

KIMMO NIEMINEN

EXECUTIVE SUMMARY

Over thirty years of combined management and engineering experience in space, science, subsea, and military operations. Extensive experience spans NASA's Extravehicular Activity (Spacewalks), Extravehicular Robotics, and the Extravehicular Mobility Unit (Spacesuit) across the International Space Station, Space Shuttle, and Lunar Programs, in support of the Astronaut Office.

As a consultant (<u>www.Q-Forte.com</u>) under the Royal Norwegian Consulate in Houston, uncovered high-value opportunities in the U.S. space sector and advanced strategic objectives on the global stage for the Norwegian government. Established direct partnerships between companies in the Norwegian space industry and their counterparts in the U.S. space program, resulting in numerous contracts and strengthened trade ties between Norway and the United States. Partnering with Astronaut Dr. David Wolf, a White House direct advisor to the President of the United States and the U.S. Cabinet on space policy and international engagements.

As the President of Voxel Systems, a bioscience company (<u>www.VoxelSystems.com</u>), led the team in creating a new paradigm for biochemical spectrum diagnostics, transforming medical imaging with state-of-the-art AI algorithms. Positioning the company as a global leader by commercializing a groundbreaking method capable of detecting the silent biochemical fingerprints of diseases. Held executive board-level positions and managed large-scale international program initiatives with budgets exceeding \$100 million.

As a Subsea Operations Manager and Pilot, operated submersibles and managed a deepsubmergence vehicle program for oil and gas companies. Leveraged remotely operated vehicles, atmospheric diving suits, and saturation diving systems to install oil and gas production platforms, deploy subsea modules, and conduct searches for submerged aircraft as part of accident investigations. As a consultant, secured international contracts for ROV companies within the U.S. oil and gas industry.

Served in the Finnish Navy Special Forces (SUKK 62) as part of the Underwater Demolition Team (UDT) under the command of the U.S. Navy SEAL. Completed three Non-Commissioned Officer (NCO) Schools and the U.S. Navy Survival, Evasion, Resistance, and Escape (SERE) School.

Following the world-record StratEx flight for the highest skydive and longest freefall (135,897 ft), served as Chief of Mission Control for the Global Stratospheric Flight Operations Program, overseeing high-resolution imaging from the stratosphere for the Department of Defense and scientific organizations.

Pioneered a global philanthropic initiative to distribute 100% UV-protective suits to children with Xeroderma Pigmentosum (XP), utilizing NASA spacesuit technology for humanitarian purposes to improve their quality of life.

Holding a Bachelor of Engineering (BEng) (Hons) in Electronic and Electrical Engineering from Nottingham Trent University, a Bachelor of Science in Robotics from South-Eastern Finland University of Applied Sciences and studied toward a Doctor of Philosophy (Ph.D.) in Physics.

The work is further distinguished by seventeen awards from NASA, recognizing contributions to the Space Shuttle, Hubble Space Telescope, International Space Station (ISS), Space Suit, and Artemis III programs.

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REFERENCES

Dr. David Wolf Astronaut (White House Space Council) Dr. Hilde Skorpen Consul General of Norway Dr. Rick Linnehan Astronaut Dr. Leroy Chiao Astronaut

CITIZENSHIP USA Finland

LANGUAGES English Finnish Swedish

CLEARANCE NASA PTP Eligible for Secret

MILITARY

3 NCO Schools Navy Special Forces Electronic Warfare Marines

AWARDS

17 NASA Awards Space Shuttle Program ISS Program Hubble Program Artemis III Program

EVA Operations Manager, Lyndon B. Johnson Space Center

Supported the NASA safety of spacewalk operations on the lunar surface for the Artemis III lunar program and provided direct support to the NASA Flight Operations Directorate for the Astronaut Office. Conducted underwater spacewalks at NASA's Neutral Buoyancy Laboratory in pressurized spacesuits for mission planning and astronaut training. Leading spacewalk training at the Planetary Analog Test Site to simulate lunar surface conditions, assess landers and rovers for lunar spacewalk operations, and practice scientific sample collection. Utilizing NASA's Active Response Gravity Offload System (ARGOS) to replicate a lunar gravity environment. Currently serving as SAIC SPEXO.

NASA & SUBSEA EXPERIENCE

Chief of Mission Control, World View

As Chief of Mission Control, managed the activities of the mission control team during global stratospheric highaltitude flight operations. Directed the development of a comprehensive flight operations training and certification program for Flight Directors and Flight Controllers, and led the design and construction of a state-of-the-art Mission Control Center (MCC). Supervised high-resolution imaging from the stratosphere for the Department of Defense and DARPA.

Flight Operations Engineer, Marshall Space Flight Center

Responsible for SR&QA analysis for satellites and probes at the Planetary Mission Program Office, under the Science Mission Directorate (SMD). This role involved various NASA-led missions focusing on prioritized planetary science objectives with NASA's partners around the world, aiming to answer fundamental questions to understand the origins, evolution, and destiny of the universe.

Subsea Operations Manager, iSub Ltd.

As a Subsea Operations Manager, managed the deployment of saturation diving systems, piloted manned and unmanned submersibles for deep underwater research projects, conducted searches for submerged aircraft as part of accident investigations, and installed oil and gas production platforms and subsea modules for a global client base in large-scale operations. Oversaw more than 100 personnel, including subcontractors. As a Product Manager and Engineer, directed the development of a remotely operated submersible program valued at over \$100 million.

Flight Operations Engineer, Lyndon B. Johnson Space Center

Executed underwater spacewalks at NASA's Neutral Buoyancy Laboratory, utilizing pressurized spacesuits and robotic arms for mission planning, procedure development, hardware verification, and astronaut training to refine time-critical operations, ensuring the success of spacewalks.

Flew parabolic zero-gravity flights to test spacesuits and perform spacewalk procedures. Performed virtual reality spacewalks to train in interacting with robotic arms, choreographing and rehearsing on-orbit spacewalk protocols, and conducting engineering analyses of spacewalk worksites. Conducted vacuum chamber tests as a NASA Test Subject in pressurized spacesuits to evaluate their performance for upcoming spacewalk missions. Completed a series of advanced training programs with the Flight Operations Directorate (FOD) at the Astronaut Office, specializing in physiological responses within NASA's hypobaric altitude chamber as a NASA Test Subject.

Provided real-time mission support in NASA's Mission Evaluation Room (MER) at the Mission Control Center (MCC) for multiple spacewalks and created detailed spacewalk animations to facilitate the preparation and review of procedures. Supported astronaut training at the Space Vehicle Mockup Facility (SVMF), utilizing part-task trainers to aid in troubleshooting, and developed astronaut survival procedures for spacecraft recovery operations. Led the SAIC robotics reliability team for the ISS program, representing the NASA SR&QA ISS Robotics Projects Office in international reviews, identifying and resolving major design issues and receiving multiple NASA awards.

Submersible Pilot

1994 - 1997

Piloted manned and unmanned submersible systems for some of the largest global ROV companies in subsea operations, including salvage, construction, drill support, subsea module installations, and surveys.

2019 - Present

2015 - 2017

2008 - 2015

2017 - 2019

1997 – 2008