

The Shift-And formula  $R^0 = ((R_{i-1}^0 \gg 1) \vee 10^{m-1}) \& \Sigma(t_i)$

Example:

Text = aabaacaabacab

pattern = aabac

when  $i=1$

$\Sigma(a)$	11010
$\Sigma(b)$	00100
$\Sigma(c)$	00001
*	00000

1 2 3 4 5 6 7 8 9 10 11 12 13

a a b a a c a a b a c a b

1 1 1 1 1 1 1 1 1 1 1 1 1 1

1 a 0 1
2 a 0 0
3 b 0 0
4 a 0 0
5 c 0 0

10000

$(R_0^0 \gg 1) \vee 10^{m-1}$

& 11010

$\Sigma(a)$

---

$R_1^0$  10000

$R_0^0 R_1^0$ 

1	2	3	4	5	6	7	8	9	...				
a	a	b	a	a	c	a	a	b	a	c	a	b	

j=1

a

$R^0(1,1) = 1$

j=2

a a

$R^0(1,2) = 0$

j=3

a a b

$R^0(1,3) = 0$

j=4

a a b a

$R^0(1,4) = 0$

j=5

a a b a c

$R^0(1,5) = 0$

$R_1^0$

The operation “&” will examine whether the  $\Sigma(t_i)$  equals to the  $p_j$  or not currently.