



Welcome to our newsletter...

# isoTOPICS

Edition 1

May 2020



“We hope you enjoy  
our newsletter.  
Keep Connecting  
and Stay Safe.”



# Hello & welcome

Welcome to the first edition of the Isotropic Systems Newsletter. The novel coronavirus is at the front of everyone's mind and we sincerely hope that you and your families are staying safe and well during these challenging times.

Like our colleagues around the world, over recent weeks we've taken precautionary measures to protect our people and to maintain business continuity across our teams and operations in the UK and US. We continue to connect with our customers and partners, laser-focused on the development and delivery of our transformational multi-beam terminals.

We also continue to make excellent progress and remain on track for over-the-air tests of our terminals with key partners this fall, key network certifications next year, and commercial rollouts as next-gen MEO and LEO capacity becomes available in early 2022.

And we are encouraged to see very strong interest in our solutions from the Aero, Government and Defense sectors, recognizing the unique aspects of our terminals and their ability to unleash a whole range of new opportunities for connectivity.

We hope you enjoy our newsletter.  
Keep Connecting and Stay Safe.

**John Finney**  
Founder & CEO

# Major contract signed with U.S. Defense Innovation Unit (DIU)

We have cracked the code for a new age of seamless and secure government and military connectivity and communications in some of the most challenging conditions facing government and military operations around the globe. This important agreement between the DIU and Isotropic Systems is a major milestone that will ultimately lead to ultra-high-speed data delivery and real-time national security advantages that come with integrated government networks.

We will enable the Navy, and other government forces and agencies, to arbitrage all the capacity it needs from across LEO, GEO and MEO constellations over a single multi-beam platform.

This collaboration contract is focused on the delivery of a low-profile, high performance, affordable and customizable antenna to support multiple links over multiple bands of satellite capacity, including S-, C-, Ka-, Ku-, X-, and Q-band connectivity, to open up a new world of real-time government communications and connectivity.

Our antenna platform will undergo extensive environmental and interference chamber tests throughout 2020 in preparation for installations aboard new-age Navy ships.

[Read more →](#)

“We have cracked the code for a new age of seamless and secure government and military connectivity”





## New Phase of Customer Edge Terminal Development with SES

We have entered into the final phase of development with our partners SES, of a range of scalable, cost-effective Ka-multibeam terminals to open up a new world of powerful, resilient connectivity and capabilities for a broad range of commercial and government markets.

Stewart Sanders, SES's Executive Vice President and O3b mPOWER Programme Lead said: "The SES-Isotropic Systems partnership is driving the development of innovative multi-beam customer edge terminal antennas using digital beamforming that will light up new market opportunities for the tailored scalability and flexibility of our O3b mPOWER network and our unique multi-orbit MEO-GEO constellations,"

"Our shared vision is keenly focused on bringing game-changing, high-performance broadband to both highly sophisticated and mass markets across the globe, on land, at sea, and in the air."

[Read more →](#)



# Licensing Optical Multi-Beamforming Antenna for Aero

For Aero and Defense Integrators, our optical multi-beam antennas provide customized high-performance connectivity seamlessly across multiple satellites and orbits at low power consumption, which delivers big advantages over single beam antennas to both commercial and government aircraft operators – from airlines to UAV's and every form of aircraft in between.

Our optical lens modules can be conformed to the size and shape of the fuselage or radome for a tailored low-profile solution that meets the requirements that government and commercial markets value the most as they look to unleash a new level of capabilities from their inflight connectivity (IFC) systems.

According to Northern Sky Research, “terminal advancements made in 2020 will play a pivotal role in bringing new MEO and LEO high throughput satellite capacity to the aero market, bringing long-awaited IFC expectations more closely in line with the technical realities and capabilities aboard commercial, business and government aircraft”.

[Read more →](#)



# Next-Gen Terminals Delivered by Revolutionary Optical Technology



**Maria Papaioannou**  
Director of Lens  
Antenna Engineering

Maria Papaioannou is the Director of Lens Antenna Engineering at Isotropic Systems, leading a fantastic team of lens antenna engineers and computational physicists. Together, they are designing RF lenses that unlock key performance differentiators and scanning capabilities to the Isotropic terminals.

**Q: What inspired you to become an engineer in the field of optics?**

**A:** The field of optics constitutes an inexhaustible source of inspiration across a very diverse field of applications – antennas, imaging, sensing, computing, fiber optics, solar panels to name just a few. I am a telecommunications engineer by background having conducted research on optics and lens applications across different parts of the spectrum. Our work on optical beamforming at Isotropic Systems, is a brilliant proof of the incredible capabilities available to the world through the field of optics.

**Q: Why is it exciting to do what you do at Isotropic Systems?**

**A:** Isotropic Systems is providing disruptive solutions to the telecoms industry by pushing the boundaries of innovation in the field of optics, circuits and fine engineering in bringing solutions with unprecedented trades of capabilities to market. We have a fantastic interdisciplinary team that is great to work with, learn from and share the extraordinary experience of creating something new.

## Next-Gen Terminals Delivered by Revolutionary Optical Technology

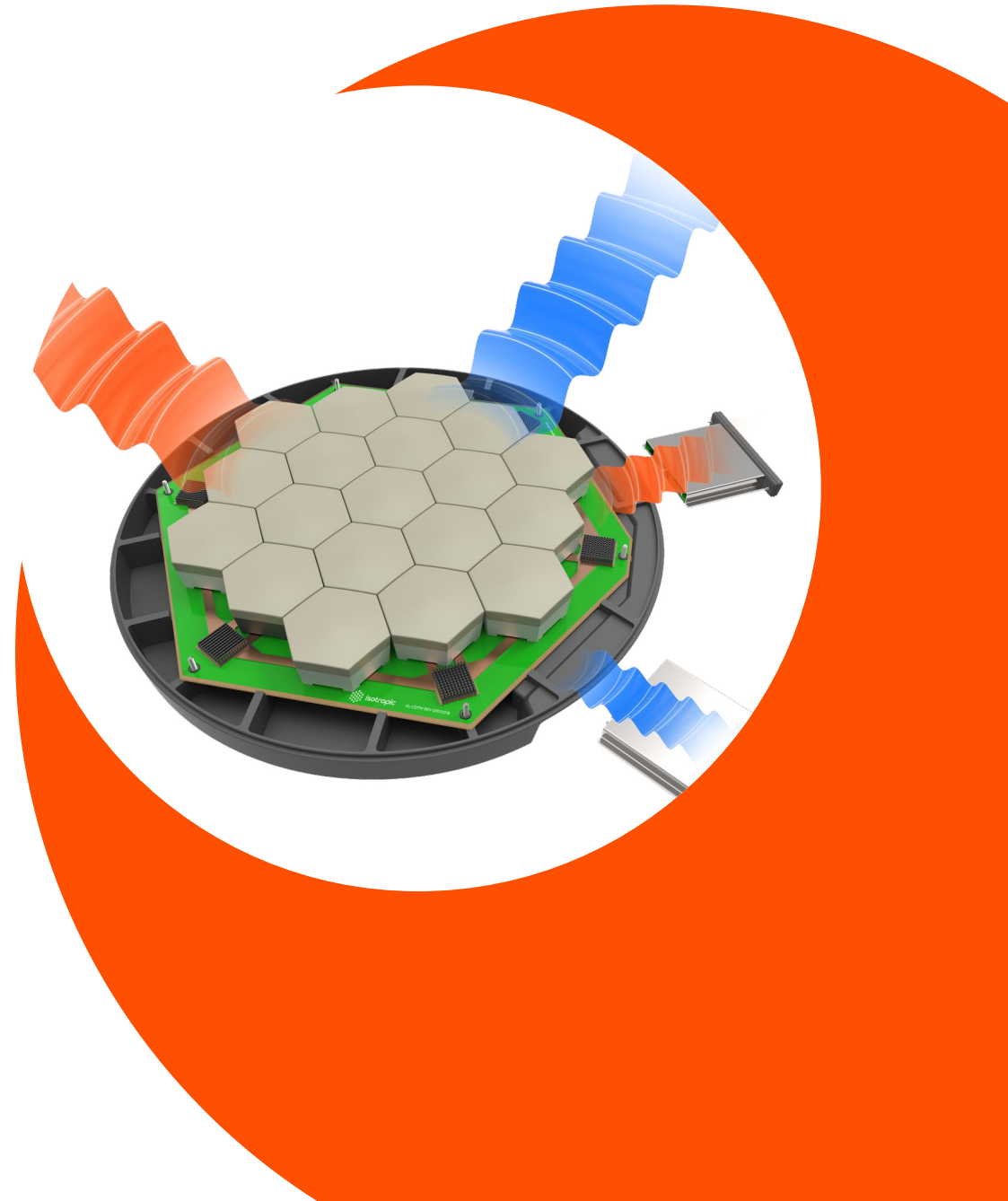
### continued

**Q: What are your thoughts on transformation optics and the impact on the satellite communications industry?**

**A:** There is an enormous capacity coming online in both Ku and Ka frequency bands as well as LEO, MEO, GEO networks. In order to fully harvest this capacity, the industry needs a fully flexible terminal that does not suffer from the cost and power implications as they relate to conventional phased arrays. Our transformation optics inspired optical beamformers are enabling the engineering of a terminal that can address these challenges and provide the required flexible solution to operators without the cost and power implications of currently available solutions.

**Q: What are your thoughts on women in STEM? What advice would you have for women entering the satellite communications sector?**

**A:** Many engineering disciplines, including the satellite communications sector, have been male dominated for many years. We are seeing a positive change in gender diversity in engineering and I am hopeful that this will continue but there is still room for improvement and it will not happen overnight. Women in engineering need to continue to advocate for equal treatment in the workplace and request the appropriate support from their company in cases where this is not the case. Lastly, acting as a role model and inspiring young girls that want to pursue engineering careers is key for improving the presence of women in STEM in the years to come.



# COVID-19 Underscores the Critical Need for More and Better Connectivity

As economies across the globe approach reopening, unprecedented levels of connectivity will help shape the post COVID-19 world, says Scott Sprague, Isotropic's Chief Commercial Officer.

We are quite literally seeing the promising opportunities, amazing capabilities and even some persistent shortfalls of a connected world play out before our eyes, every day throughout this challenging pandemic.

Millions of homebound students are communicating with their teachers and classmates. Telemedicine is bringing isolated patients face-to-face with doctors and caregivers like never before. In fact, there's been more digital healthcare delivered in the past ten weeks than the past 20 years, according to the ITU.

Satellite will be the platform of choice in the post-COVID world, where reach, readiness, nimbleness, and flexibility will enable us all to be far better prepared for whatever comes our way – whether we're a school, a hospital, a government or a business.

When we find our new normal, our reliance on connectivity and advanced applications in all geographies worldwide will explode, demonstrating just how important our mission really is at Isotropic Systems – to unlock a new level of connectivity for government and commercial markets.

[Watch the video →](#)



**Scott Sprague**  
Chief Commercial Officer



“...there's been more digital healthcare delivered in the past ten weeks than the past 20 years, according to the ITU...”



# Sat2020 Roundtable on Ground Segment



The Satellite 2020 Ground Segment Panel was re-scheduled as a virtual session due to COVID-19.

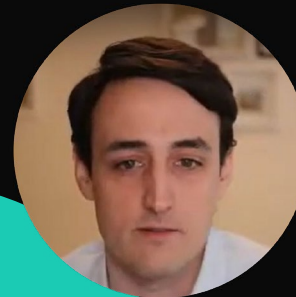
Click on the link to get some interesting insights on the key role ground segment plays in the new connectivity ecosystem.

[Watch the video →](#)

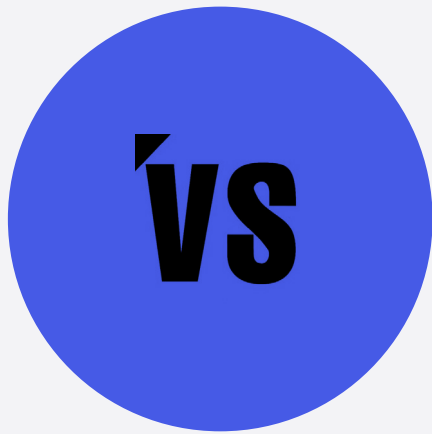


Next-Gen satellite systems in multiple orbits can only be unleashed by next-gen antennas

Brian Billman  
VP Product Management



# In the news...



## Via Satellite

Isotropic Systems CEO Shares Roadmap to 'Holy Grail' of Antenna Connectivity

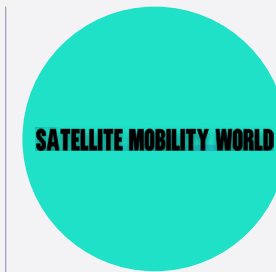
[Read more →](#)



## Space News

Isotropic pivots to serve a handful of key markets including government and defense

[Read more →](#)



## Satellite Mobility World

The Isotropic Antenna: The Perfect Solution for Aero?

[Read more →](#)



## Runway Girl

Race is on for antennas to deliver low-latency IFC via NGSO satellites

[Read more →](#)



## Satellite Evolution TV Interview

Isotropic Systems Making Waves in the Market

[Watch the video →](#)



## Frost & Sullivan

Isotropic Systems Wins a Highly Prestigious New Product Innovation Award by Frost & Sullivan

[Read more →](#)

# Events

Jun

9 – 11 – 16 June 2020, Webinar

## SES Industry Days

[Read more →](#)

22 – 26 June 2020, Webinar

## Global Connected Aircraft Cabin Chats

[Read more →](#)

Sep

11 – 14 September 2020, Webinar

## IBC 2020

[Read more →](#)

6 – 8 October, Silicon Valley

## Satellite Innovation Summit

[Read more →](#)

Oct

19 – 20 October 2020, London

## Military PNT Conference

[Read more →](#)

31 October – 2 November, Colorado

## National Space Symposium

[Read more →](#)

Nov

10 – 12 November 2020, London

## Global MilSatCom

[Read more →](#)

9 – 12 November 2020, Paris

## World Satellite Business Week

[Read more →](#)

[Visit our website to discover more →](#)



**Jeremy Turpin**  
CTO and Co-Founder

## Continuing to Build our World-Class Team

We added 2 new members to the Isotropic Team and our CTO Jeremy Turpin was named to the SSPI Board of Directors.

Jeremy, who earned his PhD at the Pennsylvania State University focused on leading-edge technologies, including electromagnetics and transformational optics, is leading the groundbreaking design and development of our high throughput optical multi-beam antennas.

SSPI executive director Robert Bell said: "Jeremy came to our attention through his nomination for our 20 under 35 talent recognition program. He is an extraordinary talent who is just beginning to make his mark on the industry. He will work closely with other newly appointed members of the SSPI Board to help drive growth and awareness of the organization and the difference it continues to make as the industry and the world enter into a new age of connectivity, space commerce and exploration.

[Read more →](#)

# Join us!

We continue to grow and build our talented team. Check our website for updates and open positions.

[View our Careers page →](#)



# Connect with us

Isotropic Systems is developing the world's first multi-service, high-bandwidth, low power, fully integrated range of high throughput terminals designed to support the satellite industry to 'reach beyond' traditional markets.

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