

# Nutzung von Bewegungsinformation zur Routennavigation und zur effizienten Vermessung der lokalen Umgebung

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# Gliederung

## Routennavigation

- Inkrementelle Generalisierung
- Ergebnisse
- Navigation
- Toleranzen
- Demonstration

## Vermessung der Umgebung

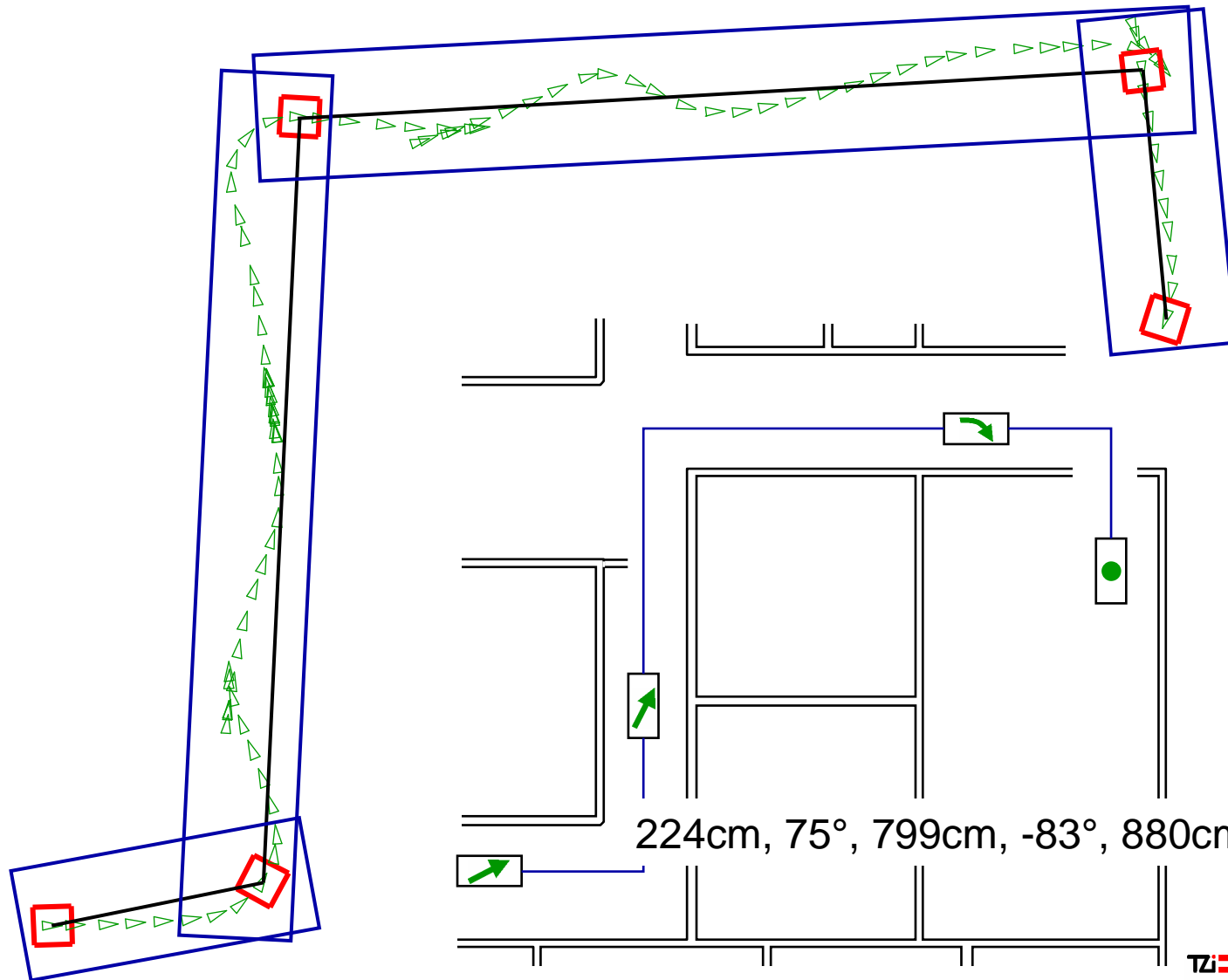
- „Statische“ Sonarvermessung
- Bedarfsgerechte und gleichmäßige Vermessung
- Ergebnisse

## Fahrassistent

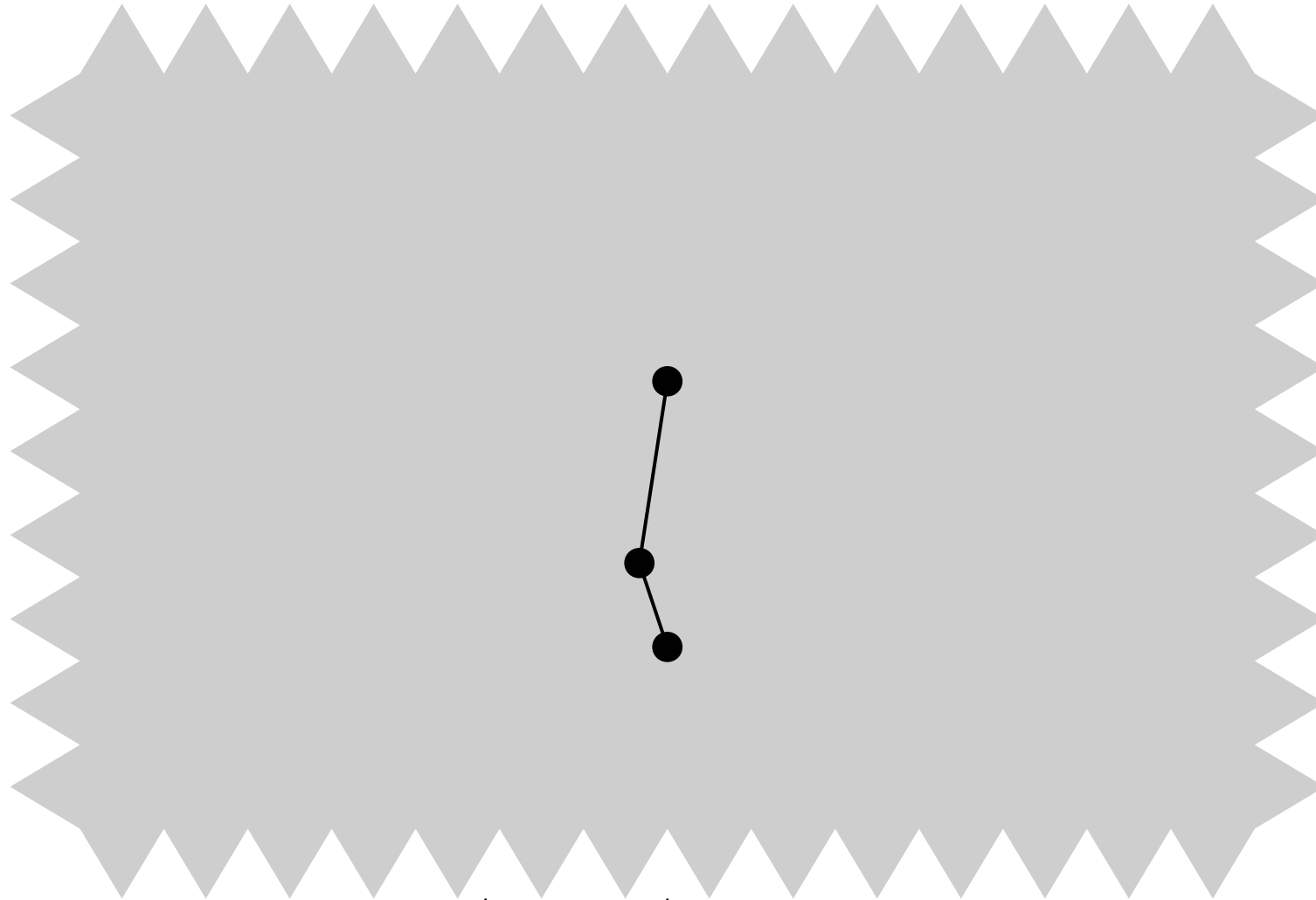
- Ausweichen / Shared Control
- Demonstration

## Ausblick

# Routennavigation - Grundidee

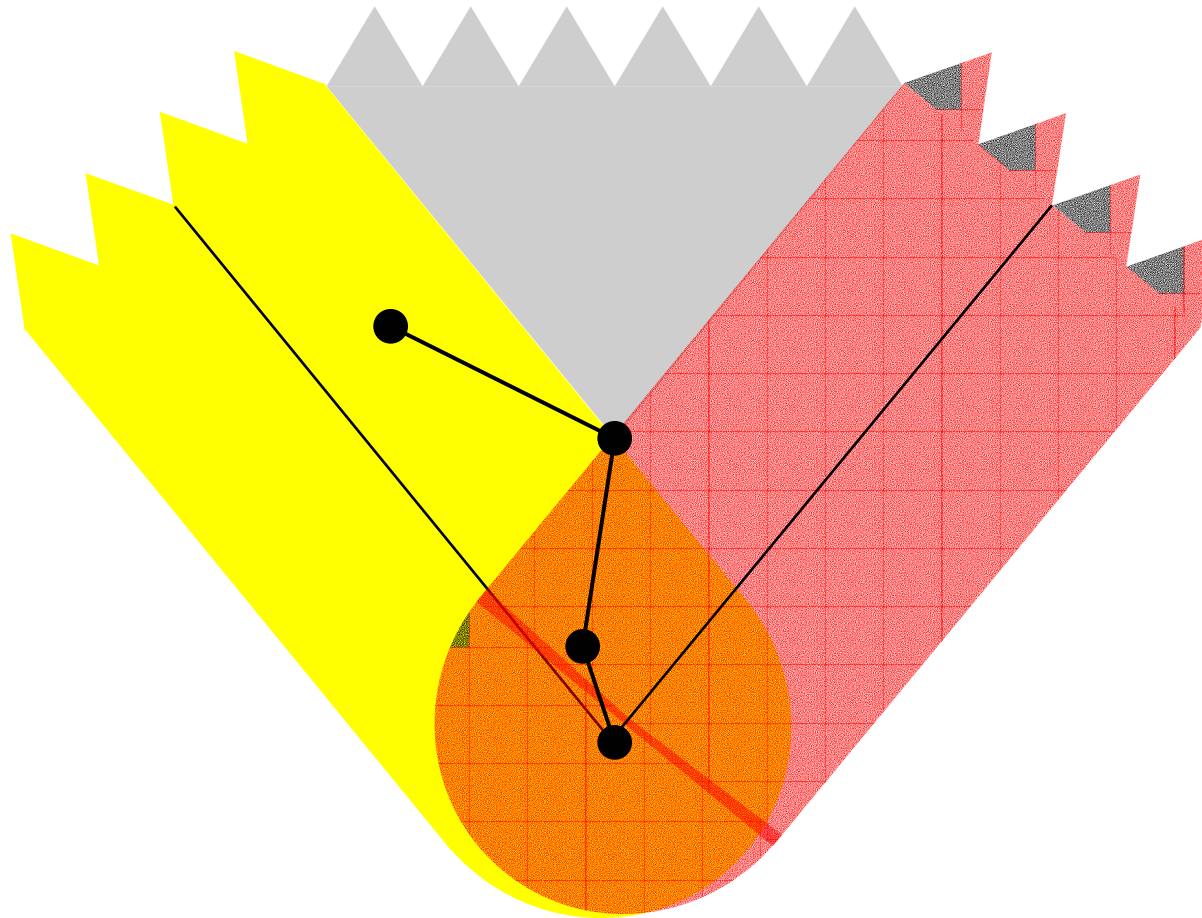


# Inkrementelle Generalisierung



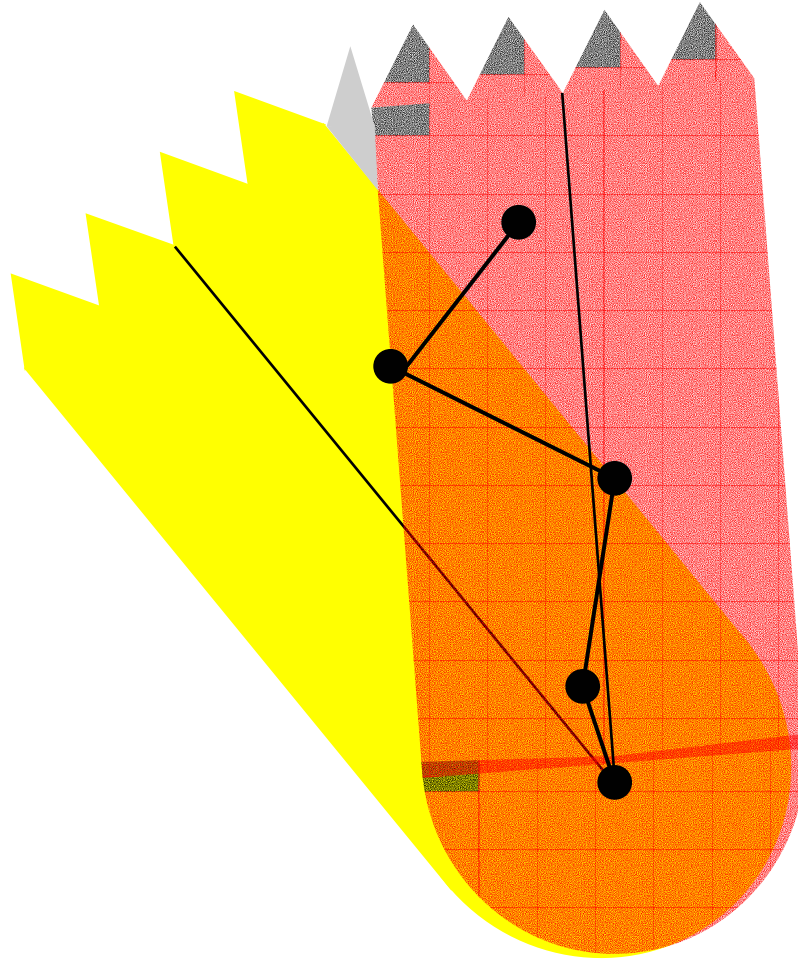
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# Inkrementelle Generalisierung



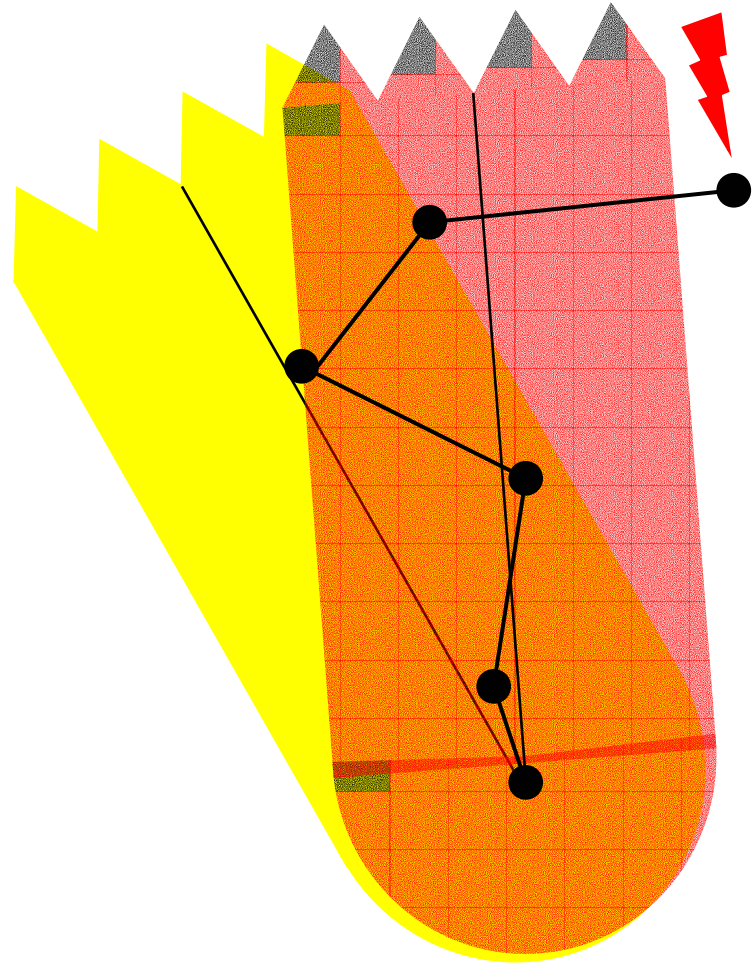
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# Inkrementelle Generalisierung



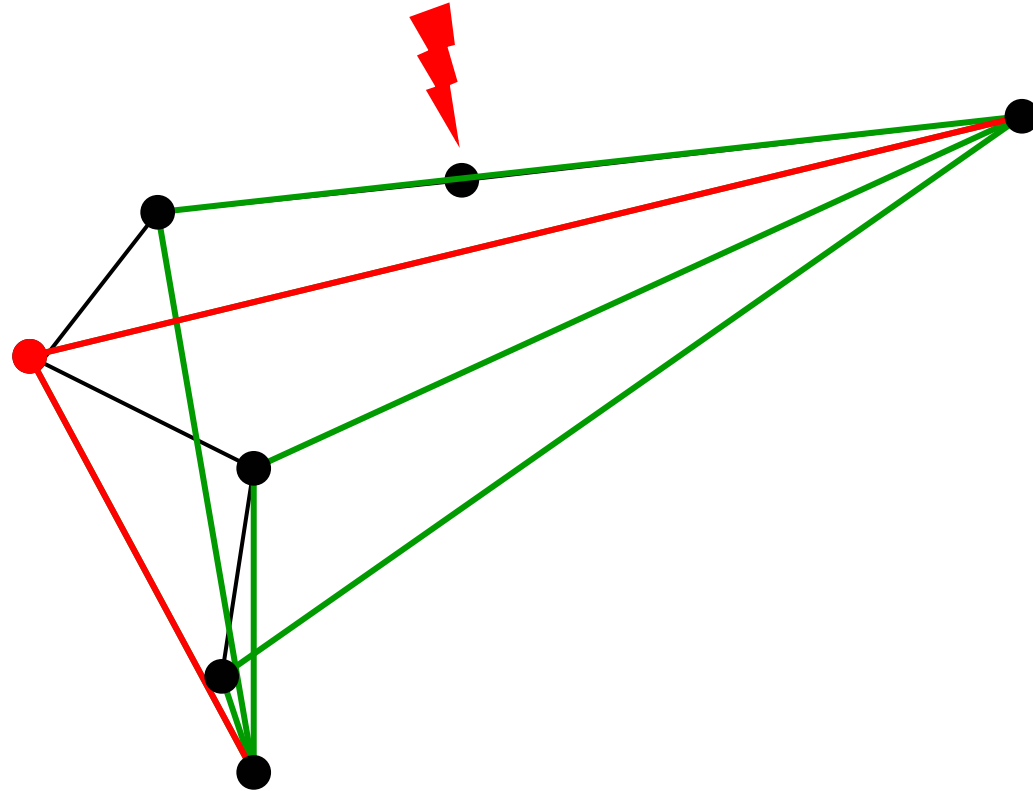
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# Inkrementelle Generalisierung



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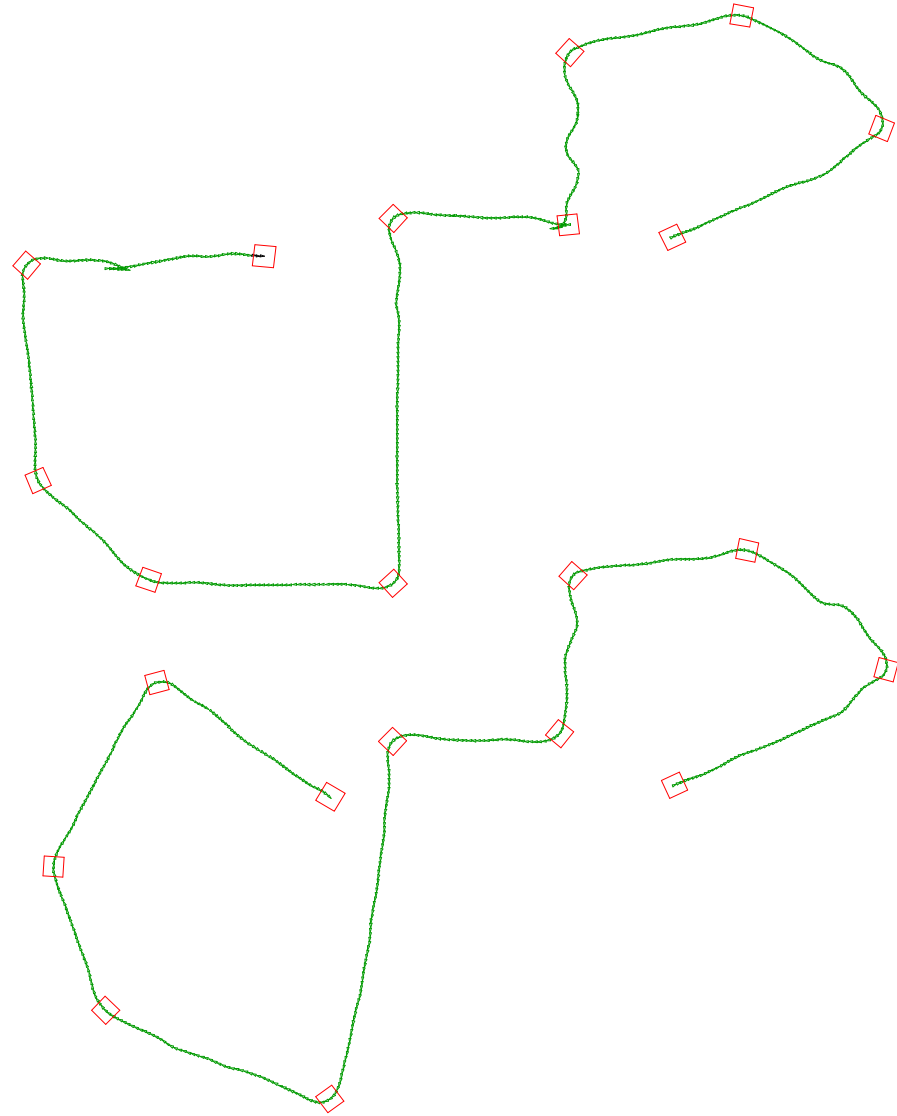
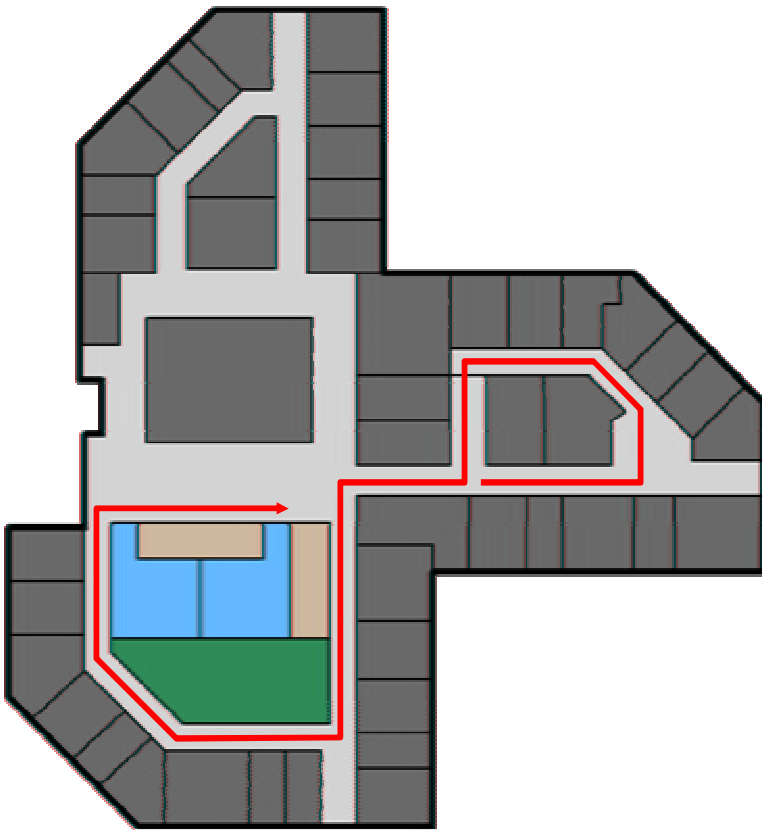
# Inkrementelle Generalisierung



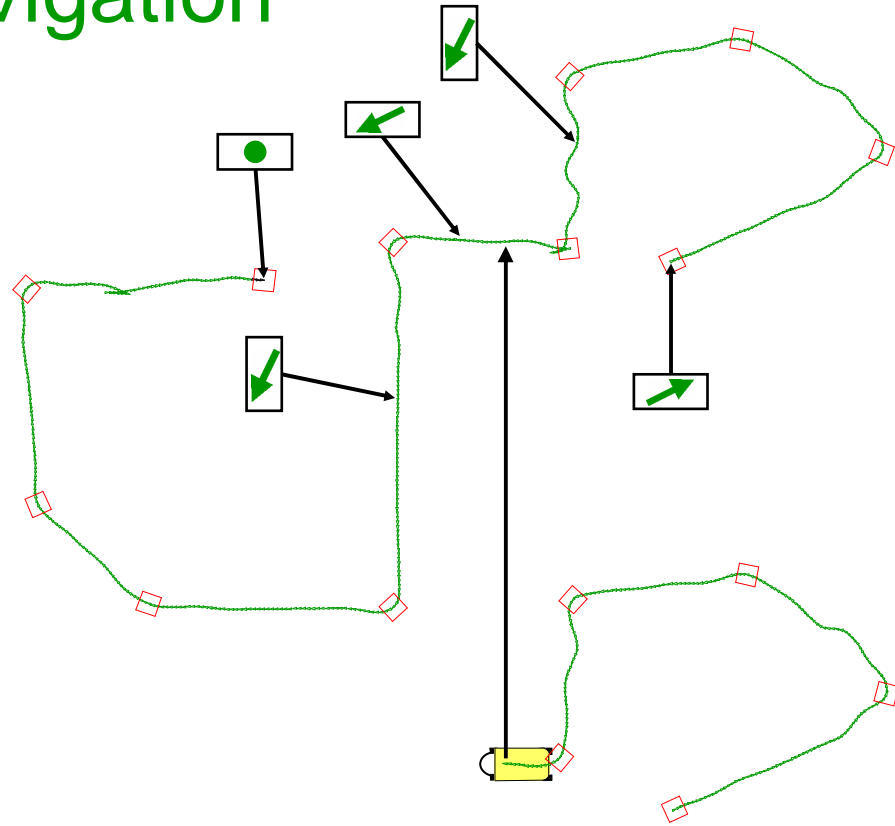
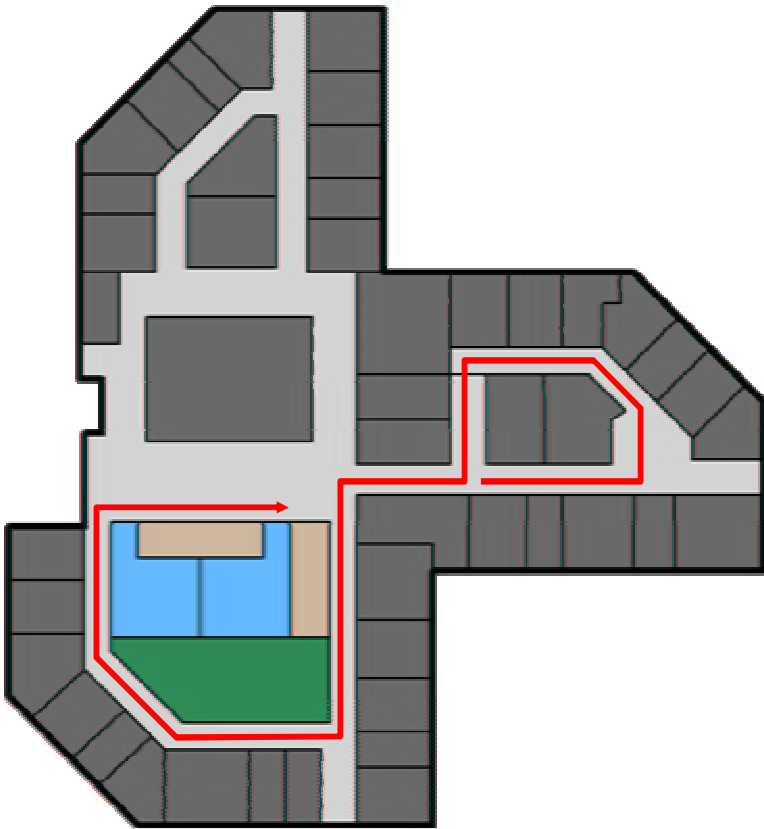
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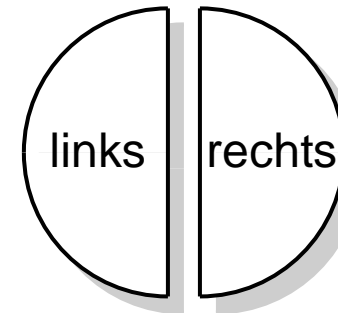
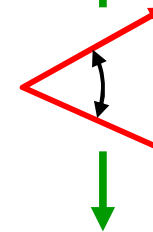
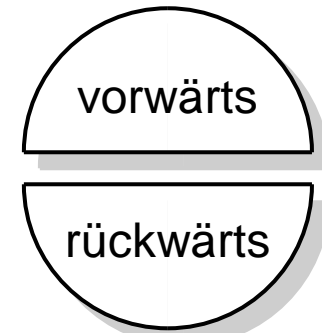
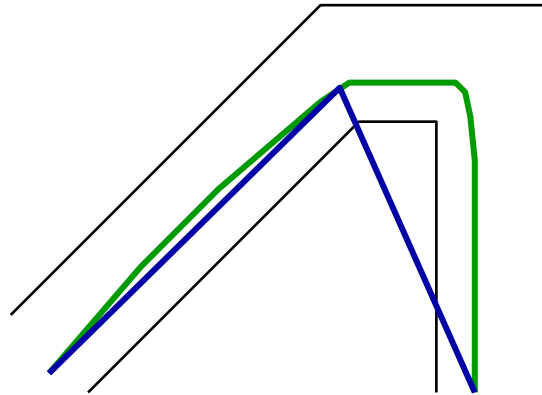
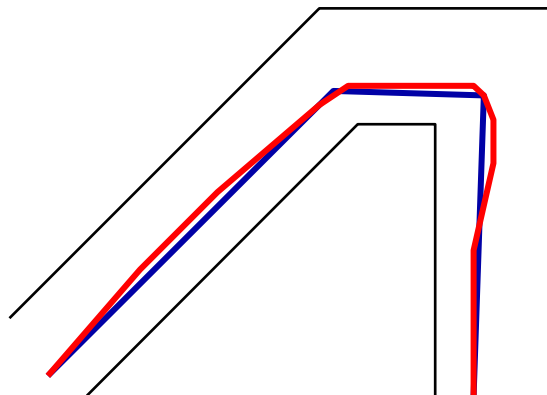
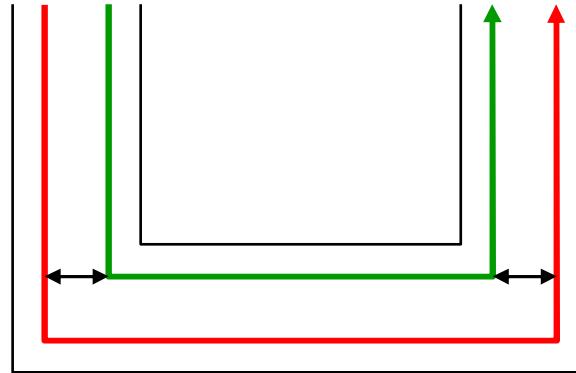
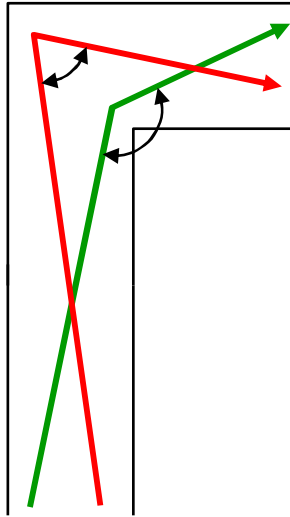
# Ergebnisse



# Navigation



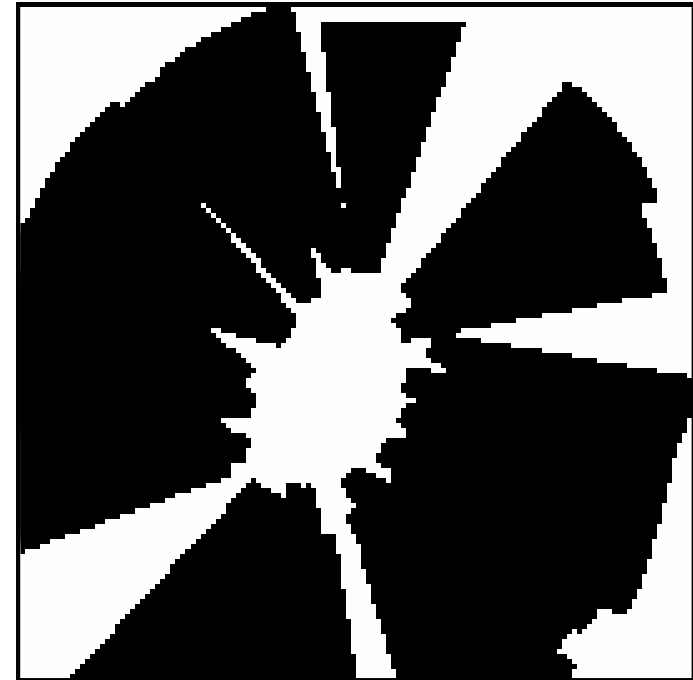
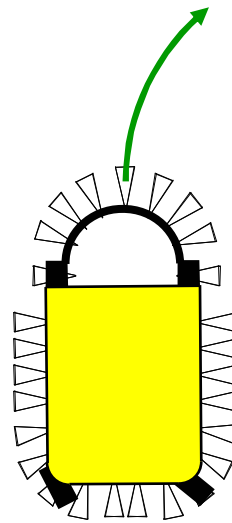
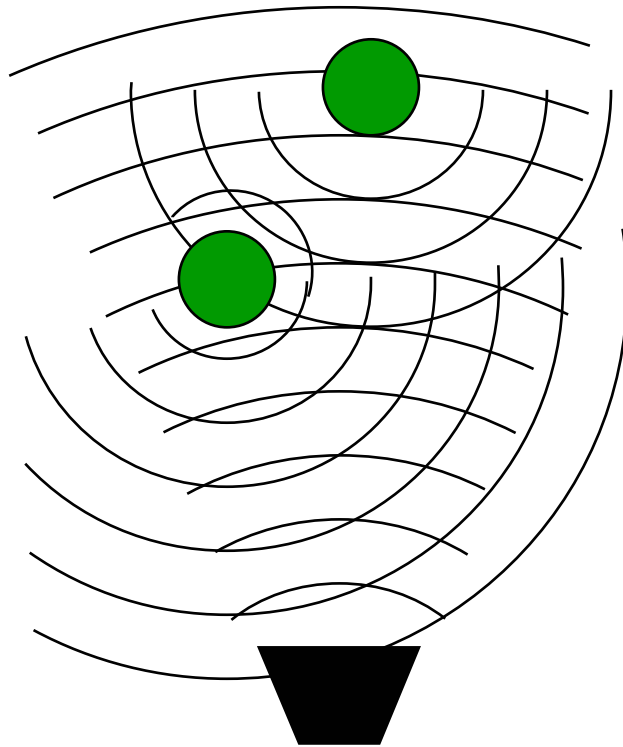
# Toleranzen



# Demonstration



# „Statische“ Sonarvermessung



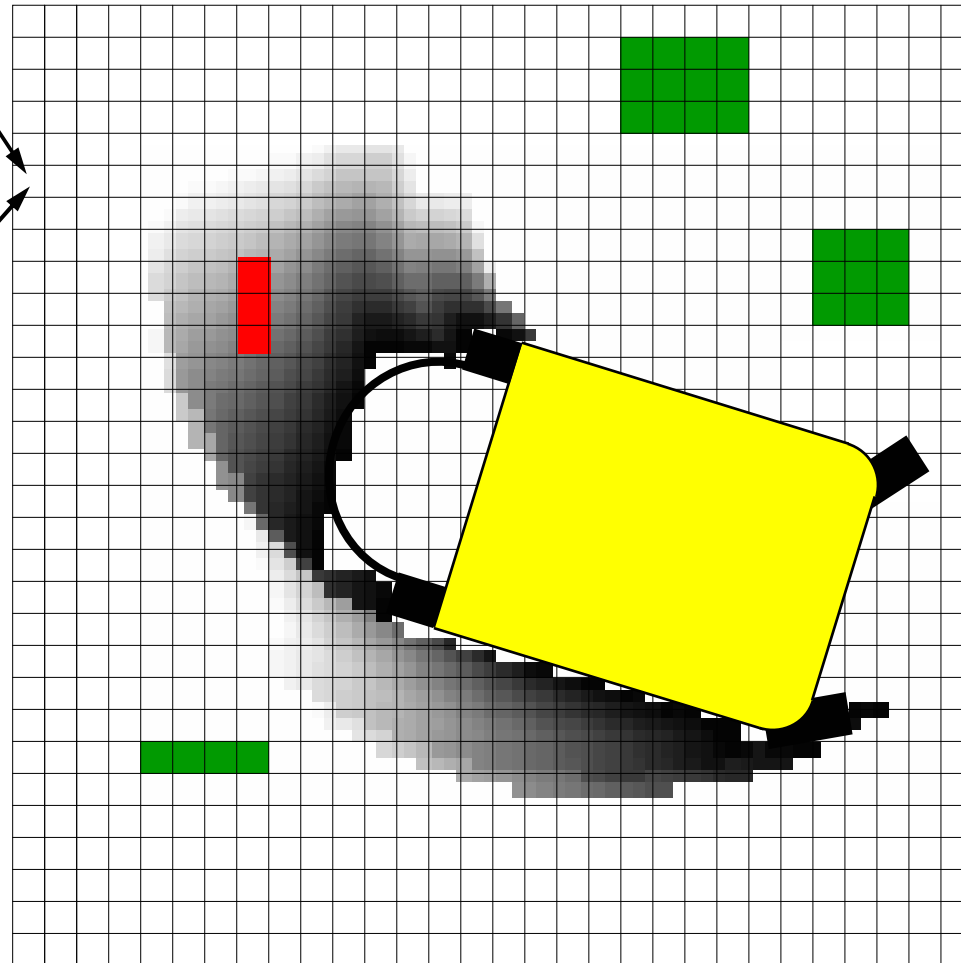
# Bedarfsgerechte und gleichmäßige Vermessung

## Alter der Messung

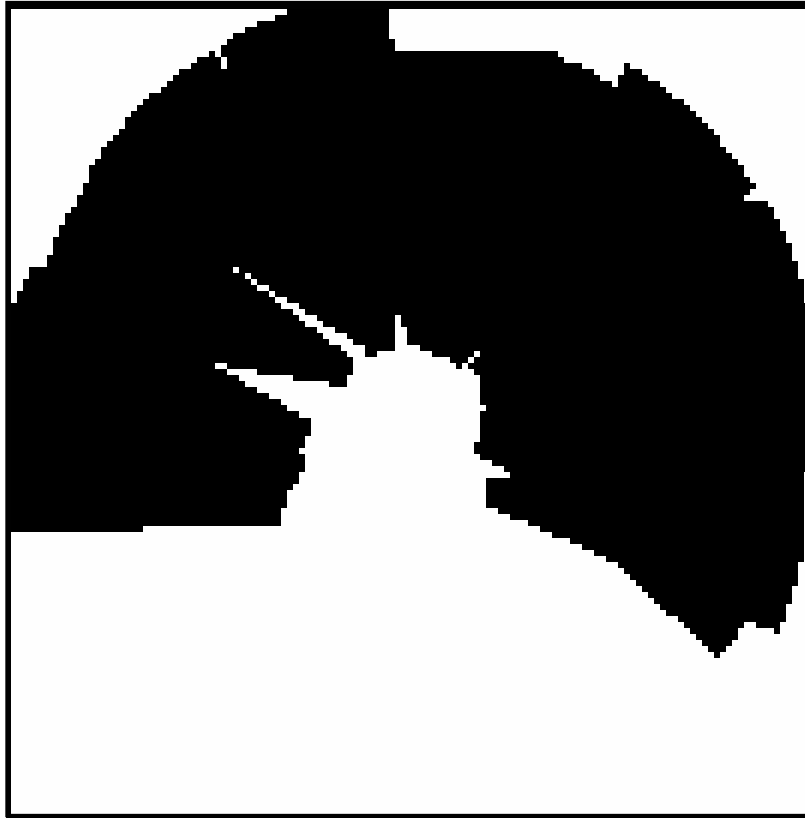
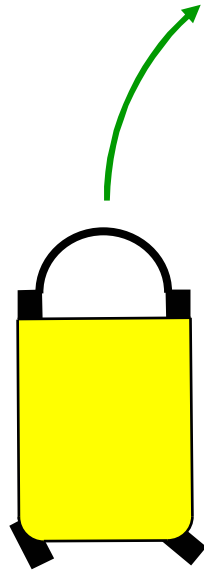
## Belegtheit der Zelle

- Noch nie gemessen
- Frei
- Hindernis vermutet
- Hindernis bestätigt

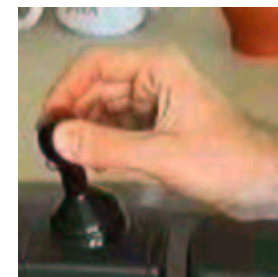
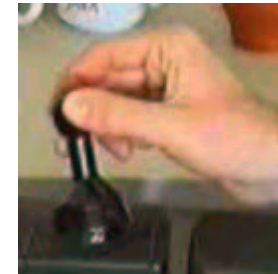
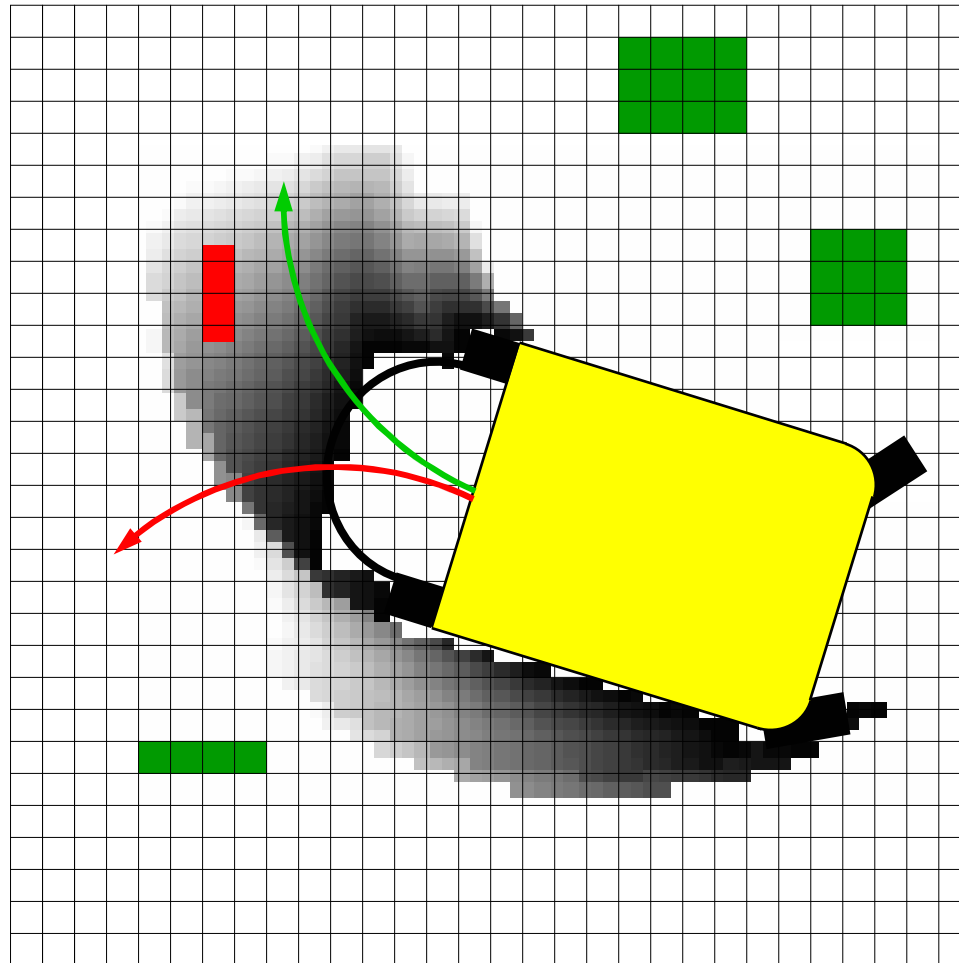
**Kollisionsgefahr!**



# Ergebnisse

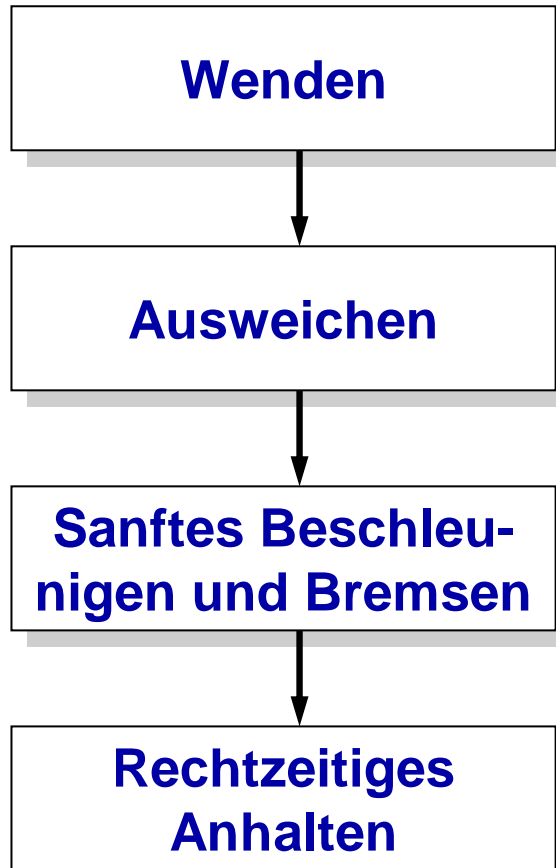


# Ausweichen / Shared Control





# Fahrassistent



# Ausblick

## Routennavigation

- Kombination von Routen zu Routengraphen
- „Natürlichsprachliche“ Routenbeschreibungen
- Integration von visuell wahrnehmbaren Landmarken

## Fahrassistent

- Weitere Grundverhalten, z.B.
  - *Andocken an einen Tisch*
  - *Rangieren*
- Weiterentwicklung der Mensch-Maschine-Schnittstelle
  - *Spracheingabe*
  - *Shared Control*