Web Tax Example 6

$TD(B, \{B,P\}\{B\})$

$IR(P, \{P\}, \{B,P\}$

$DB(P, \{P\}\{P\})$

$\dashrightarrow FF(P, \{B,P\}\{BP\}$
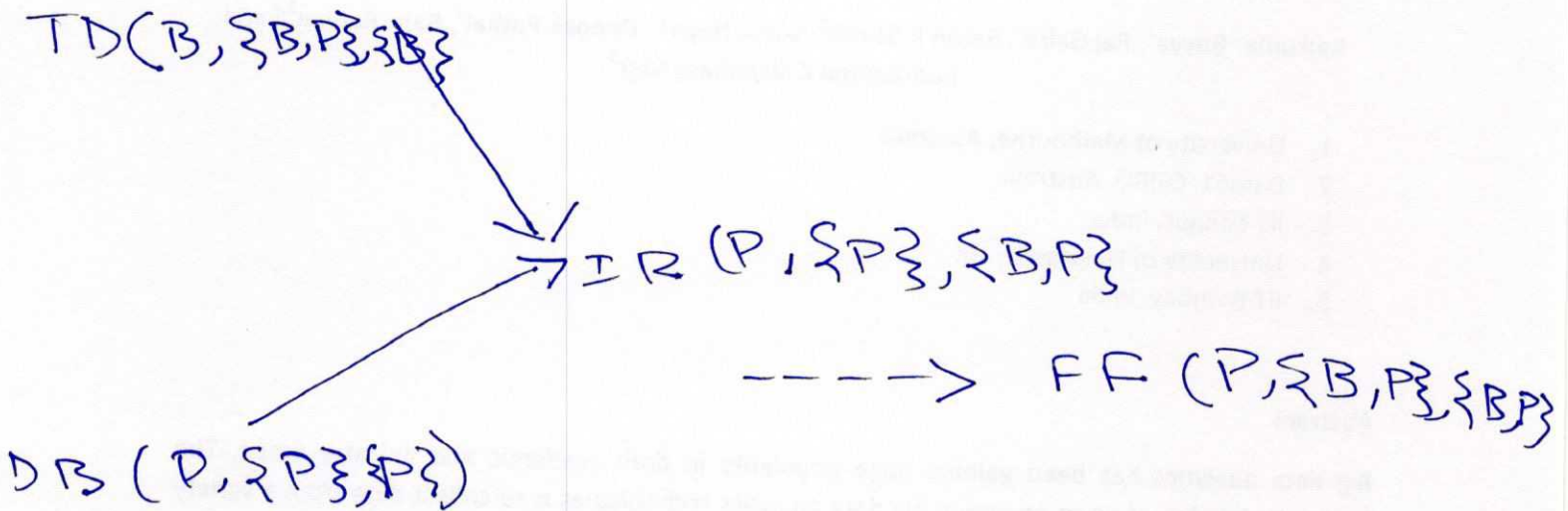
Conference Management System

- Reviewers of the same paper cannot read the review of other reviewers without first submitting their reviews.

$$C \rightarrow chair \rightarrow \text{All powerful (highest clearance)}$$

$$S = \{a_1, a_2, rv_1, rv_2, C\}$$

$$O = \{p_1, p_2, rv_{11}, rv_{12}, rv_{21}, rv_{22}\}$$
$$\uparrow \qquad \uparrow \qquad \uparrow \qquad \uparrow$$
$$owner \quad A_1 \quad A_2 \quad C \quad C$$

Paper Assignment $\{(rv_1, p_1), (rv_1, p_2), (rv_2, p_2), \cdots \}$

$p_1 \quad (A, \{a_1, a_2, rv_1, rv_2\} \{a_2\})$

$rv_{11} (d, \{C, rv_1\}, \{a_1, rv_1\})$

$(\cancel{c}, \{C, rv_1\}, \{rv_1\})$
similarly — $rv_{12} (C_1, \{C, rv_2\}, \{a_2, rv_2\})$

$$(C,\ \bar{C},\ \{ a_1, a_2, rr_1, rr_2 \})$$

r_{11} r_{12}

$$(C,\ \{ C, rr_1 \},\ \{ a_1, rr_1 \}) \qquad (C,\ \{ C, rr_2 \},\ \{ a_2, rr_2 \})$$

Vickery Auction

Auctioneer is a Trusted Party

with initial floating label: $(Au, *, \phi)$

bid A —— $(Au, \{A, Au\}, \{A\})$

bid B —— $(Au, \{B, Au\}, \{B\})$

$Au \nrightarrow$ ⌐ bid A is Submitted

$\quad\quad\quad \hookrightarrow (Au, \{A, Au\}, \{A\})$

$Au \nleftarrow$ ⌐ bid B is "

$\quad\quad\quad\quad (Au, \{Au\}, \{A, B\})$

⊥

(i) Now Au can declassify

(ii) what happens if Au declassify
in between

$$B_1 \quad B_2$$

$$C_1 \quad C_2$$

$$B_1 C_1 \quad C_1 B_1$$

$$B_1 C_2 \quad C_2 B_1 \quad \cdots \quad \cdot$$

$$\left(E_1, \left\{ AB_1, C_1 B_1, \left\{ B_1 \right\} \right\} \right)$$

$$\left(E_1, \left\{ B_1, C_1 B_1 \phi \right\} \right)$$

Dynamic Labelling

~~X Ø :~~ $(PC, \{A\})$

x: $(PC, \{A,\}, \phi)$
           PC

y: $(PC, \{B, PC\}, \phi)$

z: Label of x $(PC, \{A, PC\}, \phi)$

void test ( )

{ int a;

    a = x   // a $\{PC, \{A, PC\}, \phi\}$

    z = a   // z fixed label
                           Constraint
                           Satis fied

                       a - Healing
   a = y //   ain label ஆகும்
                         a ⊕ y
}
                         $\{PC, \{PC\}, \phi\}$