

Monitoring Fish Movement Over Ranges of Scale and Scope

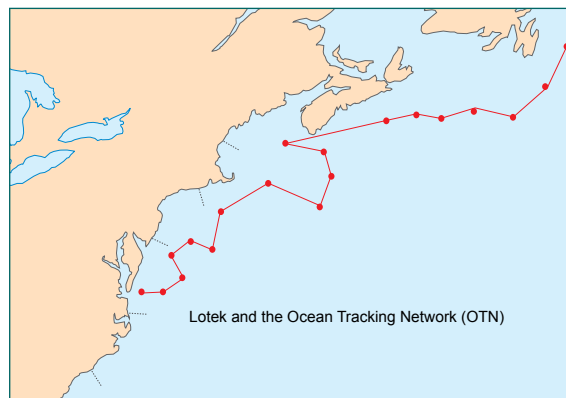
Lotek Wireless Inc. offers a range of telemetry products used in monitoring fish and wildlife movement over a broad spectrum of scale and scope, from large scale oceanic movement, to deep sea excursion and fine scale (sub-meter) habitat usage.

As an industrial partner in the **OTN project (Ocean Tracking Network)** being managed from Dalhousie University in Halifax, NS Canada, Lotek provides **LAT** geolocation archival tags for large scale (oceanic) movement monitoring and **MAP** acoustic systems for fine scale (spatial and temporal) monitoring such as 2D/3D positioning, high rate manual tracking and discrimination within high density aggregations. These products enhance the OTN's monitoring agenda, as an important complement to the initiative's broader coastal scale tracking component.

Oceanic scale



Oceanic & coastal scale



Through the use of **LAT2510** geolocation archival tags, long-term life-cycle data is collected that will provide a new level of understanding beyond the freshwater and coastal habitats of fish, mammals and birds. To our knowledge, this is the world's smallest geolocation archival tag, providing longitudinal and latitudinal estimates, internal body temperature, ambient temperature and pressure data.

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- Receivers
- Dataloggers
- Radio transmitters

- Acoustic transmitters
- Archival tags
- GPS systems

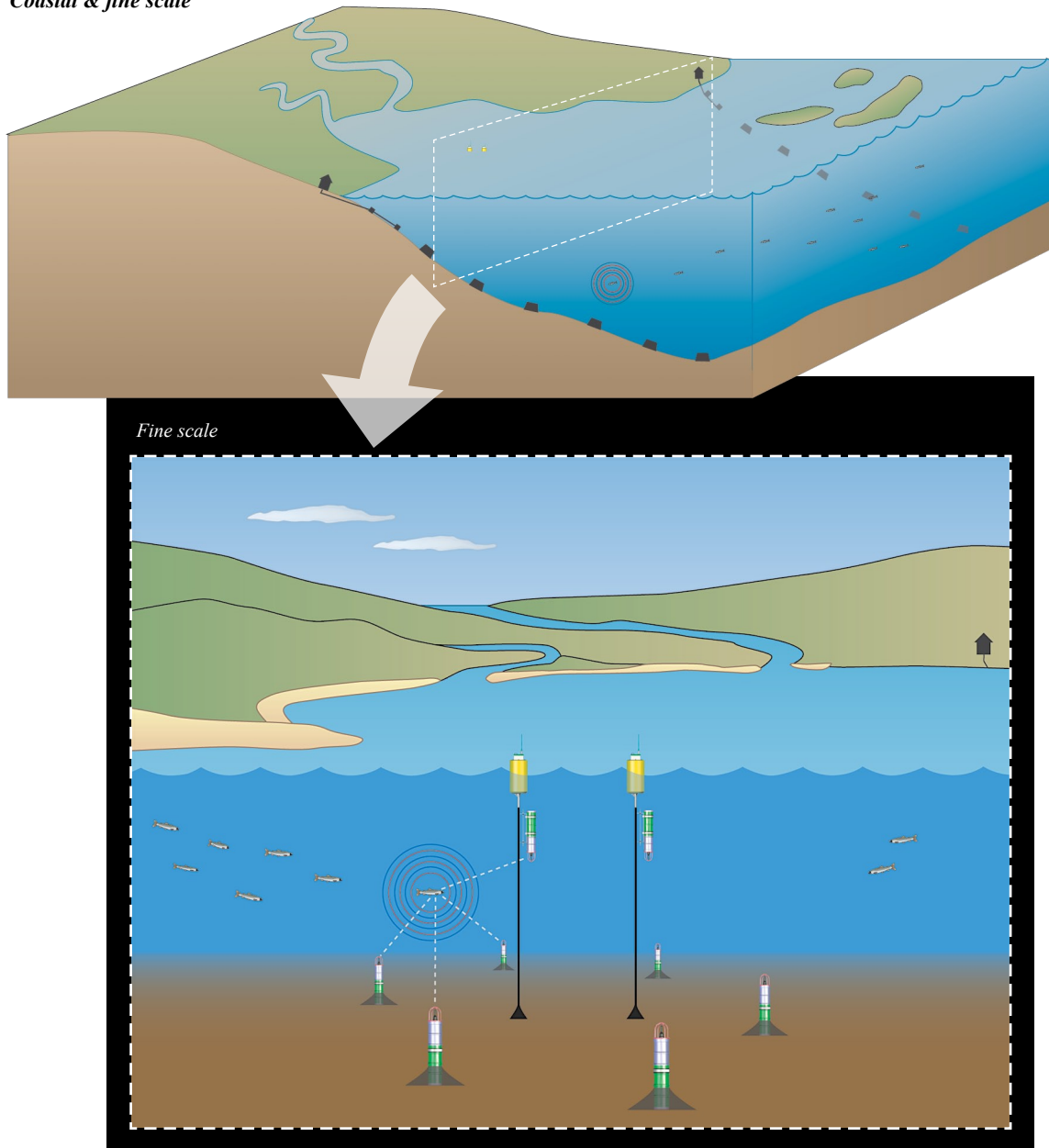
- Hydrophones
- Wireless hydrophones
- Physiological transmitters

- Depth transmitters
- Accessories
- Consulting

Delivering innovative solutions for a sustainable future.

Through strategic placement of **MAP** acoustic receivers in estuaries and other key areas of interest along coastlines, and equipping marine species of interest with **Dual Mode** transmitters that send signals to both **Lotek MAP** receivers and **Amirix VR** receivers, researchers will gain a much deeper understanding of the fine scale movements, behaviours and interactions of marine species. Researchers will be able to relate coastal migration patterns and fine scale behaviour.

Coastal & fine scale



In addition to providing fine scale activities of diadromous fish and other important marine species in 2D/3D, Lotek MAP acoustic technology allows detection of transmitters at fast transmission rates (to once per second) in acoustically noisy areas and areas of congregation with the option of providing physiological measurements (temperature, pressure and motion) whenever a tagged individual passes a MAP hydrophone array.

The result? A new understanding, not only of the broad migratory patterns, but also of fine scale movement patterns associated with feeding, spawning, predation and other species/habitat interaction/association.

For further information, contact Lotek Wireless Inc. at biotelemetry@lotek.com or call 905-836-6680



Some graphics on this page courtesy of the Integration and Application Network (ian.umces.edu/symbols/), University of Maryland Center for Environmental Science

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