Celia Fu Fremberg
Vice President

SPS

Overview

Ms. Fremberg leads the SPS Airspace Policy practice. Ms. Fremberg has an extensive experience in global Air Traffic Management with a focus on airspace and flow management. She understands the issues within the U.S. and globally exceptionally well. She is also well familiar with the International Civil Aviation Organization (ICAO)'s Block Upgrade activities. She has managed many large scales, difficult and challenging projects. Before joining SPS, she served similar roles at L&B and during her twenty+ years at The MITRE Corporation. Celia has led numerous senior and junior level staff in many different projects in the areas of communication, navigation, surveillance, air traffic management, air traffic flow management, airspace, airport planning, sustainability planning, cargo/facility planning, safety, security and military cooperation related projects, both in the US and around the world.

Ms. Fremberg is responsible for program/project development, program management, product quality and delivery, project schedule, and financial management. The projects Ms. Fremberg managed ranging from ATC and Airport technical consulting to software development, analysis, testing, and evaluation. Ms. Fremberg is also responsible for strategic planning, international work forecast, market development, bid and proposal management, project management and alliance formation for ATC and Airport programs. Ms. Fremberg also speaks frequently at international conferences on these subjects around the world.

Ms. Fremberg is deeply engaged in USTDA sponsored Aviation Cooperation Programs (ACP), and has been active in ACP China for both SPS and L&B, and led projects for ACP India for L&B. She is the co-lead in two of the program committees: Airspace and Environment, and Leadership & Professional Development Committees in China. She has been the Project Manager for the highly regarded Executive Level training programs for over 13 years, as well as for the traffic flow and reduction in delay projects where the industry and governments work together to provide innovative solutions. She also managed all projects performed in China, Japan, Taiwan, Philippines, Indonesia, Vietnam and Thailand (Prior to Year 2000, she also oversaw all South Korea and Singapore work) while she was with MITRE (1990-2013), to ensure the successful project delivery to customers from inception of the project until completion. This includes all of the proposal management, task definition, project execution, staffing allocation, financial balance, and product and project quality control. Often, Ms. Fremberg was called upon to be the project and program leader actively supporting international clients in providing proposal input, defining project requirements, designing ATC and airport operational needs, and assisting in project execution.

Ms. Fremberg is highly respected in the international arena, especially in the Asia Pacific (AP) region. In her more than twenty-eight years working in the region, she has established and maintained contacts in most of the key AP countries. High level officials, including Director Generals, would contact her and seek her opinions prior to making decisions that would affect the country's aviation organizations or system development. She is highly trusted and sought after by many CAAs and is often requested to be on certain projects or consultant teams.

Domestically, Ms. Fremberg also has extensive experiences working on direct U.S. FAA contracts. As either the project leader or technical lead, Ms. Fremberg was heavily involved in assisting the US in transitioning to the more automated ATC National Airspace System (NAS). Ms. Fremberg was deeply involved in airspace regional redesign, the Integration and Interaction Laboratory as well as in the development of the next generation NAS system. While working in the laboratory, she contributed toward the development and maintaining of the new advanced aviation operational concepts, technical and computer human interface (CHI) software for the terminal, en route, tower and the cockpit phases of the flight operations. She actively coordinated with sponsors in developing concepts and requirements for the NAS system. She—together with controllers, managers, and pilots—executed many advance aviation concept experiments with the FAA to ensure the new concepts were suitable for the operations.

Memberships

- Institute of Electrical and Electronics Engineers (IEEE)
- Society of Women Engineers (SWE), Women In Aviation (WIA)

Past Employment

- Landrum & Brown (2014-2019)
- MITRE Corporation (1992-2014)

Education

- Master of Science, Computer Science, The John Hopkins University, Maryland
- Bachelor of Science, Electrical Engineering, Washington University, St. Louis, Missouri

Representative Projects - Functional Services Provided

A partial listing of projects and aviation services which Ms. Fremberg has personally provided follows:

- **Air Traffic /Airspace**
    - China Shanghai Area Airspace and Ground Optimization Project
    - China Green Route Pilot Program
    - China Massive Delay Reduction Project
    - International Civil Aviation Organization (ICAO) Aviation System Block Upgrade (ASBU)
    - China Air Traffic Flow Management (ATFM) Engineering Assistance
    - China Wuhan Center Feasibility Study
    - Japan Narita International Airport Extended Parallel Departure Feasibility Study
    - Japan Haneda Airport Area Navigation (RNAV)/Required Navigation Performance (RNP) Route Feasibility Study and Development
    - Japan Tokyo Metropolitan Government (TMG) for Potential Joint Civil and Military Airport Operations
    - Japan Narita Airport ILS Approach Study
    - Taiwan FIR Airspace Redesign
    - FAA Optimization of Airspace and Procedures in Metroplex (OAPM) Projects
    - U.S. FAA Traffic Flow Awareness Capability (TFAC)
    - U.S. FAA User Request Evaluation Tool (URET)
    - U.S. FAA Lifting of 250 Knot Speed Restriction for Departure Aircraft Experiment
    - U.S. FAA Terminal Advanced Automation System (TAAS) Position Uncertainty Symbol Prototype
    - U.S. FAA Global Positioning System (GPS) Outage Study
    - U.S. FAA Initial Sector Suite System (ISSS) Prototype
    - U.S. FAA I-Team Flight Data Block (FDB) Prototype
    - U.S. FAA Strategic Trajectory Estimation and Metering Simulation Testbed
    - U.S. FAA Advanced Automation System (AAS) Engineering Support

- **Aviation Training**
    - China Nanjing University of Aeronautics and Astronautics Air Traffic Flow Management (ATMF) Training
    - China Executive Management Development Training (EMDT)
    - China Air Traffic Management Executive Development Training (ATMET)
    - China Airport Mid-Level Management Training
    - China CNS/ATM Master Planning Training Activities
    - India Rajiv Gandhi National Aviation University Executive Development Training: Airport Planning and Sustainable Airports Best Practices
    - Taiwan CNS/ATM Master Planning Training Activities

- **Safety**
    - China Safety Information Management Training
    - Safety Management System (SMS) Training

- **Airport**
    - China Energy Conservation and Emission Reduction (ECER) for Airports (Airlines & ATC)
    - International Civil Aviation Organization (ICAO) Aviation System Block Upgrade (ASBU) for Airports
    - China Shanghai Pudong Integrated Airport Information Communication System
    - China Guangzhou BaiYun Integrated Airport Information Communication System
    - India Sustainable Master Master Planning for Kolkata and Lucknow Airports
    - Japan Tokyo Metropolitan Government (TMG) for Potential Joint Civil and Military Airport Operations
    - Japan Narita International Airport Extended Parallel Departure Feasibility Study
    - Japan Haneda Airport Area Navigation (RNAV)/Required Navigation Performance (RNP) Route Feasibility Study and Development
    - Japan Chubu International Airport Integrated Airport Information Communication System
    - Japan Narita Airport ILS Approach Study
    - Japan Kobe Airport Integrated Information Communication System Study
    - Japan Okinawa Aircraft Maintenance Facility Study
    - Taiwan 3 International Airports Upgrade (to include Integrated Airport Information Communication System)
    - Integration of Airport Information System

- **Master Planning**
    - China CNS/ATM Master Planning Project
    - Taiwan CNS/ATM 15 Year Master Planning
    - Korea CNS/ATM Master Plan
    - U.S. Joint Planning and Development Office (JPDO) Planning
    - India Delhi Airport Master Planning

- **Navigation**
    - China Global Navigation Satellite System (GNSS) Feasibility Study
    - Regional Global Navigation Satellite System (GNSS) Feasibility Study for Thailand, Philippines, China, Indonesia, Malaysia, South Korea and Vietnam
    - Regional Global Navigation Satellite System (GNSS) Implementation Study for Thailand, Philippines, China, Indonesia, Malaysia, South Korea, and Vietnam
    - Japan Multi-Transport Satellite (MTSAT) System Engineering Support

- **Communication**
    - Thailand Trunked Radio Implementation Evaluation Project
    - U.S. FAA ATM/Data Link (DL) CHI Integration Issues