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The Future of J-ISR

Con il supporto del:



Con il sostegno di:





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Opening remarks:

Benvenuto

Gen. Walter Cretella Lombardo, Direttore dello IASD

Gen. Nazzareno Cardinali, Direttore CESMA

Introduzione al tema del workshop:

Requisiti futuri J-ISR in un ambiente dinamico e evolutivo –

Gustavo Scotti di Uccio, AOS



FUTURE J-ISR AGENDA



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- Opening remarks:
 - Benvenuto (Gen. Walter Cretella Lombardo, Direttore dello IASD & Gen. Nazzareno Cardinali, Direttore CESMA)
 - Introduzione al tema del workshop: Requisiti futuri J-ISR in un ambiente dinamico e evolutivo – Gustavo Scotti di Uccio, AOS
- Keynote briefings:
 - L'accrescimento delle conoscenze e i vantaggi operativi attraverso il J-ISR: Vision sulle necessità future e possibile Roadmap: (Gen B.A. Giuseppe Gimondo – SMD – Vice Capo VI Reparto C4I Systems And Transformation)
 - Possibile evoluzione della situational awareness e interoperability nella NATO nel periodo post 2020 (Dr. Richard H. Wittstruck - US MOD – Chair NATO JCGISR)
 - Futura J-ISR = “UNIFIED VISION” per una “informational superiority” - (W.C.(R) RAF Rob Munday NATO NIAG **SG177** Chairman)
- **Pausa caffè (10:10 – 10:50)**
- Evoluzione Degli Scenari e Ruolo Delle Nuove Smart-technologies – (Dr. Francesco Tosato: - Centro Studi Internazionali)
- Il futuro del J-ISR FUSIONE DI sensori e informazioni
 - ~~Supporto ISR alle strategie~~ (Mr. Ron Tremain, INSITU-BOEING)
 - Scenari Futuri di Asset ISR nelle Network - (Dr. Andrea Lazzareschi Sergiusti - SELEX ES)
- Metodologie Cyber ed ESM per migliorare la J-ISR
 - L'evoluzione della Protezione Cyber in un Ambiente ISR Interconnesso (Ing Ennio Raschellà – SELEX ES)
 - Capitalizzare Gli Insegnamenti Degli Ultimi Progressi Nel Settore ESM (Ing Daniela Pistoia - ELETTRONICA)
- Big data
 - Il Problema del Trattamento delle Immagini - (Ing Filippo Gemma, GM Spazio).
- Il Futuro della Sorveglianza Aerea
 - Future Multi-INT Airborne ISR – (Mr. Charles Gulledge - Lockheed Martin IS&GS Defense)
 - Una Opportunità per un Nuovo Concetto Operativo ISR – (Ing Antonio Maglione - Piaggio Aero Industries)
- Intervento di chiusura: Gen B.A. Giuseppe Gimondo
- Way ahead: Nazzareno Cardinali & Gustavo Scotti di Uccio



Joint Intelligence Surveillance and Reconnaissance Mission:



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The Joint Intelligence, Surveillance, and Reconnaissance (JISR) comprise a joint capability to produce a user-defined situational awareness picture of relevant information from a select list of sources in a **comprehensive, responsive, and timely** manner. This allows military decision-makers to gain and maintain an information advantage over an adversary and the integration of these three warfighting elements allows military planners and operators to share intelligence information at the national, theater, and tactical levels of control.

These new integrated capabilities replace antiquated, single-intelligence-specific tactics, techniques, and procedures, resulting in the delivery of timely, relevant information to the decision-making process within all levels of joint operations and disadvantaged users who do not possess the traditional systems of record that are affiliated within the intelligence arenas.

JISR combines certain components of the three distinct missions it embodies.

- *Intelligence*— The product which results from the collection, processing, integration, analysis, evaluation, and interpretation of **all available information** concerning foreign countries or areas.
- *Surveillance*— The systematic or sustained observance of aerospace, surface, or sub-surface areas, places, persons, or things by visual, aural, electronic, photographic, or **other means**.
- *Reconnaissance*— A mission to obtain, by transitory, visual observations, information about the activity and resources of an adversary, or to secure data concerning the meteorological, hydrographic, or geographic characteristics of a particular region.



J-ISR è una esigenza sovranazionale



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- Come per altre aree, I paesi NATO stanno procedendo ad una razionalizzazione delle proprie attività secondo il modello della "smart defence".
- Oggi le aree di "razionalizzazione" includono ad esempio l'esame di alcune "capabilities" come lo "Strategic AirLift", il sistema di "Comandi Deployable", una riduzione dei sistemi di IT (oggi circa 3000 server), il JSR e il C3.
- ...



J-ISR – LA ROADMAP



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- Nel 2013 la NATO – la divisione che ha avuto il task di farlo è l'International Staff - dovrà rivedere e ridefinire i requisiti a fronte di una ri-analisi dei Concetti di Impiego Operativo, per arrivare, dopo una "Gap Analysis, al lancio di una prima fase – 2013-2016 – di "implementation"
- Il target è di arrivare al 2016 con "The delivery of JISR support to an NRF-sized land deployment coupled with a Libya-style air campaign, incorporating multiple intelligence sources but with an initial focus on imagery intelligence."
- Come sempre, si procede con un processo a spirale
- Spiral 0 – 2013+ → Analisi, impostazione del lavoro e risk reduction; / Impostazione del common Training e dei criteri di interoperability e validation;
- Spiral 1 – fino al 2014 → Esecuzione del JV2014 Exercise – (cfr attività NIAG SG177) e coerenza con altre esercitazioni NATO e nazionali /Definizione della "initial JISR architecture";
- Spiral 2 – fino al 2016 → JISR Initial Operational Capability in ambito della NATO Response Force.




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... Ma cosa accadrà nei prossimi venti anni? Si deve guardare oltre l'orizzonte



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- ...
- Saranno disponibili nuovi sensori, con nuove capabilities, che permetteranno di dare le migliori informazioni per l'esecuzione delle missioni.
- Ma ci saranno **quantità enormi di dati da trattare e correlare**, questo significa che la sfida diviene sempre più complessa, ma che i ritorni saranno immensi.
- I dati ISR prenderanno sempre più **forme non convenzionali**, includendo immagini electro-optical e infrarosso, video full-motion, immagini da radar SAR, il riconoscimento, la geolocalizzazione delle emissioni sia elettroniche che non (ELINT, «measurement & signature intelligence» (MASINT), e anche sorgenti di origine umana (HUMINT)
- ISR è più che solo la somma delle sue strutture e sensori: è la combinazione di queste capacità unite all'intelligenza del personale addetto per determinare **la migliore «situation awareness»** con le più moderne tecnologie 
- **Transformation non significa solo «nuove tecnologie», ma significa anche trovare nuovi modi di fare.** Rivedere i CONOPS.





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Keynote briefings:

*L'accrescimento delle conoscenze e i vantaggi operativi
attraverso il J-ISR: Vision sulle necessità future e possibile
Roadmap:*

*Gen B.A. Giuseppe Gimondo – SMD – Vice Capo VI
Reparto C4I Systems and Transformation*



Il VI Reparto SMD - C4I Systems And Transformation

elemento di staff dello SMD per : (lista non esaustiva)



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- definire le linee di indirizzo generali, per i sistemi di comando, controllo, telecomunicazioni ed informatica (C4) della Difesa in un ottica netcentrica;
- *formulare i requisiti operativi e le linee guida dottrinali dei sistemi a carattere interforze, ...*
- *pianificare l'adozione degli standard nazionali, internazionali e NATO, (l'interoperabilità, netcentricità, standardizzazione);*
- *elaborare la programmazione finanziaria relativa all'ammodernamento e rinnovamento di sistemi interforze C4...*
- redigere il "piano triennale" per l'informatica della Difesa;
- *coordinare le attività di studio, ricerca e sviluppo nell'area di competenza, ...;*
- *seguire l'iter tecnico-amministrativo e il processo di realizzazione di programmi di competenza, ...;*
- concorrere con il Comando Operativo Interforze nella pianificazione degli assetti C4 per le operazioni e le attività addestrative;
- *formulare gli indirizzi in materia di formazione del personale nel campo C4, in un'ottica allargata al concetto netcentrico, ...;*
- applicare la politica della sicurezza dei Sistemi di C4 e Sistemi ISTAR;
- coordinare ed indirizzare le attività del dipendente Comando C4 Difesa.



Gen B.A. Giuseppe Gimondo – SMD – VI Reparto C4I Systems & Transformation



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- He joined the Italian Air Force Academy in 1981 where he later graduated in 1985. After graduation he attended the Military Qualification Flying Course in Lecce and Amendola (Italy) Air Bases where he has earned his Military Wings in 1996 on Fiat G91T. Later on he got other qualifications on AERMACCHI MB 339, Hercules C130 H , Falcon 900 EX and Airbus A319CJ.
- During his operational duties as Pilot he flew well over 4500 flight hours, undertaking different tasks and responsibilities, besides, he got a master with the Air Force Military school in Florence and civilian avionic science degree.
- From 1993 to 1995 he was assigned to 41st USAF Airlift Squadron (Pope, North Carolina), as part of the ITAF/ USAF Pilot Exchange Program, where he served as Pilot and Aircraft Commander and Chief of Squadron Training Unit.
- During 1997 he got the ISSMI master and, after that, he was assigned to Human Resource Italian Air Force Department as Chief Office. During 2002, he graduated from the Defence Resources Management Course (close to Monterey, U.S.A.). At the end of 2003 he was assigned to the Italian Air Force General Staff, as a chief of the I.T. Systems Integration branch where he served for two years. After this, he was appointed as Wing Commander at the 31° Wing.
- From January 2008 to October 2010 he led I.T. System Division (ICT branch) in the Air Force Logistic Command.
- Since 2010 he is deputy director at the Italian MoD, VI Reparto.





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Keynote briefings:

Possibile evoluzione della situational awareness e interoperability nella NATO nel periodo post 2020

Dr. Richard H. Wittstruck - US MOD – Chair NATO JCGISR



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Joint Intelligence, Surveillance and Reconnaissance are at the core of information sharing in NATO.



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Built upon a structure of intelligence driven working groups, the JCGISR is the only group within the CNAD covering all aspects of intelligence, surveillance and reconnaissance.

- Its mission is to support achievement of Intelligence, Surveillance and Reconnaissance (ISR) within NATO and between NATO and national forces by developing and providing technical interoperability through standardization and technical capabilities demonstrations that support ISR in operationally-relevant situations.
- Achieving Information Superiority requires integration and interoperability of **collection, exploitation, analysis, correlation, fusion and dissemination of data and information.**
- The JCGISR Programme of Work is **capabilities focused and output oriented; implementing jointness through participation of Air Force, Army, Navy and SOF representatives and systems.**
- JCGISR will formulate its work in conjunction with the NATO Air Force Armaments Group (NAFAG)/Joint Capability Implementation Group (JCIG), as directed, to periodically test and demonstrate achievements in operationally relevant environments



Dr. Richard H. Wittstruck



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- **Acting Deputy Program Executive Officer Intelligence, Electronic Warfare and Sensors Aberdeen Proving Ground, MD, USA 21005**
- As the Acting Deputy Program Executive Officer for United States Army's Program Executive Office for Intelligence, Electronic Warfare and Sensors (PEO IEW&S), **Dr. Wittstruck is responsible for executive leadership and oversight for development, acquisition, fielding and supportability of Intelligence, Surveillance and Reconnaissance (ISR) capabilities to enable the joint & coalition force to achieve full spectrum dominance.**
- Dr. Wittstruck provides executive program management and system of systems engineering (SoSE) expertise across a \$17B PEO IEW&S corporate portfolio of 112 acquisition programs.
- He is the Army's lead architect for ISR Surge in Afghanistan.
- **He is the NATO Chair for Joint Capability Group for ISR (JCGISR) and the NATO Vice Chair for All Source Intelligence Integration Sub-Group (ASIISG).**
- **His previous assignments include: Director SoSE, Chief Systems Engineer, Chief, Strategic Plans for PEO IEW&S, Deputy Product Manager for the Army's airborne reconnaissance programs, and in the science and technology arena in both Civil Service and industrial bases starting in 1987.**
- His previous assignments include: Chief Systems Engineer, Chief, Strategic Plans for PEO IEW&S, Deputy Product Manager for the Army's airborne reconnaissance programs, and in the science and technology arena in both Civil Service and industrial bases.
- Dr. Wittstruck holds a Doctorate Degree in Electrical & Computer Engineering from Rutgers University, a Master of Science Degree in Physics from the Polytechnic Institute of New York, and a Bachelor of Science Degree in Physics from St. Johns University. **Dr. Wittstruck has authored 19 journal articles, technical reports and conference proceedings and been awarded five U.S. patents.**





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Attività NATO

*UNIFIED VISION" 2014 per una "informational superiority"
W.C.(R) RAF Rob Munday NATO NIAG SG177 Chairman*

The NIAG Mission

Joint ISR Trial “Unified Vision 2014” (SG177)



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The NIAG is a high level consultative and advisory body of senior industrialists of NATO member countries, acting under the Conference of National Armaments Directors (CNAD), with the aims of providing:

- a forum for an open exchange of views on industrial, technical, economic, management and other relevant aspects of research, development and production of armaments equipments within the Alliance; based on current and updated information provided by relevant NATO bodies;
- industry’s advice to the CNAD, and other NATO bodies ..., on how to foster government-to-industry and industry-to-industry armaments co-operation within the Alliance;
- *assistance* the Main Armaments Groups (MAGs) ..., and other NATO bodies as appropriate, in exploring opportunities for international collaboration, and seeking timely and efficient ways to satisfy NATO military capability requirements.

□ **Industrial Contribution to demonstration of ISR Information Exchange as part of the Joint ISR Trial “Unified Vision 2014” (SG177)**

- Information sharing was proven a major shortfall in the recent operations, culminating with Libya; both **technology and policies prevent the military from effectively sharing information and intelligence**
- A JISR trial ‘Unified Vision 2014’ is planned in order to address some of the deficiencies. The industry contribution is expected in all phases of the trial, from preparation to reporting
- UV14 ambition is to gain from experiences and recommendations from UV12 (SG164). In addition UV14 will be on the next generation and level, with a Service Oriented Architecture (SOA) approach and with a full C2- system

Mr Rob Munday

Chairman NIAG Study Group 177



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Rob Munday: Information Bridge International Consulting

- Rob Munday formed his C4ISR consultancy shortly after leaving the UK Royal Air Force in 2006 after over 40 years of military service.
 - His last military post was as the UK's permanent NATO C3 representative in the UK Joint Delegation to NATO in Brussels and immediately before that he worked in the UK MOD, with responsibility for developing and co-ordinating the UK's policy with respect to the NATO C3 Organisation.
 - His other NATO appointments included S4 Branch Chief at the Northern Region Signals Group, JHQ Brunssum during NATO's SFOR and KFOR missions and Chief of the Northern Region ACE Technical Evaluation Team at HQ AFNORTH, Kolsaas, in Norway. Other national appointments were in the fields of EW, SHORAD, air defence systems engineering and combat ID.
- Rob Munday is currently leading the NIAG SG-177 Study Group – Industrial Support to UV14
 - UV14 Assessment Director
 - He also directed SG164 that provided industrial support to the NATO JISR community during the preparation and execution of JISR Trial UNIFIED VISION 2012, that took place in Norway in June 2012.
 - UV12 Assessment Director
 - He is also participating in a number of other NIAG studies, including GBAD related topics and the use of networks for air weapon data-links, and advises UK industry on NATO C4ISR.





→ 10:50





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Keynote briefings:

Evoluzione Degli Scenari e Ruolo Delle Nuove Smart-technologies

Dr. Francesco Tosato: - Centro Studi Internazionali



Ce.S.I. Centre for International Studies



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- **Ce.S.I. - Centro Studi Internazionali**, is a Rome-based institute founded in 2004 by **Andrea Margelletti**.
- Central to the mission of Ce.S.I. is the constant and active interest of its associates in current political affairs and in-depth political analysis to understand and to explain, in the shortest time and in the clearest way possible, complex events occurring on the global scale.
- Differing from academic institutions and most Italian think-tanks, the institute is characterized by the relatively short response-time to a crisis, producing up to date and objective analyses for our clients when they are needed most.



Centro Studi Internazionali

- The issues which are crucial to Ce.S.I.'s analyses are centered on the internal and international political dynamics of those countries which Italy regards as of paramount importance for its interests in the world, **especially the wider Middle East, Africa, Asia and the Balkans. Central to our work are security and defense policies, with particular focus on terrorism and counter-terrorism issues.**



Francesco Tosato – Analyst in charge of Military Affairs Desk



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- Graduated in Economics at Cà Foscari University of Venice in 2008, he earned a master in Administration, Finance and Management Audit at Sole 24 Ore Business School.
- Already contributor of Ce.S.I. from 2011 about military subjects related to defence industry and military systems, from 2013 is analyst in charge of Military Affairs Desk.
- Presently he is also contributor of Rivista Italiana Difesa, Rivista Militare, Gnosis and commentator for TGCOR, RSI (Radiotelevisione Svizzera) and Al Jazeera International on defence issues.
- At the same time, he performed different roles in the marketing area of communication agencies, international commercial enterprises and financial companies, dealing about market and competitors analysis, creation of marketing and communication plans, data analysis and budgeting





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Il futuro del J-ISR Fusione di sensori e informazioni

Scenari Futuri di Asset ISR nelle Network
Ing. Andrea Lazzareschi Sergiusti - SELEX ES

"We partner with our Customers to deliver world class, tailored and proven airborne integrated systems, sensors and training for military and security ISR/ISTAR manned and unmanned operations through a successful, customer focused business"

Multi-platform ISR/ISTAR systems - Scalable mission systems, AESA and M-scan multimode radar, electro-optical turrets, navigation aids, lightweight EW/ELINT systems, CNI.

Complete, independent UAS capability - Mission systems, platforms, ground control stations, battlelabs, training and paid by the hour services.

Combat proven electronics for fixed and rotary wing - Fixed and repositionable AESA and M-scan radar, complete integrated electronic warfare systems, lightweight high performance DIRCM systems, IRST, high power targeting laser.

UAS capability developed in-house and in operation with export customers

Integrated platform mission system on a third party UAS

Management, development, exploitation and dissemination of NATO AGS ground segment

Airborne integrated mission system in operation on 12 different platforms & surveillance radars on 9 different UAS. The only company outside the US under contract for a hyperspectral instrument.



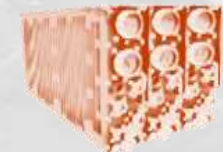
ATOS



Falco UAV System



Gabbiano Radar



Data Link management System

Dr. Andrea Lazzareschi Sergiusti - SELEX ES



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- Dr. Lazzareschi Sergiusti received the degree in Physics by Pisa University and after a period in the Italian Navy developed a large experience as a Radar System Engineer and managed the development of state of art electro-optical systems. He has been involved in international projects in the integration of microwave, sonics and electro-optics equipment within higher level surveillance and targeting systems both for ground, seaborne and airborne applications.
- In the CTO of Selex Galileo he has managed the products investment plan and is now Director of Technical Coordination among the Lob/Divisions of Selex ES.





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Metodologie Cyber ed ESM per migliorare la J-ISR -

*L'evoluzione della Protezione Cyber in un Ambiente ISR
Interconnesso*

Ing Ennio Raschellà – SELEX ES





Selex ES role in Cyber Security & Defense

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Mission

To be a leading worldwide player in the Cyber Defense sector and the trusted partner to NATO, Italy Government, and UK Government.

Grow further on the international market for Cyber Security for Government, Professional and Enterprise customers.

Cyber Security, Defense

Information Assurance



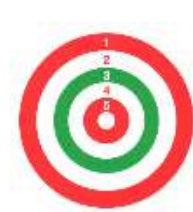
- ✓ Security Operation Center
- ✓ Services for cyber intelligence based on High Performance Computing platform
- ✓ Security Consulting, VA, Secure Architecture
- ✓ Integrated solution for lawful interception of IP and telephonic communications
- ✓ Information Assurance: new generation Crypto systems, EKMS, secure telephone



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Ing. Ennio Raschella'



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- Ennio Raschella' is currently responsible of the business within the Information Assurance Cyber Security & Information Assurance LoB with the responsibility of overseeing the market for
 - Information Security,
 - Communications Intelligence (COMINT) and
 - Galileo Public Regulated Service (PRS) System.

- Previously he hold the responsibility of sales manager for the Army and Defense and was responsible for the development of products and systems for radio communication





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Metodologie Cyber ed ESM per migliorare la J-ISR

*Capitalizzare gli insegnamenti degli ultimi progressi nel
settore ESM*

Ing. Daniela Pistoia – Elettronica



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ELETRONICA

Capitalizing the opportunity to learn about the latest advances in ESM



- **Control of information**, much of it through the EM spectrum, is already more important than control of territory in modern warfare
- We assist to the Information Warfare evolution: **cyberspace is the new battlefield for signal intelligence and psychological operations**
- EW is becoming a vital asset for Military Operations
- **Information Warfare, Cyber Warfare and Electronic Warfare are intermingled: some events have confirmed this concept**
- In the cyber/electromagnetic contest, **significant advantage will go to whom is able to gain, protect, and exploit advantages in the highly contested cyberspace domain and electromagnetic spectrum**
- ELT provides state-of-the-art ESM sensors and EW-C2 platform, integrating EM spectrum surveillance and Cyber intelligence: LOKI



Daniela Pistoia



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ELETTRONICA S.p.A.

Company Chief Scientist - Head of Product Innovation & Advanced EW Systems

She received her degree in Electronic Engineering in Rome from the University of "Tor Vergata"

- in 1988, with a special study on satellite based radar systems for surveillance of large boundary area, using random arrays antennas, published in Paris 89 IEEE International Radar Conference (1989). Since 1988, she has worked as System Analyst for Alenia Marconi Systems (formerly Selenia S.p.A.) Missile Systems Division, in the field of radar applications for missile systems.

- She has been responsible for the group of RF Sensors Simulation and Design Studies in the Engineering Dpt. of the Missile System Division. She has also been Head of System Studies in the Seeker Division of MBDA Missile Systems.
- She is author of several technical papers in the field of Signal Processing, target recognition and classification and radar phenomenology.
- Since 2003, she is with ELETTRONICA S.p.A. as Vice President for Research and Advanced Systems Design



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Big data

Il Problema del Trattamento delle Immagini
Ing Filippo Gemma, GM Spazio



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Big Data For Defense & Intelligence



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- Today's Warfighter has access to an ever-increasing number of sensors, imagers, internet artifacts, open source and other sophisticated collection devices and mechanisms, to the point that a major challenge has become how to sift through this massive amount of information to find the most critical and actionable items of intelligence. Increasingly, this must be accomplished in near-real time and the information must be packaged in a format capable of being shared with all other pertinent parties. The result is that sensor, computer and communication technologies are being strained beyond capacity to keep pace with current and future information management and analysis needs. **'Big Data'** tools, techniques, and technologies seek to provide the means to analyze, exploit and share conclusions drawn from this seemingly overwhelming information load.
- How is big data analytics being applied to ISR, intelligence sharing, GEOINT fusion, video analytics, atmospheric, identity, biometrics, and a whole range of other critical mission applications?



BIG Data and J-ISR domain



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- Introduction of BigData problem concept, i.e. the need to manage Tons of bytes containing data and information useful to fulfill a mission
- Introduction of J-ISR Tasks:
 - Data Request
 - Data Collection
 - Processing
 - Exploitation
 - Dissemination
- Focus on PED (Processing, Exploitation and Dissemination) currently analyzed by NIAG SG-0178
- Gap Analysis and current constraints
- Future Perspectives





GSAT SSA Italian MoD



Hundreds of Geobelt
Astro Images

SITA Project Italian Carabinieri



- 100.000 km² Southern Italy
- 4 full coverages in 1 year
- > 1.000 raw images from 7 Sats
- Orthorectification & Mosaiking
- ISO 19115 XML Metadata



GSC2 Maritime Surveillance



Millions of AIS data
for real-time
Sea surveillance

UAV Trial ENEL Distribuzione



- 100 km MLV Power Lines
- > 12.000 UAV images
- Near Real Time GeoRefer.
- Images analysis
- Anomalies Warnings

SATM BPC Italian Ministry of Interior



EO Images & Ship detection

MISTRALS Project Campania Region



- 13.500 km² - 551 Municipalities
- 4 full coverages in 2 years (T0 ÷ T3)
- 3 comparisons for each municipality
- 1.653 layer for new buildings
- 1.653 layer for modified buildings
- More than 30.000 differences



FILIPPO GEMMA, MBA



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□ CHIEF EXECUTIVE OFFICER / GENERAL MANAGER

- Results-driven general manager offering a strong balance between business and technical proficiency. Possess a proven track record of experience driving the advanced performance, growth and profitability of diverse organisations, most notably in the aerospace, defence, ICT services, energy and baking industries.

□ PROFESSIONAL EXPERIENCE

- **GMSPAZIO SRL, Rome, Italy • 2005-Present – General Manager** *Provider of satellite imagery processing services, modelling & simulation software and Geographical Information Systems (GIS).*
- **INFORMATICA PER IL TERRITORIO (IPT)** - *GIS solutions and remote sensing satellite imagery processing services.*
- **EURIMAGE** - *Global distributor of satellite remote sensing images*
- **SAS INSTITUTE**
- **IBM Italia Spa, Rome, Italy • 1978-1983**

□ EDUCATION

- **Master of Business Administration**
- **Post Graduate Certificate of Senior Management**
- **University Diploma in Information Technology**





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Il Futuro della Sorveglianza Aerea

Future Multi-INT Airborne ISR

Mr. Charles Gullede - Lockheed Martin IS&GS Defense



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Lockheed Martin Information Systems & Global Solutions



- Lockheed Martin Information Systems & Global Solutions is comprised of 28,000 highly skilled professionals bringing together the full range of the corporation's information competencies in



IS & GS

Airborne ISR

C2 of ISR & Data Management

Sharpening the Tactical Edge



Charles R. Gulledge – BD Lockheed Martin IS&GS-Defense C4ISR Systems

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Mr Gulledge has more than 20 years of experience with Lockheed Martin in business development, program management, and business planning. This includes a wealth of expertise in ISR systems, strategic planning, program performance, and competitive ISR solutions to meet the mission needs of our customers. His background includes development, fielding and support of complex ISR systems, both tactical and strategic signals intelligence, as well as program management and business development, with assignments in a variety of businesses and technologies in the United States, the United Kingdom, and other overseas locations.



- Mr. Gulledge joined Lockheed Martin in 1990. While with Lockheed Martin, Mr. Gulledge has held numerous management positions. Since moving to ISGS Defense in Denver, CO, Mr. Gulledge has worked as a member of the Advanced Development Team, led several large captures as a capture manager and most recently in the role of business development has spear headed the wins of the Finnish Air Force Program IX and the Italian Air Force G III 'Use Agree' program.





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Il Futuro della Sorveglianza Aerea

Una Opportunità per un Nuovo Concetto Operativo ISR
Ing Antonio Maglione - Piaggio Aero Industries



PIAGGIO AERO INDUSTRIES





Ing. Antonio Maglione



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- Antonio Maglione is Chief Technical Officer / Head of Design Organization of Piaggio Aero Industries.
- Graduated in 1982 at University "Federico II" of Naples as Naval Architect and Marine Engineer, started his career in Italcantieri at the Headquarter in Trieste, but quickly refocused his interest and working activity in Aerospace.
- 17-years experience in Alenia-Aermacchi (formerly Aeritalia) working in several international ventures (ATR 42 and ATR 72 in cooperation with Aerospatiale (FR), the MD80 Propfan Demo and the B717 (née MD95) with McDonnell Douglas in California, the Falcon 900EX for Dassault Aviation, the Typhoon in the EFA consortium and the C27J Spartan –Lockheed Martin (USA) - with responsibility of the development and certification of the Airframe (cooperation with Rolls Royce-Allison, GKN UK, Boeing-De Havilland Australia, AIDC Taiwan).
- In 2001 he joined Piaggio Aero Industries, creating in Naples an Engineering Center focalized in Research and Preliminary Design for General Aircraft and Business Aviation with Research Programs focused to Technologies potentially applicable to present and future Company products.
- Since 2005 CTO of Piaggio Aero Industries, having as immediate achievement the development and certification of the successful P180 Avanti II, with a fleet of more than 200 aircraft and 800.000 flight hours spanning from Europe to USA , Canada, Brazil, Russia, India, China.
- Looking at new opportunities/products for the Company, early 2010 he conceived and developed a new line of products of Piaggio Aero Industries for the Defense and ISR market, today represented by the P180 MPA Multirole Patrol Aircraft - and by the P1.HH "HammerHead" UAS.





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Intervento di chiusura:

Gen B.A. Giuseppe Gimondo



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Way ahead:

Nazzareno Cardinali & Gustavo Scotti di Uccio



Conclusive remarks

TOR of a possible CESMA WG (Gustavo Scotti di Uccio)

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Tactical Eyes and Ears
for the Warfighter

- Ease of use - Soldier's need a less complex interface and a reduction on the reliance of FSR
- Better Training - Train the 21st Century Soldier via 21st Century technology. Soldiers today learn differently. Institutional Training.
- The Cloud: How do we use the Cloud to our advantage in a safe/secure method?
- How do we reduce sustainment costs?
- How does the digital handheld world can influence the working methods?
- IA & Cyber Security
- «social network» tools as «intelligence information collector»
- Bio-engineering / ...

Intelligence, Electronic Warfare, Force Protection Capabilities to stay in front of a exceedingly agile and evolving threats



CESMA Next Steps – JISR Workshop



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- Slides
- Video recording
- Documents





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The Future of J-ISR

Con il supporto del:



Con il sostegno di:



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