## How to use 3dAIActionGenerator

## 1. Before use

This script is a perl script.
You need to install ActivePerl etc. to use it on Windows.
Please download and install according to the following site.
https://www.perl.org/get.html\#win32
MacOSX has perl installed with OSX, so this is not necessary.

## 2. Script startup

Double click the "sakuzu" file (script) in the SakuzuAction folder to start the program.
At the same time, the files "actionpath.txt" and "menu.txt" and the folder "ACTION" are created.
Be sure to put "actionpath.txt" and "menu.txt" in the same folder as the script.



## 2-1. actionpath.txt

In actionpath.txt, enter the folder location where the generated actions will be saved.
If there is a SakuzuAction folder on the Windows desktop, it has the following description.
C:/Users/username/Desktop/SakuzuAction/ACTION/
In this case, the generated action will be created in the ACTION folder.
By rewriting this content, you can create actions anywhere you like, regardless of where the script is.
If the described folder does not exist, a new folder with the described name is created.

2-2 menu.txt
Enter the items to be displayed on the menu screen in "menu.txt" .
There is no limit to the number of items.
The following is an example of the entry.
3030 Isometric
3015 Trimetric
3030 a10 b20 c30 Rotate isometric
The first number in the row is the left angle, the second number is the right angle,
"a10" is the top rotation $10^{\circ}$, "b20" is the front (left) rotation $20^{\circ}$ and "c30" is the side (right) rotation $30^{\circ}$.
The input order is the rotation order.
The number of rotations is unlimited.
You can write a comment at the end of the line.
The "Isometric", "Trimetric", and "Rotate isometric" parts are comments.

## 3．Calculate with script

A menu is displayed in the window that has been launched．
Enter the leftmost number of the menu item and press enter（or return）to start calculation with the contents of the item．


Press Enter（or Return）again to perform the calculation according to the items．
When the enter key is pressed，calculation is performed according to the input contents and a part of the calculation result is displayed．
The action file（．aia）and the file containing the calculation result（．html）are output to the specified folder．

| （3）c：7Peri64＊bin\＃perl．exe |  |  |  | －回 x |
| :---: | :---: | :---: | :---: | :---: |
| 2：Input from the keyboard |  |  |  | ， |
| Please select an angle＞1 <br> Just press＂Enter＂to finish typing <br> Please inout the continuation to rotate <br> example：$>3030 \Rightarrow>3030 \mathrm{~b} 12 \mathrm{a}-5$ <br> ＞30 30 |  |  |  |  |
| $30 \_30<C: / U s e r s / m a s a / D e s k t o p / S a k u z u A c t ~ i o n / A C T I O N />~$ |  |  |  |  |
| Ellipticity Shrinkage rate Axis angle Circle to ellipse | $\begin{array}{r} \text { A (top) } \\ 35.26 \\ 0.82 \\ 90.00 \\ 0.58 \end{array}$ | $\begin{gathered} \mathrm{B} \text { (front) } \\ 35.26 \\ 0.82 \\ 30.00 \\ 0.58 \end{gathered}$ | $\begin{gathered} \text { C (side) } \\ 35.26 \\ 0.82 \\ -30.00 \\ 0.58 \end{gathered}$ |  |
| Horizontal scale Vertical scale Shear horizontal rotate | $\begin{aligned} & \text { A (top) } \\ & 81.65 \\ & 70.71 \\ & 30.00 \\ & -30.00 \end{aligned}$ | $\begin{gathered} \text { B (front) } \\ 81.65 \\ 70.71 \\ -30.00 \\ -30.00 \end{gathered}$ | $\begin{gathered} \text { C (side) } \\ 81.65 \\ 70.71 \\ 30.00 \\ 30.00 \end{gathered}$ |  |
| Exit with the command＂$e$＂ Return to the menu with＂Enter＂$>$ |  |  |  | － |


|  |  |  |
| :---: | :---: | :---: |
|  |  |  |
| ファイル（E）編集（E）表示（V）ツール（I）ヘレプ（H） |  |  |
| 整理－ライブラリに追加－＂ | 闑 | 目（2） |
| $\begin{aligned} & \text { B } 30 \_30 . \mathrm{aia} \\ & \text { 30_30.html } \end{aligned}$ |  |  |
|  |  |  |
| 2 個の項目 |  |  |

Press Enter key to return to the menu．
To exit the program，type＂e＂and press Enter．

## 3－1．Commands

The last＂e＂entered is one of the commands．There are a total of nine commands．
（These commands have no arguments or options）
Display the explanation of all commands with command＂h＂．


## 3-2. Input from the keyboard

If you select "Input from Keyboard" in the second menu item, you can perform calculations
not available in the menu item.
This item is always displayed on the menu as the last item, apart from the contents of the menu file.


## 3-3. About history

If the calculation is not in the menu item, a file called "history.txt" is created in the same folder as the script and the history is recorded (the items already recorded in the history are not newly recorded).
When the history is recorded, an item "Select from history" is displayed on the menu screen.


Select this item to select an angle from the history items.


## 3-3-1. Clear history

Use the "ch" command to clear the history.
The cleared history file is renamed from "history.txt" to "history1.txt" , "Select from History" is not displayed in the menu, and then a new history file is created.

At the next clear, history1 is renamed to history2, and the past history will increase as you push out in order. By default, it is set to history5, but you can change the setting to history9 at the beginning of the script.
\$hmax=5; \# Maximum number of saved past history files(up to 9).

## 4. Settings for hiding input guidance sentences

You can hide the text of the input guidance at the beginning of the script.
\$guide=1; \# \$guide=1 -Display input guidance sentence.
\# \$guide=0 -Hide input guidance sentence.

## 5. Notes

1. The following bugs have been identified when reading the action file:

If the absolute value of the calculation result is less than 1 and a negative number, Illustrator can not read the minus sign (-).
This is an Illustrator specification and after importing an action, only that part needs to be re-recorded from the action palette. In this case, @ is added to the beginning of the generated action file and html file name.
In the html document (calculation result), the corresponding numbers are displayed in red, so please check.


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| [Figure data] | A(top) | B(front) | C(side) |
| :--- | ---: | ---: | ---: |
| Ellipticity | 0.99 | 52.56 | 37.42 |
| Shrinkage rate | 1.00 | 0.61 | 0.79 |
| Short axis angle | 108.71 | 20.00 | 17.95 |
| Circle to ellipse | 0.02 | 0.79 | 0.61 |
|  |  |  |  |


| [Transform] | A(top) | B(front) | C(side) |
| :--- | ---: | ---: | ---: |
| Horizontal scale | 79.42 | 79.42 | 60.79 |
| Vertical scale | 2.17 | 99.98 | 99.96 |
| Shear horizontal | 87.95 | -0.76 | 1.29 |
| Rotate | 17.95 | 17.95 | 20.00 |
| [Transform | A(top) | B(front) | C(side) |
| back] | -17.95 | -17.95 | -20.00 |
| Rotate |  |  |  |

2. Depending on the enlargement value and the size of the object, the drawable range of Illustrator may be exceeded. In this case, it can not be transformed properly.
