

DEFENSE

Research and Development

**Memorandum of Understanding
Between the
UNITED STATES OF AMERICA and
GERMANY**

Signed at Koblenz and Washington
April 16 and May 11, 2007

and

Agreements Amending the
Memorandum of Understanding

Signed at Washington and Koblenz
June 16 and July 11, 2011

Signed at Koblenz and Washington
November 18 and 26, 2014

Signed at Washington and Koblenz
February 10 and May 8, 2017



NOTE BY THE DEPARTMENT OF STATE

Pursuant to Public Law 89—497, approved July 8, 1966
(80 Stat. 271; 1 U.S.C. 113)—

“ . . .the Treaties and Other International Acts Series issued under the authority of the Secretary of State shall be competent evidence . . . of the treaties, international agreements other than treaties, and proclamations by the President of such treaties and international agreements other than treaties, as the case may be, therein contained, in all the courts of law and equity and of maritime jurisdiction, and in all the tribunals and public offices of the United States, and of the several States, without any further proof or authentication thereof.”

GERMANY

Defense: Research and Development

*Memorandum of understanding
signed at Koblenz and Washington
April 16 and May 11, 2007;
Entered into force May 11, 2007.
And agreements amending the
memorandum of understanding.
Signed at Washington and Koblenz
June 16 and July 11, 2011;
Entered into force July 11, 2011.
Signed at Koblenz and Washington
November 18 and 26, 2014;
Entered into force November 26, 2014.
Signed at Washington and Koblenz
February 10 and May 8, 2017;
Entered into force May 8, 2017.*

MEMORANDUM OF UNDERSTANDING (MOU)

BETWEEN

THE DEPARTMENT OF DEFENSE
OF THE UNITED STATES OF AMERICA

AND

THE FEDERAL MINISTRY OF DEFENCE OF THE FEDERAL REPUBLIC
OF GERMANY

FOR THE

COOPERATIVE SYSTEM DEVELOPMENT AND DEMONSTRATION OF THE
ROLLING AIRFRAME MISSILE BLOCK 2

UPGRADE TO THE MK-31 GUIDED MISSILE WEAPON SYSTEM

(Short Title: RAM BLOCK 2 UPGRADE MOU)

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INTRODUCTION

The Department of Defense of the United States of America (U.S. DoD) and Federal Ministry of Defence of the Federal Republic of Germany (GE MOD), hereinafter referred to as the "Participants":

Having a common interest in defense;

Recognizing the benefits to be obtained from standardization, rationalization, and interoperability of military equipments;

Desiring to improve their mutual conventional defense capabilities through the application of emerging technology;

Having a mutual need for the Rolling Airframe Missile (RAM) Block 2 Upgrade to satisfy common operational requirements; and

Recognizing the success of other cooperative arrangements concerning RAM:

Memorandum of Understanding among the Government of the United States of America represented by the United States Navy and the Government of the Federal Republic of Germany represented by the Federal Ministry of Defense Concerning Cooperative Development of an Advanced Surface-to-Air Missile System dated July 22, 1976;

Memorandum of Understanding among the Government of the United States of America, represented by the United States Navy, the Government of the Federal Republic of Germany represented by the Federal Ministry of Defense and the Government of Denmark, represented by the Ministry of Defense Concerning Cooperative Full-Scale Engineering Development of an Advanced Surface-to-Air Missile System dated May 18, 1979;

Memorandum of Understanding between the United States of America represented by the Secretary of Defense and The Government of the Federal Republic of Germany Represented by the Federal Minister of Defense Concerning Cooperative Production of the EX-31 Guided Missile Weapon System dated August 3, 1987, (Short title: Block 0 MOU);

Agreement between the Department of Defense of the United States of America and the Ministry of Defense of the Federal Republic of Germany concerning Cooperative Engineering and Manufacturing Development of the RAM Block I Upgrade to the MK-31 Guided Missile Weapon System dated

March 27, 1996, and Amendment 1 dated October 21, 1998,
(Short title: Block I EMD and HAS Upgrade Agreement);

Agreement between the Department of Defense of the United States of America and the Federal Ministry of Defense of the Federal Republic of Germany concerning In-Service Support of the Rolling Airframe Missile MK-31 Guided Missile Weapon System dated February 9, 2001 (Short title: RAM ISS Agreement);

Agreement between the Department of Defense of the United States of America and the Federal Ministry of Defense of the Federal Republic of Germany for the Production of the Rolling Airframe Missile (RAM) Block 1 and Block 1 Helicopter Aircraft Surface (HAS) Upgrade Systems dated December 18, 2001, (Short title: Block 1/Block 1 HAS Production Agreement);

The U.S.-German Research and Technology Projects Memorandum of Understanding dated March 17, 1995, as amended by Extension dated September 19, 2003: Project Agreement No. RTP-US-GE-N-04-0026 between the Secretary of Defense on behalf of the Department of Defense of the United States of America and the Federal Minister of Defense of the Federal Republic of Germany for Cooperation in Research and Development of Technologies Applicable to Ship Defense Missiles dated December 20, 2004, (Short title: RAM P³I PA); and

Having established, under the aforementioned agreements, a cooperative management office known as the Rolling Airframe Missile Program Office (RAMPO);

Have reached the following understandings:

SECTION I

DEFINITIONS AND ABBREVIATIONS

The Participants have jointly decided upon the following definitions for provisions used in this MOU:

- Block 1 The modification to the Block 0 Guided Missile Round Pack (GMRP), which allows for Infrared all-the-way guidance mode to the seeker while maintaining original RF/IR capabilities and the upgrade to the Guided Missile Launching System (GMLS), which adds the capability to fire Block 0 and Block 1 missiles.
- Block 1 HAS The modifications to the RAM Block 1 Guided Missile Weapons System (GMWS), which adds the capability to engage helicopter, fixed wing aircraft, and small surface craft targets.
- Block 2 The modification to the Block 1/Block 1 HAS GMRP, which allows for enhanced kinematic capability and evolved radio frequency (ERF) guidance; and the upgrade to the GMLS, which adds the capability to fire Block 0, Block 1, and Block 2.
- Classified Information Official Information that requires protection in the interests of national security and is so designated by the application of a security classification marking. This Information may be in oral, visual, magnetic, or documentary form or in the form of equipment or technology.
- Contract Any mutually binding legal relationship under national laws that obligates a Contractor to furnish supplies or services, and obligates one or both of the Participants to pay for them.
- Contracting The obtaining of supplies or services by Contract from sources outside the government organizations of the Participants. Contracting includes description (but not determination) of supplies and services required, solicitation and selection of sources, preparation and award of Contracts, and all phases of Contract administration.

Contracting Agency	The entity within the government organization of a Participant, which has authority to enter into, administer, or terminate Contracts.
Contracting Officer	A person representing a Contracting Agency of a Participant who has the authority to enter into, administer, or terminate Contracts.
Contractor	Any entity awarded a Contract by a Participant's Contracting Agency.
Contractor Support Personnel	Persons specifically identified as providing administrative, managerial, scientific, or technical support services to a Participant under a support Contract.
Controlled Unclassified Information (CUI)	Unclassified Information to which access or distribution limitations have been applied in accordance with applicable national laws or regulations. It includes Information that has been declassified but remains controlled.
Cooperative Project Personnel (CPP)	Military members or civilian employees of a Participant assigned to the RAMPO who perform managerial, engineering, technical, administrative, Contracting, logistics, financial, planning or other functions in furtherance of the Project.
Cost Ceiling	The maximum amount to which the shared Financial and Non-Financial Costs may move without the prior written amendment of this MOU.
Defense Purposes	Manufacture or other use in any part of the world by or for the armed forces of either Participant.
Designated Security Authority (DSA)	The security office approved by national authorities to be responsible for the security aspects of this MOU.
Financial Costs	Project costs met with monetary contributions.
Host Participant	The Participant whose nation serves as the location of the RAMPO.
Information	Knowledge that can be communicated by any means, regardless of form or type, including, but not

limited to, that of a scientific, technical, business, or financial nature, and also including photographs, reports, manuals, threat data, experimental data, test data, designs, specifications, processes, techniques, inventions, drawings, technical writings, sound recordings, pictorial representations, and other graphical presentations, whether in magnetic tape, computer memory, or any other form and whether or not subject to copyright, Patent, or other legal protection.

Non-financial Costs	Project costs met with non-monetary contributions.
Parent Participant	The Participant that sends its CPP to the RAMPO located in the nation of the other Participant.
Participant	A signatory to this MOU represented by its military or civilian personnel. Contractors and Contractor Support Personnel will not be representatives of a Participant under this MOU.
Patent	Legal protection of the right to exclude others from making, using, or selling an invention. The term refers to any and all Patents including, but not limited to, Patents of implementation, improvement or addition, petty Patents, utility models, appearance design Patents, registered designs, and inventor certificates or like statutory protection as well as divisions, reissues, continuations, renewals, and extensions of any of these.
Project	Cooperative efforts of the Participants under this MOU to achieve the objectives in Section II (Objectives) and accomplish the work in Section II (Scope of Work).
Project Background Information	Information not generated in the performance of the Project.

Project Equipment	Any material, equipment, end item, subsystem, component, special tooling or test equipment jointly acquired or provided for use in the Project.
Project Foreground Information	Information generated in the performance of the Project.
Project Information	Any Information provided to, generated in, or used in this Project.
Project Invention	Any invention or discovery formulated or made (conceived or "first actually reduced to practice") in the course of work performed under a Project. The term "first actually reduced to practice" means the first demonstration, sufficient to establish to one skilled in the art to which the invention pertains, of the operability of an invention for its intended purpose and in its intended environment.
Project Plan	A plan that provides a description of the Project's delivery requirements and milestones.
Prospective Contractor	Any entity that seeks to enter into a Contract to be awarded by a Participant's Contracting Agency and that, in the case of a solicitation involving the release of export-controlled Information, is eligible to receive such Information.
Then-Year U.S. Dollars	Then-Year Dollars represent amounts to be obligated for resources in the actual years in which the obligation will be made. A Then-Year U.S. Dollar contains implicit adjustments for variation in the purchasing power of a dollar over time.
Third Party	A government other than the Government of a Participant and any person or other entity whose government is not the Government of a Participant.

The Participants have jointly decided upon the following abbreviations for terms used in this MOU:

6-DOF	Six Degrees Of Freedom
CG	Classification Guide
CPP	Cooperative Project Personnel
CUI	Controlled Unclassified Information
DPM	Deputy Project Manager
DSA	Designated Security Authorities
DT/OT	Developmental Testing/Operational Testing
ERF	Evolved Radio Frequency
EU	European Union
FMPD	Financial Management Procedures Document
GE MOD	Federal Ministry of Defence of the Federal Republic of Germany
GMLS	Guided Missile Launching System
GMRP	Guided Missile Round Pack
GMWS	Guided Missile Weapon System
HAS	Helicopter/Aircraft/Surface
HWIL	Hardware in the Loop
NATO	North Atlantic Treaty Organization
ORDALT	Ordnance Alteration
PM	Project Manager
PSI	Project Security Instruction
RAMPO	Rolling Airframe Missile Program Office
RM&A	Reliability, Maintainability and Availability
SC	Steering Committee
SPIL	Signal Processor in the Loop
TDP	Technical Data Package
U.S. DoD	United States Department of Defense

SECTION II

OBJECTIVE

2.1. The overall objective of this Project is to provide enhanced kinematic capability and ERF guidance for the Rolling Airframe Missile (RAM) Guided Missile Weapon System (GMWS) through joint system development and demonstration of the RAM Block 2, in order to counter the evolving threat and address obsolescence issues.

SECTION II

SCOPE OF WORK

3.1. The overall work to be carried out under this MOU includes the following tasks to design, develop, test, qualify, and document the RAM Guided Missile Round Pack (GMRP) Block 2 configuration and to modify the RAM Guided Missile Launching System (GMLS) to allow for firings of all baselines of the missiles. The development quantities for Block 2 engineering and Developmental Testing/Operational Testing (DT/OT) missiles and launcher Ordnance Alterations (ORDALTs) necessary to complete scope of work are provided in Annex A (RAM Block 2 Development Quantities). The Participants will:

- 3.1.1. Definitize and agree to the appropriate Block 2 increments of the RAM Weapons System Specifications 18925, 18926, and RAM Interface Specification 19622.
- 3.1.2. Design, develop, and document the Block 2 missile hardware to the requirements of the specifications identified in subparagraph 3.1.1; and complete material qualification tests, insensitive munitions tests, safety certification, and engineering evaluation tests.
- 3.1.3. Fabricate, assemble, and test Block 2 engineering missiles in accordance with Annex A (RAM Block 2 Development Quantities).
- 3.1.4. Develop six degrees-of-freedom (6-DOF), signal processor in the loop (SPIL), and hardware-in-the-loop (HWIL) simulations for the Block 2 configuration; and conduct functional design verification tests and performance prediction studies.
- 3.1.5. Design, develop, and document the Block 2 missile software to the requirements of the specifications identified in subparagraph 3.1.1; and complete qualification tests, validation, and verification of the missile software.
- 3.1.6. Identify and generate changes to all Block 1 GMRP Retrofit drawings, specifications, interface

control drawings, drawing trees, and specification trees; and develop a production technical data package (TDP) in sufficient detail to permit Block 2 missile production.

- 3.1.7. Develop and modify tooling and test equipment sets for the Block 2 configuration. All tooling and test equipment will be designed to enable future production and ORDALT of Block 1A into Block 2 missiles and associated launcher upgrade.
- 3.1.8. Fabricate and assemble Block 2 DT/OT missiles in accordance with Annex A (RAM Block 2 Development Quantities) and the production Technical Data Package (TDP).
- 3.1.9. Develop test plans and conduct test firings utilizing Block 2 engineering and DT/OT missiles; and gather and analyze test data.
- 3.1.10. Design, develop, document, and integrate hardware and software modifications, as required to the launcher to allow firing of Block 0, 1, 1A and 2 missiles in accordance with Annex A (RAM Block 2 Development Quantities);, and install RAM GMLS ORDALTs for support of the developmental and operational tests.
- 3.1.11. Acquire and equip targets for developmental and operational tests.
- 3.1.12. Provide interim spares plans, training hardware, support equipment, installation equipment, developmental and operational tests, Spares, and updates to the Block 1 Logistics Support Analysis Records (LSAR) that allow support of the Block 2 with no degradation to the Reliability, Maintainability, and Availability (RM&A) achieved with Block 1.
- 3.1.13. Perform the preliminary Block 2 missile production line set up task for the fabrication of Block 2 production representative missiles as outlined in subparagraph 3.1.7.

SECTION IV

MANAGEMENT (ORGANIZATION AND RESPONSIBILITY)

4.1. This Project will be directed and administered on behalf of the Participants by an organization consisting of the RAM Steering Committee (SC) and the RAMPO. The Participants recognize that RAMPO personnel currently participating in the Block 1/Block 1 HAS Production Agreement and the RAM ISS Agreement efforts will have additional duties and responsibilities assigned as a result of this MOU. The RAMPO is headed by a Project Manager (PM). The SC will have overall authority over the Project and the RAMPO, in accordance with this MOU. The PM will have primary responsibility for effective implementation, efficient management, and direction of the Project in accordance with this MOU.

4.2. The SC will consist of one representative appointed by each Participant. The SC will meet semi-annually with additional meetings held at the request of either representative. Each meeting of the SC will be chaired by the representative of the Participant hosting the meeting. Decisions of the SC will be made unanimously. In the event that the SC is unable to reach a timely decision on an issue, each SC representative will refer the issue to its higher authority for resolution. In the meantime, the approved Project Plan will continue to be implemented without interruption under the direction of the PM while the issue is being resolved by higher authority.

4.3. The SC will be responsible for:

- 4.3.1. Exercising executive-level oversight of the Project.
- 4.3.2. Reviewing progress in meeting Project requirements as specified in RAM Weapons System Specifications 18925, 18926, and RAM Interface Specification 19622 referenced in paragraph 3.1.1 of Section III (Scope of Work).
- 4.3.3. Reviewing and approving the Project Plan developed by the RAMPO, and reviewing the technical progress of the Project against the Project Plan.

- 4.3.4. Reviewing the financial status of the Project to ensure compliance with the provisions of Section V (Financial Provisions) and Annex B (Financial Matters) of this MOU.
- 4.3.5. Resolving issues brought forth by the RAMPO.
- 4.3.6. Reviewing and forwarding to the Participants for approval recommended amendments to this MOU in accordance with Section XX (Amendment, Termination, Entry Into Effect, and Duration).
- 4.3.7. Amending, as necessary, Annexes A, B, C, and E of this MOU consistent with paragraph 20.1. of Section XX (Amendment, Termination, Entry Into Effect, and Duration).
- 4.3.8. Approving plans to manage and control the transfer of Project Equipment provided by either Participant to support the execution of the Project in accordance with Section VIII (Project Equipment).
- 4.3.9. Approving plans for the disposal of jointly acquired Project Equipment under this MOU in accordance with Section VIII (Project Equipment).
- 4.3.10. Maintaining oversight of the security aspects of the Project, including reviewing and obtaining approval from the appropriate Designated Security Authority (DSA) of a Project Security Instruction (PSI) and a Classification Guide (CG) prior to the transfer of Classified Information or Controlled Unclassified Information (CUI).
- 4.3.11. Providing recommendations to the Participants for the addition of new Participants in accordance with Section XV (Participation of Additional Participants).
- 4.3.12. Employing its best efforts to resolve, in consultation with the export control authorities of the Participants concerned, any export control issues raised by the RAMPO in accordance with subparagraph 4.7.9 or raised by a Participant's SC representative in accordance with subparagraph 9.1.2.2.

4.3.13. Monitoring Third Party sales and transfers authorized in accordance with Section XI (Third Party Sales and Transfers).

4.3.14. Reviewing the semi-annual status report submitted by the RAMPO.

4.3.15. Approving the Financial Management Procedures Document (FMPD) developed by the RAMPO.

4.4. The RAMPO will execute the Project. The U.S. DoD will appoint the PM, who, as head of the RAMPO, will be responsible for implementing this MOU and for day-to-day management of the Project. The PM will be assisted in his functions by a Deputy Project Manager (DPM) who will be appointed by the GE MOD and who will be granted and delegated all authority necessary to perform his or her functions. The PM or DPM, in their absence, will appoint a representative to act with all responsibility and authority.

4.5. Although the PM is ultimately accountable for the day-to-day management and execution of the Project, the PM and the DPM will jointly participate in the daily management of the Project. All Project-related correspondence (in-going, out-going, and internal) received or issued by the PM will be brought to the DPM's attention and vice versa. All Project decisions will be approved by the PM and DPM. Any lack of agreement or non-concurrence will be referred to the SC for resolution. Project files and other joint Information stored in RAMPO will be accessible without distinction to both Participants' staff members who must comply with host nation security regulations or procedures.

4.6. The Participants agree to provide the personnel required to execute the Project in accordance with Annex C (RAMPO Organization). Each Participant will provide the personnel required within six (6) months of the effective date of this MOU. Should a Participant be unable to provide its contribution of personnel to the RAMPO at the required time or fail to replace its contribution of personnel within six (6) months of their departure, the PM will have the authority to make alternative arrangements on behalf of and at the expense of that Participant. Such alternative arrangements will be made only after consultation with the SC.

4.7. The PM, assisted by the DPM, will be responsible for:

- 4.7.1. Managing the cost, schedule, performance requirements, technical, security, and financial aspects of the Project described in this MOU.
- 4.7.2. Developing and submitting the Project Plan to the SC for approval, and executing the approved Project Plan.
- 4.7.3. Developing and submitting any required changes to the approved Project Plan to the SC for approval.
- 4.7.4. Executing the financial aspects of the Project in accordance with Section V (Financial Provisions) and Annex B (Financial Matters) of this MOU.
- 4.7.5. Referring issues to the SC that cannot be resolved by the PM.
- 4.7.6. Developing and recommending amendments to this MOU and its Annexes to the SC.
- 4.7.7. Developing and implementing SC-approved plans to manage and control the transfer of Project Equipment provided by either Participant in accordance with Section VIII (Project Equipment).
- 4.7.8. Developing and implementing SC-approved plans for the disposal of jointly acquired Project Equipment under this MOU in accordance with Section VIII (Project Equipment).
- 4.7.9. Monitoring export control arrangements required to implement this MOU and, if applicable, referring immediately to the SC any export control issues that could adversely affect the implementation of this MOU.
- 4.7.10. Developing and forwarding to the SC a PSI and a CG for the Project within three months after MOU signature, and implementing them upon final approval.
- 4.7.11. Forwarding recommendations to the SC for the addition of new Participants in accordance with Section XV (Participation of Additional Participants).

4.7.12. Providing a semi-annual status report to the SC.

4.7.13. Appointing a Project security officer.

4.7.14. Developing and submitting the FMPD to the SC for approval and implementing the approved FMPD.

4.8. Annex D (Cooperative Project Personnel) establishes provisions for the general conduct of all GE MOD personnel who will serve as Cooperative Project Personnel (CPP) under this MOU.

SECTION V

FINANCIAL PROVISIONS

5.1. The performance of the responsibilities under all Sections of this MOU will not cost more than a Cost Ceiling of \$325.4 million (M) Then-Year U.S. Dollars. The U.S. dollar will be the reference currency, and the Project fiscal year will be the U.S. fiscal year. The Cost Ceiling may only be changed by written amendment of this MOU in accordance with Section XX (Amendment, Termination, Entry Into Effect, and Duration).

5.2. Each Participant will contribute its equitable share of the full Financial Costs and Non-financial Costs of the Project including overhead costs, administrative costs, and costs of claims, and will receive an equitable share of the results of the Project.

5.3. The full Financial Costs and Non-financial Costs of the Project, as identified in this Section and Annex B (Financial Matters) of this MOU, will be shared according to the following percentages:

Participant	Percentage Share
U.S. DoD	50%
GE MOD	50%

5.4. Participation in the Project will include both financial and non-financial contributions to directly support Project efforts. Values have been mutually determined for Project non-financial contributions. Both financial and non-financial contributions required to support Project efforts are detailed in Annex B (Financial Matters).

5.5. Participation in the Project also will include financial and non-financial contributions for RAMPO administration and associated support services including, but not limited to, RAMPO training costs, Contract award, Contract administration, office space, security services, Information technology services, communications services, and supplies. Values have been mutually determined for RAMPO administrative costs, and are included in Annex B (Financial Matters).

5.6. In addition to the shared costs of RAMPO administration and associated support services costs described in paragraph 5.5., the cost of personnel in the RAMPO will be borne as follows:

5.6.1. The Host Participant will bear the costs of all pay and allowances of Host Participant personnel in the RAMPO.

5.6.2. The Parent Participant will bear the following CPP-related costs:

5.6.2.1. All pay and allowances of CPP assigned to the RAMPO.

5.6.2.2. Transportation of CPP, CPP dependents, and their personal property to the RAMPO location prior to commencement of the CPP assignment in the RAMPO, and return transportation of the foregoing from the RAMPO location upon completion or termination of the CPP assignment.

5.6.2.3. Compensation for loss of, or damage to, the personal property of CPP or CPP dependents, subject to the laws and regulations of the Parent Participant's Government.

5.6.2.4. Preparation and shipment of remains and funeral expenses in the event of the death of CPP or CPP dependents.

5.7. The following costs will be borne entirely by the Participant incurring the costs or on whose behalf the costs are incurred:

5.7.1. Costs associated with national representation at meetings by non-RAMPO members.

5.7.2. Costs associated with any unique national requirements identified by a Participant.

5.7.3. Any other costs not expressly stated as shared costs or any costs that are outside the scope of this MOU.

5.7.4. Costs for its RAMPO personnel and associated travel costs.

5.8. The PM, assisted by the DPM, will be responsible for establishing the detailed financial management procedures under which the Project will operate. These procedures, which must accord with the national accounting and audit requirements of the Participants, will be detailed in a Financial Management and Procedures Document (FMPD) prepared by the RAMPO and subject to the approval of the SC. Each Participant will fund the Project in accordance with Annex B (Financial Matters) and the estimated schedule for financial contributions contained in the FMPD, which will be consistent with paragraph 5.10.

5.9. The Participants recognize that it may become necessary for one Participant to incur contractual or other responsibilities for the benefit of the other Participant prior to receipt of the other Participant's funds. In the event that one Participant incurs such responsibilities, the other Participant will make such funds available in such amounts and at such times as may be required by the Contract or other obligation and will pay any damages and costs that may accrue from the performance of or cancellation of the Contract or other obligation in advance of the time such payments, damages, or costs are due.

5.10. A Participant will promptly notify the other Participant if available funds are not adequate to fulfill its responsibilities under this MOU. If a Participant notifies the other Participant that it is terminating or reducing the funding for this Project, both Participants will immediately consult with a view toward continuation on a modified basis.

5.11. RAMPO will maintain complete records of all work performed, responsibilities and commitments incurred, and monies received and expended and will ensure that the normal internal audit surveillance and checks of accounting and procurement procedures will be applied in accordance with the standard accounting practices of the United States. The audit of the RAMPO financial Information for the Project will be performed on an as-required basis, determined by the SC, by the U.S. DoD on behalf of the Participants. To the extent consistent with law, reports of such audits will be released to the Participants. The GE MOD will assist the U.S. DoD on any audit elements required to perform the audit satisfactorily. Where German auditors need to obtain or to inspect specific Project financial data that, in their view, is relevant to being able to fulfill its national responsibilities, the U.S. DoD will grant access to such specific Project financial data that concern financial contributions of the GE MOD.

SECTION VI

CONTRACTING PROVISIONS

6.1. The U.S. DoD (acting through the Department of the Navy) will be responsible for Contracting for work on behalf of the Participants as set forth in Section II (Objectives) and Section III (Scope of Work) in accordance with U.S. Contracting laws, regulations, and procedures.

6.2. The Contracting Officer will be the exclusive source for providing contractual direction and instructions to Contractors.

6.3. The RAMPO will be responsible for the coordination of activities relating to the Project, and will cooperate with the Contracting Officer in the areas of Contract procedures, Contract negotiation, evaluation of offers, and Contract award. The RAMPO will review statements of work prior to the development of solicitations to ensure that they are in accordance with this MOU. The RAMPO will approve the forwarding of procurement requests to the Contracting Officer. In addition, the Contracting Officer will keep the RAMPO advised of all financial arrangements with the prime Contractor.

6.4. The Contracting Officer will negotiate to obtain rights to use and disclose Project Information require by Section IX (Disclosure and Use of Project Information). The Contracting Officer will insert into prospective Contracts (and require its Contractors to insert in subcontracts) suitable provisions to satisfy the requirements of this MOU, including Section IX (Disclosure and Use of Project Information), Section X (Controlled Unclassified Information), Section XII (Security), Section XIII (Third Party Sales and Transfers), and Section XX (Amendment, Termination, Entry into Effect, and Duration), including the export control provisions in accordance with this MOU, in particular paragraphs 6.6. and 6.7. During the Contracting process, the Contracting Officer will advise Prospective Contractors of their responsibility to notify immediately the Contracting Agency, before Contract award, if they are subject to any license or agreement that will restrict their freedom to disclose Information or permit its use. The Contracting Officer will also advise Prospective Contractors to employ their best efforts not to enter into any new agreement or arrangement that will result in restrictions.

6.5. In the event the Contracting Officer is unable to secure adequate benefits to use and disclose Project Information as

required by Section IX (Disclosure and Use of Project Information), or is notified by Contractors or potential Contractors of any restrictions on the disclosure and use of Information, the matter will be referred to the SC for resolution.

6.6. Each Participant will legally bind its Contractors to a requirement that the Contractor will not retransfer or otherwise use export-controlled Information furnished by another Participant for any purpose other than the purposes authorized under this MOU. The Contractor will also be legally bound not to retransfer the export-controlled Information to another Contractor or subcontractor unless that Contractor or subcontractor has been legally bound to limit use of the Information to the purposes authorized under this MOU. Export-controlled Information furnished by one Participant under this MOU may only be retransferred by the other Participant to its Contractors if the legal arrangements required by this paragraph have been established.

6.7. Each Participant will legally bind its Prospective Contractors to a requirement that the Prospective Contractor will not retransfer or otherwise use export-controlled Information furnished by another Participant for any purpose other than responding to a solicitation issued in furtherance of the purposes authorized under this MOU. Prospective Contractors will not be authorized use for any other purpose if they are not awarded a Contract. The Prospective Contractors will also be legally bound not to retransfer the export-controlled Information to a prospective subcontractor unless that prospective subcontractor has been legally bound to limit use of the export-controlled Information for the purpose of responding to the solicitation. Export-controlled Information furnished by one Participant under this MOU may only be retransferred by another Participant to its Prospective Contractors if the legal arrangements required by this paragraph have been established. Upon request by the furnishing Participant, the receiving Participant will identify its Prospective Contractors and prospective subcontractors receiving such export-controlled Information.

6.8. The Contracting Officer will immediately advise the RAMPO of any cost growth, schedule change, or performance problems of any Contractor for which the Contracting Officer is responsible.

6.9. Upon agreement, and consistent with Section II (Objectives), a Participant may contract for the unique national

requirements of the other Participant, as referenced in subparagraph 5.7.2.

SECTION VII

WORK SHARING

7.1. The Participants will work toward the goal that the work to be performed under this MOU will be shared in a fair and reasonable manner to the maximum extent possible, consistent with high technical merit, reasonable cost, and the need to achieve the timely, economical, and efficient execution of the Project. This work will encompass those requirements contained in Section III (Scope of Work) of this MOU that are common to the Participants and are funded under this Project.

7.2. Sources from both nations will be permitted to bid on Project work. Each Participant will encourage its Contractors to provide competitive opportunities to sources from the other nation to participate in the work of the Project, provided that such participation does not adversely impact the Project.

7.3. No requirement will be imposed by either Participant for work sharing or other industrial or commercial compensation in connection with this MOU that is not in accordance with this MOU.

SECTION VIII

PROJECT EQUIPMENT

8.1. Each Participant may provide Project Equipment identified as being necessary for executing the MOU to the other Participant. Project Equipment will remain the property of the providing Participant. A list of all Project Equipment provided by one Participant to another Participant will be developed and maintained by the RAMPO, approved by the SC, and incorporated into this MOU as an amendment to Annex E (Loan of Project Equipment) in accordance with Section IV (Management) prior to such transfers.

8.2. The receiving Participant will maintain any such Project Equipment in good order, repair, and operable condition. Unless the providing Participant has authorized the Project Equipment to be expended or otherwise consumed in connection with the Project without reimbursement to the providing Participant, the receiving Participant will return the Project Equipment to the providing Participant in as good condition as received, normal wear and tear excepted, or return the Project Equipment and pay the cost to restore it. If the Project Equipment is damaged beyond economical repair, the receiving Participant will return the Project Equipment to the providing Participant (unless otherwise specified, in writing, by the providing Participant) and pay the replacement value as computed pursuant to the providing Participant's national laws and regulations. If the Project Equipment is lost while in the custody of the receiving Participant, the receiving Participant will issue a certificate of loss to the providing Participant and pay the replacement value as computed pursuant to the providing Participant's national laws and regulations.

8.3. The providing Participant will deliver Project Equipment to the receiving Participant at a mutually arranged location. Possession of the Project Equipment will pass from the providing Participant to the receiving Participant at the time of receipt of the Project Equipment. Any further transportation is the responsibility of the receiving Participant.

8.4. All Project Equipment that is transferred will be used by the receiving Participant only for the purposes of carrying out this MOU, unless otherwise consented to, in writing, by the providing Participant. In addition, in accordance with Section XIII (Third Party Sales and Transfers) Project Equipment will

not be re-transferred to a Third Party without the prior written consent of the providing Participant.

8.5. Project Equipment transferred to one Participant under this MOU will be returned to the providing Participant prior to the termination or expiration of this MOU.

8.6. Any Project Equipment that is jointly acquired on behalf of both Participants for use under this MOU will be disposed of during this Project or when the Project ceases, as approved by the SC.

8.7. Disposal of jointly acquired equipment may include a transfer of the interest of one Participant in such Project Equipment to the other Participant, or the sale of such equipment to a Third Party in accordance with Section XIII (Third Party Sales and Transfers) of this MOU. The Participants will share the consideration from jointly acquired Project Equipment transferred or sold to a Third Party in the same ratio as costs are shared under this MOU.

SECTION IX

DISCLOSURE AND USE OF PROJECT INFORMATION

9.1. General

- 9.1.1.1. Both Participants recognize that successful collaboration depends on full and prompt exchange of Information necessary for carrying out this Project. The Participants intend to acquire sufficient Project Information and rights to use such Information to enable the execution of this MOU, and recognize that as a result both Participants will receive all Project Foreground Information. The nature and amount of Project Information to be acquired will be consistent with the objectives stated in Section II (Objectives), Section III (Scope of Work), and Section VI (Contracting Provisions).
- 9.1.1.2. The following export control provisions will apply to the transfer of Project Information:
 - 9.1.1.2.1. Transfer of Project Information will be consistent with the furnishing Participant's applicable export control laws and regulations. Unless otherwise restricted by duly authorized officials of the furnishing Participant at the time of transfer to the other Participant, all export-controlled Information furnished by that Participant to the other Participant may be retransferred to the other Participant's Contractors, subcontractors, Prospective Contractors, and prospective subcontractors, subject to the requirements of paragraphs 6.6 and 6.7 of Section VI (Contracting Provisions). Export-controlled Information may be furnished by Contractors, subcontractors, Prospective Contractors, and prospective subcontractors of one Participant's nation to the Contractors, subcontractors, Prospective Contractors, and prospective subcontractors of the other Participant's nation pursuant to this MOU subject to the conditions established in licenses or other approvals issued by the Government of the

former Participant in accordance with its applicable export control laws and regulations.

- 9.1.2.2. If a Participant finds it necessary to exercise a restriction on the retransfer of export-controlled Information as set out in subparagraph 9.1.2.1. of Section IX (Disclosure and Use of Project Information), it will promptly inform the other Participant. If a restriction is then exercised and the affected Participant objects, that Participant's SC representative will promptly notify the other Participant's SC representative and they will immediately consult in order to discuss ways to resolve such issues or mitigate any adverse effects.

9.2. Government Project Foreground Information

- 9.2.1. Disclosure: All Project Foreground Information generated by a Participant's military or civilian employees will be disclosed without charge to both Participants.
- 9.2.2. Use: Each Participant may use all Government Project Foreground Information without charge for Defense Purposes. The Participant generating Government Project Foreground Information will also retain its rights of use thereto. Any sale or other transfer to a Third Party will be subject to the provisions of Section XIII (Third Party Sales and Transfers) of this MOU.

9.3. Government Project Background Information

- 9.3.1. Disclosure: Each Participant, upon request, will disclose to the other Participant any relevant Government Project Background Information generated by its military or civilian employees, provided that:
 - 9.3.1.1. such Project Background Information is necessary to, or useful in, the Project, with the Participant in possession of the

Information determining whether it is "necessary to" or "useful in" the Project;

- 9.3.1.2. such Project Background Information may be made available without incurring liability to holders of proprietary rights; and
- 9.3.1.3. disclosure is consistent with national disclosure policies and regulations of the furnishing Participant.

9.3.2. Use: Government Project Background Information disclosed by one Participant to the other may be used without charge by the other Participant for Project Purposes only. However, the furnishing Participant will retain all its rights with respect to such Project Background Information.

9.4. Contractor Project Foreground Information

- 9.4.1. Disclosure: Project Foreground Information generated and delivered by Contractors will be disclosed without charge to both Participants.
- 9.4.2. Use: Each Participant may use, without charge for its Defense Purposes, all Contractor Project Foreground Information generated and delivered by Contractors of the other Participant. The Participant whose Contractors generate and deliver Contractor Project Foreground Information will also retain rights of use thereto in accordance with the applicable Contract(s). Any sale or other transfer to a Third Party of Contractor Project Foreground Information will be subject to the provisions of Section XIII (Third Party Sales and Transfers) of this MOU.

9.5. Contractor Project Background Information

- 9.5.1. Disclosure: Any Project Background Information (including Information subject to proprietary rights) generated and delivered by Contractors will be made available to the other Participant provided the following conditions are met:
 - 9.5.1.1. such Project Background Information is necessary to, or useful in, the Project,

with the Participant in possession of the Information determining whether it is "necessary to" or "useful in" the Project;

9.5.1.2. such Project Background Information may be made available without incurring liability to holders of proprietary rights; and

9.5.1.3. disclosure is consistent with national disclosure policies and regulations of the furnishing Participant.

9.5.2. Use: Project Background Information furnished by one Participant's Contractors and disclosed to the other Participant may be used without charge by the other Participant for Project Purposes only, and may be subject to further restrictions by holders of proprietary rights; however, the furnishing Participant will retain all its rights with respect to such Project Background Information.

9.6. Alternative Uses of Project Information

9.6.1. Any Project Background Information provided by one Participant will be used by the other Participant only for the purposes set forth in this MOU, unless otherwise consented to, in writing, by the providing Participant.

9.6.2. The prior written consent of each Participant will be required for the use of Project Foreground Information for purposes other than those provided for in this MOU.

9.7. Proprietary Project Information

9.7.1. All Project Information subject to proprietary interests will be identified, marked, and handled as Controlled Unclassified Information.

9.7.2. The provisions of the NATO Agreement on the Communication of Technical Information for Defence Purposes, done at Brussels on October 19, 1970, and the Implementing Procedures for the NATO Agreement on the Communication of Technical

Information for Defence Purposes, approved by the North Atlantic Council on January 1, 1971, will apply to proprietary Project Information related to this MOU.

9.8. Patents

- 9.8.1. A Contracting Participant will include in its Contracts a provision governing the disposition of rights in regard to Project Inventions, and the related Patent rights, which either:
 - 9.8.1.1. provides that the Participant will hold title to all Project Inventions together with the right to make a Patent application for the same, free of encumbrance from the Contractor concerned; or
 - 9.8.1.2. provides that the Contractor will hold title (or may elect to retain title) for Project Inventions together with the right to make Patent applications for the same, while securing for the Participant a license for the Project Inventions, and any Patents therefore, on terms in compliance with the provisions of subparagraph 9.8.2. below.
- 9.8.2. In the event that a Contractor holds title (or elects to retain title) for a Project Invention, the Contracting Participant will secure for the Participants non-exclusive, irrevocable, royalty-free licenses under all Patents secured for that invention, to practice, or have practiced, the patented Project Invention for Defense Purposes throughout the world.
- 9.8.3. The provisions of subparagraphs 9.8.4. through 9.8.8. below will apply in regard to Patent benefits for all Project Inventions made by either Participant's military or civilian employees, including those within Government-owned facilities, and for all Project Inventions made by Contractors for which the Contracting Participant holds title or is entitled to acquire title.

- 9.8.4. Where a Participant has, or can secure, the right to file a Patent application with regard to a Project Invention, that Participant will consult the other Participant regarding the filing of such Patent application. The Participant having such benefits will, in other countries, file, cause to be filed, or provide the other Participant with the opportunity to file on behalf of the Participant holding such benefits, or its Contractors, as appropriate, Patent applications covering any such Project Invention. A Participant will immediately notify other Participants that a Patent application has been filed. If a Participant, having filed or caused to be filed, a Patent application decides to stop prosecution of the application, that Participant will notify the other Participant of that decision and permit the other Participant to continue the prosecution or maintain the Patent as the case may be.
- 9.8.5. Each Participant will be furnished with copies of Patent applications filed and Patents granted with regard to Project Inventions.
- 9.8.6. Each Participant will grant to the other Participant a non-exclusive, irrevocable, royalty-free license under its Patents for Project Inventions, to practice, or have practiced, the patented Project Invention for Defense Purposes throughout the world.
- 9.8.7. Patent applications to be filed under this MOU that contain Classified Information will be protected and safeguarded in accordance with the requirements contained in the NATO Agreement for the Mutual Safeguarding of Secrecy of Inventions Relating to Defense and for Which Applications for Patents Have Been Made, done in Paris on September 21, 1960, and its Implementing Procedures.
- 9.8.8. Each Participant will notify the other Participant of any Patent infringement claims made in its territory arising in the course of work performed under the Project. Insofar as possible, the other Participant will provide

Information available to it that may assist in defending the claim. Each Participant will be responsible for handling all Patent infringement claims made in its territory, and will consult with the other Participant during the handling, and prior to any settlement, of such claims. The Participants will share the costs of resolving Patent infringement claims in the same percentage as they share the full Financial Costs and Non-financial Costs of the Project, unless otherwise arranged. The Participants will, in accordance with their national laws and practices, give their authorization and consent for all use and manufacture in the course of work performed under the Project of any invention covered by a Patent issued by their respective countries.

SECTION X

CONTROLLED UNCLASSIFIED INFORMATION

10.1. Except as otherwise provided in this MOU or as authorized in writing by the originating Participant, Controlled Unclassified Information provided or generated pursuant to this MOU will be controlled as follows:

- 10.1.1. Such Information will be used only for the purposes authorized for use of Project Information as specified in Section IX (Disclosure and Use of Project Information).
- 10.1.2. Access to such Information will be limited to personnel whose access is necessary for the permitted use under subparagraph 10.1.1., and will be subject to the provisions of Section XIII (Third Party Sales and Transfers).
- 10.1.3. Each Participant will take all lawful steps, which may include national classification, available to it to keep such Information free from further disclosure (including requests under any legislative provisions), except as provided in subparagraph 10.1.2., unless the originating Participant consents to such disclosure. In the event of unauthorized disclosure, or if it becomes probable that the Information may have to be disclosed further under any legislative provision, immediate notification will be given to the originating Participant.

10.2. To assist in providing the appropriate controls, the originating Participant will ensure that CUI is appropriately marked to ensure its "in confidence" nature. The Participant's export-controlled Information will be marked in accordance with the applicable Participant's export control markings as documented in the PSI. The Participants will also decide, in advance and in writing, on the markings to be placed on any other types of CUI. The appropriate markings for all CUI will be described in the PSI.

10.3. CUI provided or generated pursuant to this MOU will be handled in a manner that ensures control as provided for in paragraph 10.1.

10.4. Prior to authorizing the release of Controlled Unclassified Information to Contractors, the Participants will ensure the Contractors are legally bound to control such Information in accordance with the provisions of this Section.

SECTION XI

VISITS TO ESTABLISHMENTS

11.1. Each Participant will permit visits to its Government establishments, agencies and laboratories, and Contractor industrial facilities by employees of the other Participant or by employees of the other Participant's Contractor(s), provided that the visit is authorized by both Participants and the employees have any necessary and appropriate security clearances and a need-to-know.

11.2. All visiting personnel will be required to comply with security regulations of the Host Participant. Any Information disclosed or made available to visitors will be treated as if supplied to the Participant sponsoring the visiting personnel, and will be subject to the provisions of this MOU.

11.3. Requests for visits by personnel of one Participant to a facility of the other Participant will be coordinated through official channels, and will conform with the established visit procedures of the host country. Requests for visits will bear the name of the Project.

11.4. Lists of personnel of each Participant required to visit, on a continuing basis, facilities of the other Participant will be submitted through official channels in accordance with recurring international visit procedures.

SECTION XII

SECURITY

12.1. All Classified Information provided or generated pursuant to this MOU will be stored, handled, transmitted, and safeguarded in accordance with the General Security Agreement between Germany and the United States of America, dated December 23, 1960, as amended, and including the Industrial Security Annex thereto, of April 16, 1970, as amended.

12.2. Classified Information will be transferred only through official Government-to-Government channels or through channels approved by the DSAs of the Participants. Such Classified Information will bear the level of classification, denote the country of origin, the conditions of release, and the fact that the Information relates to this MOU.

12.3. Each Participant will take all lawful steps available to it to ensure that Classified Information provided or generated pursuant to this MOU is protected from further disclosure, except as permitted by paragraph 12.8., unless the other Participant consents to such disclosure. Accordingly, each Participant will ensure that:

12.3.1. The recipient will not release the Classified Information to any government, national, organization, or other entity of a Third Party without the prior written consent of the originating Participant in accordance with the procedures set forth in Section XIII (Third Party Sales and Transfers).

12.3.2. The recipient will not use the Classified Information for other than the purposes provided for in this MOU.

12.3.3. The recipient will comply with any distribution and access restrictions on Information that is provided under this MOU.

12.4. The Participants will investigate all cases in which it is known or where there are grounds for suspecting that Classified Information provided or generated pursuant to this MOU has been lost or disclosed to unauthorized persons. Each Participant also will promptly and fully inform the other

Participant of the details of any such occurrences, and of the final results of the investigation and of the corrective action taken to preclude recurrences.

12.5. The PM, assisted by the DPM, will prepare a PSI and a CG for the Project. The PSI and the CG will describe the methods by which Project Information will be classified, marked, used, transmitted, and safeguarded, and will require that markings for all export-controlled Classified Information also include the applicable export control markings identified in accordance with paragraph 10.2. of Section X (Controlled Unclassified Information). The PSI and CG will be developed by the PM within three months after this MOU enters into effect. The PSI and CG will be reviewed and forwarded to the Participants' DSAs for approval and will be applicable to all government and Contractor personnel participating in the Project. The CG will be subject to regular review and revision with the aim of downgrading the classification whenever this is appropriate. The PSI and CG will be approved by the DSA prior to the transfer of any Classified Information or CUI.

12.6. The DSA of the Participant in which a classified Contract is awarded will assume responsibility for administering within its territory security measures for the protection of the Classified Information, in accordance with its laws and regulations. Prior to the release to a Contractor, prospective Contractor, or subcontractor of any Classified Information received under this MOU, the DSAs will:

- 12.6.1. Ensure that such Contractor, prospective Contractor or subcontractor and their facility(ies) have the capability to protect the Classified Information adequately.
- 12.6.2. Grant a security clearance to the facility(ies), if appropriate.
- 12.6.3. Grant a security clearance for all personnel whose duties require access to Classified Information, if appropriate.
- 12.6.4. Ensure that all persons having access to the Classified Information are informed of their responsibilities to protect the Classified Information in accordance with national security laws and regulations, and provisions of this MOU.

12.6.5. Carry out periodic security inspections of cleared facilities to ensure that the Classified Information is properly protected.

12.6.6. Ensure that access to the Classified Information is limited to those persons who have a need-to-know for purposes of the MOU.

12.7. Contractors, prospective Contractors, or subcontractors that are determined by DSA to be under financial, administrative, policy, or management control of nationals or entities of a Third Party, may participate in a Contract or subcontract requiring access to Classified Information provided or generated pursuant to this MOU only when enforceable measures are in effect to ensure that nationals or other entities of a Third Party will not have access to Classified Information. If enforceable measures are not in effect to preclude access by nationals or other entities of a Third Party, the other Participant will be consulted for approval prior to permitting such access.

12.8. For any facility wherein Classified Information is to be used, the responsible Participant or Contractor will approve the appointment of a person or persons to exercise effectively the responsibilities for safeguarding at such facility the Information pertaining to this MOU. These officials will be responsible for limiting access to Classified Information involved in this MOU to those persons who have been properly approved for access and have a need-to-know.

12.9. Each Participant will ensure that access to the Classified Information is limited to those persons who possess requisite security clearances and have a specific need for access to the Classified Information in order to participate in the Project.

12.10. Information provided or generated pursuant to this MOU may be classified as high as SECRET. The existence of this MOU is Unclassified and the contents are Unclassified.

SECTION XIII

THIRD PARTY SALES AND TRANSFERS

13.1. The Participants will not sell, transfer title to, disclose, or transfer possession of Project Foreground Information, jointly acquired Project Equipment, or any item produced either wholly or in part from Project Foreground Information to any Third Party without the prior written consent of the other Participant's Government. Furthermore, neither Participant will permit any such sale, disclosure, or transfer, including by the owner of the item, without the prior written consent of the other Participant's Government. Such consent will not be given unless the Government of the intended recipient agrees, in writing, with the Participants that it will:

- 13.1.1. not retransfer, or permit the further retransfer of, any equipment or Information provided; and
- 13.1.2. use, or permit the use of, the equipment or Information provided only for the purposes specified by the Participants.

13.2. A Participant will not sell, transfer title to, disclose, or transfer possession of Project Equipment or Project Background Information provided by the other Participant to any Third Party without the prior written consent of the government of the Participant that provided such equipment or Information. The providing Participant will be solely responsible for authorizing such transfers and, as applicable, specifying the method and conditions for implementing such transfers.

13.3. Sales or transfers of equipment developed or Project Foreground Information generated under this MOU may attract a levy to be shared between the Participants. Prior to any such sale or other transfer, the amounts of any levy and the procedures for assessing and distributing such levy will be mutually determined by the Participants consistent with the laws and regulations of each Participant. Either Participant may reduce the assessment of its share of the levy.

13.4. Consent for Third Party sales and transfers of Project Foreground Information, Project Equipment jointly acquired under this MOU, or any item produced either wholly or in part from Project Foreground Information will be subject to foreign and security policies, national laws, and regulations of the

Participants. Approval by one MOU Participant's government of another MOU Participant's sale or transfer to a Third Party will take into consideration its willingness to sell or transfer such equipment or Information to the same Third Party.

SECTION XIV

LIABILITY AND CLAIMS

14.1. For liability arising out of, or in connection with, activities undertaken in the performance of official duty in the execution of this MOU, the following provisions will apply.

14.2. Claims against a Participant or its military or civilian personnel will be dealt with in accordance with the terms of applicable multilateral or bilateral treaties and agreements of the Participants. For those claims for which multilateral or bilateral treaties or agreements do not apply, the following provisions will apply:

14.2.1 With the exception of claims for loss of or damage to Project Equipment under Section VIII (Project Equipment), each Participant waives all claims against the other Participant for injury to, or death of, its military or civilian personnel and for damage to, or loss of, its property (including jointly acquired property) caused by such personnel of that other Participant. However, if the Participants mutually determine that such injury, death, damage, or loss results from reckless acts or reckless omissions, wilful misconduct or gross negligence of a Participant's military or civilian personnel, the costs of any liability will be borne by that Participant alone.

14.3. Claims from any other persons for injury, death, damage, or loss of any kind caused by one of the Participant's military or civilian personnel will be processed by the most appropriate Participant, as mutually determined by the Participants. Any costs determined to be owed the claimant will be borne by the Participants in the same ratios as their financial and non-financial contributions specified in this MOU. However, if the Participants mutually determine that such injury, death, damage, or loss results from reckless acts or reckless omissions, willful misconduct or gross negligence of a Participant's military or civilian personnel, the costs of any liability; will be borne by that Participant alone.

14.4. In the case of damage caused to or by jointly acquired property of the Participants, where the cost of making good such damage is not recoverable from other persons, such cost will be

borne by the Participants in the same percentage as they share the full Financial and Non-Financial Costs of the Project.

14.5. Claims arising under any Contract awarded pursuant to Section VI (Contracting Provisions) will be resolved in accordance with the provisions of the Contract. The Participants will not indemnify Contractors against liability claims by any other persons. However, in exceptional circumstances (e.g., involving certain nuclear activity or other unduly hazardous activity where the cost of insurance is excessively high), the Participants may consider whether to indemnify Contractors against liability claims by any other persons.

SECTION XV

PARTICIPATION OF ADDITIONAL PARTICIPANTS

15.1. It is recognized that defense organizations of other nations may wish to join the Project.

15.2. Mutual agreement of the Participants will be required to conduct discussions with potential additional Participants. The Participants will discuss the MOUs under which another Participant might join, including the furnishing of releasable Project Information for evaluation prior to joining. If the disclosure of Project Information is necessary to conduct discussions, such disclosure will be in accordance with Section IX (Disclosure and Use of Project Information), Section X (Controlled Unclassified Information), and Section XIII (Third Party Sales and Transfers).

15.3. The Participants will jointly formulate the provisions under which additional Participants might join. The addition of new Participants to the Project will require amendment of this MOU by the Participants.

SECTION XVI

CUSTOMS DUTIES, TAXES, AND SIMILAR CHARGES

16.1. Customs duties, import and export taxes, and similar charges will be administered in accordance with each Participant's respective laws and regulations. Insofar as existing national laws and regulations permit, the Participants will endeavor to ensure that such readily identifiable duties, taxes and similar charges, as well as quantitative or other restrictions on imports and exports, are not imposed in connection with work carried out under this Project.

16.2. Each Participant will use its best efforts to ensure that customs duties, import and export taxes, and similar charges are administered in a manner favorable to the efficient and economical conduct of the work. If any such duties, taxes, or similar charges are levied, the Participant in whose country they are levied will bear such costs.

16.3. If, in order to apply European Union (EU) regulations, it is necessary to levy duties, then these will be met by the EU member end recipient. To this end, parts of the components of the equipment coming from outside the EU will proceed to their final destination accompanied by the relevant customs document enabling settlement of duties to take place. The duties will be levied as a cost over and above that Participant's shared costs of the Project.

SECTION XVII

SETTLEMENT OF DISPUTES

17.1. Disputes between the Participants arising under or relating to this MOU will be resolved only by consultation between the Participants and will not be referred to a national court, international tribunal, or to any other person or entity for settlement.

SECTION XVIII

LANGUAGE

18.1. The working language for the Project will be the English language.

18.2. All data and Information generated under this MOU and its implementing Contracts and provided by one Participant to the other Participant will be furnished in the English language.

SECTION XIX

GENERAL PROVISIONS

19.1. All activities of the Participants under this MOU will be carried out in accordance with their respective national laws and regulations, including their respective export control laws and regulations. The responsibilities of the Participants will be subject to the availability of funds for such purposes.

19.2. The Participants have mutually determined that this MOU creates legally binding obligations under international law.

19.3. In the event of a conflict between a Section of this MOU and any Annex to this MOU, the Section will control.

SECTION XX

AMENDMENT, TERMINATION, ENTRY INTO EFFECT, AND DURATION

20.1. Except as otherwise provided, this MOU may be amended by the mutual written agreement of the Participants. Annex A (RAM Block 2 Development Quantities), Annex B (Financial Matters), Annex C (RAMPO Organization), and Annex E (Loan of Project Equipment) of this MOU may be amended by the written approval of the SC only within the Cost Ceiling of the MOU.

20.2. This MOU may be terminated at any time upon the written agreement of the Participants. In the event both Participants agree to terminate this MOU, the Participants will consult prior to the date of termination to ensure termination on the most economical and equitable terms.

20.3. Either Participant may terminate this MOU upon 120 days written notification of its intent to terminate to the other Participant. Such notice will be the subject of immediate consultation by the SC to decide upon the appropriate course of action to conclude the activities under this MOU. In the event of such termination, the following rules apply:

20.3.1. The terminating Participant will continue participation, financial or otherwise, up to the effective date of termination.

20.3.2. Except as to Contracts awarded on behalf of both Participants, each Participant will be responsible for its own Project-related costs

associated with termination of the Project. For Contracts awarded on behalf of both Participants, the terminating Participant will pay all Contract modification or termination costs that would not otherwise have been incurred but for the decision to terminate; in no event, however, will a terminating Participant's total contribution, including Contract termination costs, exceed that Participant's share of the Cost Ceiling as established in Section V (Financial Provisions).

20.3.3. All Project Information and rights therein received under the provisions of this MOU prior to the termination will be retained by the Participants, subject to the provisions of this MOU.

20.4. The respective rights and responsibilities of the Participants regarding Section VIII (Project Equipment), Section IX (Disclosure and Use of Project Information), Section X (Controlled Unclassified Information), Section XII (Security), Section XIII (Third Party Sales and Transfers), Section XIV (Liability and Claims), and this Section XX (Amendment, Termination, Entry into Effect, and Duration) will continue to apply notwithstanding termination or expiration of this MOU.

20.5. This MOU, which consists of twenty (20) Sections and five (5) Annexes, will come into effect upon signature by both Participants and will remain in effect for ten (10) years. It may be extended by written agreement of the Participants.

IN WITNESS WHEREOF, the undersigned, being duly authorized by their governments, have signed this MOU.

DONE, in duplicate, in the English language.

FOR THE DEPARTMENT OF DEFENSE
OF THE UNITED STATES OF
AMERICA

Delores M. Etter
Signature

Delores M. Etter
Name Assistant Secretary of the
Navy (Research, Development and
Acquisition)
Title

5/11/07
Date

Pentagon Washington DC
Location

FOR THE FEDERAL MINISTRY OF
DEFENCE OF THE FEDERAL
REPUBLIC OF GERMANY

[Signature]
Signature

Vizepräsident beim
Name Bundesamt für Wehrtechnik
und Beschaffung
Dipl.-Ing. Harald Stein
Title

16.04.2007
Date

Koblenz
Location

ANNEX A

RAM BLOCK 2 DEVELOPMENT QUANTITIES

HARDWARE	QUANTITY
Engineering Missiles	20
DT/OT Missiles	35
Launcher ORDALTs	3

ANNEX B

FINANCIAL MATTERS

(\$M)

	<u>FY06</u>	<u>FY07</u>	<u>FY08</u>	<u>FY09</u>	<u>FY10</u>	<u>FY11</u>	<u>FY12</u>	<u>TOTAL</u>
FINANCIAL CONTRIBUTIONS								
US		\$41,0	\$40,0	\$26,2	\$26,6	\$0,0	\$0,0	\$133,8
GE ¹		\$24,8	\$29,7	\$32,6	\$35,6	\$28,2	\$9,4	\$160,3
TOTAL FINANCIAL	\$0,0	\$65,8	\$69,7	\$58,8	\$62,2	\$28,2	\$9,4	\$294,1
NON-FINANCIAL CONTRIBUTIONS								
US ²	\$26,5	\$0,0	\$0,0	\$0,0	\$2,4	\$0,0	\$0,0	\$28,9
GE ³	\$0,0	\$0,0	\$0,0	\$0,0	\$0,0	\$0,0	\$2,4	\$2,4
TOTAL NON-FINANCIAL	\$26,5	\$0,0	\$0,0	\$0,0	\$2,4	\$0,0	\$2,4	\$31,3
TOTAL CONTRIBUTIONS								
US TOTAL	\$26,5	\$41,0	\$40,0	\$26,2	\$29,0	\$0,0	\$0,0	\$162,70
GE TOTAL	\$0,0	\$24,8	\$29,7	\$32,6	\$35,6	\$28,2	\$11,8	\$162,70

¹ The reference exchange rate for GE Financial Contributions is \$1.18 dollars/Euro.

² The maximum U.S. Non-Financial contribution is \$28.9 and consists of 40 encrypted telemeters and contractor/ Field activity Block 2 efforts performed between Oct 2005 and Dec 2006 and Range/Target costs for 2010.

³ The maximum GE Non-Financial contribution is \$2.4M for 4 MM-38s and associated ground launcher repair, material transport, and manpower. (Contribution was converted at 1.18 dollars/Euro)

ANNEX C

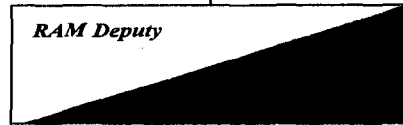
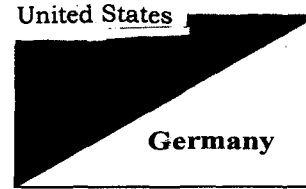
RAMPO ORGANIZATION



International Programs
Project Manager



Program Manager



RAM Deputy

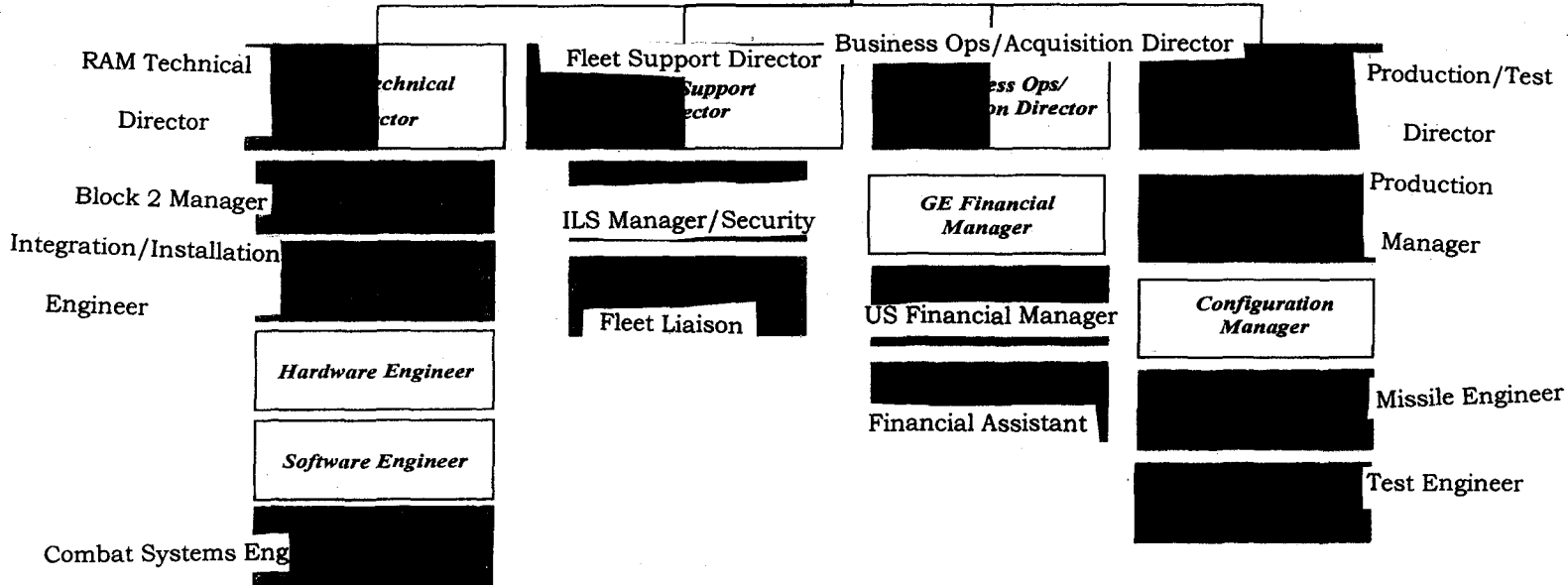
U.S. Nat'l Deputy



Office Manager



GE Military Rep



NOTE: Text duplicated in some areas for greater clarity.

ANNEX D

COOPERATIVE PROJECT PERSONNEL

1.0. Purpose and Scope

1.1. This Annex establishes the conditions that will govern the conduct of Cooperative Project Personnel (CPP). The Parent Participant will assign military members or civilian employees to the Rolling Airframe Missile Program Office (RAMPO) in accordance with Section IV (Management) and this Annex. CPP must be able to perform all the responsibilities assigned to them under this MOU. Commencement of assignments will be subject to any requirements that may be imposed by the Host Participant or its government regarding acceptance of CPP, such as, but not limited to, visas and visit request documentation. The SC will determine the length of tour for the positions at the time of initial assignment.

1.2. CPP will be assigned to the RAMPO for Project work and will report to their designated RAMPO supervisor regarding that work. The PM will be responsible for the creation of a document describing the duties of each CPP position, which will be subject to approval by the SC. CPP will not act as liaison officers on behalf of the Parent Participant. CPP may act, from time to time, on behalf of their respective SC member if the latter so authorizes in writing.

1.3. CPP will not be assigned to command or other positions that would require them to exercise responsibilities that are reserved by law or regulation to an officer or employee of the Host Participant's government.

2.0. Security

2.1. The SC will establish the maximum level of security clearance required, if any, to permit CPP to have access to Classified Information and facilities in which Classified Information is used in accordance with the Project Security Instruction (PSI) and Classification Guide (CG). Access to Classified Information and facilities in which Classified Information is used will be consistent with, and limited by, Section II (Objectives) and Section III (Scope of Work) of this MOU and will be kept to the minimum required to accomplish the work assignments.

2.2. The Parent Participant will file visit requests for the CPP through prescribed channels in compliance with the Host Participant's procedures. As part of the visit request procedures, the Parent Participant will cause security assurances to be filed, through the German Embassy specifying the security clearances for the CPP being assigned.

2.3. The Host Participant and Parent Participant will use their best efforts to ensure that CPP assigned to the RAMPO are aware of, and comply with, applicable laws and regulations as well as the requirements of Section X (Controlled Unclassified Information), Section XI (Visits to Establishments), Section XII (Security), and paragraph 20.4. of Section XX (Amendment, Termination, Entry into Effect, and Duration) of this MOU and the provisions of the PSI and CG. Prior to commencing assigned duties, CPP will, if required by the Host Participant's government laws, regulations, policies, or procedures, sign a certification concerning the conditions and responsibilities of CPP. If such a certification is required, the Host Participant will provide detailed instructions to the CPP.

2.4. CPP will at all times be required to comply with the security and export control laws, regulations, and procedures of the Host Participant's government. Any violation of security procedures by CPP during their assignment will be reported to the Parent Participant for appropriate action. CPP committing significant violations of security and export control laws, regulations, or procedures during their assignments will be withdrawn from the Project with a view toward appropriate administrative or disciplinary action by their Parent Participant.

2.5. All Classified Information made available to CPP will be considered as Classified Information furnished to the Parent Participant, and will be subject to all provisions and safeguards provided for in Section XII (Security), the PSI, and CG.

2.6. CPP will not have personal custody of Classified Information or Controlled Unclassified Information unless approved by the Host Participant and as authorized by the Parent Participant. They will be granted access to such Information in accordance with Section X (Controlled Unclassified Information), Section XII (Security), and the PSI during normal duty hours at the RAMPO and when access is necessary to perform Project work.

2.7. CPP assigned to the RAMPO will not serve as a conduit between the Host Participant and Parent Participant for requests and/or transmission of Classified Information or Controlled Unclassified Information unless specifically authorized by the PSI.

3.0. Technical and Administrative Matters

3.1. Consistent with Host Participant's government laws and regulations, CPP will be subject to the same restrictions, conditions, and privileges as Host Participant personnel of comparable rank and in comparable assignments. Further, to the extent authorized by Host Participant's government laws and regulations, CPP and the CPP's authorized dependents will be accorded:

3.1.1. Exemption from any Host Participant's government tax upon income received from the Parent Participant.

3.1.2. Exemption from any Host Participant's government customs and import duties or similar charges levied on items entering the country for their official or personal use, including their baggage, household effects, and private motor vehicles.

3.2. On arrival CPP and the CPP's dependents will be provided briefings arranged by the RAMPO regarding compliance with applicable laws, orders, regulations, and customs. CPP will also be provided briefings arranged by RAMPO regarding entitlements, privileges, and responsibilities, such as:

3.2.1. Any medical and dental care that may be provided to CPP and the CPP's dependents at Host Participant medical facilities, subject to the requirements of applicable laws and regulations, including reimbursement requirements.

3.2.2. Purchasing and patronage privileges at military commissaries, exchanges, theaters, and clubs for CPP and the CPP's dependents, subject to the requirements of applicable laws and regulations.

3.2.3. The Host Participant will provide, if available, housing and messing facilities for CPP and the CPP's dependents on the same basis and priority

as for its own personnel. CPP will pay messing and housing charges to the same extent as Host Participant personnel. At locations where facilities are not provided by the Host Participant for its own personnel, the Parent Participant will make suitable arrangements for its CPP.

- 3.2.4. Responsibility of CPP and their accompanying dependents to obtain motor vehicle liability insurance coverage in accordance with the laws and regulations applicable in the area where they are residing. In case of claims involving the use of private motor vehicles by CPP, the recourse will be against such insurance.

3.3. The PM, through the RAMPO, will, in consultation with the CPP, establish standard operating procedures for CPP in the following areas:

- 3.3.1. Working hours, including holiday schedules.
- 3.3.2. Leave authorization, consistent to the extent possible with the military and civilian personnel regulations and practices of the Host Participant and Parent Participant.
- 3.3.3. Dress regulations, consistent to the extent possible with the military and civilian personnel regulations and practices of the Host Participant and Parent Participant.
- 3.3.4. Performance evaluations, recognizing that such evaluations will be rendered in accordance with the Parent Participant's military or civilian personnel regulations and practices.

3.4. CPP committing an offense under the laws of the government of the Host Participant or Parent Participant may be withdrawn from this Project with a view toward further administrative or disciplinary action by the Parent Participant. Disciplinary action, however, will not be taken by the Host Participant against CPP, nor will the CPP exercise disciplinary powers over the Host Participant's personnel. In accordance with Host Participant's government laws and regulations, the Host Participant will assist the Parent Participant in carrying out investigations of offenses involving CPP.

3.5. During their RAMPO assignment, CPP will not be placed in the following duty status or environments unless mutually decided by the SC:

- 3.5.1. Areas of political sensitivity where their presence may jeopardize the interests of either the Host Participant or Parent Participant, or where, in the normal course of their duty, they may become involved in activities which may embarrass either Participant.
- 3.5.2. Deployments in non-direct hostility situations, such as UN peacekeeping or multi-national operations, or third countries.
- 3.5.3. Duty assignments in which direct hostilities are likely. Should a RAMPO to which CPP are assigned become involved in hostilities unexpectedly, CPP assigned to that RAMPO will not be involved in the hostilities. Any such CPP approved by the SC for involvement in hostilities will be given specific guidance as to the conditions under which the assignment will be carried out by the appropriate authorities of the Host Participant and Parent Participant.

3.6. The provisions of the NATO Status of Forces Agreement regarding the rights of a sending state's military personnel and civilian employees and their respective dependents will apply to CPP.

ANNEX E

LOAN OF PROJECT EQUIPMENT

As of the effective date of this MOU, no loans of Project Equipment are required for this MOU. In the event one Participant intends to provide Project Equipment to the other Participant, the SC will, in accordance with paragraph 8.1. of Section VIII (Project Equipment) of the MOU, incorporate the list of Project Equipment into this MOU as an amendment to this Annex E prior to such transfers. The Annex will follow generally the following format:

1.1. The loan of the following Project Equipment is necessary for executing this MOU.

Providing Participant	Receiving Participant	Qty	Description	Part/Stock #	Consumable/Non-Consumable	Approx Value	Loan Period

1.2. The providing Participant will loan the Project Equipment for the loan period identified in paragraph 1.1. above.

AMENDMENT ONE
TO THE
MEMORANDUM OF UNDERSTANDING (MOU)
BETWEEN
THE DEPARTMENT OF DEFENSE
OF THE UNITED STATES OF AMERICA
AND THE
FEDERAL MINISTRY OF DEFENCE OF THE FEDERAL REPUBLIC
OF GERMANY
FOR THE
COOPERATIVE SYSTEM DEVELOPMENT AND DEMONSTRATION OF THE
ROLLING AIRFRAME MISSILE BLOCK 2
UPGRADE TO THE MK-31 GUIDED MISSILE WEAPON SYSTEM
(Short Title: RAM BLOCK 2 UPGRADE MOU)

INTRODUCTION

The Department of Defense of the United States of America and the Federal Ministry of Defence of the Federal Republic of Germany, hereinafter referred to as the "Participants";

Considering the Memorandum of Understanding (MOU) Between the Department of Defense of the United States of America and the Federal Ministry of Defence of the Federal Republic of Germany for the Cooperative System Development and Demonstration of the Rolling Airframe Missile Block 2 Upgrade to the MK-31 Guided Missile Weapon System (RAM Block 2 Upgrade MOU), which became effective on May 11, 2007; and

Recognizing the need to amend the MOU in order to continue successful cooperative development of RAM;

Have agreed as follows:

SECTION I PURPOSE

The purpose of this Amendment is to provide additional funding for fiscal years (FY) 2010 through 2012 and increase the Cost Ceiling of the MOU.

SECTION II AMENDMENT

1. In paragraph 5.1. delete "\$325.4" and insert "\$353.4".
2. In paragraph 5.9. delete "The" at the beginning of the first sentence and insert "Subject to the provisions of this MOU, the".
3. Delete Annex B (Financial Matters) to the MOU and insert the following:

ANNEX B
FINANCIAL MATTERS

(\$M)

	Through FY10	FY11	FY12	TOTALS
FINANCIAL CONTRIBUTIONS				
U.S. DoD	\$133.8	\$1.3	\$1.3	\$136.4
GE MOD ¹	\$122.7	\$35.2	\$16.4	\$174.3
TOTAL FINANCIAL	\$256.5	\$36.5	\$17.7	\$310.7
NON-FINANCIAL CONTRIBUTIONS				
U.S. DoD ²	\$28.9	\$11.4	\$0	\$40.3
GE MOD ³	\$0	\$0	\$2.4	\$2.4
TOTAL NON-FINANCIAL	\$28.9	\$11.4	\$2.4	\$42.7
TOTAL CONTRIBUTIONS				
U.S. TOTALS	\$162.7	\$12.7	\$1.3	\$176.7
GE TOTALS	\$122.7	\$35.2	\$18.8	\$176.7
GRAND TOTAL	\$285.4	\$47.9	\$20.1	\$353.4

1. The reference exchange rate for GE MOD Financial Contributions is \$1.18 (U.S.)/Euro.
2. The maximum U.S. Non-Financial contribution is \$40.3M and consists of 40 encrypted telemeters, contractor/Field activity Block 2 efforts performed between October 2005 and December 2006, Range/Target costs for 2010, 10 Block 2 missiles in FY11, and contractor/field activity Block 2 efforts performed between October 2010 and September 2011.
3. The maximum GE MOD Non-Financial contribution is \$2.4M for 4 MM-38s and associated ground launcher repair, material transport, and manpower. (Contribution was converted at \$1.18 (U.S.)/Euro).

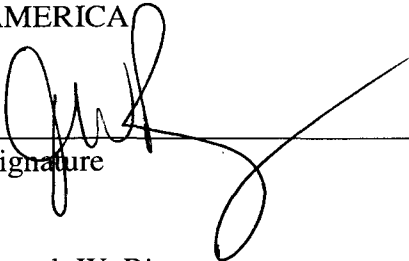
**SECTION III
ENTRY INTO EFFECT**

This Amendment One to the RAM Block 2 Upgrade MOU will enter into effect upon signature by both Participants. This Amendment will remain in effect for the same period as the MOU that it amends. Unless specifically amended herein, all other provisions of the MOU remain unchanged.

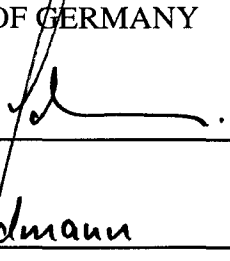
The undersigned, being duly authorized by their Governments, have signed this Amendment.

FOR THE DEPARTMENT OF DEFENSE
OF THE UNITED STATES OF
AMERICA

FOR THE FEDERAL MINISTRY OF
DEFENCE OF THE FEDERAL
REPUBLIC OF GERMANY



Signature



Signature

Joseph W. Rixey

Name

Grundmann

Name

Deputy Assistant Secretary of the Navy
(International Programs)

Title

Vizepräsident i. V.

Title

16 JUN 2011

Date

11 Juli 2011

Date

Washington, D.C

Location

Wolpert

Location

AMENDMENT TWO
TO THE
MEMORANDUM OF UNDERSTANDING (MOU)
BETWEEN
THE DEPARTMENT OF DEFENSE
OF THE UNITED STATES OF AMERICA
AND THE
FEDERAL MINISTRY OF DEFENSE OF THE FEDERAL REPUBLIC
OF GERMANY
FOR THE
COOPERATIVE SYSTEM DEVELOPMENT AND DEMONSTRATION OF THE
ROLLING AIRFRAME MISSILE BLOCK 2
UPGRADE TO THE MK-31 GUIDED MISSILE WEAPON SYSTEM
(Short Title: RAM BLOCK 2 UPGRADE MOU)

INTRODUCTION

The Department of Defense of the United States of America (U.S. DoD) and the Federal Ministry of Defense of the Federal Republic of Germany (GE MOD), hereinafter referred to as the “Participants”;

Considering the Memorandum of Understanding (MOU) Between the Department of Defense of the United States of America and the Federal Ministry of Defense of the Federal Republic of Germany for the Cooperative System Development and Demonstration of the Rolling Airframe Missile Block 2 Upgrade to the MK-31 Guided Missile Weapon System (RAM Block 2 Upgrade MOU), which came into effect on May 11, 2007, and was amended on July 11, 2011; and

Recognizing the need to amend the MOU a second time in order to continue successful cooperative development of the RAM Block 2 Upgrade;

Have agreed as follows:

SECTION I PURPOSE

The purpose of this Amendment Two is to provide additional funding for fiscal years (FY) 2015 through 2019, increase the Cost Ceiling, and extend the duration of the MOU through September 30, 2019.

SECTION II AMENDMENT

The MOU is amended as follows:

1. Delete paragraph 5.1. of Section V (Financial Provisions) of the MOU and replace it with the following:

“5.1. The performance of the responsibilities under all Sections of this MOU will not cost more than a Cost Ceiling of \$406.0 million (M) Then-Year U.S. Dollars. The U.S. dollar will be the reference currency, and the Project fiscal year will be the U.S. fiscal year. The Cost Ceiling may only be changed by written amendment of this MOU in accordance with Section XX (Amendment, Termination, Entry into Effect, and Duration).”
2. Delete paragraph 20.5. of Section XX (Amendment, Termination, Entry into Effect, and Duration) of the MOU and replace it with the following:

“20.5. This MOU, which consists of twenty (20) Sections and five (5) Annexes, will come into effect upon signature by both Participants and will remain in effect through September 30, 2019. It may be extended by written agreement of the Participants.”

3. Delete Annex B (Financial Matters) to the MOU and replace it with the following:

ANNEX B

FINANCIAL MATTERS

(\$M U.S. Dollars)

	FY06 - FY14	FY15	FY16	FY17	FY18	FY19	TOTALS
FINANCIAL CONTRIBUTIONS							
U.S. DoD	\$136.4	\$7.5	\$8.2	\$7.5	\$2.8	\$0.3	\$162.7
GE MOD ¹	\$174.3	\$26.3	\$0.0	\$0.0	\$0.0	\$0.0	\$200.6
TOTAL FINANCIAL	\$310.7	\$33.8	\$8.2	\$7.5	\$2.8	\$0.3	\$363.3
NON-FINANCIAL CONTRIBUTIONS							
U.S. DoD	\$40.3	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$40.3
GE MOD	\$2.4	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$2.4
TOTAL NON-FINANCIAL	\$42.7	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$42.7
TOTAL CONTRIBUTIONS							
U.S. DoD TOTAL	\$176.7	\$7.5	\$8.2	\$7.5	\$2.8	\$0.3	\$203.0
GE MOD TOTAL	\$176.7	\$26.3	\$0.0	\$0.0	\$0.0	\$0.0	\$203.0
GRAND TOTAL	\$353.4	\$33.8	\$8.2	\$7.5	\$2.8	\$0.3	\$406.0

1. The reference exchange rate for GE MOD Financial Contributions is \$1.18 U.S./Euro.

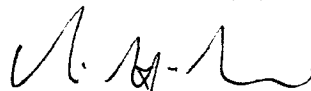
**SECTION III
ENTRY INTO FORCE**

This Amendment Two to the RAM Block 2 Upgrade MOU will come into effect upon signature by both Participants. This Amendment will remain in effect for the same period as the RAM Block 2 Upgrade MOU that it amends. Unless specifically amended herein, all other provisions of the RAM Block 2 Upgrade MOU remain unchanged.

In witness whereof, the undersigned, being duly authorized by their Governments, have signed the Amendment.

FOR THE DEPARTMENT OF DEFENSE
OF THE UNITED STATES OF
AMERICA

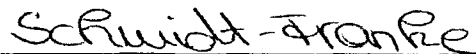
FOR THE FEDERAL MINISTRY OF
DEFENSE OF THE FEDERAL
REPUBLIC OF GERMANY



Signature

Signature

JAMES J. SHANNON
Rear Admiral, U.S. Navy



Name

Name

Deputy Assistant Secretary of the Navy
(International Programs)

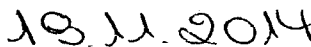


Title

Title

Date

Date



Location

Location



**SECTION III
ENTRY INTO FORCE**

This Amendment Two to the RAM Block 2 Upgrade MOU will come into effect upon signature by both Participants. This Amendment will remain in effect for the same period as the RAM Block 2 Upgrade MOU that it amends. Unless specifically amended herein, all other provisions of the RAM Block 2 Upgrade MOU remain unchanged.

In witness whereof, the undersigned, being duly authorized by their Governments, have signed the Amendment.

FOR THE DEPARTMENT OF DEFENSE
OF THE UNITED STATES OF
AMERICA

FOR THE FEDERAL MINISTRY OF
DEFENSE OF THE FEDERAL
REPUBLIC OF GERMANY



Signature

Signature

JAMES J. SHANNON
Rear Admiral, U.S. Navy

Name

Name

Deputy Assistant Secretary of the Navy
(International Programs)

Title

Title

NOV 26 2014

Date

Date

Washington, D.C.

Location

Location

AMENDMENT THREE
TO THE
MEMORANDUM OF UNDERSTANDING (MOU)
BETWEEN
THE DEPARTMENT OF DEFENSE
OF THE UNITED STATES OF AMERICA
AND THE
FEDERAL MINISTRY OF DEFENCE OF THE FEDERAL REPUBLIC
OF GERMANY
FOR THE
COOPERATIVE SYSTEM DEVELOPMENT AND DEMONSTRATION OF THE
ROLLING AIRFRAME MISSILE BLOCK 2
UPGRADE TO THE MK-31 GUIDED MISSILE WEAPON SYSTEM
(Short Title: AMENDMENT THREE TO THE RAM BLOCK 2 UPGRADE MOU)

INTRODUCTION

The Department of Defense of the United States of America (U.S. DoD) and the Federal Ministry of Defence of the Federal Republic of Germany (GE MOD), hereinafter referred to as the "Participants";

Considering the Memorandum of Understanding (MOU) Between the Department of Defense of the United States of America and the Federal Ministry of Defence of the Federal Republic of Germany for the Cooperative System Development and Demonstration of the Rolling Airframe Missile Block 2 Upgrade to the MK-31 Guided Missile Weapon System (RAM Block 2 Upgrade MOU), which came into effect on May 11, 2007, and was amended on July 11, 2011, and on November 26, 2014; and

Recognizing that, because of evolving threat tactics and inevitable obsolescence, there is a need to amend the RAM Block 2 Upgrade MOU a third time in order to continue successful cooperative development of the RAM Block 2 Upgrade;

Have agreed as follows:

SECTION I PURPOSE

The purpose of this Amendment Three to the RAM Block 2 Upgrade MOU is to provide additional funding for Fiscal Years (FYs) 2017 through 2023, increase the Cost Ceiling, and extend the duration of the RAM Block 2 Upgrade MOU, as amended, through September 30, 2023.

SECTION II AMENDMENT

The RAM Block 2 Upgrade MOU, as amended, is further amended as follows:

1. Delete paragraph 5.1. of Section V (Financial Provisions) of the RAM Block 2 Upgrade MOU, as amended, and insert in its place the following:
 - “5.1. The performance of the responsibilities under all Sections of this MOU will not cost more than a Cost Ceiling of 645 Million (M) Then-Year U.S. Dollars. The U.S. Dollar will be the reference currency, and the Project fiscal year will be the U.S. fiscal year. The Cost Ceiling may only be changed by written amendment of this MOU in accordance with Section XX (Amendment, Termination, Entry Into Effect, and Duration).”

2. Delete paragraph 20.5. of Section XX (Amendment, Termination, Entry Into Effect, and Duration) of the RAM Block 2 Upgrade MOU, as amended, and insert in its place the following:

“20.5. This MOU, which consists of twenty (20) Sections and five (5) Annexes, will come into effect upon signature by both Participants and will remain in effect through September 30, 2023. It may be extended by written agreement of the Participants.”

3. Delete Annex B (Financial Matters) to the RAM Block 2 Upgrade MOU, as amended, and insert in its place the following:

“ANNEX B

FINANCIAL MATTERS

(\$M)

	FY06	FY16	FY17	FY18	FY19	FY20	FY21	FY22	FY23	TOTALS
	FY15									
FINANCIAL CONTRIBUTIONS										
U.S. DoD	143.9	8.2	7.5	30.5	16.5	15.7	4.9	2.7	0.4	230.3
GE MOD ¹	200.6	0.0	0.0	26.2	26.2	25.5	25.5	24.1	1.5	329.6
TOTAL	344.5	8.2	7.5	56.7	42.7	41.2	30.4	26.8	1.9	559.9
FINANCIAL NON-FINANCIAL CONTRIBUTIONS										
U.S. DoD ²	40.3	0.0	16.4	1.0	2.0	2.0	14.0	2.0	5.0	82.7
GE MOD	2.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.4
TOTAL NON-FINANCIAL	42.7	0.0	16.4	1.0	2.0	2.0	14.0	2.0	5.0	85.1
TOTAL CONTRIBUTIONS										
U.S. DoD TOTAL	184.2	8.2	23.9	31.5	18.5	17.7	18.9	4.7	5.4	313.0
GE MOD TOTAL	203.0	0.0	0.0	26.2	26.2	25.5	25.5	24.1	1.5	332.0
GRAND TOTAL	387.2	8.2	23.9	57.7	44.7	43.2	44.4	28.8	6.9	645.0

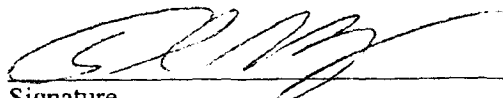
1. The reference exchange rate for GE MOD financial contributions is U.S.\$1.18/Euro.
2. The maximum U.S. DoD non-financial contribution is \$82.7 Million, which includes \$42.4 million from FYs 2017 through 2023. The new contribution includes field activity/Contractor efforts in FY 2017, government-furnished material from FYs 2018 through 2021, 15 missiles (U.S. production rounds from inventory) in FY 2021, and range/target costs in FYs 2022 and 2023.”

**SECTION III
ENTRY INTO EFFECT**

This Amendment Three to the RAM Block 2 Upgrade MOU will come into effect upon signature by both Participants. This Amendment Three to the RAM Block 2 Upgrade MOU will remain in effect for the same period as the RAM Block 2 Upgrade MOU, as amended, that it amends. Unless specifically amended herein, all other provisions of the RAM Block 2 Upgrade MOU, as amended, remain unchanged.

In witness whereof, the undersigned, being duly authorized by their Governments, have signed this Amendment Three to the RAM Block 2 Upgrade MOU.

FOR THE DEPARTMENT OF DEFENSE
OF THE UNITED STATES OF
AMERICA



Signature

F. D. MORLEY
Rear Admiral, U.S. Navy

Name

Deputy Assistant Secretary of the Navy
(International Programs)

Title

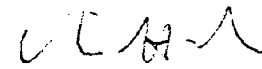
10 FEB 2017

Date

Washington, D.C.

Location

FOR THE FEDERAL MINISTRY OF
DEFENCE OF THE FEDERAL
REPUBLIC OF GERMANY



Signature

Schmidt-Franke

Name

Deputy Director-General

Title

08.05.2017

Date

Robbe

Location