Munsell Viewer   Ver.4.0 Outline

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Munsell Viewer is software that performs "coloring using Munsell values".

1. Displaying of Munsell color chart. (All colors of definition value in RIT real.dat)

2. Converting the input Munsell value to RGB value and displaying its color and its value.

3. Displaying a color table using Munsell values such as US Standard Card, ISCC-NBS, Japan JIS standard etc.

Currently, these three are the basic functions.

Munsell Viewer

Munsell Color Chart

[sRGB] [AdobeRGB]

Display Munsell Notation

C	Chart
T	Table
M	Maintenance
?	Guide

Munsell Viewer

(All Elements)

STD CARD 238	sRGB	AdobeRGB
ISCC-NBS 267	sRGB	AdobeRGB
JIS 269	sRGB	AdobeRGB
Neutral 181	sRGB	AdobeRGB

(Per Color)

STD CARD 238	sRGB	AdobeRGB
ISCC-NBS 267	sRGB	AdobeRGB
JIS 269	sRGB	AdobeRGB
All Color	sRGB	AdobeRGB

(ISCC Tone and Color)

Tone Chart	sRGB	AdobeRGB

C	Chart
T	Table
M	Maintenance
?	Guide

Munsell Viewer

[Maintenance]

[Mem]
Clear Memory

[Mem->File]
Memory to SaveFile

[Mem->File]
This time to SaveFile

[File->Mem]
Load File into Memory

[File]
Text Input

[File]
Duplicate Next Beginning File

[File]
Duplicate UserLoad File

C	T	M	?
Chart	Table	Maintenance	Guide

Munsell Viewer

Easy Guide

Outline

Maintenance

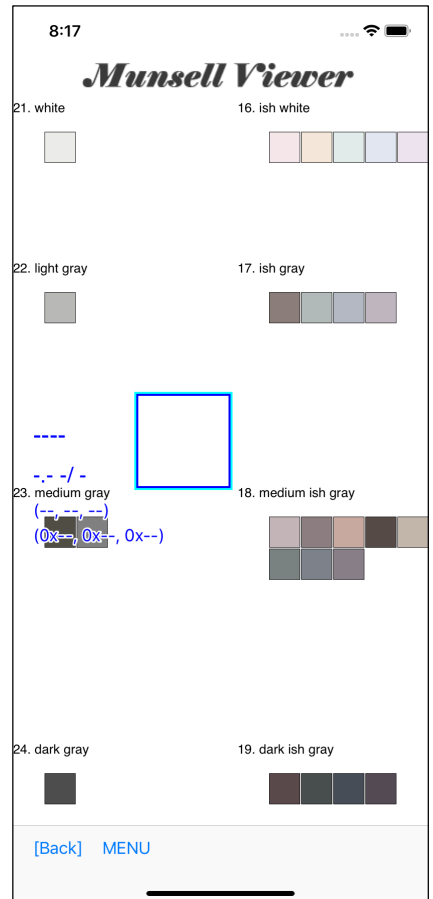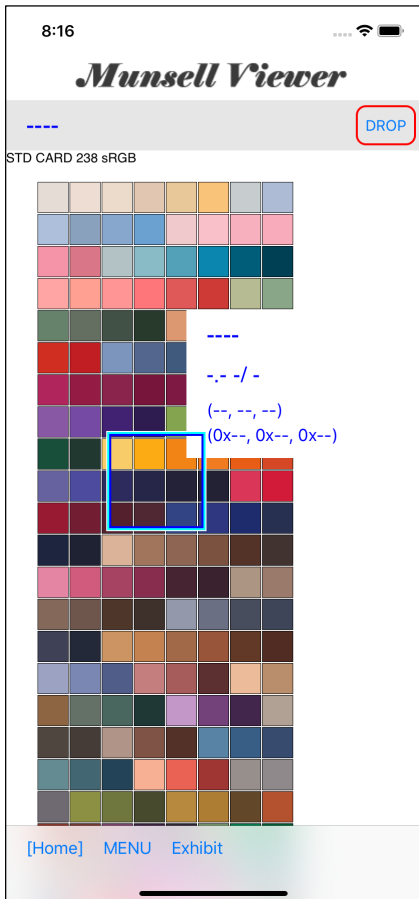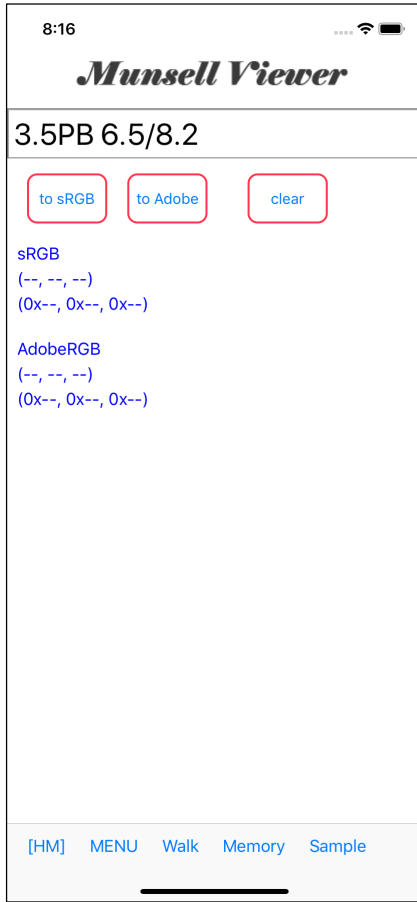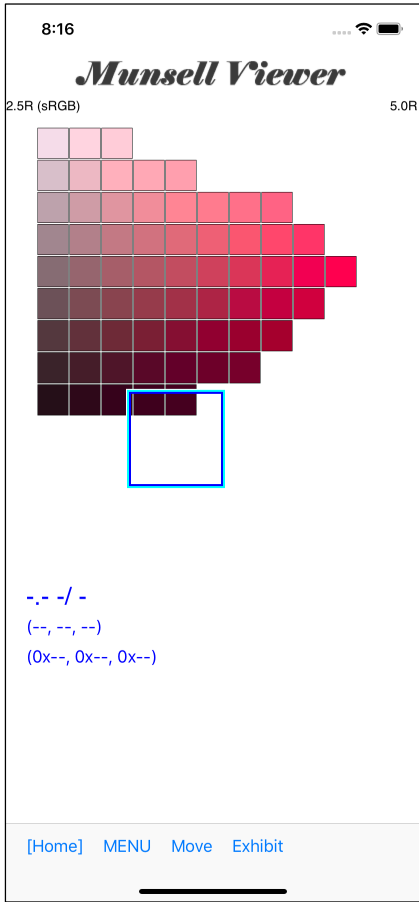| C	T	M	?
Chart	Table	Maintenance	Guide
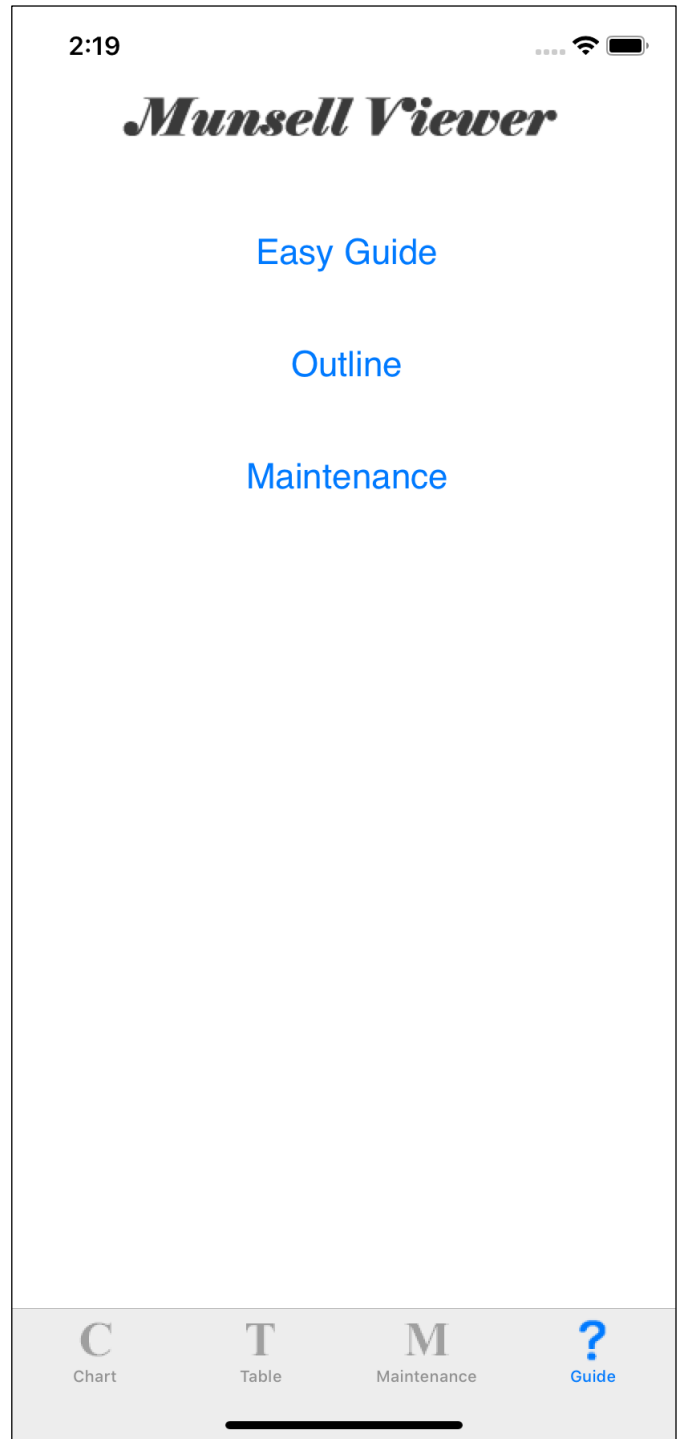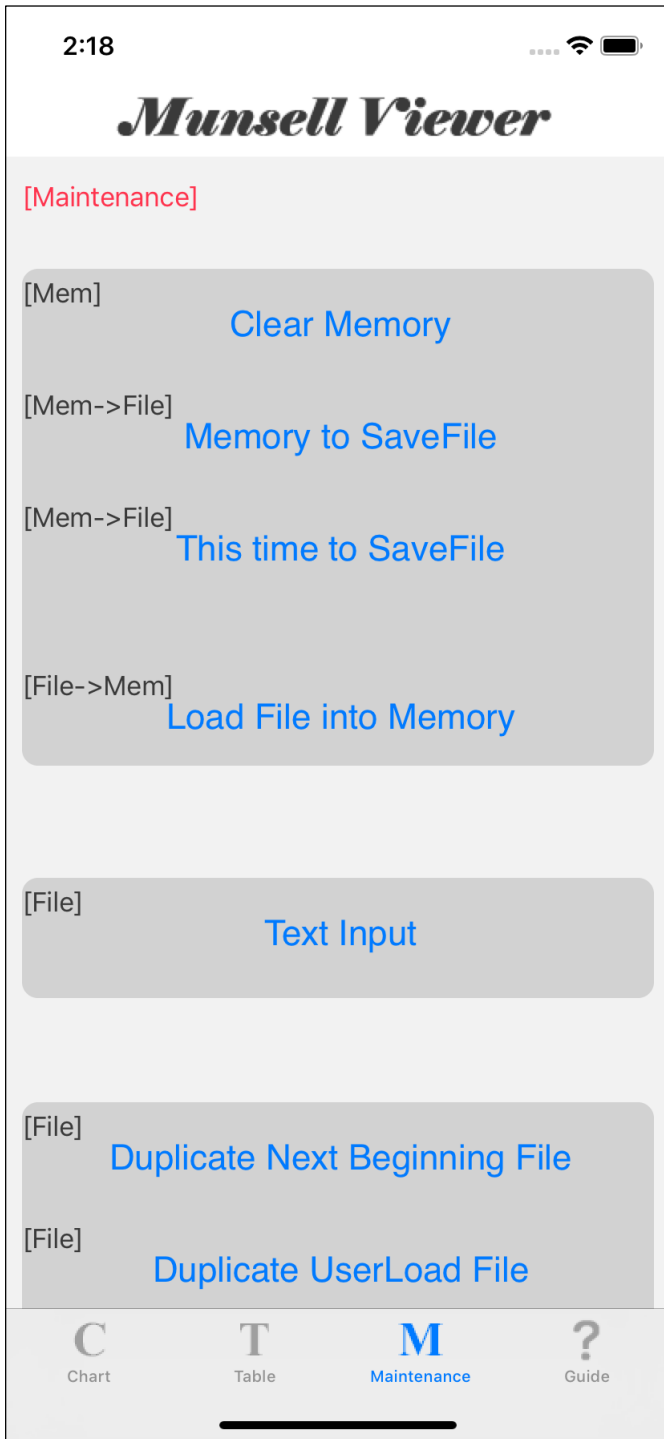
Home Screen has Four Tab formats like this one.

The first is related to charts, and the second is related to color tables.

When the button on Home Screen is pressed, the View as shown below will appear.

The buttons on the Home Screen roughly correspond to three basic function calls.

Screen 1

Munsell Viewer

2.5R (sRGB)   5.0R

-.- -/ -
(--, --, --)
(0x--, 0x--, 0x--)

[Home]   MENU   Move   Exhibit

Screen 2

Munsell Viewer

3.5PB 6.5/8.2

to sRGB   to Adobe   clear

sRGB
(--, --, --)
(0x--, 0x--, 0x--)

AdobeRGB
(--, --, --)
(0x--, 0x--, 0x--)

[HM]   MENU   Walk   Memory   Sample

Screen 3

Munsell Viewer

----   DROP

STD CARD 238 sRGB

-.- -/ -
(--, --, --)
(0x--, 0x--, 0x--)

[Home]   MENU   Exhibit

Screen 4

Munsell Viewer

1. R (47)

2. YR (44)

-.- -/ -
(--, --, --)
(0x--, 0x--, 0x--)

3. Y (28)

4. GY (10)

5. G (15)

[Back]   MENU   Exhibit

Screen 5

Munsell Viewer

21. white   16. ish white

22. light gray   17. ish gray

-.- -/ -
(--, --, --)
23. medium gray   (0x--, 0x--, 0x--)   18. medium ish gray

24. dark gray   19. dark ish gray

[Back]   MENU

Firstly (1)

Munsell Viewer calculates based on RIT real.dat.

      * RIT … Rochester Institute of Technology

Munsell values within the range of RIT real.dat can all be handled.

However, Munsell values outside the range of RIT real.dat can not be handled at all.

Firstly (2)

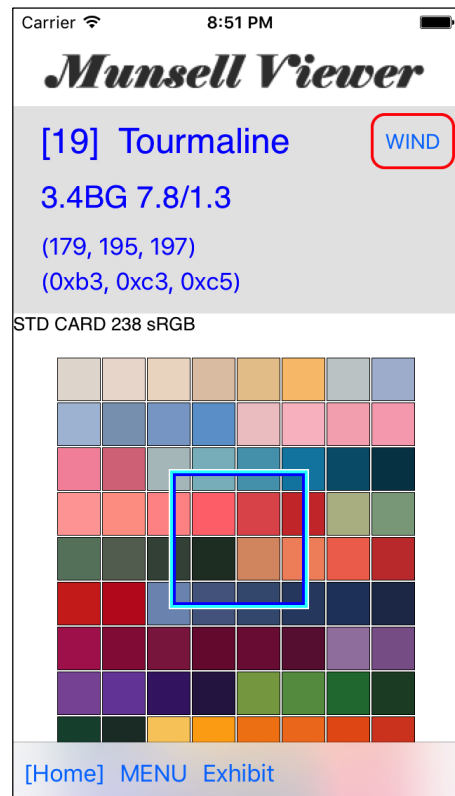name (which is used in this document.)

Cursor View

Color View

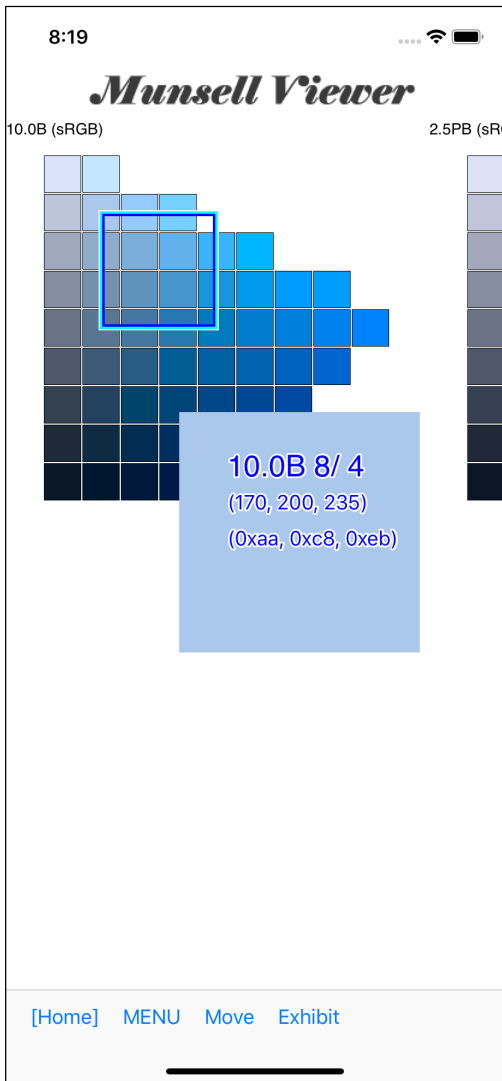Information View

2.5YR 5/ 10

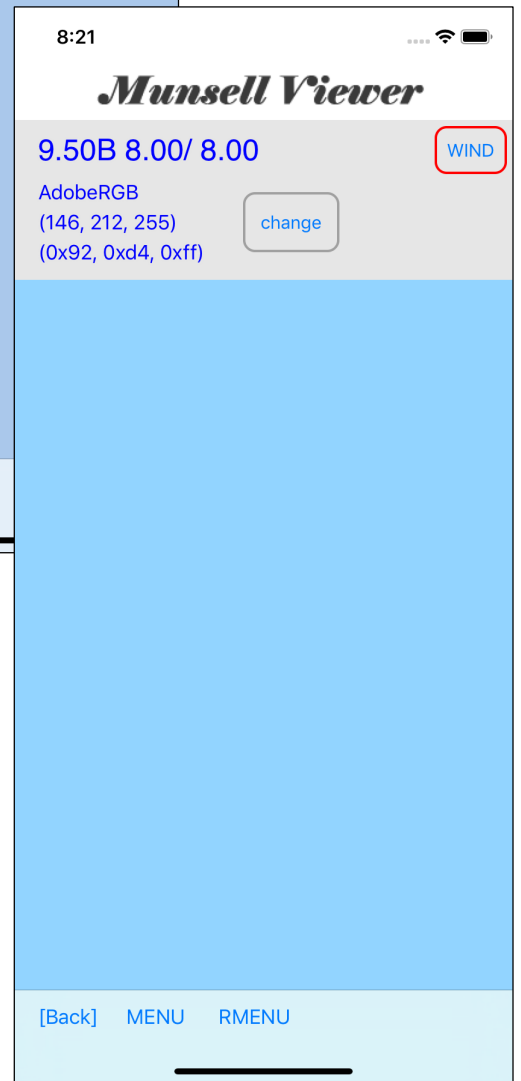(170, 95, 52)

(0xaa, 0x5f, 0x34)
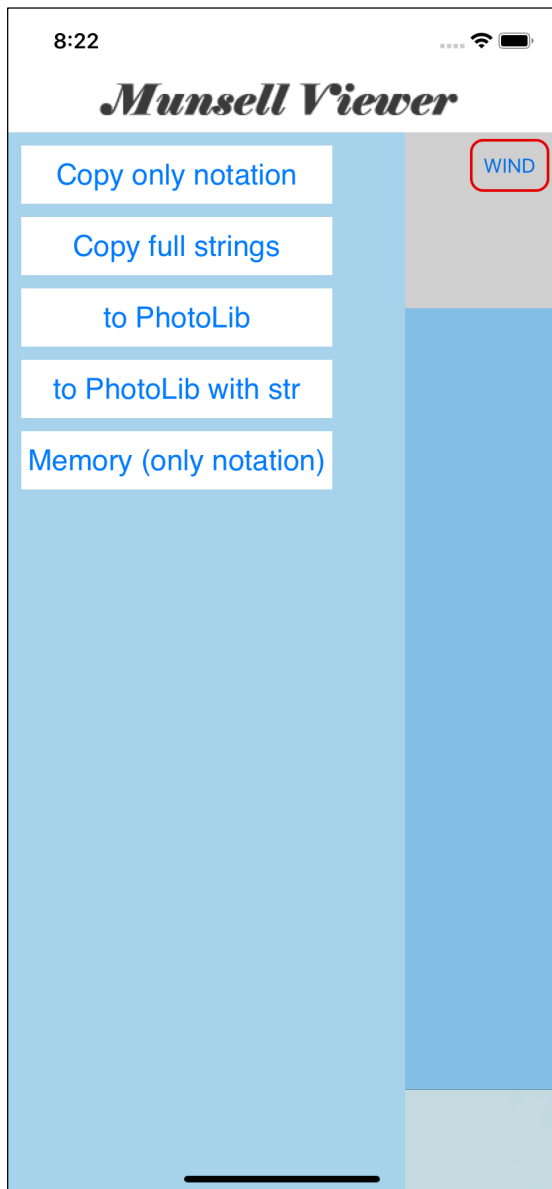
Drop Information View

Carrier 📶   8:51 PM   ▬

Munsell Viewer

[19] Tourmaline   WIND

3.4BG 7.8/1.3

(179, 195, 197)
(0xb3, 0xc3, 0xc5)

STD CARD 238 sRGB

[Home] MENU Exhibit

Drop Information View can
do horizontal scroll.
(Some is not so.)

Tourmaline   WIND

G 7.8/1.3

95, 197)
0xc3, 0xc5)

About information view

8:19

Munsell Viewer

10.0B (sRGB)   2.5PB (sR

10.0B 8/ 4

(170, 200, 235)

(0xaa, 0xc8, 0xeb)

[Home]   MENU   Move   Exhibit

8:19

Munsell Viewer

[12] Forget-me-not   DROP

STD CARD 238 sRGB

[12] Forget-me-not

0.2PB 6.5/6.4

(106, 161, 209)

(0x6a, 0xa1, 0xd1)

[Home]   MENU   Exhibit

Munsell Viewer

10.00B 8.00/ 4.00 [DROP]

sRGB
(170, 200, 235)
(0xaa, 0xc8, 0xeb)

AdobeRGB ✓
(183, 203, 235)
(0xb7, 0xcb, 0xeb)

[Back]   MENU   RMENU

Munsell Viewer

10.0B 8/ 4 [DROP]

[Back]   Walk

Munsell Viewer

9.50B 8.00/ 8.00 [WIND]

AdobeRGB
(146, 212, 255)   [change]
(0x92, 0xd4, 0xff)

[Back]   MENU   RMENU

When you "long press" any kind of "information view" displaying color values, whatever it is in what state, so such "copy menu view" comes out.

Copy (Munsell value only)

Copy only the Munsell value as a character string to the pasteboard (clipboard).
It is 9.5 B 8.00 / 8.00 in this example.

Copy (all, full string)

Copy all the displayed character strings to pasteboard (clipboard).

In this example,

9.50B 8.00/8.00
AdobeRGB
(146,212,255)
(0x92,0xd4,0xff)

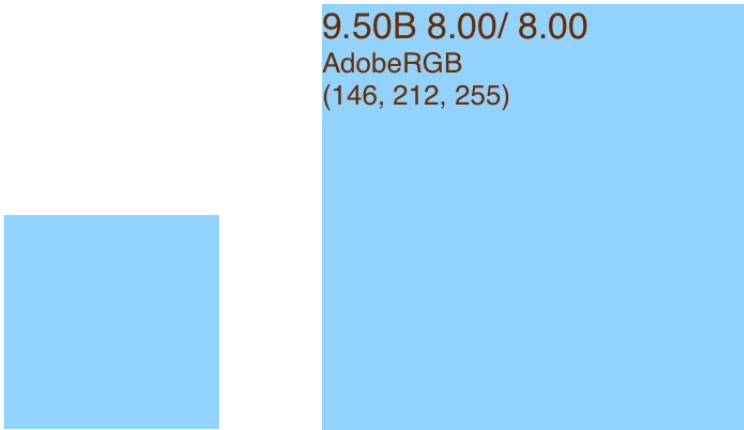this is such a string.

PhotoLib (no character string)

Transfer color image of size 100 x 100 to PhotoLibrary.
No letters (no string) are included.

PhotoLib (with character string)

Transfer color image of size 200 x 200 to PhotoLibrary.
It contains the image string.

Memory (Munsell value only)

(That) Munsell value is "Memoryed".

9.50B 8.00/ 8.00
AdobeRGB
(146, 212, 255)

However an image is contracting here, an such kind of image is send to PhotoLib.

It is only in the case of copying in the Munsell color chart so that the hexadecimal value is described.

This string does not contain a hexadecimal value string elsewhere.

It is because, putting out 4 lines, the letters become too strong.

2.5G 5/ 12
(61, 144, 80)
(0x3d, 0x90, 0x50)
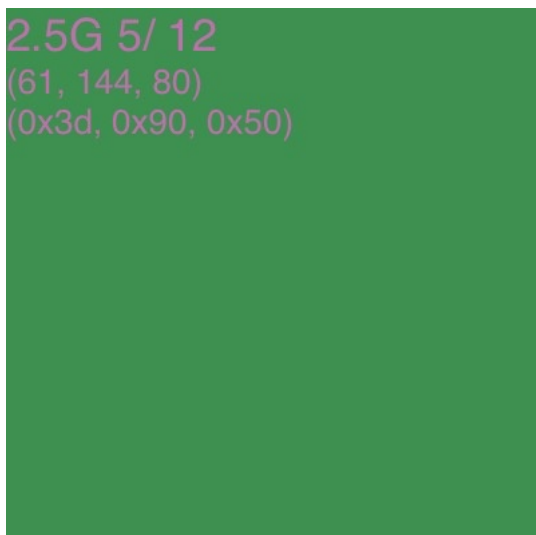
A color of string in an image is complementary color.

Some string is hardly to see as this example. So I would end this way in the future.

Firstly (3)

Munsell Viewer's command has a certain layer structure.

Displaying Munsell color chart

Chart   Exhibit   Walk

Displaying Munsell value

Displaying Munsell value   Walk

Displaying color table

Color table matrix   Exhibit   Walk

Directory structure of Munsell Viewer

     User

         Documents

             Next

             UserLoad

Currently, Munsell Viewer keeps files in such a directory hierarchy.

Only one of the UserLoad directories can place text files.

Next directory is designed to store only "next time startup file".

Therefore, in effect, there is only one directory, and so on.

     User

         Documents

             Next

                mvmf_next_beginning.txt

The next startup file is like this, the file, mvmf_next_beginning.txt, stored in the Next directory.

This file is just a text file that stores Munsell values in character string format.

What the Munsell Viewer holds

Text file representing color values

Just a text file

Displayed and hidden selected state value

Munsell Viewer keeps is such things.

There is no such thing as

"secretly acquiring personal information and location information or sending it somewhere".

Munsell Viewer is displaying advertisements.

This advertisement may send position information, but I do not know well about details, I do not know well.

In any case, Munsell Viewer itself has no such thing as "secretly acquiring personal Information and location information or sending it somewhere".

Problems in the range of RIT real.dat

H	V	C	GB/T 15608-2006			RIT real.dat (D65)			JIS Z 8721-1993 (D65)		
			x	y	Y	x	y	Y	x	y	Y
2.5R	5.0	10.0	0.4634	0.3196	20.5	0.4533	0.3058	19.770	0.4576	0.3133	19.07
5.0R	5.0	10.0	0.4780	0.3300	20.5	0.4747	0.3227	19.770	0.4784	0.3295	19.06
7.5R	5.0	10.0	0.4923	0.3446	20.5	0.4927	0.3399	19.770	0.4956	0.3459	19.05
10.0R	5.0	10.0	0.5057	0.3657	20.5	0.5113	0.3630	19.770	0.5131	0.3680	19.05
2.5YR	5.0	10.0	0.5116	0.3825	20.5	0.5161	0.4064	19.770	0.5184	0.3888	19.05
5.0YR	5.0	10.0	0.5112	0.4050	20.5	0.5108	0.4276	19.770	0.5161	0.4104	19.06
7.5YR	5.0	10.0	0.5077	0.4179	20.5	0.5025	0.4489	19.770	0.5099	0.4315	19.09
10.0YR	5.0	10.0	0.4967	0.4407	20.5	0.4905	0.4683	19.770	0.5006	0.4528	19.14

As a matter of fact, like above table,

The CIE xyY value that is assigned for the Munsell value.

This is the actual value of the color for the Munsell value.

What is the chroma value for that Hue and Value?

This is decided by CIE xyY value's table.

It is impossible to calculate color values exceeding the upper and lower limits of this table.

In fact,

Munsell value 5.6R 7.6/10.1

is

STANDARD COLOR CARD OF AMERICA
[27] Shell Pink 5.6R 7.6/10.1.

However, this Munsell value can not be handled on Munsell Viewer.

Because Munsell Viewer is doing calculations based on RIT read.dat.

The color expressed by Munsell notation such as
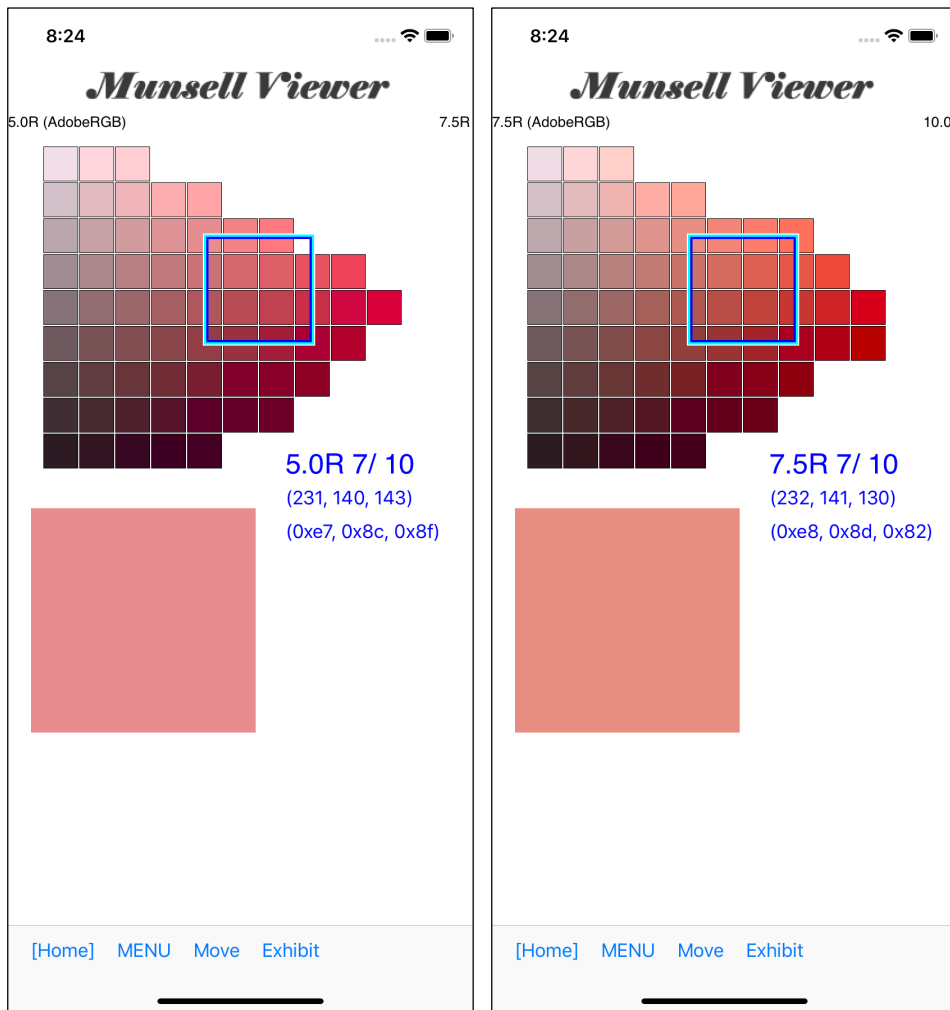

5.6R 7.6/10.1

exists between a following position.

[hue] 5.6R   ... between 5.0R and 7.5R
[value] 7.6   ... between 7 and 8
[chroma] 10.1   ... between 10 and 12

Therefore the color exists between

[5.0 R 8/ 10]	[5.0 R 8/ 12]	[7.5 R 8/ 10]	[7.5 R 8/ 12]
[5.0 R 7/ 10]	[5.0 R 7/ 12]	[7.5 R 7/ 10]	[7.5 R 7/ 12]

5.0R 7/ 10
(231, 140, 143)
(0xe7, 0x8c, 0x8f)

7.5R 7/ 10
(232, 141, 130)
(0xe8, 0x8d, 0x82)

But, in this way, the values

    5.0R 8/12
    7.5R 8/12

do not exist within the definition range of RIT real.dat.

In a way, here is

[5.0 R 8/ 10]	
[5.0 R 7/ 10]	[5.0 R 7/ 12]

[7.5 R 8/ 10]	
[7.5 R 7/ 10]	[7.5 R 7/ 12]

This example, so to speak, is that

    "one value of the four corners necessary for calculating the color value is
     missing."

For this reason,

[27] Shell Pink 5.6R 7.6/10.1

is not able to handle on Munsell Viewer.

That Chroma with that Hue and Value does not exist.

That is the cause of stopping with the "Walk" command, not going forward.

Although there is

A calculation method of provisional value of missing part
in the case that "one value of four corners necessary for calculation of
color value is missing."

However, Munsell Viewer does not use this method, and is taking
countermeasures "Can not handle it".

Appendix

origin of color data

RIT real.dat

Rochester Institute of Technology

STANDARD COLOR CARD OF AMERICA

SPECTROPHOTOMETRIC AND COLORIMETRIC DETERMI.
NATION OF THE COLORS OF THE TCCA STANDARD
COLOR CARDS
By Genevieve Reimann,1 Deane B. Judd, and Harry J. Keegan
jresv36n3p209_A1b.pdf

ISCC-NBS

Central Notations for the Revised ISCC-NBS
Color-Name Blocks
Kenneth 1. Kelly
jresv61n5p427_A1b.pdf

JIS Z 8102:2001

JIS (Japanese Industrial Standards)
Z 8102:2001 "Names of non-luminous object colours."

Examples of adjustments Munsell Viewer is doing

Munsell Viewer calculates based on RIT real.dat.

Therefore, Munsell Viewer can not handle Munsell notation which is out of the definition range of RIT real.dat.

Therefore, some color values have been adjust for.

The following is the list.

STANDARD COLOR CARD OF AMERICA

[27] Shell Pink 5.6R 7.6/(10.0)* (adjusted)
       default 5.6R 7.6/10.1 don't adapt to RIT real.dat. (value 8 chroma is short.)

[206] Coral 2.5R 7.1/(10.0)* (adjusted)
       default 2.5R 7.1/10.6 don't adapt to RIT real.dat. (value 8 chroma is short.)

ISCC-NBS

[24] reddish black 6.0R (1.0)*/0.8 (adjusted)
       default 6.0R 0.9/0.8 don't adapt to RIT real.dat. (unsupport below value 1.)

[40] strong reddish brown 0.5YR 3.0/(10.0)* (adjusted)
       default 0.5YR 3.0/11.2 don't adapt to RIT real.dat. (value 3 chroma is short.)

[49] brilliant orange 4.5YR 8.0/(12.0)* (adjusted)
       default 4.5YR 8.0/12.1 don't adapt to RIT real.dat. (value 8 chroma is short.)

[59] dark brown 5.5YR (2.0)*/3.6 (adjusted)
       default 5.5YR 1.6/3.6 don't adapt to RIT real.dat. (7.5YR's value 1 chroma is short.)

[65] brownish black 7.5YR (1.0)*/0.8 (adjusted)
       default 7.5YR 0.8/0.8 don't adapt to RIT real.dat. (unsupport below value 1.)

[67] brilliant orange yellow 9.0YR (8.0)*/12.1 (adjusted)
       default 9.0YR 8.4/12.1 don't adapt to RIT real.dat. (value 9 chroma is short.)

[70] light orange yellow 9.0YR 8.6/(8.0)* (adjusted)
       default 9.0YR 8.6/8.1 don't adapt to RIT real.dat. (value 9 chroma is short.)

[75] deep yellowish brown 9.5YR (3.0)*/6.0 (adjusted)
    default 9.5YR 2.9/6.0 don't adapt to RIT real.dat. (value 2 chroma is short.)

[96] dark olive brown 2.5Y (2.0)*/2.5 (adjusted)
    default 2.5Y 1.8/2.5 don't adapt to RIT real.dat. (value 1 chroma is short.)

[108] dark olive 8.0Y (2.0)*/3.2 (adjusted)
    default 8.0Y 1.7/3.2 don't adapt to RIT real.dat. (value 1 and 2 chroma is short.)

[114] olive black 9.0Y (1.0)*/0.8 (adjusted)
    default 9.0Y 0.9/0.8 don't adapt to RIT real.dat. (unsupport below value 1.)

[124] deep olive green 5.0GY (2.4)*/(6.0)* (adjusted)
    default 5.00Y 2.4/7.1 don't adapt to RIT real.dat. (value 2 and 3 chroma is short.)

[157] greenish black 7.5G (1.0)*/0.7 (adjusted)
    default 7.5G 0.9/0.7 don't adapt to RIT real.dat. (unsupport below value 1.)

[171] very light greenish blue 4.5B (8.0)*/5.2 (adjusted)
     default 4.5B 8.2/5.2 don't adapt to RIT real.dat. (value 9 chroma is short.)

[177] brilliant_blue 3.0PB 6.4/(10.0)* (adjusted)
    default 3.0PB 6.4/11.0 don't adapt to RIT real.dat. (value 7 chroma is short.)

[180] very light blue 2.4PB (8.0)*/(6.0)* (adjusted)
    default 2.4PB 8.2/7.2 don't adapt to RIT real.dat. (value 8 and 9 chroma is short.)

[184] very_pale_blue 0.9PB 8.4/(2.0)* (adjusted)
    default 0.9PB 8.4/3.0 don't adapt to RIT real.dat. (2.5PB's value 9 chroma is short.)

[198] very light purplish blue 7.0PB 7.8/(6.0)* (adjusted)
    default 7.0PB 7.8/6.1 don't adapt to RIT real.dat. (value 8 chroma is short.)

[202] very pale purplish blue 7.0PB (8.0)*/4.1 (adjusted)
    default 7.0PB 8.2/4.1 don't adapt to RIT real.dat. (value 9 chroma is short.)

[213] very pale violet 1.0P 8.2/(4.0)* (adjusted)
    default 1.0P 8.2/4.1 don't adapt to RIT real.dat. (value 9 chroma is short.)

[249] light purplish pink 4.0RP (8.0)*/7.3 (adjusted)
    default 4.0RP 8.3/7.3 don't adapt to RIT real.dat. (value 9 chroma is short.)