

Q&A

with
Judith Knudsen

Co-owner and Vice President of Operations and Marketing with Canadian-based Knudsen Engineering. President and owner of Knudsen Systems Inc., a small business located in New York, U.S.A. Member of the Canadian, United States and International Hydrographic Societies, the Canadian Advanced Technology Association, the Marine Technology Society, and the United States Navy League. Judith Knudsen is a one-woman dynamo: she's people savvy and a taskmaster, who gets things done – and all with a smile.

Where were you born? Where is home today?

I was born in Niagara Falls, New York, and grew up in Lewiston – a small town further downstream on the Niagara River. Today I live in Perth, Ontario, with my husband and business partner Don. We also have a vacation home near Tampa, Florida.

What is your personal motto?

A colleague and friend often refers to me as “the little engine that could.” It’s a form of stubbornness, but self-confidence too. Believe in yourself and then so will others. Believe in the importance of laughter and carry it wherever you go. Much of our happiness depends on our ability to spread it.

Who inspires you?

My partner Don for his total confidence and trust in my capabilities. Also my dedicated staff: they share a passion for our entrepreneurial effort, and contribute much energy and drive to the mission.

What has been the highlight of your career so far?

The many exciting and often critical missions where our systems have been deployed. Knudsen equipment has gathered data from the shallowest to deepest parts of the world’s oceans – from a row boat in a small river in the middle of Africa to the bottom of the Mariana Trench – the deepest hole in the earth. A good example would be our involvement over the years with survey activities in the Canadian Arctic. Beginning in the late 1980s, our then new echo sounders were used for helicopter-borne, through-ice spot sounding by the Canadian Hydrographic Service. Today, our equipment is still used in the high arctic and has expanded to other roles including installation on Canadian and U.S. icebreakers and research vessels, and recently on AUVs mapping the ocean bottom.

What makes Knudsen’s products unique?

Knudsen products offer attractive price/performance ratios. Offering products at the high end of performance within the single beam survey market, but at affordable prices is our mission. Within our small niche market, we must continue to strive to stay on top of

the technology revolution. Although we may be ‘simply single,’ our mandate is to do it exceptionally well.

How has ocean mapping technology evolved?

It has come a very long way from the days of lead lines. When Knudsen first entered the survey market, single beam technology was the preferred method of data collection, but on paper roll records. The effort to transfer the data from these paper rolls to map charts was a massive task, but it was the only means for many years. With the arrival of the digital world, things progressed rapidly. Knudsen introduced the first totally digital echo sounder, which allowed us to capture and store the digital depth records at the same time as printing occurred on the rolls. This led us to the introduction of the first “blackbox” echo sounder in the early 1990s.

What new technologies would you like to see?

Not only do we now want highly accurate water depths, but we want to see into the bottom, and we want to know what it looks like, what is its makeup. With today’s technology, this is becoming more and more achievable. As technology becomes more compact and affordable, access by more budget-constrained researchers working on much smaller platforms in shallower depths will soon be within reach.

How does Knudsen develop new ideas and technologies?

As a team. We all watch the marketplace; we all talk with customers; we all look to where there is a hole in the market. Some of our most creative times have been done over a case of beer in our conference room. The beauty of a small motivated team is that we can react quickly and efficiently when we identify the opportunity, and more importantly, we will have fun doing it.

What advice do you have for people starting in the industry?

Focus. Do a few things exceptionally well, rather than many things mediocre. Always, always take the high road, and never, never burn bridges!