



Newsletter – June 2015

ASB Systems Pvt. Ltd.

Imaging or Imagining?

“Vorsprung durch Technik”, screams the hoarding of a premium car brand. The slogan means “Progress through technology”. Ok, point taken, albeit answers awaited...what is it that makes the premium car brand so special...

Prestige may be one big reason that sells such high end cars. But one should also give considerable thought to the facts that made it a premium brand. “The difference is in the details” is an apt statement. A plethora of safety features, looks and performance together set it apart from the other mortals on the road.

Well, no, we have not ventured into car business...atleast, not as yet! The point that we are trying to prove here is that costs can be justified with just one critical parameter...and that parameter is known as quality!

In the Sonar business, quality gets co-related to the brand, and to the instrument’s parameters like Accuracy and resolution. Fish can be tracked using a fisherman’s fish-finder as well as a scientific echosounder. Only that the latter does a more refined job as required by the researcher.

Similar is the case with underwater imaging systems. There are underwater cameras which can provide blurry images up to an arm’s length, or sonars which can provide “somewhat” kind of images...and then there’s *Blueview*!

In this issue...



The Quality criteria



2D and 3D technology



Sonar Models
3D :BV5000
2D :M900



New Release –
Shallow water
Multibeam

Customer satisfaction is our prime objective

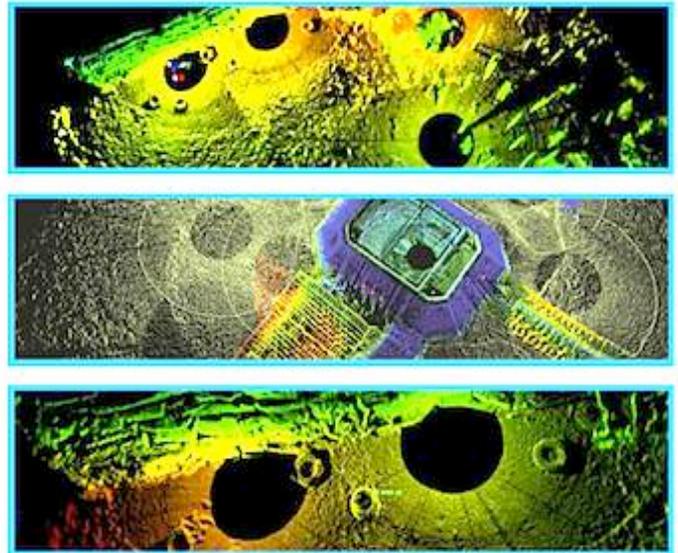
Imaging vs Imagining

Underwater vision is serious stuff, when it comes to marine construction, monitoring, survey and detection. There is no room for approximation; precise and accurate imaging is what is required. And Blueview does just that...2D and 3D high resolution imaging sonars, built for these very applications. With Blueview, you can be sure that nothing is left to the imagination (no pun intended!)

3D technology -

Surface deployed and "in-water-column" systems have been used in an attempt to inspect and monitor underwater structures for years. These systems while suitable for bottom surveys and mapping often cannot provide enough side elevation detail to effectively determine its "as-is/as-found" condition.

The advantage of a 3D side-elevation view of a damaged structure is its ability to see and quantify numerous elevation aspects including height, angle, depth, etc. of the structure and its surroundings enable project managers and engineers to better ascertain the as-is/as-found with minimum training required.



Model BV5000 -

The BV5000 is a combination of a multibeam profiler sonar with a pan and tilt to scan areas of interest generating 3D point clouds.

3D Multibeam Scanning Sonar creates high resolution, laser-like, imagery of underwater areas, structures and objects of interest, even in low to zero visibility conditions. The 3D system is simple to deploy, easy to operate, provides highly detailed 3D point clouds from a tripod, an ROV, surface vessel or customized deployment solution. The BV5000 collects 3D point clouds without positioning, heading, pitch or roll information from a stationary platform and can collect motion compensated 3D point clouds using the MotionScan kit. When the BV5000 is combined with QuickStitch software, a streamlined software package for viewing, cleaning, aligning, measuring and creating profiles, the complete 3D solution delivers turn-key 3D to customers.

The BV5000 is equipped with a Tripod and Pan & Tilt mechanism. The scanning sonar head and integrated mechanical pan and tilt mechanism generate both sector scans and spherical scan data. With the touch of a button, these new 3D mechanical scanning sonar create 3D point clouds of an of the structure. Further, placing the proper data gathering equipment near the structure enables visibility into the structure from multiple angles, providing critical information to determine the exact condition of the structure.



2D technology -

Tracking moving and stationary targets in addition to navigation poses challenges that can be solved with new 2D imaging sonar technology.

The first step in solving these challenges is to understand the limitations of traditional mechanical scanning sonar. There are vast differences between the traditional mechanical scanning sonar and new 2D imaging sonar. The scanner mechanically rotates a single, narrow sonar beam. The resulting imagery is static, like a still image photograph. With a scanner, moving objects appear as blurs or “sonar smears” across the image. Additionally, 2D scanners do not operate well while in motion as stationary objects will appear as blurs and smears.

2D Imaging Sonar, sometimes referred to as “acoustic cameras” operate differently and provide distinct advantages even in zero visibility conditions. Able to operate from both moving and stationary positions, 2D imaging sonar capture data within a defined field-of-view (like a slice of pie), while the “top-side” software processes the data rapidly to generate a real-time sonar “movie” viewable from a laptop or PC. Moving objects can now be seen clearly as they move into, through, and out of the field-of-view.



Model M900 - A 2D Imaging Sonar system can be safely deployed from a surface vessel with the operator utilizing a “topside” laptop or PC to view detailed underwater scenes in real time. The video-like imagery enables the operator to cover wide areas quickly and easily, and can spot moving objects that may be caught in the flow of especially turbid sections.

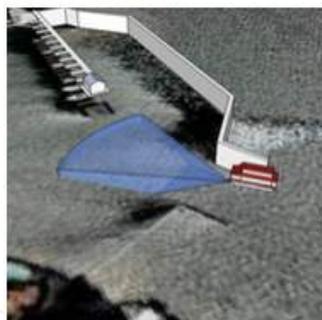
The acoustic data captured by the 2D Imaging Sonar can also deliver accurate point-to-point measurements. Using the same software operators can verify the distance between any two points within the imagery.

Applications:

Hull Inspection



Navigating Structures



Culvert Inspection



Equipment Placement



New Release – Teledyne Odom MB2: Shallow water multibeam

The MB2 Multibeam Echosounder is developed for fast mobilization on smaller vessels and is optimized for shallow water survey companies, Port and Harbour Authorities, dredging companies and other users looking for an easy to use, quick to deploy, high resolution system.

As an option MB2 can be supplied with an integrated IMU and GPS heading system as well as an integrated real-time SVP sensor to simplify installation and calibration, making the MB2 perfect for use on vessels of opportunity, small survey launches and ASVs.



MB2 features a dedicated cylindrical transmit array and broad range of sounding frequencies improving on the performance of the MB1 by offering a wider coverage and narrower acoustic beam.

Using both amplitude and phase bottom detection, the MB2 is capable of sounding a swath of up to 140° in up to 110m water depth.



- ✦ Selectable swath width up to 140 degrees
- ✦ Acoustic beam width 1.8° x 1.8°
- ✦ User selectable frequency range from 200 to 460 kHz
- ✦ Integrated IMU and GPS heading system (Optional)
- ✦ Integrated real-time SVP sensor (Optional)