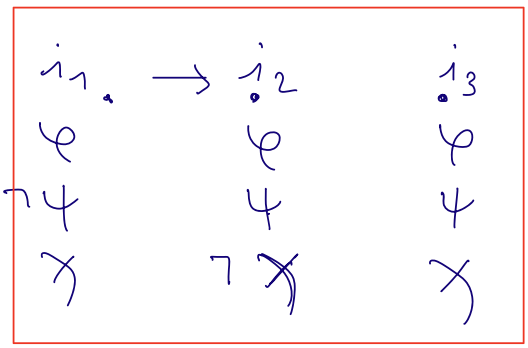
line 564, file DDLcube.thy.
This is the model shown by nitpick. We have $P(\varphi/\varphi\vee\psi)$, $P(\psi/\psi\vee\chi)$ and $P(\varphi/\varphi\vee\chi)$

$i_1 \to i_2$ means $i_1 \geq i_2$ ($\sqsubseteq i_1\ i_2$)
no arrow means $\not\geq$

$\|A\|$ = set of worlds where A holds



Verification:

$\max(\|\varphi\vee\psi\|) = \{i_1, i_3\} \cap \|\varphi\| = \{i_1, i_3\}$
↳ $P(\varphi/\varphi\vee\psi)$ holds

$\max(\|\psi\vee\chi\|) = \{i_1, i_3\} \cap \|\psi\| = \{i_3\}$
↳ $P(\psi/\psi\vee\chi)$

$\max(\|\varphi\vee\chi\|) = \{i_1, i_3\} \cap \{i_1\}$
↳ $P(\varphi/\varphi\vee\chi)$

However, the law does not hold in general, if I change the value of φ, ψ and χ.

$P(\overbrace{\varphi\wedge\psi\wedge\neg\chi}^{\varphi} / \overbrace{(\varphi\wedge\psi\wedge\neg\chi)}^{\varphi} \vee \overbrace{(\varphi\wedge\psi\wedge\chi) \vee (\varphi\wedge\psi\wedge\neg\chi)}^{\psi})$ is true

$P(\overbrace{(\varphi\wedge\psi\wedge\chi) \vee (\varphi\wedge\psi\wedge\neg\chi)}^{\psi} / \overbrace{(\varphi\wedge\psi\wedge\chi) \vee (\varphi\wedge\psi\wedge\neg\chi)}^{\psi} \vee \overbrace{(\varphi\wedge\neg\psi\wedge\chi)}^{\chi})$ is true

$P(\overbrace{\varphi\wedge\psi\wedge\neg\chi}^{\varphi} / \overbrace{(\varphi\wedge\psi\wedge\neg\chi)}^{\varphi} \vee \overbrace{(\varphi\wedge\neg\psi\wedge\chi)}^{\psi})$ is false

proof:

$\max(i_2, i_3) \cap |i_2| \neq \emptyset$
$\max(i_1, i_2, i_3) \cap |i_2, i_3| \neq \emptyset$
$\max\{i_2, i_1\} \cap |i_1| = \emptyset$