PERSPECTIVES

International Armaments Cooperation Programs (IACP) In Japan

By

Director of the Defense Technology Office, Noboru Y. Flores, Mutual Defense Assistance Office (MDAO), U.S. Embassy, Tokyo, Japan

Summary

The International Armaments Cooperation Program between the U.S. and Japan is facilitated by the Defense Technology Office (DTO) located in the Mutual Defense Assistance Office at the American Embassy in Tokyo, Japan. The DTO aids DoD access to Japanese technology and promotes cooperative R&D projects of mutual benefit between DoD organizations and the Japanese Defense Agency or with Japanese industry. The DTO is responsible for:

1. coordinating several executive-level forums for discussing potential and on-going cooperative R&D efforts,

2. assisting project managers in establishing and managing projects, and

3. advising DoD personnel on the military, political, cultural and economic background information that impacts technology collaboration.

DoD—Japan R&D cooperative activities operate under a somewhat bureaucratic structure with several levels of forums tasked with identifying opportunities, assessing capabilities, overseeing multiple projects and improving the cooperative process. Current U.S.-Japan cooperative R&D programs are valued at $169M. These projects contribute to the DTO mission of providing DoD with the options to cooperatively develop, acquire, or use Japanese technology so that U.S. soldiers, sailors, airmen, and marines have the best and most cost effective equipment in the world.

Background

On 8 July 1950, less than a month after the Korean War broke out, General Douglas MacArthur, Supreme Commander of the Allied Powers, wrote to the Japanese Prime Minister authorizing Japan to establish a "National Police Reserve (NPR)" of 75,000 men. This reversed the post WWII policy of total disarmament of Japan. On the same day, the U.S. provided its first defense advisory assistance organization to Japan and began assisting Japan to recruit, train and equip the NPR. Two years later, the NPR was renamed the National Safety Force and the mission was changed from exclusively maintaining peace and order within Japan to that of coping with aggressions from beyond its borders. In 1954, the U.S. advisory organization was redesignated the Military Assistance Advisory Group - Japan (MAAG-J) and organized along tri-service lines with a mission to further U.S. foreign policy in the Far East by assisting the Government of Japan to organize, train, equip, and maintain her defense forces. In July 1969, with the maturation of the Self Defense Forces, the MAAG-J was reorganized to become the

Mutual Defense Assistance Office (MDAO), reduced from an 82 person office to 16 people. and given four areas of responsibility: standardization, military assistance, defense security and data exchange.

Mutual Defense Assistance Office (MDAO)

The MDAO currently is responsible for two areas: foreign military sales to Japan and international armaments cooperation with Japan. This paper discusses the latter area, which is the responsibility of MDAO's Defense Technology Office (DTO).

International Armaments Cooperation

The DTO, located in the American Embassy, Tokyo, was established in November 1991 and its mission is "to investigate, evaluate and facilitate opportunities between the United States and Japan for the development of technologies of interest to the DoD." This office is the in-country action agency for the military departments (MILDEPs) and the Under Secretary of Defense for Acquisition and Technology, who provides policy guidance and oversight. The DTO is composed of two civilian professionals and two military officers representing the Office of the Secretary of Defense (OSD) and three MILDEPs.

In the context of the larger security relationship, the Department of Defense seeks cooperation with the Japan Defense Agency (JDA) in research, development, procurement and production of military equipment. DoD's objectives are military interoperability, cost savings, and use of the best technology available for incorporation in DoD systems. In addition to the military benefits that derive from successful coordination of military equipment programs, there is also a political dimension to cooperation that bolsters the security relationship between the U.S. and Japan.

The Japanese are world leaders in key technologies and processes which have potential to contribute to DoD acquisition programs. The DTO provides the DoD acquisition community insights into Japan's technology and military requirements and serves as an essential bridge to overcome obstacles to cooperation caused by differences in language and culture. The DTO is familiar with both DoD and JDA acquisition programs and objectives, and it possesses the capability to perform liaison services between DoD organizations and the government and industry organizations in Japan. These services have proven essential in the development and negotiation of cooperative program agreements and subsequent coordination of cooperative program execution.

Framework

The basic framework that governs U.S.-Japan defense technology cooperation is the Mutual Defense Assistance Agreement (MDAA) of 1954. This agreement provides that "each government. . . will make available to the other. . .such equipment, materials, services, or other assistance as the Government furnishing such assistance may authorize, in accordance with such detailed arrangements as may be made between them".

The Master Data Exchange Agreement between Japan and the U.S. was signed in 1962. As of 1998, there are 37 Annexes to the master agreement. These annexes provide a means to allow the exchange of technical information between the two governments. Current technology areas covered include tracked and wheeled vehicles, artillery, lasers, rotorcraft, torpedoes, sonars, mine countermeasures, air delivered weapons, crew escape, and tactical missile propulsion.

The Systems and Technology Forum (S&TF)

The Systems and Technology Forum, the senior level U.S.-Japan forum for discussion of collaboration in defense systems and technology, was established in 1980. The S&TF has met nineteen times.

The S&TF meets at least annually at the executive level. The JDA co-chair is the Director General, Bureau of Equipment (BoE), roughly the equivalent of the Under Secretary of Defense (USD) for Acquisition and Technology (A&T). The last S&TF meeting was held in Tokyo on 20 January 1998 and was co-chaired by the USD(A&T). Participants include representatives from each of the DoD Military Departments and each of Japan's Self Defense Force elements.

The S&TF and its subordinate committees review status of cooperative programs, identify potential areas for future cooperation, examine ideas to improve the cooperative process and provide a mechanism to showcase defense and industrial capabilities. The S&TF has established several subordinate committees which typically include members from the U.S. Military Departments and the Japan Self Defense Forces (JSDF) as well as from OSD and the JDA Internal Bureau.

Working Level S&TF. Meets in between executive level meetings. The ADUSD (Armaments Cooperation) has co-chaired the last four meetings with his Japanese counter-part, the Director General, R&D, JDA. The working level meetings are convened to review the progress of established cooperative programs and to provide guidance.

Air Defense Technical Review Group. Established in 1984 to explore opportunities for cooperation in air defense systems and technology. This group is credited with establishing the Advanced Hybrid Propulsion Technologies Cooperative Program. The group is co-chaired by the OUSD Principal Deputy Director, Strategic and Tactical systems and by the JDA Internal Bureau's director of the Aircraft Division.

Communications Technical Review Group. Established in 1985 to coordinate C3I programs and to explore opportunities for cooperation in development of C3I systems and technologies. The Communications TRG laid the foundation for the Eye Safe Laser Radar Cooperative Program. The group is co-chaired by the Staff, Assistant Secretary of Defense for C3I and by the JDA Internal Bureau's director, Communications and Electronic Systems Office.

Aircraft Technical Review Group. Established in 1998 to explore opportunities for cooperation in manned and unmanned aircraft and related subsystems. The group is co-chaired by the OUSD Deputy Director, Missile Warfare, Strategic and Tactical OUSD (A&T) and by the JDA Internal bureau's Director of the guided Weapons Office.

Technology Steering Group (TSG). Established in 1994 as a steering committee for the S&TF at the director level [Director, Pacific Armaments Cooperation, OUSD (A&T)/Director, Coordination Division, BoE]. The TSG establishes preliminary study groups of experts to explore possibilities for cooperation in technology or mission areas not covered by the TRGs.

Service Forums. The Army has dialogue with the Ground Systems Development Department, Technical Research and Development Institute (TRDI) through the Japan Armaments Study Team and the Army Reciprocal Visit to Japan (JAST/ARVJ) visits. The Navy has a dialogue with the Maritime Staff Office through the Technical Information Exchange Meetings (TIEM).

Cooperative R&D Programs

There are six cooperative research and development programs between the DoD and the JDA. The cost of these programs is shared equally by DoD and JDA. Each program has taken advantage of funding provided by DoD's International Cooperative R&D Program (Nunn money). On the JDA side, most of these programs are managed by the Technical Research and Development Institute (TRDI), which is responsible for all research and development programs of the JDA and its Self Defense Forces.

Ducted Rocket Engine Program. Established in 1992 after considerable debate in both Japan and the U.S., DRE was the first DoD-JDA cooperative R&D project. The $30M, five year U.S. Army Aviation and Missile Command (AMCOM)/TRDI project aims to develop and ground test a flight–weight ducted rocket engine with potential application to surface to air missile systems.

Advanced Steel Technology. Established in 1995, this $35M U.S. Naval Sea Systems Command/TRDI project aims to develop new methods for welding high strength steels using undermatched welding techniques. Potential applications for the DoD include aircraft carrier and submarine hull construction.

Fighting Vehicle Propulsion using Ceramic Materials. Established in 1995, this $26M U.S. Army Tank-Automotive and Armaments Command (TACOM)/TRDI project aims to develop breakthrough diesel engine technology for ground vehicles with emphasis on high power density and low fuel consumption through the use of ceramic materials.

Eye Safe Laser Radar. Established in 1996, this $20M U.S. Army Communications and Electronics Command (CECOM)/TRDI project will design, develop, fabricate and test a demonstrator multifunction eye-safe laser radar system capable of range finding, range mapping, target profiling, and obstacle warning and avoidance.

ACES II Ejection Seat Modification. Established in 1998, this $50M U.S. Air Force/Japan Air Self Defense Force (JASDF) project will develop and evaluate a modification kit for the ACES II ejection seat used in F-15 and other aircraft. The kit will increase the stability of the seat and minimize limb flailing to reduce injury potential in high-speed ejections.

Advanced Hybrid Propulsion Technologies. Established in 1998, this $18M U.S. Air Force/TRDI project will conduct research and exploratory development of advanced hybrid rocket engine propulsion to increase the performance, safety, and reliability of future tactical missiles. The project will develop liquid oxidizers, gas generator fuels, flow control systems, combustion technology and other supporting technology.

Joint Working Groups

Joint Working Groups (JWG) are used to develop the scope of work for potential cooperative projects and to negotiate Memoranda of Understanding (MOUs) that govern cooperative projects. The following are currently active JWGs:

Shallow Water Acoustic Technologies. The U.S. Naval Research Laboratory and TRDI are discussing a cooperative R&D project in the areas of environmental measurement, sound propagation/reverberation modeling, and signal processing/artificial intelligence in shallow water environments. The Navy and TRDI would conduct joint experiments, formulate an exchangeable database, and explore interoperable system concepts.

with a Bachelor of Science degree in Science of Aviation on the same date. He was then assigned to the "Centro de Aplicações Táticas e Recompletamento de Equipagens (CATRE)" in Natal, RN. where he completed his flight training. In 1983 he was assigned to the Fifth Air Tranportation Squadron. in Canoas. RS. where he worked as a Crew-Member of a C-95 Bandeirante. Since then. he has been assigned to many Brazilian Air Force Flight Units. having flown approximately 5,000 hours on C-95 Bandeirante. VC-97 Brasilia. U-7 Sêneca, T-27 Tucano, and VU-35 Lear Jet. In June 1998 he received his master's degree from the Graduate School of Logistics and Acquisition Management. Air Force Institute of Technology. Major Barros is currently the vice commander of the Brazilian Air Force Institute of Logistics (ILA) at São Paulo AFB.