









Making the Complex Simple

http://www.montereytechnologies.com



Who We Are

Monterey Technologies, Inc. (MTI) has provided industry leading Human Factors Engineering and Human-Systems (HSI) Integration services. from Government to commercial clients, since 1984. The company was incorporated in the state of California in 1984 to provide professional services to government and industry customers in the areas of human factors research and engineering, systems analysis, simulation, and training.

Our professional staff is highly trained and qualified, with backgrounds in Behavioral Science, Engineering, Computer Science, and Business Management. Several staff members have significant military experience (US Navy, US Air Force, US Army). Nearly all company staff holds Master's or Ph.D. degrees. We take pride in the high quality and low turnover of the MTI professional staff and in the quality products and services that we deliver to our clients.

Monterev Technologies, Inc. has established an outstanding reputation for providing high quality HFE and HSI-related services on time and on budget. MTI's user-centered design process has paid off for hundreds of our customers since 1984. Our human-centered design approach results in better, more intuitive products that are easier to use, are quicker to market, reduce product life cycle costs, and reduce training time, resulting in both higher quality and more profitable products for our clients.

Our Products and Services

Monterey Technologies, Inc. has successfully designed, developed, tested, and evaluated human machine interfaces (HMI), including advanced display systems, for a variety of Military, NASA, and commercial applications. Our technical approach supports the new DoD Directives (DoDD) 5000.1 & 5000.2 on Human System Integration. Many of the programs we have worked on required integration of data and information from multiple sources and integration of data over time to provide useful information to users. During the course of this work MTI has become intimately familiar with the information required by Command, Control, Communications, Computers, and Intelligence (C4I) and weapon systems operators to accomplish specific mission objectives.



MTI participated in crew station re-design efforts for the US Army's M1 Abrams tank (photo courtesy of US Department of Defense)

HSI Projects

MTI has provided long term, on-site support to NASA and DoD research labs providing human in the loop research support to programs aimed at integrating future technologies such as commercial aviation displays, enhanced helicopter survivability and targeting electronics, and cognitive decision aiding software.

We have worked with the Tank Automotive Research, Development and Engineering Center (TARDEC), Satellite communication programs (SATCOM), BAE Systems Land and Armaments Division, NASA's Computational Fluid Dynamics group, and more to design crew stations and GUIs tailored to user needs with consideration of mission requirements, human performance capabilities, and applicable design standards.

Members of MTI's staff have served as Principal Investigators for the U.S. Army's Crew Station Research and Development Facility's simulation task on the Rotorcraft Pilot's Associate (RPA) program, an Advanced Technology Demonstration (ATD) program to apply cognitive decision aiding techniques to the next generation of Army rotorcraft.

MTI helps national and international defense aerospace companies fulfill HSI elements, such as DoDD 5000.1, 5000.2 and the application of relevant standards such as MIL STD 1472, NASA-STD-300, and FAA Human Factors Design Standard. Our human factors specialists conduct user centered design (UCD) for military, government, and commercial systems, with a focus on Warfighter, operator, and user experience.



MTI has provided human factors, engineering, and test support for the Royal Australian Air Force's Wedgetail AEW&C program



ViPER CVW provides multi-aircraft mission planning to Naval aviation

Medical Usability

MTI conducts formative and summative studies on Class II and III medical devices. We provide full-service usability testing and analysis capabilities including:

- Initial Requirements Analysis
- Test Design
- Data Collection
- Reporting

Effective designs are achieved when the user's needs become an integral part of the design process. Our team of Human Factors specialists helps our clients accomplish goals of effective design.

User Interface Design

MTI focuses on the human's functional requirements. Our approach develops functional requirements for the user, rather than only functional requirements for the technology. MTI characterizes user knowledge and expectations to determine optimal design for user interfaces. We develop both preliminary and detailed specifications for high-level architecture, structure, navigation strategies, menu categorization, and the look and feel of the interface itself to guide development teams.

ViPER CVW

ViPER CVW (Carrier Air Wing) is a tactical version of MTI's legacy ViPER mission planning tool intended to aid CVW strike planners in creating and coordinating integrated multi-element strike plans. ViPER CVW focuses on the unique challenges of planning large force strike missions for carrier-based fixed-wing aircraft. ViPER CVW allows key planning data, such as target coordinates, to traverse the "Sensor-to-Shooter" pathway in a digital format. ViPER CVW provides the tools to rapidly sketch aircraft movements, and develop potential Courses of Action (CoAs) in an electronic map, as singles or in groups, and allows users to visualize actions in space and time, in relation to other planning constraints, using a variety of linked displays. ViPER CVW will be initially available to the fleet user as part of an the FA-18 EA-18 Joint Mission Planning System (JMPS) Mission Planning Environment (MPE).

ViPER Family of Mission Planning Systems

- ViPER CVW
- Submarine BYG-1 Mission Planning Assistant (MPA)
- AEGIS Mission
 Planning Assistant
- ViPER CSG

MTI Human Factors specialists conduct usability testing in both lab and field settings



Mission Planning

MTI provides mission planning software solutions based on our Visual Planning, Execution and Review (ViPER) suite of capabilities. ViPER is an adaptable toolset that enables planners to pull together information from distributed sources, integrate all considerations in a single application, and rapidly transition from sketching to execution. Core capabilities of ViPER for all applications are:

- Scalable from Operations Center to
 Unit-Level planning
- Close gap between planning and execution systems
- Fully integrated temporal and geographic views
- Interfaces to external data sources
- CoA sketching
- Animated plan rehearsals
- Management of competing priorities
- Automatic brief building
- Computer assisted planning
- Instant metrics for plan comparison

Mission Planning Assistant

The submarine AN/BYG-1 Mission Planning Assistant (MPA) was developed from the ViPER-CSG strike group planning system. MPA provides an integrated workspace allowing crews to produce dynamic mission plans using integrated spatial, temporal and knowledge base data, combining these elements into planning products usable throughout the mission phases. Plans are dynamic in that changes can be made as environmental, tactical and other mission variables change during the course of planning and execution.

Completed plans may be referenced during mission execution and further annotations and information can be added to support after-action reviews. A completed mission with the associated plan can be saved and archived for future reference. Plan data can also be transported from one submarine to another, or from sub to shore as required.

Our Customers

Government

- U.S. Air Force (USAF)
- U.S. Army (USA)
- U.S. Coast Guard (USCG)
- U.S. Navy (USN)
- Department of Transportation (DOT)
- Federal Aviation Administration (FAA)
- National Aeronautics and Space Administration (NASA)

International

- Commonwealth of Australia (CoA)
 Defence Science and Technology
- Organisation (DSTO)QinetiQ Consulting Australia
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Defense Contractors

- BAE Systems
- Battelle
- The Boeing Company
- CHI Systems, Inc.
- General Atomics
- General Dynamics
- Lockheed Martin
- Mathtech, Inc.
- National Technical Associates
- Northrop Grumman
- Raytheon
- Stottler Henke
- Ultra-Prologic, Inc.

Commercial

Exelon

- Intel
- Kyocera Wireless Corporation
- St. Jude Medical
- San Jose State University
- VMware



About Us

MTI is a Human-Centered Analysis, Design, and Ergonomics firm. We provide products and services to government, commercial, and International clients. The company is headquartered in Monterey, CA, with regional offices in San Jose, San Diego, Seattle, WA, Minneapolis, MN, and at NASA Ames research center, Moffett Field. The company provides humancentered analysis and design services that improve human performance.

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