L . U . N . A

L . U . N . A

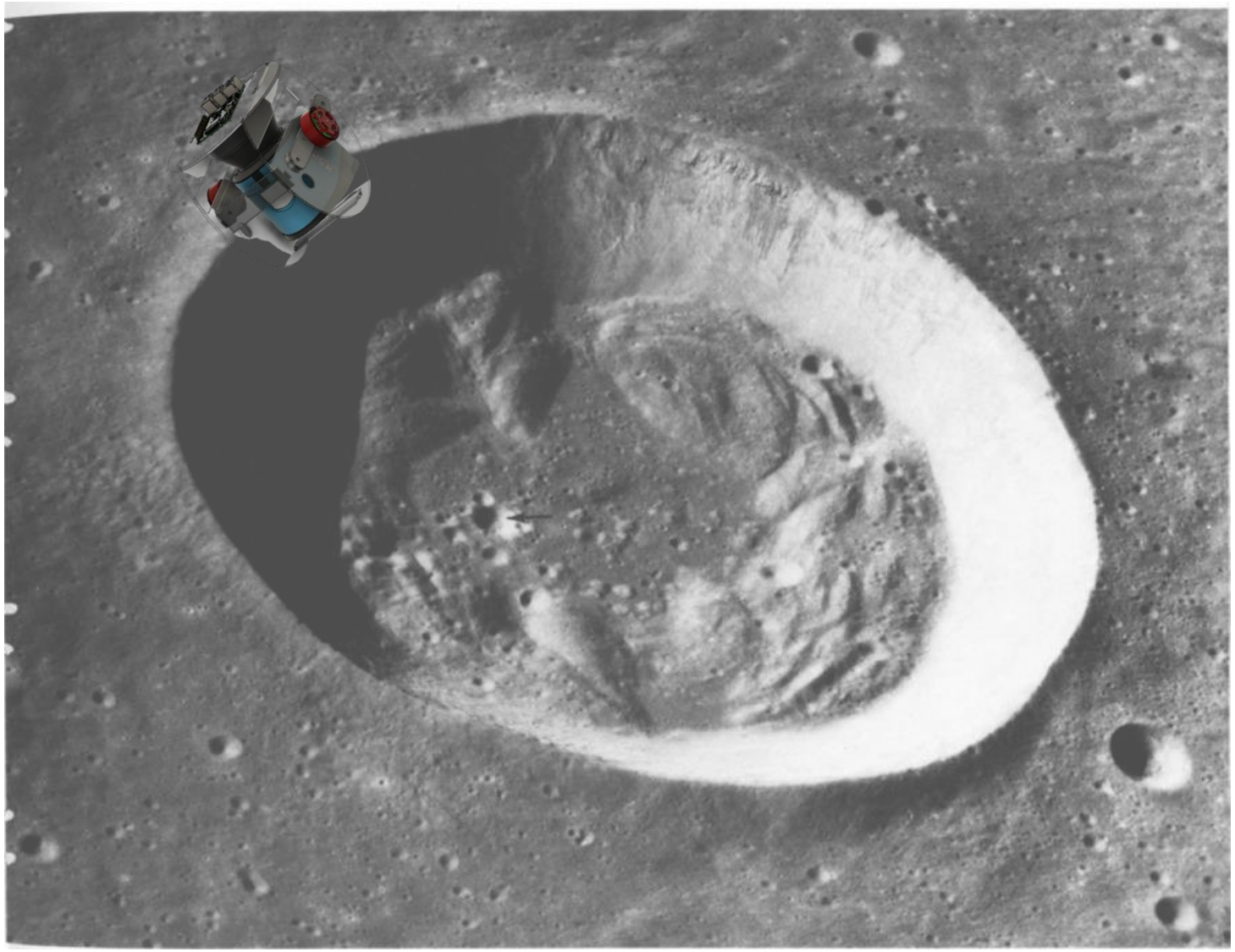
laser-mapping

unidirectional

navigation

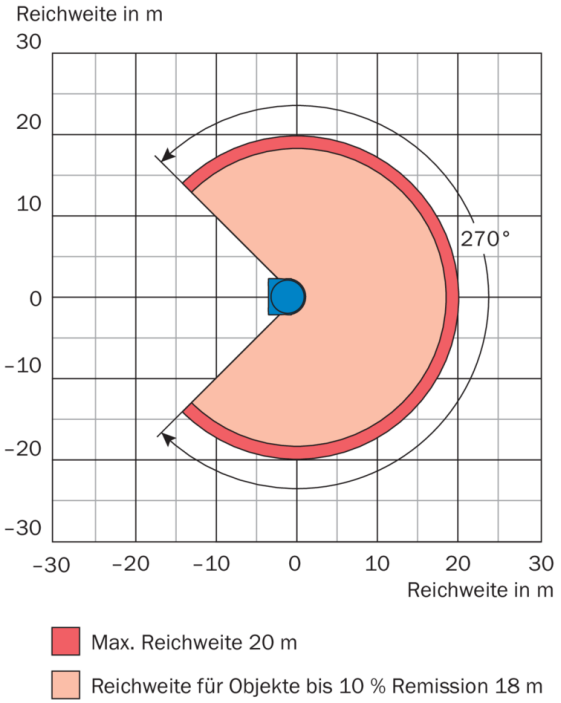
actuator

L . U . N . A



L.U.N.A

- Sick LMS 100 1000
- 270° FOV in a 2D plane
- max. range 20m



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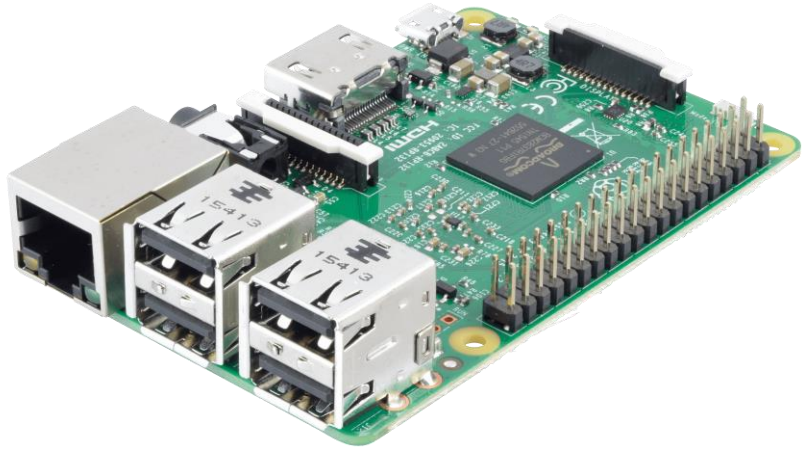
Raspberry PI 3



+

Robot Operating System

ROS

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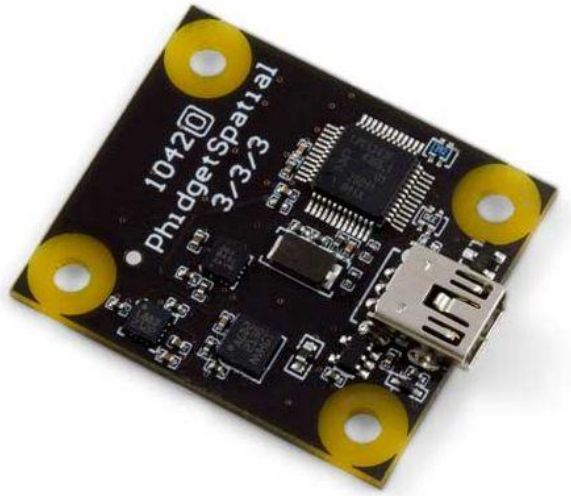
- 1042/1044 _0 PhidgetSpatial 3/3/3
- Magnetometer, Accelerometer and Gyroscope in 3D
- High precision
- Highly compatible with ROS



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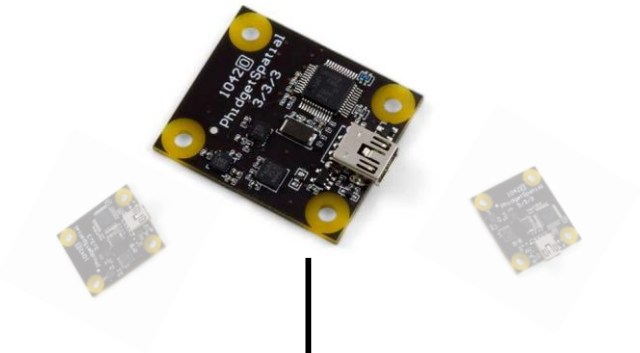

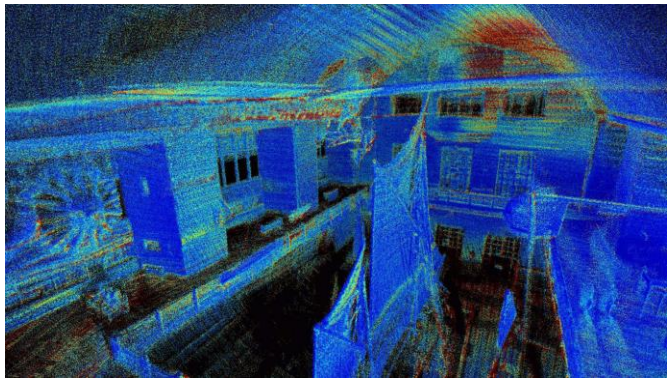

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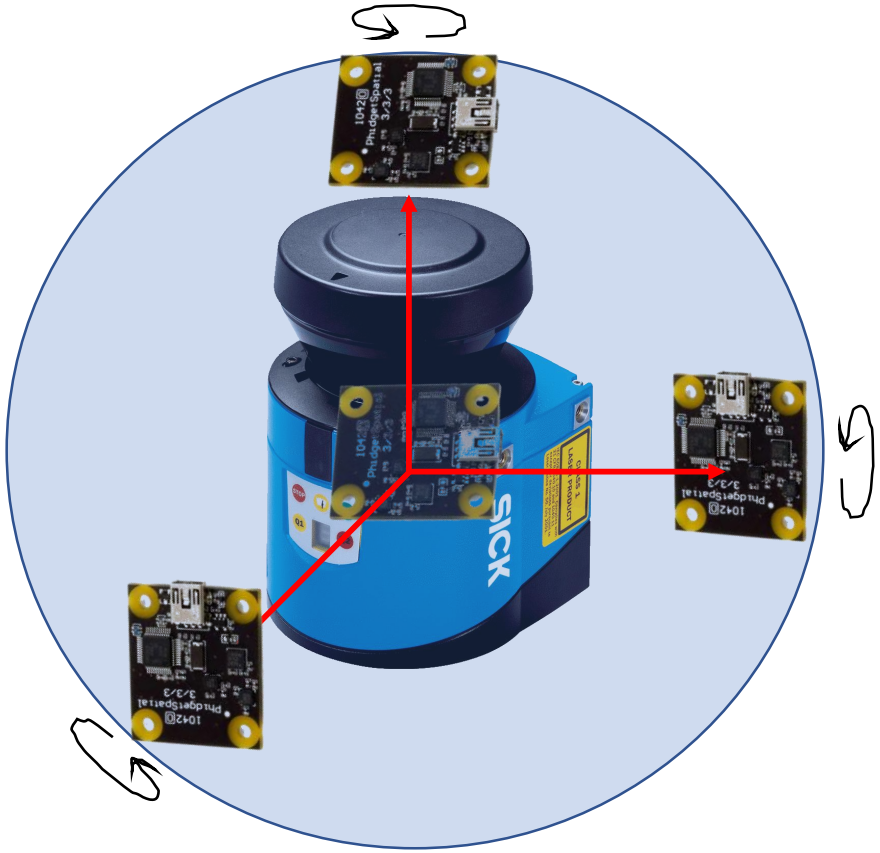

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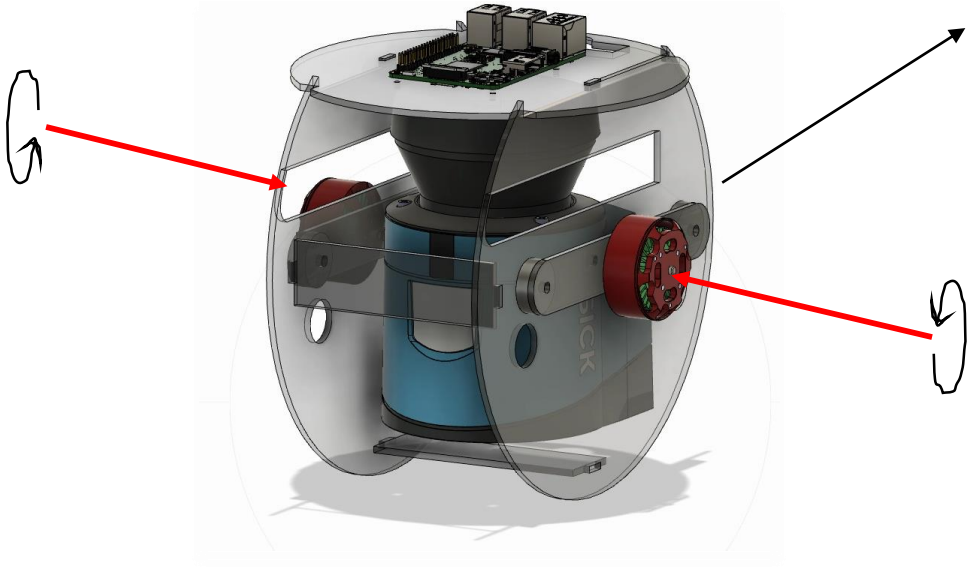

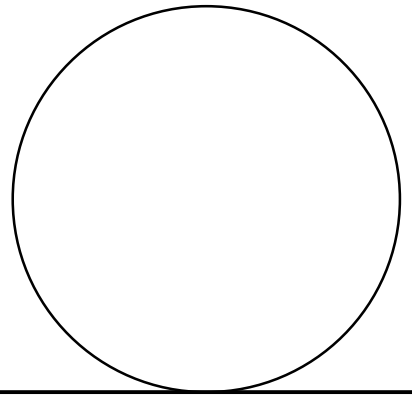

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- ZTW Black Widow 2208 18A Brushless Motor
- Integrated ESC
- Can rotate CW or CCW

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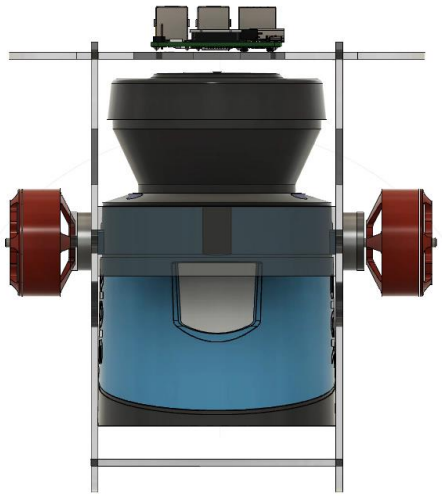

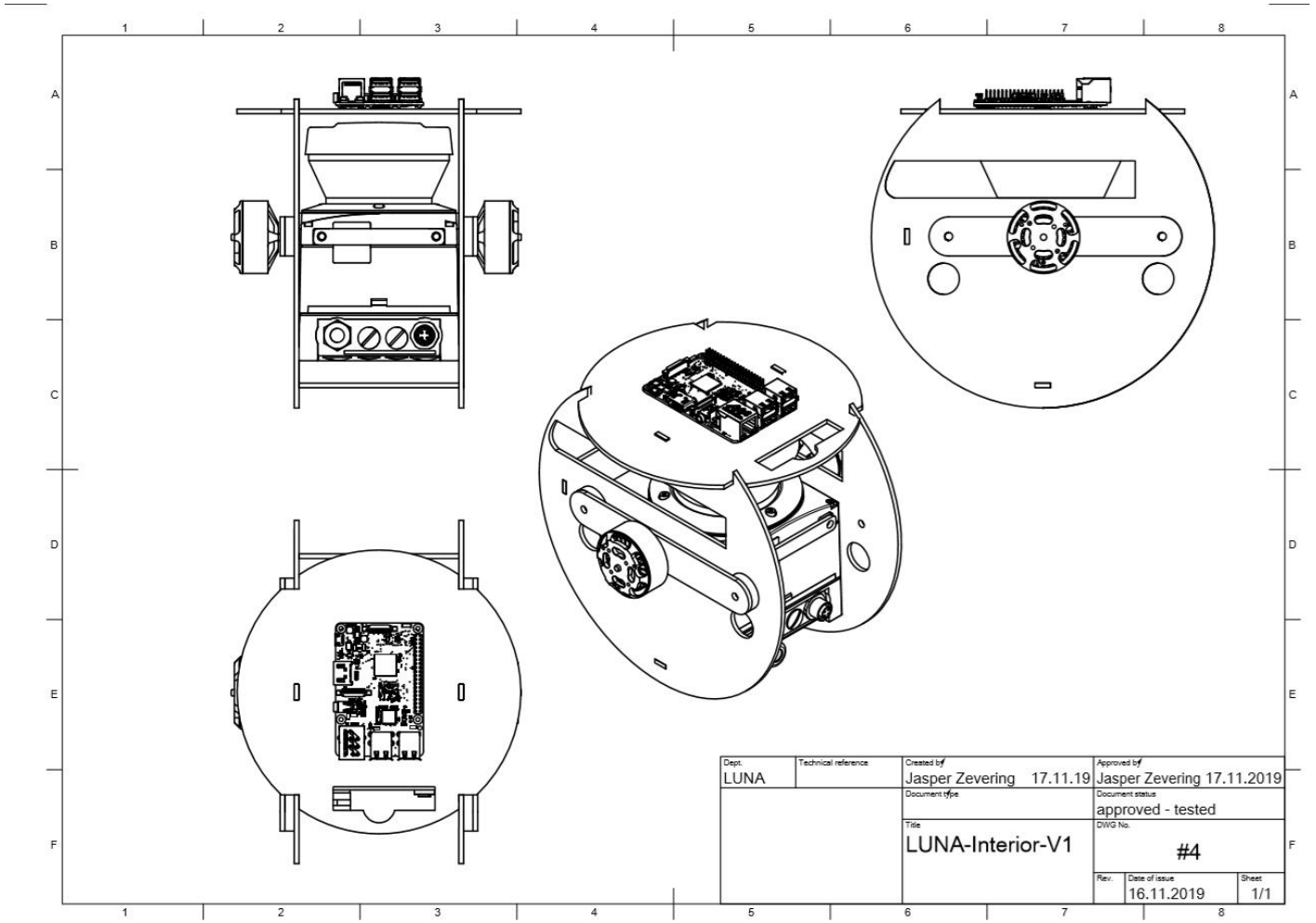

Dept. LUNA	Technical reference	Created by Jasper Zevering 17.11.19	Approved by Jasper Zevering 17.11.2019
		Document type	Document status approved - tested
		Title LUNA-Interior-V1	DWG No. #4
			Rev. / Date of issue 16.11.2019 / Sheet 1/1

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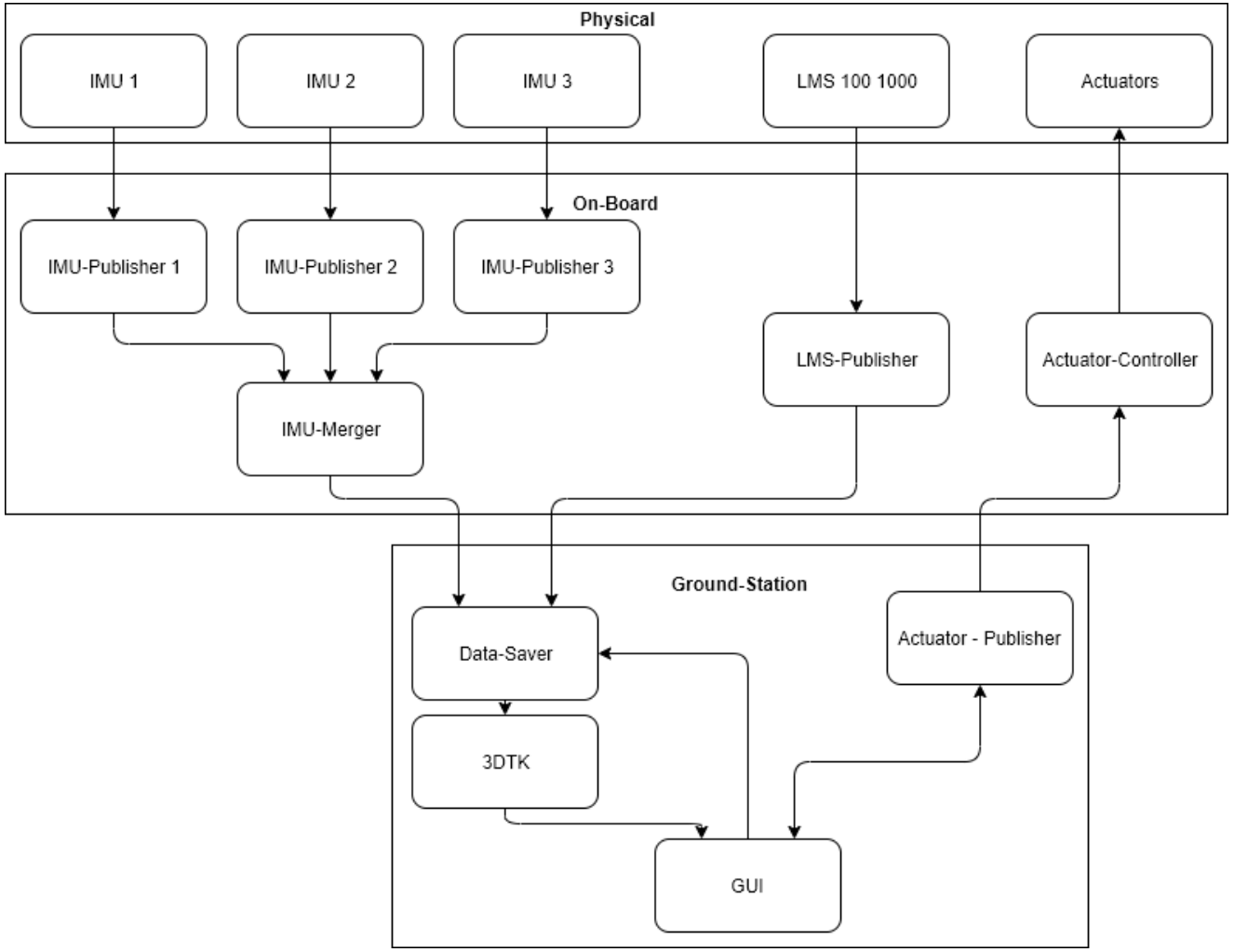
Physical
IMU 1
IMU 2
IMU 3
LMS 100 1000
Actuators
On-Board
IMU-Publisher 1
IMU-Publisher 2
IMU-Publisher 3
IMU-Merger
LMS-Publisher
Actuator-Controller
Ground-Station
Data-Saver
3DTK
GUI
Actuator - Publisher

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Schedule (initial)

	Anton Motor	Fabi IMU + Lok	Jasper + 3d Map	Mechanic
KW 44	Hardware besorgen	Pi auseinandersetzen	Current state 3d mapping	Planning mechanic
KW 45	—	Imu Auslesen	Ros 3d mapping, google mapping	Get Hardware
KW 46	Hardware ansteuern	Lage aus IMU	Implement mapping	Build
KW 47	Hardware sinnvoll ansteuern	Lage aus IMU	Merge with pose	Build
KW 48	Gegensteuerung	IMU Merging	Merge with pose	Build
KW 49	Mechanik Merging	Mechanik Merging	Visual	Mechanik Merging
KW 50	Mechanikfertigstellung	Meachanikfertigstellung	Mechanikfertigstellung	Mechanikfertigstellung
KW 51	Test	Test	Test	Track optimization
KW 52	—	—	—	—
KW01	—	—	—	—
KW 02	Präsentation / GUI	Presentation / GUI	Presentation / Visual 3d map	Presentation / Track optimization / Krater building
KW 03	Completed	Completed	Completed	Completed
KW 04	Actual Presentation	Actual Presentation	Actual Presentation	Actual Presentation

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Schedule (updated)

	Anton Motor	Fabi IMU + Lok	Jasper 3d Map + Mechanik		
KW 44	Planning + scheduling	Planning + scheduling	Planning + scheduling + Current State		
KW 45	Hardware besorgen	Pi besorgen+ auseinandersetzen	Ros 3d mapping, google mapping + Ros nodes		
KW 46	Hardware ansteuern	Imu Auslesen + Ros nodes	CAD + helping IMU		
KW 47	Hardware präzise ansteuern	Imu Mergen	Built + Rendering for Presentation		
KW 48	Gegensteuerung	IMU Lage +Design for Presentation	Power distribution		
KW 49	Mechanik Merging	Mechanik Merging	Visual Output + Mechanik Merging		
KW 50	Mechanikfertigstellung	Mechanikfertigstellung	Mechanikfertigstellung		
KW 51	Test	Test	Test		
KW 52	—	—	—		
KW01	—	—	—		
KW 02	Präsentation / GUI	Presentation / GUI	Visual 3d map Krater building?		
KW 03	Completed	Completed	Completed		
KW 04	Actual Presentation	Actual Presentation	Actual Presentation		

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What have we done so far?