

IMS Overview Briefing

2020

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CORPORATE OVERVIEW



PRIVATELY OWNED & OPERATED

- Est. 1963, current ownership since 1994
- Culture of developing innovative technological solutions in a rapid & agile production environment
- Space, Aviation, National Security & Defense
- A new breed of prime integrator (80% from U.S. gov't direct)

CORPORATE HEADQUARTERS: SPARKS, NEVADA

- Supports business areas, subsidiaries & affiliates with nearly 4,000 personnel at 33 facilities
- Facilities in 19 U.S. states, England, Germany and Turkey



25% AVERAGE ANNUAL CORPORATE GROWTH

- 2018 Projected Revenue of \$2B
- Strong financial position in the industry; continuous profitability; no long term debt
- Primarily internal growth with 20 strategic acquisitions

COMMITMENT TO EXCEEDING CUSTOMER EXPECTATIONS

- Responsiveness, professionalism, discipline, high standards of character & integrity
- Constantly seeking out new ideas, technologies and process improvements
- Virtual enterprise with cross-pollination to leverage technologies

SYSTEMS ENGINEERING, INTEGRATION, NETWORKING COMPETENCIES

- End-to-end, concept-to-completion solutions with numerous fielded systems
- Commitment, collaboration & long-term focus on customers
- Demonstrated QRC expertise with open architecture solutions



33 Locations in 19 U.S. States, England, Germany and Turkey



Business Area Headquarters
Space Systems (SSG); Louisville, CO
ISR, Aviation & Security (IAS); Centennial, CO
Integrated Mission Systems (IMS); Hagerstown, MD
Electronic & Information Systems (EIS); Sparks, NV

Field Offices

Wholly owned operating subsidiaries:















SNC MAJOR PROGRAMS: 2007 - 2018

- NASA Commercial Resupply Services 2 (CRS2)
- NASA Commercial Crew & Integrated Capability (CCiCap)
- Air Force BPC Light Air Support (LAS) International (A-29)
- Air Force PC-12 Pilatus
- Air Force NSAV Light & Med
- Air Force C-130 Modifications (Avionics, Electronic Warfare, Mission Networking)
- Air Force Gorgon Stare Wide Area Surveillance, 'Big 25' Award from C4ISR & GEOINT Award
- U.S. Customs & Border Protection Multi-role Enforcement Aircraft
- NAVY & SOCOM CREW/Thor Jammers
- ARMY MARSS TF-ODIN
- ORBCOMM Gen 2 Satellites
- Space Test Program Satellite-5 or STPSat-5
- Air Force Knight Ryder





SNC AWARDS & RECOGNITION:

- "Best of What's New," featuring the Dream Chaser® spacecraft, Popular Science
- World's Top 10 Most Innovative Companies in Space, Fast Company
- America's Fastest-Growing Private Companies, Inc.
- Tier 1 Superior Supplier for U.S. Air Force
- Aerospace Company of the Year
- Top Women-Owned U.S. Government Contractor
- Fastest Growing Women-Owned Company in North America
- Aviation Entrepreneurs of the Year
- Living Legends of Aviation
- Best Places to Work: Reno/Tahoe, Denver, Florida
- Top Woman-Owned Firm for Excellence
- Women Role Model of the Year
- Distinguished Business of the Year
- Honorary Doctorate of Science -- University of Nevada, Reno (2016)
- Family Owned Business Award -- Nevada Business Magazine
- Carnegie Corporation of New York's "Great Immigrants, Great Americans"
- Service to the Flag Award NDIA, Women in Defense









Fatih Ozmen Owner & CEO



Eren OzmenOwner, Chairwoman
& President



Jon Burgoyne
Executive VP
ISR, Aviation, and Security
(IAS)



Greg Cox
Executive VP
Electronic & Information
Systems (EIS)

LEADING THE WAY

SNC's commitment to inquisitive leadership means helping to develop an enterprise-wide mindset of advancement. Our leadership believes a dynamic team environment leads to innovative advancements in technologies, business practices, and most importantly to the personal development of our employees.



Tim Owings
Executive VP
Integrated Mission Systems
(IMS)



What We Do







IMS Capabilities

- Operation Designed for Today's Strategic Environment
 - Focused on Agility, Dependability and Tempo
 - System of Systems
 - Diverse Projects
 - Short Cycle Time
 - Broad Focus on System of Systems
 - ISO 9001:2008 / AS9100:2009 certified = Formal Program Processes
 - DCMA 8210.1
 - FAA Repair Station
 - CMMI 3
 - Room for Individual Program Focused Efforts
 - 5 Hangars in MD: 125,000 sq./ft.
 - 1 Hangar in Huntsville Alabama: 22,000 sq. ft. hangar space
 - Office, Engineering, CLS: 50,000+ sq./ft. in Md, North Carolina and Alabama





Sierra Force

- •fully modernized UH-60L with a zero-time unlimited lifecycle airframe, minimal-time components and a state-ofthe-art NEXTGEN 2020 compliant Garmin G5000H digital avionics suite.
- Customizable for a wide variety of missions including personnel transport, cargo (internal and external) or special purpose missions.

Air Launched Unmanned Aircraft System (ALUAS)

- •Designed for precision penetration of enemy defenses for a low-risk, low-cost, high-value solution for intelligence, surveillance and reconnaissance (ISR) missions.
- •Small unmanned aircraft system capability without ground footprint

Ground Control Station

- HMMWV M1152A1 Platform Based, C-130 Transportable
- Multiple Communications Capability, SATCOM, UHF / VHF, Data / Video , MIDS Link-16

IMS Products

Golden Knight's Demonstration Aircraft

- ■Air Operable Door (AOD) Jump Door Supplemental Type Certificate
- ■SNC designed Jump Hand Hold mounted above the door providing more flexibility for jump team maneuvers

DCH 7 & 8 / Direct ISR Support to Tactical Forces

- Carries out Intelligence, Surveillance and Reconnaissance (ISR) Missions providing the warfighter with actionable intelligence
- Multi-sensor, multi-payload low altitude ISR Platform

SNC TRAX Software (Tactical Radio Application Extension)

- Routes data from one datalink to another utilizing MIL-STDs and industry standards, effectively combining them
- Eliminates any proprietary interfaces and protocols

FMS SNC Scorpion® Models

 The SNC SCORPION aircraft is a fully integrated Multi-Role Special Mission Aircraft based on proven technology.

Orion Mission Software

 Orion is a comprehensive situational awareness tool, providing an operator with a clear and usable picture of both ground and air mission situations

King Air 350 ER Mission Enhancement

- Pratt & Whitney PT-67A engine: operating at 1050 continuous HP; next generation planned to include a contingency power of 1200 HP for 2 minutes
- ■MT Propeller: anticipated 8% increase in take-off capability & climb, significant noise reduction in cabin & from ground, reduced maintenance



Integrated Mission Systems (IMS)

Aircraft system design, engineering, modification, integration, and sustainment

Aircraft Engineering/ Modification

- Advanced ISR Platforms
- Rotary and Unmanned Systems
- Fused and Integrated Sensor Systems
- Aircraft Survivability Equipment
- FAA Major/Minor Modifications & Avionics Upgrades under Part 145 Repair Station
- CMMI® Level 3

Advanced Technology Applications

- Counter UAS
- Cyber Effects
- Air Launched Effects
- Applied Artificial Intelligence Solutions
- Long Range Precision Fires Support

Mission Solutions/Innovations

- Airborne Command & Control
- Net Enabled Operations
- Robust Interoperability Solutions (SNC TRAX®)
- Remote Platform/Sensor Control

Deployed Mission Operations

- Global logistics management
- Unprecedented Availability Rates
- Over 500,000 combat flight hours supported
- 10 years of around the world support across numerous theaters of operation





















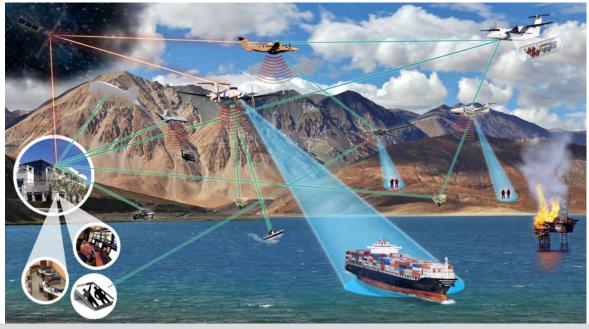


SNC IMS Portfolio





SNC Solution for Air, Marine & land Borders



Air

- ISR
- Airborne PED
- Persistent ISR
- Border Protection
- Airborne C2
- COMINT SNC Scorpion ISR
 SIGINT
- ISR Light
- IMINT
- Vigilant Stare
- BLoS LoS Aerostat

Land

- PED
- Secure Handhelds
- Secure Tablets
- Jammers

Mobile Land

- Mobile PED
- MOTS (Mobile Air Traffic Control Systems)
- ALS (Automated Landing Systems)

Maritime

- SNC Scorpion ISR (Seaspray Radar)
- Periscope Identification
- ALS





Sensor & Radar Integration

Multi-function, fully fused

Wide-area search and rapid detection of suspect activities

Radar / LIDAR Systems

 Years of experience in fielding multiple systems across multiple platforms: Vader, Selex, Phoenix Eye, HISAR, Lynx, ALIRT

EO/IR and Camera Systems

 More than 75 different EO/IR and other camera systems installed WESCAM, GD, Raytheon, FLIR, PeARL™

SIGINT Systems

• Industry leading SIGINT experience long-term relationships with DoD Customers

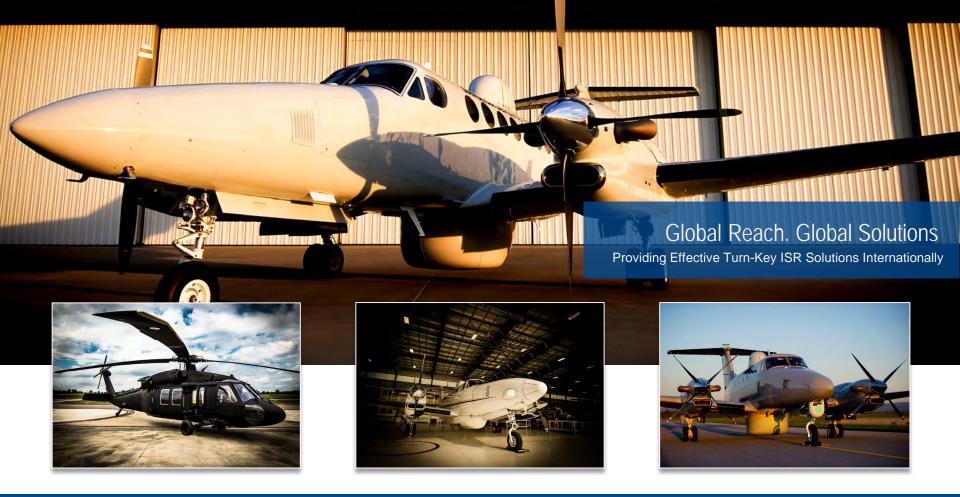




Platform Integration

- Engineering
 - "A-kit" Design for optimal systems performance
 - Platform Enhancements (ASE, Aux Fuel, Avionics, Glass Cockpits, and Major Structural Modifications)
- Modification
 - Prototype and Quick Reaction Capabilities
 - Fleet Production Capabilities
- Certification
 - Civilian Supplemental Type Certificates (STCs)
 - Military Air Worthiness Releases
 Combinations of STCs and AWRs









FMS SNC Scorpion® Models

- The SNC SCORPION aircraft is a fully integrated Multi-Role Special Mission Aircraft based on proven technology.
- The Choice of Law Enforcement
- The Choice of US Border Protection
- Highly capable maritime, border security, law enforcement and ISR special mission aircraft
- Quick role change allows multitasking from same platform Currently in production and FAA certified





SNC Scorpion® – Turn-Key ISR Solution

- Quick role-change capability enables multi-mission role for a single platform
- Fully reconfigurable to meet specific mission requirements
- Modular design approach for maximum versatility and efficiency
- 10 STC's applied to the Beechcraft King Air Platform





SNC Scorpion® – STC's

- SA03449NY Installation of Top Radomes (OML)
- SA03282NY Installation of Two Special use Interiors
- SA00367SE Nose Baggage Compartment Installation
- SA10478SC Modular Airborne Data Recording Acquisition Systems
- SA4005NM Pulse-lite System
- SA4175NM Raisbeck Fully Enclosed High-Flotation Gear Door System
- SA03449NY Installation of Bottom Radomes (OML)
- SA03087NY FLIR and Lift Mechanism
- SA02658LA King Air Mission Enhancement
- SA03349NY KU/KA Radome installation





King Air 350ER Mission Enhancement

- Pratt and Whitney PT-67A engine; operating at 1050 continuous HP
- MT Propeller; anticipated 8% increase in take off capability and climb, significant noise reduction, in cabin and from ground, reduced maintenance; through greater ground clearance, reduced vibration, no ground propeller speed restrictions, unlimited blade life and FOD repairable blades, individual blade replacement on wing.
- eABS, Electronic Anti-Lock Brakes, greatly reduces required take off distances and provides increased safety margin during landing
- Light Weight Battery, reduces weight by 35 lbs, can be serviced on the wing





10 - SA03282NY–Installation of Bottom Radomes (OML)













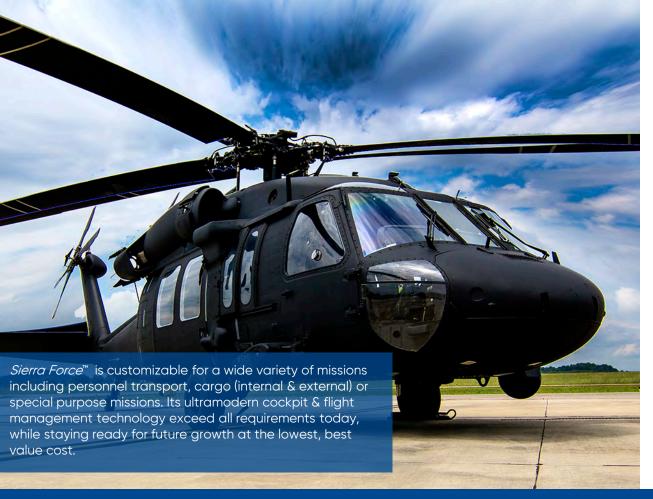












Modernizing Helicopter Fleets & Integrating NEXTGEN Technology

- Affordable to acquire & maintain
- Robust & proven in demanding environments world-wide
- Low workload for the pilot with an excellent Human
- Machine Interface (HMI)
- Flexiblility for interfacing with legacy & mission
- equipment
- Highly capable with state-of-the-art functionality
- Highly integrated for a low number of LRUs providing
- lower weight, reduced failures rates, & improved
- aircraft dispatch rate
- Compliant FAA NexGen Area Navigation (RNAV),
- Required Navigation Performance (RNP) standards,
- & LPV approaches
- Night Vision (NVD) compatible
- FAA-certified & in production
- Ideally suited for the special-mission environment
- Open architecture to facilitate growth





SNC TRAX Software (Tactical Radio Application Extension)

- Routes data from one datalink to another utilizing MIL-STDs and industry standards, effectively combining them
- Eliminates any proprietary interfaces and protocols
- Configuration and setup has minimal steps and is intuitive
- All connections can be set to auto-start after initial configuration
- Users with minimal to no datalink training can carry out complex datalink integration by clicking on an icon
- All functions and capabilities created by and for tactical users (Sensor Operators, Ground Forces, Operations Centers, etc.)
- Platform-J Link-16 radios, SADL radios
- Allows users to either join (air-air, join gateway), or establish a network
- (Gateway Master/ Time Reference)
- Routes data from one datalink to another Routing of unicast and multicast CoT data





Orion Workstation

- Orion is a comprehensive situational awareness tool, providing an operator with a clear and usable picture of both ground and air mission situations.
- Orion has flown over 400,000+ mission hours throughout CONUS, SOUTHCOM, CENTCOM, and Korea theaters.
- Orion is operator friendly and has been modified and enhanced through extensive operator input and experience.
- Client/Server architecture easily allows for additional functionality to be added to the system
- Defined interfaces to allow for easy data / target sharing with Federated Systems





Transportable Control Ground Station

- HMMWV M1152A1 Platform Based
- C-130 Transportable
- Harsh Environments / MIL-STD Equipment
- Multiple Communications Capability
 - SATCOM
 - UHF / VHF
 - Data / Video
 - MIDS Link-16
- Environmental Control Unit (ECU)
- Uninterruptable Power Supply (UPS)
- Bose A20 Noise Canceling Headsets
- Integrated Cobham Audio System
- Network Time Server (NTS) Sync
- Emergency Power Off (EPO)
- Dual 4K Resolution Displays
- . Ovidle Danlay Biret Antonna
- Quick Deploy Pivot Antennas
- LED Lighting with Tactical Black Out Lights
- CO2, Smoke Detector & Over Temp Sensor
- Two-Person Operation Ready





Transportable Ground Station (Inside)

Features

- Escape Hatch
- Light/Blackout
- Secure Brackets for Monitors
- ECU Control
- MIDS Antenna Hook Up
- Sealed Keyboard Hook Up
- Sealed Keyboard & Trackball
- Adjustable Seat
- Push To Talk (PTT)
 Pedal & Footrest



Mission Planner ISR Software



Features Continued

- Flight Card Export Feature
- Interactive Map (2D & 3D)
- No-Fly Zone and Restricted Operation Zone (ROZ) Specification
- Radio Frequency Line-Of-Site (LOS) Visualization
- Safe Airspace Volume (SAV) Creation
- EO/IR Planning

Features

- Real-Time Video Feed from Air Vehicle
- Comms (Voice & Data) With Air Vehicle
- · Efficiency & Effectiveness of Mission
- Increased Endurance & Time-On-Target
- Reduced Workload via Sensor Automation
- Simplified Airspace Planning
- Integration w/Orion for Autonomous Sensor Control





MTS & UGCS - Software

Mission Tasker System & Unified Ground Control Station



Kutta Technologies has developed this revolutionary software system to be capable of interfacing with a multitude of different Unmanned Aerial System (UAS) platforms using STANAG 4586 protocol. This innovative software can be tailored to unique vehicle specifications and delivered in a variety of hardware platforms based on customer needs.

Features

- Mission & Route Planning
- Safe Airspace Volume (SAV)
- Keep In Algorithm (KIA)
- No Fly Zones (NFZ)
- EO / IR Switching
- Zoom In / Out
- Slew Payload 360° (Map & Video)
- Supervised Usage (LOI-4) Control

Development / Certification

- RTCA DO-178C Methodologies
- STANAG 4586
- UCS-WG Compliant

Hardware Platform Options

- Rugged Handheld (UGCS-400)
- Rack-mounted GCSs
- Semi-Rugged Laptops
- Tablets





Manned / Unmanned Toolkit – MUM - 178

- Innovative cognitive decision aiding technologies designed to simplify UAS and payload control (UAS auto-routing, point and click route/area survey, dynamic re-tasking, playbook, Motion Target Indication, etc.)
- UAS pre-mission planning
- Aviator-centric user interfaces
- Multi-vehicle control options







Kutta Compact Underground Portable Radios

Drum® 1000

Kutta Radios provides next-generation medium frequency radios to mine operators as a reliable, cost-effective solution to communication and tracking needs. Kutta DRUM® radios use cables, wires, tracks, and pipes to create survivable, redundant communication paths underground that extend for miles. The DRUM® is a wireless medium frequency radio system that works whether mine power is on or off, post-incident, and even through obstructions.

KLR 200

The Kutta "LINK" radio allows First
Responders to seamlessly communicate
with operational and tactical command
posts using their existing radio equipment
in challenging environments such as
subway tunnels and high-rise buildings.

