Introduction

Welcome to Rainbow – your open source voice user interface (VUI) for scientific lab.

Rainbow is AutoIt-based, meaning we provide here mainly AutoIt scripts. You can

view Rainbows skills and further explanations in <mark>DOI: 10.1038/s41598-023-46185-x</mark>.

This file gives step-by-step instructions of how to configure Rainbow to work on your

Windows 10 PC. Please adapt script Rainbow_2.au3 (Mainscript),

Rainbow_Timer.au3 and SMP_Script.au3.

__Important__! When you finished the adjustment of all AutoIt.au3 scripts, please convert

them into executables: *right-click on "Rainbow_2", "Rainbow_Timer" and*

"SMP_script" >> Compile Script

Installation

1) Please install "AutoIt full installation"

   https://www.autoitscript.com/site/autoit/downloads/

2) Download and unzip Rainbow Zip Folder

The folder consists of several Word, Excel and text files and a folder called "program"

where you can find all AutoIt scripts.

Adaptation

1) Please start Google Translate via **Google Chrome** and allow voice recording

   rights if necessary.

2) Open "Rainbow_2" via *right-click >> edit script*

To adapt Rainbow to your environment, you need to make adjustments in certain

places. These places are marked with "!" in the rainbow script. Follow the note next to

the "!". Please adjust !1 - !62.

For adjustments of pixel numbers like mouse clicks or window sizes open the window

tool *"AutoIt v3 Window Info" >> options >> Freeze*

**Adjusting Pixel coordinates requires the same conditions as expected running rainbow.**

a) **Adjust mouse clicks: Do not move the corresponding window.** Mouse clicks consist of the x and y position of the mouse cursor. Open the Mouse tab on *AutoIt v3 window info*, open the interface with the desired button, position the cursor on the button (without clicking) and read the position of the mouse cursor under "Position" at *AutoIt v3 Window Info*. The two pixel coordinates are transferred exactly the same in the AutoIt script *Mouseclick("left",x,y)*.

b) **Adjust Window size and position**: Window Information consists of the position x,y and the size width and height. Open the window tab on AutoIt v3 window info. Try to adjust the window size near to 360, 615 (you can view the current state at "size"). Position the window of google translate in google chrome in the lower right corner of the desktop. Insert the Position (x,y) and the size (widh, height) into the AutoIt script. Window name is given in "Titel". *WinMove("WindowName",x,y,widh,height)*.
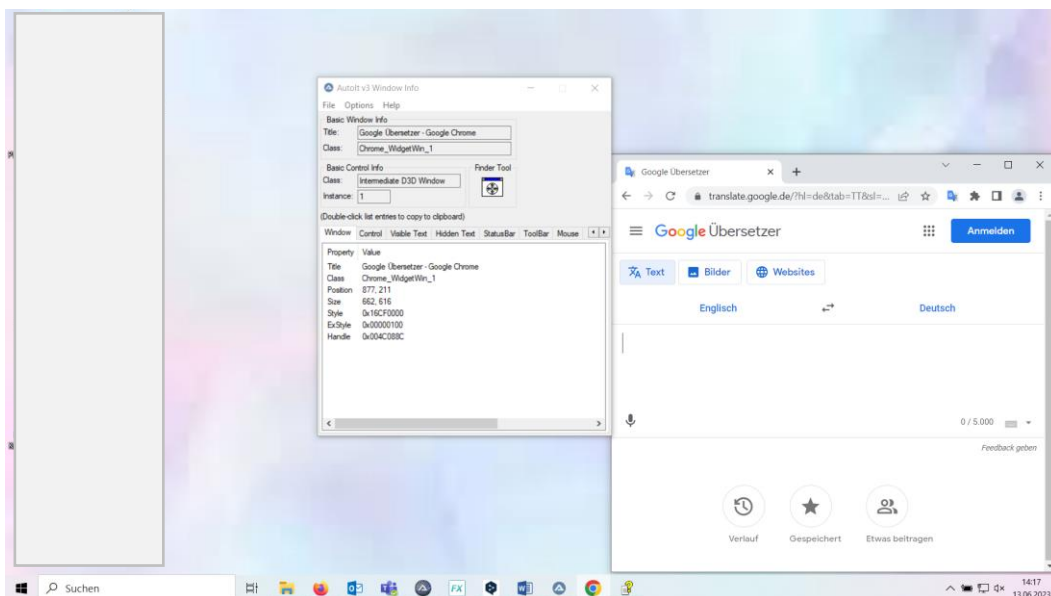
c) **Adjust PixCheckColor**: Note for !19 – Please enter a misspelled word in GTS to simulate an error. Please position the mouse cursor on the blue star (see

circled in red in the figure) and insert its x,y position in the AutoIt command

PixelCheckColor on line !19.

PixelCheckColor(x,y)
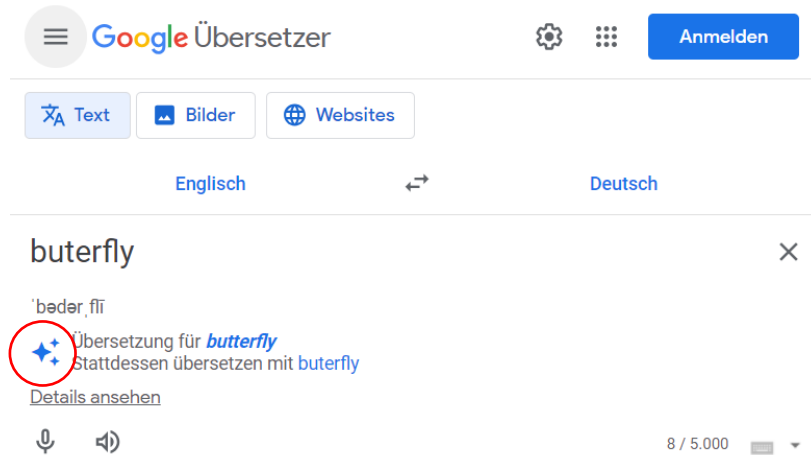
d) **Adjust PixelCheckSum**: This AutoIt command counts all pixel values in a specified area. The area is specified as a rectangle with the x,y coordinates of the upper left corner and the lower right corner. Please specify the coordinates as shown in the figure (red dots) in lines !21 and !23.
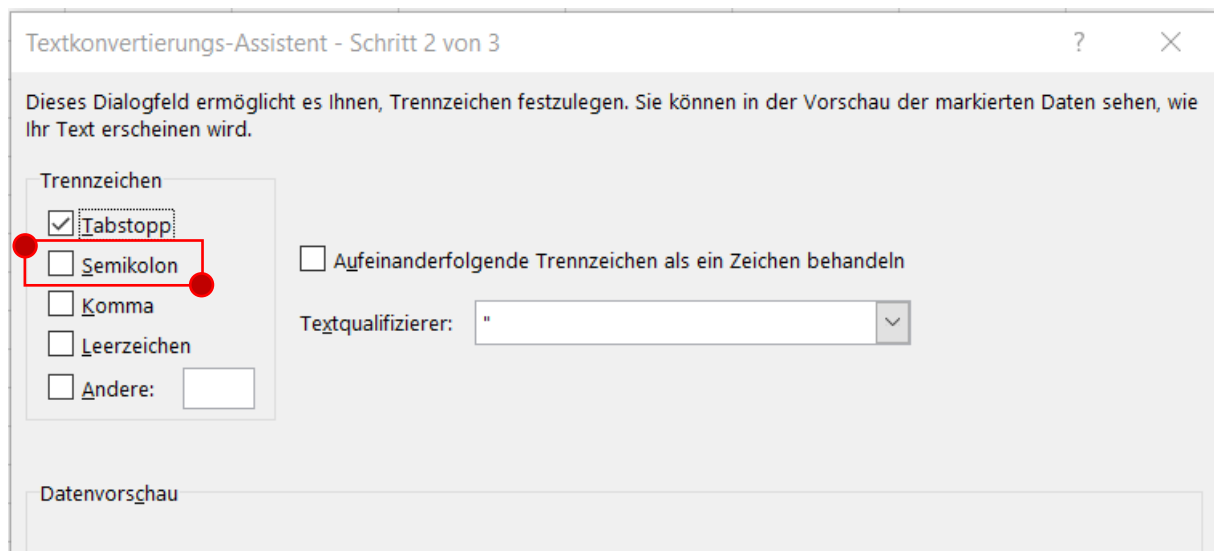
PixelCheckColor(x,y,x,y)
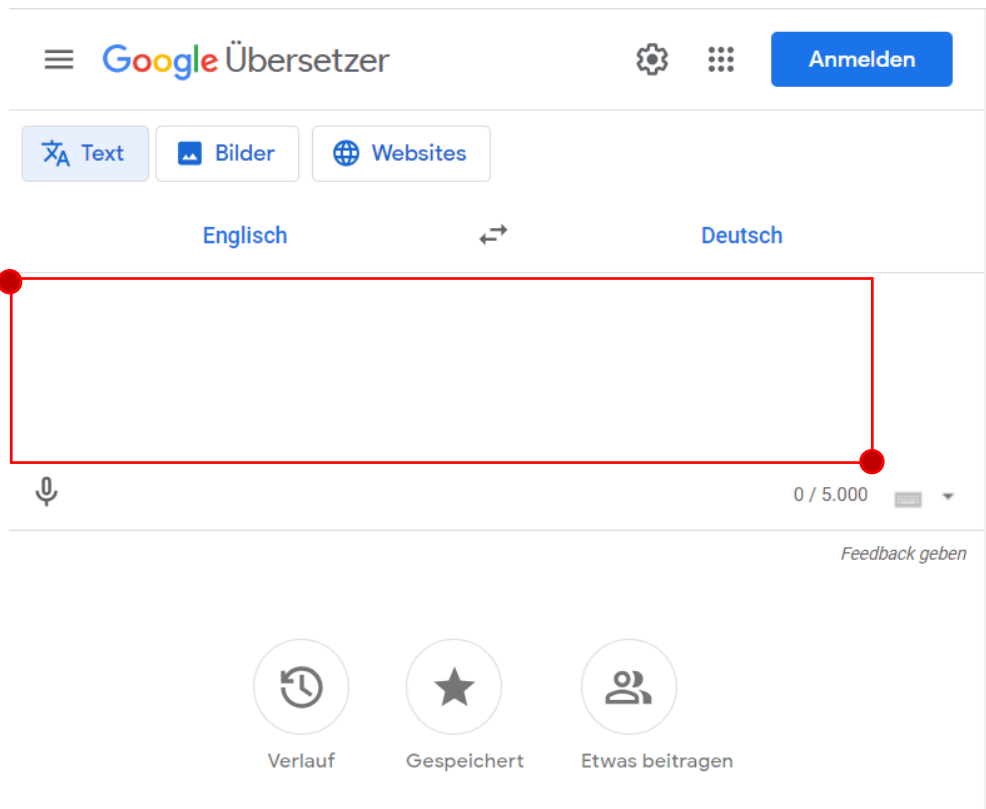
Note for !35 and !36 – To determine the pixel sum of a specific area, please open and save a new AutoIt file. Write:

WinActivate("Titel of window line !34")

Sleep(1000)

MsgBox(0,"",PixelCheckSum(x,y,x,y)

For the x,y,x,y coordinates insert the pixel coordinates of the red dots in the following figure.

Start the script by pressing key F5 >> Go back to rainbow script and insert the displayed pixel sum (Message Box) in line !36.

If $sum = xxxxxx then