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Query	Output Size	Cost	Plan
$R \bowtie S$	200	8750	$R \bowtie S$
$R \bowtie W$	40,000	7500	$R \bowtie W$
$R \bowtie U$	40,000	6250	$R \bowtie U$
$S \bowtie W$	40,000	6250	$S \bowtie W$
$W \bowtie U$	20,000	3750	$W \bowtie U$
$R \bowtie S \bowtie W$	4000	11,500	$(R \bowtie S) \bowtie W$
$R \bowtie S \bowtie U$	2000	10,250	$(R \bowtie S) \bowtie U$
$R \bowtie W \bowtie U$	40,000	9000	$(R \bowtie W) \bowtie U$
$R \bowtie S \bowtie W \bowtie U$	80,000	15250	$((R \bowtie S) \bowtie U) \bowtie W$

Join Algo:

$B(R) = \dfrac{T(R)}{4} = \dfrac{4000}{4} = 1000$

$B(S) = \dfrac{T(S)}{4} = \dfrac{3000}{4} = 750$

$B(W) = \dfrac{T(W)}{4} = \dfrac{2000}{4} = 500$

$B(U) = \dfrac{T(U)}{4} = \dfrac{1000}{4} = 250$

Output Size: $T(R \bowtie S) = \dfrac{T(R) \, T(S)}{(V(R,B), V(S,B))} = \dfrac{4000 \cdot 3000}{\max(200,100) \cdot \max(100,300)} = \dfrac{12,000,000}{60,000} = 200$

Cost $R \bowtie S$: $5(1000) + 5(750)$
$= 5000 + 3750$

Cost $S = 5(750) = 3750$
$\&$ lowest cost

$= 8750$

Cost $R \bowtie S \bowtie U$:
$8750 + 5(250) + 5(50) = 10,250$

Cost $R \bowtie S \bowtie W$:
$8750 + 5(500) + 5(50) = 11500$

Cost $R \bowtie W \bowtie U$:
$7500 + 5(250) + 5(50) = 9000$

Plan:

$R \bowtie S$
$\downarrow$
$(R \bowtie S) \bowtie U$
$\downarrow$
$((R \bowtie S) \bowtie U) \bowtie W)$

→ If we use the lowest cost join & do one do one more join on that we will get the lowest cost.

→ Cost: 15,250