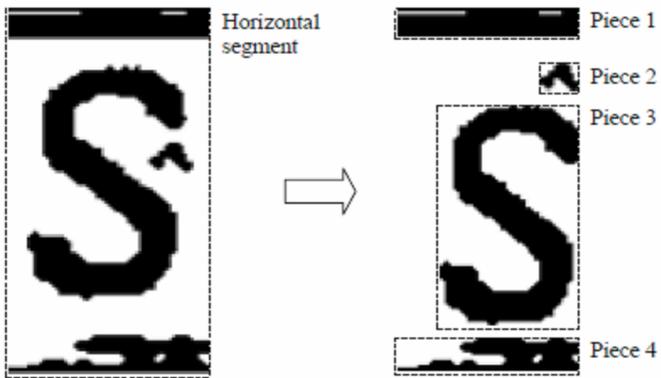
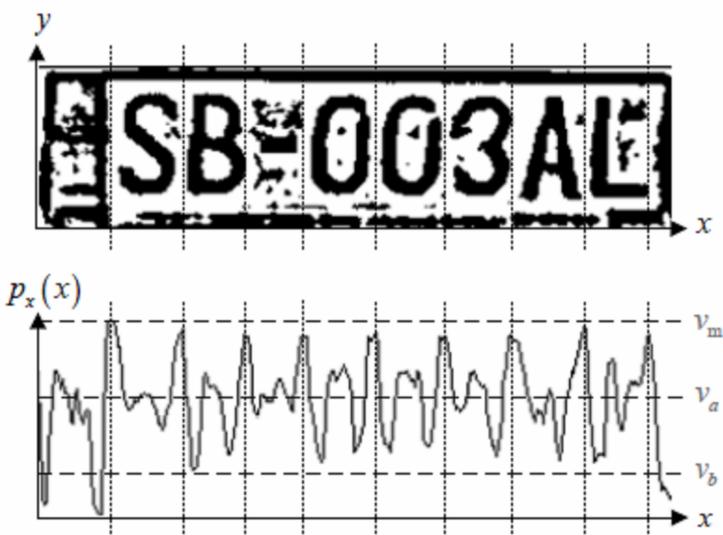




$f(x,y)$  [w-1,h-1]-  
 $f(x,y)$  «1»  
 $[0,0] -$   
 $w$   $h$   
 $\langle 0 \rangle$   
 $[ , ]$ ,  
 $[ , ]$   
 $[ ', ' ]$  ,  
 $[ , ]$  [ ', ' ]  
 $[x,y] \in P \Leftrightarrow \exists [ ', ' ] \in P: [x,y] \overset{N_4}{\sim} [ ', ' ]$



1 - (pieces)



2 - ( )

$\overset{N_4}{\sim}$

»  
 $[x,y] \overset{N_4}{\sim} [ ', ' ] \Leftrightarrow |x - x'| = 1$

(pieces)

- $(x, y) \in S$
- $f(x, y) = 1$
- $S = \{(x, y) \mid f(x, y) = 1\}$
- $A = \{(x, y) \mid f(x, y) = 1\}$

```

let set S = ∅
let set X = {[x, y] | f(x, y) = 1 ^ [0, 0] ≤ [x, y] < [w, h]}
while set X is not empty do
begin
let set R = ∅
let set A = ∅
pull one pixel from set X and insert it into set A
while set A is not empty do
begin
let [x, y] be a certain pixel from A
pull pixel [x, y] from a set A
if f(x, y) = 1 ^ [x, y] ∈ A ^ [0, 0] ≤ [x, y] < [w, h] then
begin
pull pixel [x, y] from set A and insert it into set R
insert pixels [x - 1, y], [x + 1, y], [x, y - 1], [x, y + 1] into set A
end
end
add R to set S
end

```

[3].

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