Mitcham Industries Works on Redefine Ocean Imaging



US-company Mitcham Industries, Inc. announced that Klein Marine Systems, a division of Mitcham, has developed a new, patent-pending technology called MA-X that is anticipated to redefine ocean imaging. Traditional side-scan sonar imaging creates a nadir gap in the center of the image. This gap in data requires overlapping survey lines which leads to significant additional survey time to achieve 100% coverage. For the operators of autonomous underwater vehicles (AUV), this translates into extended mission duration. Traditional gap-filler solutions tend to be expensive or of low image quality.

Acoustic Track over the Sea Bottom

MA-X is essentially the next generation of side scan sonar whose arrays are physically mounted at an angle relative to the towfish or AUV platform. In this way, each narrow fan-beam is oriented at a downward and forward-grazing angle, resulting in an acoustic track over the sea bottom that starts from the port and starboard side and extends diagonally forward across the nadir ahead of the platform. MA-X allows for seamless imaging of the entire swath, including the nadir area. Klein believes this technology will provide unmatched image quality and an estimated 40% increase in the coverage rate and survey efficiency (i.e. fuel, survey time).

Low-risk Gap-filling Sonar Solution

Guy Malden, Co-CEO of Mitcham Industries, commented, "In our opinion, MA-X represents a paradigm shift in seafloor imaging. We believe it to be a cost-effective, attractive and low-risk gap-filling sonar solution, capable of being immediately adopted on AUVs of all sizes – even in conjunction with other manufacturers' sonars, including SAS. This MA-X technology should provide Klein with an attractive value proposition and the ability to rapidly expand its penetration of the AUV and towed side scan sonar market."

Shorter Survey Time

The immediate benefits to the users of the MA-X technology, both military and commercial, are shorter survey time and more predictable surveys in windows of good weather. For AUV operators, this translates into either longer autonomy or smaller size battery, i.e., lower cost or more payload space. In addition, the MA-X imagery has the same interpretative characteristics as side scan images (grazing angle, shadows) and therefore, no operator re-training is needed.

Compatible with major Third-party Imaging Software

MA-X-based products will continue to output Klein's SDF data format and will be compatible with major third-party imaging software applications, including automatic target recognition software. The MA-X technology will be introduced in a variety of Klein products, including both towed systems and payloads for autonomous platforms.

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