Lead System Eng, Architect, Analysis, Science, AI, Autonomy, PM Manager

Well rounded Project, Program, OPS Manager, S&T, Robotic,Autonomy,AI principal systems/architect engineer, project/program management out-of-the-box-thinking, edge of technology, expertise in invention, concept development & requirements to delivery, and support of high-tech DOD, DHS, DARPA, intelligence, NANO Technology, ISR, Net Centric & SoS, ontology, predictive AI, computer controlled, Military, Homeland, Intelligence, Commercial, Aerospace, Electrical, Information Technology, CONOPS, DCGS, products, research and development. Dealt with next generation projects; environments where the scope of accomplishment has never been done before, and the technologies may not exist. As Government NASA talked to European Space Agency ESA, Supported NASA Exhibit at Paris Air Show, Washington DC, NASA Lead on Air & Space Exhibit, & Japan AI Robot Conference.

- ■ Biometrics,Tactical Persistent ISR+AI ■ **Artificial Intelligence & Virtual Reality** ■ **Hands-on team Leadership 30 yrs**
- ■ Aerospace,Cloud Computers,ontology■ 21 Year Advance Concepts, Full Cycle & **Doors** ■ Manage Multi-Discipline Teams NASA & Industry
- ■ Intel ALLINT+AI Sys Eng/DHS/ONR ■ Data Fusion/Extraction/Analysis/CONOPS ■ Manager: Proposal, Project, Program, Integrate
- ■ **Complete space systems, Mission** ■ **NANO Tech,HW/SW/Firm, SDLC, Architect** ■ **Net Centric Systems & War**

Federal Government Employee a decade; Full Performance Permanent Rehire SF50 status in grade GS13-861 Aerospace Engineer Systems and GS13-850 Electrical Engineer, NASA Patent Disclosure
NASA Program Development Manager for Man Space Shuttle Experiment:4 NASA Centers, US State, Foreign+US

Chaired 3 IEEE Sponsored Conferences on Simulation Technology, AI Robotics Exhibit Fuzz IEEE Yokohama and Author IEEE CRC Industrial Electronics Handbook on Advanced AI Control Systems. Author NASA AI Papers NANO Technology Swarm 1 KG spacecraft SWARM for 2030 & Fuzzy Logic Interviewed/Demonstrated RMSS robotics & HMI accomplishment for Hubble mission on Fox TV

PROFESSIONAL EXPERIENCE

Joseph Mica - Independent Consultant   (Attorney Clients omitted)   2008 – Present
PROJECT MGT. SYSTEM ENGINEER, SUBJECT MATTER EXPERT (SME), SCIENCE & TECHNOLOGY (S&T)
- ▪ SEG/ARTradeDesk/VFOX Island: Artificial Intelligence, Virtual Reality, Distributed AI Agents, Predictive AI, Autonomous Systems, cloud information & distributed computing, open multi agent architecture, TOR, IT, server farms, Cloud Computers, Encryption
- ▪ AeroTek (multi-contracts) Principal Systems Eng: IV&V, QA, ISR, analysis, HW/SW/AI, and Intelligence Surveillance Recognizance (ISR) US Marine/State department contract Border Protection Middle East Countries, ELINT, COMINT, Radar, Identification Friend or Foe (IFF)

Bombardier Deputy Lead Engineer $65 Mil Project   2007-2008
- ▪ Technical Authority f27 widely diverse engineers, wide depth & breadth, on-time, on budget, international effort
- ▪ Deputy Lead Engineer $65 Mil Project, supervised 27 widely diverse engineers, wide depth & breadth, on time, on budget, international effort: US ($65 M), Montreal (Prime Contract), Sweden (Sub Contract), Included my leading of telecom commutations between two International Engineering Teams to mitigate Problems and coordination. Included my System Engineering of these disciplines: Network Engineering of Distributed Computer Network Control System, Electrical Engineering of Electric Commuter Train Propulsion System, Radio Frequency Engineering EMI-EMC, Hardware Firmware, Software Distributed Computer Network Control, Mechanical Engineering and System Engineering

Navy Panama City Florida: System Engineer Littoral Combat Ships   2006-2007
Teledyne Brown Engineering System Engineer & Program Manager Support, Aero Tech Engineering Contract
- ▪ Lead Engineer for Modeling and Simulation (M&S) on Navy's new Littoral Combat Ship (LCS) Program that has an ISR mission. He reported directly to the Modeling and Simulation (M&S) Government manager at NSWC-PC on base. His job was a critical one in that he helped facilitate the smooth engineering flow from Mission Package (MP) development through integration and test to be ready for accreditation and ship acceptance. His roles included being the Systems Engineer where he helped write the Systems Engineering Plan, and the Working Group Charter that defined his roles and responsibilities and the functions of these work areas with respect to the rest of LCS community. Joe also was tasked to be the Mine Warfare M&S Lead Engineer. Joe was also was asked by the government manager to attend meetings for the manager.

Office of Navy Research (ONR) ISR Programs (DCS Contract)   8-2005 – 2-2006
PROGRAM MANAGEMENT SUPPORT, PRINCIPAL SYSTEM ENGINEER, CONCEPT DEVELOPMENT
Responsibilities included working in house with Navy Marine Corp government ISR Program Manager supporting dozen projects creating very advanced new S&T concepts that are used to generate funding for programs and ultimately generate the requirements for industry and academia to bid on and work from. I monitored current contractors including Northrop and others. Represent ONR ISR at meetings with other government agencies, and contractors. Created the content, forged the agenda for such meetings, or provided needed support: concepts development through to QA, Verification & Validation acceptance recommendation.

- Represented government ISR program manager at US & allied forces ISR one star meeting to assemble report for two star military.
- Development of S&T Tactical Persistent Surveillance programs out to 2012, Sensors from EMID to THz, & UAV, UGV, MAV, GPS
- Advanced ISR concepts development, system engineering, program development for Marines and Navy Littoral Combat ship: plus current development, system engineering, program management support for about dozen programs, System of Systems Intelligence
- DARPA ASSIST, Biometrics, Ontology, Covert RF Communication Systems, Terahertz THz (Active & Passive Systems), Antennas
- Ontology, OWL, NIST, DARPA & Software Development Life Cycle (SDLC), plus use of advanced NANO Technology, EOIR
- Advanced IED & terrorist detection: Detect hidden IED devices in urban combat and battlefield, Detect terrorist attack or IED
- Anticipate terrorist plans. I developed, and know, very advanced well-grounded conventional or artificial intelligence concepts.
- Modeling Adversarial Decisions in Complex Operational Warfare for Intelligence Surveillance Reconnaissance (ISR) Process, SOA
- Artificial Intelligence Methods, Ontology, Predictive Methods, MULTI-INT Fusion, CONOPS, DCGS Distributed Common Gnd Sys
- Agile Sensors a distributed networked MULTI-INT, Multi-Platform, Biometric systems, Tagging Tracking Locating (TTL), AF DIB
- Data fusion, Data Extraction, Network Centric Warfare, Operate/control MULTI-INT sensors by region, Low power/very small/disposable/non-disposable agile sensors, detection of hidden Improvised Explosive Device IED and Weapons Detections, MULTI-INT: EO/IR, THz, Acoustic, Seismic, Biometric, Sonar, EMID, RADINT, SIGINT, MASINT, HUMINT, Open Source, Non-cooperative targets, RFID, Optical, Biometrics, MASINT support of un-tagged persons, vehicles, secondary identifiers

Naval Research Lab (NRL) – Washington DC (ITT Contract) 8-1-2004, 5-13-2005
PROJECT SUPPORT, SYSTEM ENGINEER Artificial Intelligence application development for antiterrorism & DHS

- Worked on the integration of AHEAD Analogical Reasoning component software modules, written in Lisp or JAVA. Developed antiterrorist Task Method Knowledge (TMK) CONOPS Models to anticipate terrorist attacks and applied Software Development Life Cycle (SDLC). Worked on JAVA GUI Man Machine Interface. NRL/DHS sponsored training as Intelligence Analyst by people from FBI & CIA. Worked with the Principal Investigator.
- Received Intelligence Analyst Training though DHS and NRL from people that were FBI, CIA, & other. AI Intel Analyste Consultant
- Evidence Analysis: ELINT, COMMENT, SIGINT, HUMINT, MASINT, IMINT, OPEN SOURCE, Detect terrorist plans, IEDs
- Research & Development supports connecting the dots for Antiterrorism and Intelligence
- Artificial Intelligence: Case based Reasoning, Task Method Knowledge (TMK), FIRE, SHOP, Discovery Machine
- Used SQL, XML, JAVA & SWING. Graphical User Interfaces (GUI) designed, (SOA) Service Oriented Architecture
- Ontology Application, Case Base Reasoning, software development, integration, and software QA and IV&V
- Development Life Cycle (SDLC), knowledge (representation, fusion, extraction, management)

SUN Ridge Incorporated – DOD listed contractor – SBA listed   5-1995, 5-2005
Principal System Engineer, Project/Program Management, President, Founder
A company I started while employed as NASA government with the directors approval and only did work that was non-government related such as information technology or internet enterprise work while employed by the government to prevent any conflict of interest. After I left NASA in 2001 I became an officially CAGE CODE registered DOD contractor, government proposals, DOD SBIR, contracts and independent various other work from industry. Was Subject Matter Expert (SME) as Science and Technology Consultant. Systems, EE CS & AI

- System Engineer, Marine contract, Intelligence Mid East country protection, airborne ISR; ELINT, COMINT, Radar IFF, EW & ECM
- Future Combat Systems; CONOPS Mission Development for System of System heterogeneous UVs Intelligence; data mining, data fusion, intelligence gather, analysis, report. EE and CS, Artificial intelligence: decision, control, information, image processing.
- Examined RF: Beacons, Data communications, Spacecraft RF communications CCSDS, RF wireless networks/security, spectrums
- Autonomous vehicles R&D effort leading team. Unmanned (Autonomous) Air Vehicles UAV, Micro Air Vehicles MAV, Unmanned Ground Vehicles UGV, Unmanned Surface Vehicles USV, Battlefield & Mission Management, systems, concepts, requirements, robot sensors: IR, Sonic, Radar, Ladar (lazar), optics. Modeling: Player Stage, DI Guy, Sense 8, World-to-World, Biometric Engineer
- Artificial Intelligent Agent Reasoning: Distributed Agents, Open Agent Architecture created in multiple programming languages/interfaces, Agent Swarms, Translation Agents form bridges between agents, Linguistic Agents with speech recognition/talking, extensible or addendum agents, cooperative agents, collaborative agents, mobile agents for light weight user interfaces, multi-modal GUIs combination handwriting, speech, gestures, & black board. ISO 9001, Project, Excel, Word, Access
- Data integrate/fusion: database records, vision systems, object identification, self-localization. Swarms, Fuzzy logic, neural network, genetic algorithms, rule base system, Bays probability, SDLC, IV&V, QA, Business Development, Powerpoint, Doors Requirements
- DSP digital signal process, real-time, embedded software, firmware, firewall, Virtual Private Network (VPN), Internet Protocol Security (Ipsec), Demilitarized Zone (DMZ), Proxy Server, Encryption, IT, computer hardware & software, UNIX, Red Hat Linux, POSIX OS, C/C++, QNX RTOS, electrical engineering computer science, Cryptology RF communications, key exchange, algorithms.
- Provide system-engineering methods. Done concept, requirements, design development, manufacturing, systems integration, testing.

RayTech Contract Artificial Intelligence System Engineer   2003-2004

• System of Systems (SOS) Military UAV, UGV, USV, Future Combat Systems, Artificial Intelligence AI, Distributed AI Agents, Autonomy, Research, Development, CONOPS, ISR

National Aeronautics & Space Administration (NASA)Retired Gov.2-1991,1-2001

GS13-861 Electrical Engineer and GS13-850 Aerospace Engineer, Lead Engineer & COTR

Managed System Engineering on Autonomous NANO Technology Spacecraft (ANTS). ANTS is an AI highly autonomous OPEN AGENT ARCHITECTURE 1000 spacecraft SWARM of 1 KG spacecraft, the next generation PICO size, for year 2030.

- Wrote Systems document, won NASA HQ funds twice for AI ANTS SWARM & made NASA patent disclosure.

Published ANTS (Autonomous nano-technology swarm): An artificial intelligence approach to asteroid belt resource exploration, in: Proceedings International Astronautical Federation, 51st Congress, October, 2000. Also worked on many advanced spacecraft & missions.

- Complete spacecraft systems, Autonomy, Payloads, Electrical Power Systems (EPS), C&DH, Deployment, Space Shuttle, Robotics
- Lead Engineer responsible for all systems engineering & wrote ANTS heterogeneous satellite proposal to NASA HQ: instruments, on-board flight Ops, navigation, communication, heuristic systems, fuzzy logic, genetic algorithms, neural nets, planning systems, rule base systems, distributed artificial intelligence, spacecraft autonomy. Made patent disclosure 1999. Co-authored AI team paper.
- Systems engineer new spacecraft proposals: AURORA LITES, DIPPER, EPS, Space Power Platform autonomy orbital power station.

Project Proposal Manager and Systems Engineer of NASA teams: Supported Hubble Space Telescope (HST) Service Missions 1, 2, 3 power & electrical systems, COTR, trained in FARS, systems engineer, task lead & QA, IV&V, GPS

- As System Engineer I worked on the Service Missions change out of the Hubble Spacecraft Power System, Batteries, and Solar Arrays
- Proposal Manager, Principal Engineer, Lead Team of 5 Senior Engineers & other managers. Real time Astronaut Vision Enhancement Network (RAVEN) a fuzzy logic vision video enhancement processing on Space Shuttle. Met with 3 astronauts during requirements.
- RAVEN enhanced the astronauts ability to work in the hard to control conditions of space, enhance the Remote Manipulator System (RMS) operator's vision to control a Space Orbiter Shuttle robotic arm used to grapple the spacecraft from space place it in shuttles flight support system docking fixture for servicing. Astronaut strapped by foot restraint rides the RMS robotic arm into the work site.
- Proposal manager of team for a manned shuttle experiment for welding in space. Team was: four NASA Centers, the Air Force, NBS, 3 Universities, Paton Welding Institute in the Ukraine, Rockwell, and 3 other companies. NASA built experiment. Gave Space Construction talk at ESA Norwich The Netherlands1993. Supported NASA exhibit at Paris Air Show 1993 at invitation of NASA HQ.

Project Manager & Principal System Engineer: overall systems design, requirements management, and hands-on

Directed 60 diverse disciplined professionals of Doctors, Engineers, other managers and technicians on day/night shifts for RMSS.

- Project/Operations Mgr & principal engineer on a physical Remote Manipulator System Simulator (RMSS) control system for 50 foot 6 degree of freedom Space Shuttle robotic arm; FPGAs, **Embedded real-time control software** C, Forth, fuzzy logic control system, Till Shell, **HW design;** computer links, digital optical resolvers, analog sensors, hydraulics, mechanical engineering, human safety.
- Supported **HST Shuttle Mission CONOPS** development through reach and clearance studies. Had astronaut RMS JSC training.
- **Program Managed design**, Delivered $2.5M EFMDM Hubble Spacecraft sensor link, $100K under cost & beat accelerated 10 month schedule by 3 months. Wrote requirements, & environment tests of Shuttle Enhanced Flexible Multiplexer Demultiplexer (EFMDM) (**ASIC**, embed computer) & Enhanced Power Distribution Switching Unit. **RF; CCSDS**, STD 461 **EMI/EMC** & 810 **Environmental**
- **Integration & Test Engineer** plus shuttle satellite deployment for both Upper Atmosphere Research Satellite (UARS) and Explorer Platform (EP). Wrote Explorer Platform satellite GPS experiment software, Kalman Filter. Worked on Hubble SM1-3, UARS, EP.

McDonnell Douglas   5-1984, 2-1991

Project/Programs Mgt, Systems Engineer, R&D Principal Investigator, Space Station OPS

Program Management & Cruise Missile System Engineer, SDLC, & NSWC Dahlgren, NAVY Team Rep

Program Management Officer Government Rep on Tomahawk Weapons Systems - System Engineering Integration Agent (TWS-SEIA), reporting to the Navy and Naval Surface Weapons Center government managers and the Navy Commander for briefings. Monitored Launch Contractors Program/Project Management of Software Development Life Cycle SDLC, external organization system interfaces, chaired action review board (ARB) for problem priority - status definition - resolution - tracking development, TQM , IV&V site manager.

Principal Investigator/Lead R&D Engineer on Computer Controlled Spacecraft Power System IRAD. Developed proprietary distributed agent processor firmware real-time embedded HW SW network control system, blackboard. Hired by NASA in 1991 because IRAD demonstration was years ahead.

Spacecraft EPS, NiCAD & NiH Batteries plus 28 volt and charging with direct energy & V/T, Constant Current, peak Power Tracking.

Space Station System OPS, Managed and system engineered: Requirements Concepts for Command and Control Interface between Space Station Freedom Control Center plus Engineering Center Ops.

System design: Engineering Support Center Concept Document Facility Requirements, System Engineer for Artificial Intelligence tasks, AI project estimator for Requirements definition. Mission time-lines CONOPS. Pier to Pier OSI Open System Command network interface.

Emerson Electric CO, Aerospace Division, St. Louis, MO   12-1980, 5-1984

Electrical Engineer Embed HW, SW & Systems Development (US Secret & NATO Secret)

- SW Development of the F5 fighter Radar Fire Control System and Scan Converter to overlay Maverick missile video when locked-on.
- System engineering: US/NATO Army system, lead software embedded code engineer, & wrote embedded assembly operating system.

- Promoted for Real-Time embedded computer hardware design on FIST lazar computer fire control system.

Education and Honors

- Washington University St. Louis MO: BSEE 5-1978, Graduate Certificate in Artificial Intelligence (AI) Certificate 1-1991, GPA 3.2/4.0 (classes in: RF, Acoustic, computer science, analog, biometric, power, contract law), Joined: IEEE, ACM, INCOSE
- Major, Capps & Associates The Centre for Counterintelligence and Security Studies Certificate April 2005 HUMINT, Deception Intel
- Counterintelligence OPSEC INFOSEC class per NISPOM 4-2007 & briefed by FBI agent "Origin of FBI Counterintelligence" 3-2007
- Coauthored IEEE CRC Industrial Electronics Handbook: advanced AI control using fuzzy logic 1997, FUZ-IEEE Japan exhibit,+7 papers
- Conference Program Chair on: 6th, 7th, 8th, SCS, NASA, SPIE, IEEE, INNS and also IEEE/Simulation Technology 92, 93, 94
- Published AI ANTS (autonomous nano technology swarm): Artificial intelligence approach to asteroid belt resource exploration,2030
- Trained by CIA Agent; on Spy, Escape, Evasion, Tradecraft, Advanced Firearms, Urban Combat, Human Polygraph and Survival
- Stay off the Grid, Disguise, Avoid Hunters, Surveillance, Survival, Tactical Firearms Operations, Spy Escape and Evasion Drive training, and more by former CIA Agent Case Officer. I am trained as human lie detector, and psychological persuasion methods. Have supported this former CIA agent also for his classes. I have become highly skilled in personal and private security.
- Took class by 3 CIA Counter Intelligence Security Specialists on interrogation and how to detect deceptions and find out truth.
- Completed CIA & Special Forces Advanced Class: Live Fire (Hand Guns & AR15), CIA Driving, Escape Bondage/rope/duck tape//capture/police handcuffs/locked in trunk/lock pick, hand to hand combat, knife fighting, CIA surveillance/following/dead drop.
- Scheduled for original CIA/OSS Last Ditch hand to hand fighting created originally by a guy that survived over 600 street fights.
- FRONT SIGHT: Is the best firearms and tactical training corporation in America. They have trained, federal agents, sheriffs, SWAT, some military, and civilian including movie celebrities. I am a Front Sight Guardian member and thus part of an advisory to the corporate president and board.

Personal Interest

- I love my dog Sonne a Rhodesian Ridgeback a show dog and loyal loved family member July 10, 2005 to July 10, 2017
- Got another Rhodesian Ridgeback Mavrick September 27 2017 that came from the same blood line as Sonne.
- Photography used professionally to help pay my college expenses, owned a studio
- I have traveled around the world for pleasure and business and seen it all during my career, worked in side of government or industry

Advanced Science, Technology, AI Autonomy, Systems and Project Management

Even though I have reached 65 years old I look and think decades younger than my age, am highly active and through out my career been a leader in hands on engineering and project management leading teams in advanced technology at NASA and in system engineering and artificial intelligence the DOD or DHS Homeland Security or Intelligence Surveillance Recommence (ISR).

I worked on several projects sometimes simultaneously developing projects 30 years in the future with technology that does not exist. Dealt with extremely next generation projects that were 20 to 30 years in the future; environments where the scope of accomplishment has never been done before, and the technologies may not exist. NASA trained me in project leadership and NASA offered a sponsored MBA program but did not have the time in ~ 1995 to pursue because I was doing 3 or more projects simultaneously. Sometimes I had up to 60 professionals ranging from technicians to PhD and ranging from 1 company to 5 or 6 working under me on the project that I managed and did the system engineering as well.

- Co-Author of IEEE CRC Industrial Electronics Book on Advanced Artificial Intelligence Control Systems and other papers.
- IEEE Invited me to Yokohama Japan to present paper on Artificial Intelligence Controlled Robotic System and Exhibit.
- Worked on Advanced Unmanned Vehicles (UAV, UVG, USV, MAV) Office of Navy Research, DARPA, and Marine Corp.
- Lead Engineer on Advanced NASA Deep Space Autonomous Space Craft using various AI Disciplines SWARM in NANO 10 KG and PICO 1 KG Technology.
- Artificial Intelligence Engineer working one Navy Research Lab and Department of Homeland Security and got Intelligence Analyst Training by FBI, CIA, and DHS.
- Familier with varions Intelligence Gathering Disciplines such as SPYCRAFT, Intelligence Surveillance Reconnaissance (ISR)
- Training in CIA trade craft through association with Jason Hanson former CIA Case Officier : Escape, Evade, Influence, Recruit, Lie Detection, Self Défense, blend, detected a CIA observe me in crowded space ~200 ft, drive, weapons, hand-to-hand

Meet US Government CFR Requirements for Handicap Special Hiring Preference

Signed Schedule A Hiring Authority 5 CFR 213.3102 (u) disability qualification letter signed by Dr Eugene Woltering MD is available.

Intelligence Gathering Sample Disciplines   Understanding

- **HUMINT - Human Intelligence - gathered from a person on the ground**
  - **HUMINT is NOT= Counterintelligence, Counterintelligence may include HUMINT**
  - NRL Government sponsored Deception & Denial Counter Intelligence and Analyst training.
  - OPSEC INFOSEC per NISPON training
  - NRL/DHS Antiterrorism Intelligence Analyst advanced artificial intelligence Analyst tool
  - ONR Intelligence Analyst tool development, data fusion, knowledge extraction, ontology
  - Is a pure collection discipline and is an essential contributor to the all-source picture
- **IMINT - Imagery Intelligence - gathered from satellite and aerial photography**
  - NASA sponsored Imagery satellite photography for science data acquisition.
- **MASINT - Measurement and Signature Intelligence**
  - Measurement and Signature intelligence is technically derived intelligence data, such as nuclear (training), optical (photography & physics background), radio frequency (intelligence surveillance platform integration and weapons system), acoustics (engineering class), seismic, and materials sciences data.
- **ACOUSTINT - Acoustic Intelligence - gathered from acoustical sources**
- **CBINT - Chemical and Biological Intelligence - gathered from chemical and biological weapons and hazards**
- **CBRN – Chemical, Biological, Radiological, Nuclear (Potential Terrorist Attack Methods)**
- **DEWINT - Directed Energy Weapon Intelligence - gathered from weapon related radio frequency, microwave, electromagnetic pulse, laser, and particle beams**
- **Effluent/Debris Collection - gathered from atmospheric effluents and debris**
- **EOINT - Electro-Optical Intelligence - gathered from optical monitoring of the electromagnetic spectrum**
- **IRINT - Infrared Intelligence - gathered from the infrared spectrum**
- **LASINT - Laser Intelligence - gathered from laser systems**
- **MATINT - Materials Intelligence**
- **NUCINT - Nuclear Intelligence - gathered from the analysis of radiation**
- **RADINT - Radar Intelligence - gathered from radar sources**
- **RF/EMPINT - Radio Frequency/Electromagnetic Pulse Intelligence - gathered from radio frequency and electromagnetic pulse emissions**
- **Spectroscopic Intelligence**
- **Net Centric Systems and System of Systems (SoS): Collection, Process, Dissemination**
- **NANO and PICO Technology**
- **OSINT - Open Source Intelligence - gathered from open sources**
  - Very skilled at Information that is in the public domain, such as periodicals, news broadcasts, and information on the Internet.
- **SIGINT - Signals Intelligence - gathered from interception of signals**
  - Signals intelligence is information derived from signals intercept, comprising all COMINT, ELINT, and MASINT, however transmitted.
- **ELINT - Electronic Intelligence - gathered from electronic sensors**
  - Experience was classified military project
  - **Experience (COMINT & ELINT)** Intelligence Surveillance Platform Integration
- **TECHINT - Technical Intelligence - gathered from analysis of weapons and equipment used by the armed forces of foreign nations**
- **INTELLIGENCE LAYERING for Analysis and extraction of actionable intelligence.**
- **INTELLIGENCE COLLECTION DEVELOPMENT CYCLE:**
  - **1. Planning and Direction, 2. Collection, 3. Processing, 4. Production, 5. Dissemination**
- **INTELLIGENCE ANALYSIS TOOLS and their development using conventional or artificial intelligence methods for data fusion, knowledge extraction to actionable intelligence and predictive analysis.**
- **COUNTERINTELLIGENCE: Studied Robert Hansen, Aldridge Ames, etc.**
- **COUNTERTERRORISM : Developed antiterrorist Task Method Knowledge (TMK) CONOPS Models to anticipate terrorist attacks.**
- **FBI and DOD BIOMETRICS data collection such as FBI EFTS, DoD EBTS, and ANSI/NIST ITL 1-200x spec**
- **RFID with RFID III is coming soon**
- **Deception and Denial Practices & OPSEC INFOSEC: Trained by CIA, FBI, KGB for Intelligence Analysis**
- **RECRUITMENT EXAMPLE: The KGB as standard practice had the MICE acronym "tricks of the trade"**
- **Intelligence Surveillance Reconnaissance (ISR)**: Collection, Process, Dissemination
  - ALLINTs, Tagging Tracking Locating (TTL), Sensors, Analysis, Networks