



THALES

Press release

Germany adopts the ESSOR High Data Rate Waveform (HDR WF) developed by a4ESSOR joint venture

In a major step towards the use of ESSOR (European Secure Software defined Radio) technology by international military coalitions, Germany adopts the ESSOR HDR Waveform and joins the programme for its further development

Bonn, 21st February 2020 – a4ESSOR S.A.S. (Alliance for ESSOR), a multi-national joint venture which is developing European Secure Software Defined Radio (SDR) technology, has been awarded a contract amendment by OCCAR (Organisation Conjointe de Coopération en matière d'Armement) which allows Germany to join the ESSOR (European Secure Software defined Radio) programme and its OC1 (Operational Capability 1) phase as a new participating state alongside existing partners Finland, France, Italy, Poland and Spain. The contract amendment will replace the ESSOR OC1 contract signed in November 2017. The duration of the new ESSOR OC1 contract is 63 months and the total value for a4ESSOR is approximately EUR 100 million. Work will be shared between the six companies participating in a4ESSOR: Bittium (Finland), Indra (Spain), Leonardo (Italy), Radmor (Poland), Rohde & Schwarz (Germany) and Thales (France).

The ESSOR programme is the state of the art of the European Secure Software Defined Radio (SDR). Started in 2009 as a real technological challenge, ESSOR has proven the success of its multinational joint industrial development by demonstrating its broadband networking waveform on a number of different radio platforms provided by the members of the a4ESSOR industrial consortium including Bittium, Indra, Leonardo, Radmor and Thales. The consortium will now be joined by the German company Rohde & Schwarz. By joining the programme, Germany will be able to exploit the benefits of using ESSOR architecture and methodology and the expertise coming from the ESSOR High Data Rate Waveform development in the last ten years. The participation of Germany in ESSOR as a full Participating State, enables it to steer the future evolution of the Programme together with the other partners, and constitutes an important step towards European interoperable tactical communications, built on SDR.

Lino Laganà, President and General Manager of a4ESSOR, said: "This contract, which will see Germany participate in the ESSOR programme, is a big step forward towards a common European defence infrastructure. Secure communications are key to the interoperability of armed forces, which is why a4ESSOR has been developing high-quality and highly-secure communications capabilities which are easily deployable on several manufacturers' radios thanks to SDR technology and our ESSOR architecture. This contract also recognises the outstanding work and achievements of the a4ESSOR team over the last ten years, and is an acknowledgment of the importance of the collaboration between our long-standing shareholders Bittium, Indra, Leonardo, Radmor and Thales. The addition of Rohde & Schwarz to the team will deepen our pool of expertise and lead to even further success."

The OCCAR Director, Matteo Bisceglia, stated: "The signature of this contract constitutes a great leap forward in creating a common European Defence through interoperability and in supporting the creation of a Defence Industrial Technological Base. With the participation of Germany, ESSOR includes now four OCCAR Member States and is the de facto European reference for SDR. The increasing reputation of ESSOR is also testified by its inclusion in the list of projects of the Permanent Structured Cooperation (PESCO) which paved the path for a number of new technical developments in the framework of the European Defence Industrial Development Project (EDIDP) for which OCCAR is already working in close contact with all relevant stakeholders".



About ESSOR

The aim of the ESSOR programme is to develop pan-European Software Defined Radio (SDR) technology in order to improve the ability of Armed Forces to cooperate in coalition operations. The programme was initiated in 2009 under the umbrella of the European Defence Agency (EDA) and it is currently sponsored by the governments of Finland, France, Germany, Italy, Poland, and Spain. The joint venture Alliance for ESSOR (a4ESSOR S.A.S.) has been chosen by the Organisation Conjointe de Coopération en matière d'Armement (OCCAR) to manage the industrial consortium, whose members are Bittium from Finland, Indra from Spain, Leonardo from Italy, Radmor from Poland, Rohde & Schwarz from Germany and Thales from France. In addition to the European High Data Rate (HDR) waveform, the programme has produced and validated the definition for a European SDR Architecture, which has been ported and qualified on six different European platforms. The interoperability benefits of the waveform are regularly demonstrated through network tests involving different national platforms.

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About Bittium - Defense & Security

Bittium is a trusted Finnish company with over 30 years of experience in advanced radio communication technologies. For Defense & Security market Bittium provides the most modern products and solutions for tactical & secure communications. The products and solutions for tactical communications bring broadband data and voice to all troops across the battlefield. For secure communications Bittium offers proven mobile devices and cyber security solutions certified up to CONFIDENTIAL level. Net sales in 2019 were EUR 75.2 million and operating profit was EUR 6.3 million. Bittium is listed on the Nasdaq Helsinki Exchange. www.bittium.com

About Indra

Indra is one of the leading global technology and consulting companies and the technological partner for core business operations of its customers world-wide. It is a world-leader in providing proprietary solutions in specific segments in Transport and Defense markets, and a leading firm in Digital Transformation Consultancy and Information Technologies in Spain and Latin America through its affiliate Minsait. Its business model is based on a comprehensive range of proprietary products, with a high-value focus and with a high innovation component. In the 2018 financial year, Indra achieved revenue of €3.104 billion, with 43,000 employees, a local presence in 46 countries and business operations in over 140 countries. www.indracompany.com

About Leonardo

Leonardo a global high-technology company, is among the top ten world players in Aerospace, Defence and Security and Italy's main industrial company. Organized into five business divisions, Leonardo has a significant industrial presence in Italy, the United Kingdom, Poland and the USA, where it also operates through subsidiaries such as LeonardoDRS (defense electronics), and joint ventures and partnerships: ATR, MBDA, Telespazio, Thales Alenia Space and Avio. Leonardo competes in the most important international markets by leveraging its areas of technological and product leadership (Helicopters, Aircraft, Aerostructures, Electronics, Cyber Security and Space).

Listed on the Milan Stock Exchange (LDO), in 2018 Leonardo recorded consolidated revenues of €12.2 billion and invested €1.4 billion in Research and Development. The Group has been part of the Dow Jones Sustainability Index (DJSI) since 2010 and became Industry leader of Aerospace & Defence sector of DJSI in 2019. www.leonardocompany.com

About Radmor

RADMOR S.A. is a part of WB Group the biggest Polish private capital group engaged in defense industry. RADMOR is a designer, manufacturer and supplier of modern radiocommunication solutions for army and civil services. The company conducts activities for defense and security of Polish state, manufactures military radios and distributes civil radios. RADMOR engineers focus on research and development of modern



radiocommunication systems as well as devices (handhelds, manpacks and vehicular radios working in HF/VHF/UHF and 2.4 GHz bands), waveforms (narrowband/wideband) and specialized software (e.g. SCA, SCIP, NINE). All of these activities are supported by own accredited laboratory (environmental exposure, EMC compatibility) and production line. RADMOR together with WB Group members provides complete military systems to many armies on entire world. www.radmor.com.pl/eng

About Rohde & Schwarz

Rohde & Schwarz is a leading supplier of solutions in the fields of test and measurement, broadcast and media, aerospace, defense, security and networks and cybersecurity. The technology group's innovative communications, information and security products help industry and government customers ensure a safer and connected world. On June 30, 2019, Rohde & Schwarz had 12,100 employees. The independent group achieved a net revenue of EUR 2.14 billion in the 2018/2019 fiscal year (July to June). The company is headquartered in Munich, Germany, and has subsidiaries in more than 70 countries, with regional hubs in Asia and America. www.press.rohde-schwarz.com

About Thales

Thales (Euronext Paris: HO) is a global technology leader shaping the world of tomorrow today. The Group provides solutions, services and products to customers in the aeronautics, space, transport, digital identity and security, and defence markets. With 80,000 employees in 68 countries, Thales generated sales of €19 billion in 2018 (on a pro forma basis including Gemalto).

Thales is investing in particular in digital innovations — connectivity, Big Data, artificial intelligence and cybersecurity — technologies that support businesses, organisations and governments in their decisive moments.

About a4ESSOR SAS

a4ESSOR S.A.S. is a joint venture organized and existing under the laws of France, set up by six EU leading companies: Bittium Wireless Ltd, Indra Sistemas S.A., Leonardo S.p.a., Radmor S.A., Rohde & Schwarz GmbH & Co. KG and Thales Communications & Security S.A.S) in order to manage the ESSOR (European Secure Software defined Radio) contract awarded by OCCAR-EA and to promote the ESSOR products in the SDR community.