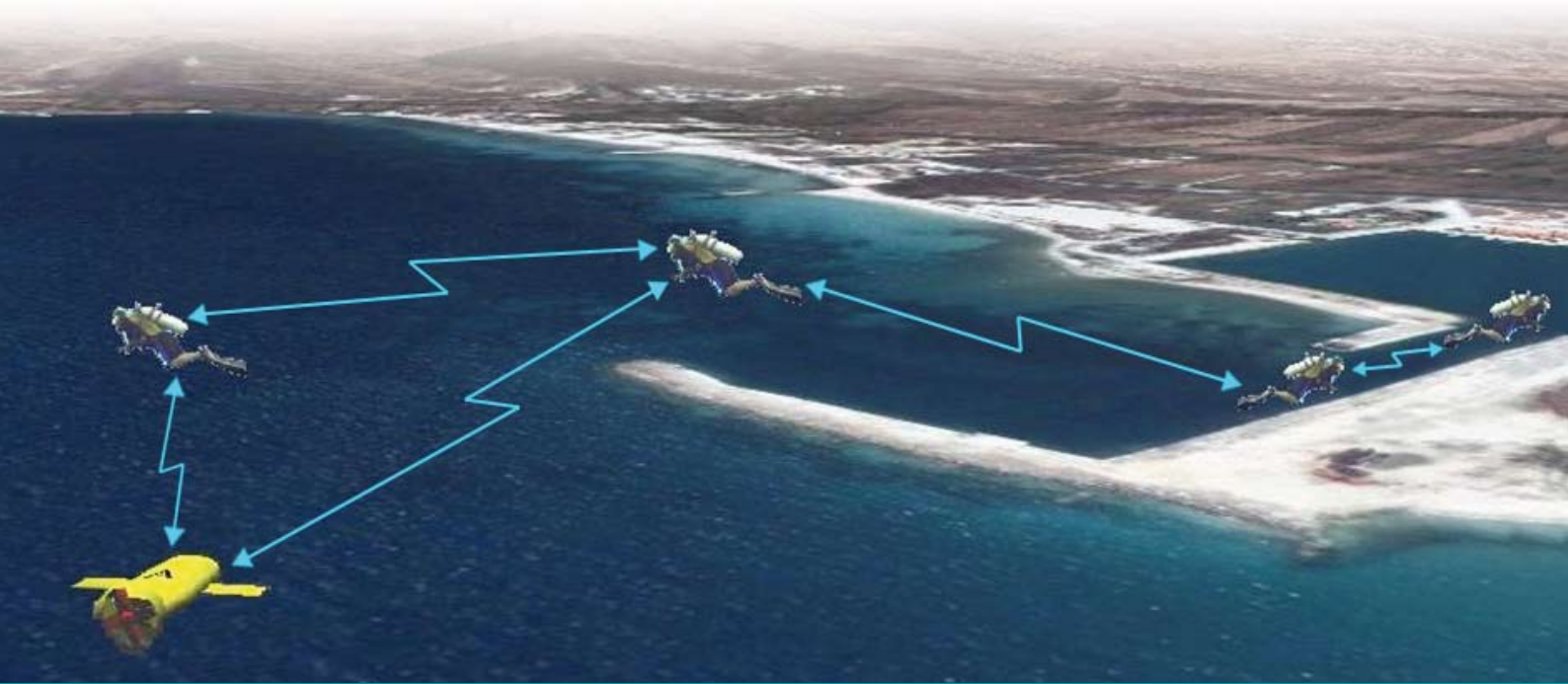


DeepLink™

Low Propability of Intercept Acoustic Communication Network



Gain the ability to communicate and the benefit of remaining undetected

Benefits

- Ability to communicate between several underwater mobile nodes
- Provides LPI communication
- Robustness for fast dynamic channel modifications
- High reliability in a wide variety of scenarios
- Ability to communicate with or without line-of-sight between all nodes
- Approved for diver safety by the Israeli navy
- Includes transmission of SMS messages and navigation control messages

Covert Acoustic Communication

DeepLink is a Low Probability of Intercept (LPI) acoustic communication network which is suitable for the Underwater Acoustic Channel (UWAC). Based on CDMA communication, DeepLink takes advantage of the UWAC to increase system LPI.

DeepLink - Operational Abilities

DeepLink's dimensions enable the system to be carried by small underwater vehicles or divers. Using CDMA communication with MIMO (Multi-Input, Multi-Output) techniques, DeepLink overcomes the multipath interferences of the UWAC, ensuring high reliability in various environments such as deep water, shallow water, harbors and etc.

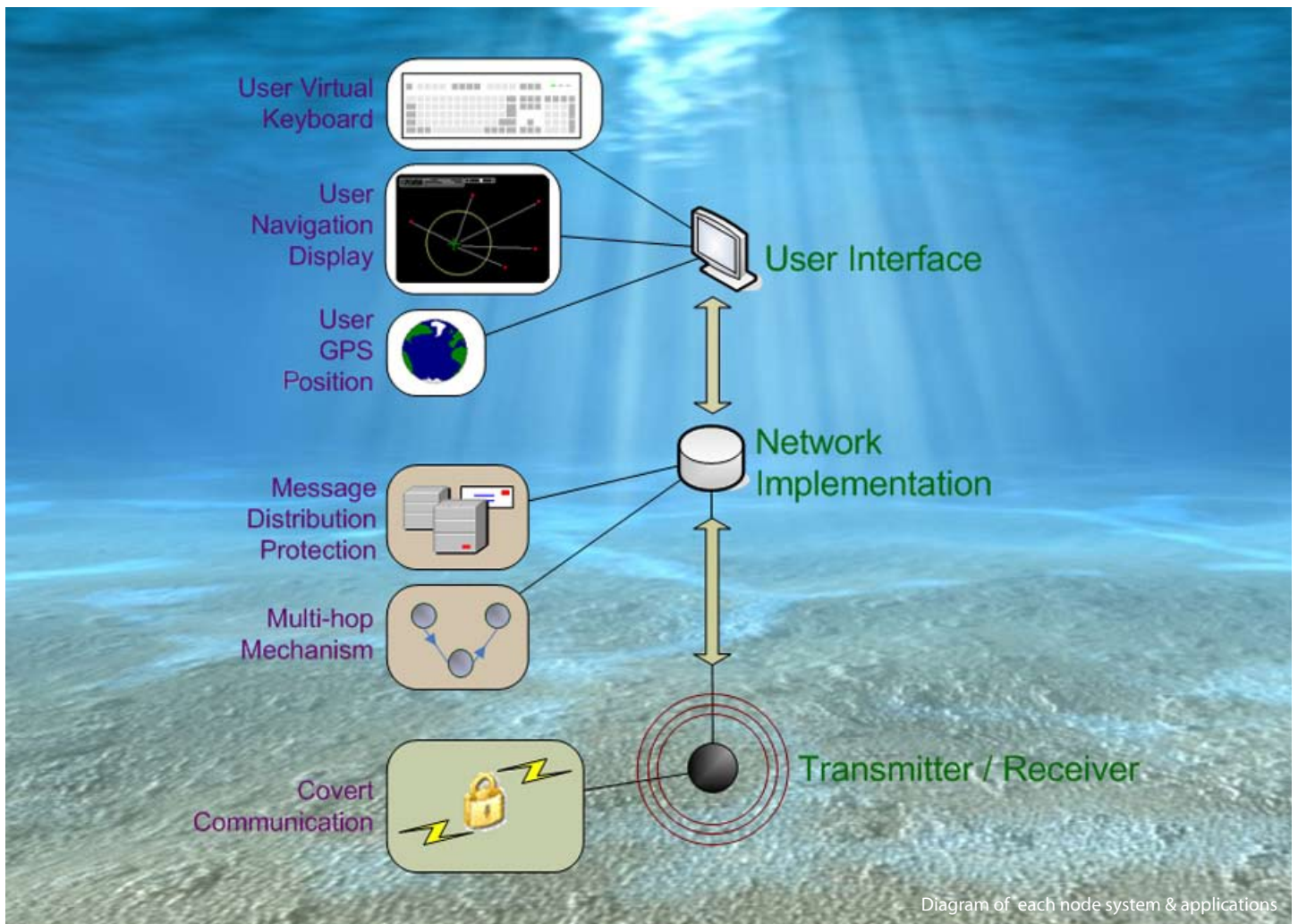
DeepLink is designed as an ad-hoc network including a multi-hop mechanism.

DeepLink's Unique Capabilities

Both built-in message distribution protection and multi-hop mechanisms increase the reliability of the network and the connectivity between nodes, providing a solution for non-line-of-sight scenarios.

DeepLink supports both SMS and navigational control messages, allowing the user to create his own mission status.

Each node contains a user interface which includes a virtual keyboard (for SMS writing), a navigation system and network display.



Technical Specifications

	With LPI	Without LPI
Effective communication range	5 km	10 km
Transmission rate	100 bps	1000 bps
Correct message decoding probability	10 ⁻⁶	
LPI	50% for 5 km transmitter - receiver range	

Features

- Covert communication
- Multi-hop mechanism
- Message distribution Security.
- SMS and navigational control messages
- Uni-cast, broadcast and multi-cast transmissions
- Includes user interface with navigational control abilities and network display

DeepLink's abilities have been proven in naval experiments, carrying out scenarios in various underwater channels, with and without line-of-sight, and with an interceptor present.

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