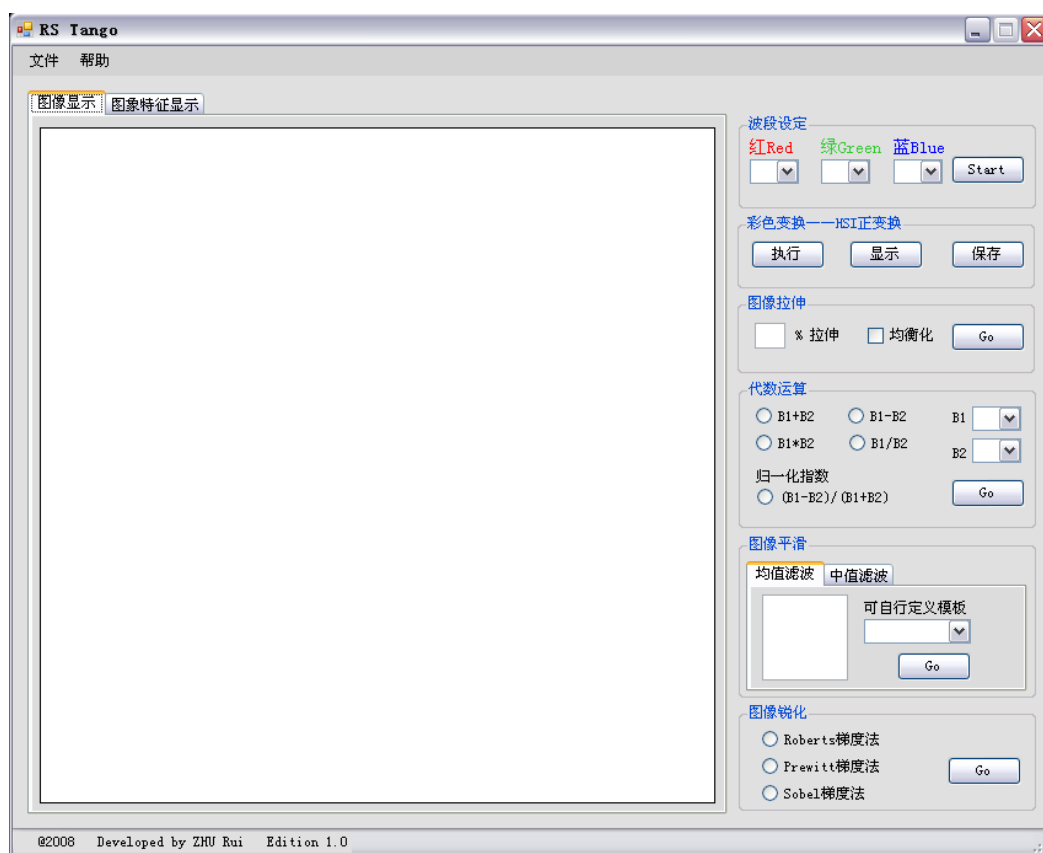# Help File for RS Tango 1.0

2009/01

Editor RUI ZHU

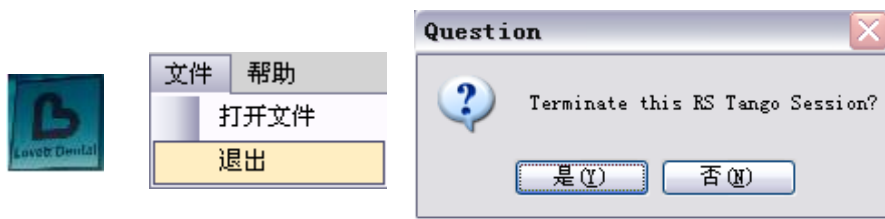School of Geography Science

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RS Tango1.0 is a piece of software for remote sensing digital image processing. RUI ZHU implemented this software independently by C# in Jan, 2009 when he was a junior student in Nanjing Normal University, PR. China. *RS* represents Remote Sensing while *Tango* indicates the innovation, passion of the developer.

1. Turn on and Turn off the Software

    Double click the ICO of the software and the main interface will show as it looks in the picture below.
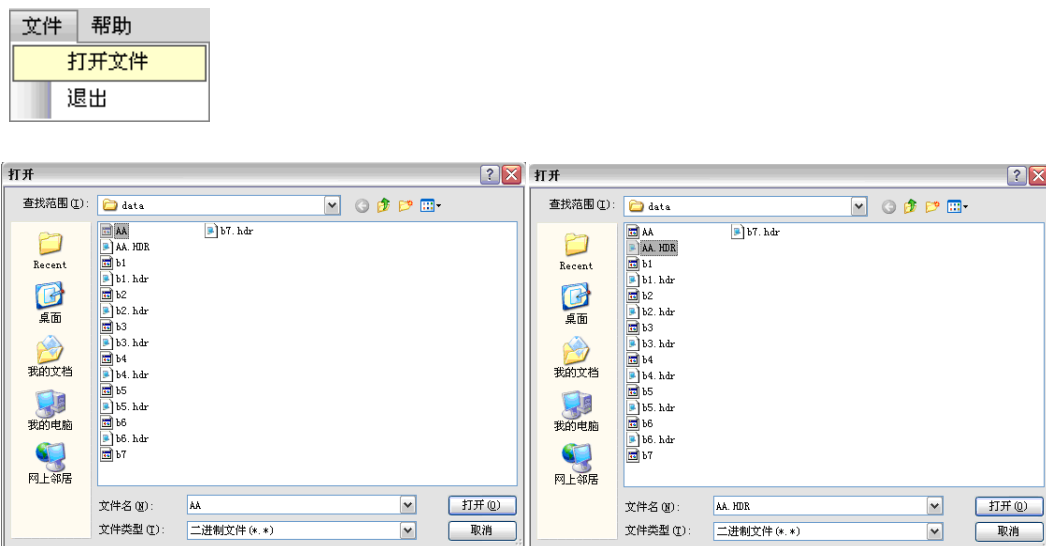

    A dialog box will jump out to ensure the user is willing to turn off the software when *Quit* button is pressed.
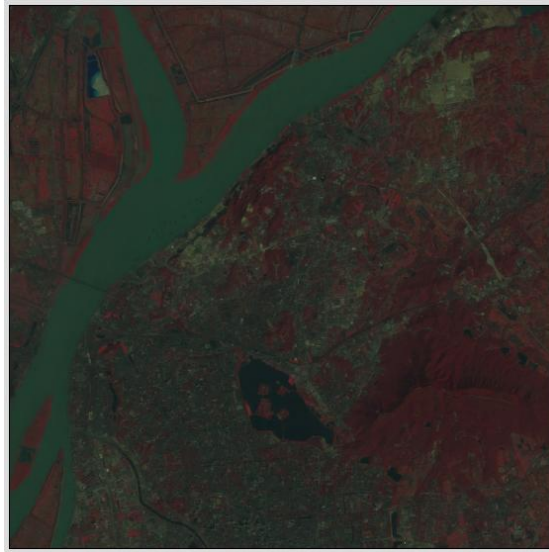
2. Upload the Image Data

Click *Open File* in the drop-down list menu and the *Dialog Box* for uploading the image file will show automatically. Firstly, choose file data and then choose its header file to get metadata accordingly.
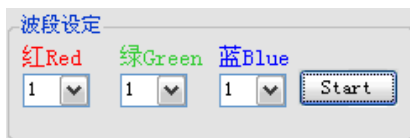

3. Set Multi-brand Data

In the first step, 7 multi-brand data are chosen. Now, seven different brand data can be chosen independently to represent RED, GREEN and BLUE, respectively. False color composite image can be shown when the *Start* button is pressed.
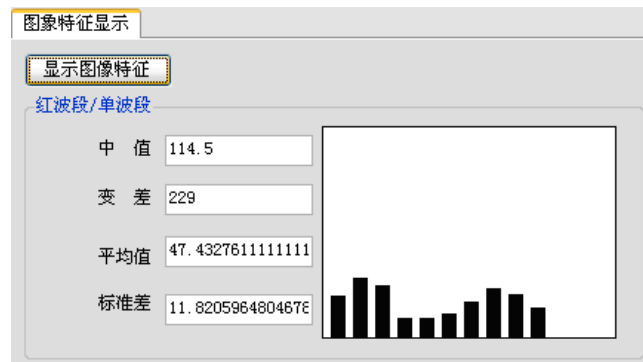
4. Set Single-brand Data

In this case, brand selection for RGB is not necessary. All of the three brands data are tacitly approved to be the first brand data. Image will show when the *Start* button is pressed.
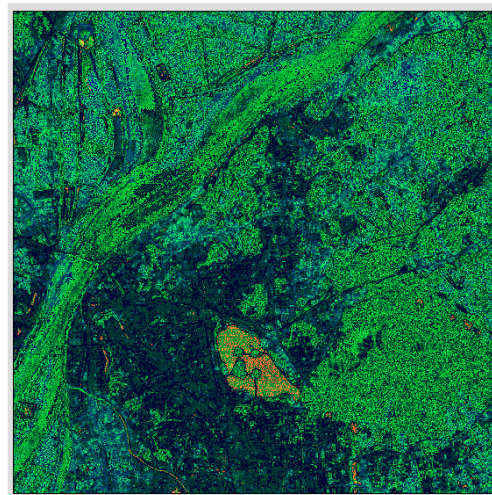

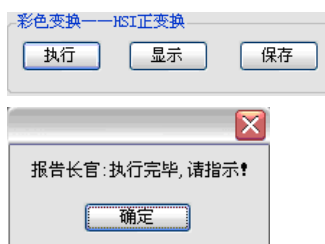5. Characteristic Statistics of the Image

Columns of Three brands characteristics can be shown when *Tab*

Control is selected. Three specific brand characteristics will be calculated respectively. They are namely mid-value, variation, mean-value and standard variation. Column diagram of gray scales will be drawn at the same time.
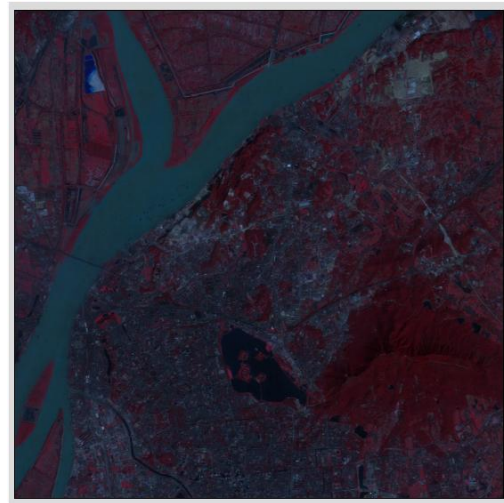

6. Color Transformation

The software provides color transformation from RGB to HIS. The function is available as long as three brands have been set. To start with, a prompt dialog box will jump out when data transformation is finished. Then HIS image can be shown when *Display* button is pressed. Lastly, the transformed data can be saved when *Save* button is pressed.
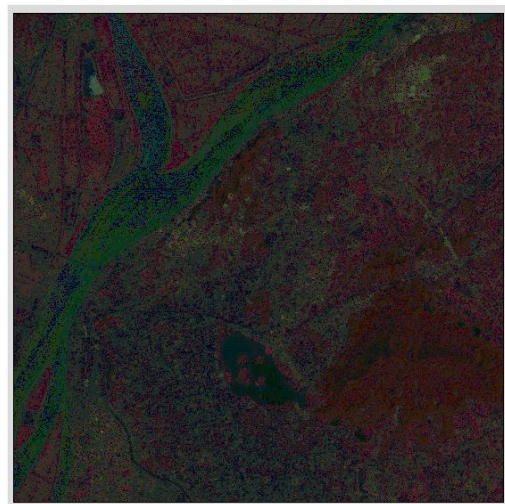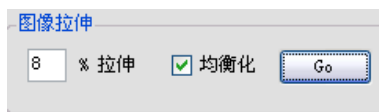
7. Image Stretching and Equalization

The software provides function of image stretching and equalization. The function is available as long as three brands have been set. Users can set the number of percent to do stretch. New image will show automatically when *Go* button is pressed.
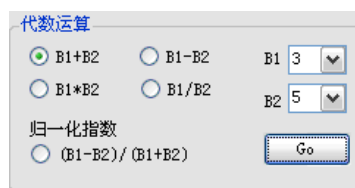

Similarly, new image can be shown automatically when Stretching and equalization are selected at the same time. Some unique dots can be seen clearly in this specific situation.
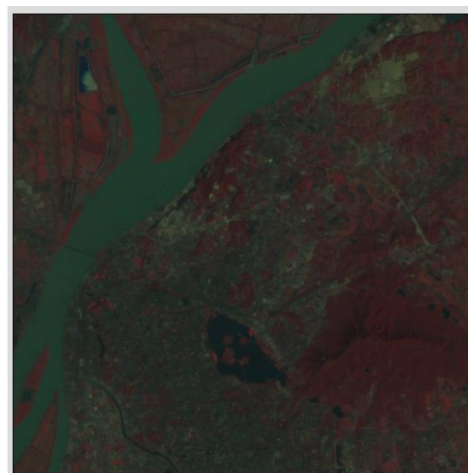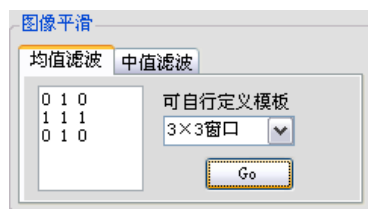
8. Map Algebra Calculation

The software provides map algebra calculation. Users can set the brand of B1 and B2 and which kind of calculation will be used themselves after three multi-brand data have been set. New image will be drawn when *Go* button is pressed.

9. Image Smoothing

The software provides function of both mean filter and median filter. For mean filter, there are two options for users. One is 3 times 3 windows and the other one is 5 times 5 windows. For median filter, the model is 1 times 3 windows. These functions are available when data are uploaded successfully.

10. Help

In case of any problems on RS Tango 1.0, users can get help of the
Help File. Also, users can contract with the developer via *About RS
Tango*.