

# GWV, Blatt 07

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## 1. Assumables

- buttler\_worked
- buttler\_did\_not\_work
- gardener\_worked
- gardener\_did\_not\_work

## Observations

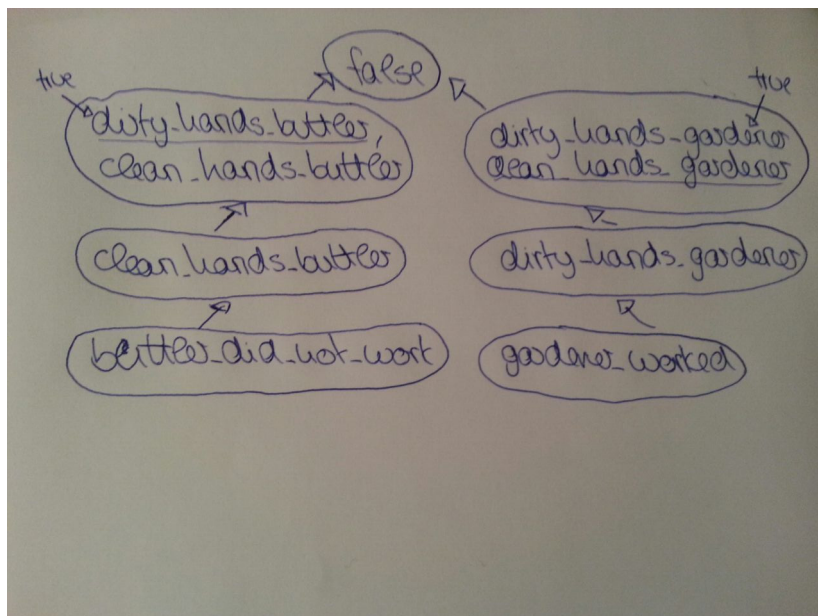
- dirty\_hands\_buttler  $\leftarrow$
- clean\_hands\_gardener  $\leftarrow$

## Regeln

- clean\_hands\_buttler  $\leftarrow$  buttler\_did\_not\_work
- dirty\_hands\_gardener  $\leftarrow$  gardener\_worked

## Integrity Constraints

- false  $\leftarrow$  dirty\_hands\_buttler  $\wedge$  clean\_hands\_buttler
- false  $\leftarrow$  dirty\_hands\_gardener  $\wedge$  clean\_hands\_gardener



## Minimaler Konflikt

{buttler\_did\_not\_work} und {gardener\_worked}

## Minimale Diagnose

{buttler\_did\_not\_work, gardener\_worked}

Es muss also gelten, dass der Buttler gearbeitet hat, bzw der Gärtner nicht gearbeitet hat, da es ansonsten zu einem Widerspruch kommen würde.

# Knowledge base:

```

noise_1 <- starter_on
noise_2 <- fuelPump_on
noise3 <- engine_on
fuelPump_on <- electronicFuelRegulation_on, fuelTank_full, fuelPump_ok
filter_on <- filter_ok, fuelPump_on
engine_on <- starter_on, engine_ok
starter_on <- ignitionKey_on, starter_ok
ignitionKey_on <- battery_on, ignitionKey_ok
battery_on <- battery_full, battery_ok
electronicFuelRegulation_on <- battery_on, electronicFuelRegulation_ok
fuelTank_on <- fuelTank_full, fuelTank_ok

```

Integrity constraints:

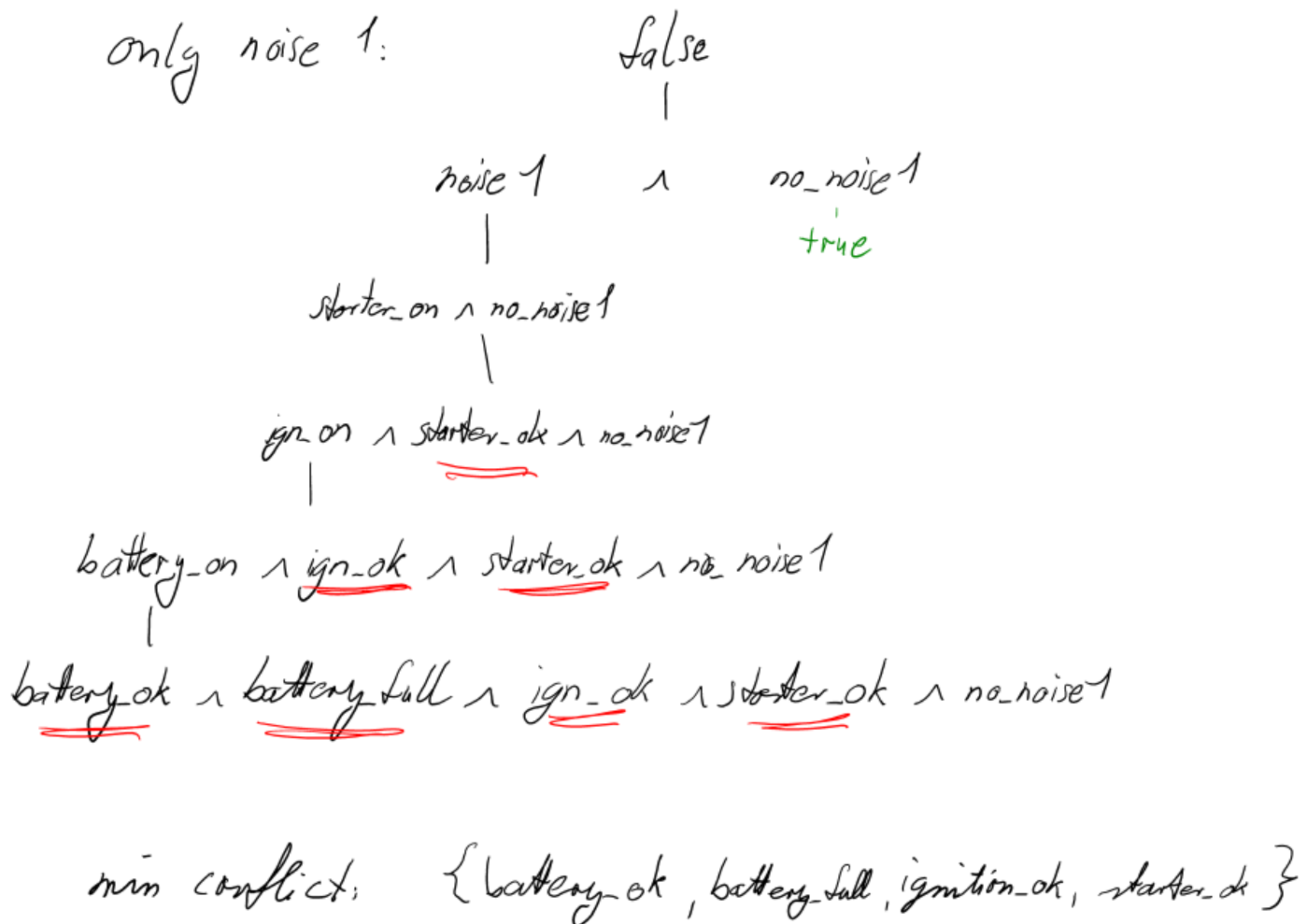
```

false <- noise1, not_noise1
false <- noise2, not_noise2
false <- noise3, not_noise3

```

Assumables:

Alles mit \_ok und \_full



only noise 2:

(fuel pump = fp)

(electronic fuel regulation = efr)

(fuel tank = ft)

false

noise 2  $\wedge$  no noise 2

fp-on  $\wedge$  no noise 2

efr-on  $\wedge$  ft-on  $\wedge$  fp-ok  $\wedge$  no noise 2

battery-on  $\wedge$  efr-ok  $\wedge$  ft-on  $\wedge$  fp-ok  $\wedge$  no noise 2

efr-on  $\wedge$  ft-full  $\wedge$  ft-ok  $\wedge$  fp-ok  $\wedge$  no noise 2

b-ok  $\wedge$  b-full  $\wedge$  efr-ok  $\wedge$   
ft-on  $\wedge$  fp-ok  $\wedge$  no noise 2

b-on  $\wedge$  efr-ok  $\wedge$  ft-full  $\wedge$   
ft-ok  $\wedge$  fp-ok  $\wedge$  no noise 2

b-on  $\wedge$  efr-ok  $\wedge$  ft-full  $\wedge$   
ft-ok  $\wedge$  fp-ok  $\wedge$  no noise 2

b-ok  $\wedge$  b-full  $\wedge$  efr-ok  $\wedge$   
ft-full  $\wedge$  ft-ok  $\wedge$  fp-ok  $\wedge$  no noise 2

b-full  $\wedge$  b-ok  $\wedge$  efr-ok  $\wedge$   
ft-full  $\wedge$  ft-ok  $\wedge$  fp-ok  $\wedge$  no noise 2

b-full  $\wedge$  b-ok  $\wedge$  efr-ok  $\wedge$  ft-full  
 $\wedge$  ft-ok  $\wedge$  fp-ok  $\wedge$  no noise 2

min-conflict: { b-ok, b-full, efr-ok, ft-full, ft-ok, fp-ok }

$$\text{noise } 1 \wedge \text{noise } 2 \wedge \neg \text{noise } 3$$

$$\text{false} \leftarrow \text{noise } 3 \wedge \underline{\text{no\_noise } 3}$$

| true

$$\text{e\_on} \wedge \text{no\_noise } 3$$

|

$$\underline{\text{s\_on}} \wedge \text{f\_on} \wedge \underline{\text{e\_ok}} \wedge \text{no\_noise } 3$$

| true

$$\underline{\text{s\_on}} \wedge \underline{\text{f\_ok}} \wedge \underline{\text{fp\_on}} \wedge \underline{\text{e\_ok}} \wedge \text{no\_noise } 3$$

true true

$$\text{min conflict: } \{\text{f\_ok}, \text{e\_ok}\}$$