HimawariCast: software manual

Kencast client Ver.8

13 September 2017

JMA's HimawariCast software enables conversion of HRIT files received via the HimawariCast service into SATAID format and allows display on a PC with other data in SATAID format. The software runs on Windows with 8 GB or more memory. This document outlines how the software is installed and configured.

1. KenCast Fazzt Professional Client

1.1. Preparation for Installation

1.1.1. Executing Windows Update

Run Windows Update to ensure that your OS is the latest version.

1.1.2. Installing Database Software

Install the MS SQL Server 2005 Express Edition SP 4.

Note: Do not change the installation directory.

1.1.3. Installing 7-Zip

Go to the link below, download 7-Zip and install it (use the 64-bit version for a 64-bit OS).

http://www.7-zip.org/download.html

Follow the wizard to install.

Note: Do not change the installation directory.

1.1.4. Installing HimawariCast Software

Go to the link below and download JMA's HimawariCast software.

http://www.data.jma.go.jp/mscweb/en/himawari89/himawari_cast/himawari_cast.html#software

Unzip the downloaded "`HimawariCast_software.zip`" file to reveal the following two folders:

`KenCast`

`SATAID`

Move the "`SATAID`" folder to drive "`C:\`" for a location at "`C:\SATAID`".

1.1.5. Creating Folders

Create the following required folders using Windows Explorer:

`C:\HRIT`

`C:\HRIT_in`

`C:\HRIT_tmp`

`C:\LRIT`

`C:\MANAM`

`C:\SATAID_Image`

`C:\SATAID_Obs`

`C:\Temp`

1.2. Installing KenCast Fazzt Professional Client

1.2.1. Installing Fazzt Client

Install Fazzt Client for Windows using the Fazzt Client CD. Start "`FazztClient.exe`" from the "`Fazzt\Windows`" folder.

For a 64-bit OS, Fazzt Client is installed under

`C:\Program Files (x86)\KenCast\` .

For a 32-bit OS, it is installed under

`C:\Program Files\KenCast\` .

The description below is for a 64-bit OS. For a 32-bit OS, adjust the Fazzt Client installation folder locations as appropriate.

1.2.2. Installing Fazzt Script

Create the following folder under the Fazzt Client installation folder as a place to store Fazzt

Script files.

```
C:\Program Files (x86)\KenCast\Fazzt\Scripts\HimawariCast
```

Store the following Fazzt Script files in the “KenCast” folder (as specified in 1.1.4) in the above folder:

```
DeleteFilesOlderThanN.fzt
Match10.fzt
CombineAnyway.fzt
ConcAndConvert.fzt
UnzipIncomingFiles.fzt
```

The “KenCast” folder can then be deleted.

1.3. Configuring KenCast Fazzt Professional Client

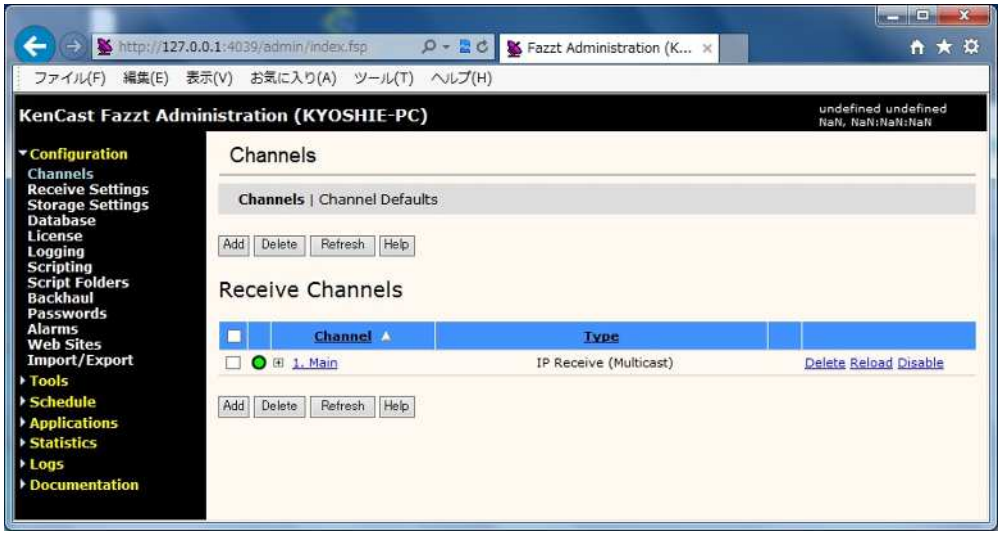
The Fazzt Client web-based configuration page can be accessed via a web browser. The default URL is as follows:

http://127.0.0.1:4039/

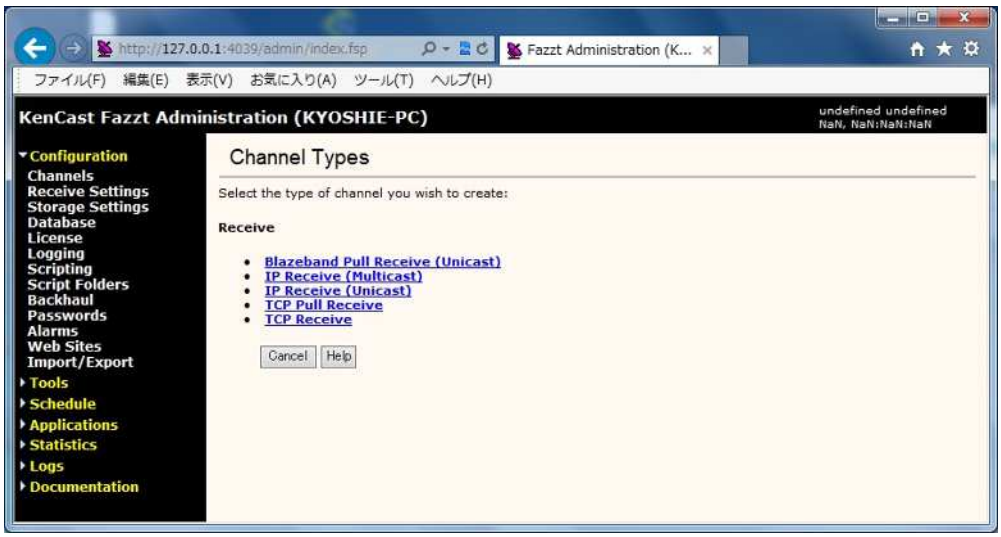
1.3.1. Adding Channels

Add channels from which to receive data.

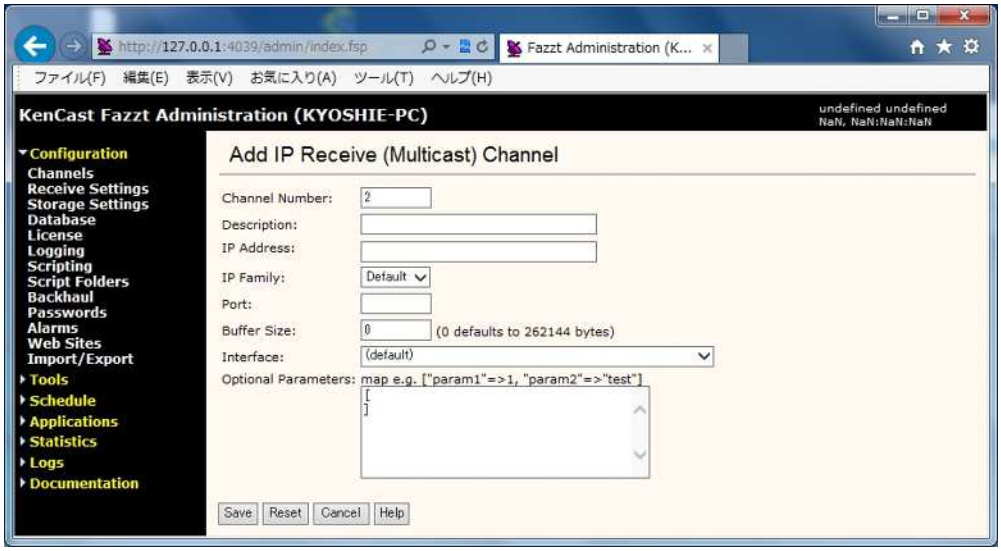
Go to [Configuration] on the left of the screen and select [Channels]. The “Channels” setting screen will be displayed.



Click the [Add] button.



Select [IP Receive (Multicast)] from the “Receive” index.



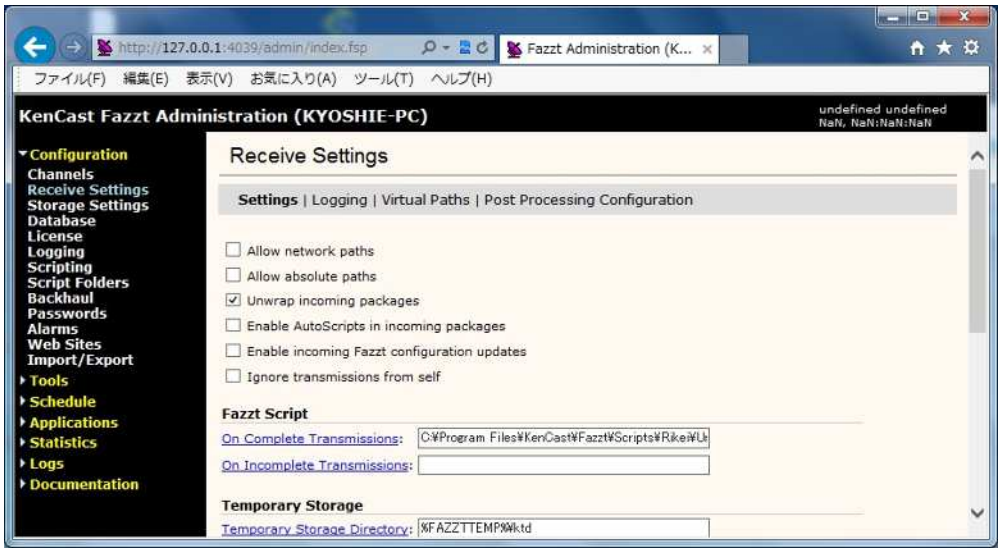
Set up the required items on the “Add IP Receive (Multicast) Channel” setting screen.

Description:	(Input the channel name, e.g., `HimawariCast`.)
IP Address:	(Input the IP address of the multicast to be used. This is `239.0.0.1` for HimawariCast.)
IP Family:	(Select [IPv4].)
Port:	(Input the port number of the multicast to be used. This is `8001` for HimawariCast.)
Buffer Size:	`6291456`
Interface:	(Select the network interface of the channel to be used.)

Click the [Save] button.

1.3.2. Receive Settings

Go to [Configuration] on the left of the screen and select [Receive Settings]. The “Receive Settings” screen will be displayed.



Uncheck the following:

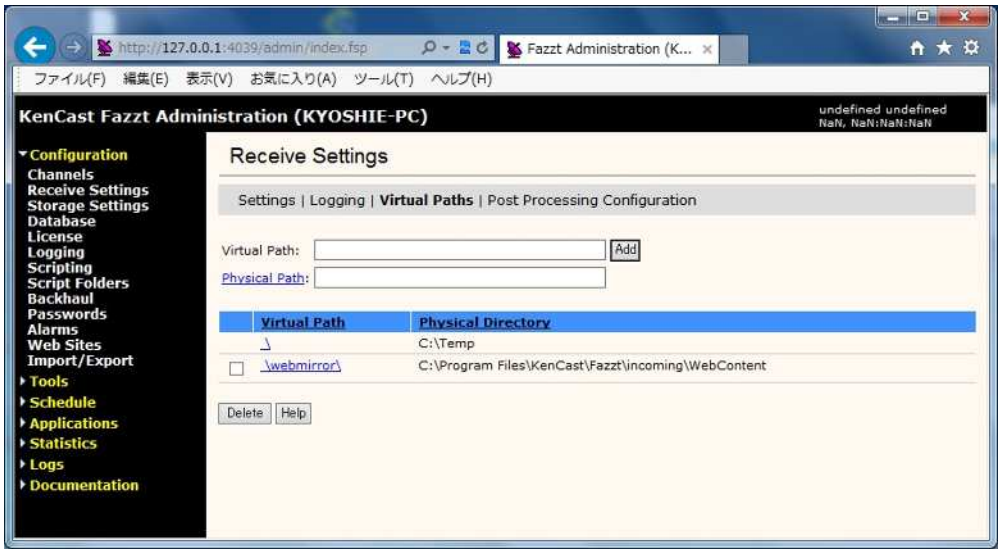
□ Allow network paths

□ Allow absolute paths

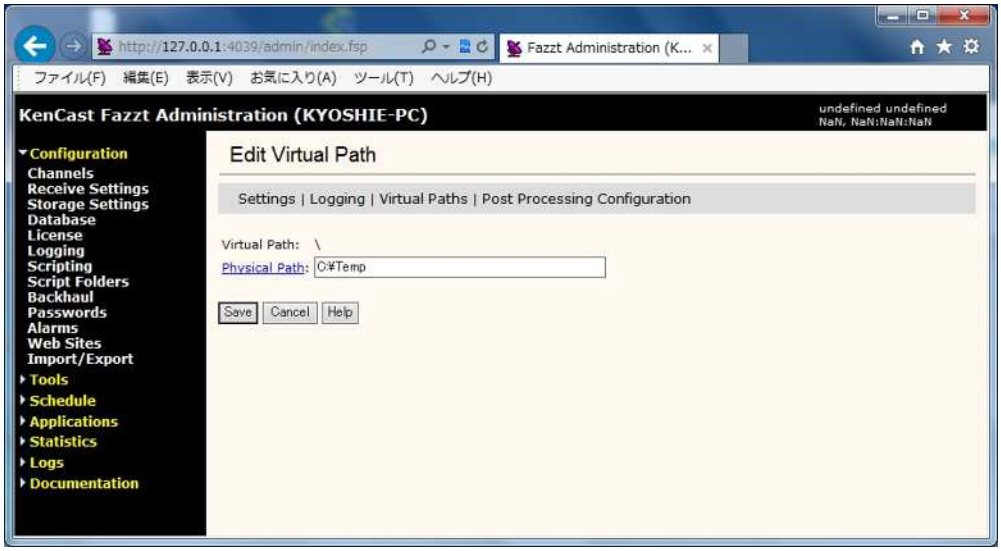
Click [On Complete Transmissions] and select the following Fazzt Script:

```
C:\Program Files (x86)\KenCast\Fazzt\Scripts\HimawariCast\
        UnzipIncomingFiles.fzt
```

Display “Virtual Paths” from the menu bar on the “Receive Settings” screen.



Click [\] from “Virtual Paths”. “Edit Virtual Path” will be displayed.



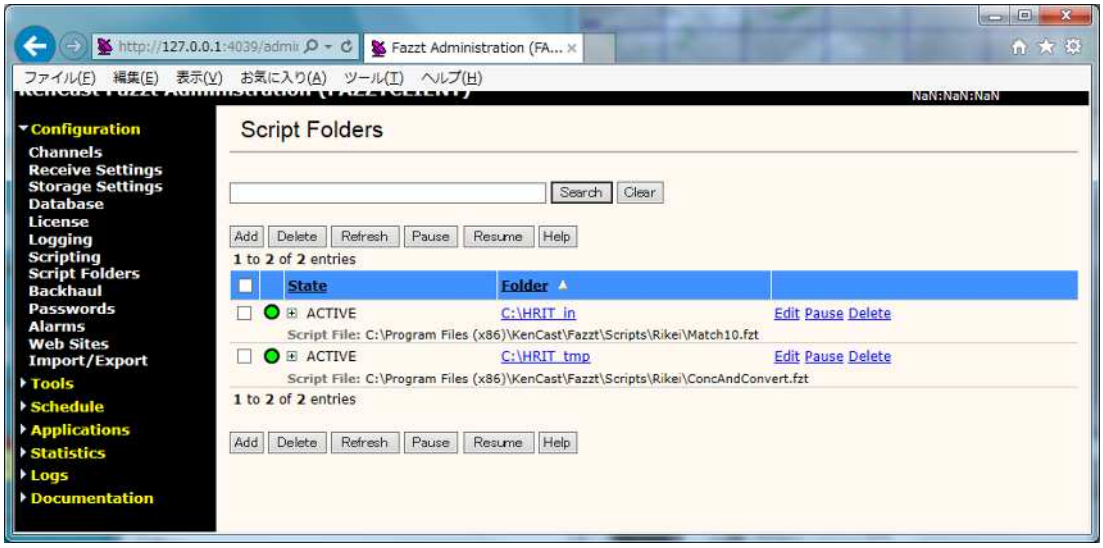
Input the following and click the [Save] button:

Physical Path:	`C:\Temp`

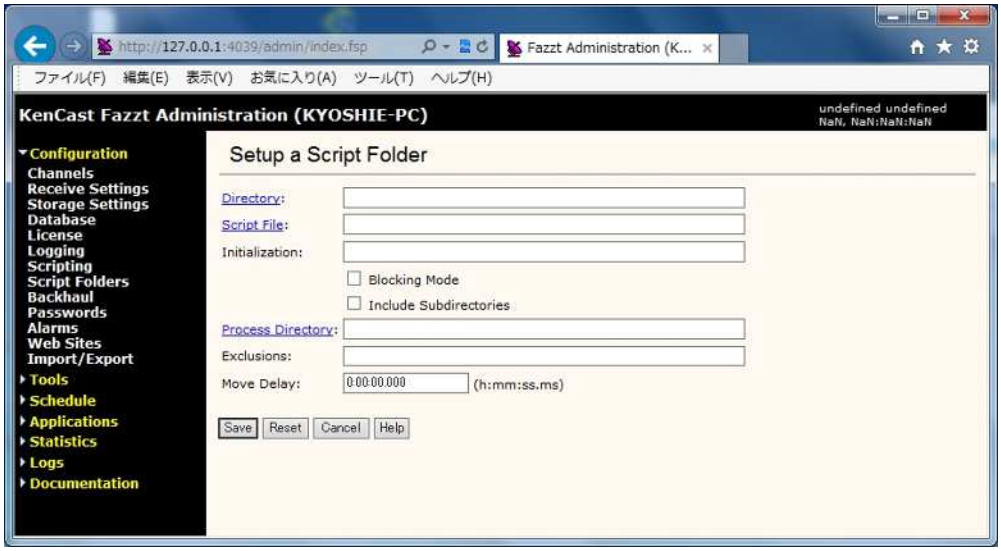
1.3.3. Creating Script Folders

Add two script folders.

Go to [Configuration] on the left of the screen and select [Script Folders]. The “Script Folders” setting screen will be displayed.



Click the [Add] button.



Input the following values and click the [Save] button:

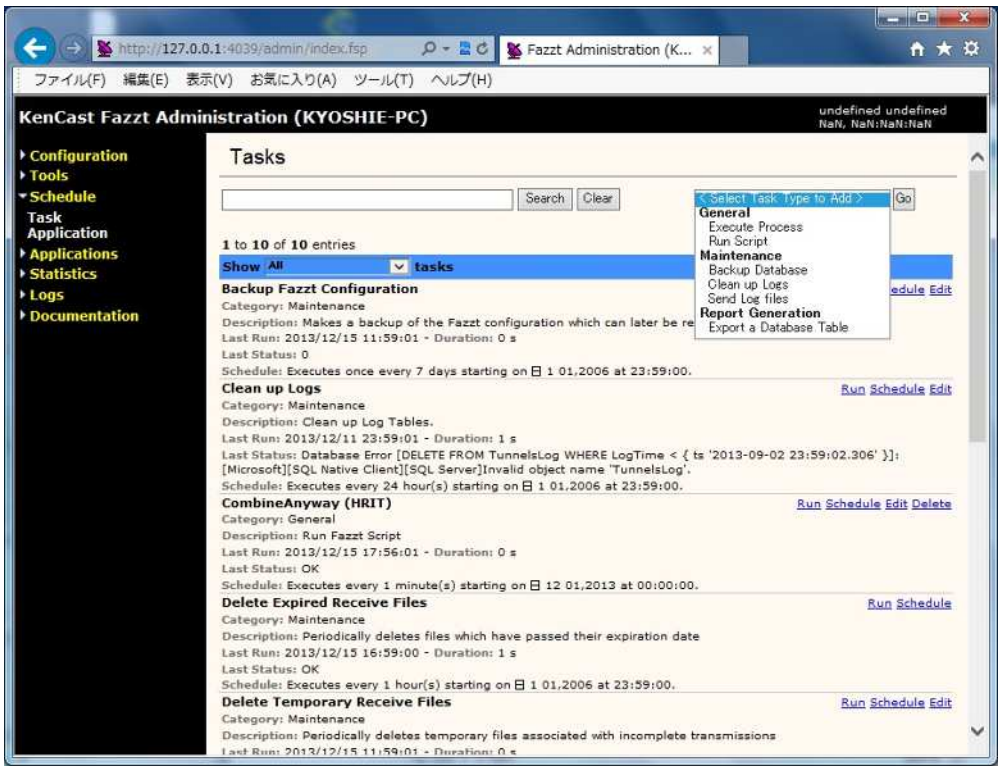
Directory:	`C:\HRIT_in`
Script File:	`C:\Program Files (x86)\KenCast\Fazzt\Scripts\HimawariCast\Match10.fzt`
Blocking Mode:	(Check mark)

Directory:	`C:\HRIT_tmp`
Script File:	`C:\Program Files (x86)\KenCast\Fazzt\Scripts\HimawariCast\ConcAndConvert.fzt`
Blocking Mode:	(Check mark)

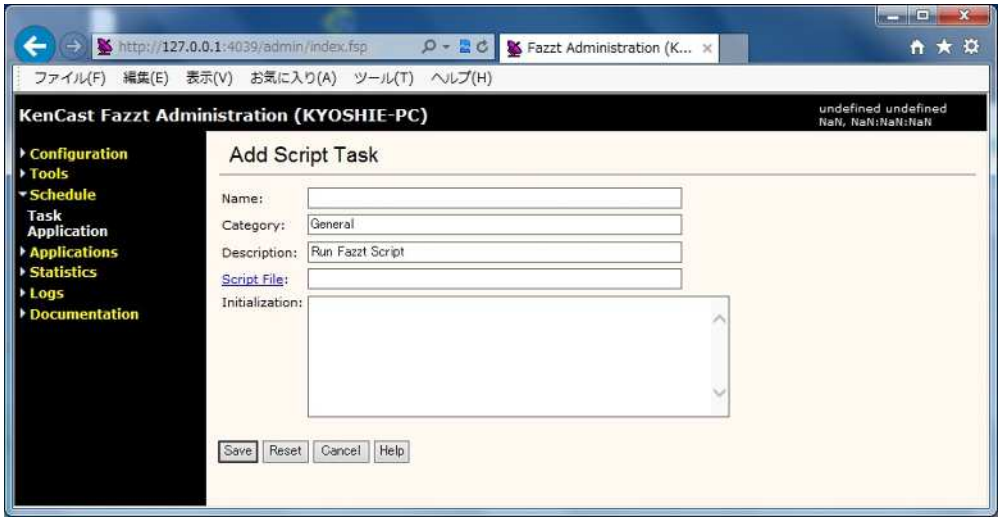
1.3.4. Creating Tasks

Add three Tasks using Fazzt script.

Go to [Schedule] on the left of the screen and select [Task]. The “Tasks” screen will be displayed. Select [Run Script] from the [< Select Task Type to Add >] pull-down menu.



Set the desired items on the “Add Script Task” setting screen.



Input the following values and click the [Save] button.

Name:	Combine Anyway (HRIT)
Category:	HimawariCast
Script File:	C:\Program Files (x86)\KenCast\Fazzt\Scripts\HimawariCast\ CombineAnyway.fzt
Initialization:	map $ExpTime = ["Minutes" => 25]; Note: Input the waiting time from the start of observation to HRIT file receipt. While MTSAT-2 is in operation, a period of 40 minutes is appropriate. After Himawari-8 starts operation, 25 minutes is recommended.

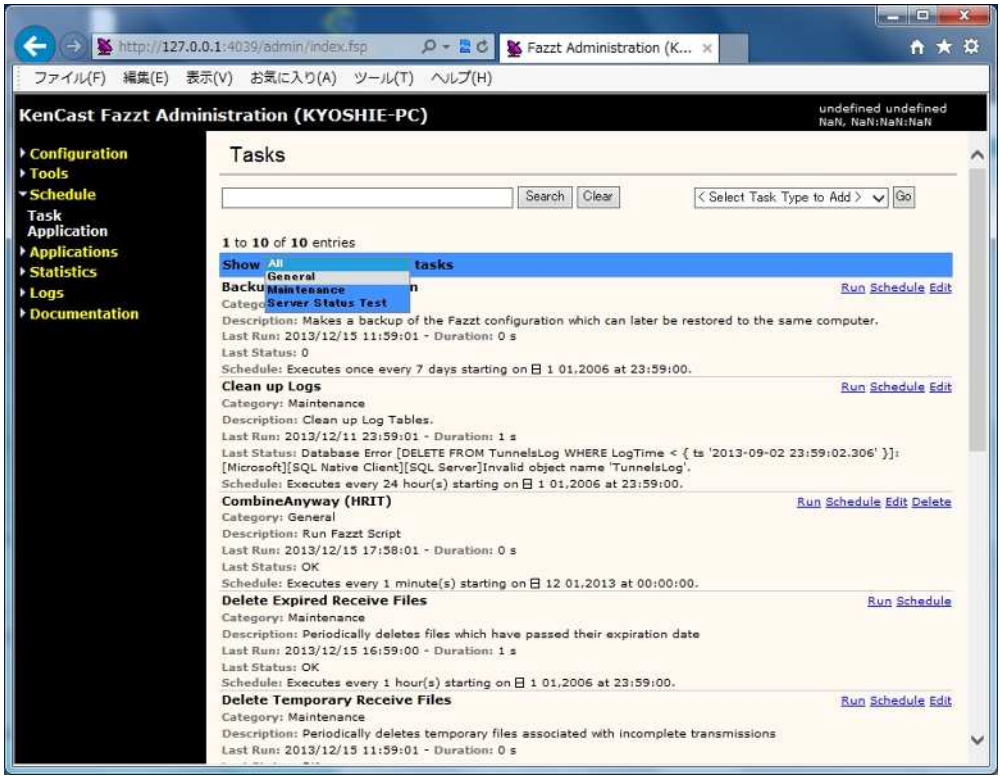
Name:	Delete Files Older Than N
Category:	HimawariCast
Script File:	C:\Program Files (x86)\KenCast\Fazzt\Scripts\HimawariCast\ DeleteFilesOlderThanN.fzt
Initialization:	$FolderName = {"C:\\HRIT", "C:\\LRIT", "C:\\MANAM", "C:\\SATAID_Image", "C:\\SATAID_Obs"}; map $ExpireTime = ["Days" => 7]; Note: Input the period for which received data should be stored in consideration of HDD capacity.

Name:	Delete Files Older Than N (Temp Folders)
Category:	HimawariCast
Script File:	C:\Program Files (x86)\KenCast\Fazzt\Scripts\HimawariCast\ DeleteFilesOlderThanN.fzt
Initialization:	$FolderName = {"C:\\Temp\\HRIT_in", "C:\\Temp\\LRIT", "C:\\Temp\\MANAM", "C:\\Temp\\SATAID_Image", "C:\\Temp\\SATAID_Obs", "C:\\HRIT_in\\Process", "C:\\HRIT_tmp\\Process"}; map $ExpireTime = ["Minutes" => 60];

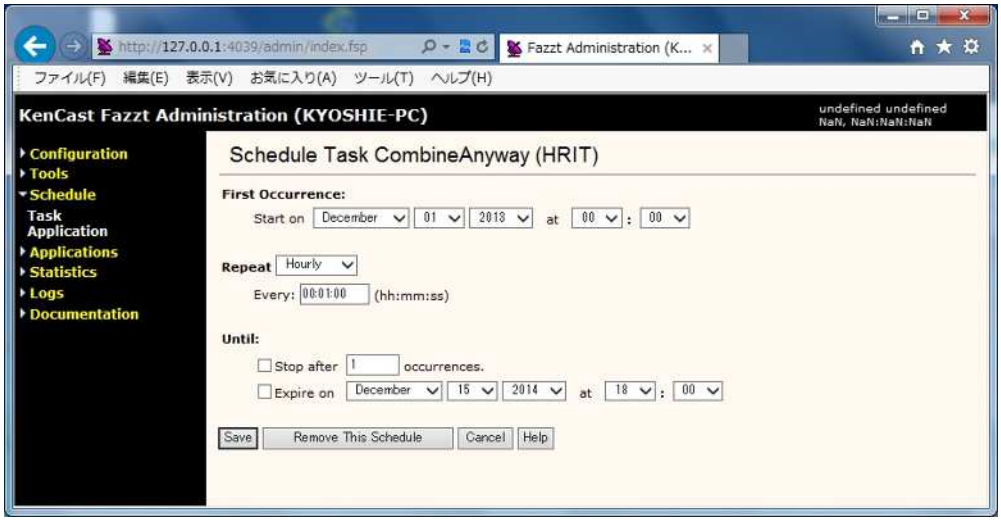
1.3.5. Adding Scheduled Tasks

Add schedules for the tasks created as outlined in 1.3.4.

Go to [Schedule] on the left of the screen and select [Task]. The “Tasks” screen will be displayed. Select [HimawariCast] from the blue-strip “Show [All] tasks” pull-down menu.



Click [Schedule] to the right of the tasks to be configured.



Input the following values and click the [Save] button.

Combine Anyway (HRIT)

Repeat:	`Hourly` `Every: 00:01:00`

Note: for operation at one-minute intervals.

Delete Files Older Than N

Repeat:	`Hourly` `Every: 01:00:00`

Note: for operation at one-hour intervals.

Delete Files Older Than N (Temp Folders)

Repeat:	`Hourly` `Every: 01:00:00`

Note: for operation at one-hour intervals.

1.4. Configuring Other Settings

1.4.1. Changing Buffer Size by Editing Registry

Editing the registry should be done carefully.

Start the Registry Editor (method is OS-dependent).

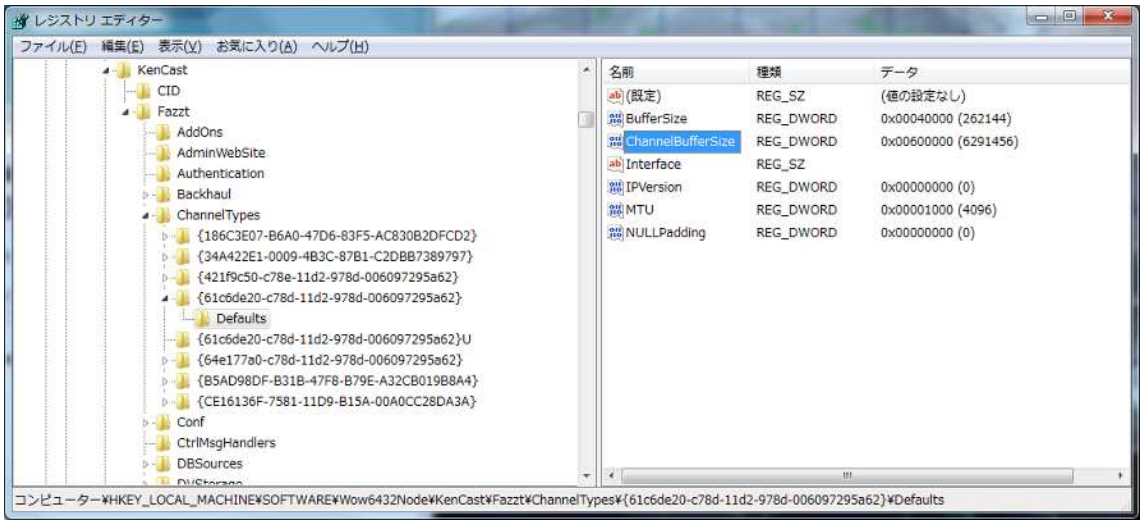
Select the following folder in the Registry Editor.

For a 64-bit OS:

```
HKEY_LOCAL_MACHINE\SOFTWARE\Wow6432Node\KenCast\Fazzt\
        ChannelTypes\{61c6de20-c78d-11d2-978d-006097295a62}\
        Defaults
```

For a 32-bit OS:

```
HKEY_LOCAL_MACHINE\SOFTWARE\KenCast\Fazzt\
        ChannelTypes\{61c6de20-c78d-11d2-978d-006097295a62}\
        Defaults
```



Double-click “ChannelBufferSize” from the “Defaults” folder, check “Decimal” and input “6291456”.

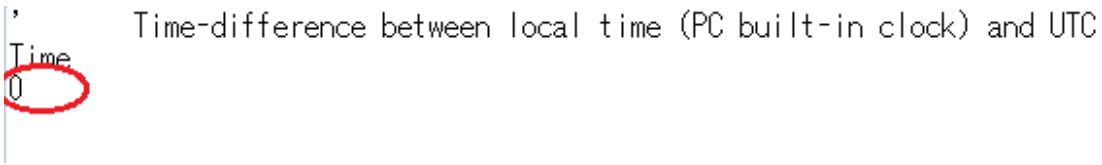
2. SATAID Software

2.1. Configuring SATAID Software

2.1.1. Configuring sataid.ini

Open "`C:\SATAID\sataid.ini`" in a text editor (e.g., Notepad).

Input the time difference between the PC's built-in clock and the UTC value on the third line (default: 0 hours).



2.1.2. Configuring sataid.vbs

Open "`C:\SATAID\sataid.vbs`" in a text editor (e.g., Notepad).

Input the execution filename in line 26 as follows:

For a 64-bit OS:

```
sGMSLP = "GMSLPD\GMSLPD64.EXE"
```

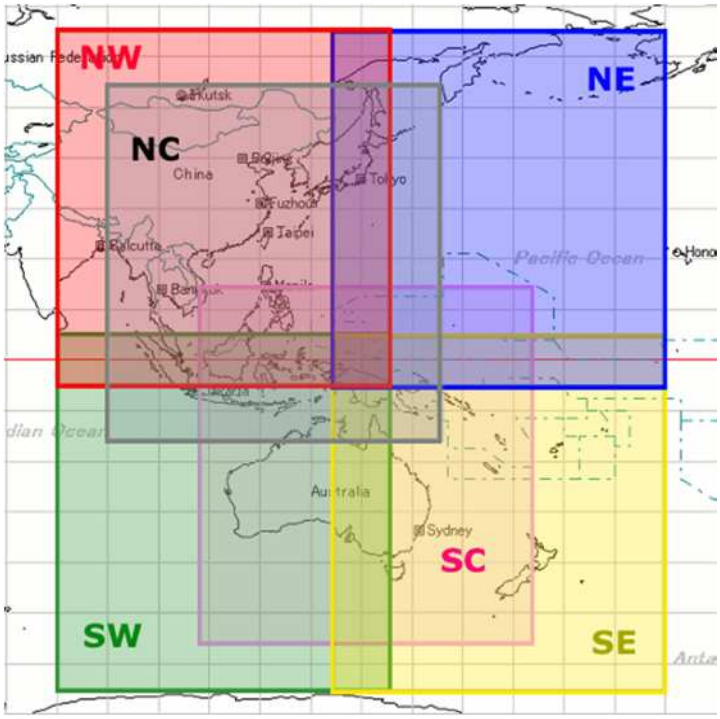
For a 32-bit OS:

```
sGMSLP = "GMSLPD\GMSLPD.EXE"
```

2.1.3. Configuring the Display Area

The following seven display areas are provided:

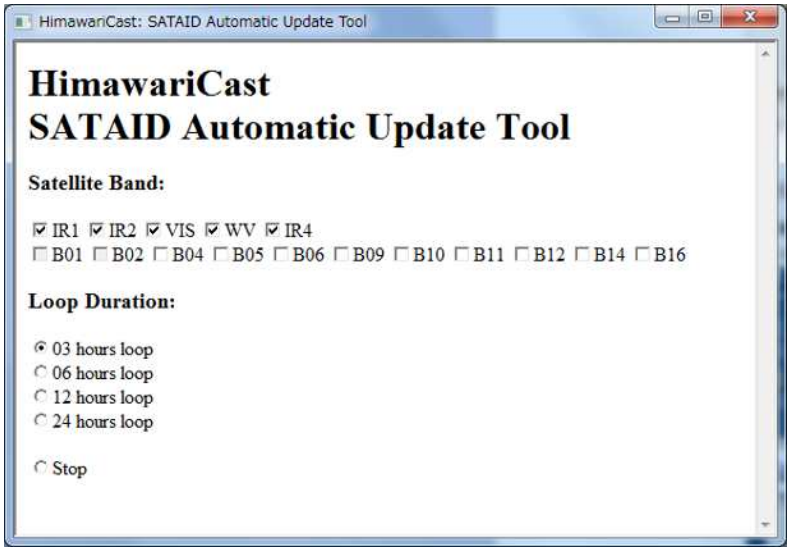
Display area	Latitude	Longitude	Configuration file
Full Disk	65N – 65S	80E – 200E (160W)	`hrit2sataid_FullDisk.ini`
North Central (NC)	55N – 15S	90E – 155E	`hrit2sataid_NorthCentral.ini`
Northwest (NW)	65N – 5S	80E – 145E	`hrit2sataid_Northwest.ini`
Northeast (NE)	65N – 5S	135E – 200E (160W)	`hrit2sataid_Northeast.ini`
South Central (SC)	15N – 55S	107.5E – 172.5E	`hrit2sataid_SouthCentral.ini`
Southwest (SW)	5N – 65S	80E – 145E	`hrit2sataid_Southwest.ini`
Southeast (SE)	5N – 65S	135E – 200E (160W)	`hrit2sataid_Southeast.ini`



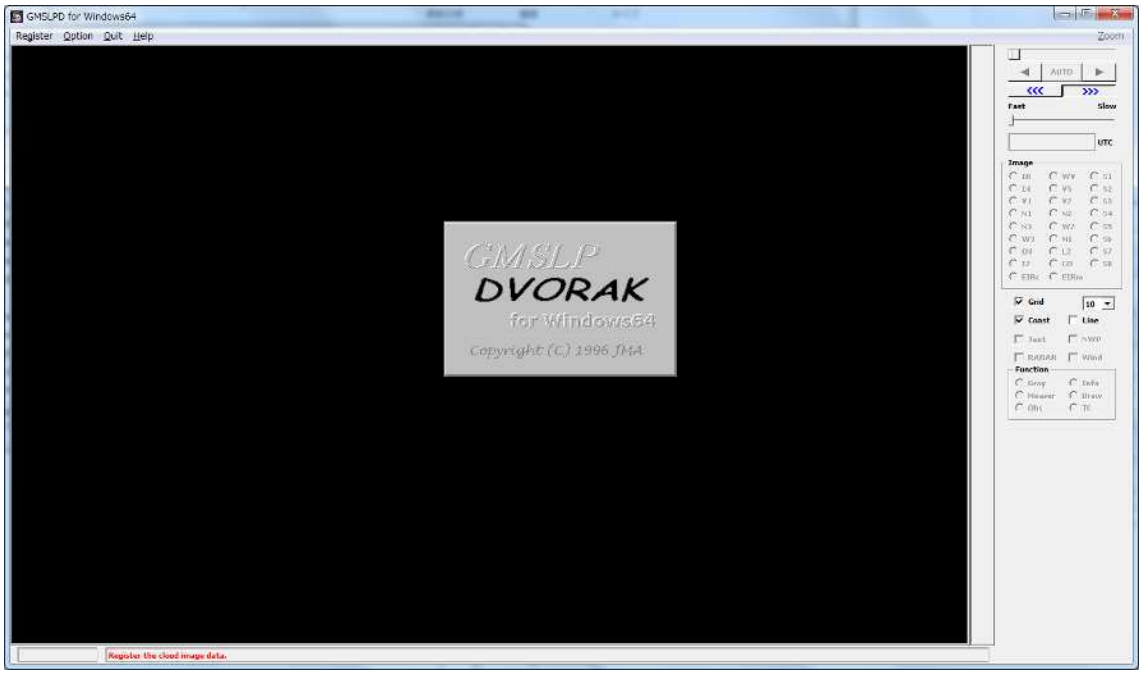
Rename the configuration file under the "`C:\SATAID\Program Files`" folder corresponding to the display area to "`hrit2sataid.ini`". Initially, "North Central (NC)" is selected as the display area, and "`hrit2sataid.ini`" is the same as "`hrit2sataid_NorthCentral.ini`". Note: SATAID software consumes large amounts of memory when the display area is set to "Full Disk".

2.1.4. Starting the SATAID Automatic Update Tool

Double-click "C:\SATAID\Sataid_Loop.hta" to start the SATAID Automatic Update Tool.



SATAID software starts automatically.



SATAID software reads satellite imagery of bands checked for [Satellite Band] in the SATAID Automatic Update Tool during the period checked for [Loop Duration] of the tool.
Note: SATAID software consumes more memory with a greater number of bands and longer read periods.

SATAID software reads the latest satellite imagery and updates the display every five minutes. Automatic updating can be suspended by checking [Stop] under [Loop Duration] in the SATAID Automatic Update Tool.

SATAID software has buttons corresponding to Himawari satellite bands. The mapping table is as follows:

Band	**Name of button**
1	V1
2	V2
3	VS
4	N1
5	N2
6	N3
7	I4
8	WV

9	W2
10	W3
11	MI
12	O3
13	IR
14	L2
15	I2
16	CO