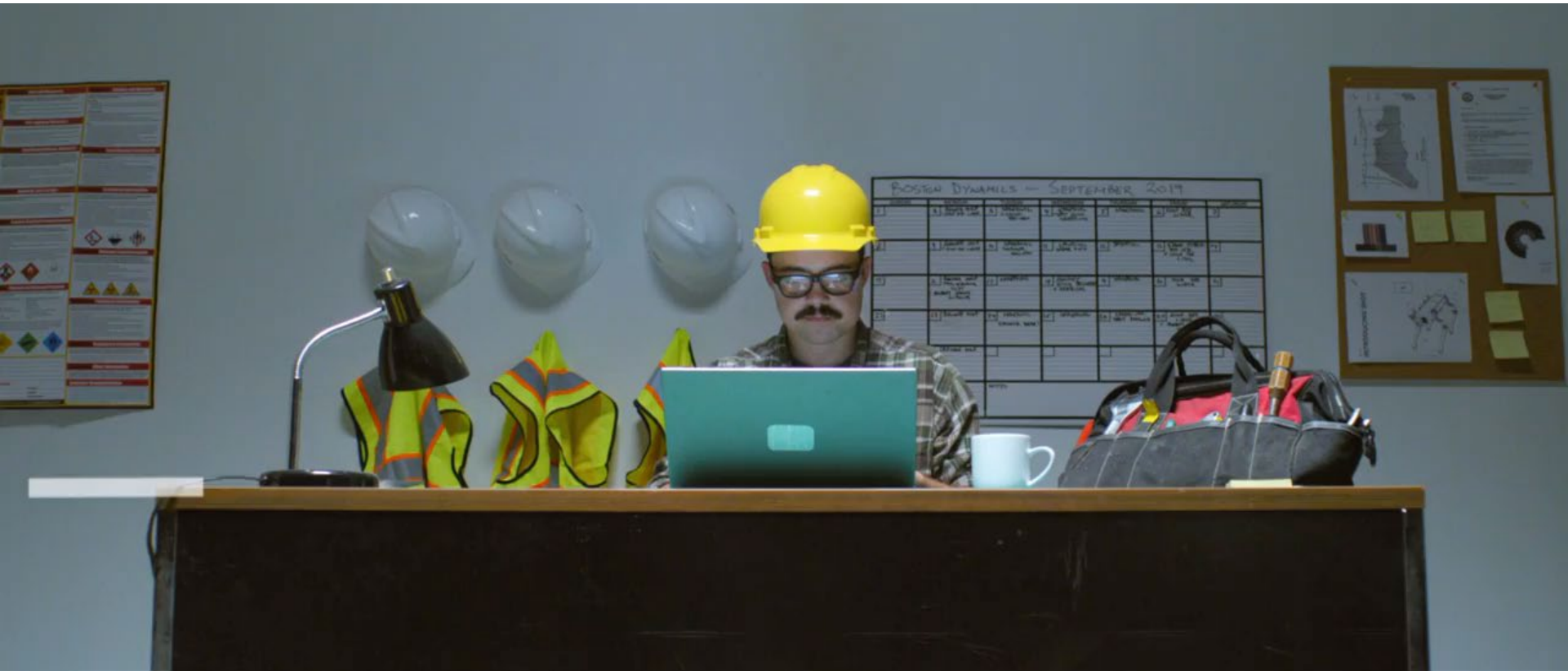


IAPH Sustainability Awards

Robot "Spot" as a bridge inspector (assistant)

Uli Baldauf – Head of Research & Development, Hamburg Port Authority
26 May 2023

Who is SPOT?



Organized a demo-day in the port



Use Case: bridge inspection

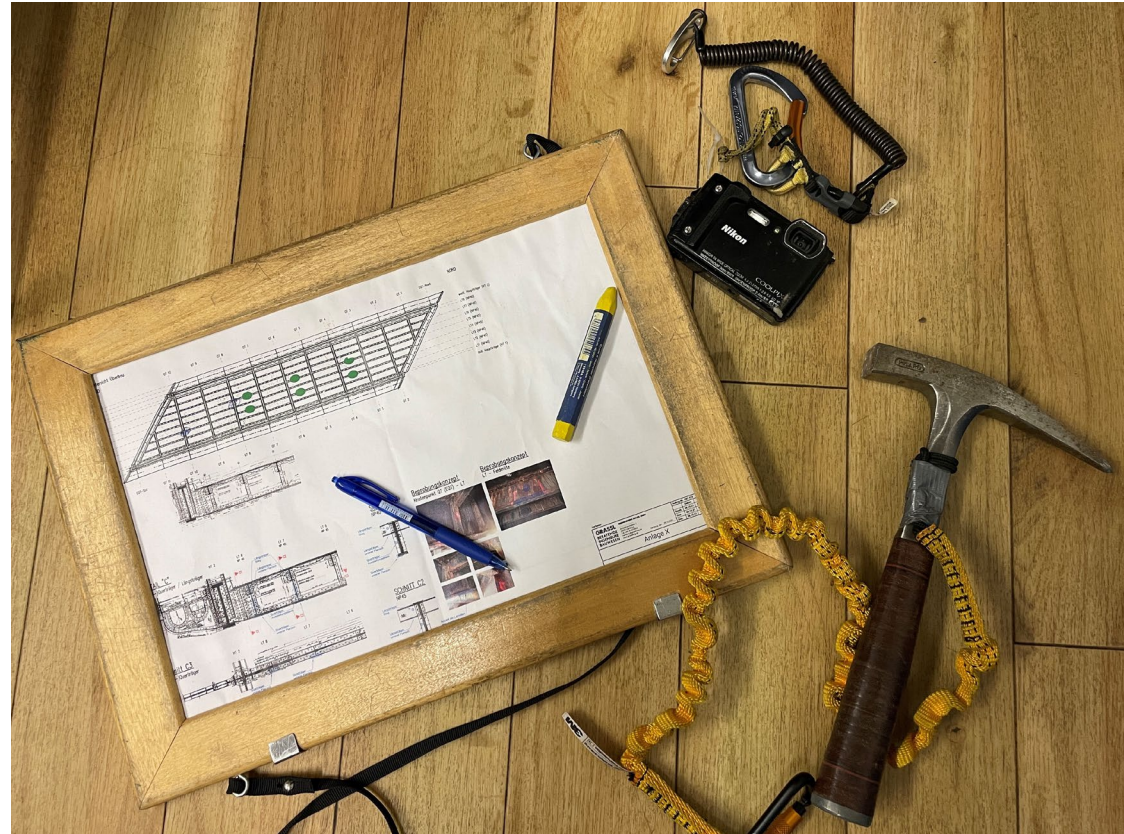


Inside the bridge

Rough working environment inside the bridge: bad lights, bad sound, hot in summer, cold in winter

Conventional tools for bridge inspections

Except for the digital camera there are not many digital tools...



SET UP A PROJECT

Scope:

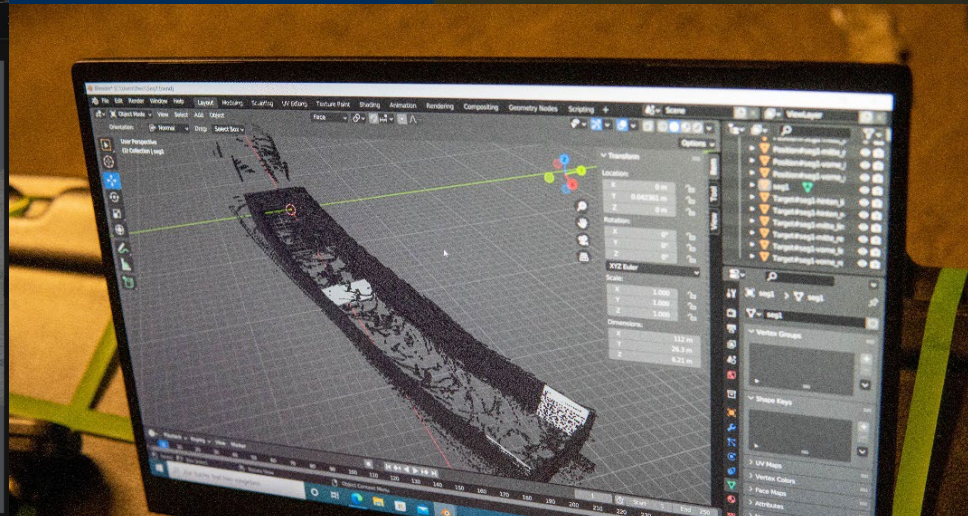
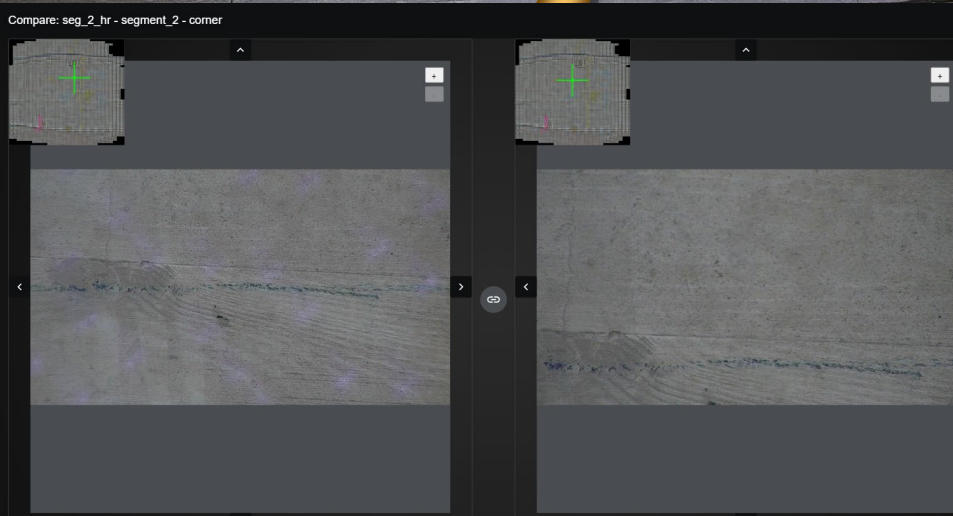
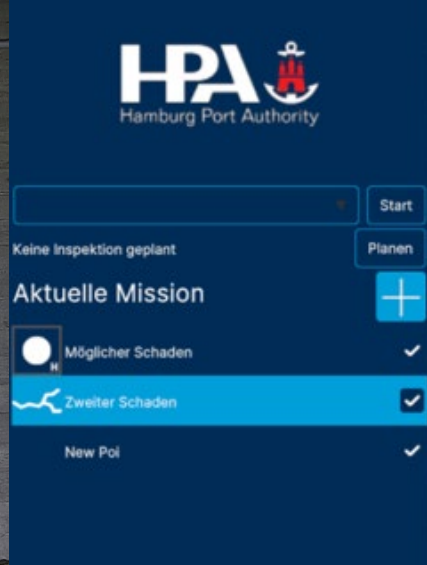
- Spot walks through 1000 m inside the bridge – autonomous
- Spot takes pictures with 30-times optical zoom
- Spot creates point clouds
- Digital Twin of the bridge is generated
- Pictures have coordinates and time-stamps
- A dashboard for comparism of pictures is provided
- Cracks and damages are assigned in the digital twin
- Cracks and damages are shown via augmented reality within the bridge (demo case)

Time:

01/2022 – 06/2023



Impressions



Thank You!



Uli Baldauf, Head of R&D