RgbVideoEditor® User Manual

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History:

1. 2/1/2019, initial version

0. What does RgbVideoEditor® do?

As shown in Fig. 0, *RGBVideoEditor®* loads several input videos and does artificial intelligence (AI) analysis to decide the highlights based on audio and video cues. It also can render the event/team info at the beginning of the output video and change its music as well.
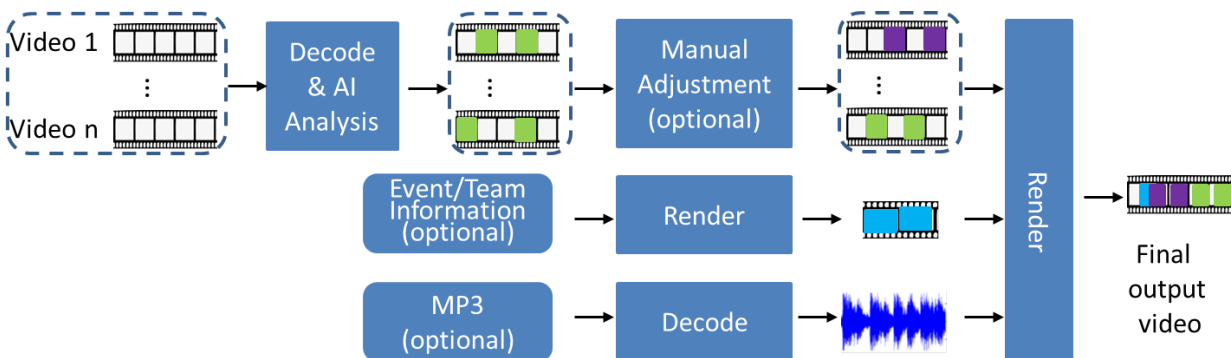

Fig. 0 The data and algorithm blocks of *RgbVideoEditor®*. It highlights videos in three approaches: Pure manually, semi-Automatically, or full-Automatically based on user's choice. Current release only implements auto cut by detecting the applause movements.

1. Prerequisite

a) Windows 10 or Windows 7
b) 7-Zip installed: https://www.7-zip.org/download.html
c) Notepad++ (Optional, used to edit xml config file): https://notepad-plus-plus.org/

2. Download and Install

2.1 download

Go to **rgbEditor.com** download the zip file: **rgbVideoEditor.zip**

2.2 Install

a) Create a folder named **C:/rgbEditor**

b) Copy the downloaded **rgbVideoEditor.zip** into **C:/rgbEditor**

c) Unzip **rgbVideoEditor.zip** into **C:/rgbEditor/rgbVideoEditor**
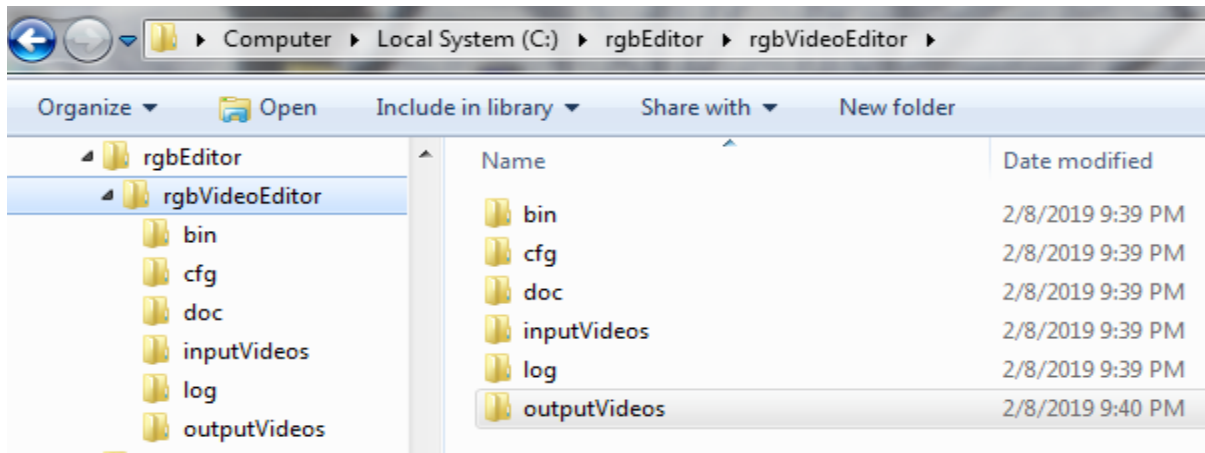
Then you will have folder structure as follows.

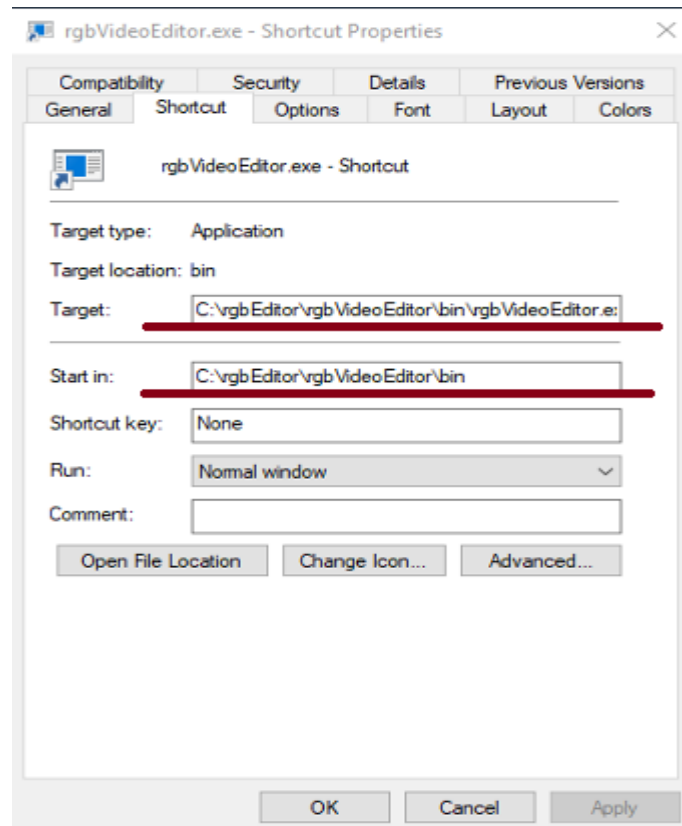Fig. 1 The folder Structure after installing *RgbVideoEditor®*

3. Run

3.1 Edit config files (optional)

a) Edit **C:/rgbEditor/rgbVideoEditor/cfg/cfgTeamInfo.xml** if you only want to render team info (the names/pictures of players, coaches, and managers etc.) at the beginning of output video. This file only needs to be edited once as long as your team is not changed (See appendix A for more detailed info if you do not know how to edit an xml file).

b) Edit **C:/rgbEditor/rgbVideoEditor/cfg/cfgVideoEditor.xml**. This file contains the basic parameters used by *RgbVideoEditor®*. If you do not edit at here, the default will be loaded, and you can change them in the GUI (Graphic User Interface) (See appendix B for more detailed info if you do not know how to edit an xml file).

3.2 Run the program

a) Create a desktop shortcut: Travel to **C:/rgbEditor/rgbVideoEditor/bin**, right click rgbVideoEditor.exe then choose "send to" -> "desktop"

b) Check: Right click the desktop icon you will see the "target" and "start in" parameters as shown in Fig. 2.

c) Run: Just double click "rgbVideoEditor.exe – Shortcut" from your desktop

d) Or you can skip a) to c) and directly open a command window in folder **C:/rgbEditor/rgbVideoEditor/bin,** then execute rgbVideoEditor.exe

Fig. 2 The "Target" and "start in" folder locations of desktop shortcut.

3.3 GUI

Once it runs, a GUI like fig.3 will popup. You can also setting the parameters from this GUI. From Fig.3 one can see that it has 10 areas as follows.

a) **Title and menu bar**: Nothing to explain
b) **Video Image**: This area displays the an initial advertisement image when system just start, once the video is processed, its size will be changed and displays the video image.
c) **Multi-range sliders**: Once the video is analyzed, it shows the highlighted videos, you can delete, add and a highlight range, or adjust the exist range by press(left button)-and-move your mouse.
d) **Thumbnail video Browsing Slider**: Once the video is processed, use this slider to fast browse your video.
e) **Play/Pause Controls**: Once put the "Thumbnail video Browsing Slider" at a place, you can use "play" and "pause" button to play the video. You also can use "+" / "-" button to add/remove an highlight region.
f) **Game Info input**: This area inputs your game info. You must put all videos (if it's a multiple video file case) from the game into one folder, in that way, "Load All"/"Remove All" button will load/remove all files in the folder for process. "Add One"/"Remove One" will add/remove one video file into the edit platform.
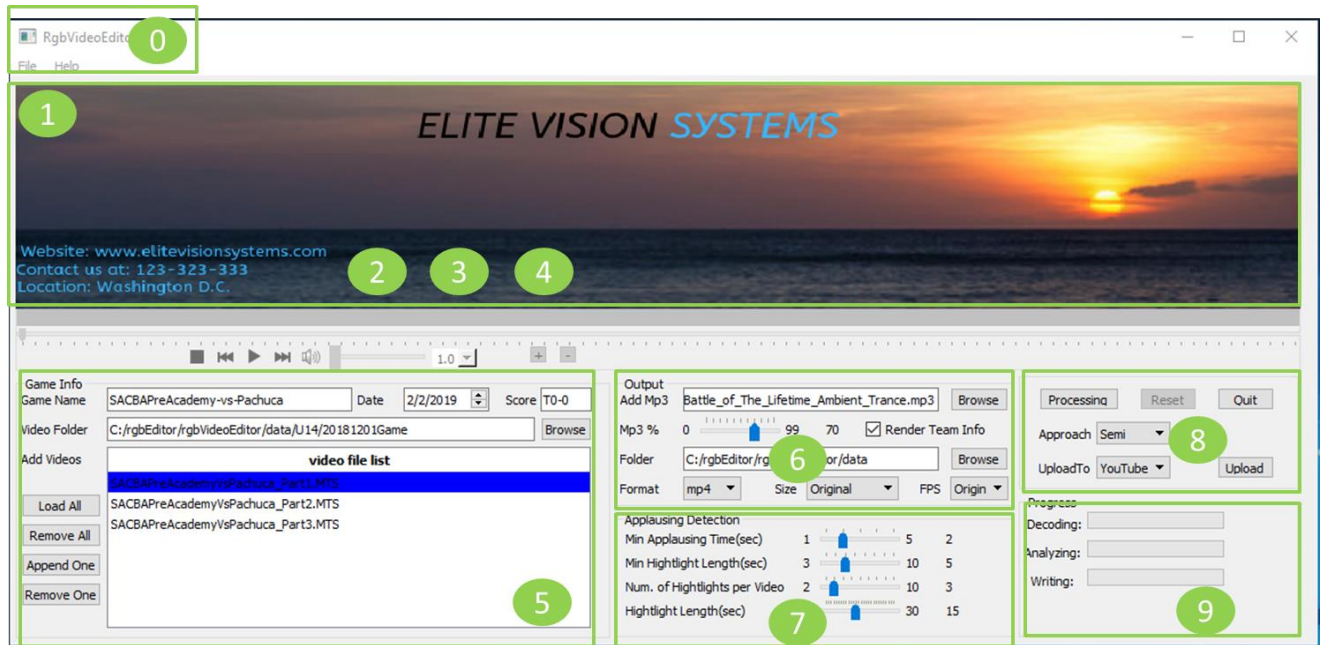
Fig. 3. The main regions of the GUI. 0. Title and menu bar, 1. Video Image, 2. Multi-range sliders, 3. Thumbnail video Browsing Slider , 4. Play/Pause Controls, 5. Game Info input, 6. Output settings, 7. Applausing detection parameters, 8. Process control buttons, 9 Progress bar and time usages log.

g) **Output settings:** (1) You can add an mp3 file to change the audio in output video, Mp3% can be from 0 to 99, 0/99 means no/full mp3 contributions, a number in the range of (0,99) gives you a mixed sound from the original video file and your mp3 input. (2) "Folder" determines the location of the final output video file. (3) "Format" gives you an option to decide the output video format, you can choose "mp4", "avi", etc. (4) "Size" decides the image size of the output video, you can choose "original", "1280x720", or "640x480". (5) "FPS" gives the frame rate (frame per second) parameter, you can choose "original", "30", or "60" . Here original means "it is the same as the input video".

h) **Applause detection parameters**:   (1) "Minimum applause time" (unit in second) only selects the highlights which have at least certain mound of applause time. The larger the number the lesser the highlights will be selected. (2) "Minimum highlight length" (unit in second) decides , (3) "Number of highlights per video" controls the number of highlights recommended for each video file. (4) "Highlight length" (unit in second), it controls the time range for each highlight, a large/small number gives a long/short output video.

i) **Process control buttons**. (1) "Approach", if you already know where is the highlight region, choose "manual". If choose "Semi" , the AI will recommend some highlights first, you can operate multi-range slider to make an adjustment, then write output video. If "choose" "Auto" the user adjustment step will be skipped. (2) "Reset" press reset to process another game or adjust parameters re-process the current game files. (3) The function of "UploadTo" YouTube, Face book, twitter ect. is not implement yet.

j) **Progress bar and time usage log**. This area show the process bar and time (in seconds) used for each process.

Appendix A. Edit C:/rgbEditor/rgbVideoEditor/cfg/cfgVideoEditor.xml

1. Open **cfgTeamInfo.xml** by notepad ++

2. You only can edit the black char fields, do not change any none-black fields

3. All the picture files should under the **teamInfo** folder you given

4. For Coaches field you can remove line 9 if you only have one coach or add more by copy&past line 9

5. For Managers and Treasures, it is similar as the coaches field

6. In the roster area,
you can delete a player such as the lines from 47 to 52; or can add more players by copy the whole block from line 47 to line 52.

7. After finish edit, try to drag and drop to any internet browser, if there has any error try to fix it, otherwise you are ready to go.

```xml
1    <?xml version="1.0" encoding="utf-8"?>
2    <cfg>
3      <team>
4        <name>SAC U14</name>
5        <folder>C:/rgbEditor/rgbVideoEditor/data/U14TeamInfo</folder>
6        <picFile>TeamPic1.jpg</picFile>
7        <coachs>
8          <coach>FirstNameA, LastNameA</coach>
9          <coach>FirstNameB, LastNameB</coach>
10       </coachs>
11       <managers>
12         <manager>Jeniffer Tom</manager>
13         <manager>abc Williams</manager>
14       </managers>
15       <treasurers>
16         <treasurer>donot care</treasurer>
17       </treasurers>
18       <roster>
19         <player>
20           <num>1</num>
21           <firstName>Hunter</firstName>
22           <lastName>LastNameA</lastName>
23           <picFile>Hunter.jpg</picFile>
24         </player>
25
26         <player>
27           <num>2</num>
28           <firstName>Josiah</firstName>
29           <lastName>Abraham</lastName>
30           <picFile>31-Josiah.jpg</picFile>
31         </player>
32
33         <player>
34           <num>6</num>
35           <firstName>Nathan</firstName>
36           <lastName>Buckely</lastName>
37           <picFile>none</picFile>
38         </player>
39
40         <player>
41           <num>12</num>
42           <firstName>Justin</firstName>
43           <lastName>JustinLastName</lastName>
44           <picFile>none</picFile>
45         </player>
46
47         <player>
48           <num>15</num>
49           <firstName>Petter</firstName>
50           <lastName>Wang</lastName>
51           <picFile>none</picFile>
52         </player>
53
54       </roster>
55     </team>
56   </cfg>
57
```

Appendix B. Edit C:/rgbEditor/rgbVideoEditor/cfg/cfgTeamInfo.xml

1. Open **cfgTeamInfo.xml** by notepad ++

2. You only can edit the black char fields, do not change any none-black fields

3. \<game\> … \</game\>
If you have more than one files for a game, put all of them into the same folder Then copy/delete lines 12-14 to match your scenario. If do not want to change the sound set "None" in mp3File field.

4. \<timefReqAna\> … \</timefReqAna\>
Do not change it

5. \<output\> … \</output\>
originazalAudioIntensity can be set as any number between 0 and 1

6. \<gui\> … \</gui\>
Do not change

6. \<dataContainer\> … \</dataContainer\> Do not change

6. \<log\> … \</log\>
Do not change

```
C:\rgbEditor\rgbVideoEditor\cfg\cfgVideoEditor.xml - Notepad++

File  Edit  Search  View  Encoding  Language  Settings  Tools  Macro  Run  Plugins  Window  ?

cfgVideoEditor.xml

1   <?xml version="1.0" encoding="utf-8"?>
2   <cfg>
3     <games>
4       <game>
5         <name>SACBAPreAcademy-vs-Pachuca</name>
6         <date>08/19/2017</date>
7         <score>W2-0</score>
8         <skip>0</skip>
9         <inputVideoFolder>C:/rgbEditor/rgbVideoEditor/data/U14/20181201Game</inputVideoFolder>
10        <inputVideoFileFilter>Videos (*.mp4 *.avi *.ts)</inputVideoFileFilter>
11        <videoFiles>
12          <video>SACBAPreAcademyVsPachuca_Part1.MTS</video>
13          <video>SACBAPreAcademyVsPachuca_Part2.MTS</video>
14          <video>SACBAPreAcademyVsPachuca_Part3.MTS</video>
15        </videoFiles>
16        <mp3File>C:/rgbEditor/rgbVideoEditor/data/mp3/Battle_of_The_Lifetime_Ambient_Trance.mp3</mp3File>
17      </game>
18    </games>
19    <timeFreqAna>
20      <winSz>4800</winSz>
21      <stepSz>2400</stepSz>
22      <nFFT>12000</nFFT>
23      <nSec4EachRawAppluasing>20</nSec4EachRawAppluasing>
24      <nMaxHotSeg4EachVideoToCut>3</nMaxHotSeg4EachVideoToCut>
25    </timeFreqAna>
26    <output>
27      <outputVideoFolder>C:/rgbEditor/rgbVideoEditor/data</outputVideoFolder>
28      <outputVideoFmt>mp4</outputVideoFmt>
29      <headerVidoeFilePath>noFile</headerVidoeFilePath>
30      <insertingVidoeFilePath>noFile</insertingVidoeFilePath>
31      <originalAudioIntensity>0.3</originalAudioIntensity>
32      <highlightSegmentLengthInSec>15</highlightSegmentLengthInSec>
33      <minApplausingTimeSec>2</minApplausingTimeSec>
34      <minSegmentTimeSec>5</minSegmentTimeSec>
35      <isRenderTeamInfo>0</isRenderTeamInfo>
36    </output>
37    <gui>
38      <fontSize>8</fontSize>
39      <!--set(-1,-1) to original size -->
40      <dispImgWidth>1280</dispImgWidth>
41      <dispImgHeight>720</dispImgHeight>
42      <dispImgWidthInit>1000</dispImgWidthInit>
43      <dispImgHeightInit>200</dispImgHeightInit>
44      <thumbnailWidth>640</thumbnailWidth>;
45      <thumbnailHeight>480</thumbnailHeight>;
46    </gui>
47    <dataContainer>
48      <qSize>50</qSize>
49    </dataContainer>
50    <log>
51      <projProfileFolder>C:/rgbEditor/rgbVideoEditor/data/preDecodedProfiles</projProfileFolder>
52      <logFolder>C:/rgbEditor/rgbVideoEditor/log</logFolder>
53      <isDumpLog>1</isDumpLog>
54      <isShowLogInConsole>1</isShowLogInConsole>
55      <isDumpSelectedRawAudio>0</isDumpSelectedRawAudio>
56    </log>
57  </cfg>
58
```