



- $P_{111} : a \wedge b \wedge c$
- $P_{112} : a \wedge b \wedge \neg c$
 $\rightarrow G_{11} : a \wedge b$
- $P_{121} : c \wedge d \wedge f$
- $P_{122} : c \wedge d \wedge \neg f$
 $\rightarrow G_{12} : c \wedge d$
- $P_{131} : e \vee f$
- $P_{132} : \neg e \wedge \neg f$
 $\rightarrow G_{11} : \top$
 $\rightarrow P_1 : a \wedge b \wedge c \wedge d$
- $P_{211} : \neg a \wedge \neg d \wedge (b \vee c)$
- $P_{212} : \neg a \wedge \neg d \wedge (\neg b \vee \neg c)$
 $\rightarrow G_{21} : \neg a \wedge \neg d$
- $P_{221} : e$
- $P_{222} : \neg e$
 $\rightarrow G_{21} : \top$
- $P_{231} : \neg a \wedge \neg d \wedge (b \wedge f)$
- $P_{232} : \neg a \wedge \neg d \wedge (\neg b \vee \neg f)$
 $\rightarrow G_{31} : \neg a \wedge \neg d$
 $\rightarrow P_2 : \neg a \wedge \neg d$
- $P_{331} : (\neg b \vee (b \wedge \neg a) \vee (b \wedge \neg d)) \wedge (c \vee e \vee f)$
- $P_{332} : (\neg b \vee (b \wedge \neg a) \vee (b \wedge \neg d)) \wedge (\neg c)$
 $\rightarrow G_{31} : \neg(a \wedge b \wedge d)$
 $\rightarrow P_3 : \neg(a \wedge b \wedge d)$

P_1 : P_1 can succeed when the initial state satisfies $a \wedge b \wedge c \wedge d$ and the right choices are made. I believe I made a mistake for the postcondition of a_{111} , probably I wanted c to be set to true for a_{112} , so that c is always true for the goal G_{12} when G_{11} succeeded. Because of that P_1 succeeds when the initial state is $a \wedge b \wedge d$ and the right choices are made.

P_2 : P_2 succeeds when $\neg a \wedge \neg d$ and the right choices are made.

P_3 : It seems that the expression $(\neg b \vee (b \vee \neg a) \vee (b \wedge \neg d))$ is equal to $\neg(a \wedge b \wedge d)$ to treat cases not handled by P_1 .