Spotlight Q&A with Dr. Dipak Roy

Dr. Dipak Roy is the founder and CEO of D-TA Systems Inc. After selling his previous company, Interactive Circuits and Systems Ltd., to Radstone Embedded Computing (now Abaco) in 2003, Dr. Roy started D-TA Systems in 2007 with the aim of creating an defense electronics solutions provider that could compete widely across the EW, SIGINT, radar and simulation markets. In recent years, his company has won contracts to provide HF radars for Canada's Over-the-Horizon Radar project, EW simulators for the US Army and, more recently, an EW payload demonstrator for the US Navy. In this discussion, Dr. Roy talks with JED about a variety of topics from the perspective of a small and medium-sized enterprise (SME)

JED: **D-TA is been very successful at developing a core technology and from this developing a variety of competitive solutions for different markets. How have you been able to do this?**

Roy: From the very inception, D-TA's mandate has been to provide full solutions for the EW sensor systems market. Some of these include COMINT, ELINT, EW emulation, HF processing, etc. Towards that goal, we have successfully built a team that is dedicated to providing the best capability for developing complete solutions. Our vertically integrated technology company now has expertise in RF, IF and mixed signals, FPGA, Multi-core software, and EW applications.

It was very critical for D-TA to have full control of the technology stack as stated above. Our solid core technology benefits customers by providing the highest level of performance, and at the lowest cost. We excel at both spectrum sensing, and spectrum creation.

JED: **D-TA is a small- and mid-sized enterprise (SME) that is often competing with much larger EW and SIGINT systems houses. What are your strengths and weaknesses in this market?**

Roy: Our Strengths: After 14 years of business, and close to nine figures of R&D investment, we are well on our way to capturing new market share. As a complete systems provider, virtually all the time as a SME, we compete with much larger companies (Tier 1 and 2s). The key formula for success is our compelling value proposition that customers always desire. So far we have been very successful in providing the best performance, at the lowest cost, and the highest level of service and support. We see our end customers (Air Force, Navy, Army and Special Forces) rather deal with a nimble/flexible SME than working with a larger organization. In addition, we maintain and support collaborations with academia to train the next generation.

Weakness: Unlike the big prime contractors, we lack the historical track record. However we focus on our strengths where we provide major sub systems that can be easily integrated into large combat management systems. Our small size requires a lot of focus, and we rely on many global partners to address complex customer requirements.

JED: **In what ways do you think the defense electronics market is changing in favor of SMEs?**

Roy: It is changing particularly in the EW area, where your brain/intellectual capital is more important than financial capital. This provides a significant capability for SMEs with relatively less investment to provide sate of the art solutions for the end user.

SMEs also have a number of advantages when accessing Government funding programs and/or Other Transaction Authorities (OTAs). Case in point, D-TA had a major win to provide a next-generation EMSO solution for the US Navy via

S2SMARTS/NSTXL.

JED: **The DOD is embracing new MOSA standards, such as SOSA. What does this mean for SME's, such as D-TA?**

Roy: We fundamentally believe that the government should not impose standards, as it inhibits innovation. Many Government bodies are moving towards "one size fits all" – VPX boards, for example – which in theory sound good, but have severe impacts on integration and program costs.

D-TA has developed a ground breaking solution of up-mast EW. With a focus on miniaturization and extreme SWaP, we now include the entire EW sensing/transmitting, as well as the processing inside the antenna that is up mast. Essentially your antenna is your entire EW! This makes the VPX approach redundant.

JED: **What are your goals for D-TA Systems over the next few years?**

Roy: We are the only SME in the entire world with full systems capability moving towards extreme SWaP, antenna-integrated EMSO systems. Our focus is to develop the next generation technology, capture market share in EW Emulation, ELINT/ESM, HF processing and RF/IF record/playback systems. Over the next five years, we are going after capturing the EW market share in a big way. This is demonstrated by our growing US office presence, and recent wins.