

UWIS; Underwater navigation system and how to utilize it in marine science

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UWIS System is new and innovative underwater tracking, navigation and communication system for divers. The divers or ROV carries so called UWIS diver units which are tracked by three buoys on the surface. Buoys locate themselves with integrated GPS. Surface personnel can follow up to 100 divers at the same time and interact with them by using up to 100 messages. All locations and messages are delivered also down to divers so they can navigate like they normally do above the water surface. Divers see other diver's locations and may communicate with them. UWIS System also generates messages by itself according to the given setups. This enables

many safety features for the divers. UWIS System is compatible with Alltab underwater tablet which is powerful tool for marine scientists. It is Android tablet inside the waterproof housing down to 150m depth. Besides navigation software there is data collection app available named Allure. UWIS System fills wirelessly coordinates and depth information to collected data which is possible to share to the cloud right after the dive. No manual handwriting or copy process after the dive anymore. UWIS System stores the diving tracks and those are easy to use in after-analyses and reports. Data is also valuable for example in underwater photogrammetry.