**User manual**

**Sunsiy10**

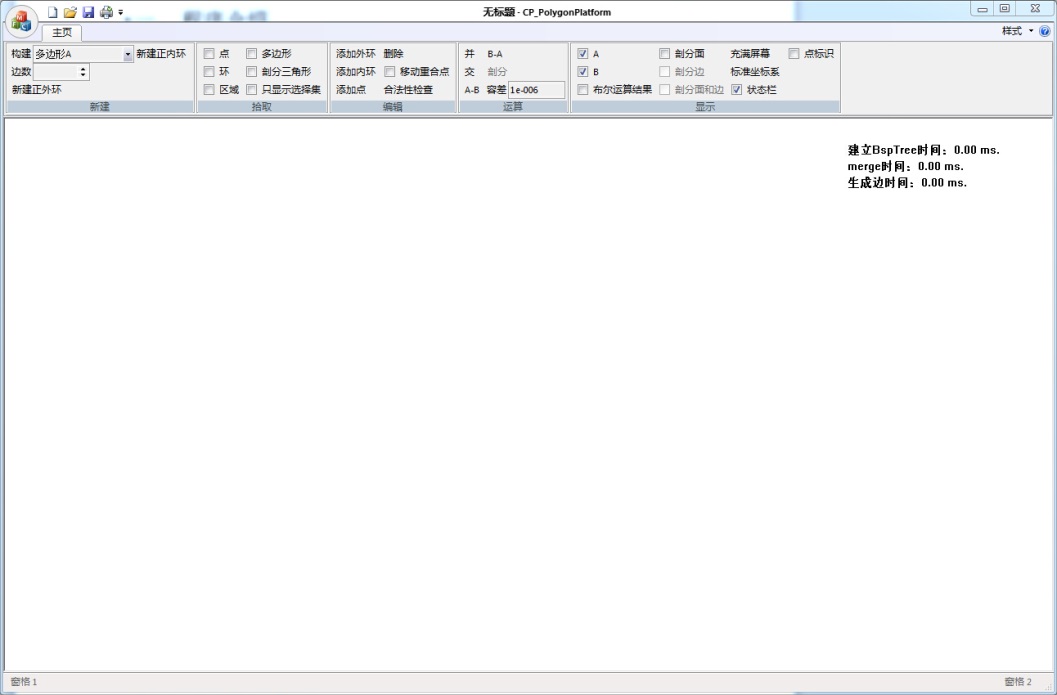
**2014.12.25**

**1. Main interface**

This program can realize three Boolean operations (intersection, union, difference) of general polygons.

After opening the program, you will see the main interface as shown in the figure below, and the upper part of the interface is the menu bar, which shows the main functions supported by the program. On the basis of the original framework, two general multi-deformation intersection, union, and difference operations have been added, as shown in the operation menu bar. Added the legality check function in the edit menu bar to check the legitimacy of general polygons A and B.

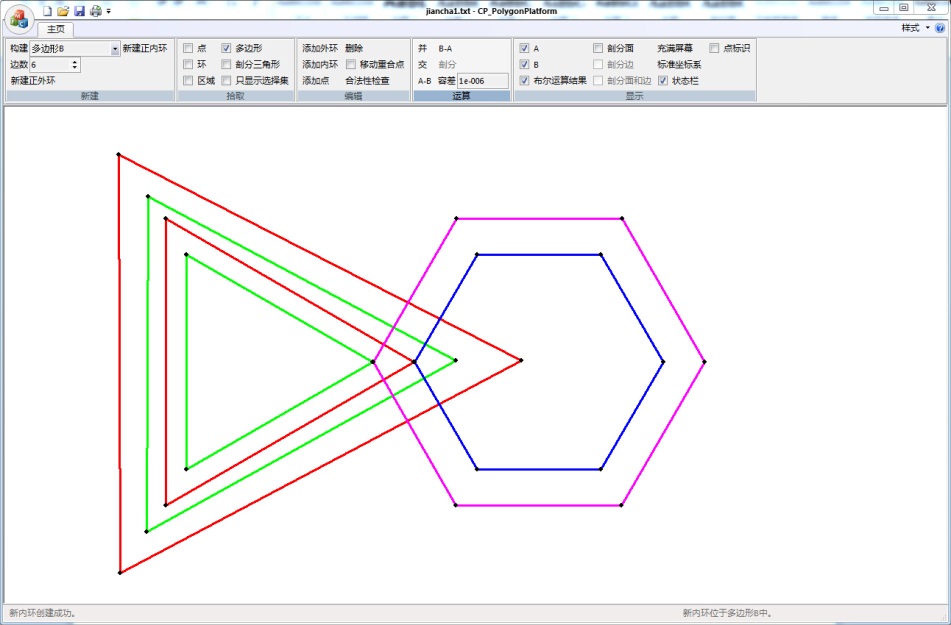
In the display menu bar, users can choose whether to display polygon A, whether to display polygon B, and whether to display Boolean operation results. It should be noted that each time this selection is updated, the previous Boolean result will disappear, and the Boolean operation needs to be re-performed to display the Boolean result.



**2. Polygon Boolean operations**

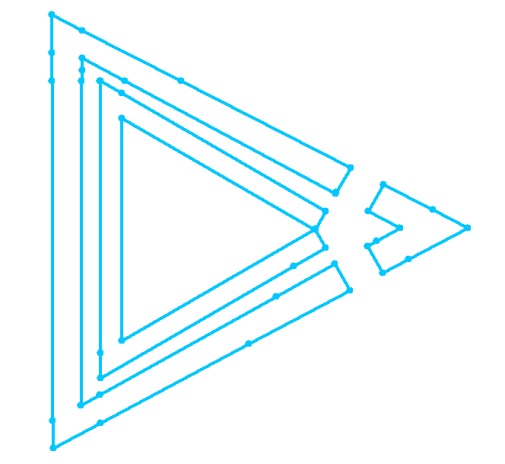
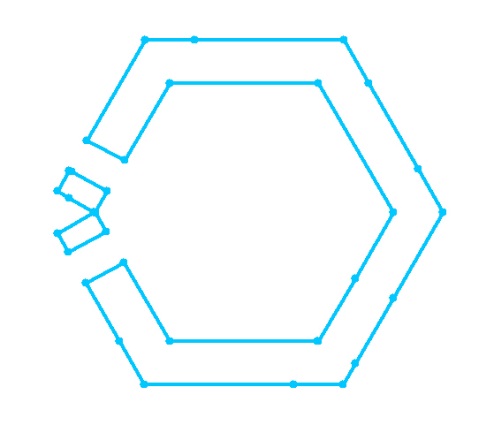
**2.1 Manually add polygons for Boolean operations**

Users can manually create and edit general polygons A and B and perform Boolean operations on them:



In the image above, polygon A is on the left and polygon B on the right.

Boolean result:

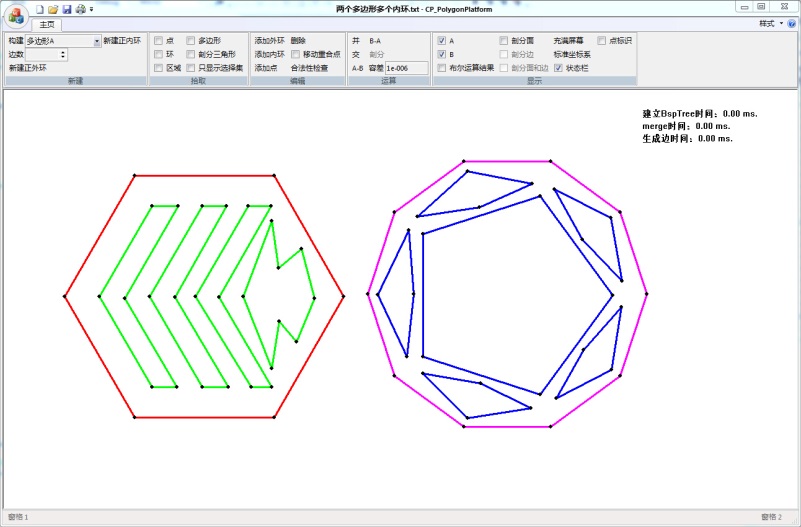
 

A-B B-A

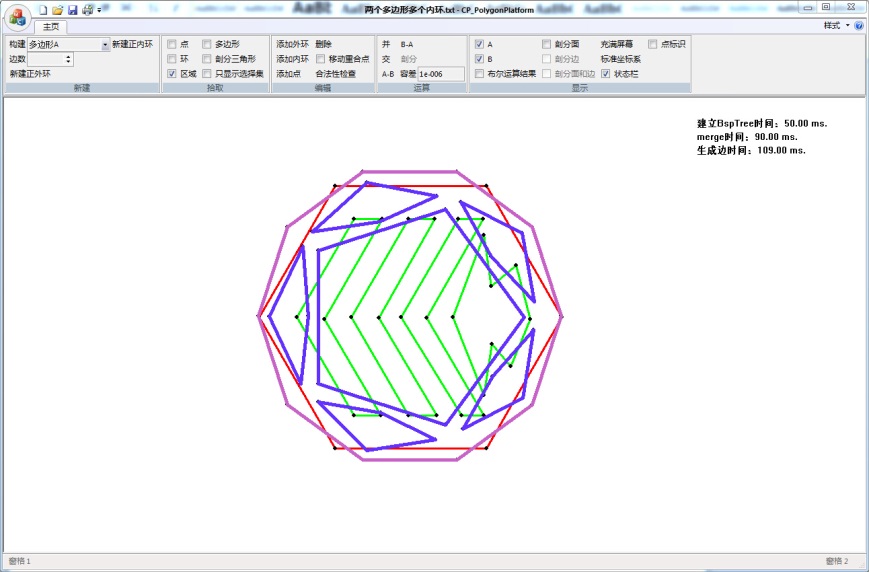
The points on the edges shown in the results are where the edges are partitioned when the spatial binary split tree merges.

**2.2.2 Import files for polygon boolean operations**

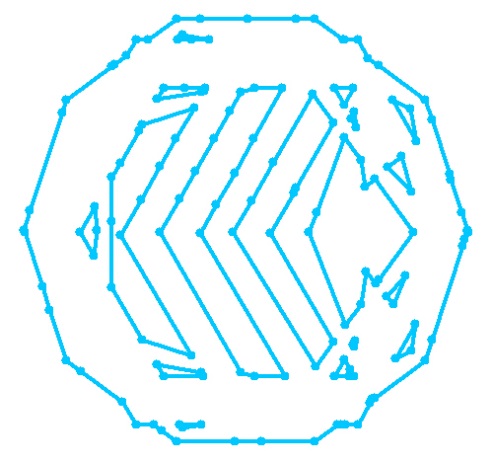
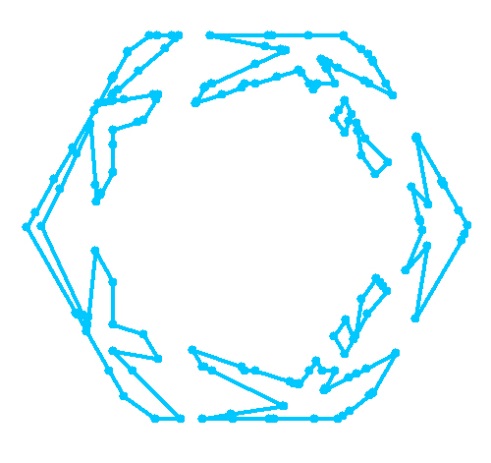
Users can open existing files for corresponding Boolean operations, click the MFC icon in the upper left corner, you can choose to open an existing file, as shown below to open a file: (the left is polygon A, the right is polygon B)



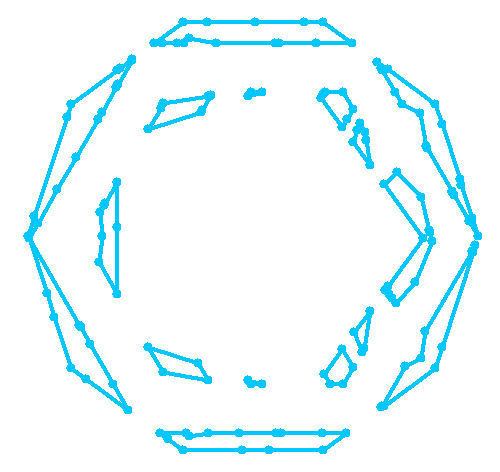
Superimpose the positions of two polygons together:



Boolean result of the operation:

A∪B A∩B

![C:\Users\qinghua\AppData\Roaming\Tencent\Users\1527035368\QQ\WinTemp\RichOle\]PW9](~PP2)CJGS7I@I%XOK.jpg](data:image/jpeg;base64,) 

A-B B-A

**2.3 Legality Check**

Click the legitimacy check button of the edit menu to know the legitimacy of the current polygon: (red is the outer ring of the region in the figure below, and the green is the ring within the region)

