

Drill / Drill down

$$Ch. select = \{a, b, a''\}$$

$$P. select = \{a, b\}$$

$$T. select = \{t, b\}$$

$$J_{cc}(q_{ch}, T) = \frac{\{a, b, a''\} \cap \{t, b\}}{\{a, b, a'', t, b\}}$$

$$\leq \frac{\{a, a'', b\} \cap \{t, b\}}{\{b, t, b\}}$$

$$\leq \frac{\{a, a'', b\} \cap \{a, t, b\}}{\{a, b, t, b\}}$$

$$\leq \frac{[\{a, b\} \cap \{a, t, b\}] \cup [\{a, a''\} \cap \{a, t, b\}]}{\{a, b, t, b\}}$$

$$\leq \frac{[\{a, b\} \cap \{t, b\}] \cup [\{a, b\} \cap \{a\}] \cup [\{a, a''\} \cap \{a, t, b\}]}{\{a, b, t, b\}}$$

$$\leq J_{cc}(q_p, T) + \frac{\{a\} \cup (\{a, a''\} \cap \{a, t, b\})}{\{a, b, t, b\}}$$

$$\leq J_{cc}(q_p, T) + \frac{\{a, a''\} \cap \{a, t, b\}}{\{a, b, t, b\}}$$

$$\leq J_{cc}(q_p, T) + \frac{\{a, a''\} \cap \{t, b\}}{\{b, t, b\}}$$

$ch.select = \{a', b'\}$   
 $P.select = \{a, b\}$   
 $T.select = \{t, b'\}$

Zoom In/ slice  
Extension / slice

$$J_{cc}(q_{ch}, T) = \frac{\{a', b'\} \cap \{t, b'\}}{\{a', b, t, b'\}}$$

$$\leq \frac{\{a', b'\} \cap \{t, b'\}}{\{b, t, b'\}}$$

$$\leq \frac{[\{a', b'\} \cap \{t, b'\}] \cup \{a\}}{\{b, t, b', a\}}$$

$$\leq \frac{\{a', a, b'\} \cap \{t, b', a\}}{\{b, t, b', a\}}$$

$$\leq \frac{\{a, b'\} \cap \{t, b', a\} \cup \{a'\} \cap \{t, b', a\}}{\{b, t, b', a\}}$$

$$\leq \frac{\{a, b'\} \cap \{t, b', a\}}{\{b, t, b', a\}} + \frac{\{a'\} \cap \{t, b', a\}}{\{b, t, b', a\}}$$

$$\leq \frac{\{a, b'\} \cap \{t, b'\}}{\{b, t, b', a\}} + \frac{\{a\}}{\{b, t, b', a\}} + \frac{\{a'\} \cap \{t, b', a\}}{\{b, t, b', a\}}$$

$$\leq J_{cc}(P, T) + \frac{\{a', a'\} \cap \{t, b', a\}}{\{b, t, b', a\}}$$

$$J_{cc}(q_{ch}, T) \leq J_{cc}(P, T) + \frac{\{a'\} \cap \{t, b'\}}{\{b, t, b'\}}$$

child.select clause -  $\{att_P, b'\} \cap T.select$   
 $T.select \cup \{att_P, b'\}$