ENSURING A STATE OF THE ART INNER LAYER AIR DEFENSE SYSTEM

In conversation with

Fabian Ochsner

Rheinmetall Air Defence AG

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FULL SPECTRUM AIR DEFENCE

Ahead of the Full Spectrum Air Defence conference, taking place online 22-24 September, Defence iQ interviewed Fabien Oshner of Rheinmetall Air Defence AG, one of the conference's industry partners

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BIOGRAPHY

Fabian Ochsner
CEO
Rheinmetall Air Defence AG

Fabian Ochsner, CEO of Rheinmetall Air Defence Zurich and Senior Vice President, responsible for Sales and Marketing of the Air Defence and Radar Systems Business Unit.

Fabian Ochsner has a bachelor level electric engineering background and holds a master degree in business administration from SUNY at Albany NY. He has been with Rheinmetall, Oerlikon-Contraves and Oerlikon since 1984. He has more than 25 years of experience in air defence, particularly as an officer of the Swiss Ground Based Air Defence Brigade. Colonel (ret) Fabian Ochsner held until end of 2018 the position of Chief GBAD in the Air Operation Center of the Swiss Airforce, deploying clusters of Skyguard Fire Control Units and 35mm Oerlikon Twin Guns, recently modified to be used in MOOTW missions, as well as Rapier and Stinger SAM's.

INTERVIEW

"In the mid-term future even more challenging threats such as supersonic cruise missiles and hypersonic weapons are emerging on the battlefield"

Q1. Rheinmetall has a huge global footprint, especially in the air defence space. Could you bring our readers up to speed on some of the most exiting programmes you are working on today, and what is on the horizon for the company in terms of new partnerships or contracts?

It is obvious that the recent incidents and conflicts - for example Donbas, Ukraine and Abqaiq, Saudi Arabia, just to name two - had a huge impact on the threat perception and lead to a "new" awareness of capability gaps and a "renaissance" of the Very Short Range Air Defence (VSHORAD).

Mobile platforms and C-UAS systems are the main segments that we focus on currently - besides our classical task of protecting vital assets and infrastructure. The Oerlikon Skynex® system architecture enables our customers to combine all these tasks and sub-systems into a complete tactical unit. In this context, we are working together with many well-known international partners on several customer programs and/or new product developments - without going into details at this point.

When it comes to the regional aspect, the major part of our activities lies in the MENA-region and Asia, but European/western nations are also setting up programs that we already participate in or that will work on in the near future.

Q2. Adversarial development of advanced cruise missiles, artillery and small unmanned aerial systems presents NATO allies and partners with a significant and complex air and missile defence challenge. What's Rheinmetall's perspective on how the current threat landscape, and how is this informing customer requirements?

As already indicated above, the wide use of weaponized drones during the recent incidents is especially worthwhile to mention. These weapons provide a relatively cheap alternative to expensive high-tech weapons such as guided stand-off missiles. It is also a fact that today and in the future artillery fires more and more precision guided munition in order to increase hit probability and reduce collateral damage. Therefore, Rheinmetall has recognized in the recent past more requests from various customers to either up-grade or replace obsolete short-range air defense systems. In the mid-term future even more challenging threats such as supersonic cruise missiles and hypersonic weapons are emerging on the battlefield thus, the customers are taking this into consideration while shaping their future requirements.

“With the integration of a higher degree of automation we support the decision making process of the tactical users”

Q3. Accelerated technological disruption is reshaping the defence enterprise. How is Rheinmetall balancing its R&D investments in traditional defence capabilities versus new, cutting edge technologies? What innovations in the air and missile defence field can we expect in the next few years?

Rheinmetall has traditionally been focused on cannon based air defense systems, and this technology has regained much of its relevance during the last decades as one of the best VSHORAD air defense solutions. Especially when it comes to defense against artillery rockets, mortar and UAS. The cannon is one of the most cost and technically efficient options that are available on the market today against these target categories.

Rheinmetall will continue to focus on delivering the best cannon solutions for our customers and enhance our sensor capabilities and network capabilities, to further increase the detection capabilities, automation, and speed in defense against these types of air targets. In the next years, Rheinmetall will extend its effector toolbox with new missiles, laser and electronic countermeasures (ECM). To provide our customers with a state of the art inner layer air defense system, which has the capability to defeat all targets in the VSHORAD category. Our goal is also, through our effector mix, to give the optimal cost per target performance by having the option to choose the optimal effector against each target type.

Q4. Rheinmetall also focuses a lot on training technology. Could you share some insight into some of the training capabilities that focus on air and missile defence?

Our AD-Systems are state-of-the-art technology and basing on an integrated engineering & development process. The factors of operability, maintainability are threatened therein in regard of the current mil standards and we focus on implementing the ASD Spec Set. This is the international specification for the preparation of technical documentation in a controlled language by the AeroSpace and Defence Industries Association of Europe (ASD). Therefore, we are well taking in consideration on how the designated crew will manage to operate and maintain our sophisticated weapon system. This results later in the design of the easy understandable and self-explanatory Human Machine Interface (HMI) for Users. With the integration of a higher degree of automation we support the decision making process of the tactical users and in addition we are providing embedded training simulators. Nevertheless, it is crucial to train our customers 1:1 with a train-the-trainer concept to ensure that the customer reaches a high level of independence and then spread their gained knowledge to further crews. Our provided training courses are mainly concentrated in training on-the-job (approx. 70%) and combined with the corresponding basics instructions in the classroom. This is applicable for all branches of training (operation & maintenance) and in addition we provide refresher courses and field support during the full life cycle of the system in use.

Rheinmetall is integrating new technologies like Augmented Reality (AR) into the field of ILS and training. For instance, technical publications are no longer only paper based, they are provided digitally. That saves time in info research by factors! In combination to that, the Oerlikon® Digital Logistics Supports Suite opens the horizon into a new ILS world. Using AR, we are able to link Integrated Logistics Support (ILS) data (i.e. Interactive Electronic Technical Manual / IETM modules) to the respective viewed or selected system hardware with the DLSS device (i.e. tablet).

FULL SPECTRUM AIR DEFENCE ONLINE

The Online Gathering of the World's Air Defence Community

22 – 24 September 2020

www.defenceiq.com/events-airdefenceinternational-online/

As the Coronavirus pandemic has clearly illustrated, our world is capable of imposing dramatic and surprising strategic shock. Faced with the proliferation of UAVs as well as heightened tensions with missile capable nations, strategic and point air defence depends upon intelligently maintaining a competitive edge. There is far greater peril in hubris and neglect than in seizing the advantage offered by the latest technologies and military method.

The Full Spectrum Air Defence Digital Forum has been built to provide a forum of value to the air defence community. While COVID-19 has disrupted many traditional processes, including our community's annual face-to-face meetings, it has also unleashed new digital opportunities.

Free-to-attend for the military, the world's first online meeting of the air defence community will allow future leaders to benefit from the presentations of senior leaders drawn from around the world and expand the networks required to engage with industry and foreign militaries alike.

With ever increasing threats from state and non-state actors alike, the need share knowledge has rarely been greater. The Full Spectrum Air Defence Digital conference will take place online 22-24 September.

DOWNLOAD THE 2020 AGENDA HERE

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Free-to-attend for the military.

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Defence iQ collaborates with contributors from the military services, defence policy, acquisition, traditional and non-traditional defence inudstry, S&T and academia. Our objective is to provide our members and wider readership with a hub of commentary and analysis on issues covering military operations and doctrine, defence policy, acquisition and technology development.

We recognise that established paradigms in defence are being challenged by new, complex threats and disruptive technologies, and as such public-private sector collaboration and the cross-fertilization of ideas about the present and future defence enterprise has become more important than ever.

As such, Defence iQ welcomes the contributions from thought leaders across the defence community, to help inform, educate and inspire the current and next generation of disruptive thinkers, innovators and smart customers in defence.

Please get in touch with the Editor, Alex Stephenson, at alexander.stephenson@defenceiq.com to discuss submission proposals.