



● ● Rob Andzik, President, AMERGINT

Remaining resilient to cyber threats ● ●

AMERGINT delivers software-defined signal and protocol processing applications. The company serves the satellite ground, test and data acquisition markets across defence, scientific and commercial sectors. Company President Rob Andzik talks about the emerging nature of electronic warfare (EW), and the company's efforts to help remain resilient to cyber threats.

Laurence Russell, News and Social Media Editor, Global Military Communications

GMC: Can you tell me a little about AMERGINT?

Rob Andzik: AMERGINT is a small company based out of Colorado Springs, up on the foothills at the base of Pike's Peak. We employ about 100 people, mostly engineers, and we focus on the space to ground satcom links that monitor and control the satellites.

Some of the key programs we've worked on include the International Space Station's (ISS) uplink and downlink video and Internet access through our work at the Johnson Space Centre. We run the monitoring and control for GPS constellations, and we are also running acquisition systems for some of the large rockets like Atlas and Delta which United Launch Alliance (ULA) is responsible for.

AMERGINT is a really exciting place to be because we get to do very important work processing mission-critical links. If we don't deliver, the point to the satellite may be lost, so it's essential we don't put a foot wrong. That's highly motivating, but it's also fun to work in a smallish, focussed company that can often feel very friendly.

GMC: What are some recent challenges AMERGINT has adapted to in the climate we find ourselves in?

Rob Andzik: Obviously, the pandemic has impacted world commerce. Everyone is affected at some level. We do have the benefit of being a software focussed



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company, which allowed the majority of our staff to pack up equipment and head home to connect safely.

So, there was a tiny hiccup, but AMERGINT managed to continue work as normal. Given the importance of what we do, that's a necessity as a critical business. People may need satellite communication right now more than ever, after all. We're very fortunate to be able to comfortably support our staff family in the way we have.

GMC: You've partnered with Abaco Systems to develop electronic warfare capabilities. How will a combination of your technologies offer unprecedented sophistication?

Rob Andzik: To start, one of the key things to know about AMERGINT's technology is that it offers a very modular software architecture which allows us to develop agile and responsive systems which can be adjusted to meet precise customer needs.

Pairing our software architecture with transposable Abaco hardware was a perfect fit. It has provided the ability to deliver to customer demand with even further accuracy around a sharper schedule and evolve or scale that as their requirements change.

GMC: We've spoken to defence developers who argue that militaries supplying via a private model are preferable because the developmental risk of the project is borne by the commercial sector, removing the costs of state research from the taxpayer, and the constraints of long development cycles from government research bodies. Do you agree with that?

Rob Andzik: Absolutely. It is an interesting concept because usually militaries need very specific systems and the commercial industry is so habitually focussed on commodity consumer products, so at face value, the two don't necessarily gel.

But by utilising private companies like AMERGINT, we're able to develop mission-critical systems from the ground up in defence and science with a certain unique efficiency. It's not another project for the government to juggle, it's work being outsourced to a devolved organisation which can focus its energy better.

A strong part of this is the capacity for sustainment. We possess a set of engineers with a wide variety of specialisations, which we can keep gainfully employed and fully occupied because of the extent of our operations. In a government type program, you wouldn't necessarily be able to offer those specialists much more than a limited contract without the benefits of full employment.

By leveraging the strengths of the private sector, we can retain better talent, cost-effectiveness, and quality, and while offering more activity in the American economy than a government division would be able to create.

GMC: AMERGINT has been clear about the need for the armed forces to invest in electronic warfare resilience. Just how critically has our reliance on electronics become?

Rob Andzik: Someone could be reading my words using electronics right now. I think it's hard to imagine what a cyber-attack would really look like. The world hasn't become aware of it in the public eye. But everything from key processes like agriculture down to something as personal as daily communications are reliant on electronics, and therefore at risk of this emerging threat.

That's doubly so when you're talking about military entities. The resilience to tolerate an attack and continue operations in the event key electronics have been targeted is currently vital and will only become more critical as EW technology continues to become more sophisticated. It's something we simply cannot afford to ignore.

GMC: Does the movement towards RF countermeasures herald a less lethal, less destructive form of force?

Rob Andzik: I would say so. Obviously, a weapon is a weapon,

it's designed to subdue. There are certainly ways of using these technologies to the same lethal degree as conventional 21st century weaponry, but that shouldn't discount the value of disrupting, silencing, misdirecting, and negating a combatant's efforts, to reduce their functional level of threat, minimising, or potentially even ending hostilities.

This is still a set of developing technologies and applications, so we can only speculate on the logical extent of their use, but we are certainly seeing a set of functions that would allow for a strong deterrent without involving lethal force.

GMC: The cyber domain is a very new category and one that seems to be rapidly taking shape. At present, there are those relatively unaware of it. Which capabilities do you foresee will become synonymous with the domain in the near future?

Rob Andzik: The cyber domain is one which is often associated with protecting money, a frontier primarily revolving around banks detecting and resisting cyber theft.

But that's just the tip of the iceberg. With so much communication online, the ability to disrupt or spoof those lines of contact can have devastating effects. Cyber-attacks are all about information and misinformation, which has the potential for incredible power.

To disrupt your ability to produce results or response allows for massive capability, and the potential for confusion or even chaos is obvious. The strength of cyber is often in its subtlety. The most damage can be done without you even noticing.

They say the pen is mightier than the sword because the weaponization of information has the potential to be so much more affecting than an individual's destructive power, but in the future we see, we could certainly see the mouse becoming mightier than the gun, so to speak.

Though as I've said, much of this is still to be discovered. What I can assure is that AMERGINT is a shield against these new threats, and we're committed to forming reliable partnerships to ensure our customers' safety. What we do is to ensure our products and systems are entirely secure. We protect some of the most essential links in the world, which is a critical job growing in priority, and we couldn't take that responsibility more seriously to keep our clients safe.

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● ● AMERGINT is a shield against these new threats. Photo courtesy of Shutterstock