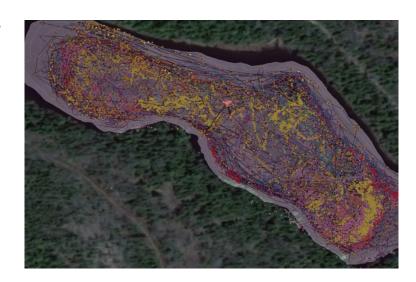# Fine-Scale Positioning

Acoustic telemetry enables precision tracking of many animals simultaneously, delivering fresh insights into animal behaviour.
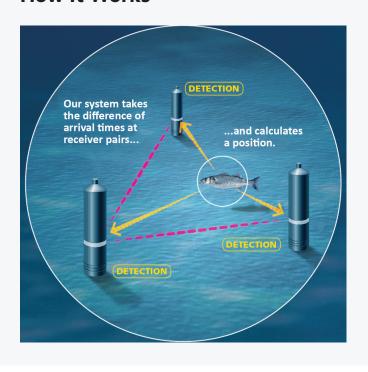
As pioneers in the field of acoustic telemetry, we have developed a fine-scale positioning system that can precisely track fish movements from within a few meters to just centimeters and as often as every few seconds.

The system uses off-the-shelf Vemco receivers and transmitters that have been deployed in many presence/absence studies worldwide.

As a fully scalable platform, there is no limit to the amount of area your study can cover and it can typically run unattended for up to a year.

How It Works

Our system takes the difference of arrival times at receiver pairs...

...and calculates a position.

DETECTION

DETECTION

DETECTION

Use Cases

» Track fish movements to within just a few metres and even centimetres and as often as every few seconds

» Identify time and place of critical behaviours such as spawning

» Understand species use of habitats such as juvenile nurseries or marine protected areas

» Indentify specific paths fish are taking around physical barriers during migration

» Visualize animal habitat utilization with 3D kernel density

» Identify environmental conditions that make animals susceptible to mortality

» Use depth sensing tags to obtain a 3D image of where your animals are in the water column

 INNOVASEA

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Design ⇢ Deploy ⇢ Collect ⇢ Analyze ⇢ Report

We offer three types of study solutions to guide you from design to final report

Expert Positioning Services

We work with you to design a system in accordance with a set of design guidelines:

» You deploy your system, collect your receiver data and send the data files to us

» We conduct data analysis on a fee-for-service basis

» We provide a final report and calculated positions

DIY User Software

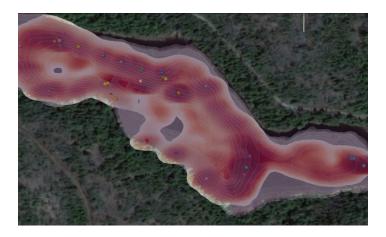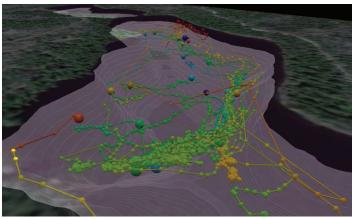Our DIY software is designed for **experienced users** of Vemco and HTI acoustic telemetry systems:

» **Fathom Position** software enables analysis of your Vemco tag datasets

Fathom **Position**

» **AcousticTags** and **MarkTags** software enables analysis of your HTI tag datasets

» Perform precise fine-scale positioning analysis

» Quickly and easily ranslate raw data into tangible results

» Generate your own animal tracks at any time

Full Service Solutions

» We provide study solutions from design to final report

» We have over 40 years experience in applying underwater acoustic techniques

» Our consultants are highly skilled in designing fine-scale positioning studies and analyzing large datasets

Ready to Get Started? Contact us today.

About Innovasea

Innovasea designs the world's most technologically advanced aquatic solutions for fish tracking and builds them to withstand the toughest conditions. It's all driven by a commitment to make our ocean and freshwater ecosystems sustainable for future generations. Today. Tomorrow. For life.

www.innovasea.com/fish-tracking