

# euRathlon 2014

29<sup>th</sup> September - 3<sup>rd</sup> October 2014,

La Spezia, Italy

## Team Information Form

### Team Details

Team Name: Avalon

Institution/Company: DFKI GmbH and University of Bremen

Logo (attach or insert here):

Team  
Avalon

The logo for Team Avalon features the word "Team" in a large, bold, sans-serif font above the word "Avalon" in a similar font. The letter "o" in "Avalon" is replaced by a stylized blue and white graphic consisting of a central blue circle with four white dots around it, connected by thin lines, resembling a molecular or atomic structure.

Website: <http://avalon.dfki-bremen.de>

Home location of team: Bremen, Germany

Name of team leader: Dipl.-Inf. Matthias Goldhoorn

Picture of team leader (attach or insert here):



When was the team established (year): 2007

Team Description (including names of the team members):

Christian Clausen, Niklas Pech, Fabio Zachert, Tim Lehr, Matthias Goldhoorn, Sascha Arnold, Jakob Schwendner

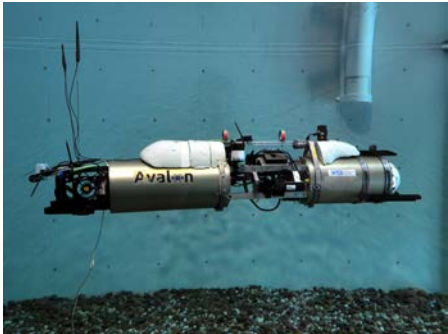
Team Sponsors (if any):

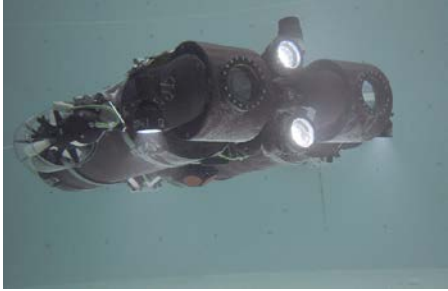
- DFKI GmbH
- University of Bremen
- The Imaging Source Europe GmbH (<http://www.theimagingsource.biz>)
- CPU Unterwassertechnik GmbH (<http://www.cpu-bremen.de>)


**Contact Details**

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## SCENARIO SELECTION AND VEHICLE(S) SPECIFICATION

SCENARIO SELECTION PER VEHICLE								
Vehicle name	Avalon	Team name	Avalon	Team leader	Dipl.-Inf. Matthias Goldhoorn			
	Age of current vehicle	Will it participate in SAUCE'14? If so, specify budget.	EURATHLON 2014: Selection of scenarios (please check all scenarios you wish to enter with this vehicle)					
	6 Years	Yes. ~2 000 €	X	Long range autonomous underwater navigation				
			X	Environmental survey of the accident area (mapping)				
			X	Leak localisation and structure inspection				
			X	Interaction with an underwater structure (manipulation)				
			X	Combined scenario				
VEHICLE SPECIFICATIONS								
No. of Thrusters	Thrusters Brand	Thrusters Type	Machining used in the process	Materials used	Software used for mechanical design	Onboard Computer	Software	Wireless Comms
6	Seabotix	BT-150		Aluminium, POM, Steel, Resin Glue		2x Intel Core Embedded PCs	Linux + Rock Software Stack	Amber Wireless, WLAN, Acoustic Modem
Sensory payload	Does the AUV include BMS?	Please, specify Sonar (if any)	Model of the Sonar	Please, specify which IMU (if any)	Model of the IMU	Connectors	Other electronics	AUV value
	Yes, Self-Made	Tritech Micron +Tritech Echo-sounder (optional BlueView P900)	See left	Xsens + KVH DSP3000	Xsens AHRS	SubConn Mini Series + Fischer AluLite + Bulgin		~ 25 000 €

SCENARIO SELECTION PER VEHICLE									
Vehicle name	Dagon	Team name	Avalon	Team leader	Dipl.-Inf. Matthias Goldhoorn				
		Age of current vehicle	Will it participate in SAUCE'14? If so, specify budget.	EURATHLON 2014: Selection of scenarios (please check all scenarios you wish to enter with this vehicle)					
		3	Not planned but maybe as fallback.  No special SAUC-E budget.	X	Long range autonomous underwater navigation				
				X	Environmental survey of the accident area (mapping)				
				X	Leak localisation and structure inspection				
				X	Interaction with an underwater structure (manipulation)				
				X	Combined scenario				
VEHICLE SPECIFICATIONS									
No. of Thrusters	Thrusters Brand	Thrusters Type	Machining used in the process	Materials used	Software used for mechanical design	Onboard Computer	Software	Wireless Comms	
5	Custom	150W		Aluminium, POM, Steel	Solidworks	2x Intel Core i7	Linux + Rock Software Stack	WLAN, Acoustic Modem	
Sensory payload	Does the AUV include BMS?	Please, specify Sonar (if any)	Model of the Sonar	Please, specify which IMU (if any)	Model of the IMU	Connectors	Other electronics	AUV value	
Teledyne Explorer DVL, Front Camera, Bottom Stereo Cameras	Air Energy Aachen BMS	Tritech Micron	See left	Xsens + KVH DSP3000	Xsens AHRS	SubConn Mini Series, Teledyne Impulse	eFuse	~ 100 000 €	

SCENARIO SELECTION PER VEHICLE								
Vehicle name	(ASV)?	Team name	Avalon	Team leader	Dipl.-Inf. Matthias Goldhoorn			
		Age of current vehicle	Will it participate in SAUCE'14? If so, specify budget.	EURATHLON 2014: Selection of scenarios (please check all scenarios you wish to enter with this vehicle)				
		2	~1000	X	Long range autonomous underwater navigation			
				X	Environmental survey of the accident area (mapping)			
					Leak localisation and structure inspection			
				X	Interaction with an underwater structure (manipulation)			
				X	Combined scenario			
VEHICLE SPECIFICATIONS								
No. of Thrusters	Thrusters Brand	Thrusters Type	Machining used in the process	Materials used	Software used for mechanical design	Onboard Computer	Software	Wireless Comms
4	Faulhaber DC Motor with R/C craft screws	Selfmade		Fibre-Glass + Epoxy	SolidWorks	Intel Atom	Debian Linux + Rock Framework	Amber-Wireless + Wifi
Sensory payload	Does the AUV include BMS?	Please, specify Sonar (if any)	Model of the Sonar	Please, specify which IMU (if any)	Model of the IMU	Connectors	Other electronics	AUV value
Altimeter, Acoustic modem.	No, only discard protection	Tritech Micron	Micron	Self-Made	-	Bulgin 400 series	Self-Made DC Motor Controller	~2000

Optional: Imaging Sonar, Profiling Sonar, Scanning, Gigabit Cameras, GPS								
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