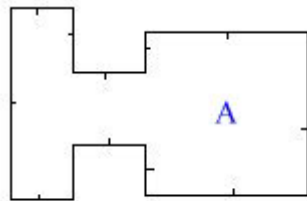


BSP ?:

---

가 . Z-Sorting( )



가 . 가 A  
가 Z-Sort ?  
가 . OpenGL Direct3D  
Z-Sorting . BSP .

```

BSP      Node,Leaf and Solid,types      .
      .      가      leaf tree      . Leaf      (      wall)      .
      nodes(node      BSP tree      leaf      .      ...)

```

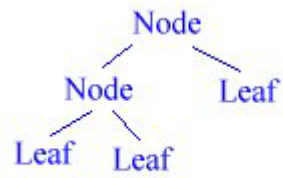


Figure 3

Nodes      node                      leaf              leaf

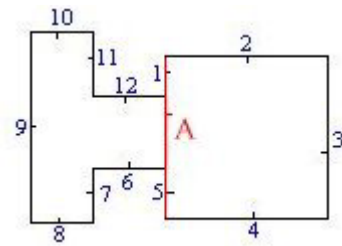


Figure 4

figure 4

line A      가

1      5

가

A

1      5

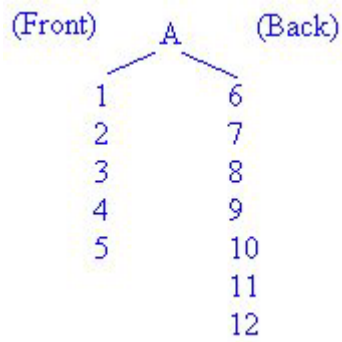


Figure 5

BSP

. A

convex(figure 1  
가

가      )

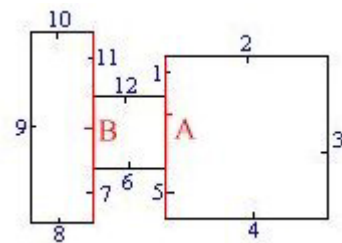


Figure 6

convex 가

convex

B

B

A

A

가

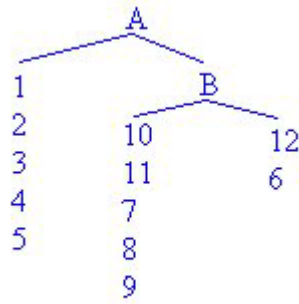


Figure 7

6 12 A B . A 가 B leaf  
 10,11,8,9 A B . A ,B node 가 convex  
 가 BSP tree leaf 가  
 BSP tree node

Bsp tree node 가 !!!!:

Trees leaf trees node 가  
 .(?) trees node 가 leaf ?  
 leaf trees 가 가

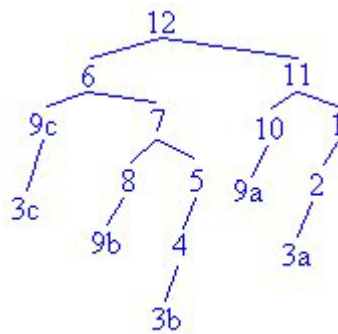


Figure 8

5 가 5 leaf 가 tree

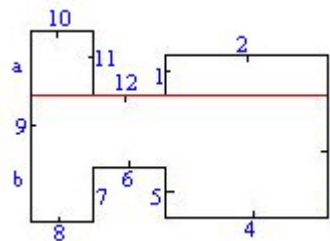


Figure 9

level( 1 5 ) A 12  
 3 3a 3b 12 가 ...

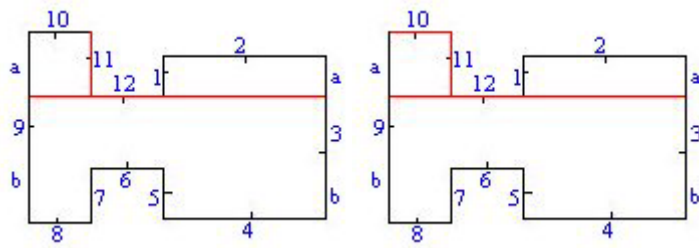


Figure 10 & 11

9a) leaf 12 가 . 1 ( leaf ...

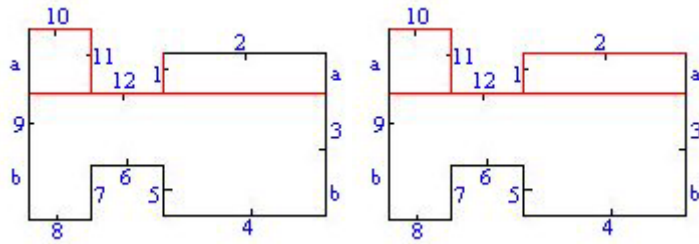
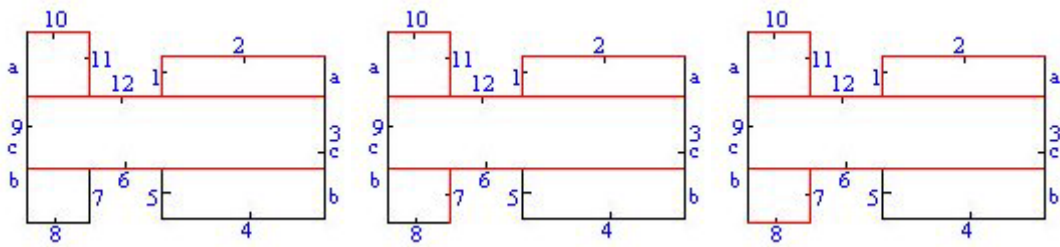


Figure 12 & 13

가 3a leaf 11 .



Figure

14,15 & 16

6 9b 9b 9c 3b 3b 3c . 가  
9b partition7 . (?)

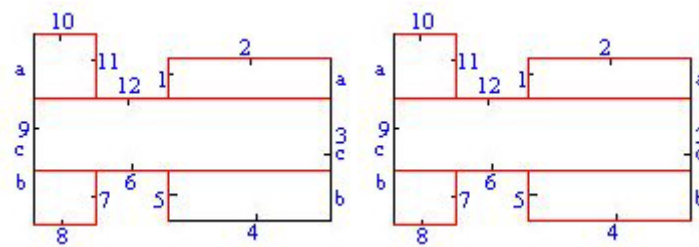


Figure 17 & 18

17 18 figure 가 leaf3b 7 .(?)

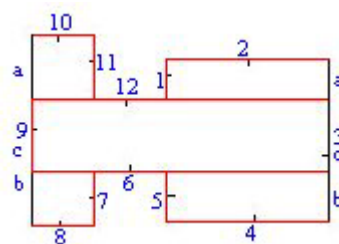


Figure 19

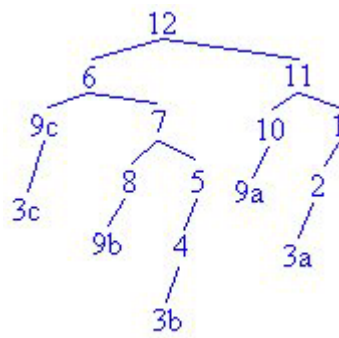


Figure 8

### Z-Sort

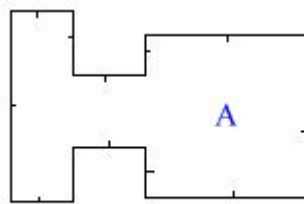


Figure 2

가 가  
가 ?  
leaf

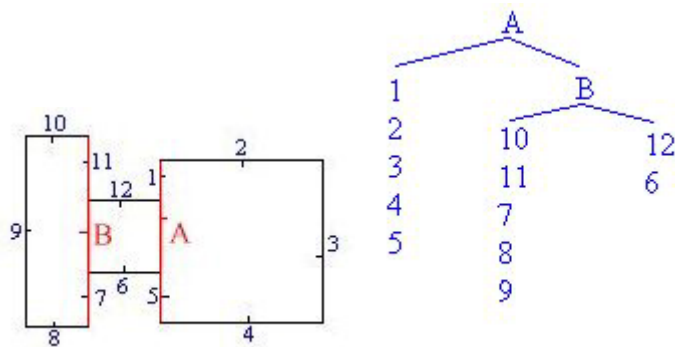


Figure 6 & 7

가 A      가      Z-Sort      A      가?  
BACK      A leaf      가?  
가      (?) B leaf      가?  
B(10,11,7,8,9)      B  
Leaf tree      가      가 (Figure 2)      A      가  
Z-Sort      가 node A      가?  
A      leaf 가      ?      B  
B      leaf 가      ?      B  
(10, 11, 7, 8, 9)      B      leaf 가      ?      B  
가      B      leaf 가      ?      B      (12, 6)  
A      leaf 가      ?      leaf(1, 2, 3, 4, 5)

Root node

Start:

1. Node 가 leaf 가  
( )가

. Node ID

start(

. Tree

가

A  
node B

B

A

.)

2. leaf 가

가

가?

(B

B

.)가

node

. (B

leaf

A

.)

End:

Z-Sorted

가

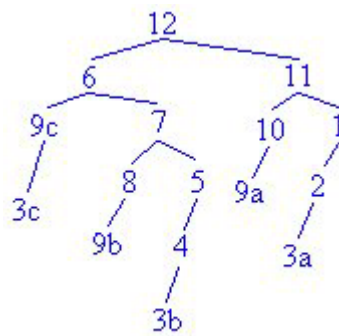


Figure 8

node

가 10

10

. Figure8

node10

가

10

가 leaf 3a

3a, 2, 1, 9a, 10, 11

leaf 9b

9b, 8, 3b, 4, 5, 7, 3c, 9c, 6, 12

가 bsp

가 ??

9000

가

BSP

Z-sort

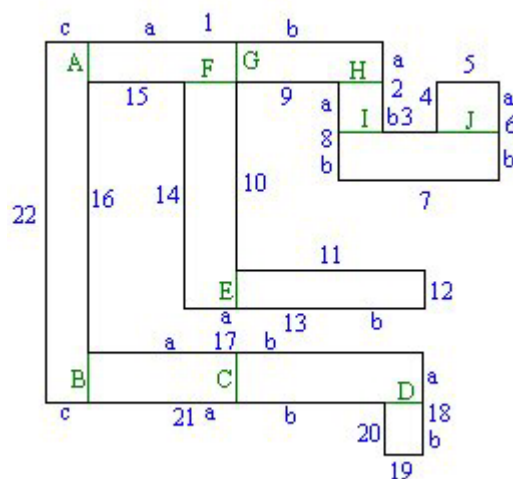
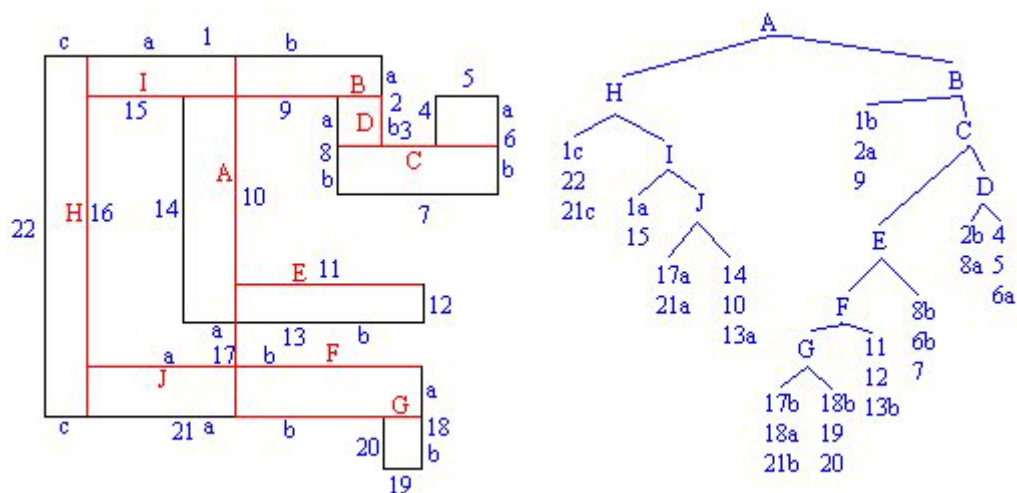
9000

portal

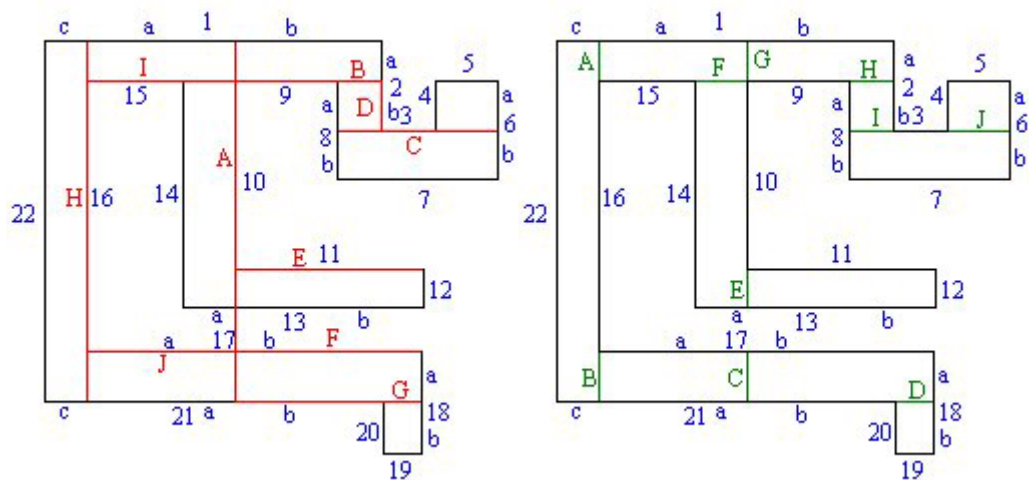
Portal

가?

leaf                      convex                      .                      complex                      . Node  
 BSP tree



? 가? (?)

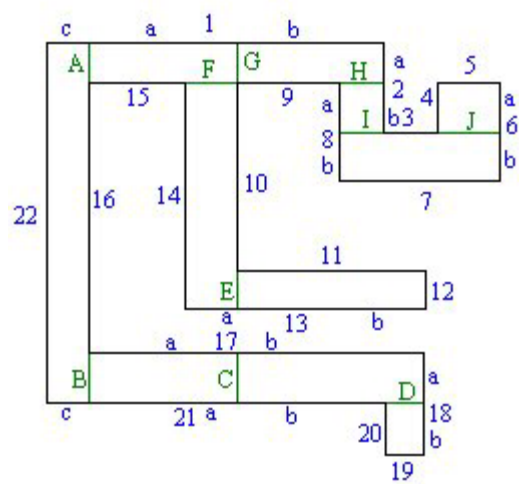


node

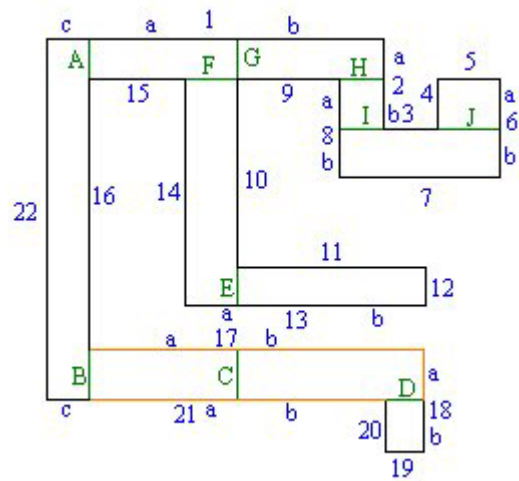
rule node  
19, 20) leaf (17b, 18a, 21b) (18b,  
A 가 가

Portal	...
A	F, G, H
B	C, D
C	B, D
D	B, C
E	F
F	A, E, G
G	A, F, H
H	A, G, I
I	H
J	NOTHING

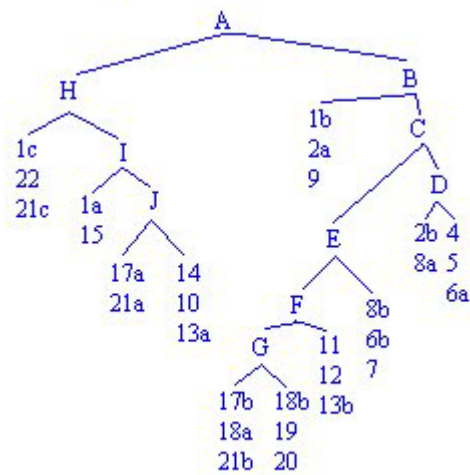
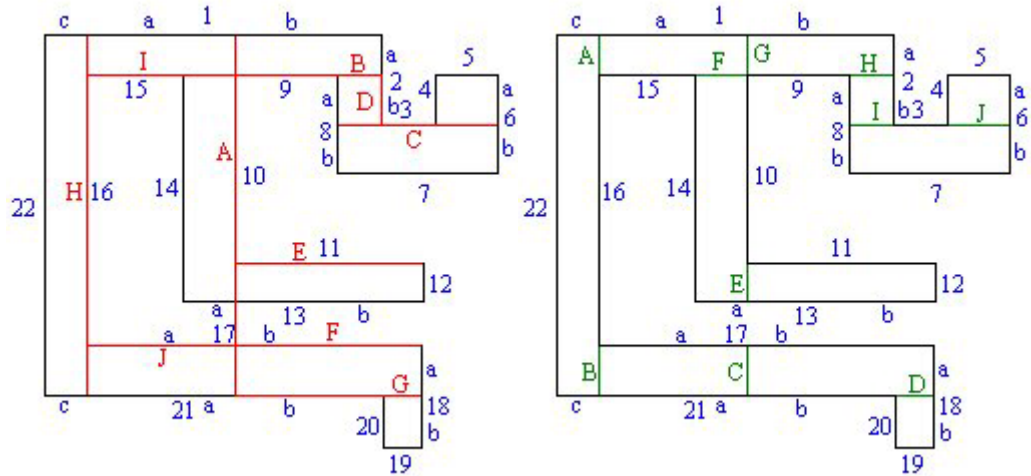
convex







C



Portal		2 leaf
A	F, G, H	1a, 15, 16, 21c, 22, 1c
B	C, D	1c, 16, 17a, 21a, 21c, 22
C	B, D	17a, 17b, 18a, 21b, 21a

D	B, C	17b, 18a, 18b, 19, 20, 21b
E	F	10, 11, 12, 13b, 13a, 14
F	A, E, G	1a, 10, 13a, 14, 15
G	A, F, H	1a, 1b, 2a, 9, 15
H	A, G, I	1b, 2a, 2b, 8a, 9
I	H	2b, 3, 6b, 7, 8b, 8a
J	NOTHING	4, 5, 6a, 6b, 7, 8b, 3

Node portal , BSP tree. 가 . H  
 I .  
 .  
 leafs . (?) 가 H I  
 (1b, 2a, 2b, 9, 2b, 3, 6b, 7, 8b, 8a)  
 . H A,G,I . I H .  
 (A, G, I, H) .  
 H I 가 .  
 A G 가 . list(1a, 16, 21c, 22, 1c, 1b, 2a, 9, 15) A G 가 .  
 list Polygon List first list .  
 "Polygon List" (1b, 2a, 2b, 9, 2b, 3, 6b, 7, 8b, 8a 1a, 16, 21c, 22, 1c, 15). 가  
 Z-Sort . list .