

# Pipe Detection & Tracking

## Feature Description

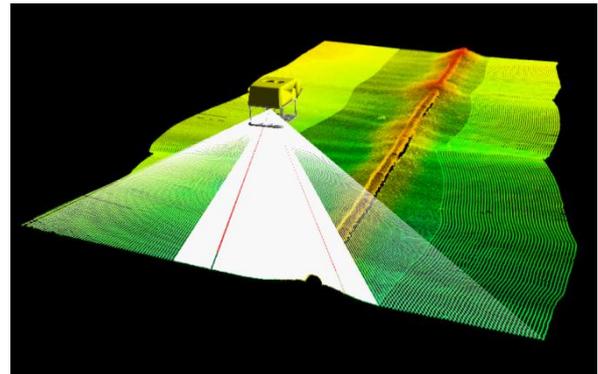


### Introduction

**Pipe Detection & Tracking** is a feature within SeaBat which automatically detects pipes within the multibeam swath, displays them to the user in real-time during survey, and outputs top of pipe position to the data acquisition software. The feature builds on the robustness of FlexMode for generating a high density profile of the pipe.

### Benefits

- Reduces manual pipeline processing effort
- Auto-steers FlexMode for less real-time manual effort
- Feedback loop into bottom detection algorithm improves end product
- Reduced risk to subsea assests
- Reduced risk of operator error

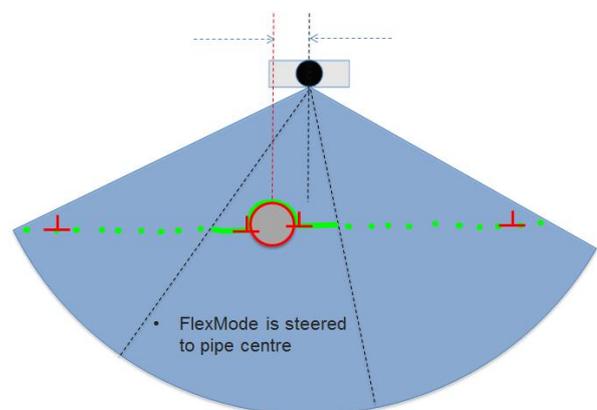


SeaBat FlexMode

### How it Works

The user enters the diameter of the pipe to be detected in the SeaBat User Interface and sets parameters to tune the pipe detection algorithm. When enabled, the real-time pipe detection algorithm computes the pipe position in the SeaBat's coordinate system and shows a circle representing the position in the swath to the operator. The detected pipe position is also output to the data acquisition software.

By including real-time pipe detection in the SeaBat system a unique advantage is gained which improves the end product. Starting from the initial detected pipe position, the diameter of the pipe is used to assist the bottom detection in the vicinity of the pipe in subsequent pings to enhance bottom detection robustness, and thus the pipeline profile. This unique feedback loop from pipe position to the bottom detection algorithm results in much cleaner pipeline profiles and, therefore, much improved detected pipe position. This is of particular advantage in instances of plastic coated (acoustically difficult) pipes where backscatter from the sides can be weak to the point that bottom detection performance is compromised, even though the sonar acoustically detects the pipe.



SeaBat Real-time Pipe Detection

### Upgrade Information

**Pipe Detection & Tracking** is available as an option for the new SeaBat Series and SeaBat 7125 in Feature Pack 4 (FP4). A software upgrade is required. Please contact your local RESON representative or [support@reson.com](mailto:support@reson.com) for further information.

#### Compatible Systems

SeaBat Series

SeaBat 7125 (FP4)