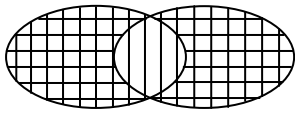


Ideja dolazi sa sljedeće slike:



Horizontalna šrafura – $A \Delta B$

Vertikalna šrafura – $A \cup B$

Naslućuje se da je $A \Delta B \Delta (A \cup B) = A \cap B$. Postoji mnogo načina da se ovo izvede. Jedan od njih je sljedeći:

$$\begin{aligned}
 A \Delta B \Delta (A \cup B) &= A \Delta ((B \setminus (A \cup B)) \cup ((A \cup B) \setminus B)) = \\
 &= A \Delta ((B \cap (A \cup B)') \cup ((A \cup B) \cap B')) = A \Delta ((B \cap A' \cap B') \cup (A \cap B') \cup (B \cap B')) = \\
 &= A \Delta (\emptyset \cup (A \cap B') \cup \emptyset) = A \Delta (A \cap B') = (A \setminus (A \cap B')) \cup ((A \cap B') \setminus A) = \\
 &= (A \cap (A \cap B')') \cup (A \cap B' \cap A') = (A \cap (A' \cup B)) \cup \emptyset = A \cap (A' \cup B) = \\
 &= (A \cap A') \cup (A \cap B) = \emptyset \cup (A \cap B) = A \cap B
 \end{aligned}$$

Ovo izvođenje prati analogiju sa izvođenjem relacije $A \underline{\vee} B \underline{\vee} (A \vee B) = AB$ u logici iskaza:

$$\begin{aligned}
 A \underline{\vee} B \underline{\vee} (A \vee B) &= A \underline{\vee} (\overline{B \vee A} \vee \overline{B} (A \vee B)) = A \underline{\vee} (B \overline{A} \overline{B} \vee A \overline{B} \vee B \overline{B}) = \\
 &= A \underline{\vee} (\perp \vee A \overline{B} \vee \perp) = A \underline{\vee} A \overline{B} = A \overline{\overline{A \overline{B}}} = A (\overline{A} \overline{B}) \vee \perp = \\
 &= A (\overline{A} \vee B) = A \overline{A} \vee AB = \perp \vee AB = AB
 \end{aligned}$$