

UNDINA: UNderwater robotics with multi-moDal communIcation and Network-Aided positioning system

MarTERA call 2020

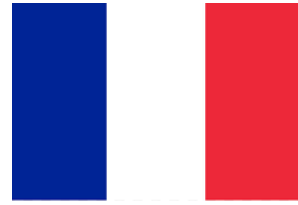
Online webinar: Havtvilling dialog

25.01.2024

UNDINA Consortium

Presenter: Beatrice Tomasi (NORCE)

Partners



UNDINA objectives: enhance communication and positioning capabilities of underwater robots

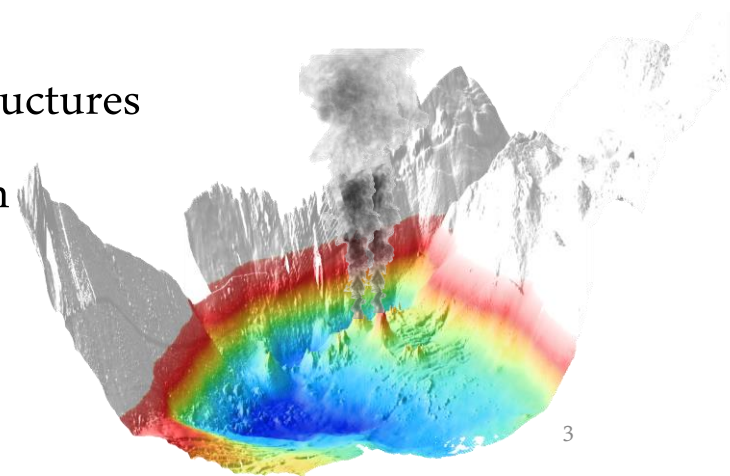
How?

- Multi-modality
- Hybrid communication and positioning system controlling multimodal communications

Why?

Enabler of

- Resident underwater robots for inspection and monitoring of offshore infrastructures
- Autonomous data collection from remote scientific ocean observatory in harsh environments



UNDINA milestone: Three payloads integrated into the robot with the first implementation of the programmable protocol stack



High data rate (Mbps)

Control channel
and positioning

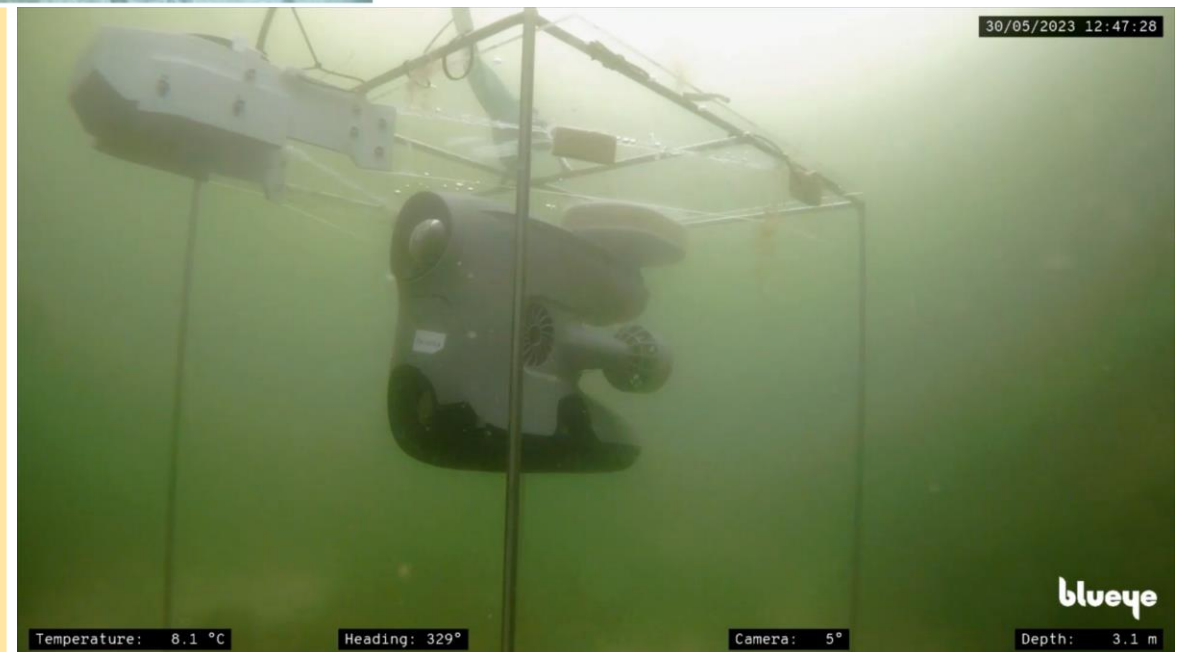
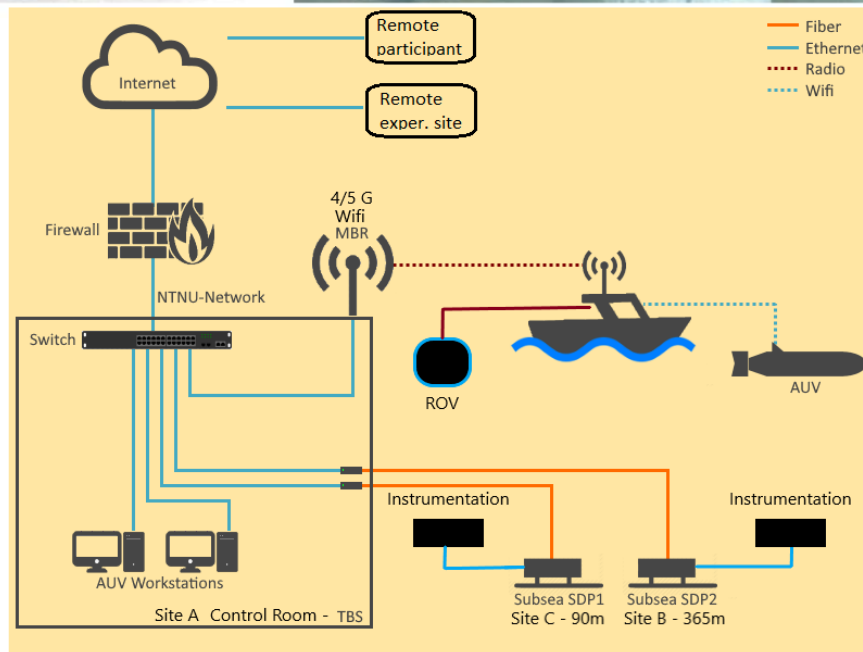
Recharge power (150 W)
upload-offload data (1Gbps)



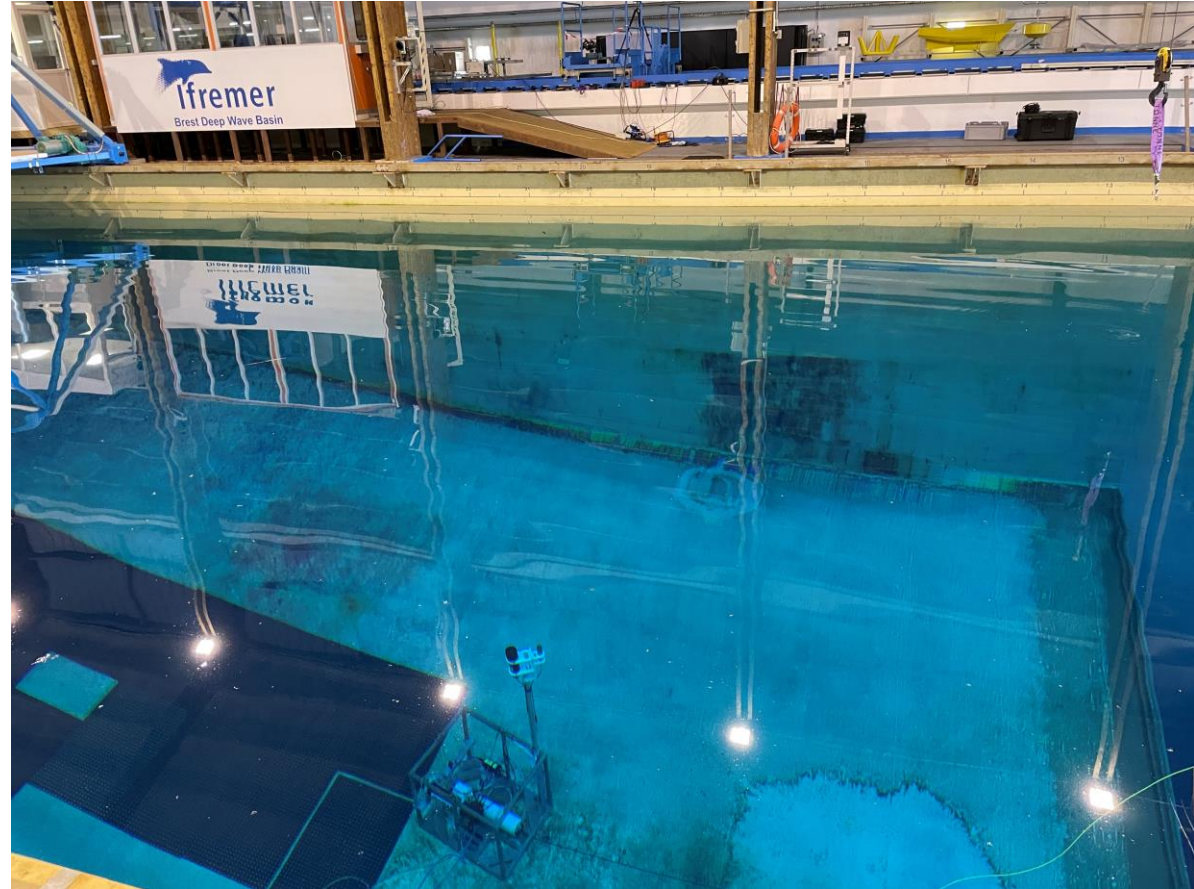
Ambition: Docking strategy for recharging the drone and communication concept for remote operations



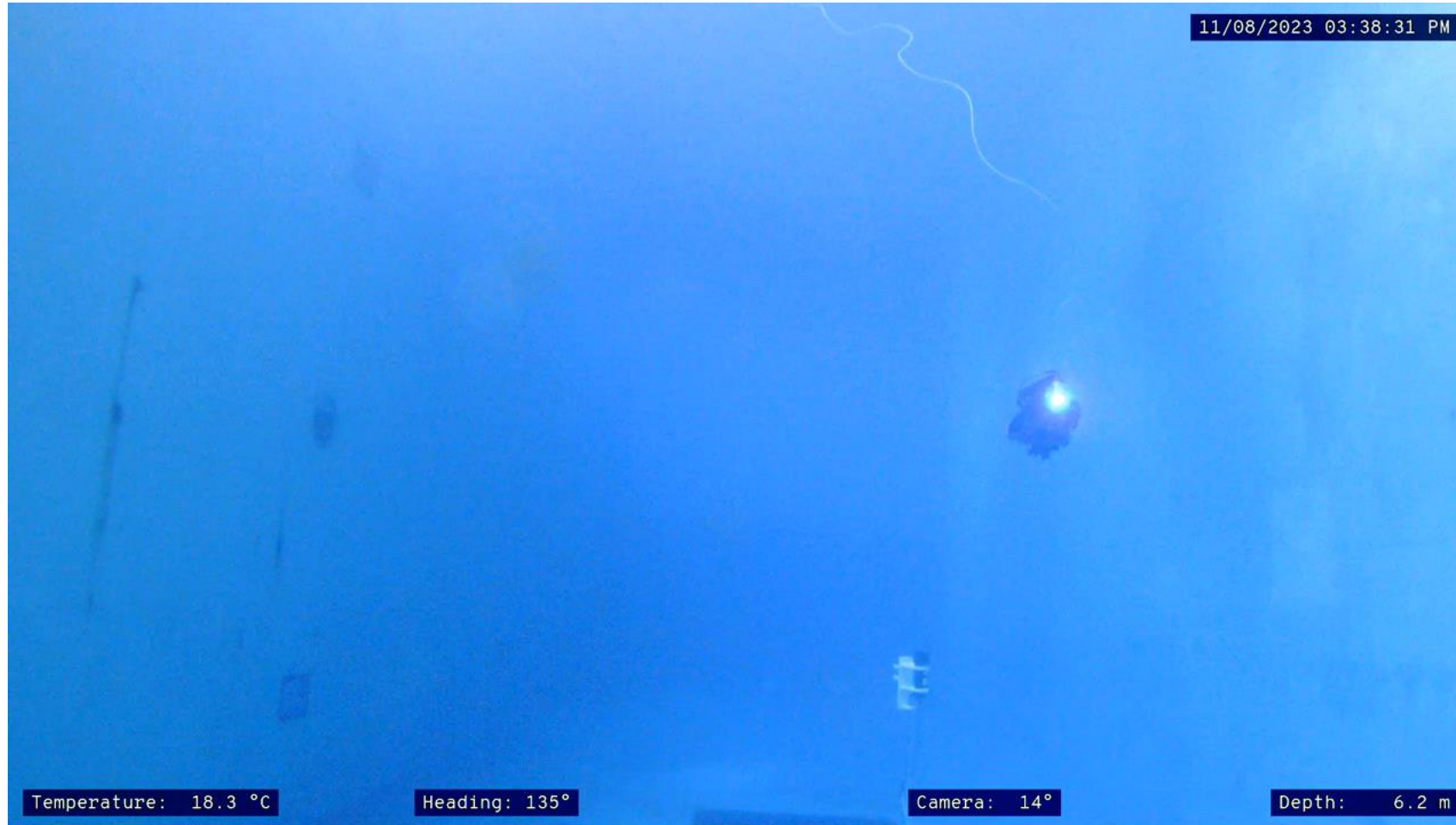
 **NTNU**
Norwegian University of
Science and Technology



UNDINA milestone: Optical and acoustic communication and positioning system integrated into the benthic station, with the first implementation of the Programmable Protocol Stack



UNDINA milestone: Initial controlled validation tests of HoPS



UNDINA community and ecosystem

blueye **HYDROMEA** **UNPLUGGED™**
Suppliers

STEINWURF
Smart Networks

NORCE

Fathom Robotics

EvoLogics®

ISEN
ALL IS DIGITAL!
BREST

yncréa

DELAIR MARINE

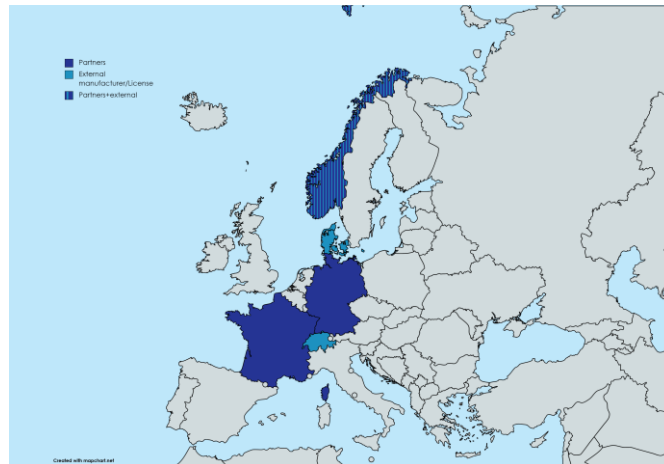


NTNU

Norwegian University of Science and Technology

Project partners technology developers

End users in industry and in research centers



Ifremer

AkerBP

References

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Acknowledgments

The UNDINA project is funded by



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