CoPilot Integration of the Gemini 1200ik

Software Integration and demo

seebyte

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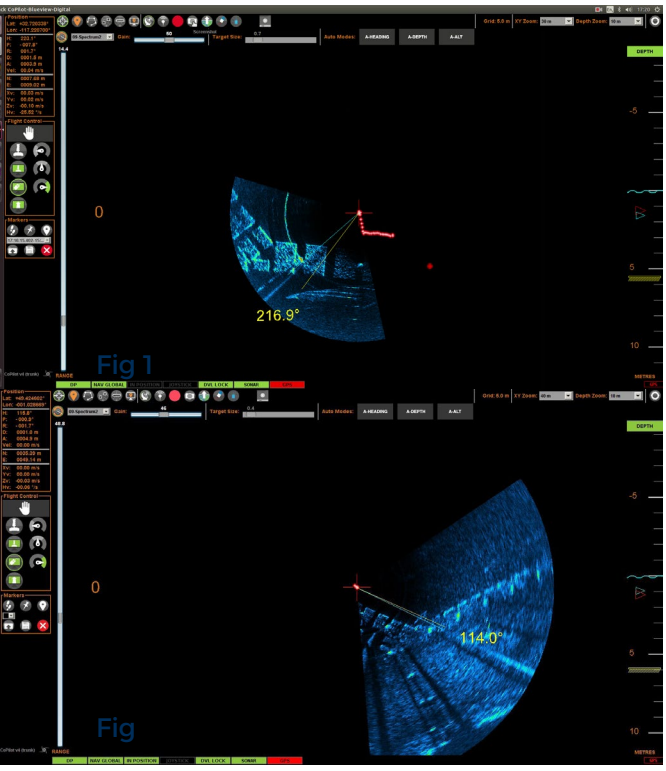
Features & Benefits

- ROV automation
- Single software package
- Advanced target identification
- Compatible with Gemini 720ik, 720is, 1200ik



Software integration of the Gemini 1200ik

Operator: US Navy
Location: San Diego, California

SeeByte's CoPilot provides automated sonar based tracking and movement relative to a target to allow a vehicle to inspect a point of interest with greater precision. CoPilot has historically supported the Gemini 720ik and 720is and now includes the new 1200ik dual frequency sonar.

Summary

The Gemini 1200ik offers two frequencies with different functionality: 720kHz for long range target detection and 1200kHz for close range inspection. The CoPilot integration supports the switching between these frequencies based on the range without any intervention from the operator.

As with other Gemini sonars, the sonar feed is also displayed and aligned with vehicle positioning and bearing.

Demo

The Gemini 1200ik sonar was mounted onboard the Navy's Videoray MSS Defender for the trial in San Diego. The sonar was used to survey a harbour from the dockside but can also be used off a ship's side as required. The sonar
returned high quality images, with high frequency being demonstrated in Fig1 and low frequency in Fig 2.
The trial was a success, leveraging the transparent interface of CoPilot to a new type of sensor with extra dual frequency capabilities. Using CoPilot allowed for autonomous control of the ROV which enabled the operator to focus on the target and high quality sonar data.

Future Developments

The next phase of this integration is to incorporate operator control through the user interface of CoPilot, with two main configurations: 'auto' mode based on higher frequency limit range (40m); or 'manual' mode allowing operator to switch manually.