

FROM 2024 BREAKTHROUGHS TO 2025 INNOVATIONS with Intersoft Electronics



In this exclusive interview, we sit down with two key figures from Intersoft Electronics:

**Jan van Gent, the Chief Commercial Officer, and
Bram Faes, the Research and Technology Manager.**



With Jan's extensive expertise in international business development and Bram's innovative leadership in R&D, they offer a comprehensive view of the trends, challenges, and advancements in air surveillance technology. From their reflections on 2024 to Intersoft Electronics' ambitious plans for 2025, let's dive into their insights.

Jan, what was your professional highlight of 2024?

Jan: From a commercial perspective, the highlight of the year was undoubtedly the Airspace World Event in Geneva. It's the most important event for us each year, bringing together all stakeholders in the air traffic management sector. We meet customers, partners, and showcase our latest technologies.

Another key milestone was our growth, with team expansions in Belgium and the U.S., a new company in Australia to strengthen our Asia Pacific presence, and the acquisition of IBS Luftfahrt und Service GmbH in Germany to enhance services in the DACH region.

Bram, what stood out for you in 2024?

Bram: I also had the opportunity to visit Airspace World. It's great to see our commercial team showcasing the fruits of our R&D efforts. On the technology side, our biggest achievement was the successful demonstration of our NORA® PSR system. We made significant advancements in key technologies, and the commercial involvement from our partners confirmed we're on the right track to market this innovation as soon as possible.

The value of industry events

Coming back to your highlight, Jan, Airspace World, I heard there was a great atmosphere and plenty of Italian wine at the Intersoft Electronics booth, but what is the real value of participating in such an event?

Jan: For me, an event like Airspace World is about two things mainly. The most important one is developing and maintaining relationships with stakeholders in the industry. In just a few days, we meet nearly everyone active in our field. The second

key aspect is showcasing and introducing new technologies and products, such as our Next Generation Signal Processing Platform, NORA® non-rotating antennas, and the latest additions to our RASS® platform.

Creating a relaxed atmosphere, like our Italian wine and cheese party, helps people unwind and engage in a more informal way, balancing business with a personal connection. In 2024, we had around 17 or 18 team members at our booth, all actively interacting with visitors. It was a fantastic edition for us.



Intersoft Electronics has been a regular at Airspace World for years. What are the plans for 2025? Any sneak peeks you can share Jan?

Jan: Well, 2025 is going to be interesting. The show is moving from Geneva to Lisbon, and we have drastically increased our budget, meaning our booth will be bigger than ever. We will also introduce new technologies, including a brand-new addition to the RASS® radar test equipment family.

You've got me intrigued now!

Jan: We can't reveal too much just yet, but I'd say, come to the Airspace World event in Lisbon to see it all firsthand.

Will you also be participating in other trade shows in 2025?

Jan: Absolutely! We will be participating in several conferences and trade shows we regularly attend, such as Airspace World and AIMS, but we're also excited to explore new events. As I mentioned, we recently launched Intersoft Services APAC in Australia, and to support that expansion, we'll be taking part in IndoDefence in Indonesia and the Avalon Airshow near Melbourne.

Global expansion

Intersoft Services APAC was established in October of 2024. Why is it important to have a business unit in Australia?

Jan: Being close to our customers and partners worldwide is essential. Over the past few years, we've been expanding our services organization with a "locals for locals" approach. Having local teams who speak the language and understand the culture is key. The addition of our Asia Pacific office in Australia is a natural progression of this strategy. With many customers in the Asia Pacific region, we're now better positioned to serve them through a local services and sales office in Australia.

Jan, what do you expect in the first year for Intersoft Services APAC?

Jan: We launched Intersoft Services APAC with an experienced professional leading the operation, which allowed us to hit the ground running. Already, we've been actively supporting our local customers in the region. For example, we've been providing support for our Sensor Monitoring System (SMS), a tool that continuously monitors the performance of radar and other navigation sensors 24/7.

By the way, collectively, our SMS systems have been in operation for over 1 million hours. This is exactly the kind of work our Asia Pacific office will continue to focus on as we grow the business in the region.

It's impressive to see how Intersoft Electronics has grown over the years. With the Belgian sites handling R&D, engineering, and production, Intersoft Electronics USA in Florida, multiple business units across Europe, and now APAC, what's next?

Jan: The next step for us is to continue our global expansion. Our goal is to establish local services organizations close to where our customers and partners are. To achieve this, we'll either be opening new offices or acquiring companies across Europe and beyond. As I mentioned, the Asia Pacific office was the first step outside of our traditional base in Europe and the U.S., but we're not stopping there. We'll continue to expand internationally while also strengthening our teams in Belgium.

With such rapid expansion, how are you approaching the hiring and development of new talent?

Bram: Over the past year, we've brought in a lot of clever minds, and obviously they all need proper training. This will involve a combination of additional training, extra resources, but also on-the-job learning. And honestly, it's a continuous process. Even our most senior engineers are constantly learning new things every day because the environment we work in is always evolving. It's all about fostering a culture of growth and keeping up with the changes in technology and industry demands.

Innovation and new technologies

With all these teams and locations coming together, what will everyone be working on? What are the key projects on the horizon?

Bram: The two main product lines we're focusing on at the moment are our NORA® and ASR-M® systems. NORA® is our new non-rotating antenna technology, fully electronically controlled with no mechanical moving parts. This has significant advantages, especially in terms of maintenance and reliability. In 2024, we conducted key technology demonstrations, and we've already secured our first commercial contract. In 2025, our R&D team, together with engineering, will work to bring the system to the next Technology Readiness Level (TRL), preparing it for market deployment. This will involve a lot of collaboration with experts from other companies, which will be a challenge, but it's also an exciting opportunity.

Next, we have our ASR-M® system, which is our modular Airport Surveillance Radar. This system has been through many changes recently, thanks to its modular design, which allows for continuous updates and improvements. The modular approach allows us to continuously integrate new technologies, keeping the system up-to-date and adaptable to the changing needs of the industry. This is essential in today's fast-paced environment, where a single block system dedicated to just one application is no longer feasible. Instead, we focus on keeping both the hardware and software modular to ensure gradual, ongoing improvements, allowing us to stay at the forefront of technological advancements. Currently, the ASR-M® is being integrated with several customers, and in 2025, we will focus on ensuring a smooth integration process and full customer acceptance of the system.

Sounds like a busy year ahead!

Bram: Yes, absolutely! We won't be bored.



Intersoft Services APAC team



Challenges and opportunities in adopting new technologies

Coming back to NORA®, there's been a lot of buzz around non-rotating radar antennas lately. NORA® seems to be a real game-changer. What's the real added value for Air Navigation Service Providers (ANSPs)?

Jan: NORA® is indeed a game-changer because it replaces traditional mechanical rotating antennas with electronically scanned antennas. These are safety-critical systems, so they need to meet strict international civil aviation regulations. Our team has been working hard to develop this technology to ensure it meets those requirements.

Once installed, NORA® significantly improves uptime. Since there are no moving parts, there's virtually no maintenance needed, which results in a much more reliable system for the end user. The feedback from potential end users and radar prime companies has been very positive.

It sounds promising. But new technologies like NORA® often come with challenges. Are ANSPs ready to adopt this innovation?

Bram: That's a great question. First, it's important to understand that NORA® isn't just a wild idea. The conceptual design for this technology began 7 or 8 years ago with NORA® IFF, better known today as L-IESA®. This technology has already been adopted by the German Navy and is being installed on their frigates right now as we speak. So, it's no longer just an idea, it's a proven concept.

In R&D, we're now focused on adapting the L-IESA® technology for land-based primary and secondary radar systems, specifically for use in civil aviation. This means ensuring full compliance with rigorous standards like those set by EUROCONTROL and ICAO, which differ from military requirements. We've made significant progress, and while there's still work to do, we're optimistic that in the coming years we'll see these systems fully integrated into the civil aviation market.

Jan: We're in discussions with leading ANSPs and industry partners to introduce NORA® into their world. Introducing any new technology is challenging, but we are confident that by working closely with customers, we can ensure it meets their needs. The big game-changer here is that, while capital costs will be similar to traditional rotating antennas, the savings will come from much lower support and maintenance costs and increased operational availability.

That sounds like a major benefit. Bram, can you tell us about the technical advantages of NORA® that make it so revolutionary?

Bram: Absolutely. NORA® has two key technical advantages that really set it apart. The first one is that everything is under full electronic control. This gives us the flexibility to create different operational modes. In its simplest form, NORA® can mimic a rotating beam, scanning 360 degrees in just 4 to 5 seconds, depending on the system we are mimicking. But because of the electronic control, we can go beyond that and create multiple beams. For example, we can create a back-to-back beam to double the update rate, or we can set the second beam to focus on a specific target or sector of interest, providing faster updates or more detailed information in that area. This allows us to give our customers much more valuable data.

And what about RASS® and SkyRF®?

Jan: Our RASS® product family is a key part of what we do. RASS® is a suite of test equipment used to measure and analyze the performance of radar and navigation systems. We have a very loyal customer base. We hosted a RASS® User Work Group in Lisbon last summer, where many of our customers gathered. It was interesting to see companies that normally compete with each other come together to share best practices and experiences with our RASS® equipment. It was a great event for both us and our customers, helping to improve the platform and strengthen relationships.

SkyRF® on the other hand, is our drone-based measurement platform designed to measure radar and navigation systems, including Instrument Landing Systems, DME, VOR, TACAN, and others. It's a service we provide to airports, helping to minimize operational impacts during certification and verification flights. SkyRF® was developed in Belgium and has since been rolled out to all our service organizations worldwide, including the two companies we acquired in 2023 and 2024.

A fun fact: our US team actually used SkyRF® for measurements in Antarctica. A temporary airport was set up there, and right after we confirmed that all navigation systems were working properly using SkyRF®, the first aircraft landed. It's incredible to see our technology deployed in places where you least expect it.

That sounds like a unique experience for the team!

Jan: It certainly was! Big thanks to our US colleagues and their contacts with authorities in the US for making that happen.

The second major advantage is that all the electronics are integrated into the antenna itself, instead of being located downstairs in the tower. This reduces the distance between the antenna element and the radar, which improves the sensitivity of the system. Combined with the advanced processing modes of the ASR-M® system, this allows us to increase the overall sensitivity and improve the quality of data output.

The role of drones in aviation's greener future

■ Another ongoing trend is the rise of drones. They are used for a lot of applications. Jan, you already mentioned the SkyRF® drone for CNS measurements. How do you see this technology evolve in the coming years?

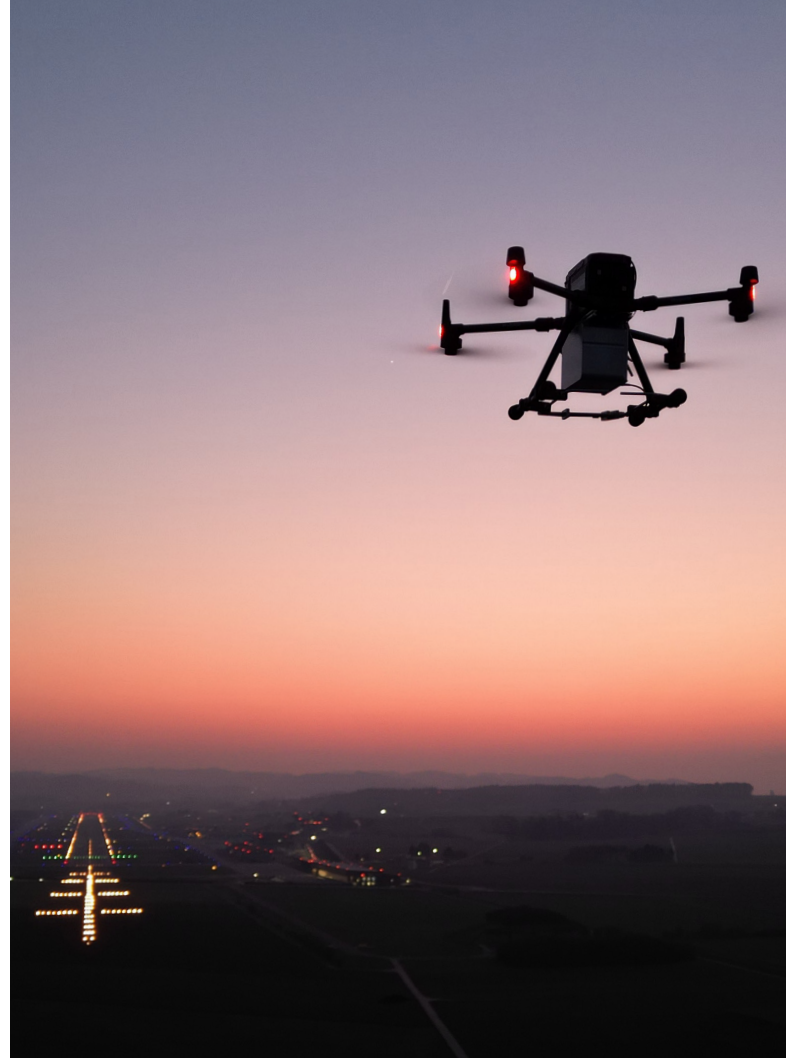
Jan: SkyRF® was initially designed as a platform to measure airport navigation aids like radars, ILS, DME, VOR, TACAN, and similar systems. Moving forward, we're planning to expand its capabilities by integrating optical measurement functionalities. This would allow the platform to assess the accuracy of systems like precision approach path indicators and runway lighting. In short, the number of applications for the SkyRF® platform will keep growing.

Another key evolution we're working on is enabling completely autonomous flights and operations beyond visual line of sight (BVLOS). The technology for this is already there, but the main hurdle is regulatory. Currently, fully automated or BVLOS drone operations are either prohibited or only permitted in very limited regions. We're optimistic that regulators will soon recognize the safety and reliability of these advanced drone systems, which will unlock even more potential for platforms like SkyRF®.

Do you think drones will play a significant role in helping the aviation industry meet its green ambitions in the long term?

Bram: I believe they will, and in some cases they already are. For example, with our SkyRF® platform, we've seen it become a reliable tool for CNS measurements. By using SkyRF®, we've been able to reduce the number of required test flights to the absolute legal minimum, which directly cuts CO2 emissions associated with those operations.

Jan: Exactly. The aviation industry has set an ambitious goal of becoming CO2 neutral by 2050, which is not far off. To meet that target, they're calling on the industry to deliver innovative technological solutions. For our part, we're committed to contributing through systems like SkyRF®, as well as our NORA® and ASR-M® radar platforms. These technologies are designed to help air navigation service providers operate more efficiently and sustainably, supporting the industry's environmental goals and paving the way for a greener future.



As we conclude this interview, Intersoft Electronics is shaping the future of air surveillance with innovative technologies like NORA®, SkyRF®, and the modular flexibility of ASR-M®.

With a strong focus on global expansion and continued innovation, 2025 is set to be another successful year. Thank you, Jan and Bram, for sharing your valuable insights and offering a glimpse into the exciting developments ahead.