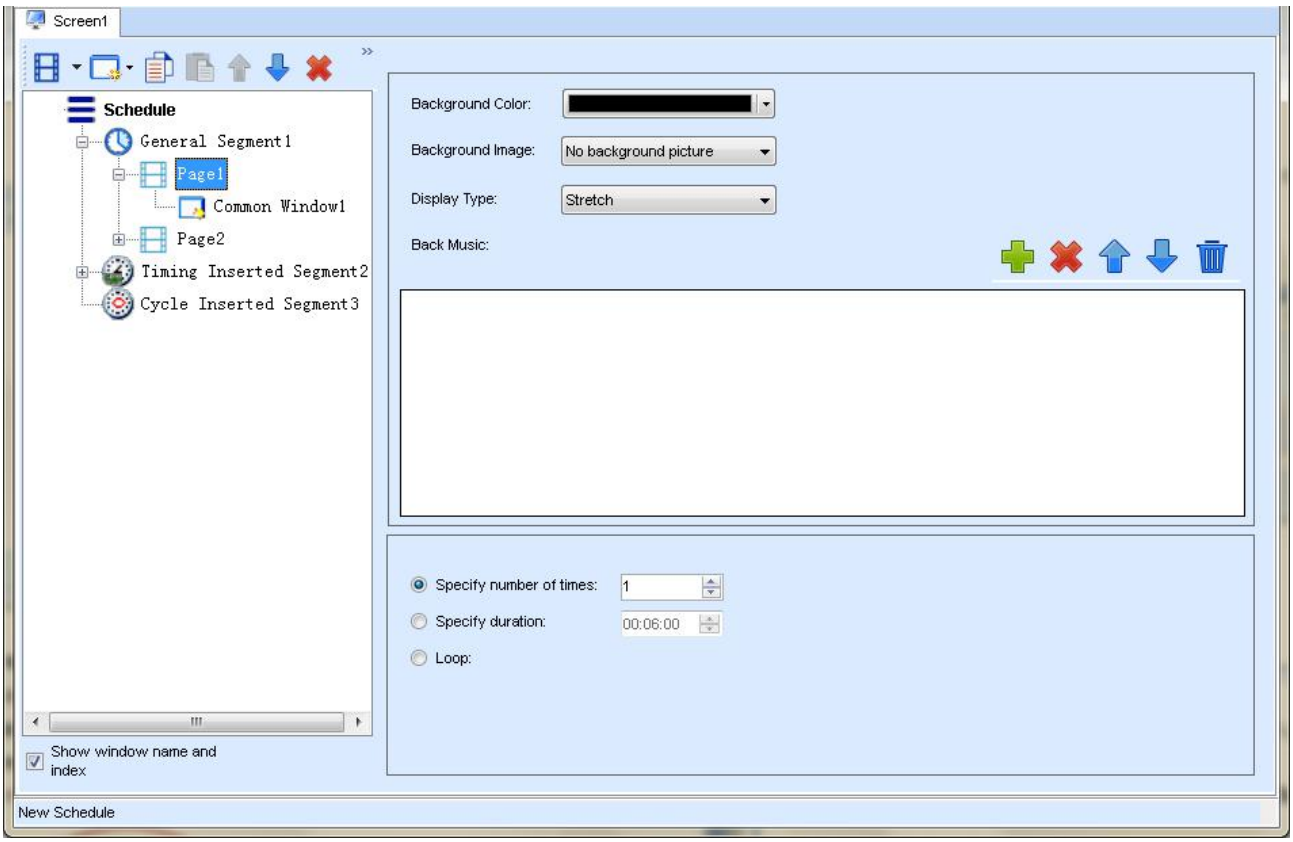


Fig.3- 24 Properties of page

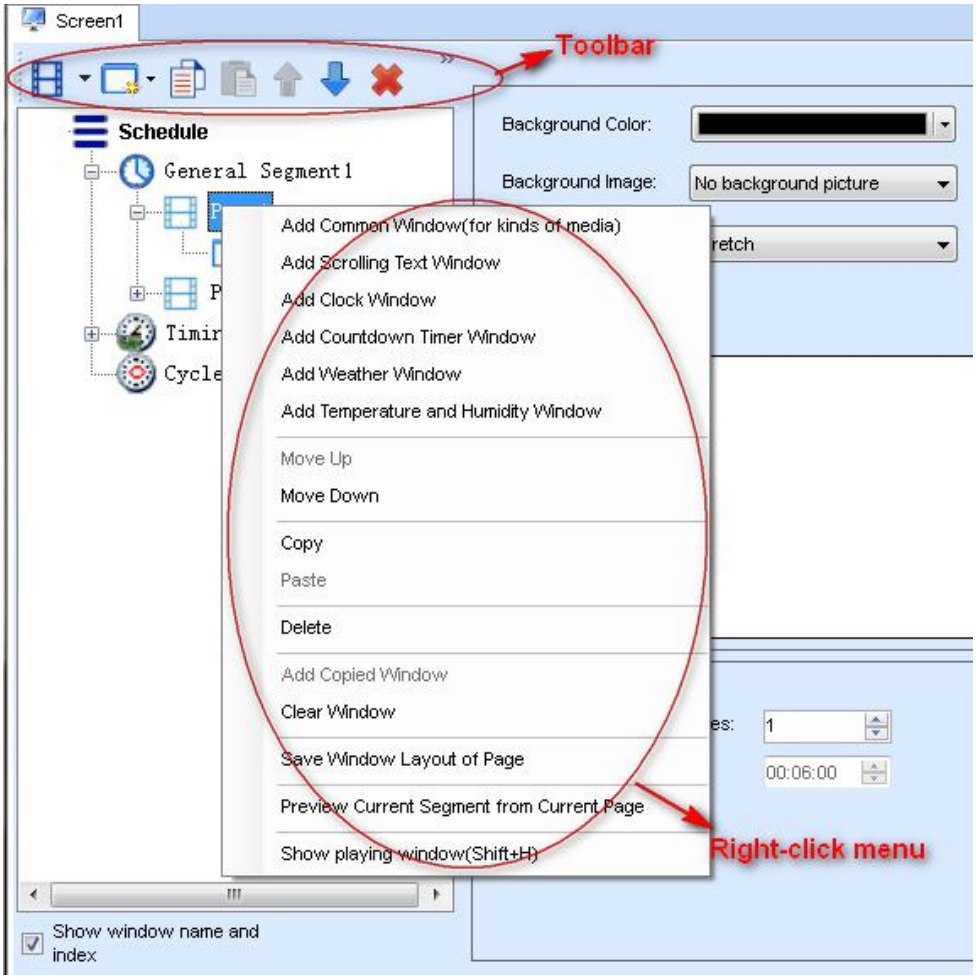
There are three options for Play Type, **Loop**, **Specific number of times** and **Specific Duration**. If Play Type is set to be **Loop**, this page will be shown repeatedly; if **Specific Duration**, NovaStudio will shift to the next page after showing this page for the time specified by **Play Duration**; if **Specific number of times**, NovaStudio will shift to the next page after all the play windows finish playing their media sources repeatedly for N times (N is specified by **Play Times**).

Area of the page that is not covered by windows will show the background picture or color, as shown in Fig.3-25.

Fig.3- 25 Background with background picture

The play type is only **Loop** for global page. The global page will be always playing during the segment playing.

Use the toolbar on the right or right-click menu, you can copy, paste, move or delete the selected page. The toolbar and menu is shown as Fig3-26.



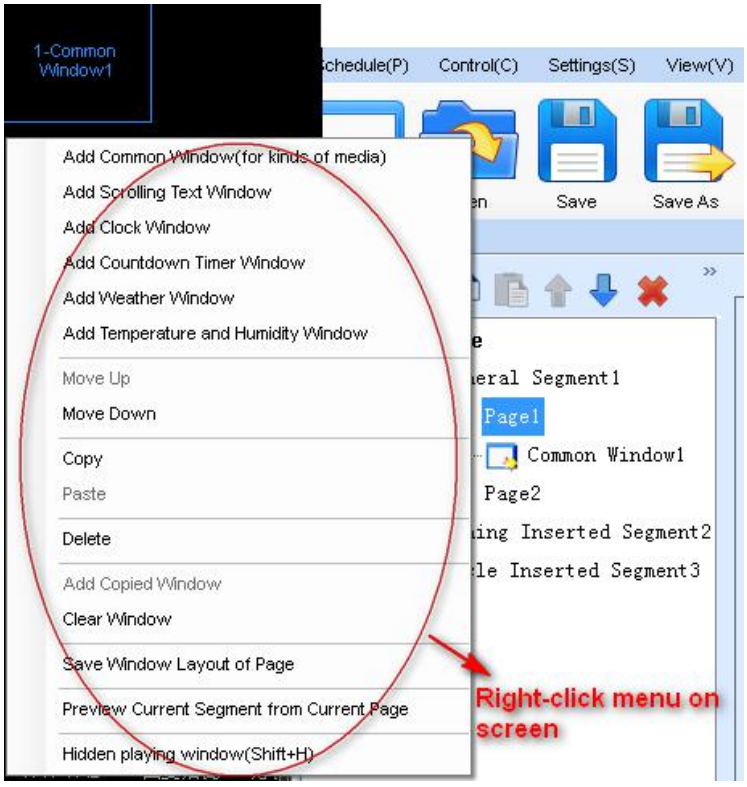


Fig.3- 26 Menu of page

3.3.2.4Window Editing

1) Create a new window

After adding a page, you should add windows to the page. For example, click the button shown in Fig.3-27 to add a common window to the page.

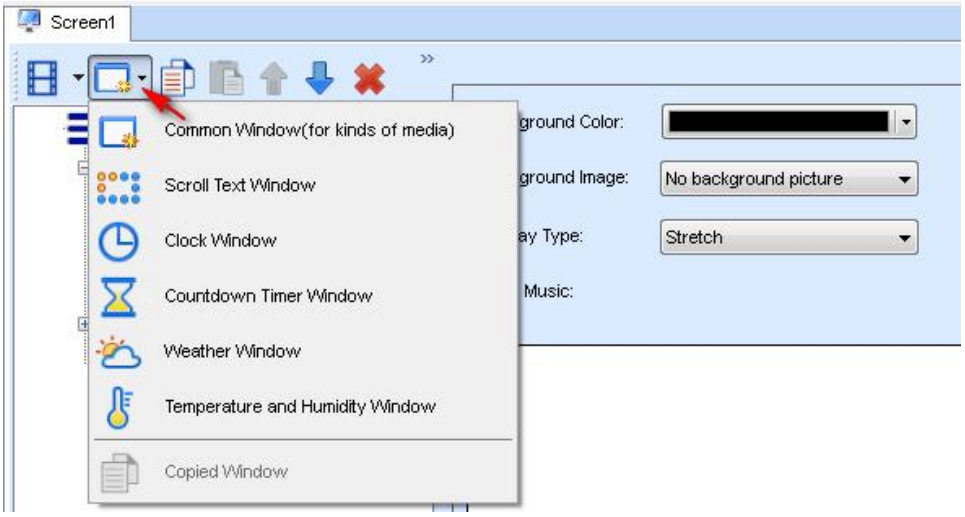


Fig.3- 27 Add window to page

The newly added window will be on focus and also shown on the computer display after the add operation, as shown in Fig.3-28.

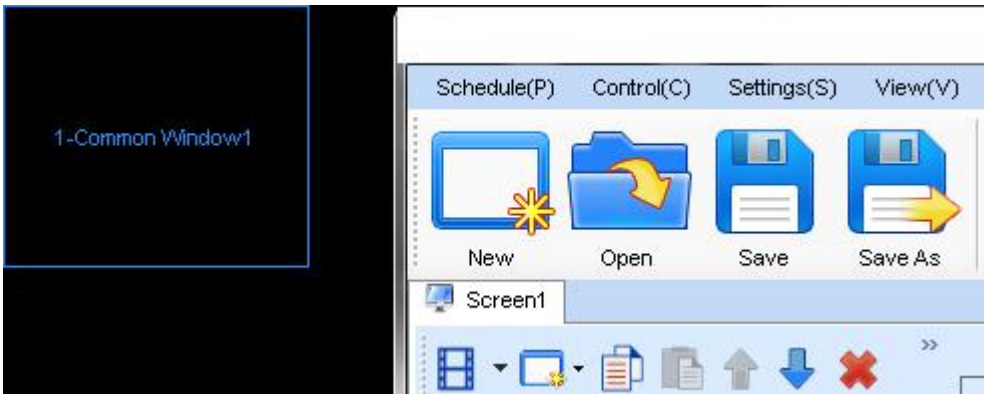


Fig.3- 28 Added window

2) Window position and size setting

The position and size of a newly added window may need to be reset as the default values are

unlikely to meet the requirements. These values can be reset directly by using the tool provided in NovaStudio, as shown in Fig.3-29. A more intuitive way to reset these values is to use the mouse. Click on the window to put focus on it and then set its position and size by drawing, pulling and squeezing, as shown in Fig.3-30. The arrow keys and their combination with Shift keys can also be used for the position and size setting of a window.

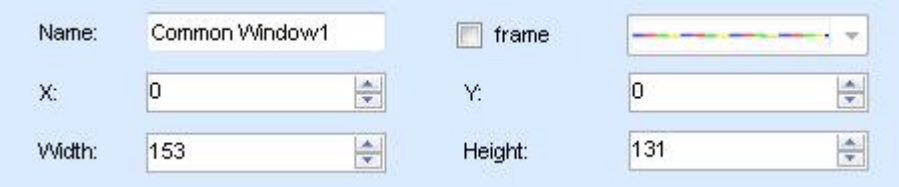


Fig.3- 29 Tools for window position and size setting

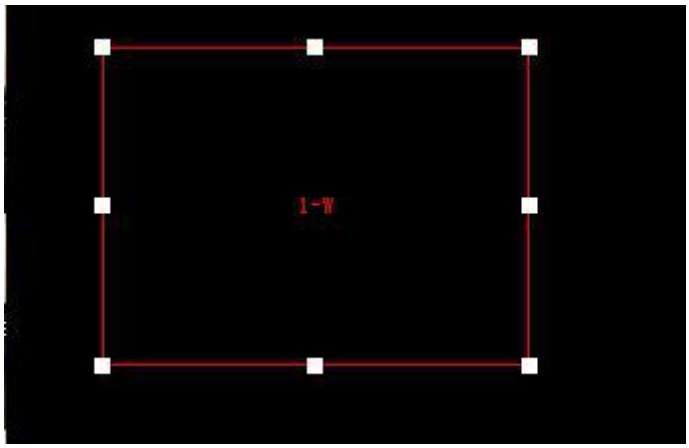


Fig.3- 30 A focused common window

To show all the windows of a page, just select the page from the page list. This could be very helpful for windows layout adjustment.

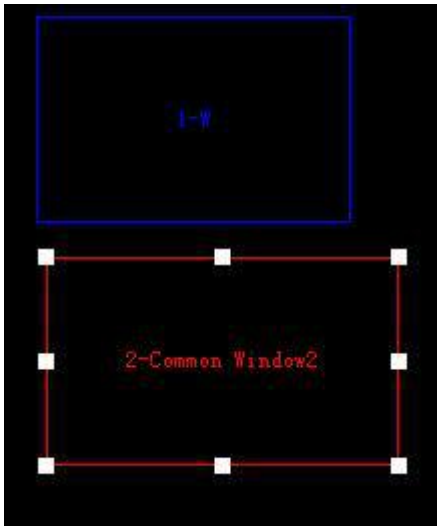


Fig.3- 31 Showing all windows of a page

3) Border setting

The newly added window defaults to single line border. Check "frame" to set frame type, as shown below.

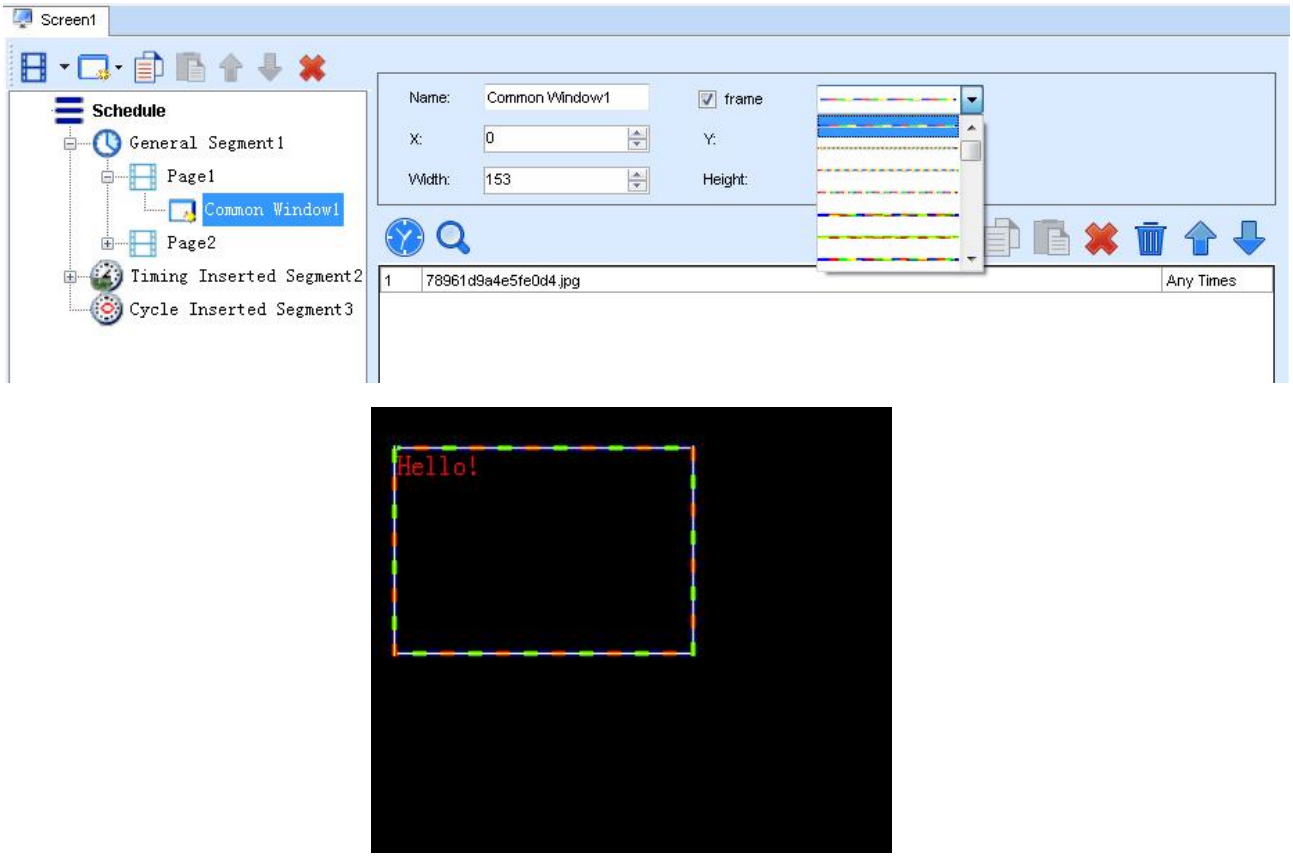


Fig.3- 32 Frame Setting

4) Delete a window

To delete a specified window, click the circled **Delete** button, as shown in Fig.3-33.

Fig.3- 33 Delete window

5) Move a window

For overlapped windows in the same page, the one at front will cover those under it.

Suppose a common window and a clock window is added to a page at the same position of (0, 0, 200, 200). The common window will cover the clock window when this page is on shown if the common window is in front of the clock window in the window list. To avoid the clock window being covered by the common window, move it to the front of the common window or move the common window to the back of it. The circled arrow buttons in Fig.3-34 are use to move a window forward or backward.

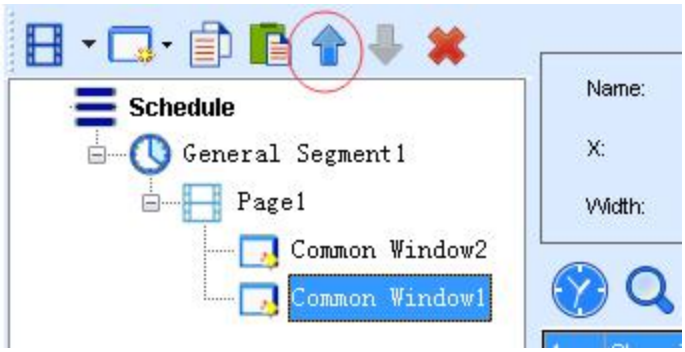


Fig.3- 34 Move window

The result of a transparent clock window on top of a common window (showing a picture) is as Fig.3-35.

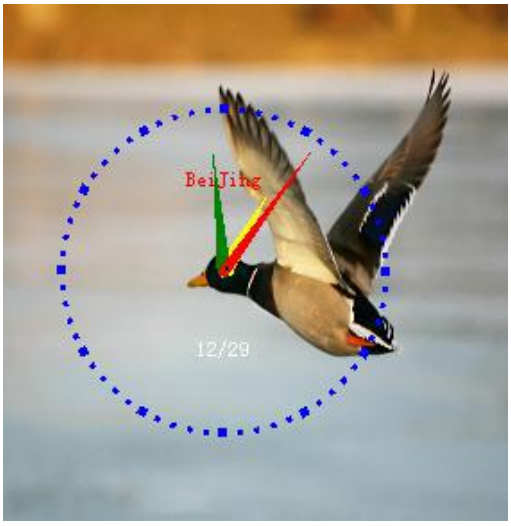


Fig.3- 35 Result of a overlapping transparent clock window on a common window

6) Duplicate a window

To duplicate a window, select the source window, click the Copy button and then click the Paste.

Circled in Fig.3-36 are the Copy button and the Paste button.

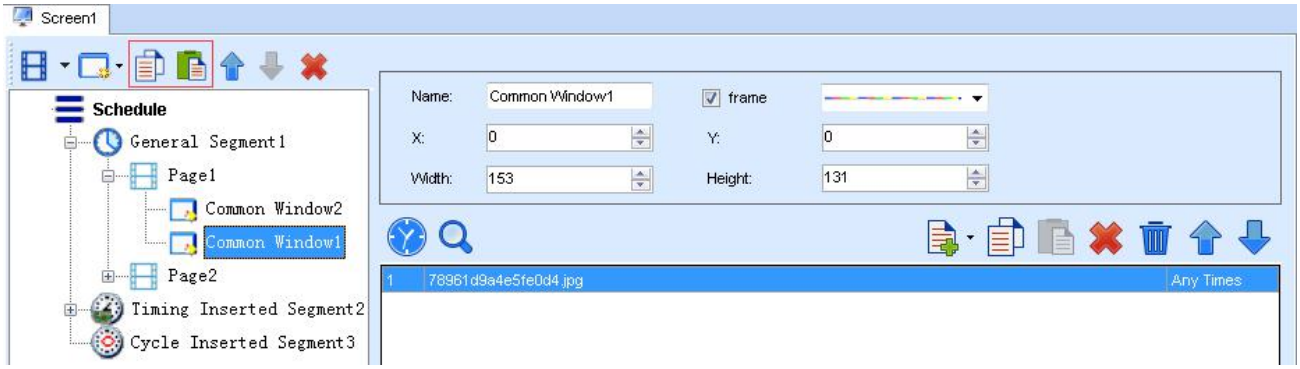


Fig.3- 36 The Copy button and the Paste button

The right-click menus on the window node and on the window zone in the screen are also supported to edit the window, as shown in Fig.3-37.

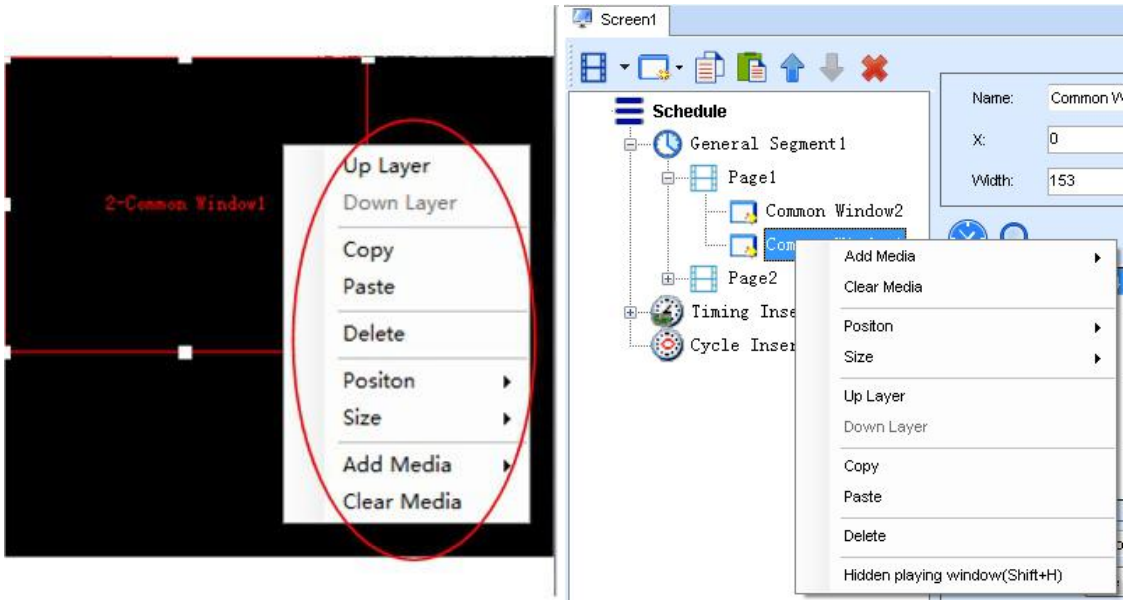
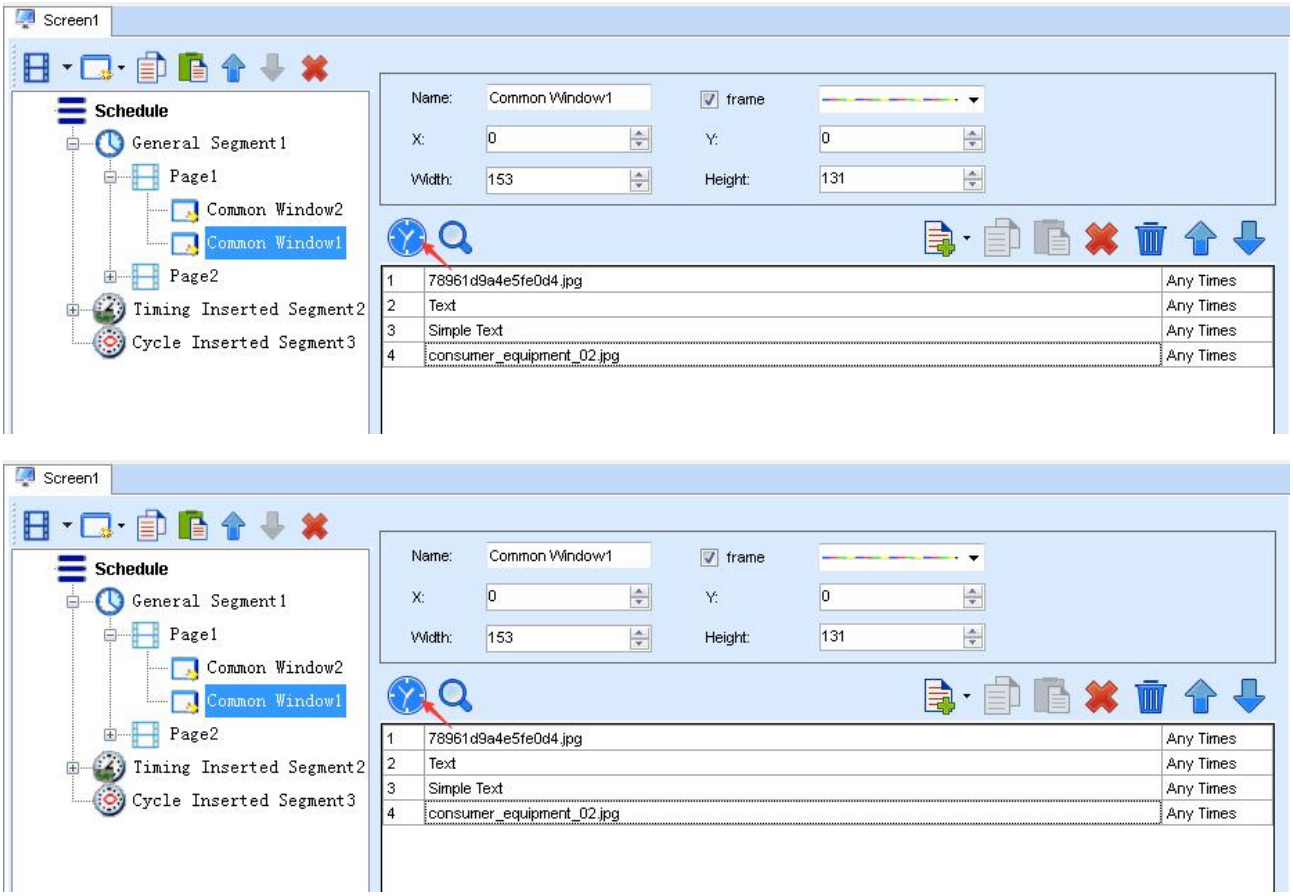


Fig.3- 37Right-click menu of window

7) Total time of the media

Select the general window; and select all medias in the media list, click to check the detailed dispatching table and theoretical playing time of the media.



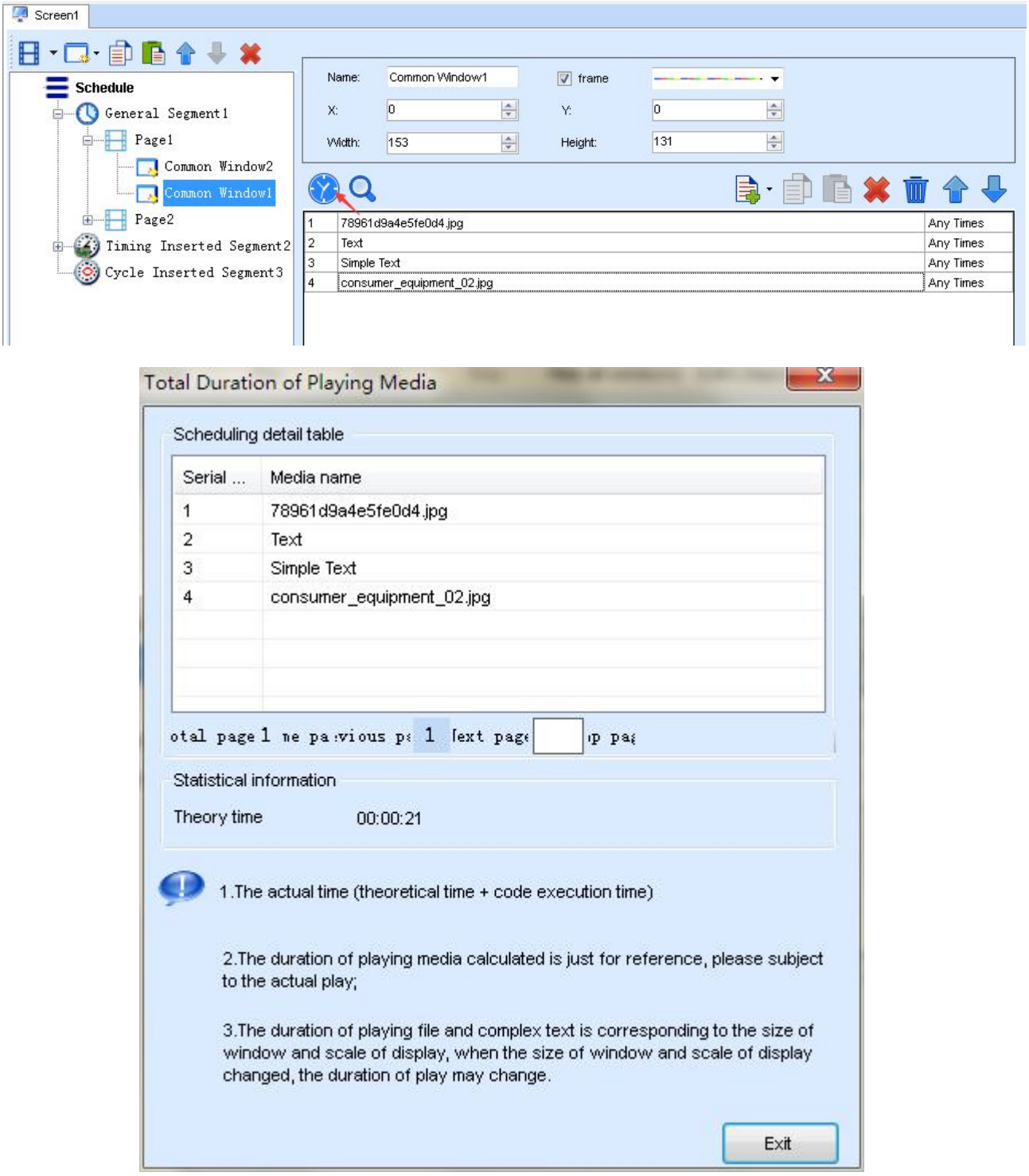


Fig.3- 38 Total playing time of the media

3.3.2.5Media Editing

Media editing will be illustrated with a common window as an example.

1) Add a media

Media sources of a media type that is supported by NovaStudio can be added to a common window for showing. Click the circled button in Fig.3-39 to access the drop-down menu of media types. Select the corresponding item to add a media source of that type to the common window.

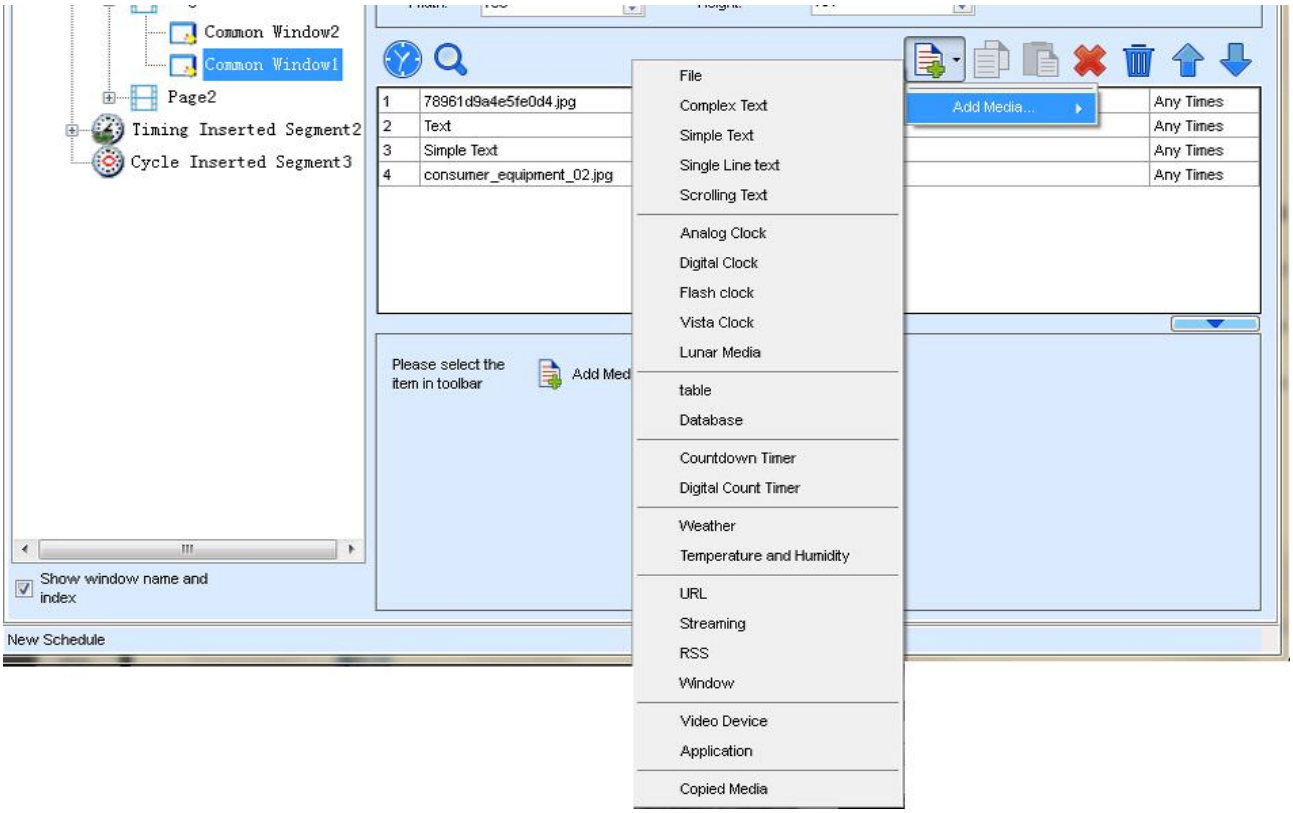


Fig.3- 39 Add media

2) Media properties setting

Properties of a media source can be set is related to the type of the media source. Refer to **1.3 Media Types Supported** for information about the settable properties of a certain type of media. Settable properties of the selected media item in the media source list will be shown on the property panel, as shown in Fig.3-40. Modify the property settings of a media item through the property panel if required.

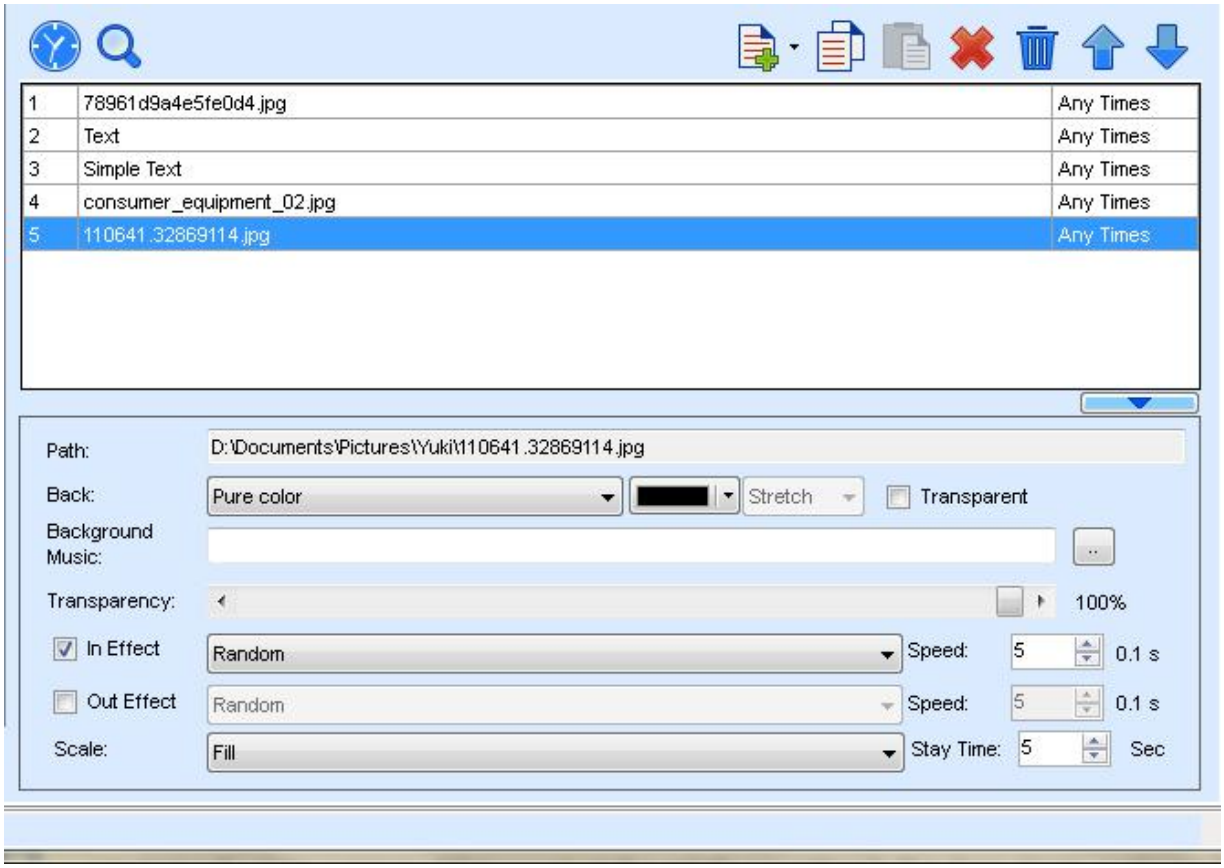
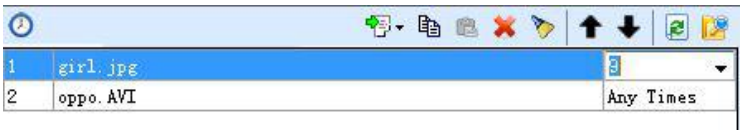


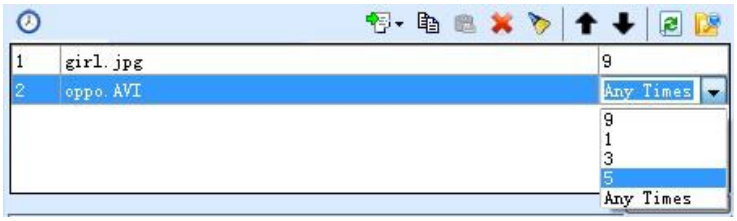
Fig.3- 40 Properties page of media

3) Set play times of media

Select the media in the list, then double click the Play Times Grid to change the play times: You can manually enter a new number or select the existing number in the drop-down, as shown in Fig.3-41.



(1)



(2)

Fig.3- 41Change play times of media

The media scheduling is related with the play type of current page, described as follows.

✧ If there is three media A, B and C of one common window, the corresponding play time is 1, 2 and Any Times, the play order is as follows:

- The play type of page is **Cycle**： A B C B C CC C……
- The play type of page is **Specific Times as 2**：A B C B | A B C B
- The play type of page is **Specific Duration**：A B C B C CC C……

✧ If there is three media A, B and C of one common window, the corresponding play time is 1, 2 and 3, the play order is as follows:

- The play type of page is **Cycle**： A B C B C C | A B C B C C | A B C B C C |……|……
- The play type of page is **Specific Times as 2**：A B C B C C | A B C B C C
- The play type of page is **Specific Duration**：A B C B C C | A B C B C C |……|……

4) Preview a media

Click a media item in the media list to preview it in the current window (in this case, the current window is a common window). New property settings will take effect immediately even they are set during the previewing. The first media source in the media list of a window will be automatically previewed when the window is selected.

Users can set and click media preview modes in the following manner. The operating steps are as follows:

Click "**Setting**" →"**Preview setting of media**" on the toolbar to enter the interface shown below:

Fig.3- 42 Media Setting

The user can set media clicking preview at "only play one time" or "loop play" according to the practical demands. If "only play one time" is chosen, "black screen" or "keep the last frame" may be selected upon the completion of media preview setting with the options below.

5) Move a media item

Use the buttons to move a media item in the media list forward or backward and thus change the play order of the media sources. Mouse can also be used to move media items. The red line in Fig.3-43 indicates the new position of the mouse item dragged by the mouse.

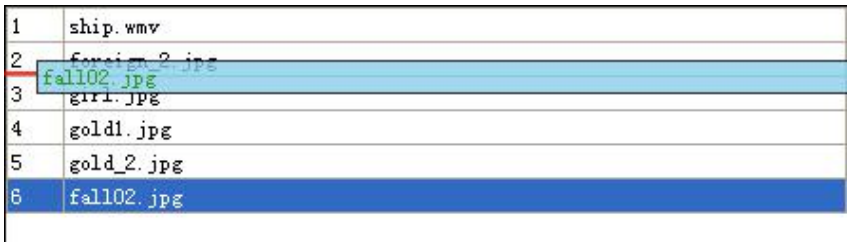


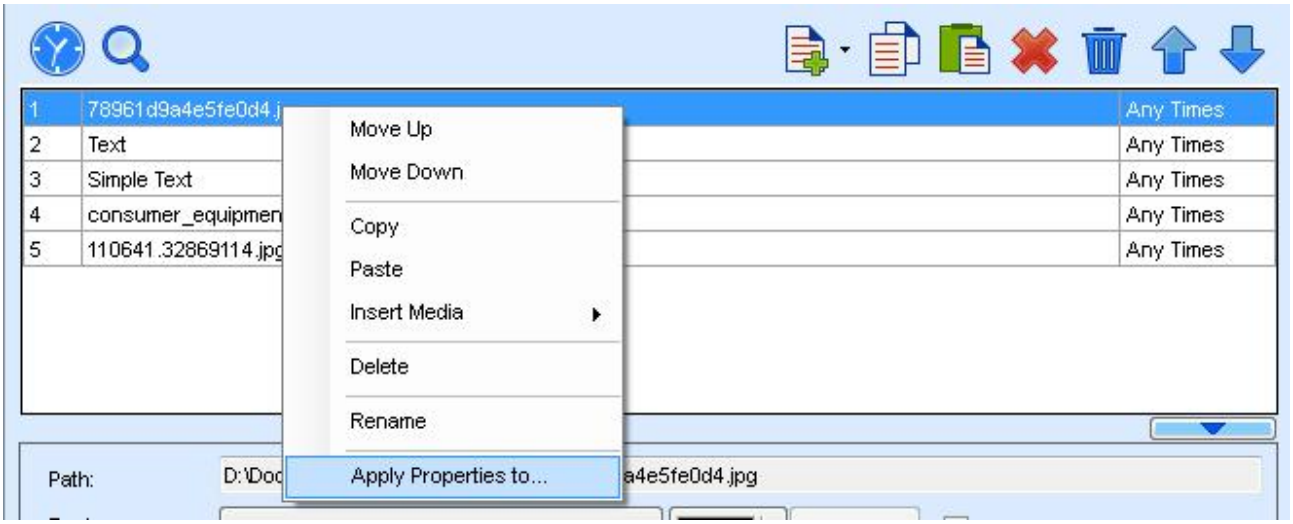
Fig.3- 43 Move a media item by mouse

6) The copy and paste of media

Click button to copy the selected media, and click button to insert the copied media after the selected media.

7) Apply the media properties to others

Select a media, and then click right button of mouse，and click choose the media to apply to in the pop up dialog.



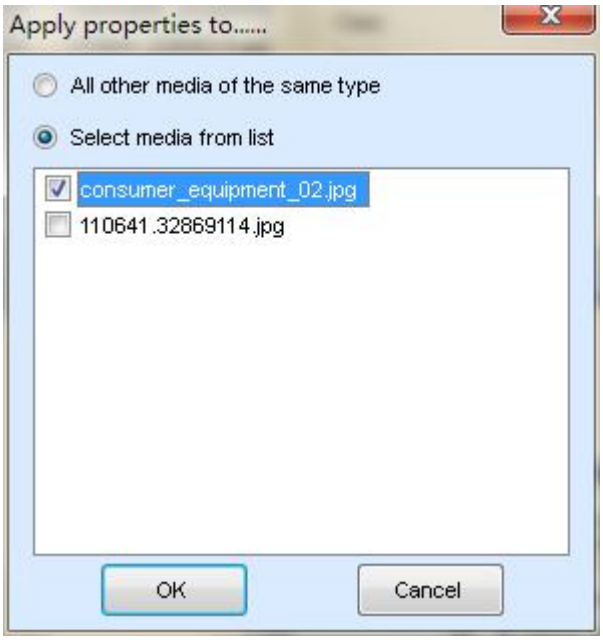


Fig.3- 44 Apply properties to media

Otherwise, the media operation also provides the corresponding right-click menu, as shown in

Fig.3-43 and Fig.3-44.

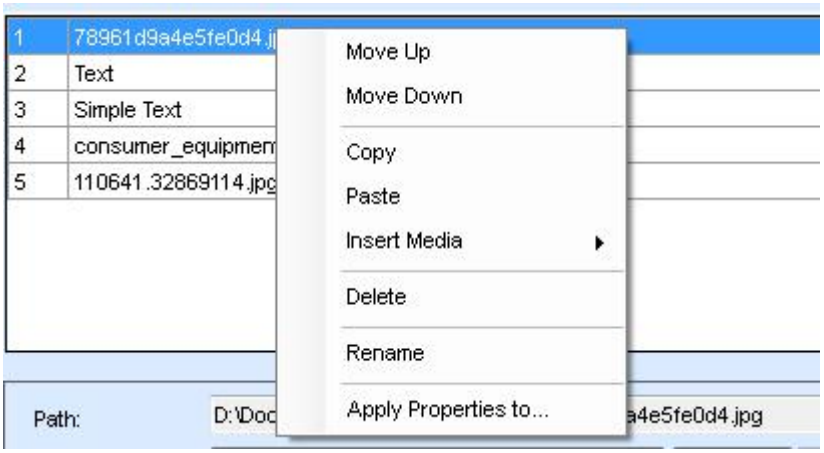


Fig.3- 45 Right-click menu of selected media

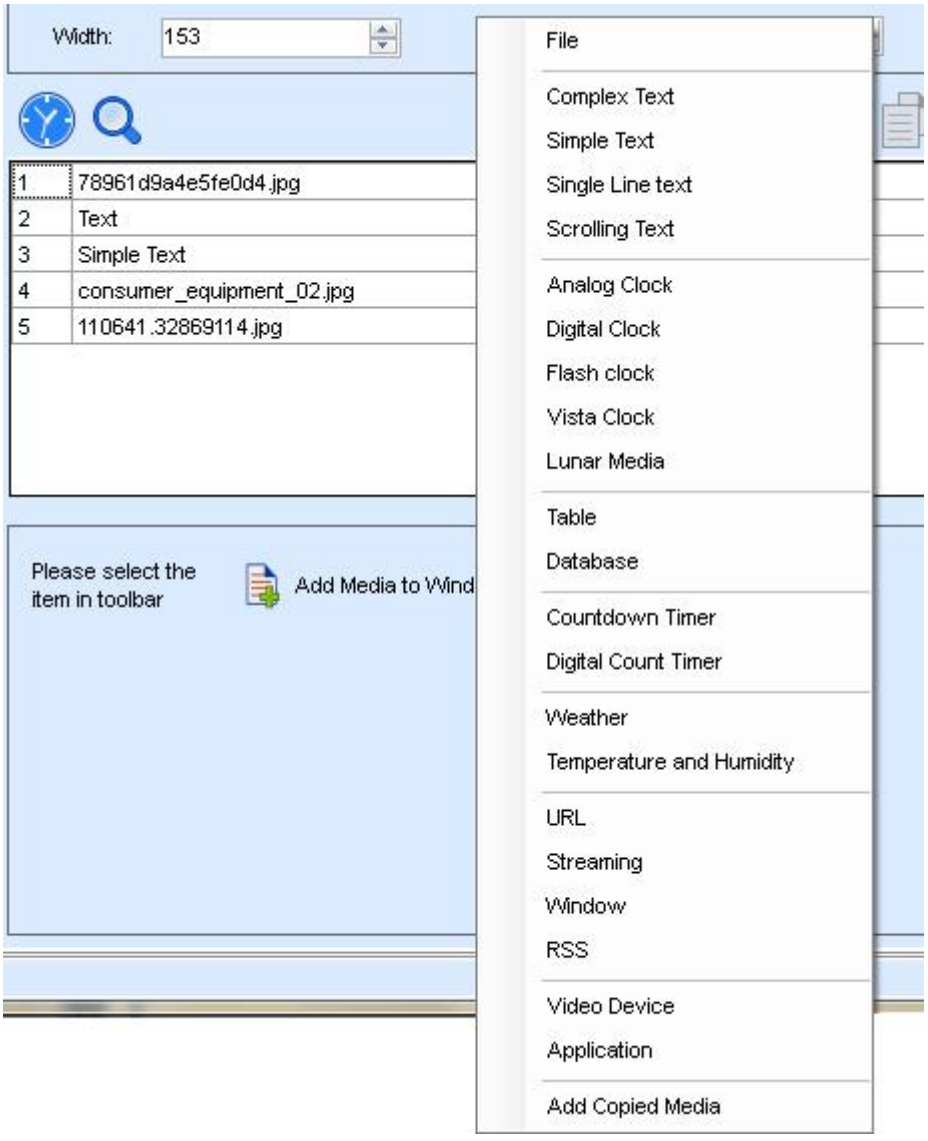
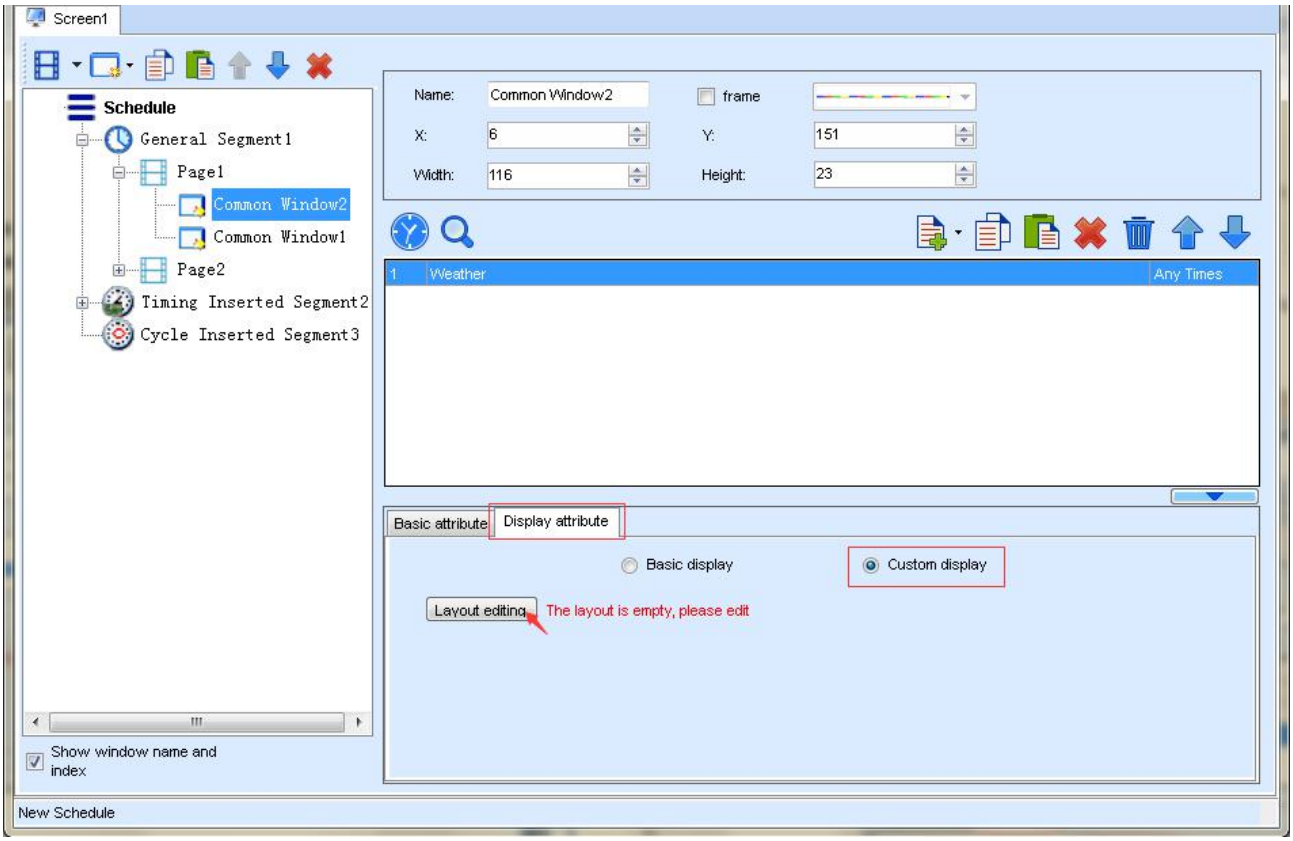


Fig.3- 46 Right-click menu of blank zone

3.3.2.6User-defined weather forecast

This software supports user-defined layout of the weather forecast. Users can make weather forecast style more worth-seeing according to their likes.

After a weather forecast media is added in the window, enter "**Display attribute**"→"**Custom display**"→"**layout editing**", as shown in the following figure:



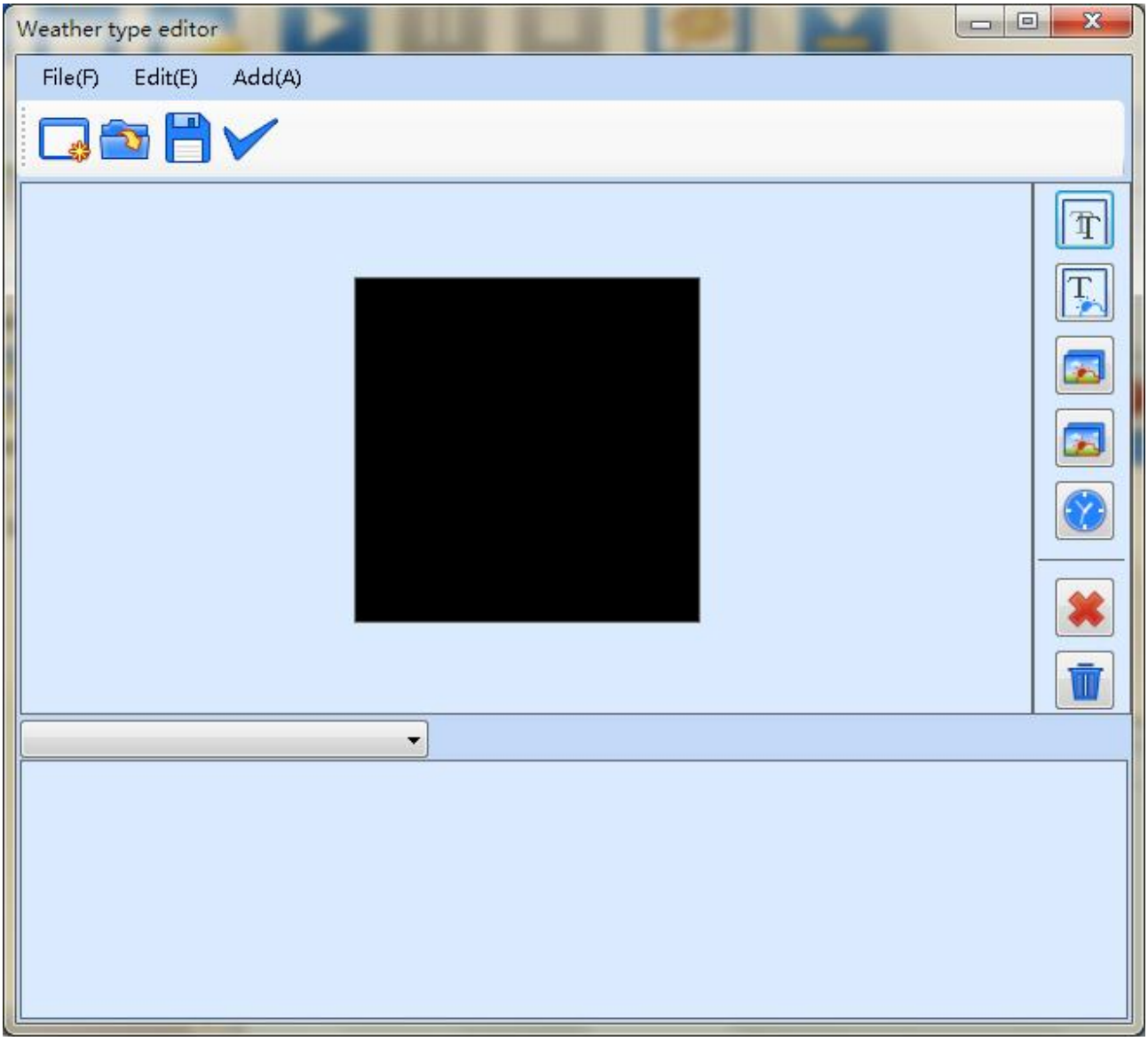


Fig.3- 47 Weather style editing

Text, weather text, Picture, weather picture, weather date can be added.

Text: Explanatory note, generally words of location, weather, temperature, humidity and wind force;

Weather text: Description of weather, weather texts of today, tomorrow, the day after tomorrow and three days from today can be selected and added;

Picture: Illustration pictures, any picture can be imported from the local;

Weather picture: Weather conditions indicated by pictures, weather pictures of today, tomorrow, the day after tomorrow and three days from today can be selected and added;

Weather date: Today, tomorrow, the day after tomorrow and three days from today can be shown in the format of date, time or week according to the time of the local system, and the format of the date can be adjusted into the form of Month Day Year, Month Day and others.

Fig. 3-48 shows a weather forecast sample that has been made.

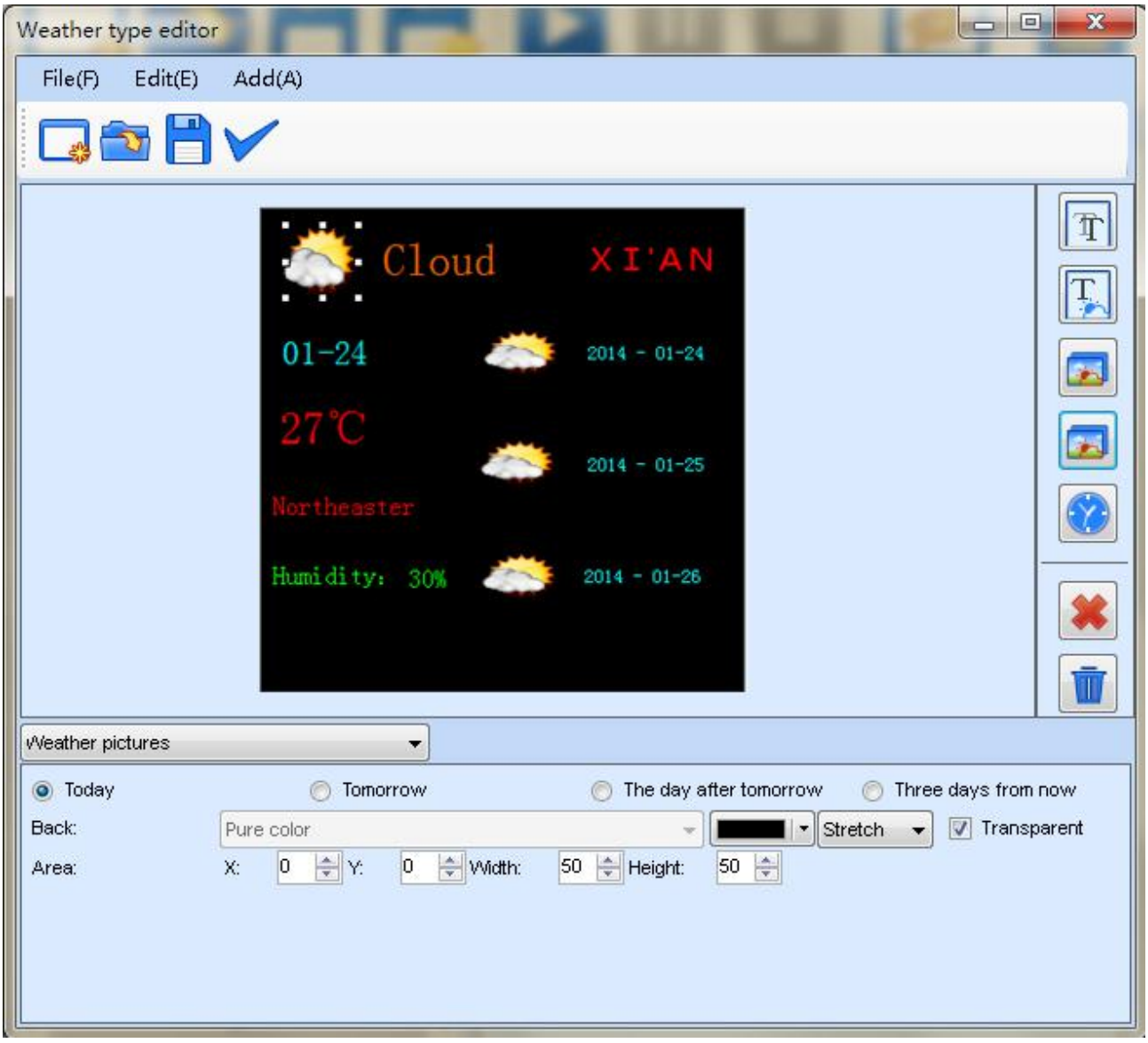
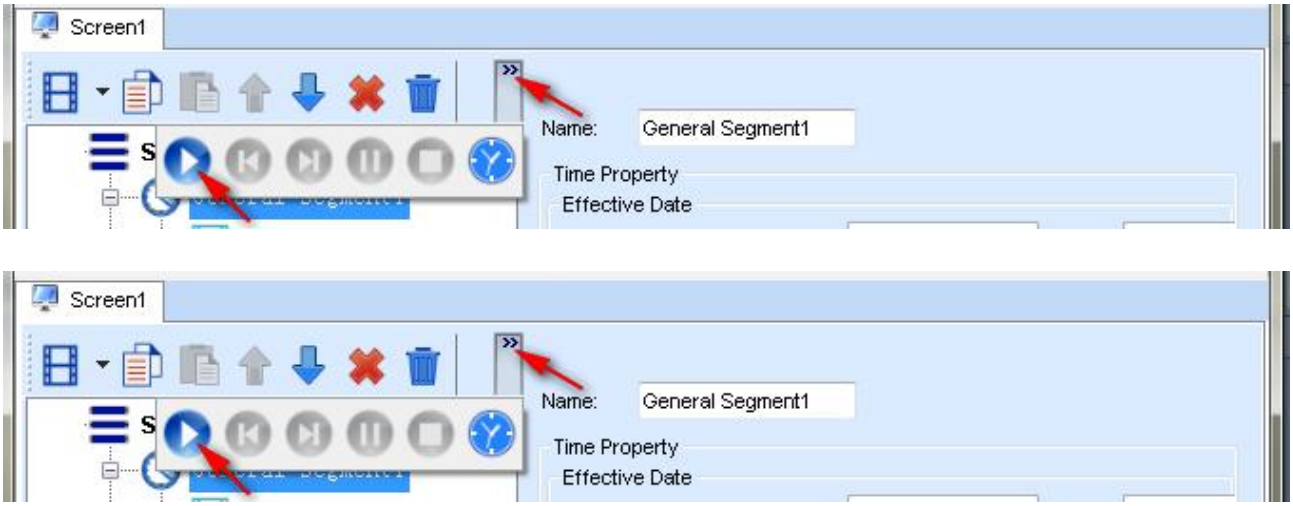


Fig.3- 48 Weather forecast style that has been made

3.3.3 Preview and Play of Play Program

3.3.3.1Preview

NovaStudio provides preview function of segment and page of play program. Select the segment or page you want to preview, and click the or button to start preview.



The interface will show the preview information after preview started, as shown in Fig.3-49. The preview information is including playing page information, playing window information, the current playing media and the next media of every window.

Select **Accelerated Preview**, you can preview at different play rate.

Click button to pause preview, and click button to stop preview, return to editing interface.

Otherwise, you can right-click on the screen, use the right-click menu to pause or stop preview, as shown in Fig.3-50.

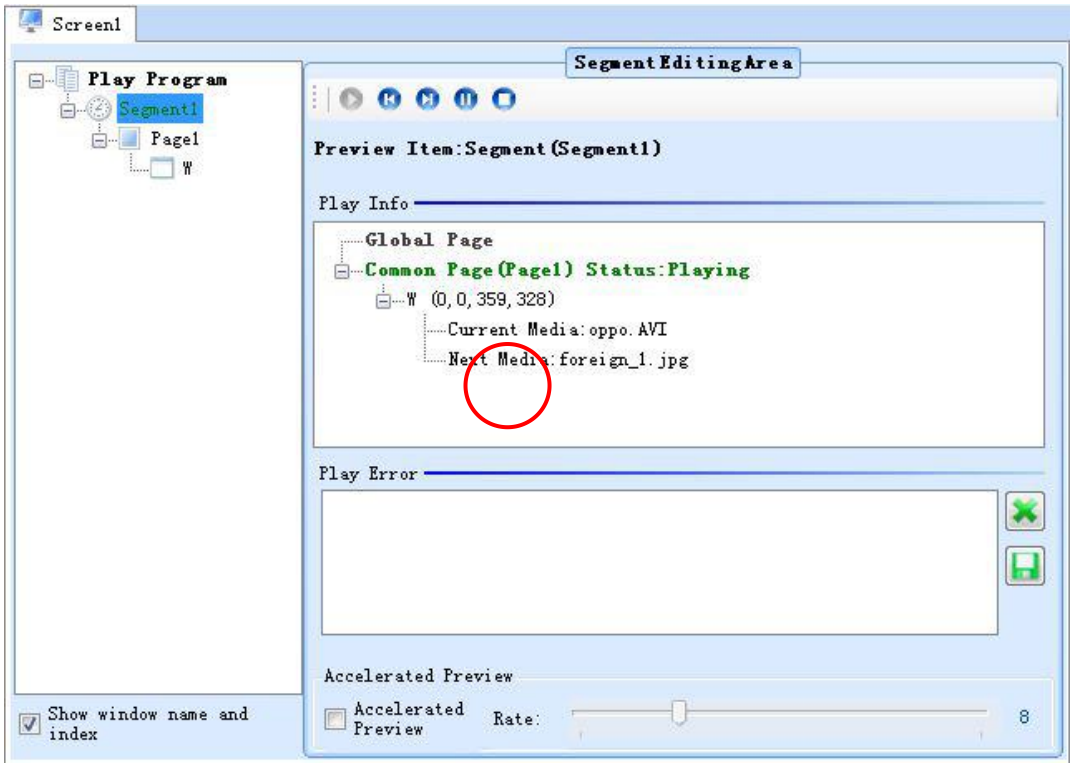


Fig.3- 49Preview Page

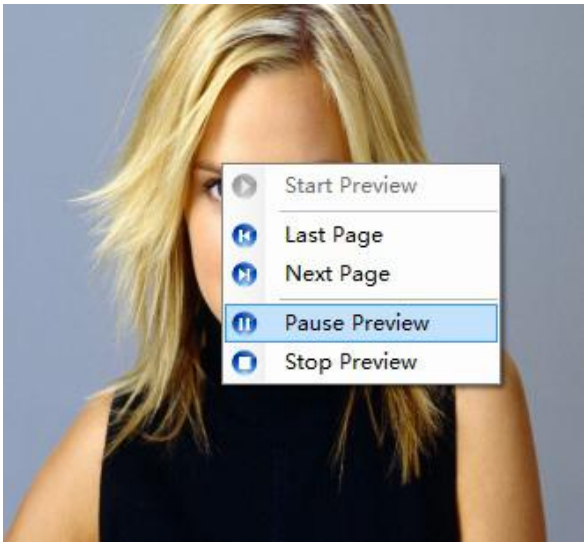


Fig.3- 50 Right-click menu of preview

3.3.3.2Play

After loading or editing over the play program, click the button

to start play the current play program. As shown in Fig.3-51.

Fig.3- 51 The button for starting play

After play started, the software can show the current common segment information (If has), the next common segment information (If has), the current inserted segment information (If has) and the next inserted segment information (If has), as shown in Fig.3-52 the fault information of play will show in the **Play Error List** in red font.

Fig.3- 52 Play page

Use

and

button on the toolbar to pause or stop play. You also can use the right-click menu on the screen as shown in Fig.3-53.

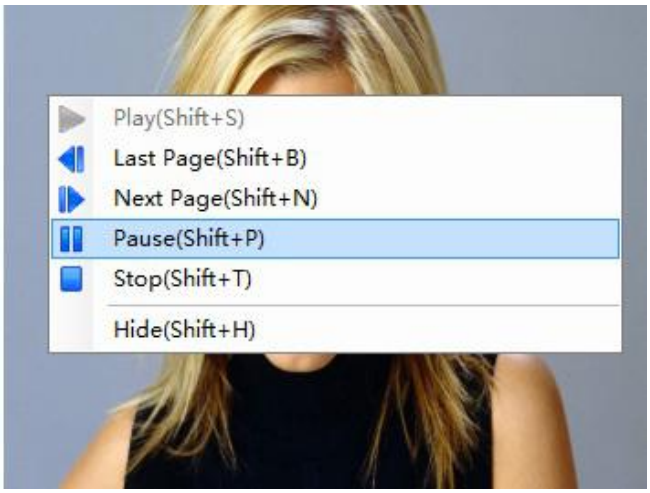


Fig.3- 53 Right-click menu of play

3.4 Priority program of the page

The program is composed of mulTIPSle pages, in which mulTIPSle image-text windows, including text, images, videos, clock, timer, temperature & humidity and weather forecast, can be added.

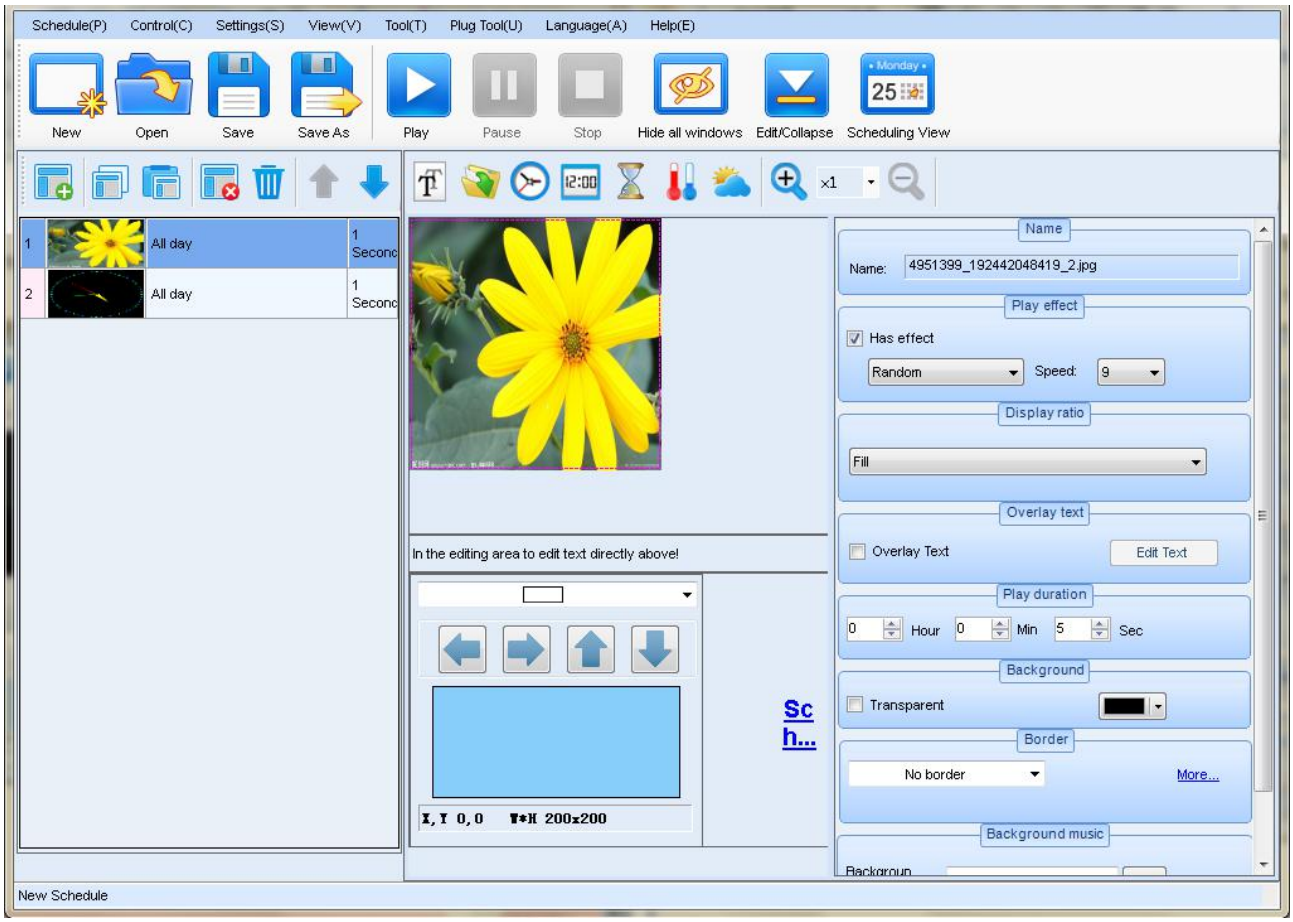


Fig.3- 54 Priority program of the page

3.4.1 Edit play program

The edit homepage of Program is divided into mulTIPSle windows, and each window is named according to its function, as shown in the following figure.

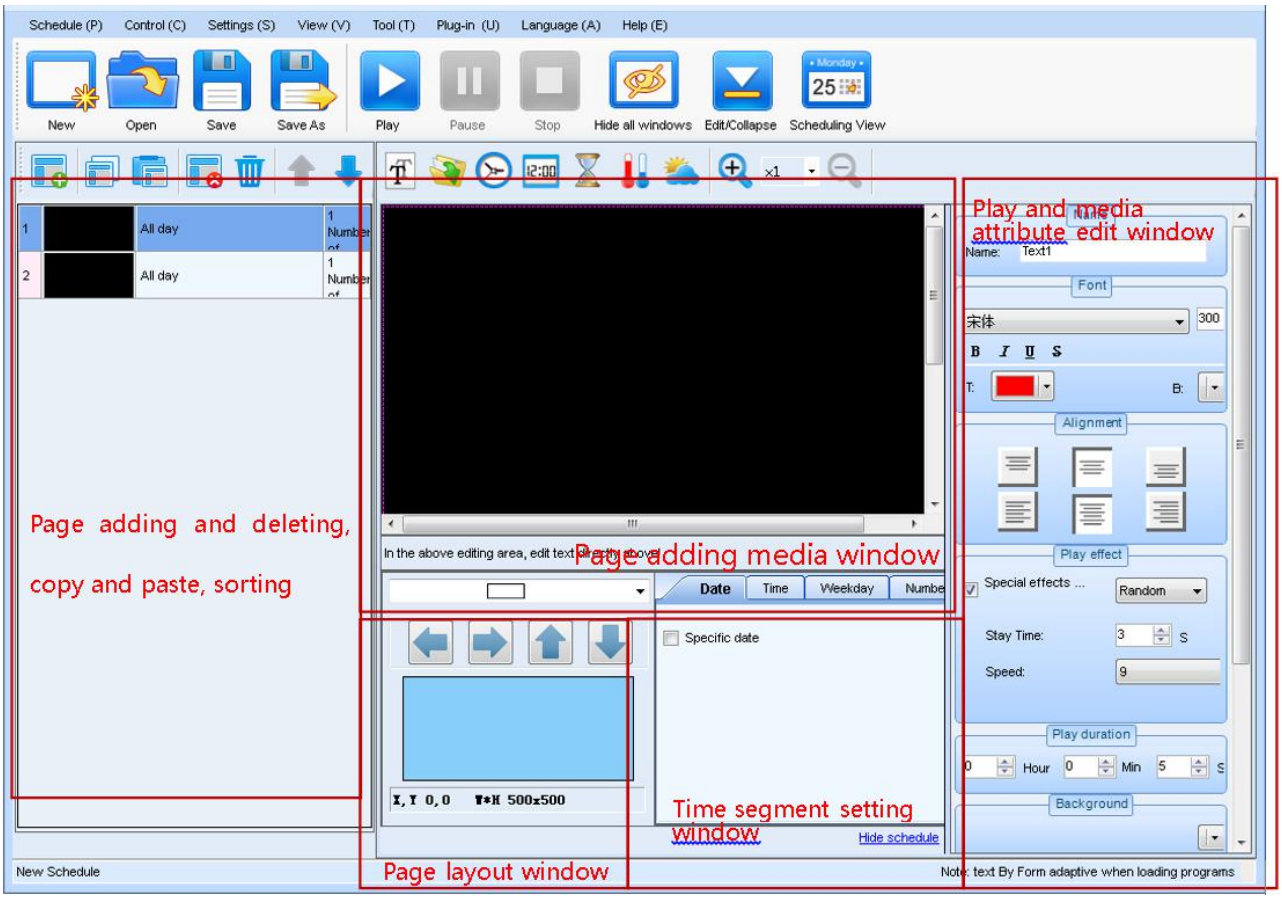


Fig.3- 55 Page function distribution

1) Display Setting

Click “Control” → “Display Setting” to set play window.

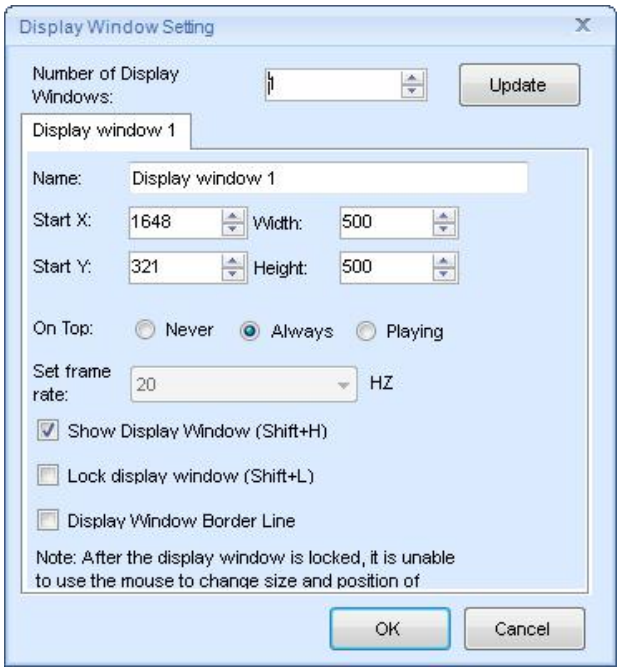


Fig.3- 56 Display Setting

	Note： The width and height of publishing window can be set over the size of the current display screen. The width×height should be simply meet the requirement of lower than nine million pixels.

2) Page adding and deleting, copy and paste, windows sorting.

图 3- 1 页面增减、排序窗口

: add a page

: copy the selected page

: paste, the pasted page is in the bottom

: delete the selected page

: clear all pages

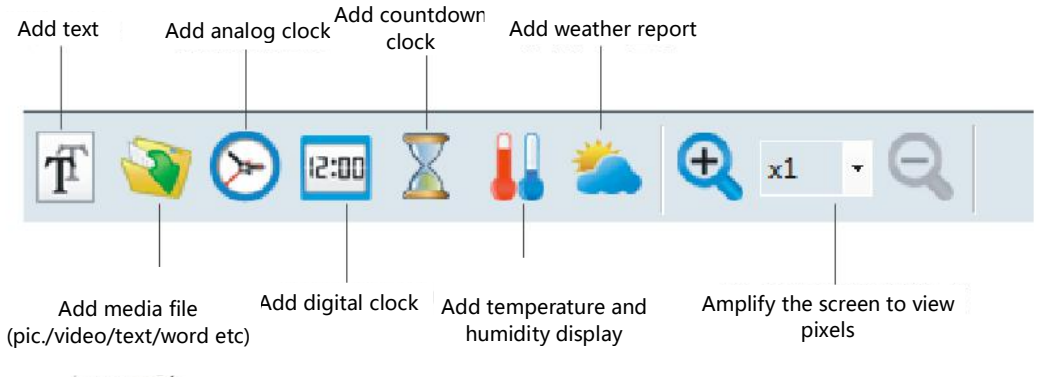
: move the selected page to a upper layer

: move the selected page to a lower layer

3) Page adding media window

Select one window of the page, and then click button on the toolbar to add media to the window.

Click to simulate the real display screen to view the distribution situation of pixels.



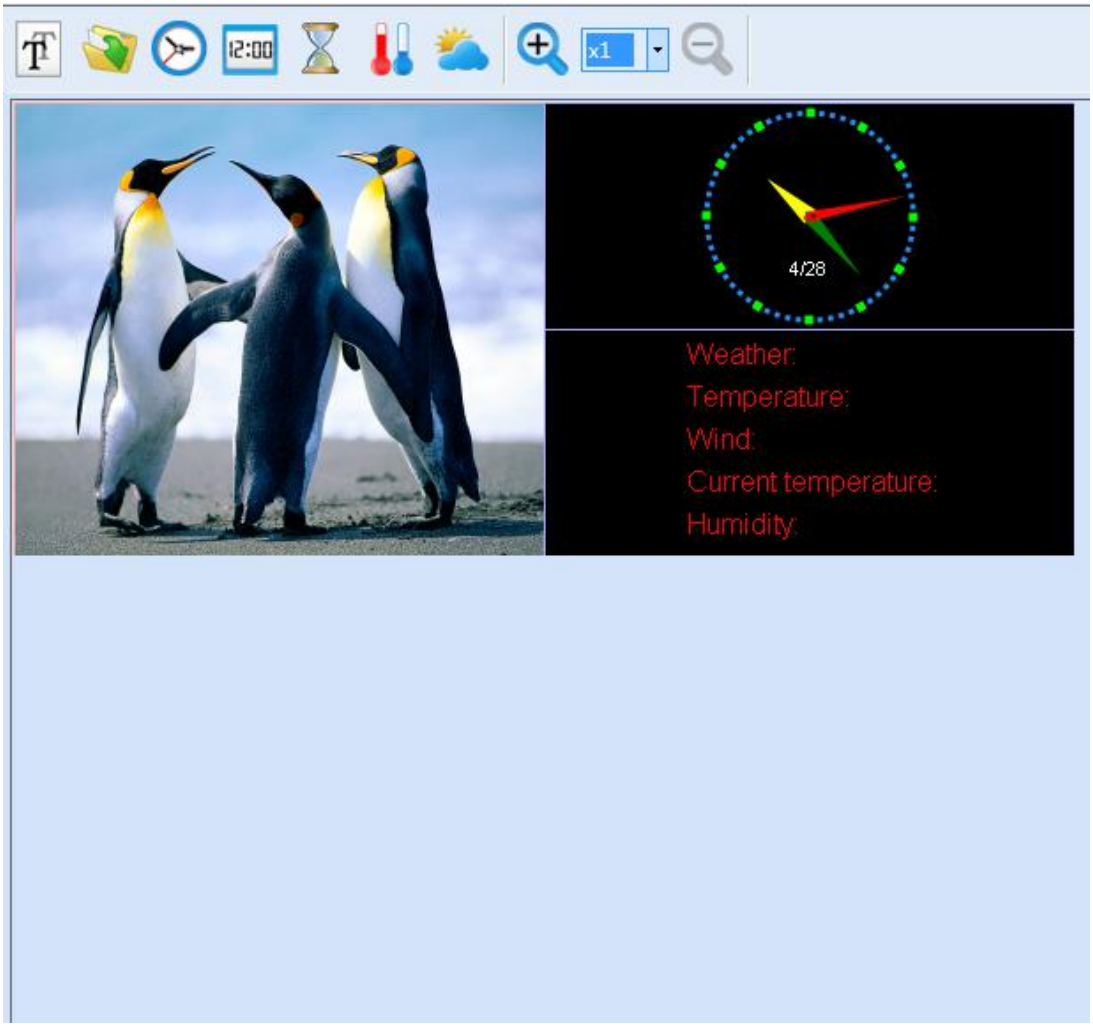


Fig.3- 57 Page adding media window

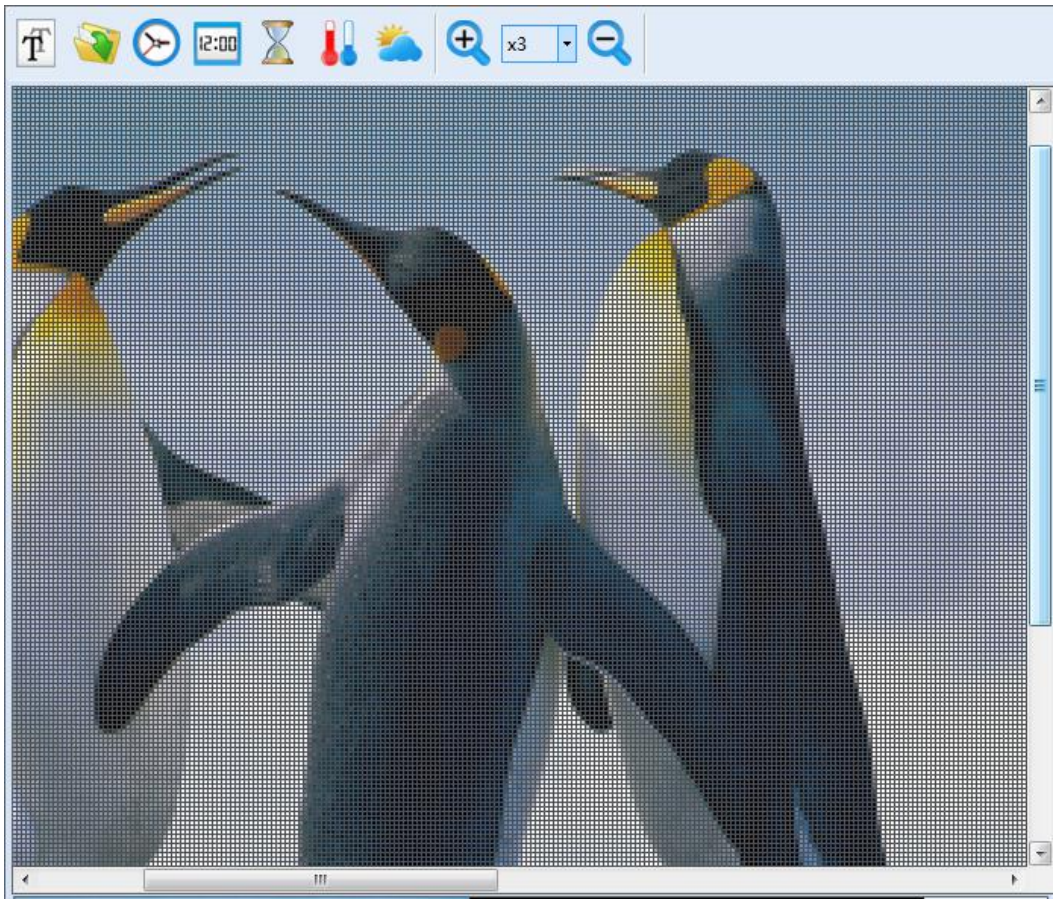


Fig.3- 58 Screen after 3 times of amplification

4) Play and media attribute edit window

When adding the media, simultaneously set attribute of the media and the play effect at the window.

5) Page layout window

Choose the page layout in the drop-down, and modify the layout proportions from top and bottom, left and right.

6) Scheduled window

Set a schedule of the selected page, which are the play time, date, week day and views.

Note: when the schedules of the pages are the same, they will be played in sequence from the first ranking one to the last one.

a) Check "**Specific date**" to set play date of list, and click to increase or decrease the time.

Fig.3- 59 Set Scheduled date

b) Click "Time" to set the play time of List, available options are All day, point-in-point or Time slot.

When "time point" play is selected, click to select the point-in-time, double click to cancel; the default is to play for one hour from the selected point in time; for example, three points-in-time are selected in the following figure - 12 AM, 3 AM and 8 AM; then the play scheduled dates are:

Play from 12 AM to 1 AM; Play from 3 AM to 4 AM; Play from 8 AM to 9 AM.

Fig.3- 60 Set Point-in-time

When "Time segment" play is selected, click to increase or decrease the time segments.

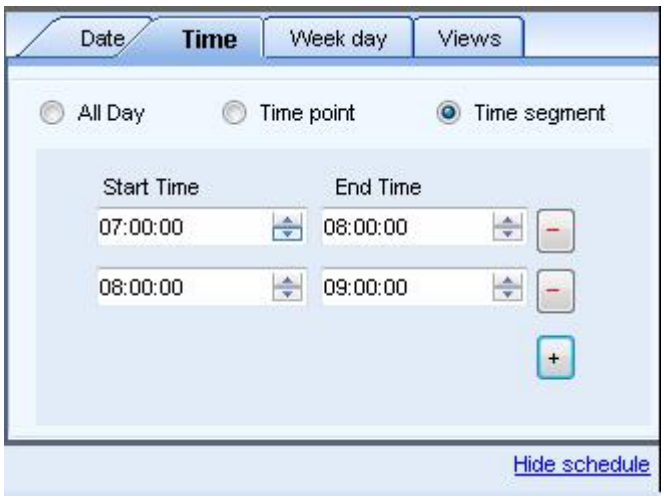


Fig.3- 61 Set Time slot

c) Click "Week day" to set the day in the week to play List.

Fig.3- 62 Set weekday

d) View Scheduled date

Click to view the Scheduled date.

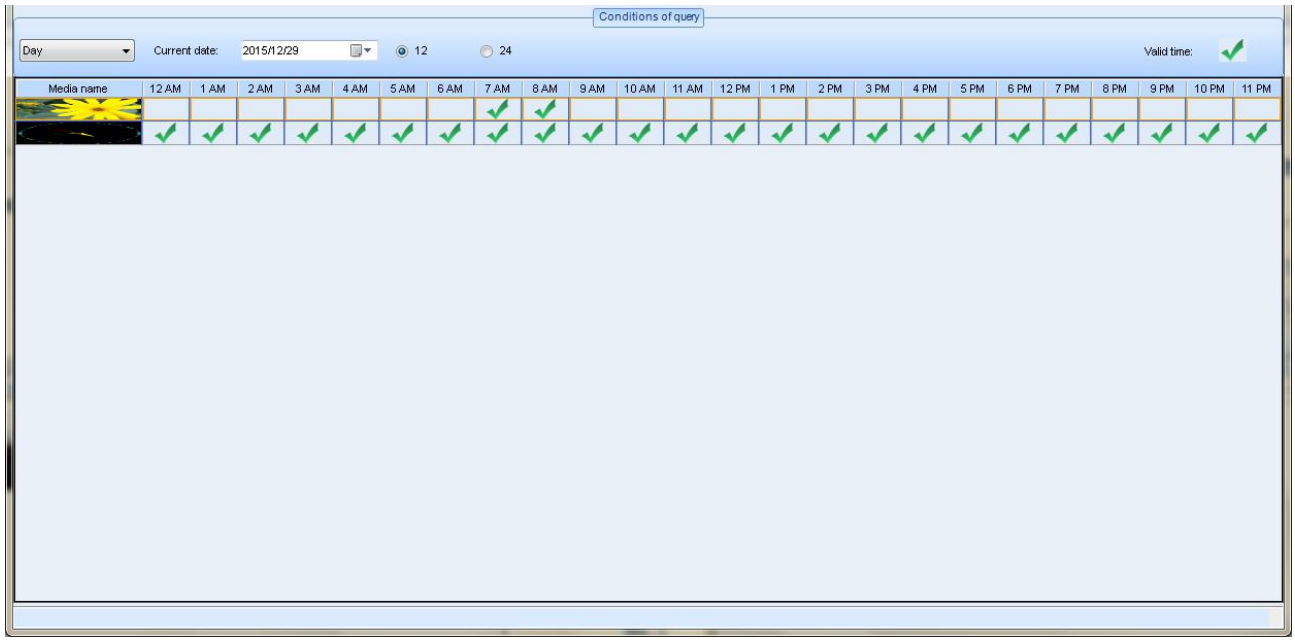


Fig.3- 63 View Scheduled date by day

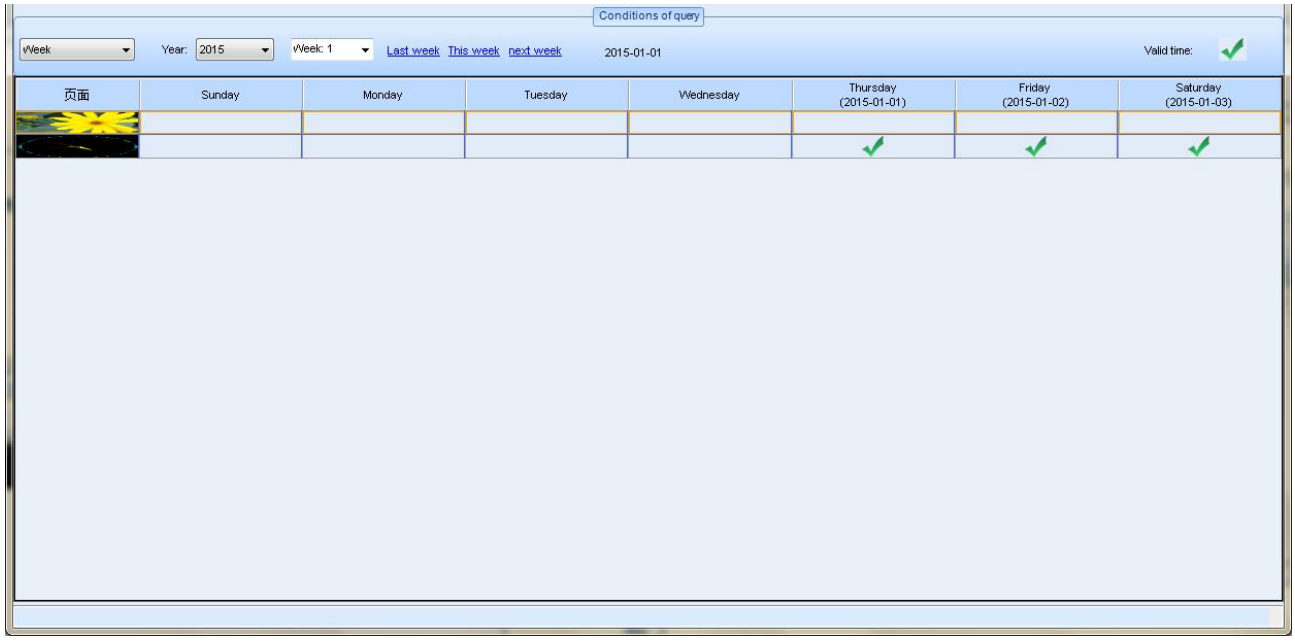


Fig.3- 64 View Scheduled date by week

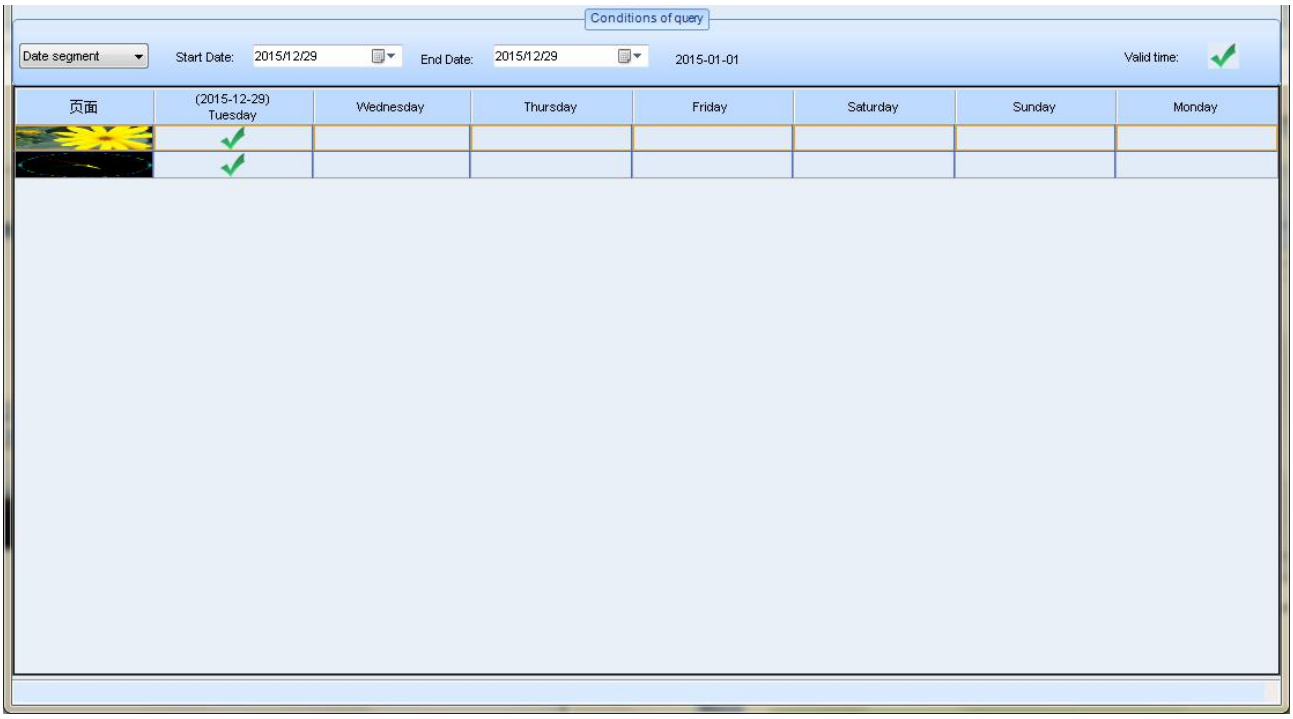


Fig.3- 65 View Scheduled date by time segment

3.4.2 Preview and Play

After editing, choose one page to preview the effect in the play window.

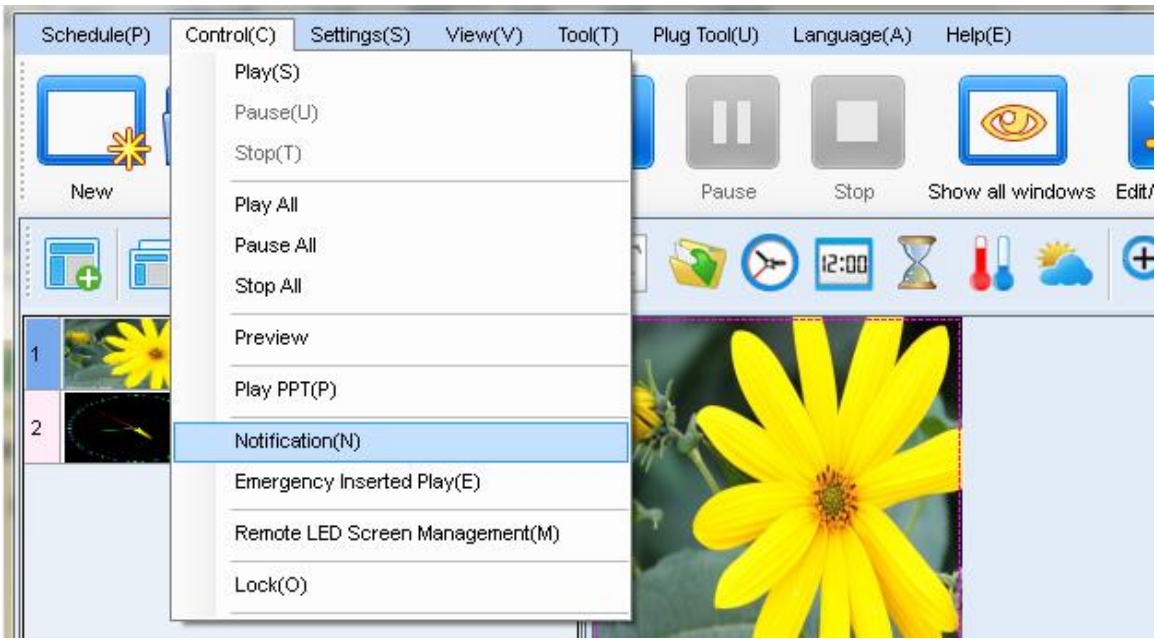
Click

to play it on a loop from top to bottom. Click

to quit playing.

4 Immediate Notification

The Immediate Notification is for publishing notifications during the play process of a play program. Click menu item **Notification** under **Control** menu, the Immediate Notification control window will show as in Fig.4-1.



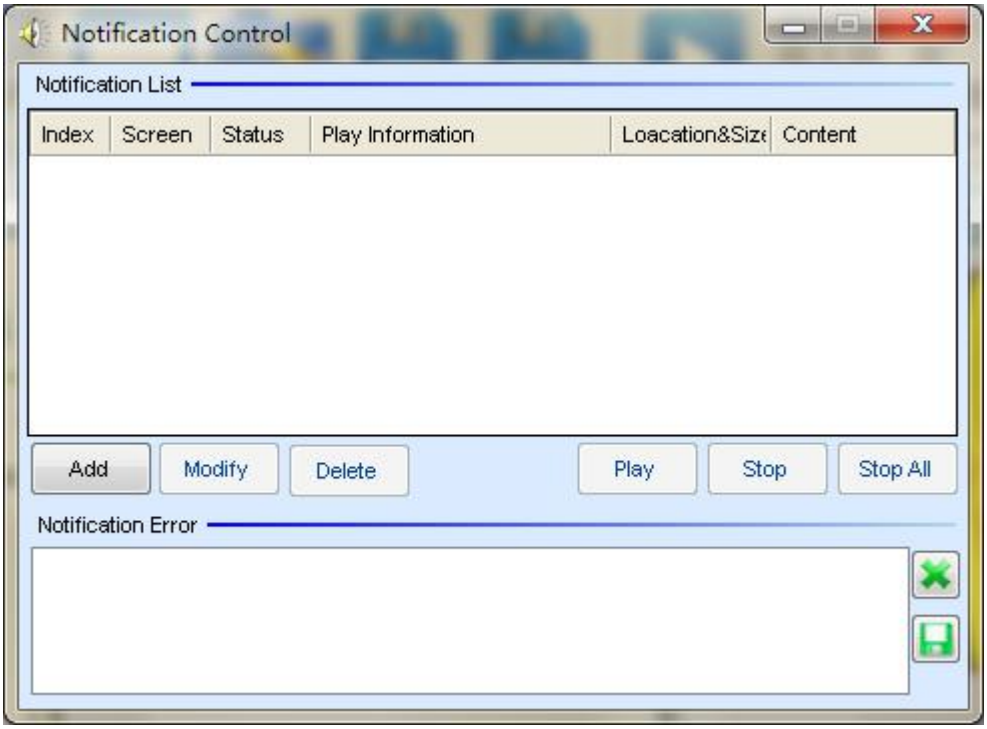


Fig.4- 1 Notification control window

- **Add a notification**

A notification needs to be added to the notification list before it is played. Click **Add** button to access the Add Notification dialog as shown in Fig.4-2.

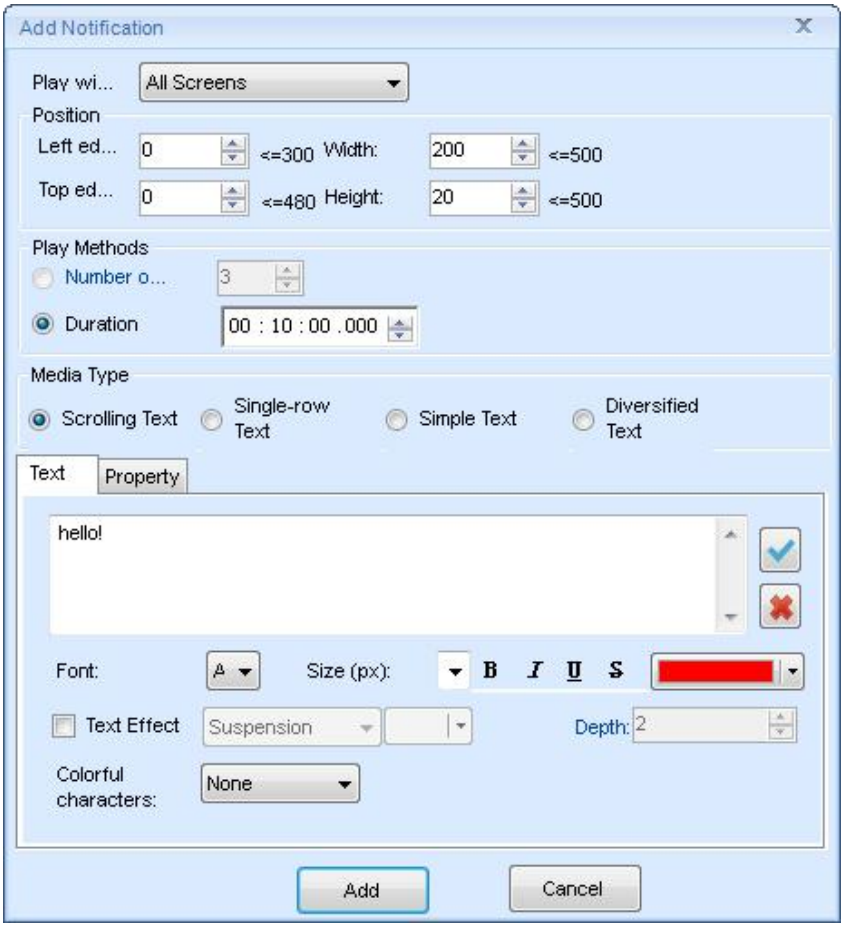


Fig.4- 2 Add Notification dialog

Properties of a notification such as display screen, position, play type, media type and content can be set through this Add Notification page. Click Add to add the edited notification to the list. Shown in Fig.4-3 is a notification in the notification list.

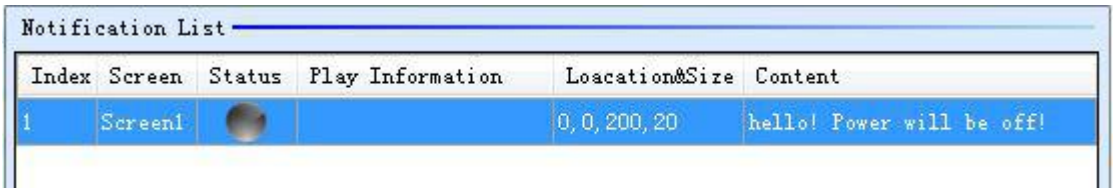


Fig.4- 3 the notification list

- **Show Notifications**

To show a notification on the LED display, select it form the notification list and click **Play** button. The play status of this notification will became green from gray. And the play

information of this notification will also be shown in the Notification List panel. Shown in Fig.4-4 and Fig.4-5 is an example for notifications being played.

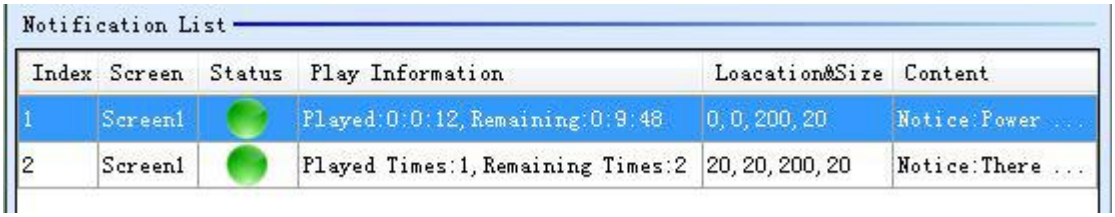


Fig.4- 4 notifications in the list

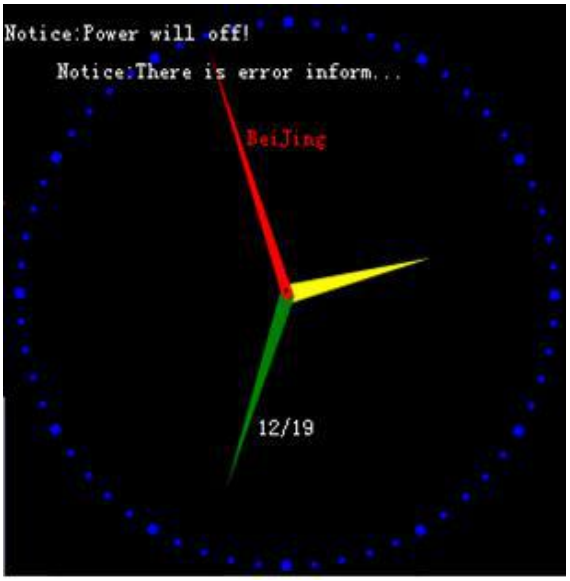


Fig.4- 5 notifications shown on the LED display

Use the **Stop** button to stop showing the selected notification. The **Stop All** button is for stopping all the notifications being shown.

To modify a notification in the list, select it and click Modify. **Note that notifications being shown are not modifiable.**

Use the Delete button to delete a selected modification.

Messages will be shown in the Notification Error panel if any error occurs during the play process of the notifications.

5 Emergency Inserted Play

In the situation that certain media or play program needs to be shown or play urgently, use the Emergency Inserted Play to pause the current playing and start the urgent play. Click menu item **Emergency Inserted Play** under **Control** menu, the Emergency Inserted Play Control window will show as in Fig.5-1.

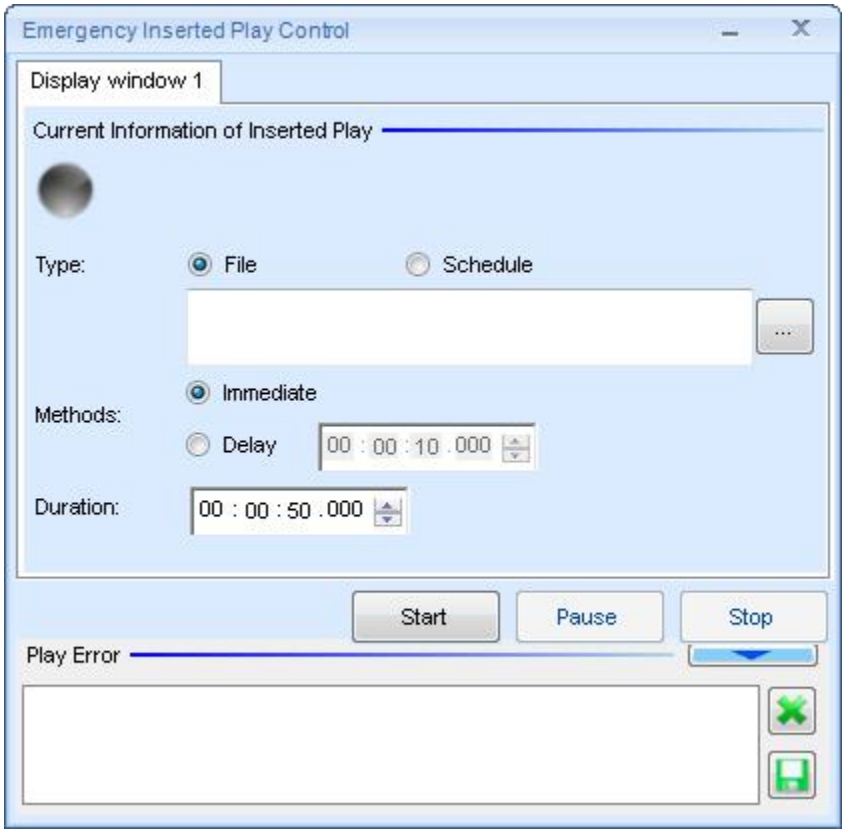


Fig.5- 1 Emergency inserted play control window

1) Emergency play of media files

Select **File** from the Emergency Play interface as shown in Fig.5-1 and click . On the pup up dialog, as shown in Fig.5-2, select the media file to be played. It could be a file of media type of video, Flash, audio, picture or any other type supported by NovaStudio. Properties of

playing that is how the selected files are to be played should be set as well, such as background color, background picture, transparency, scale, volume, position and duration. After all these settings, click **Ok** to finish setting.

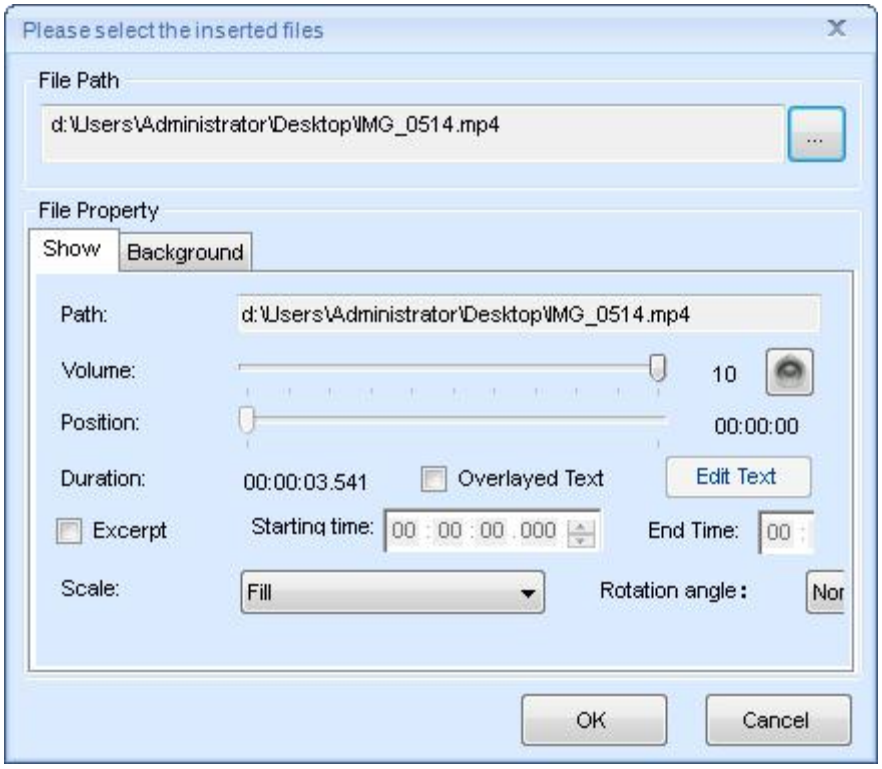


Fig.5- 2 file setting dialog for Emergency Inserted Play

Before begins the emergency play, Methods of playing need to be specified. Select Immediate to start emergency play immediately. And emergency play will be postponed for the time set for duration if **Delay** is selected. Click **Start** to active emergency play.

2) Emergency of play program

Select **Play Program** from the Emergency Play page and click button , on the pup up dialog, as shown in Fig.5-5, select the play program file to be played. If the play program has mulTIPSle segments, you must choose one of them to play.

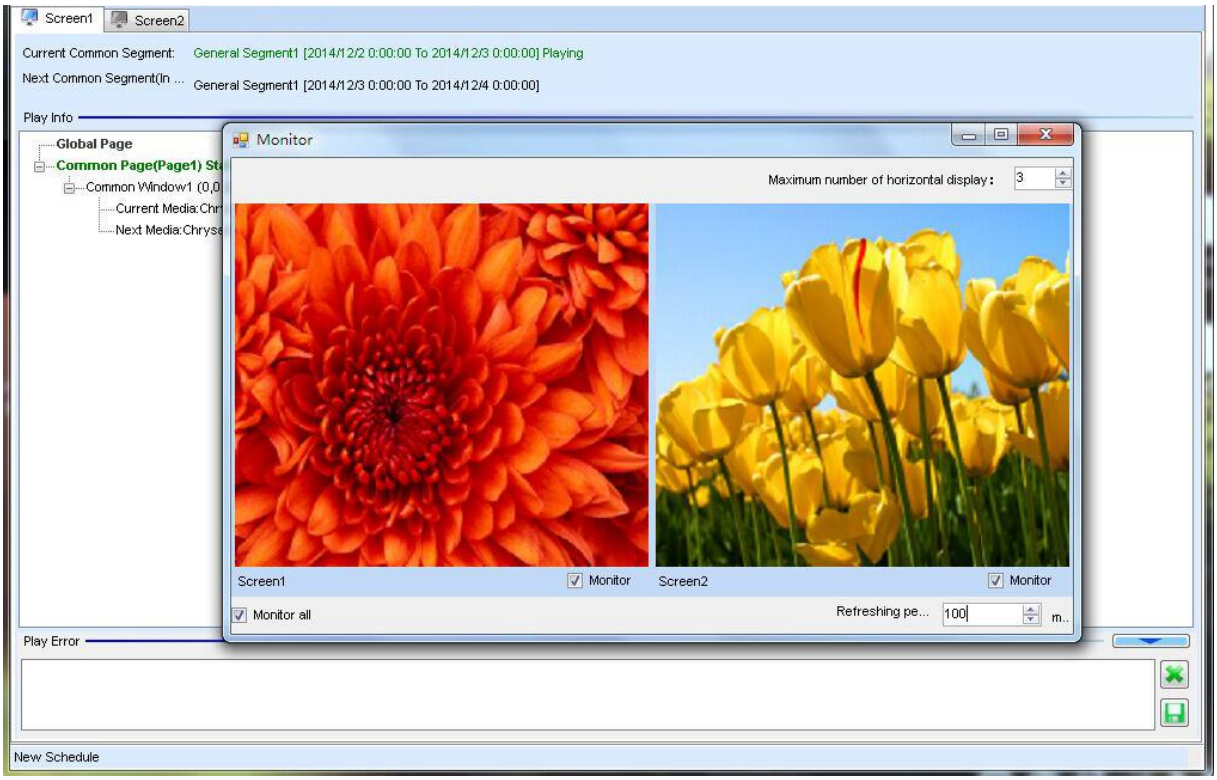
Fig.5- 3 choose play segment of play program

6 Monitoring

When display screen is in display state, real-time playing of play window of the display screen can be monitored through this function. The specific operation is shown in the following:

Click "view" —>"monitoring" to open the monitoring window.

Attention: only by monitoring the check box can the display window be monitored, otherwise, the frames in monitoring window will be in stillness. Also, the monitoring pictures would turn black in non-playing state.



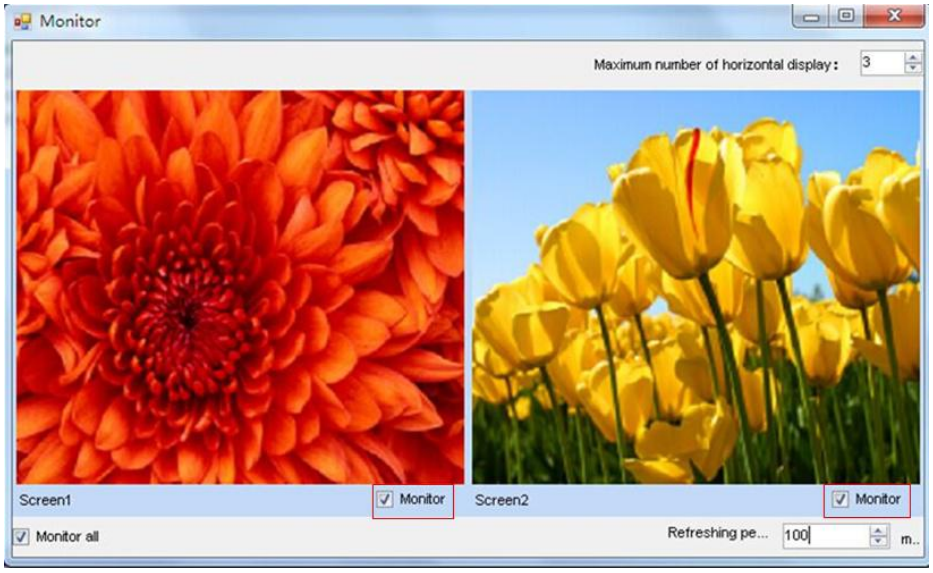


Fig. 6- 1 Monitoring window

7 Remote Display Screen Management

Remote control of one or more display screens is realized through a control computer. This computer is collectively referred to as "control computer" in the context.

7.1 Preparations

1) Run NovaStudio on the playing computer corresponding to the display screen;

2) Click menu "Settings" → "Network Settings". "Remote Real-time Management" must be ticked off first.

3) Select the IP being monitored currently, i.e. the corresponding IP on the local computer, and set communication port, which can be set within the scope of 1025~65535 and can not conflict with other communication ports.

4) Connection password is optional. In case of connection password, the same password must be input when adding display screens to let MCC control such display screens

remotely. Or failure.

5) After setting, click "OK".

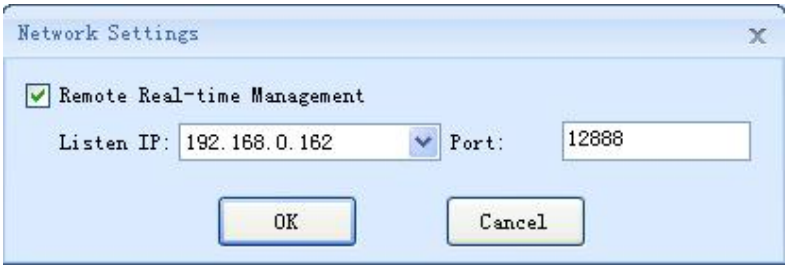


Fig.7- 1 Network Setting

7.2 Add Display Screen

Run NovaStudio on the control computer.

1) Click the menu bar "Control" → "Remote Screen Management" to enter the interface below:

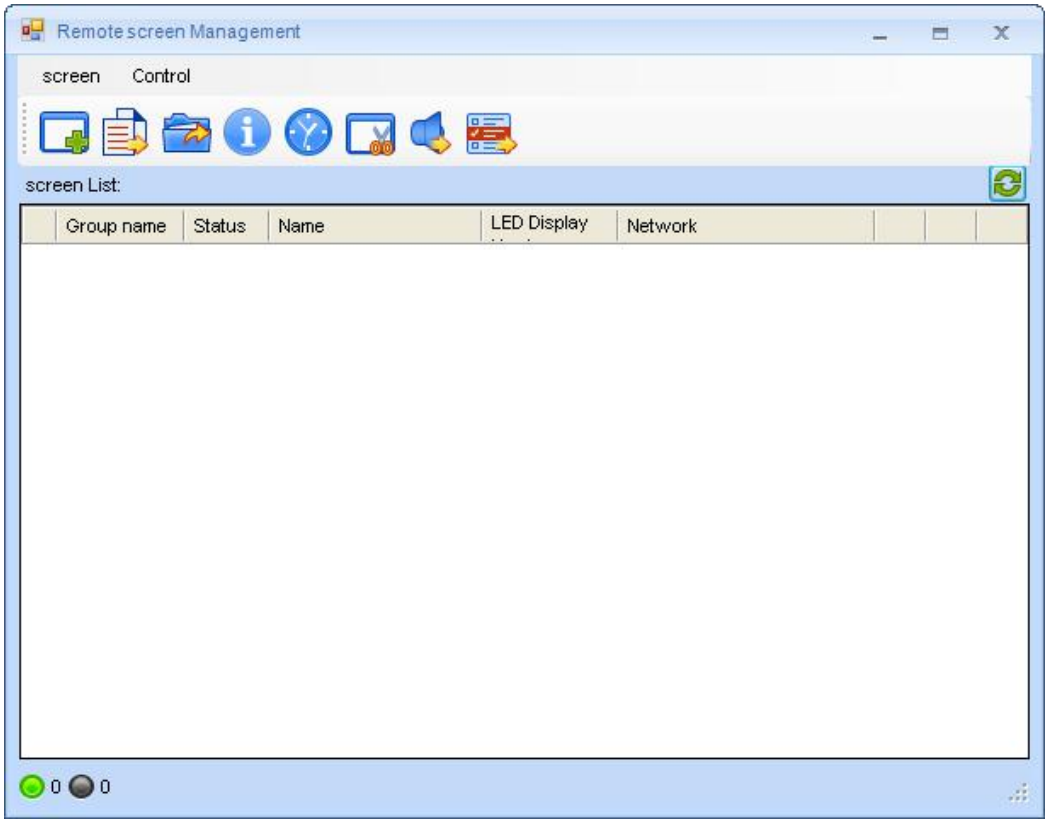


Fig.7- 2 Remote Display Screen Management

2) Click to add remote display screen, fill the name, number, IP (IP on the playing computer corresponding to the display screen) and port (must conform to the communication port of the network set on the playing computer previously) of the display screen to be added in the interface below, in case of connection password to remote display screen, input the same connection password, and click "OK" upon completion.

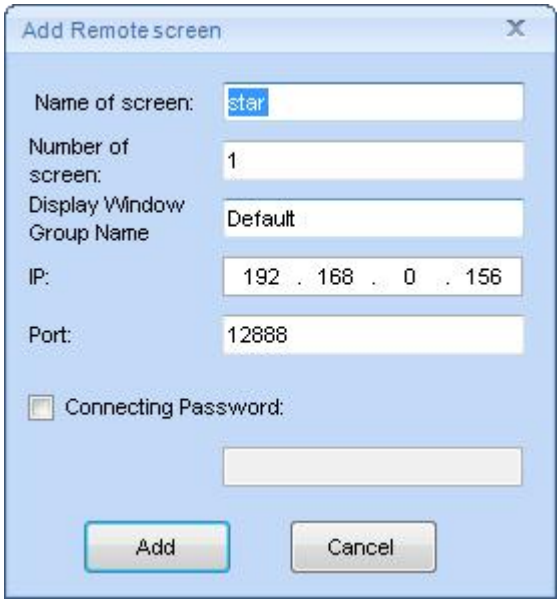


Fig.7- 3 Add Remote Display Screen

3) MulTIPSle display screens can be added as per the steps above.

7.3 Send Programs/Files

Send programs or files to display screens in long range via control computer.

1) Send programs

a) Click " " to enter the "send schedule" interface. Click " " to skim through the path where the playing programs are and open it.

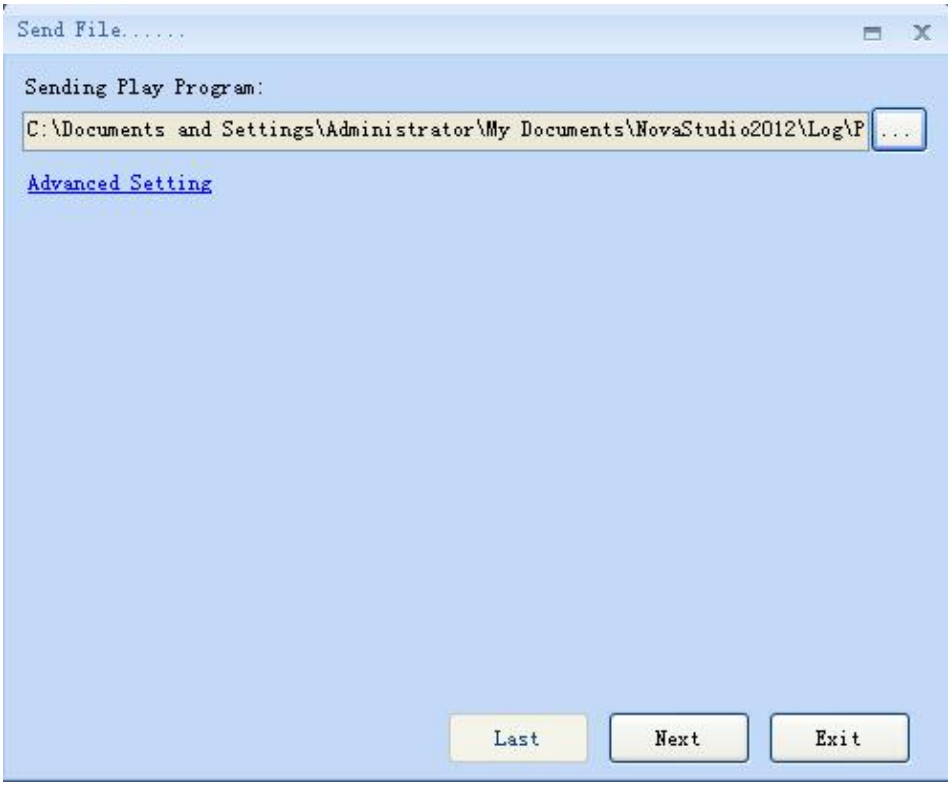


Fig.7- 4 Send Schedule

Advanced Setting : set the local storage location of files on the playing computer corresponding to the display screen, or the programs will be saved at the default path. Users can fill in the suitable storage path at discretion.

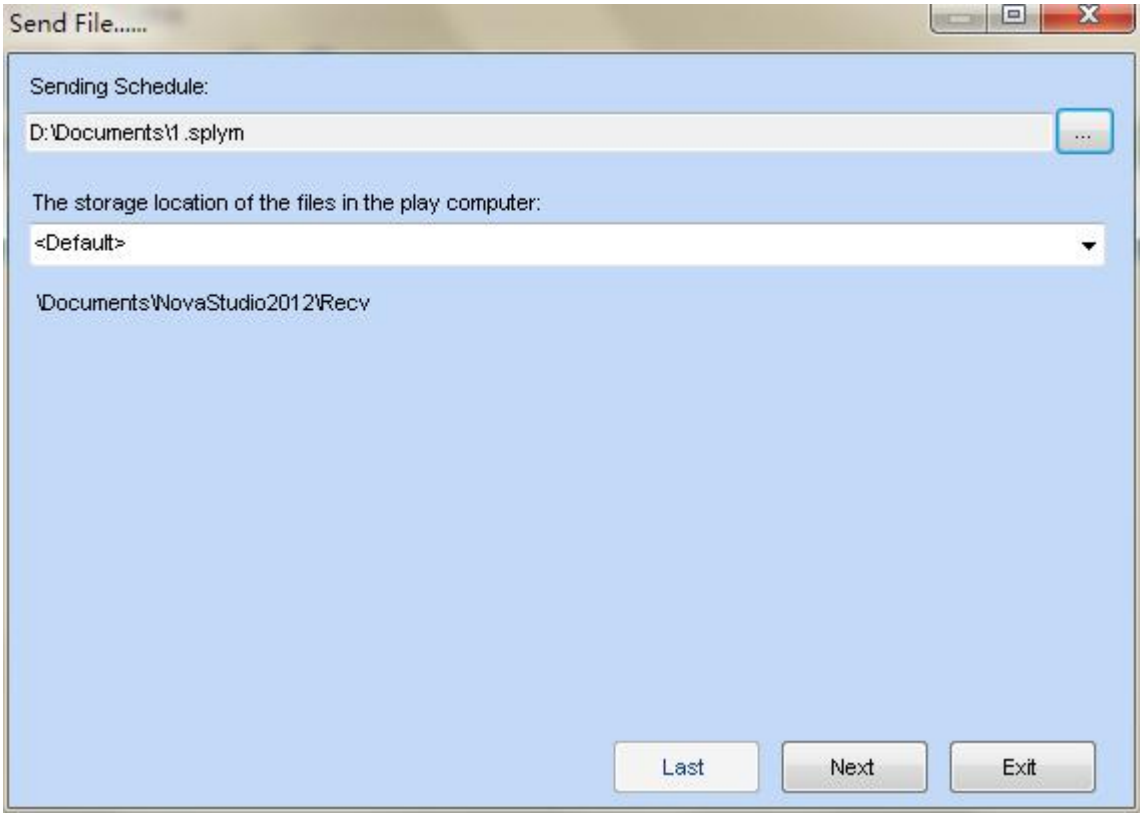


Fig.7- 5 Program Saving Path

b) Click "Next", tick off the target display screen in the page and send programs to it.

Fig.7- 6 Select Target Display Screen

c) Click "Next" to view the list of display screens to which programs to be sent. Go back

to “Last” in case of changes.

Fig.7- 7 Display Screen Sending List

d) Click “Send”, and the software will pop out prompts. Click “OK” to start sending. Upon the completion of sending, and select sending at background during the sending process.

Fig.7- 8 Sending Completed

As shown in interfaces of Fig.7-9 playing programs can be resent to display screen either by clicking the button " " corresponding to the display screen or by clicking the "Resend" beneath the interface.

2) Send files

Click " " to enter file sending interface:

Fig.7- 9 Send Files

: Add files

: Delete files

: Empty the listed files

Advance Setting :set the local storage location of files on the playing computer corresponding to the display screen, or the programs will be saved at the default path. Users can fill in the suitable storage path at discretion.

Fig.7- 10 Send File Advanced Setting

Click "Next" to send files. The following steps are the same with those of program sending.

TIPS:

If a media playback program involves many media files or those media files are large in size, it may take a long time to send out the playback program. For that kind of cases, the following steps are recommended.

1. Send the media files to the target computer in advance. Make sure in the target computer, the saving path of the media files is the same as that they are saved in the computer from which they are sent out.
2. Make the media playback program in advance.
3. Send the playback program to the target computer and save it to the folder where the media files are in. As the media files are already there, the playback program is ready to work once the sending process is finished.

7.4 Send the Order

Click “ ” to enter order control interface. One or more display screens can be ticked off to send control orders for it.

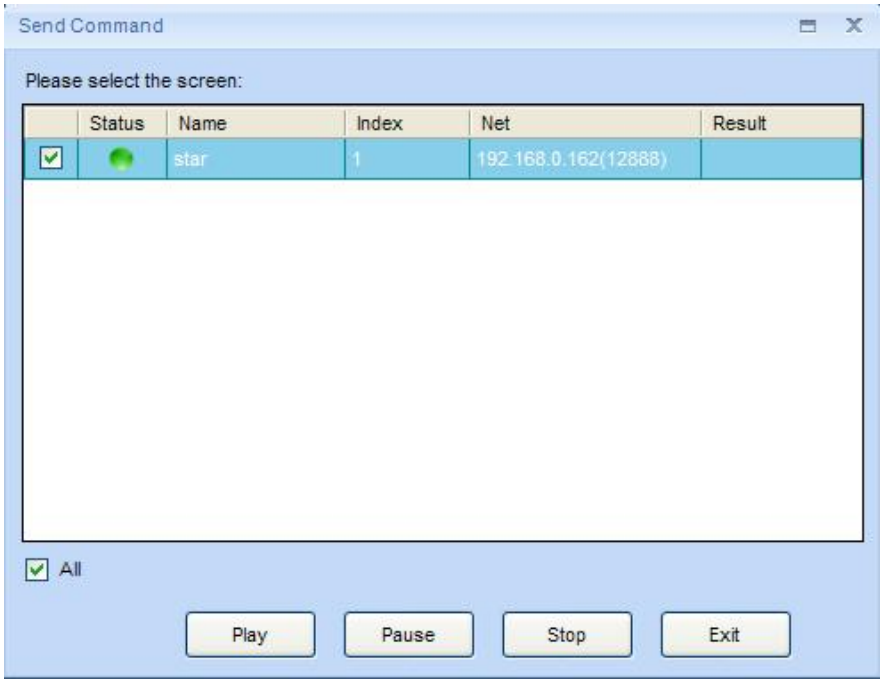


Fig.7- 11 Order Control

Timing: network timing, time synchronization

Play: start playing

Pause: a pause in current playing

Stop: stop current playing

7.5 Timing

Network timing can be performed to all the display screens in a long range. Immediate timing and periodical timing can be set. Refer to2) network timing of Chapter 10 for the specific operations.

7.6 Acquire Screenshot

Refresh and acquire desktop screenshot of displaying computer corresponding to remote display screen.

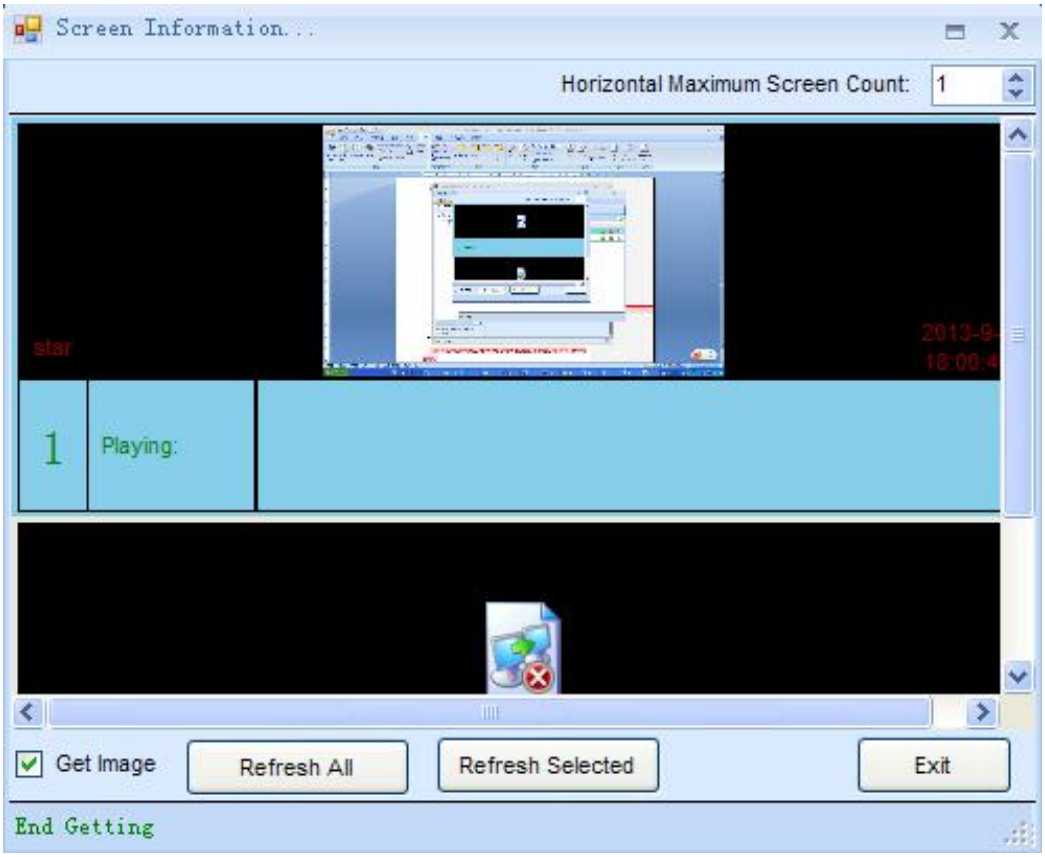


Fig.7- 12 Get Screenshot

7.7 Send Notice

Send instant notice to remote display screen. Location, play mode, play duration, media type and attributes of notices are settable on display screen.

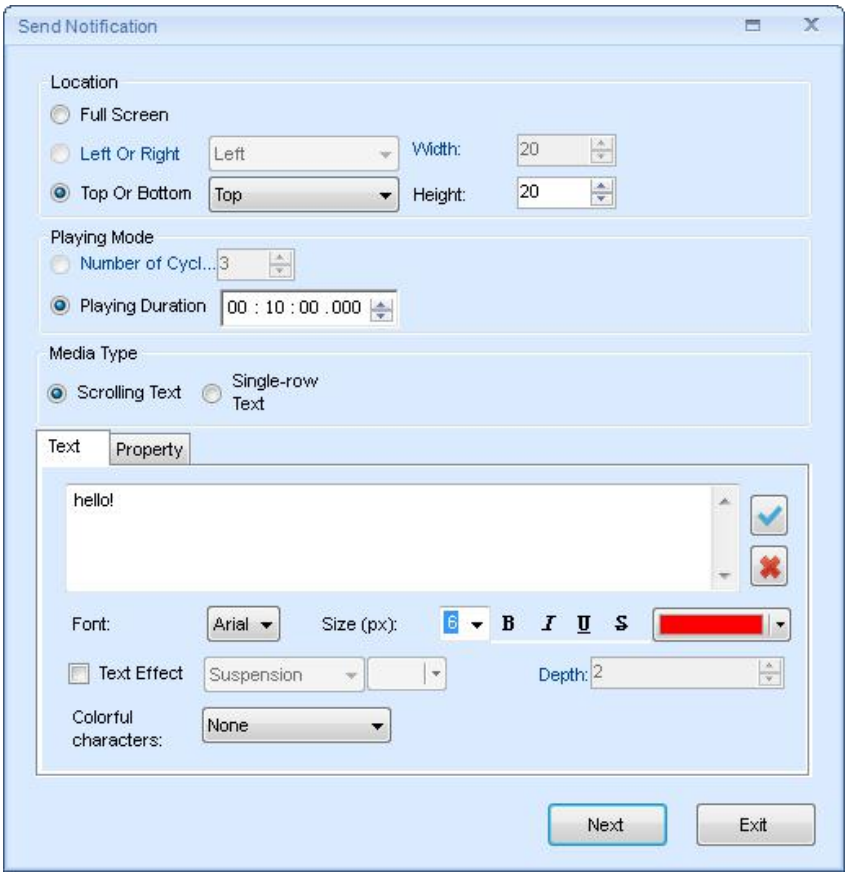
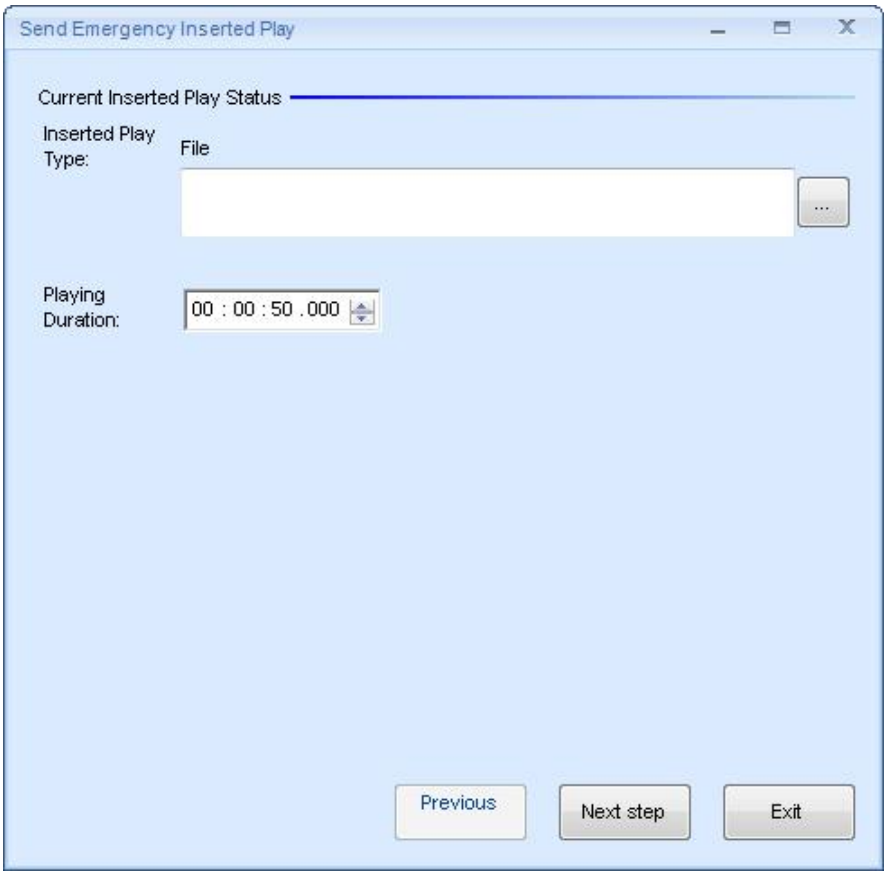
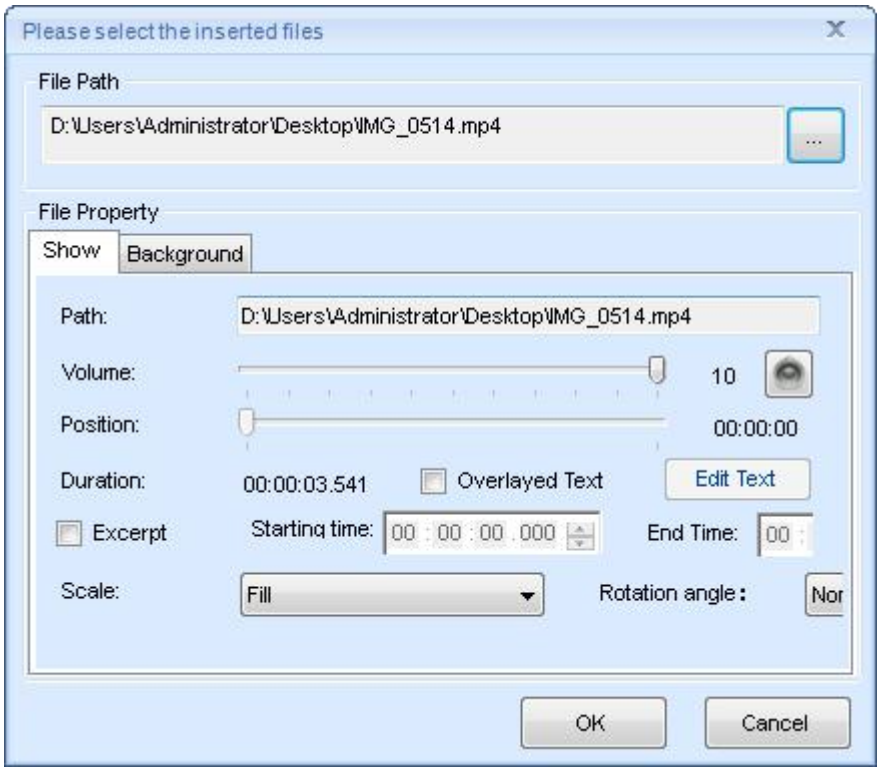


Fig.7- 13 Send Notice

7.8 Send Emergent Inserted Play

Send emergent inserted play file to remote display screen and play the inserted play file immediately upon completion.


Send Emergency Inserted Play
Current Inserted Play Status
Inserted Play Type:
File
...
Playing Duration:
00 : 00 : 50 . 000
Previous
Next step
Exit


Please select the inserted files
File Path
D:\Users\Administrator\Desktop\IMG_0514.mp4
...
File Property
Show
Background
Path:
D:\Users\Administrator\Desktop\IMG_0514.mp4
Volume:
10
Position:
00:00:00
Duration:
00:00:03.541
Overlayed Text
Edit Text
Excerpt
Starting time:
00 : 00 : 00 . 000
End Time:
00 :
Scale:
Fill
Rotation angle:
Nor
OK
Cancel

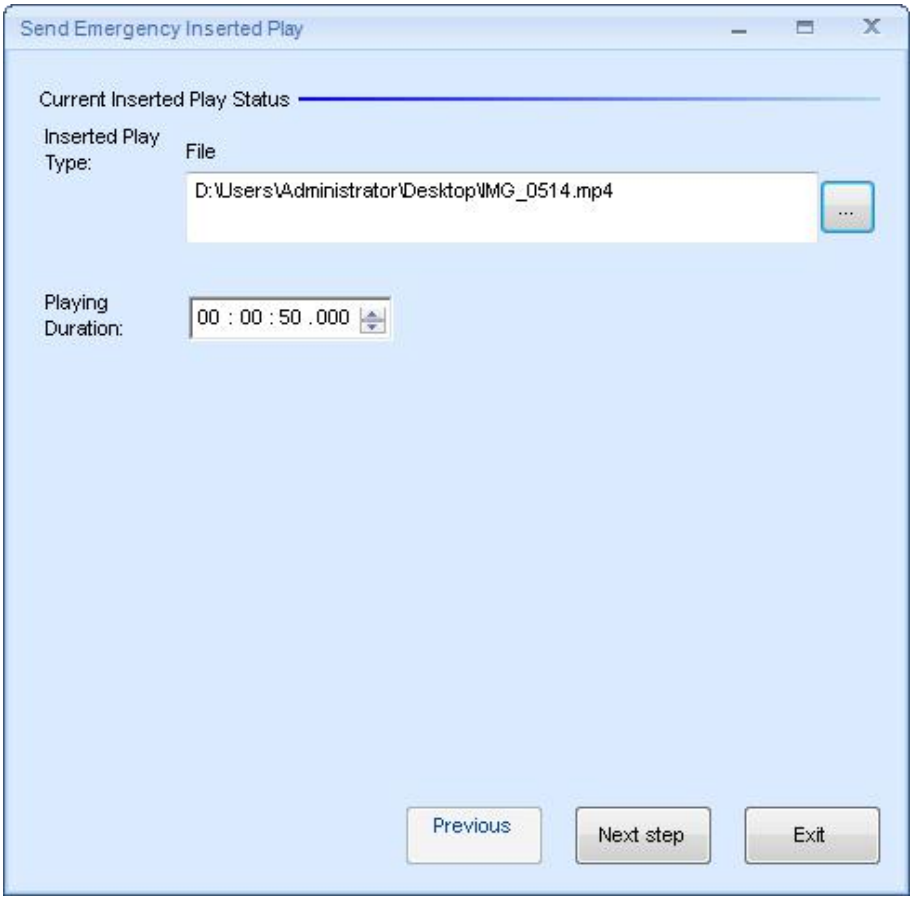


Fig.7- 14 Send Emergent Inserted play

8 Settings

8.1 Display Window Setting

Display window setting is used to set the mapping relation between the control computer (display) and the LED displays that is managed by NovaStudio. Select **Setting** ->**Display Setting** from the main menu of NovaStudio to access the Display Window Setting dialog which is as in Fig.8-1. Display window showing/locking can also be enable/disabled through this dialog.

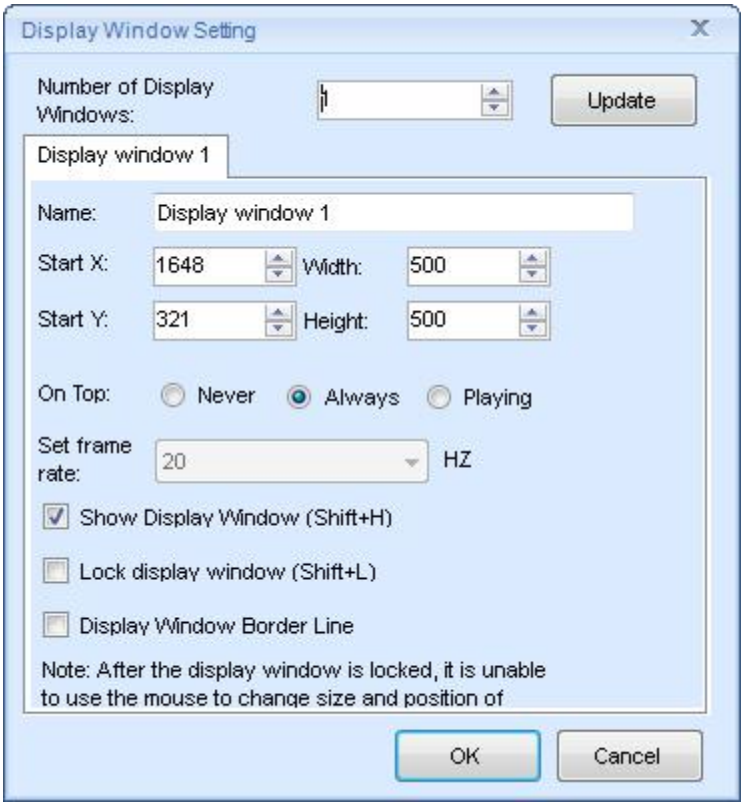


Fig.8- 1 the Display Window Setting dialog

	Note： The width and height of publishing window can be set over the size of the current display screen. The width×height should be simply meet the requirement of lower than nine million pixels.

To add or delete LED displays to/from NovaStudio, enter the new LED display count and then click the **Update** button. NovaStudio will regenerate the display windows according to the new count. (Note that the physical relation between the control computer and the LED displays are set by NovaLCT or other similar software applications.) Set the parameters for the display windows according to the LED displays parameters and then click **OK** to complete display window setting.

8.2 Start Setting

Start setting is for NovaStudio to start up automatically and begin playing certain playlist or activate certain schedule after the computer starts up. To access the Start Setting dialog, Select **Setting** ->**Start Setting** from the main menu of NovaStudio. The Start Setting dialog is as shown in Fig.8-2.

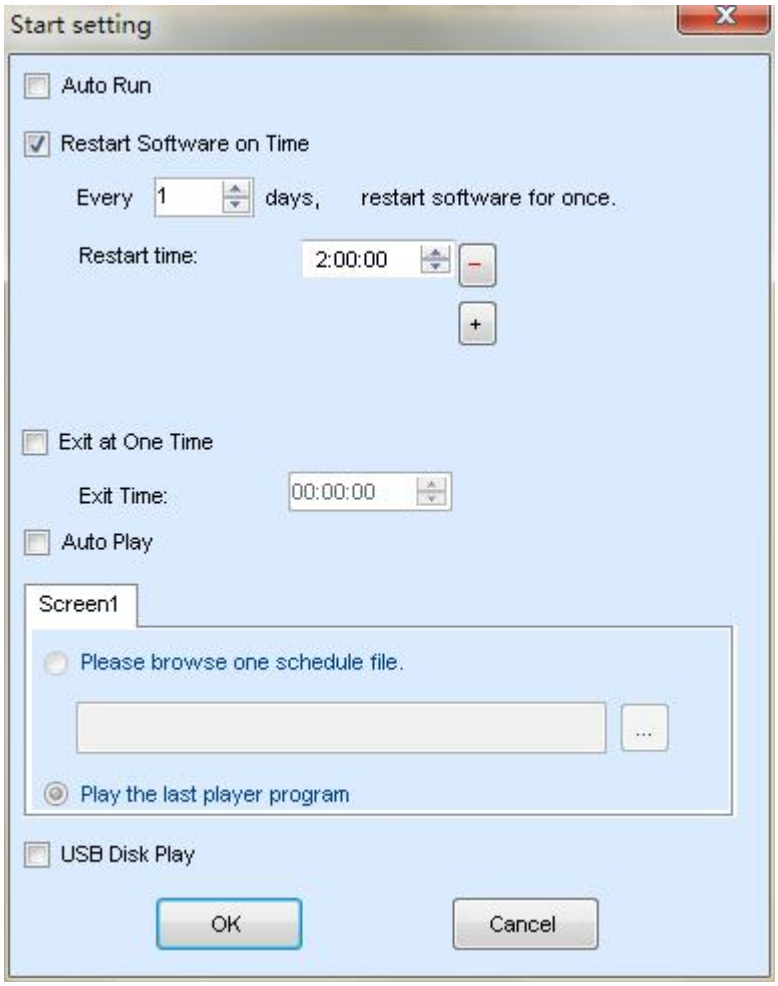


Fig.8- 2 The Start Setting dialog

If **Auto Run** is selected, NovaStudio will start automatically after the computer starts up.

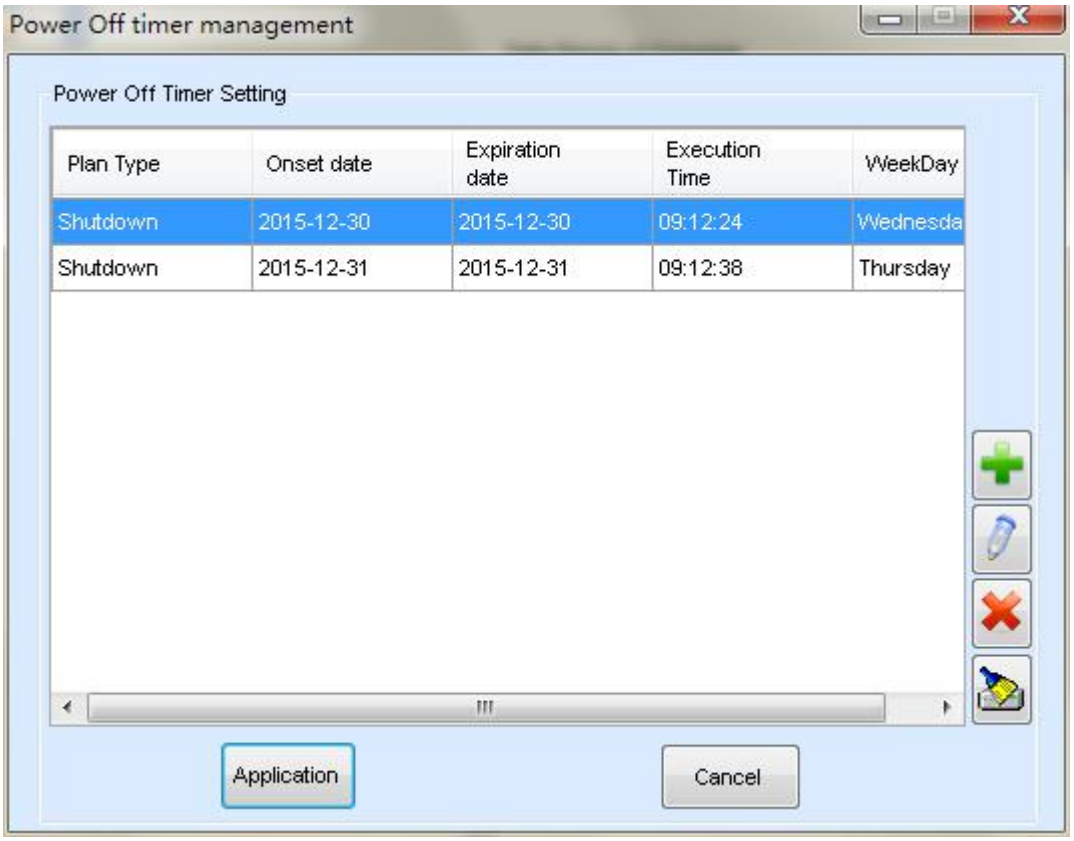
If **Restart Software on Time** is selected and time for restart is set, NovaStudio will restart automatically when the computer time reaches the set restart time. And NovaStudio will also recover the status what it was in before the restart. The restart function is useful in helping

NovaStudio to run stably for long time. In some cases, the computers are not allow to shut down, thus NovaStudio may become less stable due to problems from the OS, decoders or others in long term running. Restarting NovaStudo2012 when it is idle can keep NovaStudio in good status.

If **Auto Play** is selected, NovaStudio will activate the specified play program file automatically after it starts up.

Note that **OK** should be clicked after setting to activate all settings.

8.3 Power Settings



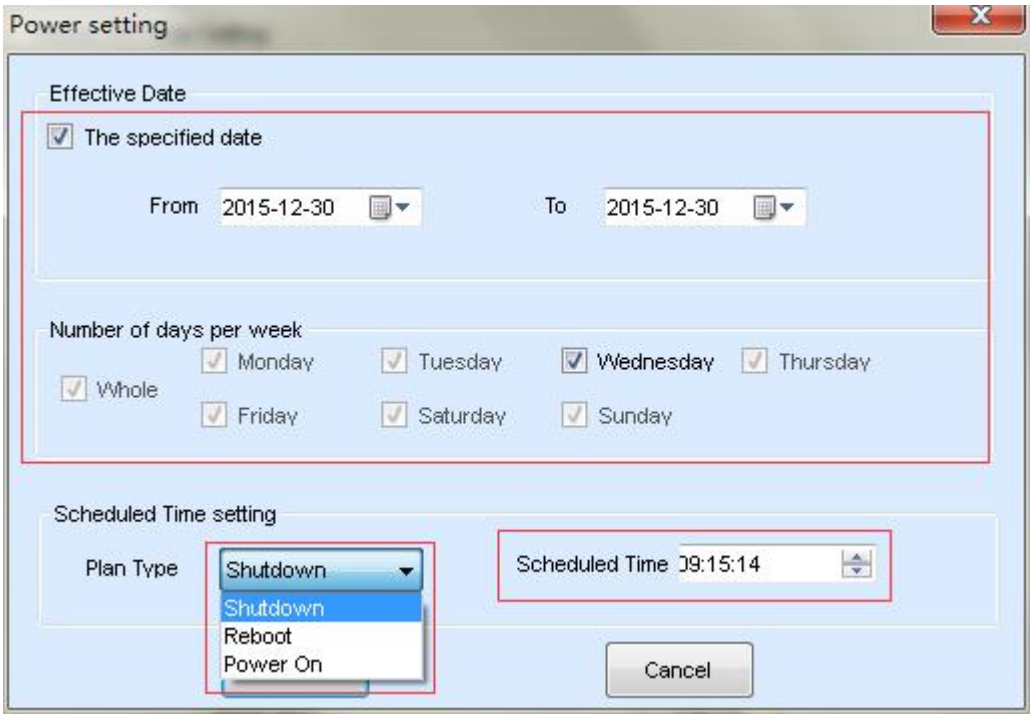


Fig. 8- 3 Power Settings

8.4 Play Setting

Select **Setting** ->**Play Setting** form the main menu of NovaStudio to open the Play Setting dialog. The Play Setting dialog is as shown in Fig.8-4.

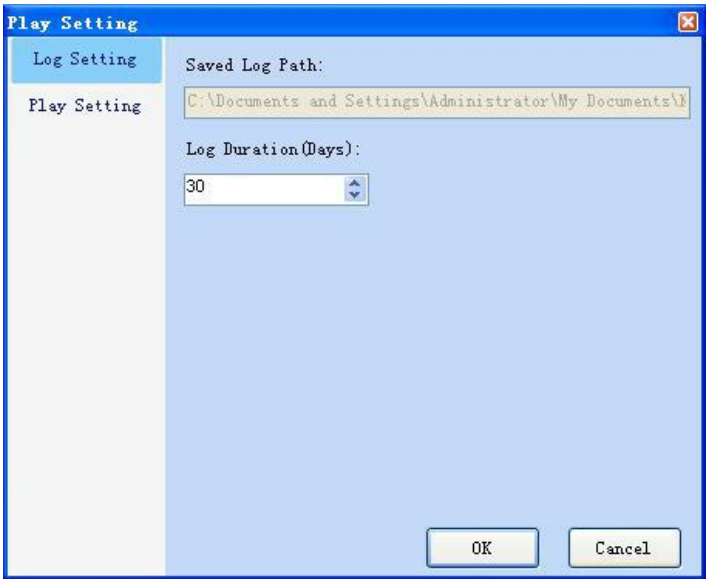


Fig.8- 4 the Play Setting dialog (Log Setting page)

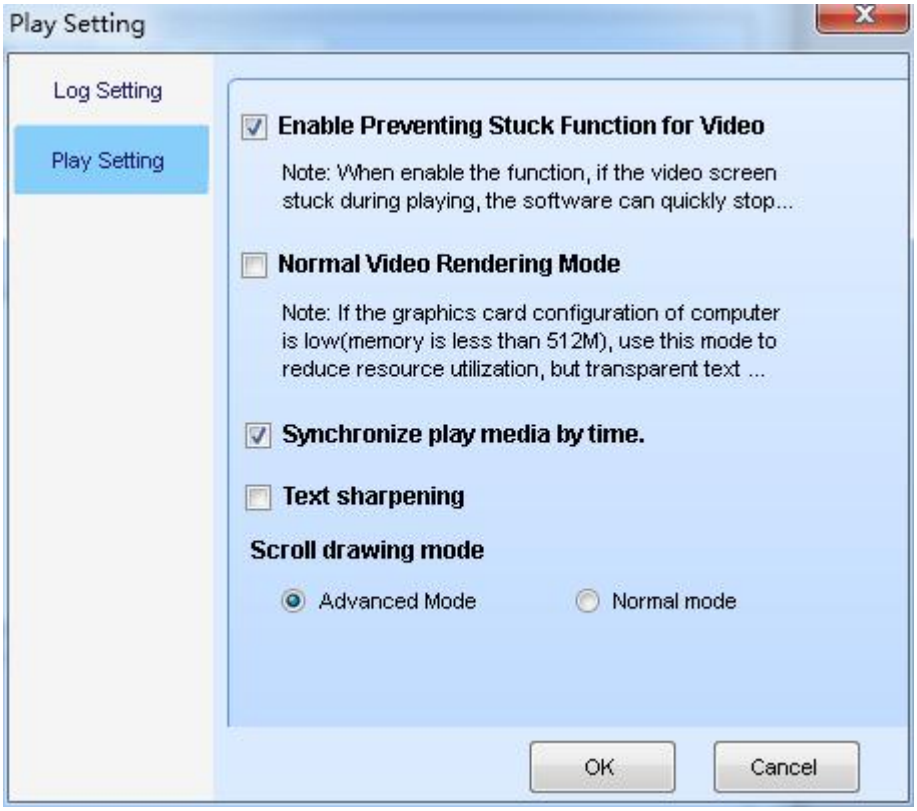
8.4.1 Log Setting

NovaStudio saves the play information of each media source in play log. And the play log files are saved in "My Documents\ NovaStudio\Log\PlayLog" of the current computer user. Each LED display has its own folder. The folder name for the Nth LED display in the LED display list is "ScreenN".

Note that NovaStudio deletes log files that are stored in the hard disk longer the number of days specified by **Log Duration**(Days).

8.4.2 Play Setting

The Play Setting page in the Play Setting dialog is as shown in Fig.8-5.



公式 1

Fig.8- 5 the Play Setting page

✧ **Enable Preventing Stuck Function for Video**

Due to problems from decoders or computers, video could be stuck during being played. NovaStudio monitors the video when it is being played. If a frame is being shown for too long, NovaStudio will stop playing this video and switch to the next media source.

✧ **Normal Video Rendering Mode**

NovaStudio adopts the advanced rendering mode for video rendering as default. If the computer is relatively low in performance, enable the Normal Video Rending Mode. Normal video rending mode also helps to prevent the problem of slit and dislocation in quick motion pictures。

✧ **Synchronization play media by time**

After this option is ticked off, the software will enable the synchronic playing of playing programs according to the computer time. Please refer to 12 Synchronic Playing Function for the specific operating steps.

✧ **Scroll drawing mode**

A better effect with the advanced drawing mode.

8.4.3 Preview Setting of Media

Click “Settings” → “Preview Setting of Media” on the toolbar to enter the media setting interface shown as below:

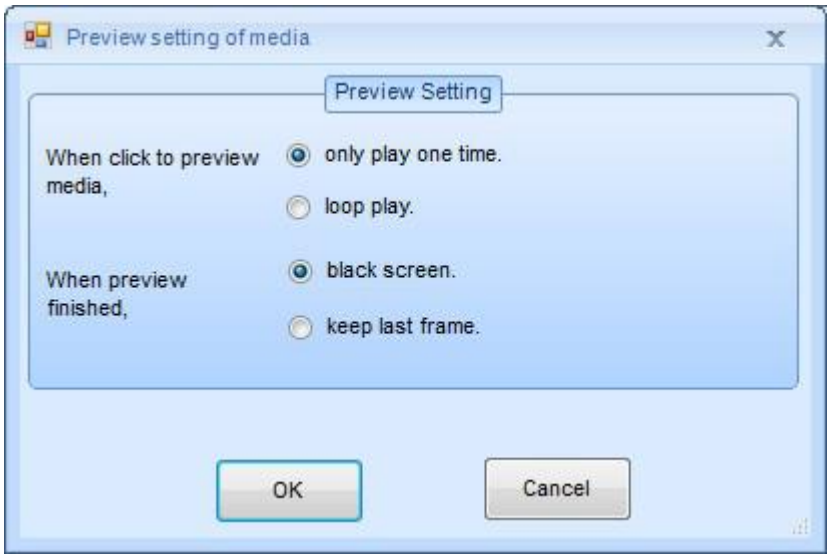
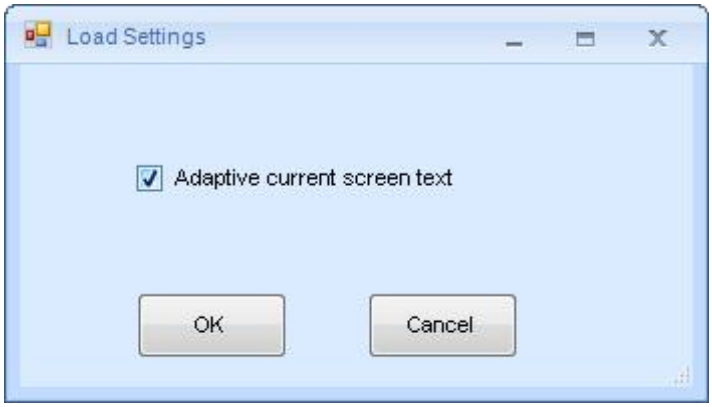


Fig.8- 6 Preview setting of media

The user can set media clicking preview at "only play one time" or "loop play" according to the practical demands. If "only play one time" is chosen, "black screen" or "keep the last frame" may be selected upon the completion of media preview setting with the options below.

8.5 Load Settings

Text can adapt itself to current screen. Click "Settings" →" Load Settings" and users can log into the interface as shown in the following picture.



9 Computer Locking

To prevent unauthorized operations on NovaStudio, NovaStudio is capable of locking the computer by disable the keyboard and the mouse.

✧ **Set/Reset the password**

Select **Set** ->**Password Setting** from the main menu of NovaStudio to access the dialog for password setting, as shown in Fig.9-1.

Fig.9- 1 Password Setting dialog

	TIPS: The initial password is NULL. That is there is no initial password!

✧ **Lock the computer**

Select Lock(O) at the main menu of NovaStudio to open the confirm dialog for computer locking, as shown in Fig.9-2 and Fig.9-3.

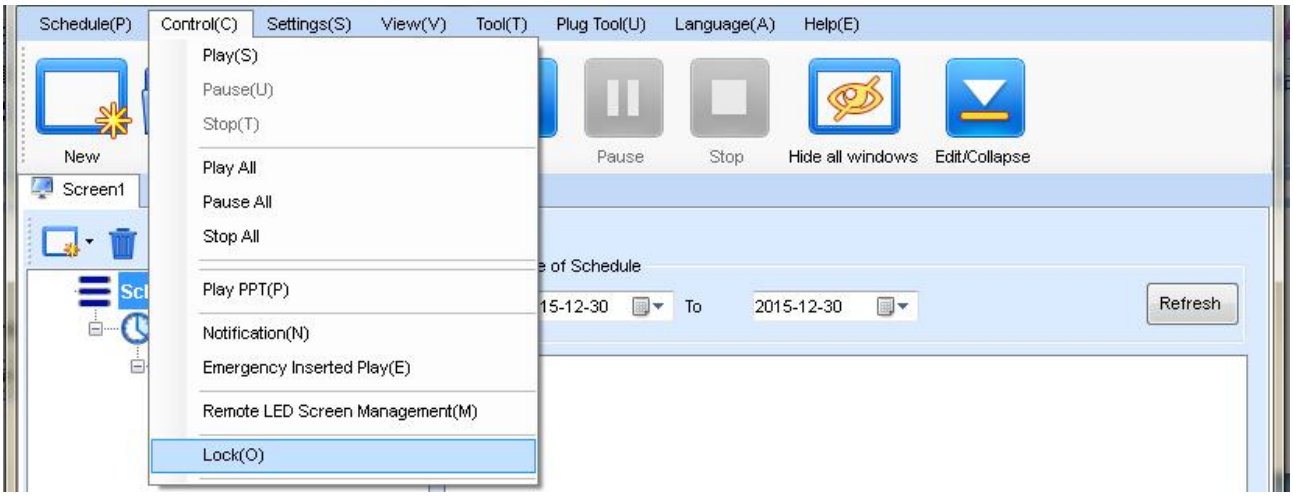


Fig.9- 2 **Lock(O)** in the main menu

Fig.9- 3 confirm dialog for computer locking

- Read the messages in the confirm dialog for computer locking carefully before lock the computer.
- Click **OK** to lock the computer. All keys except for the **ESC** key will be disabled.
- Press **ESC** to access the unlock dialog. Password is required for unlocking the computer.
- A message as shown in Fig.9-4 will be shown when the mouse is moved.

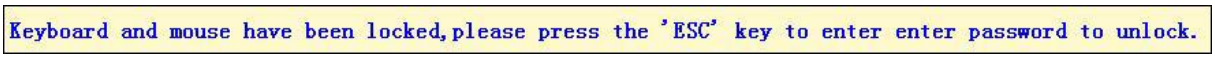


Fig.9- 4 Message shown when the computer is locked

- The **Lock(O)** item at the main menu of NovaStudio is red when the computer is locked.

	TIPS: The computer will always be in the lock status after it is locked, even NovaStudio is restarted (auto starts or by double clicking the .exe) by computer restarting by force. Password is the only way to unlock it!

✧ **Unlock the computer**

Press **ESC** to open the **Unlock Window** for unlocking. The Unlock Window is as shown in Fig.9-5.

Fig.9- 5 the dialog for unlocking

Type in the password and press **Enter** to unlock the computer. Press **ESC** to exit unlock process.

	TIPS: If the password is never set or is set to be NULL, press Enter key directly to unlock the computer. Please contact us if the password is lost.

10 Disk Play

1) Export Play Program to USB Disk

The playing programs on control computer must be exported to USB flash disk. The playing programs and the media involved can be exported to the designated folder on USB flash disk through the "export to USB flash disk" function of playing programs.

Click the menu item "export to USB flash disk" under the menu "playing programs", as shown in Fig.10-1. Select USB flash disk in the dialog box popped out, and set the name of backup folder, at where the media to be saved after being exported to USB flash disk. For the avoidance of repetition, a prefix to be attached in case of name duplication shall be set.

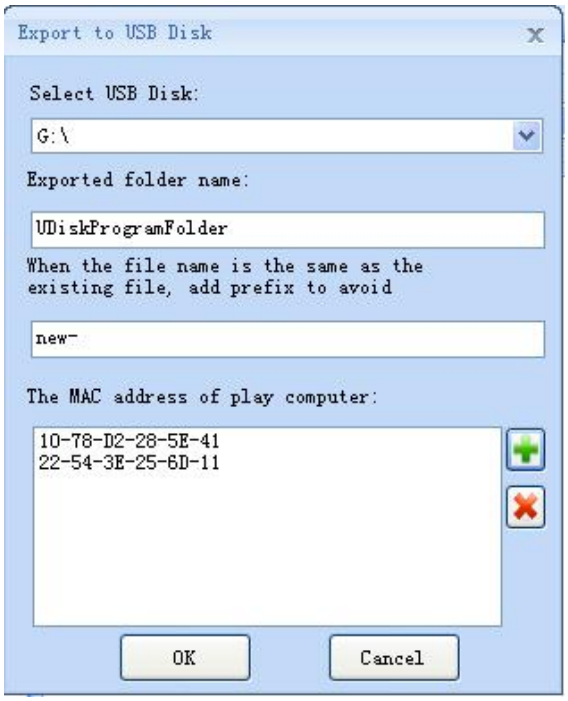


Fig.10- 1 Export to USB Flash Disk

Click " " to add the MAC address of the computer where the program will be played. More than one MACs can be added.

Click “OK” upon the completion of setting. Then, the interface below will pop out:

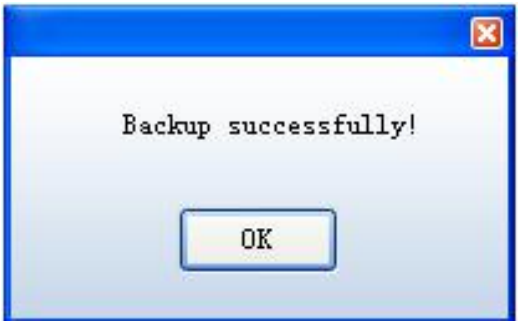


Fig.10- 2 Export USB Flash Disk Successfully

2) Enable USB Disk Play

NovaStudio in the play computer needs to enable **USB Disk Play** function. Click **Start Setting** under **Setting** menu, as shown in Fig.10-3. Select USB Disk Play, and then click OK, as shown in Fig.10-4.

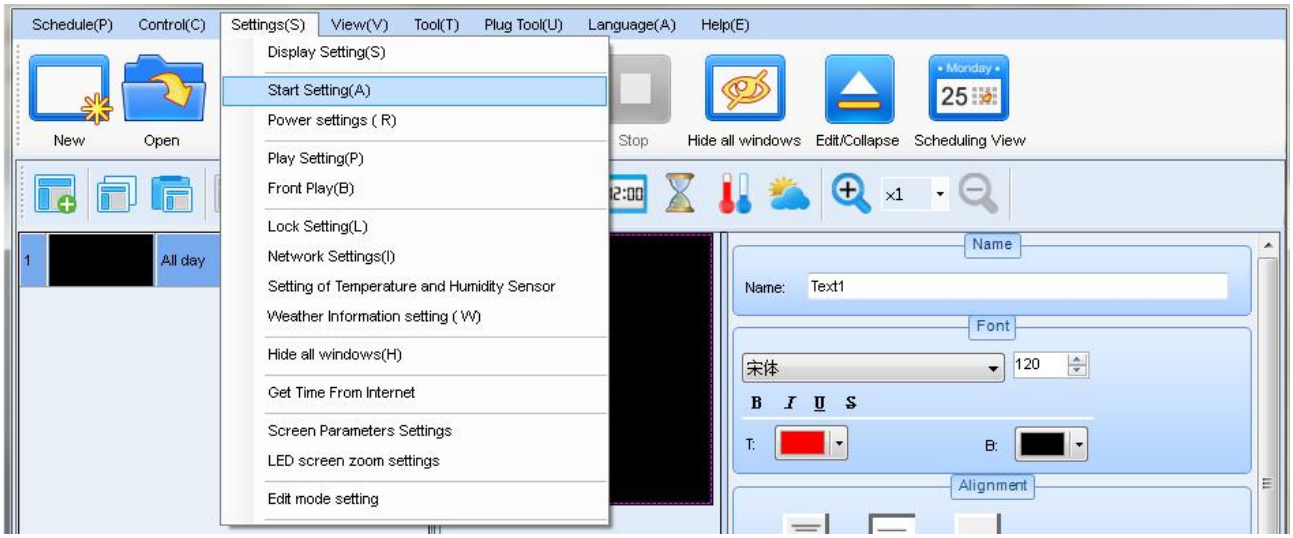


Fig.10- 3 Start Setting menu item

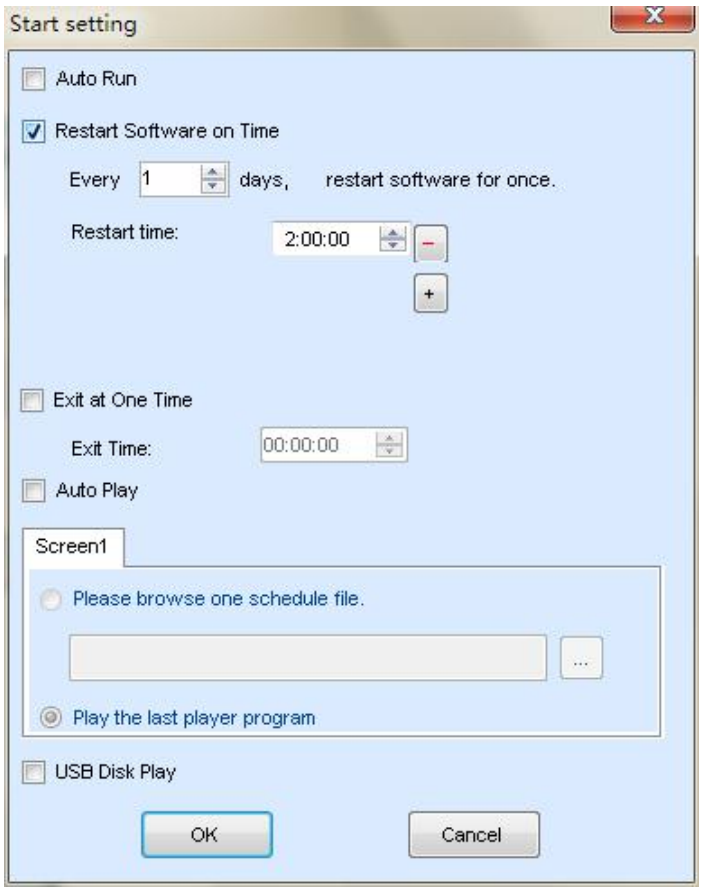


Fig.10- 4 Enable USB Disk Play

After enable **USB Disk Play**, if the USB disk which has backup content is inserted, NovaStudio will detect it real time and play the play program on it at once; If the USB disk is removed, the play will be stopped.

If **USB Disk Play** is selected, and the auto play file when NovaStudio started is not set, NovaStudio would detect the USB disk of the current computer and play the play program file on it (If has) when started.

11 Backup

NovaStudio provides backup functions, and users can backup programs to hard disk or mobile storage device in time.

Click **Backup** under **Play Program** menu, as shown in Fig11-1. In the pop up dialog, set the backup path as the root path of USB disk (here must be the root disk) , set the backup folder name arbitrarily, as shown in Fig.11-2. After click **OK**, the backup process will be shown as Fig.11-3. A message will be shown as Fig.11-4 when backup finished.

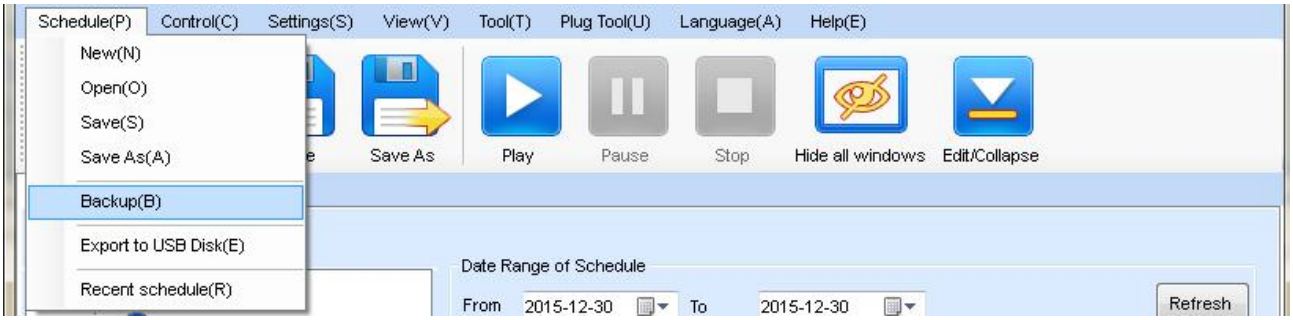


Fig.11- 1 Backup menu item

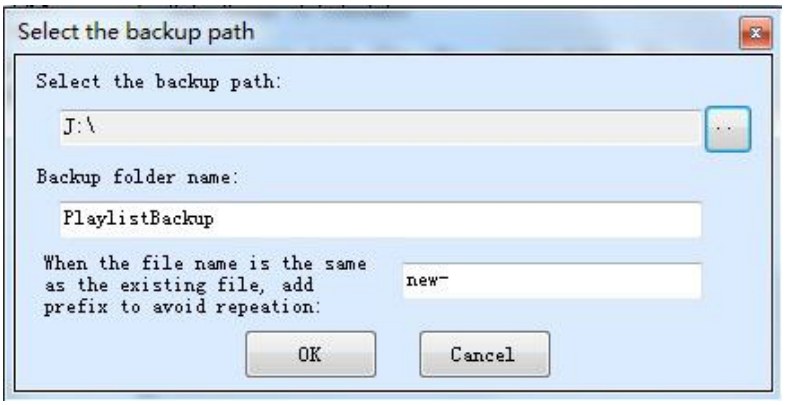


Fig.11- 2 Backup setting

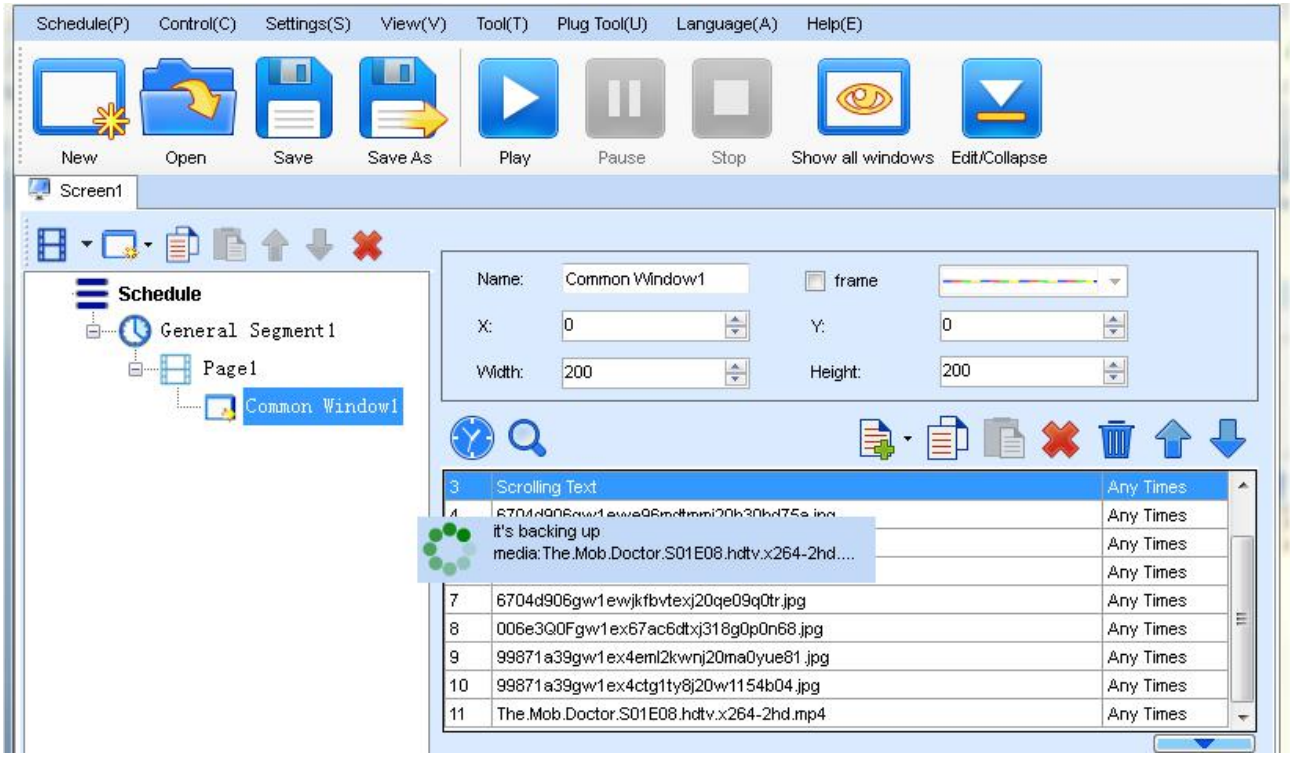


Fig.11- 3 Backup process

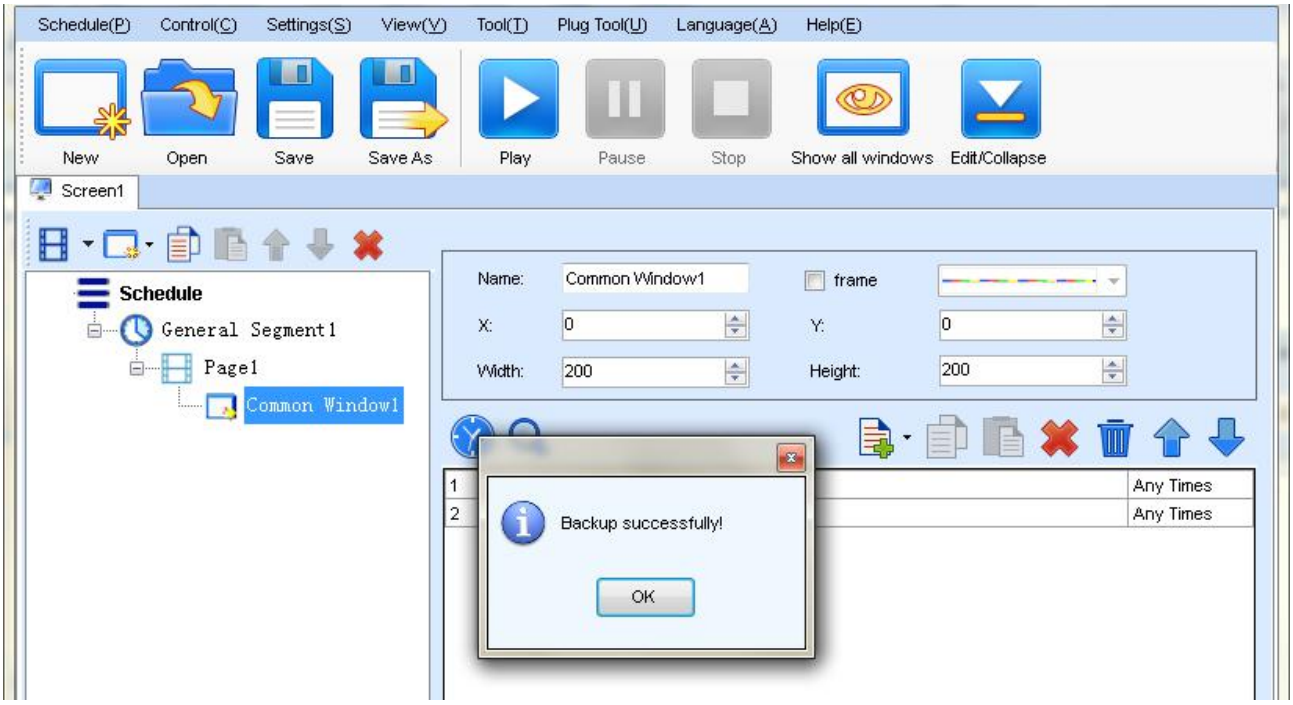


Fig.11- 4 Backup finished

12 Synchronal Playing Function

Synchronal playing function is provided in this edition to solve the requirements for synchronal playing of mulTIPSle display screens in some occasions.

1) Enable synchronal playing function

Run NovaStudio on the playing computer, click menu "**Settings**" → "**Play Setting**" on the main interface to enter the play setting interface, tick off "**Synchronize play media by time**" and then click "OK". The synchronal playing function will be enabled successfully.

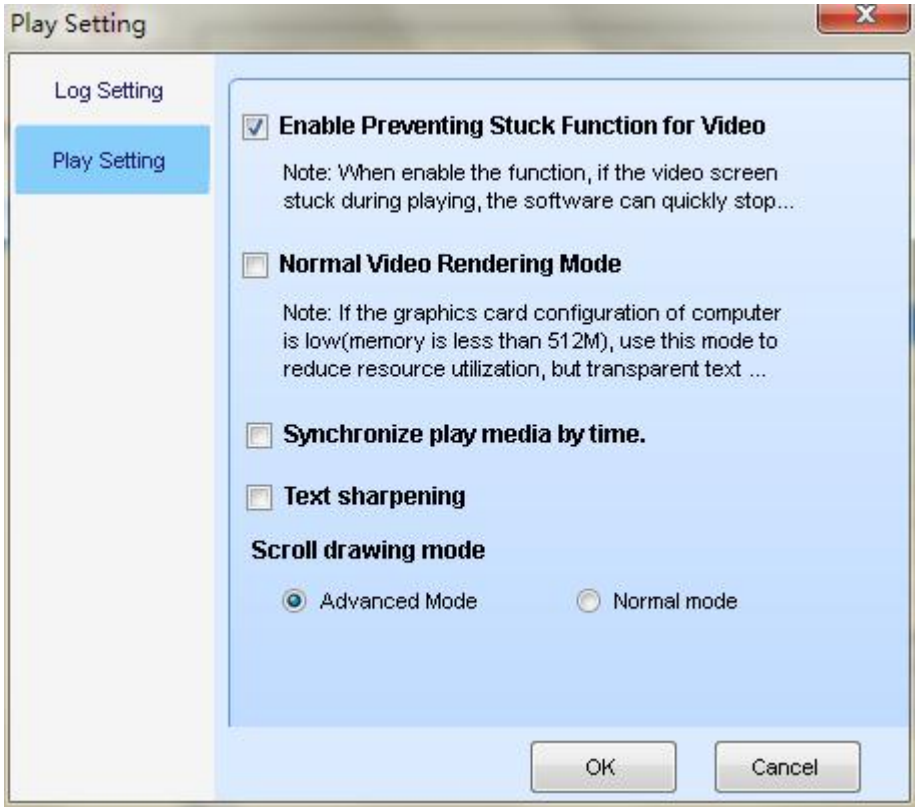


Fig.12- 1 Play Setting

⚠	**Caution:** As synchronal media function calculates the media playing time by time, so as to achieve the synchronal playing of mulTIPSle display screens, the time on mulTIPSle playing computers must be the same. This software

	achieves time synchronization by network timing. See the operating steps in 2) Network Timing of this section.

2) Network timing

There are two methods for network timing. Method 1 is to operate on each playing computer respectively, and perform network timing by acquiring time from network. It takes too much time. Therefore, method 2 is recommended (under the premise that remote control is built), as it is convenient and more accurate.

Method 1:

Set the NovaStudio on the playing computer corresponding to each display screen.

a) Click "Settings" → "Get Time From Internet" on the menu bar, and then click "Set Time Now" in the dialog box popped out. The system will acquire network time immediately.

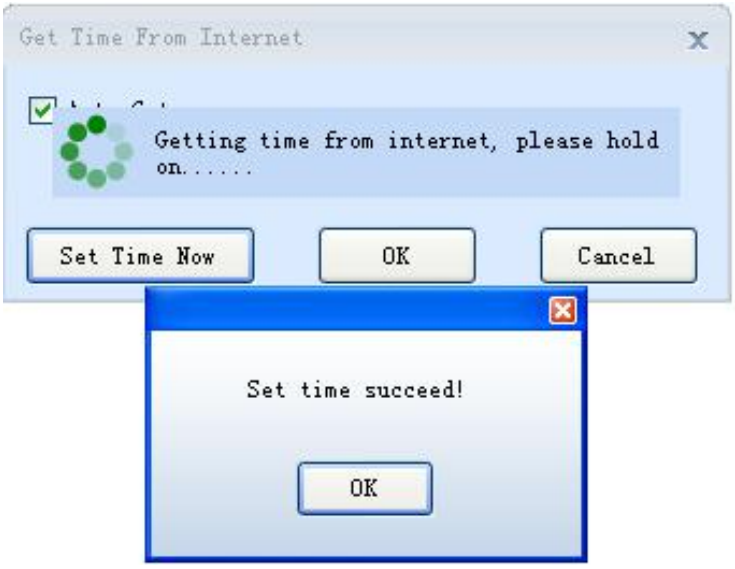


Fig.12- 2 Immediate Timing

b) Tick off "Auto Get" to set the timing cycle and then click "OK". The playing computer will conduct timing regularly according to the cycle after that.

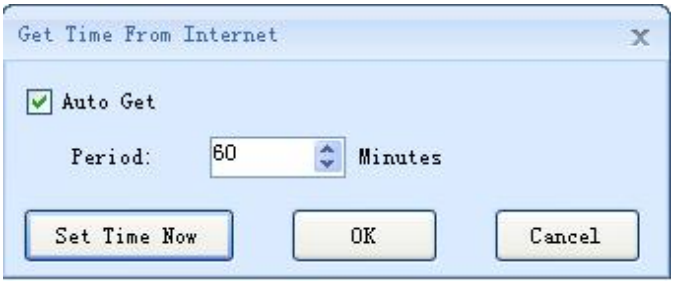


Fig.12- 3 Periodic Timing

Method 2:

If remote control is set up on mulTIPSle computers, just operate on NovaStudio on the master computer.

Click “ (timing)” on the toolbar, the interface shown as Figure11-3 will pop out. The operating steps of method 1 must be repeated.

	TIPS: Uniform timing will be performed to all the playing computers connected to all the master computers.

13 Display temperature and humidity

If the system is equipped with temperature and humidity probe, temperature-humidity media widow can be added on the display screen to display real-time temperature and humidity.

Click “Setting” → “Setting of temperature and humidity sensor” on the main menu to enter the window below, where temperature and humidity sensor can be set according to physical circumstances and then click “Ok”.

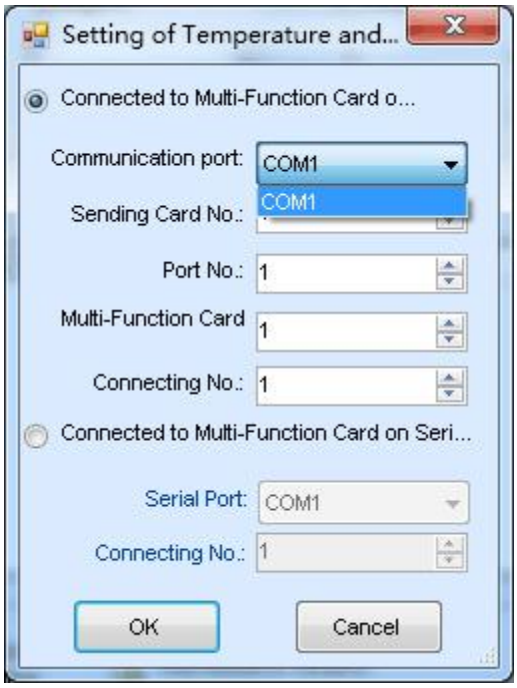


Fig.13- 1 Setting of temperature and Humidity Probe

	Note: Communication port on the Multi-Function Card located in the cable can also support USB and Ethernet port.

Then the temperature-humidity display can be added on the general window; see 3.3.2.5 Media Editing.

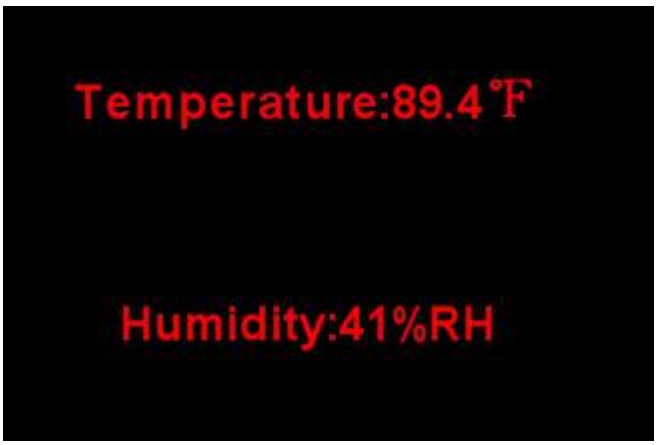


Fig.13- 2 Temperature and Humidity Window

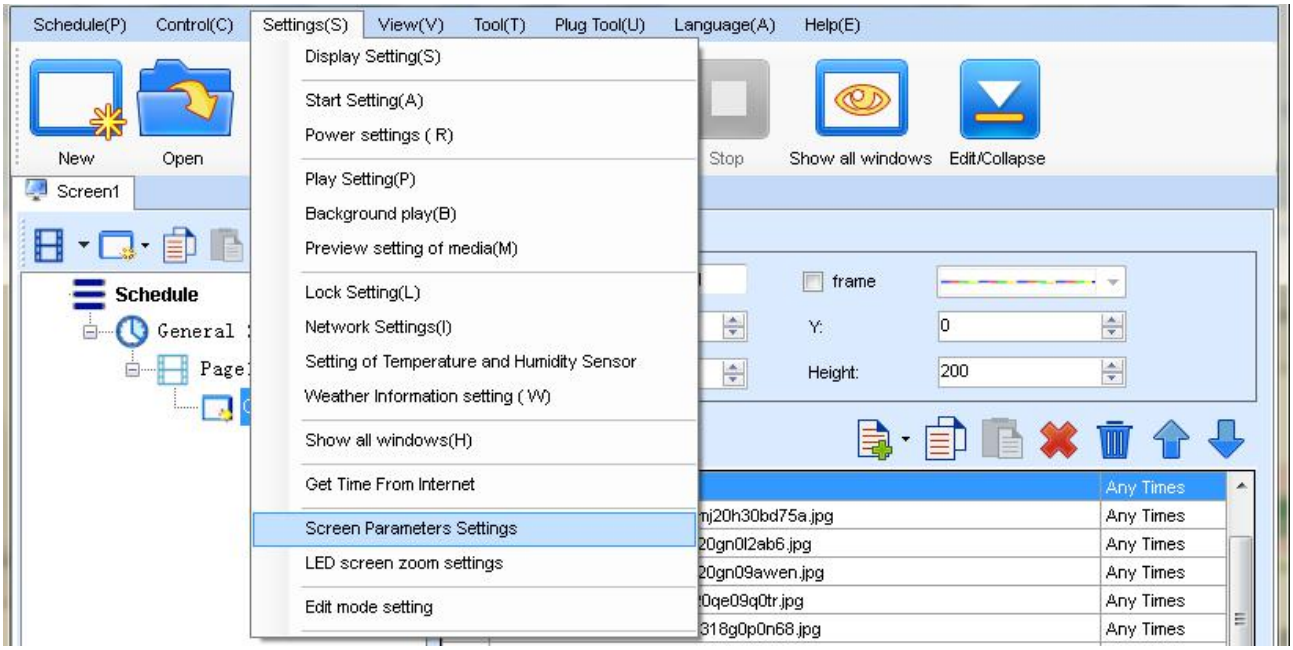
14 Weather information setting window

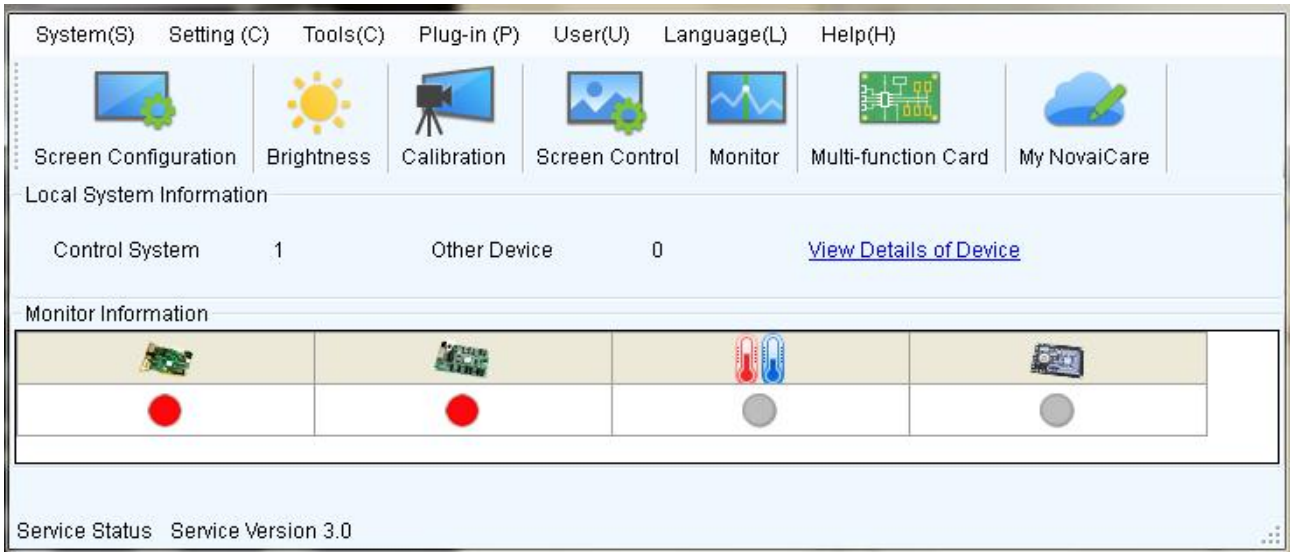
The editable of weather forecast icons and international languages.

Fig. 14- 1 Weather information setting window

15 Screen Parameters Settings

Click "Settings" → "Screen Parameters Settings" to set the screen parameters in LCT client.





16 LED Screen zoom settings

Set the start positions and the size of display region of the selected screen.

Check “Enable scaling display” to set the display width and height.

Click “Send to hardware” after setting to send the parameters to hardware.

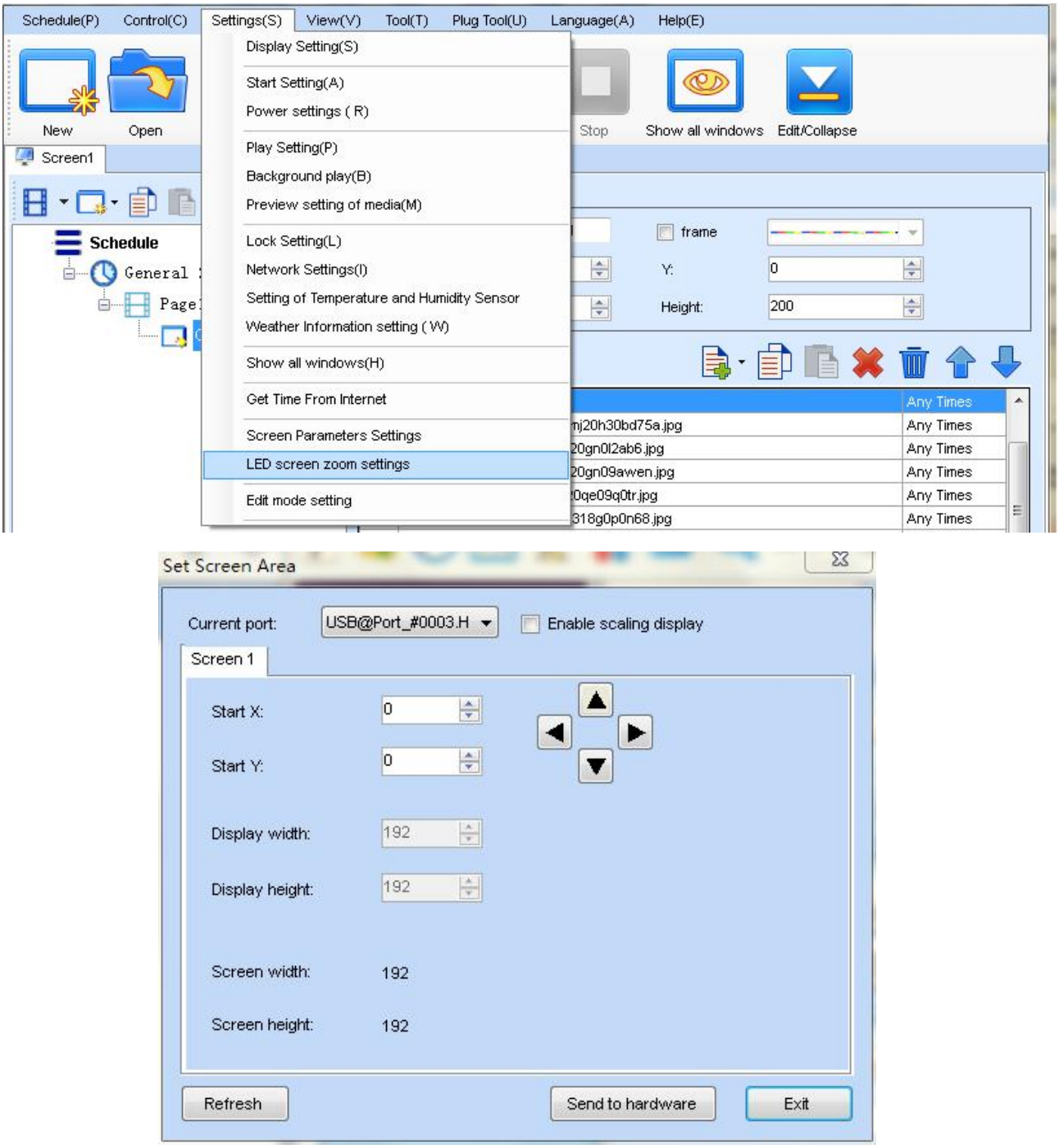


Fig. 16- 1 Set Screen Area

17 Record Control

This function coordinates with the media recorder of MT300/MT310 under the mode without sending card and the mode of asynchronous card; it only supports time priority program.

Under the mode without sending card, reticule is used to directly connect the Gigabit internet

access of the computer and Gigabit internet access of MT300/MT310; and computer can be used to control MT300/MT310 for synchronous display.

Under the mode of asynchronous card, the content which needs to be displayed will be recorded into the memory of MT300/MT310 under the mode without sending card; when the reticule between the computer and MT300/MT310 is disconnected, MT300/MT310 can automatically play the recorded content.

See the following chapters for detailed operation instruction.

17.1 Add media

On the main interface of the software Novastudio, click "Setting"→"Display setting" to set start position, and width and height of the screen.

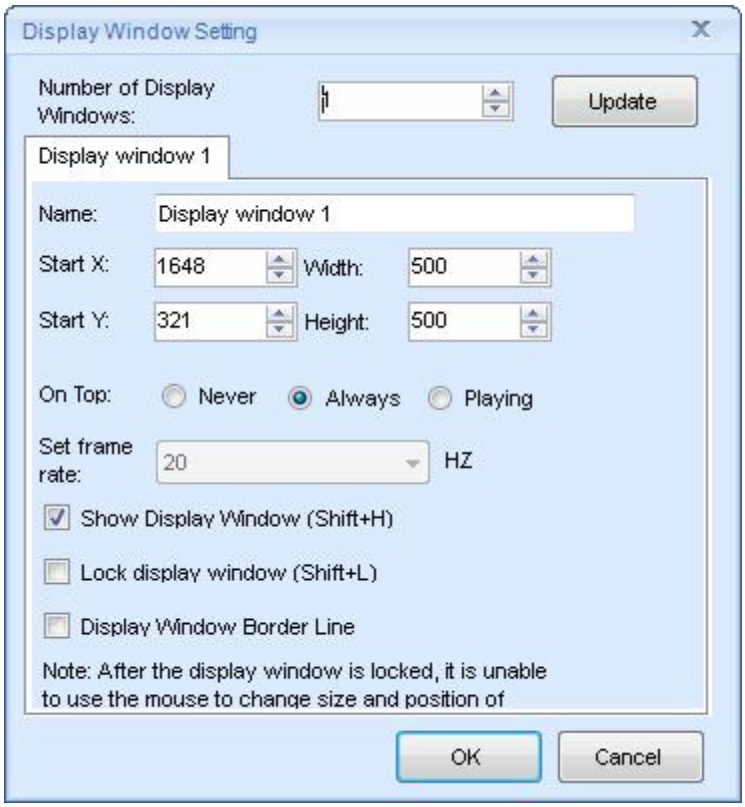


Fig.17- 1 Display setting

In the common window, add the media to be recorded; after that, play or preview it; then, the content played can be seen on the on-load screen of MT300/MT310.

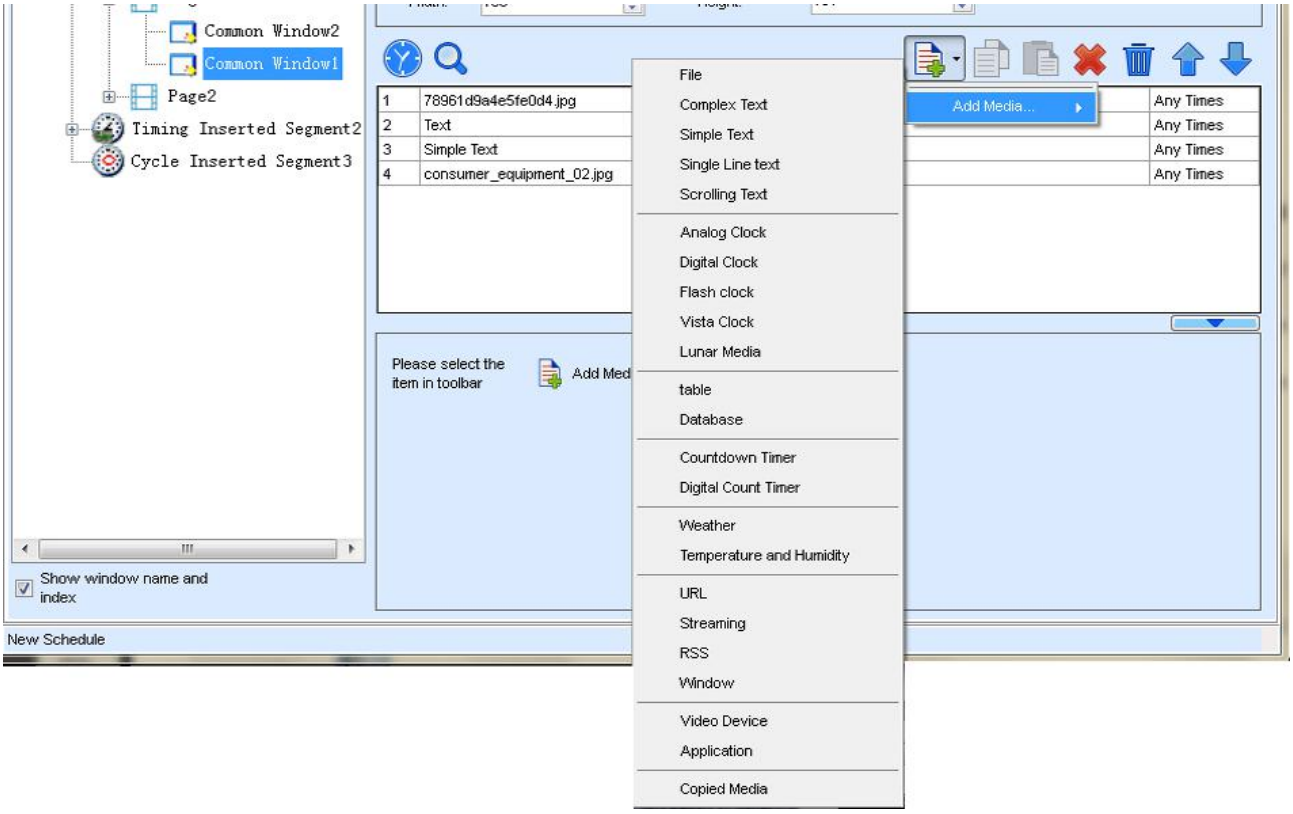


Fig.17- 2 Add media

17.2 Record Control

Click "**Control**"→"**Record Control**" to set screen, time frame, control system, frame frequency of sending card and recording time length, then click "**Record**".

Fig.17- 3 Record Control

17.3 Asynchronous mode of play

After the recording is completed, unplug one end of the cable between MT300/MT310 and the computer; usually directly unplug the cable at the computer end, the screen will start to play the recorded media repeatedly.

18 Play Streaming Media

Steaming media are the media that transmit audio, video and multimedia file by steam mode. The typical characteristic of steaming media is that the continuous audio and video information are compacted in the steaming medial players, so that they can be seen as well as unloaded, with no need to wait for the downloading.

Steaming media server is mainly to transmit video files to client by steam protocol (RTP/RTSP/, MMS, RTMP, etc.). The software supports steaming media of RTSP, MMS protocols (that is, mms://..., rtsp://...) to search websites on Internet.

As shown below, adding a steaming medium on the general window only needs to fill the Internet site in the Url, when the software will immediately load and play the medium.

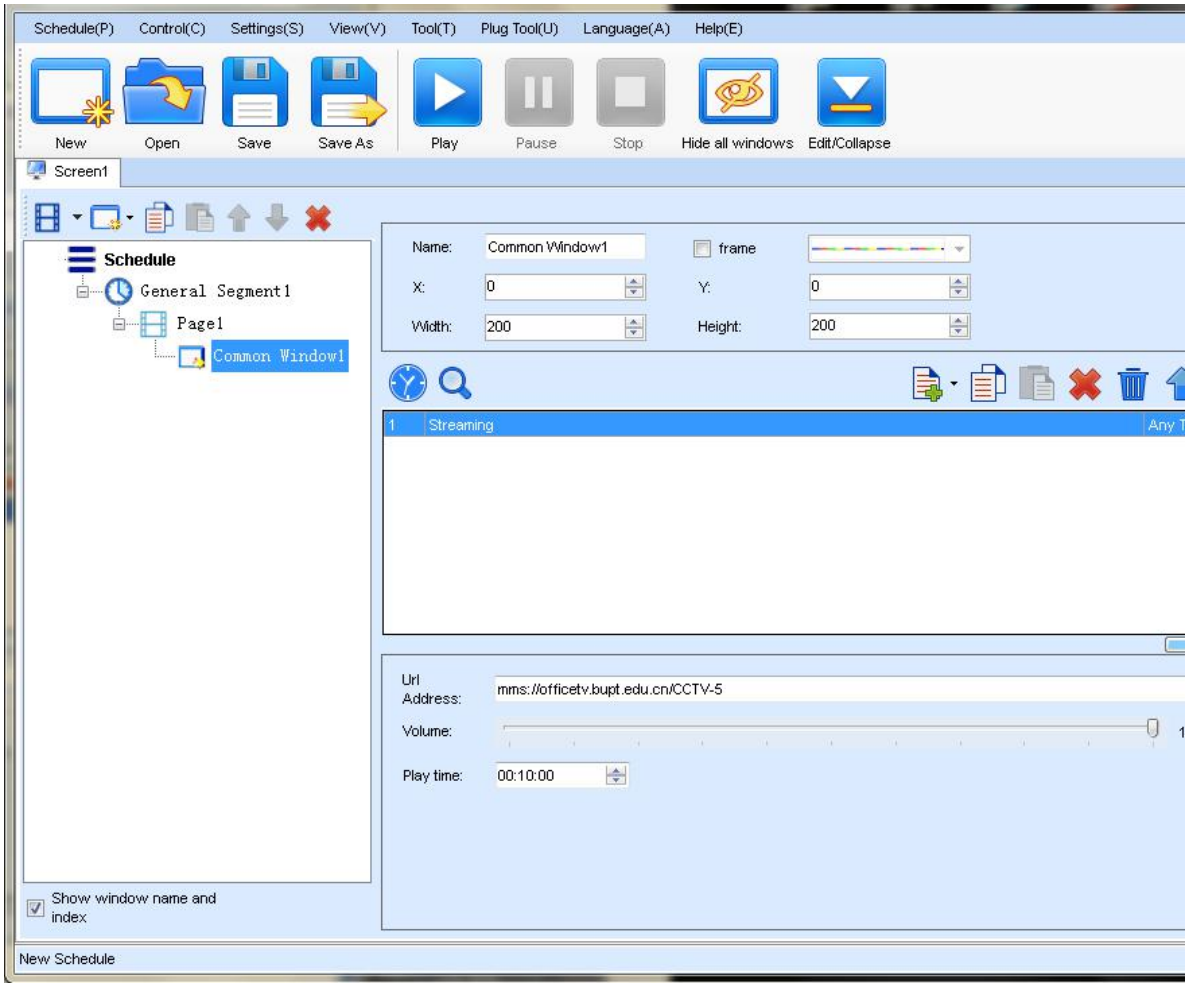


Fig.18- 1 Add Steaming Media

19 Other Functions

19.1 Resume from fault

NovaStudio can restart when serious fault happened. Sometime, NovaStudio would not work normally because of decoder unstable, if error happened, NovaStudio would restart itself and resume the play status.

19.2 PPT Showing

NovaStudio does not support adding Microsoft PPT files as media sources into playlist, but it does provide a tool to convert PPT files into pictures and thus the pictures can be added into

playlists for showing.

Select **Plug Tool** ->**PPT To Bitmap** to open the PPT to Bitmap dialog for converting, as shown in Fig.19-1. The PPT to Bitmap dialog is as shown in Fig.19-2. Select the PPT file to be converted, set the path for the result bitmaps and click **Convert** button to perform conversion.

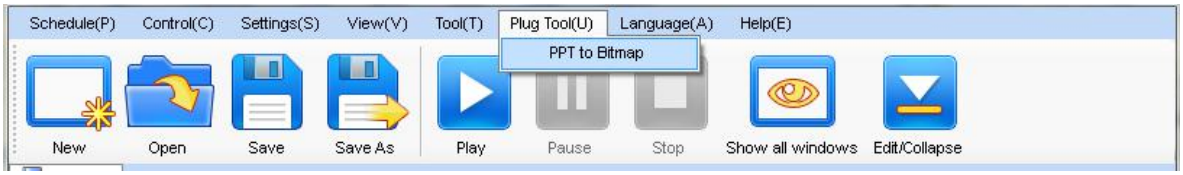


Fig.19- 1 PPT to Bitmap menu item

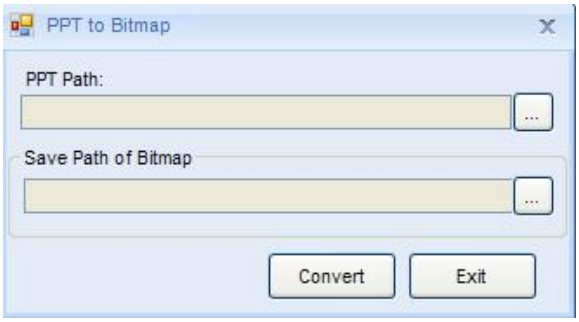


Fig.19- 2 the PPT to Bitmap conversion dialog

If the size of the play window does not match that of the converted pictures, there would be compression and distortion when showing the pictures in the play window. NovaStudio can create PPT files of which the page size can be customized. By setting the page size the same as that of the play window, compression and distortion can be avoid. To open the dialog for page size setting and PPT file creating, select **Tool** ->**PPT** from the main menu, as shown in Fig.19-3. Shown in Fig.15-4 is the dialog. The page size can be set the same as a play window (select **Same as the display window size** and then specify a display window) or directly (select **Custom Size** and enter the values for **Width** and **Height**). Microsoft PPT will be started when Click OK. Opened in Microsoft PPT is a PPT file with page size the same as the set values.

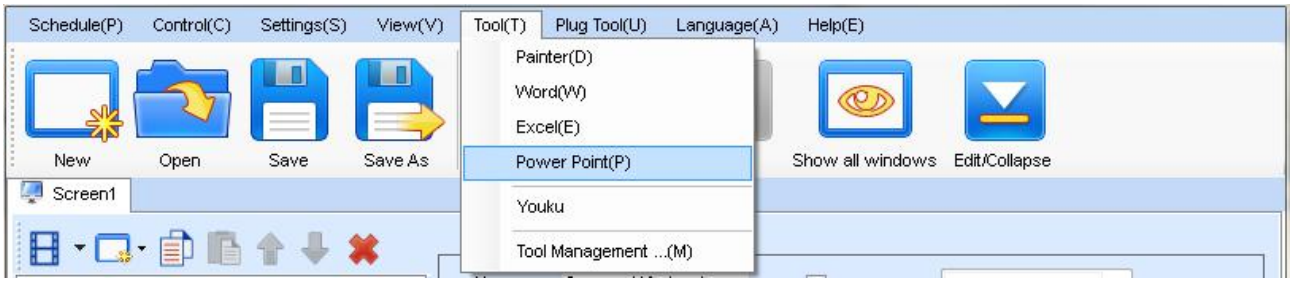


Fig.19- 3 the PPT item in Tool drop-down menu

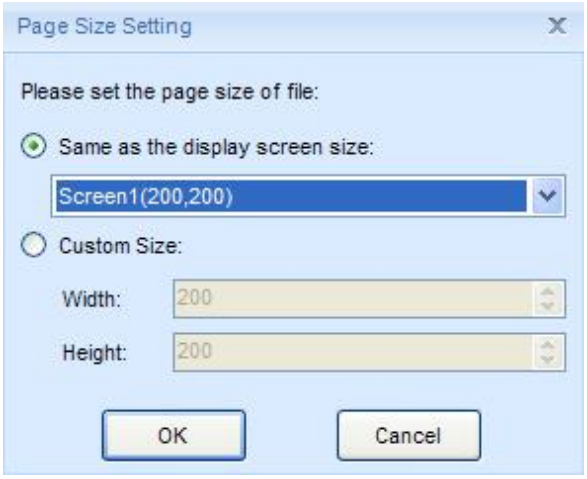


Fig.19- 4 dialog for PPT page size setting and PPT file creating

Microsoft Word files of certain page size can also be generated in this way. Select **Tool**->**Word** to open the dialog for Word files.

19.3 Tool Management

The function of tool management is provided is NovaStudio. Users can link their usually used tools to NovaStudio and thus open the tools through NovaStudio.

Select **Tool** ->**Tool Management** to open the Add Tool dialog, as shown in Fig 19-5. Shown in Fig.19-6 is the Add Tool dialog.

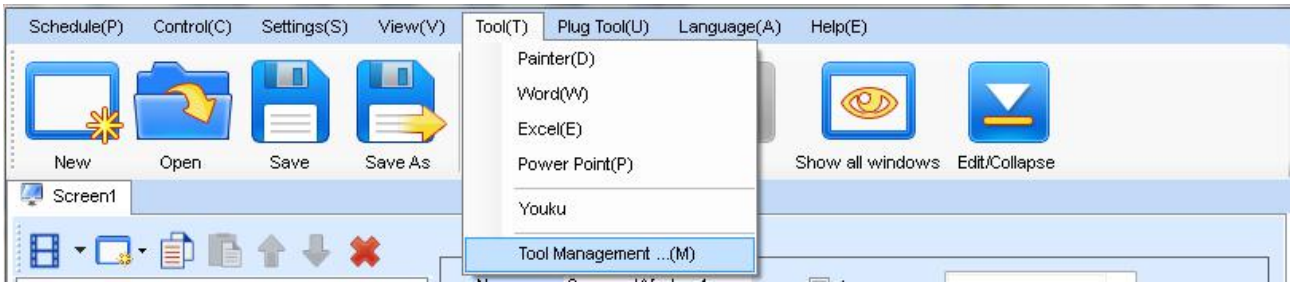


Fig.19- 5 the Tool Management item in the Tool drop-down menu

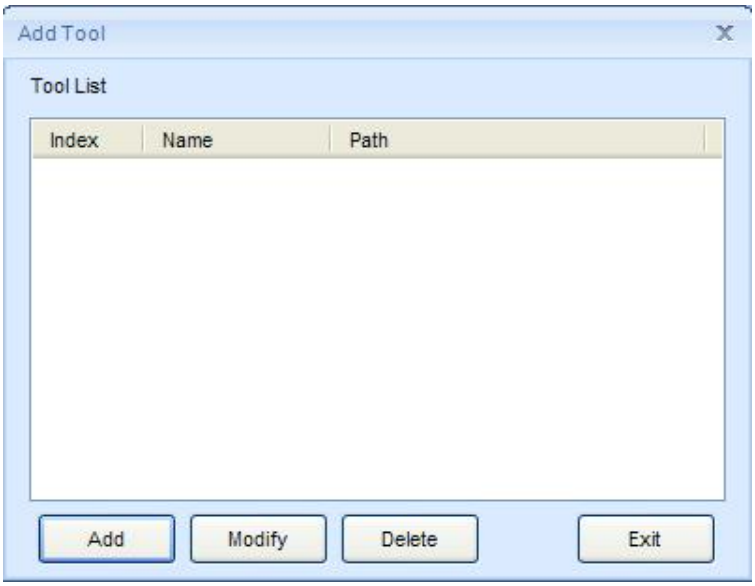


Fig.19- 6 the Tool Management dialog

Click **Add** on the **Add Tool** dialog and in the pup up **Tool Operation** dialog, specify the tool to be added (set the path of the .exe file) and set its name for shown in NovaStudio. After that, click **Add** to perform adding operation.

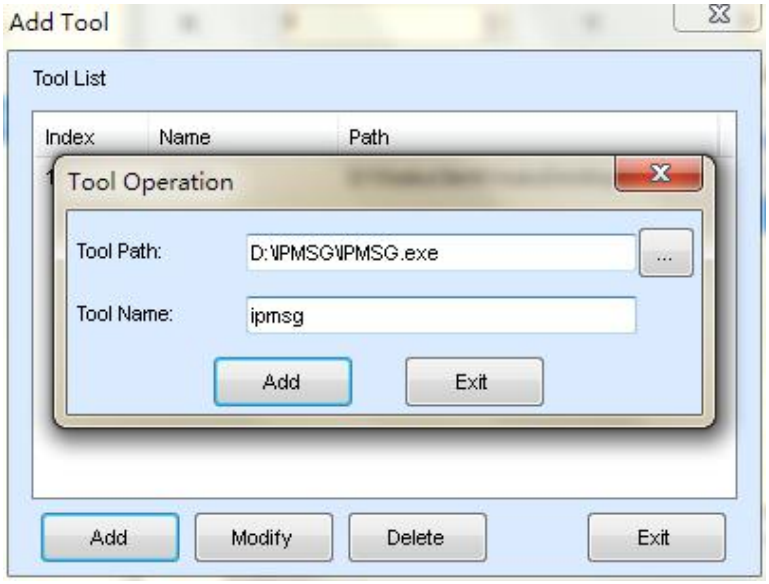


Fig.19- 7 the Tool Operation dialog

After added, the name of the new added tool will be in the drop-down menu of Tool, as shown in Fig.19-8. Select this item to open the tool when needed.

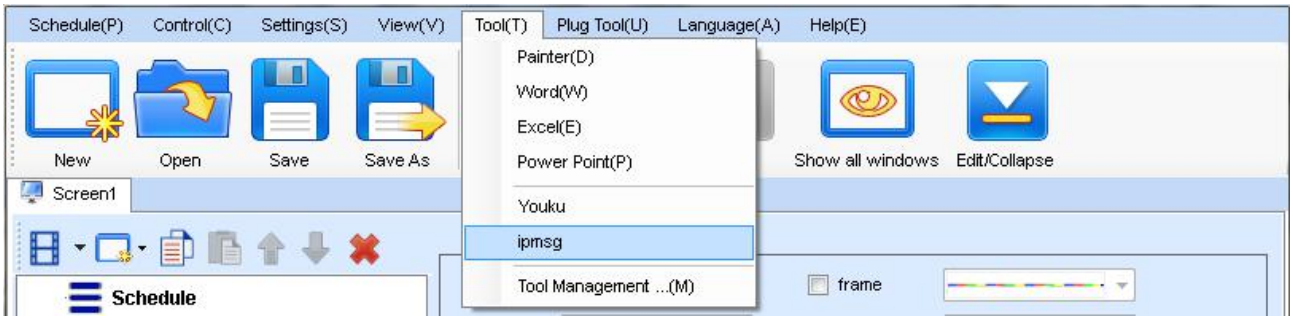


Fig.19- 8 tools added

19.4 Log Plat

Select **View** ->**PlayLog** to open the LogPlat for media play log, as shown in Fig.19-9. The LogPlat dialog is as shown in Fig.19-10.

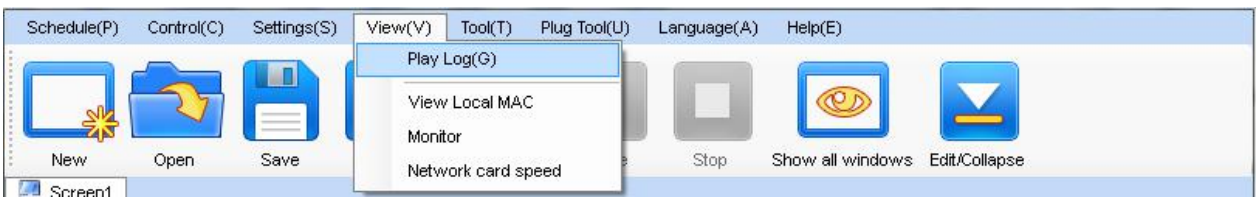


Fig.19- 9 the Play Log menu item

Fig.19- 10 the Log Plat dialog

Select a date from the calendar and the media play log of that day will be shown. You can also choose to view the play log of specific media or at certain time zone.

Click “Export” to export the viewing content to Excel file, as shown in Fig.19-11

Play Log

Play Date:2012-6-24 *Make Time:2012/6/25 18:48:53*

Name	Duration	Play Time	Stop Time	Result
foreign_1.jpg	0:00:05	16:10:45	16:10:51	Succeed
girl.jpg	0:00:05	16:10:51	16:10:56	Succeed
gold.jpg	0:00:05	16:10:56	16:11:02	Succeed
girl.jpg	0:00:05	16:11:02	16:11:08	Succeed
foreign_1.jpg	0:00:05	16:11:08	16:11:14	Succeed
girl.jpg	0:00:05	16:11:14	16:11:19	Succeed
gold.jpg	0:00:05	16:11:19	16:11:25	Succeed
girl.jpg	0:00:05	16:11:25	16:11:31	Succeed
foreign_1.jpg	0:00:05	16:12:43	16:12:49	Succeed
girl.jpg	0:00:05	16:12:49	16:12:54	Succeed
gold.jpg	0:00:05	16:12:54	16:13:00	Succeed
girl.jpg	0:00:05	16:13:00	16:13:06	Succeed

Fig.19- 11 Play log form

In the log statistics page, you can do statistics of the play times and failure times of media, as shown in Fig.19-12.

Fig.19- 12 Play log statistics

Click "Export" to export the statistics information to Excel file, as shown in Fig.19-13.

1			
2	Log Statistic		
3			
4	*Play Date:2012-6-24*	*Make Time:2012/6/25 18:58:16*	
5	**Name**	**Play Time**	**Fail Time**
6	foreign_1.jpg	3	0
7	girl.jpg	6	0
8	gold.jpg	3	0
9			

Fig.19- 13 Play log statistics form

19.5 Background Play

19.5.1 Background Play

Following will take the OS of Windows XP as an example to illustrate how to active backstage media playing.

Connect the computer video card DVI output interface with the DVI input interface of the LED display control system. Right click on the desktop and select **Properties** form the pup up menu, as shown in Fig.19-14

Fig.19- 14 desktop properties

Select **Setting** page form the **Display Properties** dialog, as shown in Fig.19-15.

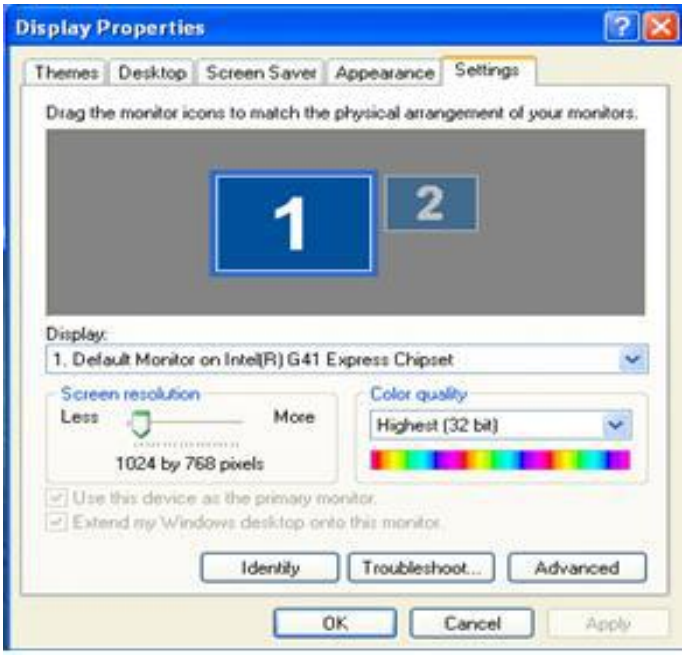


Fig.19- 15 the Setting page

Select Monitor 2 and "**Extend my Windows desktop onto this monitor**", as shown in Fig.19-16. Click **OK** when finish.

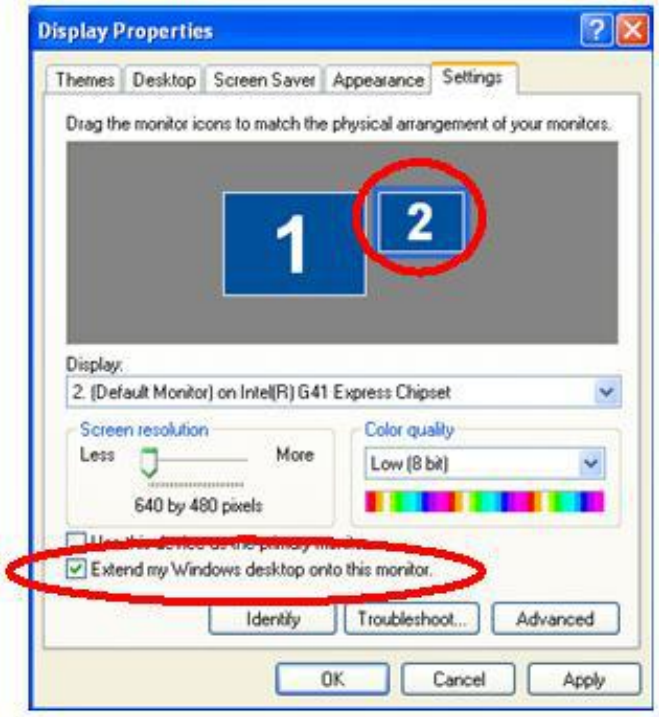


Fig.19- 16 activate Monitor 2

After the settings for Monitor 2, select **Setting** ->**Background Play** from the main menu of NovaStudio to apply backstage media playing. Note that media playing can not be seen from the computer display when backstage media playing is applied. To check media playing, select **Setting** ->**Front Play** of NovaStudio. Reapply backstage playing after checking.

19.5.2 Cancel Background Play

Cancel the selection of "**Extend my Windows desktop onto this monitor**" on the **Setting** page of **Display Properties** dialog, and select **Setting** ->**Front Play** of NovaStudio.

20 Notes and FAQ

20.1 Some conflicts between decoders may cause media play error.

Do not install decoders or media players arbitrary. They may conflict with each other and thus cause errors when NovaStudio is playing videos. NovaStudio V2.3 and later will check if there is any known decoder that may cause conflict on the computer. And will delete the decoder if allowed.

Please contact Nova if problems of decoder conflict are encountered.

20.2 Do not use low performance computers for running NovaStudio.

Please use a computer meeting the requirements listed in the section of 1.2 Run Environment of NovaStudio User Manual. The computer should have a higher performance CPU and larger memory if NovaStudio is going to run on it with mulTIPSle display windows. Note that the higher the computer performance is, the better the media play results will be.

20.3 NovaStudio launch error due to the language support of the operation system.

If the path of the NovaStudio.exe contains characters that are not belonged to the default language of the operation system, it may not be able to launch. Messages as follow may be shown.

To solve this problem, please change the path and run again.

Fig.20- 1 error message

20.4 Unable to play files of Microsoft Word and Excel

Make sure Microsoft Word and Excel have been installed correctly, otherwise, NovaStudio is not able to support files for Microsoft Word and Excel.

Please allow the operation if any firewall blocks the operation of adding Excel file. There no virus risk as it is just Excel starting a library.

20.5 What to do if characters in a table of a Microsoft Word file are slit?

Try a Microsoft Excel table.

20.6 Why NovaStudio does not run?

Please make sure that Microsoft.NET Framework 2.0 has been installed in the computer if the error message in Fig.20-2 shows up when running NovaStudio. Microsoft.NET Framework 2.0 is required for running NovaStudio.

Note that for Win8, Microsoft.NET Framework 3.5 is required. You can download it from website www.novastar-led.com and then install. Or you can select corresponding option when installing NovaStudio, Microsoft.NET Framework 3.5will be automatically downloaded and installed after that.

Fig.20- 2 error message

20.7 Why Flash files cannot be added?

Make sure Flash OCX plug-in has been correctly installed. Copy install_flash_player_ax.exe to the same folder of NovaStudio.exe and when performing installation.

20.8 Error message as below is shown when running NovaStudio.

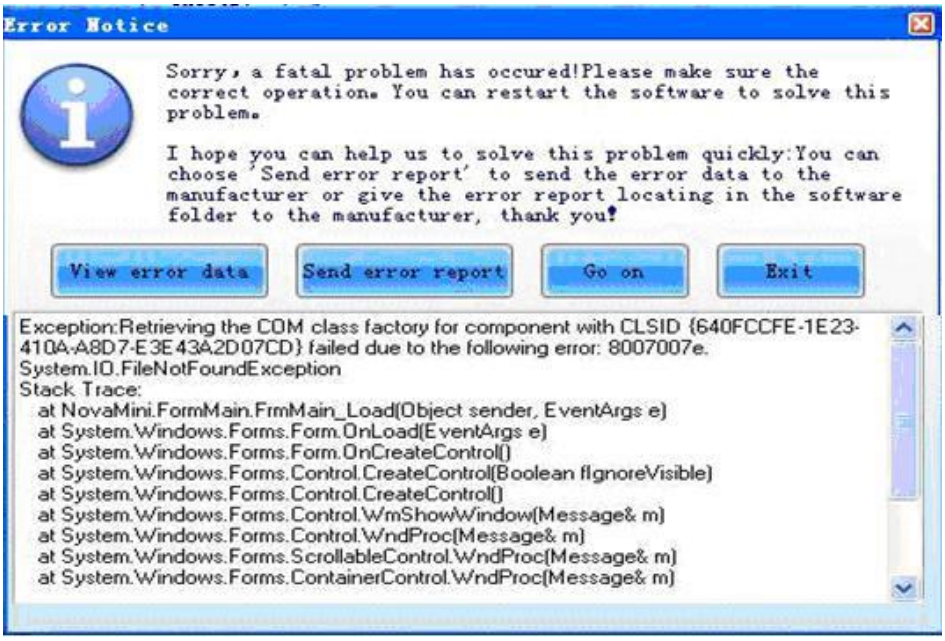


Fig.20- 3 error message

Please contact us for technique support. And please click Send Error Report if internet is available for the computer. If internet is not available, please click View Error Data and copy all the data to a .txt file.

20.9 Why NovaStudio can't load media sources which it can before?

Select **Help** ->**Reregister Decoder** from the main menu of NovaStudio. Allow all operations if they are blocked by OS or firewall.

20.10 In IE6 environment, use the keyboard arrow keys to move the display position of the web media (do not use the mouse wheel).

20.11 Video Capture Card played instability in Win7, please use Windows XP.

20.12 Please set the graphic card work under extend monitor mode if the play window of the LED screen is big in size. And please use advanced rendering mode for video playback. Part of the play window may be black if normal rendering mode is use.

20.13 Please use advanced rendering mode if text is be put on top of video. There could be flashing on the text if normal rendering mode is used.

20.14 Turn off Vertical Refresh Sync of the graphic card when use NovaStudio for pictures playback. Vertical Refresh Sync may cause influent picture playback effects under Win7 and Win8.

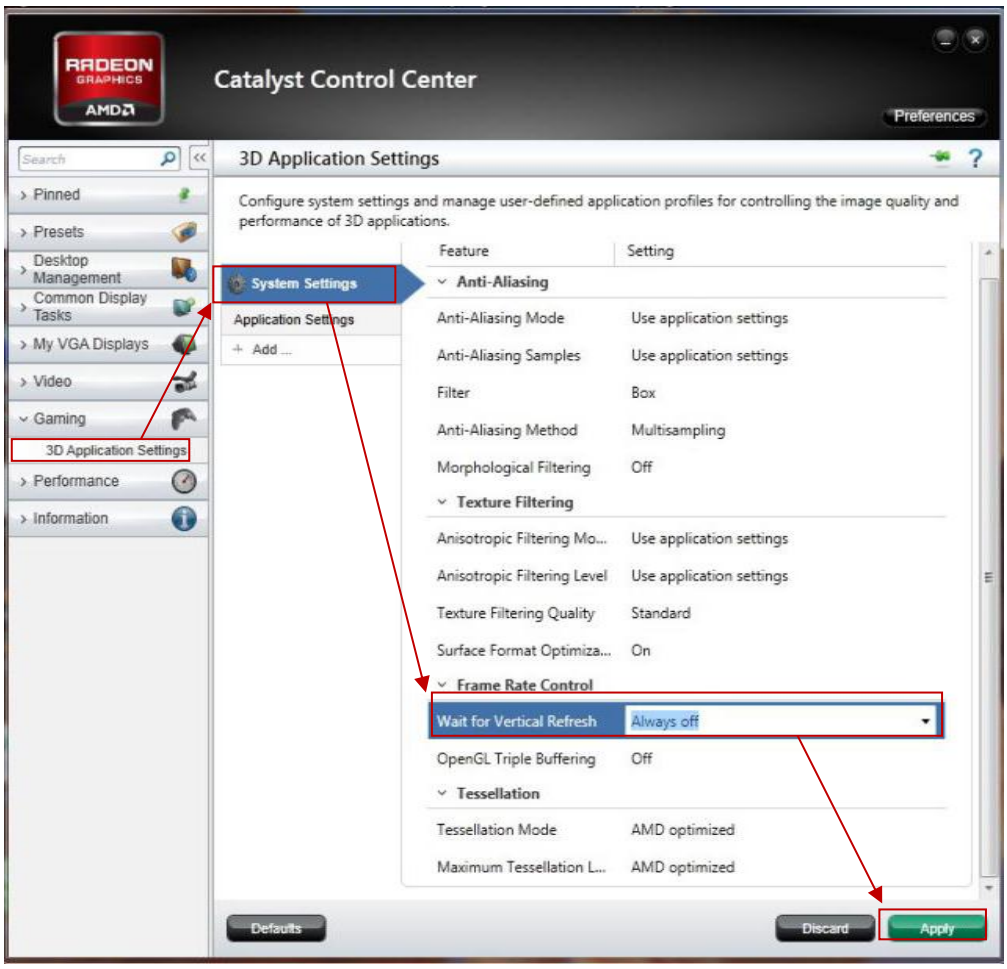


Fig.20- 4 Turn off Vertical Refresh Sync of the graphic card

20.15 For videos of format of .rmvb and those can not be loaded by NovaStudio, please convert the video format to mpeg4. Format converting tool can be download from www.novastar-led.com .

21 Document version statement

Version	Date	Update description
V2.2	2013-2-28	NovaStudio-V2.2.0
V2.4	2013-6-9	NovaStudio-V2.4.0
V2.6	2013-9-11	NovaStudio-V2.6.0
V2.7	2014-1-23	NovaStudio-V2.7.0
V3.0.0	2014-8-11	NovaStudio-V3.0.0
V3.1.0	2014-12-2	NovaStudio-V3.1.0
V3.2.0	2015-12-30	NovaStudio-V3.2.0
V3.3.0	2016-3-31	NovaStudio-V3.3.0