NodeId 10233102

Leaf set	SMALLER		LARGER	
10233033	10233021		10233120	10233122
10233001	10233000		10233230	10233232

Routing table				
-0-2212102	**1**	-2-2301203	-3-1203203
0	1-1-301233	1-2-230203	1-3-021022
10-0-31203	10-1-32102	**2**	10-3-23302
102-0-0230	102-1-1302	102-2-2302	**3**
1023-0-322	1023-1-000	1023-2-121	**3**
10233-0-01	**1**	10233-2-32	
0		102331-2-0	
		2	

Neighborhood set			
13021022	10200230	11301233	31301233
02212102	22301203	31203203	33213321

- 10233001

① Check leaf set: [10233000, 10233232]

　10233001 ∈ Set

To 10233001

- 10211122

① Check leaf set: NO in set

② Use routing table

　Find 10211302 has more longer prefix

To 10211302

- 10233102

　Don't need to send

- 3 0233123

Next: 31203203

- 10233333

　10233232

- 01233333

　02212102

4.

X, Y, Z

X : S = 0, { }

Y : S = 0, { }

Z : S = 0, { }

① Y send message, X and Y receive

$X: S=0, \{Y:0\}$

$Y: S=1, \{\quad\}$

$Z: S=0, \{Y:0\}$

② $X \nearrow Y$
   $\quad \xcancel{X} \searrow Z$

$X: S=1, \{Y:0\}$
$Y: S=1, \{X:0, Y:0\}$
$Z: S=0, \{Y:0\}$

③ $X \longleftarrow Y$
   $\quad\quad Z \swarrow$

$X: S=1, \{Y:1\}$

$Y: S=2, \{X:0, Y:0\}$

$Z: S=0, \{Y:1\}$

Z realises that it miss $\{X:0\}$

so: $Z \longrightarrow X$
   $\quad\quad NAK 0$

$\quad\quad X \longrightarrow Z$

$$x \longrightarrow z$$
$$\{x:0, Y:0\}$$

$S0$

$x: S=1, \{Y:1\}$

$Y: S=2, \{x:0, Y:0\}$

$z: S=0, \{x:0, Y:1\}$

④
$$\overset{x}{\wedge} \nearrow Y$$
$$\underset{z}{}$$
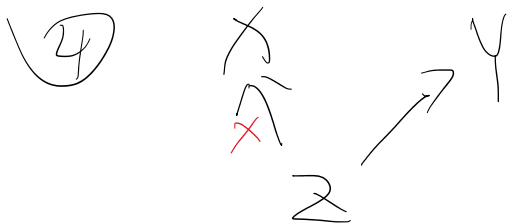
$x: S=1, \{Y:1\}$

$Y: S=2, \{x:0, Y:0, z:0\}$

$z: S=1, \{x:0, Y:1\}$

⑤
$$x \qquad Y$$
$$<3:1> \nwarrow z \nearrow <2:1>$$
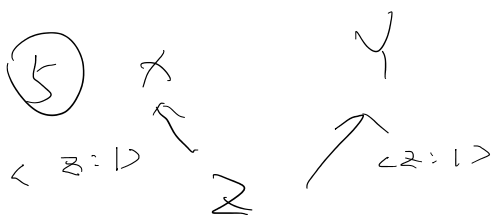
$x: S=1, \{Y:1\}$, realize, it miss $\{z:0\}$

$Y: S = 2, \quad \{X:0, Y:0, Z:1\}$

$Z: S = 2, \quad \{X:0, Y:1\}$

SO $\quad X \xrightarrow{NAKO} Z$

$\quad Z \longrightarrow X$

$(0, \{X:0, Y:1\})$

$X: S = 1, \quad \{X:0, Y:1, Z:1\}$

$Y: S = 2 \quad \{X:0, Y:0, Z:1\}$

$Z: S = 2 \quad \{X:0, Y:1\}$