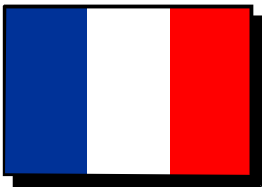
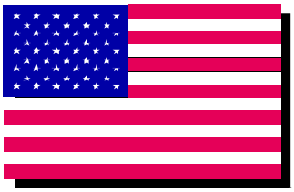
ITOP

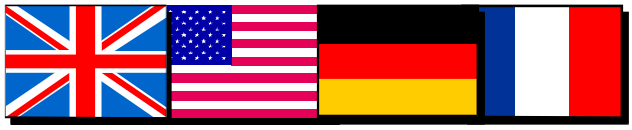
WORKING GROUP OF EXPERTS





HANDBOOK 2001

Version Date: May 2001



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I. Introduction

The Republic of France (FR or France), the Federal Republic of Germany (GE or Germany), the United Kingdom of Great Britain and Northern Ireland (UK or the United Kingdom), and the United States of America (US or the United States) signed a Memorandum of Understanding (MoU)[1] in 1983. The MoU was titled the "Memorandum of Understanding on the Mutual Acceptance of Test and Evaluation for the Reciprocal Procurement of Defense Equipment." FR, GE, UK and US[2] develop high technology weapon systems and other advanced items of defense equipment, in which they seek to facilitate the reciprocal procurement of such systems and equipment. It includes development test and evaluation and operational test and evaluation, hereinafter referred to as T&E. The International Test Operations Procedure(s)[3] (ITOP) instituted to facilitate the tenets of the MoU. ITOPs are governed by the International Test and Evaluation Steering Committee (ITESC). The ITOP program is divided into several Management Areas (MAs) and has established Management Committees (MCs) in some areas, to direct the efforts of the Working Groups of Experts (WGEs). The Terms of Reference[4] (TORs) is a guide for the ITESC, MC's and WGE's relating to the instructions, development, procedures and ratification of ITOPs.

The overall objective of the MoU is to achieve mutual acceptance of test results in order to avoid redundant testing and cost associations. The MoU has further objectives of bringing about a thorough mutual understanding of each country's policy, procedure, and organization for T&E; thus, mutual acceptability of all four nations. Acceptability derives from confidence in the accuracy and quality of the test data, technical procedures and in the format of its presentation. This document provides information to help guide Test and Evaluation subject matter experts in operating within working groups to develop common test procedures.

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[1] See Memorandum of Understanding

[2] Collectively referred to herein as the Four Nations or the four member nations or the Signatory Nations or the Governments

[3] Also called Internationales Erprobungsverfahren, or Procedure Internationale d'Essais

[4] Referred to herein as the TOR

II. Fundamental Principles

A. Purpose and Benefits. The International Test Operations Procedure (ITOP) program provides participating countries with many direct and indirect benefits. By negating or at least minimizing re-testing, the use of ITOPs has demonstrated significant savings where one country wishes to buy material from another country. Savings accrue not only from avoiding the labor costs associated with testing. Another benefit of the application of ITOPs derives from the technical quality of the procedures, which in turn, results in the quality of the test. This quality in fact, provides the confidence in, and thus the acceptance of, ITOP-derived test data. ITOPs are also used as national test procedures. Intangible benefits include the rapport developed among working group participants, which becomes a network of subject matter experts who confer which each other to share advice and experiences on unique problems. The knowledge of, and familiarity with, other nation's test capabilities has also proven to be invaluable and often results in cooperative efforts and technical information exchanges.

B. Release of ITOPs. It is possible for an ITOP to contain country specific proprietary information in which that country prefers other foreign countries not to have access to; therefore, ITOPs are restricted to the 4 signatory governments and their authorized agents. Since ITOPs are being recognized as international standards, ITOPs can be released to other countries upon approval of the four signatory nations. Approval is processed using a 30-Day Silence Procedure. Further details of this procedure are contained in Section 5, Guidance from the ITESC.

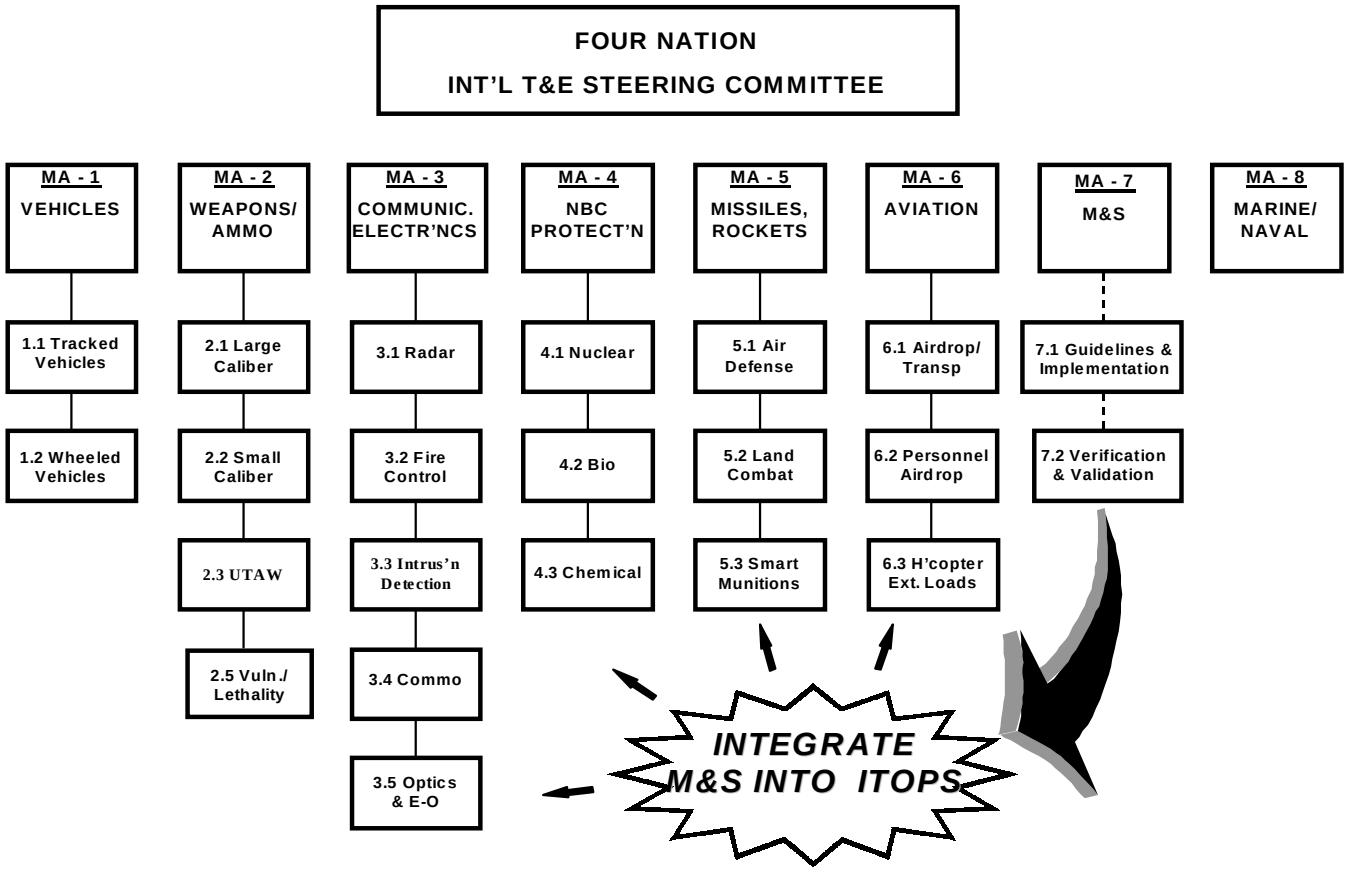
C. Third-Party Country Participation. As ITOPs continue to gain international recognition and use among countries outside of the four signatory nations, requests to participate in ITOP development from other countries are often received. Third party countries are precluded from full participation in the same context as the signatory nations. However, recognizing the mutual benefit of other country contributions to the ITOP effort, provisions have been made to allow other countries to participate as observers and interact technically under certain time restrictions as laid out in the Terms of Reference (TOR).

D. Operating Language. As stated in the TOR, English is designated as the operating language of Working Groups. While effort has been made to adhere to this TOR, it is recognized that there will be times when interpreters may be required in order to develop and obtain full effectiveness of an ITOP. The use of interpreters will be determined within the respective working group. In making this determination, the cost must be considered and weighed against the benefits, since interpreter services are quite expensive and not easily affordable under current resource constraints.

E. Management and Organization Structure. It has not been necessary to create a Management Committee (MC) for each of the Management Areas (MA). Not all WGEs are active; some WGEs have completed their work and are standing by for update reviews; some WGEs have not yet been activated.

(The management and organization structure is outlined in the following chart)

MANAGEMENT & ORGANIZATION STRUCTURE



Version Date: July 2000

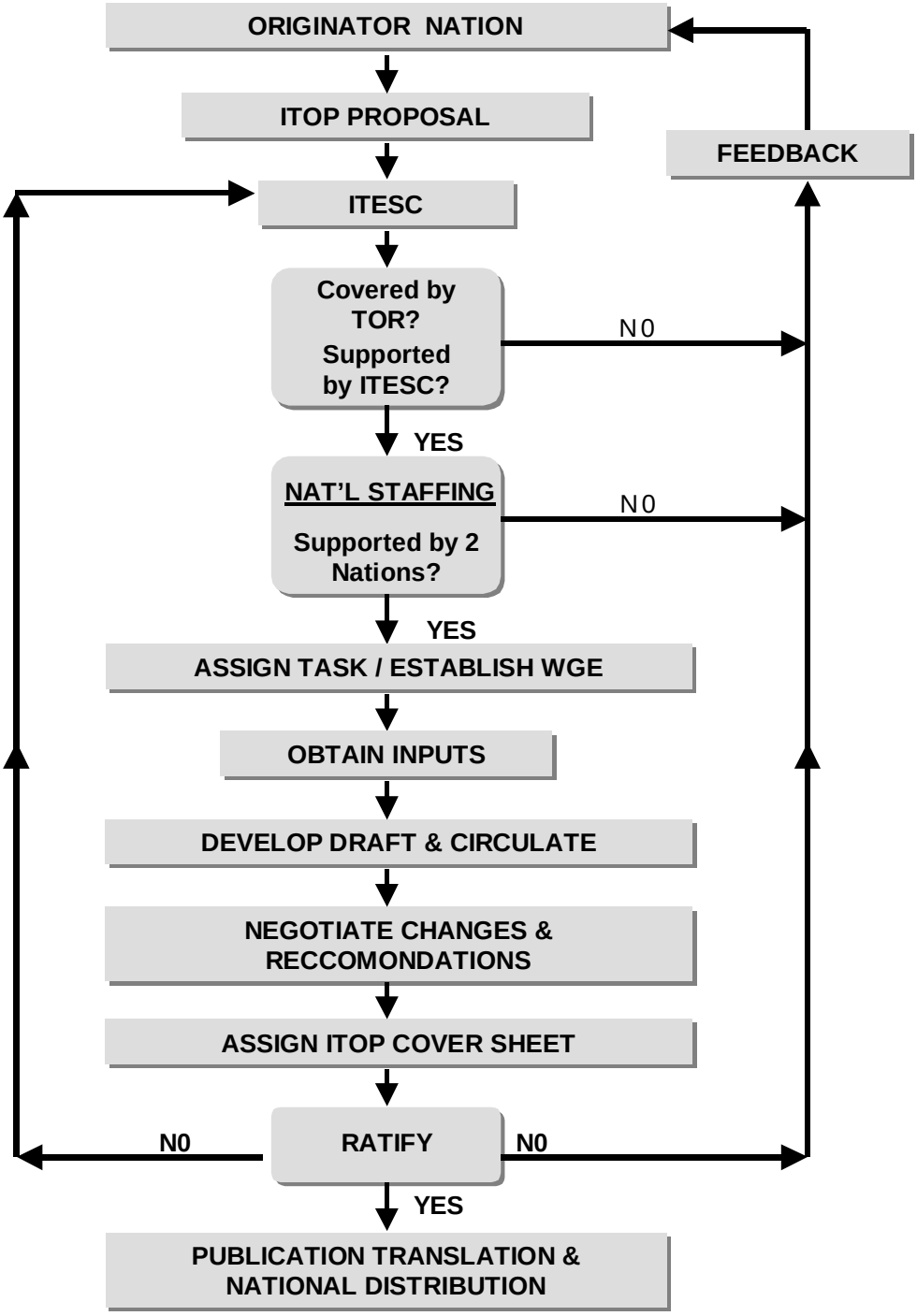
The process under which ITOPs are developed are explained on the following charts. (See next 2 pages)

I T O P SEQUENCE OF ACTIVITES

Sequence / Accountability		Nation(s)	ITESC	WGE	National POC	US -DTC
1	**ITOP Proposal**	A	R			
2	**Define task / Check against TOR**	R	A			
3	**Approval / Rejection**	R	A			
4	**National Staffing / Identify POC's**		A	R		
5	**WGE a/o assign task**			A	R	
6	**Solicit inputs for first draft**			R	A	
7	**Provide National Inputs**			A	R	
8	**Prepare Draft ITOP and circulate**			R	A	
9	**Negotiate Changes and Recommendations**			A		R
10	**Negotiate, update, agree and submit draft**			R		A
11	**Assign ITOP numbers, prepare cover sheet**	R		A		
12	**Publication, Translation, National Implementation**	R		A		
13	**Translation if required, National Implementation**	A		R		

A Action, Preparing Documentation *R* Receiving Documentation

ITOP DEVELOPMENT



III. International Test Operation Procedures

The Signatory Nations and their representatives to the ITESC, MCs, and WGEs experience both direct and indirect benefits from work associated with ITOP development. A direct benefit to the purchasing nation is to conserve money and time. Indirect benefits include the promotion of interoperability, cooperative developments, and technology transfers, and the provision of a peer review process on an international scale. The individual experts experience professional development through visits and exchange of ideas with other experts on an international scale.

The members of the WGEs must ensure that their work represents national policy, will be implemented after the national representative signs the ITOP, and that the work does not duplicate that of other international standards groups. These include North Atlantic Treaty Organization (NATO)[1] Standardization Agreements (STANAGs) and Allied Publications[2]. NATO can, and has in the past, adopted ITOPs as STANAGs; this occurred with ITOPs on vehicular testing. Further objectives of the WGEs for ITOPs appear in later sections of this document.

ITOP development is designed to be rapid, in depth, and responsive to the national needs of the Signatory Nations. The limited number of nations represented on working groups helps to reach agreement on test procedures in a relatively short time, typically to reach agreement within three years of the decision to develop an ITOP. An ITOP may go into great detail to ensure the mutual acceptance, with less compromise than what a larger international representation might require. The level of detail is such that many test officers adopt the ITOP language into the test plans verbatim. The international character of the ITOPs ensures reference to sound general physical and engineering principles rather than to the specifications of any particular measurement device developed in one country. ITOPs documents are state-of-the-art T&E procedures for testing military materiel. Use of ITOPs can benefit the developer, since countries may be more apt to consider an item for evaluation and procurement that has already been fully or partially tested under ITOPs. ITOPs help the T&E communities of the Signatory Nations to meet challenges presented by current downsizing trends and advances in weapons technologies with the sharing of assets - skills, capabilities, technologies, experiences and ideas.

[1] Or, Organisation du Traité de l'Atlantique Nord (OTAN)
[2] Or, Accords De Standardisation et Publications Interalliées De l'OTAN

IV. Guidance from the ITESC

This section gives some important points from the Memorandum of Understanding, the Terms of Reference, and minutes of the meetings of the ITESC. This synopsis is intended as a short guide, and a full reading of the original texts is recommended. If there is contradiction between this text and the original documents, the original texts and subsequent revisions or further instructions from the ITESC are the authority.

A. Objectives

ITESC: "The Steering Committee was constituted to administer the policy laid down in the MoU at reference and to develop detail agreements on procedures and practices as required." (TOR Resolution dated 28.10.1987)

MC: "The Management Committee was constituted to form and supervise Working Groups of Experts (WGE) on test and evaluation of defence materiel, with the aim to develop mutually agreed test procedures." (TOR Resolution Dated 27.09.1990) TOR of the individual MC should be checked for MC specific objectives.

WGE: "The Working Groups of Experts were constituted to develop mutually agreed test procedures to facilitate test and evaluation of defence materiel." (TOR Resolution Dated 27.09.1990)

B. Organization

This section considers questions of personnel, schedule, and cost relating to meetings.

1. MoU Signatory Nation Representatives, Professional Background

ITESC: (None specified) (TOR Resolution, 28.10.1987)

MC: Professional engineers familiar with subject matter (TOR Resolution, 27.09.1990)

WGE: Professional engineers familiar with subject matter (TOR Resolution, 27.09.1990)

2. Supporting Staff Attendance

ITESC: Supporting staff may attend meetings (TOR Resolution, 28.10.1987)

MC: Supporting staff may attend meetings (TOR Resolution, 27.09.1990)

WGE: Essential supporting staff may attend meetings, but the size of national delegations should be kept to an absolute minimum (number). (TOR Resolution 17.09.1992)

3. Representatives of Other Nations

ITESC: Representatives of other NATO nations may be invited upon unanimous agreement (TOR Resolution, 28.10.1987)

MC: Representatives of other NATO nations may be invited as unanimously agreed by the MC and subject to confirmation by the Steering Committee. (TOR Resolution, 27.09.1990)

WGE: Representatives of other NATO nations and of non-NATO nations may be invited to attend. Any participation of nations other than the 4 signatories should be discouraged in principle. Exceptions are subject to Steering Committee approval and permissible only under the following conditions: the number of additional nations shall be restricted to one per WGE at any given time; and, the duration of such participation shall be limited to a maximum period of 2 years. In such circumstances, it will be the responsibility of individual WGE members to ensure that any national T&E information be released to such NATO or non-NATO representative in accordance with the provision of Section 4 of the MOU, and the respective national security policies and procedures. (TOR Resolution, 15.9.1998) "The type of participation is as a "guest" with no voting or ratification privilege. (The invitation should)…use terminology other than "participation" that clearly defines a third country's role and restrictions." (ITESC Minutes, 15th Meeting, 17.9.1998, ¶23)

4. Chair Selection

ITESC: The committee shall elect a chair for a term of office generally not exceeding three years. (TOR Resolution, 28.10.1987)

MC: The signatory nations will host and chair the meeting on a rotational basis. (TOR Resolution, 27.09.1990)

WGE: To provide for continuity, a standing chair should be selected from those members who might reasonably expect to hold the post for a minimum of two years. (TOR Resolution 17.09.1992) Some WGEs follow the MC practice of having the host also chair.

5. Meeting Intervals

ITESC: The committee will normally meet at 6 - 9 month intervals. (TOR Resolution, 28.10.1987) In practice, the SC meets yearly in September and calls additional meetings as required.

MC: The MC will normally meet at 6-month intervals. (TOR Resolution, 27.09.1990).

WGE: As much business as possible should be conducted out of committee through normal correspondence. Thus the interval between meetings will not normally be less than six months. (TOR Resolution 17.09.1992)

6. Meeting Duration

WGE: The work programme should be planned so that the duration for WGE meetings should not exceed one week, including travelling time, familiarization visits and the checking of minutes. (TOR Resolution 17.09.1992)
(Clarification needed: Does one week mean 7 days or 5 working days?)

7. Hosting and Secretarial Support of Meetings

ITESC: The signatory nations will host the meeting on a rotational basis. The host nation shall provide secretarial support. (TOR Resolution, 28.10.1987)

MC: The signatory nations will host and chair the meeting on a rotational basis. The host nation shall provide secretarial support. The host nation shall provide copies of the agenda and minutes of the meeting to the Management Committee members. (TOR Resolution, 27.09.1990)

WGE: The signatory nations will host the meeting on a rotational basis; the host providing all necessary secretarial support, including copies of the agenda and the minutes of the meeting prior to the dispersal of the group. Copies of the minutes are also to be sent without delay to the members of the Steering Committee and the relevant Management Committee. (TOR Resolution 17.09.1992)

8. Language of Minutes and Meetings

In practice, outside of speeches by host country welcoming dignitaries, meetings are conducted in English. However, the TORs state the following.

MC: Meetings and minutes will normally be in host country language. (TOR Resolution, 27.09.1990)

WGE: Meetings will normally be conducted in TOR Resolution 17.09.1992)

9. Interpreters

MC: Host nation and delegates to provide interpreters as required. (TOR Resolution, 27.09.1990) (MC5) Each nation shall provide one interpreter for all meetings. The host country will provide three additional interpreters. (TOR of MC5, 27.09.1990, Minutes of Seventh Meeting, Annex 10)

WGE: Delegates provide interpreters if required. (TOR Resolution 17.09.1992) The present practice is to leave the matter to each WGE: that is, to try to minimize interpreter support where possible – particularly for the smaller groups, but to provide support consistent with the needs of the group so as not to jeopardize productivity. (ITESC Minutes, 15th Meeting 17.9.1998, ¶5)

10. Agenda Items

MC: The host nation for the next meeting will place those proposals on the agenda that have been marked "action requested" by at least three of the participating nations. (Resolution dated 20.10.1988)

WGE: As much business as possible should be conducted out of committee through normal correspondence…In order to allow adequate time for preparation, those papers which are to be discussed should be issued to all members not less than six weeks before the meeting is due to take place. Papers circulated later than that may be tabled, but not taken as a formal agenda item. The work programme should be planned so that the duration for WGE meetings should not exceed one week, including travelling time, familiarization visits and the checking of minutes. (TOR Resolution 17.09.1992) Note the UK use of "tabled," as in "placed on the table in front of us for discussion," not the US use, as in "placed on the table out of the way while we discuss other matters."

11. Scope of Work

This section describes the activities of the three groups that implement the MOU.

12. ITESC

The scope of work of the ITESC includes the following list. The authorization is TOR Resolution, 28.10.1987 unless noted otherwise.

- Administering the policy of the authorizing MoU as T&E.
- Exchanging information on national test methods, procedures and practices.
- Establishing sub-committees and working groups of experts as required to generate standard test procedures.
- Reviewing and approving TOR of subordinate groups.
- Defining the tasks of such subordinate groups.
- Collating, reviewing and disseminating guidance information produced under section 2.4 of the authorizing MoU. The information to include: a) the relationship between their respective T&E organizations and procedures, b) a communications directory for their initial contacts on T&E matters in the four nations, and c) a general format for the presentation of T&E data. (MoU, Section 2.4)
- Providing a revised list of ITOP delegates to all ITESC members, each MC and WGE. (Minutes, 15th Meeting ITESC for ITOPs, 17.9.1998, ¶19)
- Coordinating the development test requirements of member nations so as to identify those test requirements that can be defined in international standards.
- Establishing and maintaining liaison with project management from the start of Joint projects and throughout the development process to assist in planning test procedures, which accord with international standards.
- Establishing and maintaining liaison with other standardization authorities in order to avoid duplication of work.

- Agreeing on terms and definitions, as required. One of the three TOR Resolutions dated 27.09.1990 contains Terms and Definitions.
- Chair will approve and sign certificate to recognize MC and Working Group members who end their ITOP program participation.

13. Management Committees

The scope of work of the MC includes the following list. The authorization is TOR Resolution 27.09.1990 unless noted otherwise.

- Exchanging information on national test methods, procedures and practices, the highest applicable security classification being "NATO Confidential."
- Formation and guidance of Working Groups of Experts
- Monitoring the development of test procedures by Working Groups of Experts.
- Prioritizing ITOPs.
- Establishing and maintaining liaison with other standardization authorities in order to avoid the duplication of work.
- Agreeing on terms and definitions.
- Reporting periodically to the Steering Committee on the progress of work. The host nation shall provide copies of the agenda and minutes of the meeting to the Management Committee members.
- Initiate the action to recognize MC and Working Group members who end their ITOP program participation. (ITESC Minutes, 15th Meeting, 17.9.1998, ¶33)
- Review ratified ITOP for currency and technical adequacy every 3 years.

14. Working Groups of Experts

The scope of work of the WGE includes the following list. The authorization is TOR Resolution 27.09.1990 unless noted otherwise.

(1) Exchanging information on national test methods, procedures and practices, the highest applicable security classification being "NATO Confidential."
(2) Establishing and maintaining liaison with other standardization authorities in order to avoid the duplication of work.
(3) Agreeing on terms and definitions.
(4) Reporting periodically to the Steering Committee on the progress of work. (TOR Resolution, 27.09.1990)
(5) Developing, ratifying, and implementing ITOPs. (See section V)

15. Contractor Participation in WGEs

Contractor personnel may participate in a technical or support capacity in ITOP Working Groups. Such participation must be sponsored by a participating government organization and agree upon by all the official representatives to the WGE. Contractor personnel may not represent the government, ratify ITOPs or officially release ITOPs. In the event the working group needs to discuss certain information that should not be divulged to contractor personnel (e.g., proprietary information), the individual will be asked to temporarily leave the room.

V. WGE Activities toward ITOPs

This Section considers the activities of the groups toward developing, ratifying, implementing, and reviewing ITOPs.

Staffing ITOPs

National representatives at working group level are responsible for adequate staffing of draft ITOPs and negotiating the respective national position. This includes liaison with the national delegate to the corresponding NATO-group, if any, and the necessity to introduce any relevant promulgated ITOPs into the respective NATO program of work. (TOR Resolution, 20.10.1998)

Ratifying, Review of Classification and Technical Adequacy

WGE national representatives shall address and record the ITOP Security Classification. The WGE shall review a classified ITOP after 2 years with the aim of downgrading the classification. (TOR Resolution 20.10.1988)

The MC has the responsibility to review each ratified ITOP for currency and technical adequacy every 3 years. Where an ITOP is determined to require revisions (changes to existing procedures or additional procedures), the WGE will initiate a program of work to accomplish the required effort. The program of work should be completed in three (3) years or less. Where an ITOP is determined to be adequate and not in need of revision, that ITOP will be re-validated and the re-validation date indicated on the ITOP. (TOR Resolution 15.8.1997)

ITOP Comparison of Data to References

In principle, ITOPs shall address test data presentation requirements to permit the comparison of actual test results against prescribed standards, specifications or other reference data, l. e. the computation of deviations, failure rates etc., may form part of the respective test reports. (TOR Resolution 27.09.1990)

ITOP Agreement

Agreement is the mutual understanding reached in a WGE on the final draft an ITOP. (TOR Resolution 27.09.1990) Any agreed test procedure will be identified as 4-Nations Standard. (TOR Resolution 28.10.1987)

ITOP Ratification

An ITOP shall be considered as ratified when the participating nation has agreed to the draft ITOP at WGE level. National ratification shall be recorded on the ITOP documentation

page. Ratification is formally expressed national consent to an ITOP, following a staffing process, which shall be coordinated by the respective national delegate to the WGE. (TOR Resolution 27.09.1990)

ITOP Implementation

Implementation is national adoption of an ITOP, following ratification, and normally affecting the withdrawal of previous national procedure. (TOR Resolution 27.09.1990)

Use of Multi-National Projects

Ratifying nations agree to use any applicable ITOP in multi-national joint projects for the development or procurement of defense materiel. (TOR Resolution 20.10.1988)

ITOP Number Assignment

ITOPs are numbered following an XX-Y-ZZZ numbering system. This system is described in Chapter 2 of DTC PAM 25-32, which is reproduced in **Annex D**.

ITOP Adaptation

For specific applications, ITOPs may be adapted to suit particular project requirements; any deviation from the standard must be recorded and documented to permit reproducibility. (TOR Resolution 20.10.1988)

ITOP Release

Unclassified ITOPs may be released to other nations provided permission to do so has been granted by each signatory nation. Permission to release ITOPs to other nations is solicited through a 30-Day Silence Procedure. Under the silence procedure, a Signatory Nation signifies concurrence by silence, i.e., not formally responding to the notification. In the case of classified ITOPs the silence period will not apply and the formal written agreement of each ITOP signatory nation will be required. (ITESC Minutes, 15th Meeting, 17.9.1998, Annex 12 (ITOP cover page). In principle there is no problem with providing ITOPs to NATO but generally preference is to provide only completed documents and not drafts. (Minutes, 15th Meeting ITESC for ITOPs, 17.9.1998, #31)

VI. Special Instructions to ITOP WGEs

Identification of Related Work

ITOPs are to be developed in full cognizance of NATO Standard Agreements (STANAGs) and other related procedures and standards including the work of other ITOP WGE. Existing procedures and standards should not be duplicated in an ITOP; full advantage and referencing of such procedures and standards however, should be considered in ITOP development. WGE members should make every effort to become aware of other related work and bring such information to the table at WGE meeting. Accordingly, it is recommended that this issue be made a standing agenda item. (TOR Resolution 15.8.1997)

Inter-relationship of STANAGs and ITOPs

In principle, any relevant STANAGs shall be considered when developing an ITOP. Only promulgated STANAGs shall be referenced, drafts shall be disregarded. Duplication of work is to be avoided. NATO-STANAGs on Standard Test Procedures that have been ratified by the four nations participating in the MOU shall supersede any corresponding ITOPs; the latter may be declared as the national implementing documents for the respective STANAGs. (TOR Resolution 20.10.1998)

Validity of Referenced Documents in ITOPs

Reference to further documents should be minimized; in principle, only such documents should be referenced that provide specific direction required to complement the test procedure and to ensure adequate test performance. General literature, Source or background information on the respective subject or related matters should not be referenced; if such reference is considered indispensable, it should be classified as bibliographic - not mandatory. Only internationally agreed documents should be referenced, i.e. ITOPs, STANAGs, ISO/IEC-Standards. National standards should not be referenced; applicable passages should be quoted verbatim if necessary to ensure adequate test procedures. The extent of applicability should be defined when referencing a document; i. e. further references contained in a referenced document shall normally be disregarded. (TOR Resolution 27.09.1990)

Hardware Exchange

In principle, there should be no need to exchange hardware for test purposes if the relevant test data are available. (Annex 18, Minutes, 24-27 September 1990)

Use of Standard ITOP Covers

A standard cover ratification sheet will be used for all new ITOPs; examples are enclosed. Electronic files for generating this cover and ratification sheet have been provided to the MPC members of each country. **Annex C**
(TOR Resolution 15.8.1997)

International Test Operations Procedure
Internationales Erprobungsverfahren
Procédure Internationale d'Essais

Ratification Agreement For:

ITOP No:(number) **Date: (date)**

"(Title)"

Abstract: **This ITOP describes procedures for....**

The following principal national representatives of Working Group of Experts X.X agree this document to be acceptable.

Ratifying Nations		
FRANCE	Signature:	Date:
	(Name, Organization, Address), France	
GERMANY	Signature:	Date:
	(Name, Organization, Address), Germany	
UNITED KINGDOM	Signature:	Date:
	(Name, Organization, Address), UK	
UNITED STATES	Signature:	Date:
	(Name, Organization, Address), USA	

In principle ITOPs are intended for official use in the governments or authorized agents of the governments of France, Germany, the United Kingdom and the United States, i.e., the participants of the Four-Nation MOU relating to the Mutual Acceptance of Test and Evaluation, 5 December 1983. Unclassified ITOPs may be released to other nations provided permission to do so has been granted by each signatory nation. Formal prior notification is required and a 30-Day Silence Procedure is to be observed. In the case of classified ITOPs the silence period will not apply and the formal written agreement of each ITOP signatory nation will be required.

Supercedes: FR/GE/UK/US/ ITOP (number(s), date).

Classification: UNCLASSIFIED No. of Pages: XXX

VII. Annexes

Annex A: 4 Nation Memorandum of Understanding
Annex B: Terms of Reference (TOR)
Annex C: Standard ITOP Cover Sheet
Annex D: ITOPs Numbering Systems (Chapter 2, DTC PAM 25-32)
Annex E: List of ITOPs Delegates
Annex F. List of Ratified ITOPs

MEMORANDUM OF UNDERSTANDING

AMONG

THE GOVERNMENTS OF

THE FRENCH REPUBLIC
REPRESENTED BY THE MINISTER OF DEFENCE

THE FEDERAL REPUBLIC OF GERMANY
REPRESENTED BY THE MINISTER OF DEFENCE

THE UNITED KINGDOM OF GREAT BRITAIN AND NORTHERN IRELAND
REPRESENTED BY THE SECRETARY OF STATE FOR DEFENCE

AND

THE UNITED STATES OF AMERICA
REPRESENTED BY THE SECRETARY OF DEFENSE

RELATING TO

THE MUTUAL ACCEPTANCE OF TEST AND EVALUATION

FOR THE

RECIPROCAL PROCUREMENT OF DEFENCE EQUIPMENT

1. INTRODUCTION

1.1 The Governments of the French Republic, the Federal Republic of Germany (FRG), the United Kingdom of Great Britain and Northern Ireland (UK) and the United States of America (USA), hereinafter referred to as the Governments, are developing high technology weapon systems and other advanced items of defence equipment and are seeking to facilitate the reciprocal procurement of such systems and equipments.

1.2 In furtherance of this aim the Governments have engaged in briefings and discussions on Test & Evaluation (T&E) carried out in connection with defence procurement with the objectives of:

a. Bringing about a thorough mutual understanding of the Government's policies, organizations and procedures for T&E.

b. Establishing the main difference between the Government's organizations and procedures for T&E.

c. Identifying the actions required to overcome any difficulties arising from the differences established, to attempt to ensure the maximum possible mutual acceptability of T&E procedures.

d. Determining and recording the extent of understanding between the Governments concerning mutual acceptability of their respective T&E procedures for those systems that are developed in one country and are candidates for procurement by one or more of the other countries.

1.3 This Memorandum of Understanding (MOU) records the understanding reached by the Governments concerning the mutual acceptability of their respective T&E procedures for all systems and equipments that are developed in one country and where an interest in procurement by one or more of the others has been mutually established. It includes development test and evaluation and operational test and evaluation, hereinafter referred to as T&E.

2. POINTS OF UNDERSTANDING

2.1 Two categories of defence systems and equipments are considered:

a. Those about to commence or undergoing development.

b. Those for which development is complete.

2.2 The objective is to avoid redundant testing. The Governments will not duplicate tests where acceptable data is available from the official test programme of one of the other Governments.

2.3 Differences among the existing T&E organizations and among the existing general T&E procedures of the Governments are not such as to justify changes being made for the purposes of this MOU.

2.4 To achieve a more widespread mutual understanding of the Governments' T&E organisations and procedures, the Governments will produce a guidance information necessary to meet the purposes of this MOU, including:

a. The relationship between their respective T&E organisations and procedures.

b. A communications directory for their initial contacts on T&E matters in the four nations.

c. A general format for the presentation of T&E data.

2.5 The Governments' focal points for the aspects of T&E relating to procurement will be:

a. For development testing:

(1) The Programme Manager in France.

(2) The Project Manager in the FRG.

(3) The Project Manager in the UK.

(4) The Program Manager in the USA.

b. For operational testing:

(1) The French Service Department official responsible for the project.

(2) The FRG Service Department official responsible for the project.

(3) The UK Project Manager

(4) The USA Service independent operational T&E agency responsible for the project.

3. MUTUAL ACCEPTANCE PROCEDURES

3.1 All proposals for a system or equipment of one country to be considered for procurement by one or more of the other Governments will require, on a case by case basis, a review of T&E data reflecting test conditions, measuring instrumentation, test results and acceptability criteria. The following procedures will therefore be observed:

a. To facilitate the exchange of T&E data, a documentation format appropriate to the proposed system or equipment will be agreed between the offering Government and the Governments considering procurement.

b. For a system or equipment about to commence or undergoing development, the offering Government will invite Governments considering procurement to participate in the T&E programme at its inception or as soon as possible thereafter. Should the Governments invited choose not to participate in the testing, the offering Government, subject to its laws, existing policy, procedures and regulations, and subject to privately owned proprietary rights, will arrange for the release to the others of the T&E information necessary for evaluation.

c. For a system or equipment for which development is complete, the offering Government will ensure, subject to its laws, existing policy, procedures and regulations, and subject to privately owned proprietary rights, that all T&E data mutually agreed to be pertinent is made available to Governments considering procurement.

d. Should a Government considering procurement adjudge the T&E which has been completed or planned by the offering Government to be inadequate for its procurement procedures, the two Governments will decide by mutual agreement on any additional testing to be carried out. Such additional testing may be conducted by either country or jointly as mutually agreed. In addition, before such additional testing commences, understanding is to be reached by the two Governments regarding payments of costs, allocation of resources, scheduling and the evaluation criteria which will apply.

e. Where an aspect of the T&E carried out by the offering Government is adjudged to be inadequate to meet the requirements of the Government considering procurement, both Governments will endeavour, if they consider it appropriate, to reach agreement on a common standard for that aspect of T&E, for any subsequent application.

3.2 In any case where agreement cannot be reached between the focal points or their immediate superiors concerning the acceptability of T&E, or when it is felt that adequate data and information on T&E have not been provided, the matter will be referred to the appropriate higher authority. This will be:

a. For France, the Directeur Technique or the appropriate Service Chief of Staff.

b. For the FRG, the Abteilungsleiter Rustungstechnik or Inspekteur der Zustandigen Teilstreitkraft.

c. For the UK, the appropriate Systems Controller.

d. For the USA, the Director Defense Test and Evaluation.

3.3 Any disagreement between the four Governments regarding the interpretation or application of this MOU will be settled by consultation between the Governments on the same levels as described in paragraph 3.2. Under no circumstances will such a disagreement be submitted to an international court or third party for arbitration.

4. PROTECTION OF DATA

4.1 Any information which may be communicated directly or indirectly among the signatory governments in conjunction with this MOU, or through them to industry, shall be safeguarded in accordance with the following principles:

a. Classified technical data or other information shall be furnished through government-to-government channels and will be assigned a classification by appropriate authorities of the receiving party which will assure a degree of protection equivalent to that required by the government furnishing the information;

b. The recipient will not release the information to any other government or party without the approval of the originating government;

c. The recipient will afford the information a degree of protection equivalent to that afforded it by the originating government;

d. The recipient will respect any proprietary rights (such as patents, copy-rights, or trade secrets) which are involved in the information;

e. The recipient will not use the information for other than the purpose for which it was given.

4.2 Information that is provided in confidence by the participating governments, or produced pursuant to this program requiring confidentiality shall either retain the original classsification designation or be assigned a classification designation that shall ensure a high degree of protection against disclosure equivalent to that

required by the originator. Each government will take all lawful steps available to it to keep such information free from disclosure under any legislative provision without the consent of the originating government. To assist in providing the desired protection, each participant will mark such information with a legend indicating the originating government, and that the information relates to this program, and is furnished in confidence.

4.3 The signatory governments will investigate all cases in which it is known or there are grounds for suspecting that classified military information released to them under this MOU has been lost or disclosed to unauthorized persons. Such signatory government shall also promptly and fully inform the originator of the details of any such occurrences, and of the final results of the investigation and corrective action taken to preclude recurrences.

4.4 Each government will permit security experts of the other participating governments to make periodic visits to its territory when it is mutually convenient to discuss with its security authorities its procedures and facilities for the protection of classified information furnished to it by the other governments. Each government will assist such experts in determining whether such information provided to it by the other governments is being adequately protected.

5. IMPLEMENTATION

5.1 This MOU will come into effect on the date of the last signature. It will remain in effect until amended or terminated by mutual consent.

5.2 A participating Government may withdraw from this MOU on condition that it gives the other participating Governments 6 months' notice.

5.3 In the event that this MOU is terminated under paragraph 5.1 or if a participating Government withdraws under paragraph 5.2, the provisions of Section 4 of this MOU, protection of data, shall remain in effect with respect to all of the Governments or the withdrawing Government as the case may be, as if there had been no such termination or withdrawl.

5.4 The MOU is signed in twelve copies, four each in the English, French, and German languages, all three texts being equally authentic.

ORIGINAL SIGNED BY AGENTS FOR:

Minister of Defense of the French Republic
Secretary of State for Defence of the United Kingdom
of Great Britain and Northern Ireland
Federal Minister of Defense of the Federal Republic
of Germany
Secretary of Defense of the United States of America

PUBLISHED
INTERNATIONAL TEST OPERATIONS PROCEDURES (ITOPS)

NUMBER		TITLE
1-1-050	6 Jun 97	DEVELOPMENT OF LABORATORY VIBRATION SCHEDULES FR/GE/UK/US
1-1-057	4 Jun 99	SAFETY CRITICAL SOFTWARE ANALYSIS AND TESTING FR/GE/UK/US
1-2-500(1)	18 May 87	TRACKED-VEHICLE TRANSPORTABILITY FR/GE/UK/US
1-2-601	23 Apr 98	LABORATORY VIBRATION SCHEDULES FR/GE/UK/US
Change 1	25 Jan 99	
2-2-500(1)	21 May 87	TRACKED-VEHICLE PHYSICAL CHARACTERISTICS FR/GE/UK/US
2-2-501(1)	20 May 87	TRACKED-VEHICLE SWIMMING TESTS FR/GE/UK/US
2-2-506(1)	15 May 87	TRACKED-VEHICLE ENDURANCE TESTING FR/GE/UK/US
2-2-509(1)	6 Mar 87	TRACKED-VEHICLE RELIABILITY, AVAILABILITY AND MAINTAINABILITY
Change 1	28 May 87	FR/GE/UK/US
2-2-602(1)	9 Mar 87	TRACKED-VEHICLE ACCELLERATION, MAXIMUM AND MINIMUM SPEEDS FR/GE/UK/US
2-2-603(1)	18 May 87	TRACKED-VEHICLE FUEL CONSUMPTION FR/GE/UK/US
2-2-604(1)	9 Mar 87	TRACKED-VEHICLE DRAWBAR PULL ON SOFT SOIL
Change 1	11 Aug 87	FR/GE/UK/US
2-2-604(3)	21 May 87	TRACKED-VEHICLE DRAWBAR PULL ON HARD SURFACE FR/GE/UK/US

2-2-605(1)	13 Mar 87	TRACKED-VEHICLE TOWING RESISTANCE FR/GE/UK/US
2-2-607(1)	21 May 87	TRACKED-VEHICLE FULL-LOAD COOLING FR/GE/UK/US
2-2-609(1)	18 May 87	TRACKED-VEHICLE STEERING FR/GE/UK/US
2-2-610(1)	21 May 87	TRACKED-VEHICLE GRADEABILITY AND SIDE-SLOPE PERFORMANCE FR/GE/UK/US
2-2-611(1)	21 May 87	TRACKED-VEHICLE OBSTACLES FR/GE/UK/US

1 PUBLISHED

INTERNATIONAL TEST OPERATIONS PROCEDURES (ITOPs) cont'd)

NUMBER		TITLE
2-2-612(1)	18 May 87	TRACKED VEHICLE FORDING FR/GE/UK/US
2-2-617	17 Nov 97	VULNERABILITY TESTING OF COMBAT SYSTEMS TO CONVENTIONAL WEAPONS FR/GE/UK/US
2-2-619(1)	1 Jun 87	TRACKED VEHICLE SOFT-SOIL MOBILITY FR/GE/UK/US
2-2-627(1)	21 May 87	TRACKED VEHICLES, BRAKING FR/GE/UK/US
2-2-650(1)	18 May 87	ENGINE COLD-STARTING AND WARMUP TEST FR/GE/UK/US
2-2-702(1)	15 May 87	TRACKED VEHICLE ALTITUDE EFFECTS FR/GE/UK/US
2-2-716	25 Oct 96	MEASUREMENT OF BEHIND ARMOR DEBRIES FR/GE/UK/US
2-2-800(1)	15 May 87	TRACKED VEHICLE CENTER OF GRAVITY FR/GE/UK/US
2-2-801(1)	15 May 87	TRACKED VEHICLE WEIGHT DISTRIBUTION GROUND PRESSURE FR/GE/UK/US
2-2-808(1)	15 May 87	TRACKED VEHICLE MECHANICAL VIBRATION FR/GE/UK/US
2-2-816(1)	21 May 87	HIGH AND LOW-TEMPERATURE TEST OF VEHICLE FR/GE/UK/US
3-2-051	11 Oct 96	AUTOMATIC LOADERS FOR TANK SYSTEMS FR/GE/UK/US
3-2-075	7 Mar 85	SECONDARY ARMAMENT, VEHICLE-MOUNTED GE/US
3-2-506(1)	16 Oct 95	ARTILLERY (SELF-PROPELLED AND TOWED) FR/GE/UK/US
3-2-506(2)	23 Oct 92	TANK CANNON AND RECOIL MECHANISM FR/GE/UK/US
3-2-601	16 Oct 95	FIRING TABLES AND BALLISTIC MATCH TESTS FR/GE/UK/US

3-2-605	23 Oct 92	TANK SYSTEM ACCURACY/REFERENCE FIRING FR/GE/UK/US
3-2-712	1 Jun 98	OPTICAL TRANSFER FUNCTION FOR DIRECT VIEW TELESCOPE
Change 1		FR/UK/US
3-2-802	14 May 93	MEASUREMENT AND INSPECTION OF GUN TUBES FR/GE/UK/US

2 PUBLISHED

INTERNATIONAL TEST OPERATIONS PROCEDURES (ITOPs cont'd)

NUMBER		TITLE
3-2-803	14 May 93	VISUAL INSPECTIONS OF CANNON BORES FR/GE/UK/US
3-2-810	16 Oct 95	ELECTRICAL MEASUREMENT OF WEAPON CHAMBER PRESSURE FR/GE/UK/US
3-2-815	11 Oct 96	RECOIL MOTION MEASUREMENT FR/GE/UK/US
3-2-817	6 Dec 91	DIRECT FIRE JUMP FR/GE/UK/US
3-2-829	23 Oct 92	CANNON SAFETY TEST GE/UK/US
3-2-836 (2.1.1)	31 Mar 87	MAIN BATTLE-TANK FIRE CONTROL SYSTEMS-BORE-SIGHT AND MUZZLE-REFERENCE SYSTEM ALIGNMENT/RETENTION GE/US
3-2-836 (2.1.2)	31 Mar 87	MAIN BATTLE-TANK FIRE CONTROL SYSTEMS-GUN SIGHT SYNCHRONIZATION GE/US
3-2-836 (2.2.1)	29 Jun 95	MAIN BATTLE-TANK FIRE CONTROL SYSTEMS STABILIZATION ACCURACY

		FR/GE/UK/US
3-2-836 (2.2.2)	27 Jun 85	MAIN BATTLE-TANK FIRE CONTROL SYSTEMS DRIFT GE/US
3-2-836 (2.2.3)	29 Jun 95	MAIN BATTLE-TANK FIRE CONTROL SYSTEMS COINCIDENCE FR/GE/UK/US
3-2-836 (2.3.1)	6 Mar 92	MAIN BATTLE-TANK FIRE CONTROL SYSTEMS WEAPON SYSTEM RESPONSE TO CONTROL HANDLE FR/GE/UK/US
3-2-836 (2.3.2)	27 Apr 93	MAIN BATTLE-TANK FIRE CONTROL SYSTEMS FREQUENCY RESPONSE OF WEAPON SERVO SYSTEM FR/GE/UK/US
3-2-836 (2.3.3)	27 Apr 93	MAIN BATTLE-TANK FIRE CONTROL SYSTEMS TRANSIENT RESPONSE TO STEP COMMANDS FR/GE/UK/US
3-2-836 (2.3.4)	26 Oct 99	COMBAT VEHICLE FIRE CONTROL SYSTEMS TARGET ENGAGEMENT TIMES FR/GE/UK/US
3-2-836 (2.3.5)	10 Apr 00	COMBAT VEHICLE FIRE CONTROL SYSTEMS TARGET TRACKING FR/GE/UK/US

PUBLISHED
INTERNATIONAL TEST OPERATIONS PROCEDURES (ITOPs cont'd)

NUMBER		TITLE
3-2-836 (2.4.1)	29 Jun 95	MAIN BATTLE-TANK FIRE CONTROL SYSTEMS COMPUTERIZED CORRECTIONS FR/GE/UK/US
3-2-836 (2.4.2)	13 Oct 97	MAIN BATTLE-TANK FIRE CONTROL SYSTEMS AUXILIARY SIGHT ACCURACY FR/GE/UK/US
3-2-836 (1.1.2.1)	25 Oct 99	COMBAT VEHICLE FIRE CONTROL SYSTEMS EXTERIOR BALLISTIC SENSORS – AIR TEMPERATURE FR/GE/UK/US

3-2-836 (1.1.2.2)	25 Oct 99	COMBAT VEHICLE FIRE CONTROL SYSTEMS EXTERIOR BALLISTIC SENSORS – ATMOSPHERIC PRESSURE FR/GE/UK/US
3-2-836 (1.1.2.3)	25 Oct 99	COMBAT VEHICLE FIRE CONTROL SYSTEMS EXTERIOR BALLISTIC SENSORS – CROSSWIND FR/GE/UK/US
3-2-836 (1.3.2.1)	10 Apr 00	COMBAT VEHICLE FIRE CONTROL SYSTEMS GUN TURRET DRIVE SYSTEMS - DRIFT FR/GE/UK/US
3-2-836 (2.5.1.1)	13 Oct 97	COMBAT VEHICLE FIRE CONTROL SYSTEMS SIMULATED FIRING, LABORATORY FR/GE/UK/US
3-2-836 (2.5.1.2)	8 Apr 97	COMBAT VEHICLE FIRE CONTROL SYSTEMS SIMULATED FIRING, FIELD FR/GE/UK/US
3-2-836 (2.5.2.2)	14 Mar 96	COMBAT VEHICLE FIRE CONTROL SYSTEMS REAL FIRING FIELD TEST FR/GE/UK/US
3-2-838	2 Jun 98	DIRECT VIEW OPTICS FR/UK/US
Change 1	30 Jun 00	
4-2-014	9 Apr 97	ARTILLERY SUBMUNITION (BOMBLET) TEST FR/GE/UK/US
4-2-504(1)	19 Oct 93	SAFETY TESTING OF FIELD ARTILLERY AMMUNITION FR/GE/UK/US
4-2-504(2)	8 Apr 97	SAFETY TESTING OF TANK AMMUNITION FR/GE/UK/US
Change 1	12 Apr 99	
4-2-504(3)	31 Jul 97	SAFETY TESTING OF MORTAR AMMUNITION FR/GE/US

PUBLISHED
INTERNATIONAL TEST OPERATIONS PROCEDURES (ITOPs cont'd)

NUMBER		TITLE
4-2-510	15 May 00	GENERAL TEST REQUIREMENTS FOR UNMANNED TARGET ACTIVATED WEAPONS (UTAW) FR/GE/UK/US
4-2-511	20 May 99	MEASUREMENT OF UNMANNED TARGET ACTIVATED WEAPON (UTAW) WARHEAD PERFORMANCE FR/GE/UK/US
4-2-513	15 May 00	TESTING OF POWER SOURCES FOR UTAWS FR/GE/UK/US
4-2-520	20 May 99	GENERAL TEST REQUIREMENTS FOR COUNTERMINE AND DEMINING TESTING FR/GE/UK/US
4-2-521	20 May 99	TARGET STANDARDIZATION FOR COUNTERMINE UND DEMINING TESTING FR/GE/UK/US
4-2-523	20 May 99	MINE DETECTION EQUIPMENT FOR COUNTERMINE AND DEMINING (HAND-HELD OR VEHICLE MOUNTED) FR/GE/UK/US
4-2-601	8 Apr 97	DROP TESTS FOR MUNITIONS FR/GE/UK/US
4-2-602	11 Oct 96	ROUGH HANDLING TESTS FR/GE/UK/US
Change 1	12 Apr 99	
4-2-606	01 Sep 99	ESTABLISHMENT OF MASTER AND REFERENCE CALIBRATION ROUNDS FR/GE/UK/US
4-2-700	25 May 95	PROPELLING CHARGES FR/GE/UK/US
Change 1	14 Jul 98	
4-2-802	19 Oct 95	PROJECTILE SEATING AND FALLBACK FR/GE/UK/US
4-2-804	6 Sep 99	STICKER TESTING OF SEPARATE LOADING

ARTILLERY AMMUNITION		FR/GE/UK/US
4-2-805	15 Apr 99	PROJECTILE VELOCITY AND TIME OF FLIGHT MEASUREMENTS FR/GE/UK/US
4-2-806	6 Sep 99	ARMING DISTANCE AND IMPACT SENSITIVITY OF FUZES FR/GE/UK/US
4-2-809	6 Sep 99	RECOVERY OF FIRED AMMUNITION FR/GE/UK/US

2.1 PUBLISHED

INTERNATIONAL TEST OPERATIONS PROCEDURES (ITOPs cont'd)

NUMBER		**TITLE**
4-2-812	1 Nov 83	PENETRATION TESTS OF HEAT WARHEADS GE/US
4-2-813	30 Mar 93	STATIC TESTING OF HIGH-EXPLOSIVE MUNITIONS FOR OBTAINING FRAGMENT SPATIAL DISTRIBUTION GE/UK/US
4-2-814	31 Jul 85	RICOCHET OF DIRECT-FIRE PROJECTILES GE/US
4-2-820	9 Sep 99	HUMIDITY TESTS OF AMMUNITION FR/GE/UK/US
4-2-826	21 Sep 83	SOLAR RADIATION TESTS GE/US
4-2-829	7 Sep 99	VERTICAL TARGET ACCURACY AND DISPERSION FR/GE/UK/US
5-2-506	4 Jun 99	LABORATORY SHOCK TESTING OF MISSILES AND ROCKETS FR/GE/UK/US
5-2-507	19 Jun 98	LABORATORY VIBRATION TESTING OF MISSILES AND ROCKETS
Change 1	3 Dec 99	FR/GE/UK/US

5-2-619	6 Dec 96	SAFETY TESTING OF MISSILE AND ROCKET SYSTEMS EMPLOYING MANNED LAUNCH STATIONS FR/GE/UK/US
5-2-620	24 Oct 97	SAFETY TESTING OF REMOTELY LAUNCHED MISSILES FR/GE/UK/US
5-2-622	19 Jun 98	GENERAL REQUIREMENTS FOR FLIGHT TERMINATION SUBSYSTEMS FOR MISSILES, ROCKETS, AERIAL TARGETS, AND UNMANNED AERIAL VEHICLES (UAVs) FR/GE/UK/US
6-2-020	10 Mar 97	RADAR ANTENNA TESTS FR/GE/US
6-2-242	13 Oct 93	ANALOG COMMUNICATION TRANSMITTER AND RECEIVER TEST PROCEDURES
Change 1	20 Nov 95	FR/GE/US
6-2-246	12 Oct 95	DIGITAL COMMUNICATION TRANSMITTER AND RECEIVER TEST PROCEDURES FR/GE/US
6-2-529	9 Jun 99	RADAR RECEIVER PROCEDURES FR/GE/US

2.2 PUBLISHED

INTERNATIONAL TEST OPERATIONS PROCEDURES (ITOPs cont'd)

NUMBER		**TITLE**
6-2-530	31 Mar 93	RADAR TRANSMITTER PROCEDURES FR/GE/US
6-2-531	31 Mar 93	RADAR RECEIVER PULSE COMPRESSION RATIO FR/GE/US
6-2-532	10 Mar 97	ANTENNA SCAN RATE TEST FR/GE/US
6-2-533	11 May 98	RADOME TEST PROCEDURE FR/GE/US

6-3-027	31 Dec 87	PASSIVE INFRARED SENSORS FOR INTERIOR APPLICATION GE/US
6-3-028	31 Dec 87	ULTRASONIC MOTION SENSORS FOR INTERIOR APPLICATION GE/US
6-3-029	31 Dec 87	MICROWAVE MOTION SENSORS FOR INTERIOR APPLICATION GE/US
6-3-030	30 Mar 89	BALANCED MAGNETIC SWITCH SENSORS FOR INTERIOR APPLICATION GE/US
6-3-031	30 Mar 89	PASSIVE ULTRASONIC SENSOR FOR INTERIOR APPLICATIONS GE/US
6-3-032	30 Mar 89	VIDEO MOTION SENSORS FOR INTERIOR APPLICATION GE/US
6-3-033	4 Oct 90	VIBRATION SENSORS FOR INTERIOR APPLICATIONS GE/US
6-3-035	4 Oct 90	CAPACITANCE PROXIMITY SENSORS (CPS) FOR INTERIOR APPLICATIONS GE/US
6-3-036	30 Aug 91	RF MOTION SENSOR FOR INTERIOR APPLICATIONS GE/US
6-3-038	30 AUG 91	PORTED-COAX SENSORS FOR INTERIOR APPLICATIONS GE/US
7-2-507	17 SEP 98	AIRDROP OF PERSONNEL WITH RAM AIR PARACHUTES GE/FR/UK/US
7-2-509	27 May 94	AIRDROP OF EQUIPMENT FR/GE/UK/US

ACTION OFFICER:
Wolfgang H.R. Schmidt
CSTE-DTC-TT-M

PUBLISHED
INTERNATIONAL TEST OPERATIONS PROCEDURES (ITOPs)

for

Large Caliber Weapons and Ammunition Working Group 2.1

NUMBER		TITLE
1-1-050	6 Jun 97	DEVELOPMENT OF LABORATORY VIBRATION SCHEDULES FR/GE/UK/US
1-2-601	23 Apr 98	LABORATORY VIBRATION SCHEDULES FR/GE/UK/US
Change 1	25 Jan 99	
3-2-051	11 Oct 96	AUTOMATIC LOADERS FOR TANK SYSTEMS FR/GE/UK/US
3-2-075	7 Mar 85	SECONDARY ARMAMENT, VEHICLE-MOUNTED GE/US
3-2-506(1)	16 Oct 95	ARTILLERY (SELF-PROPELLED AND TOWED) FR/GE/UK/US
3-2-506(2)	23 Oct 92	TANK CANNON AND RECOIL MECHANISM FR/GE/UK/US
3-2-601	16 Oct 95	FIRING TABLES AND BALLISTIC MATCH TESTS FR/GE/UK/US
3-2-605	23 Oct 92	TANK SYSTEM ACCURACY/REFERENCE FIRING FR/GE/UK/US
3-2-802	14 May 93	MEASUREMENT AND INSPECTION OF GUN TUBES FR/GE/UK/US
3-2-803	14 May 93	VISUAL INSPECTIONS OF CANNON BORES FR/GE/UK/US
3-2-810	16 Oct 95	ELECTRICAL MEASUREMENT OF WEAPON CHAMBER PRESSURE FR/GE/UK/US
3-2-815	11 Oct 96	RECOIL MOTION MEASUREMENT FR/GE/UK/US
3-2-817	6 Dec 91	DIRECT FIRE JUMP FR/GE/UK/US
3-2-829	23 Oct 92	CANNON SAFETY TEST

		GE/UK/US
4-2-014	9 Apr 97	ARTILLERY SUBMUNITION (BOMBLET) TEST FR/GE/UK/US
4-2-504(1)	19 Oct 93	SAFETY TESTING OF FIELD ARTILLERY AMMUNITION FR/GE/UK/US
4-2-504(2)	8 Apr 97	SAFETY TESTING OF TANK AMMUNITION FR/GE/UK/US
Change 1	12 Apr 99	

2.3 PUBLISHED

INTERNATIONAL TEST OPERATIONS PROCEDURES (ITOPs cont'd)

for

2.4 Large Caliber Weapons and Ammunition Working Group 2.1

NUMBER		**TITLE**
4-2-504(3)	31 Jul 97	SAFETY TESTING OF MORTAR AMMUNITION FR/GE/US
4-2-601	8 Apr 97	DROP TESTS FOR MUNITIONS FR/GE/UK/US
4-2-602	11 Oct 96	ROUGH HANDLING TESTS FR/GE/UK/US
Change 1	12 Apr 99	
4-2-606	01 Sep 99	ESTABLISHMENT OF MASTER AND REFERENCE CALIBRATION ROUNDS GE/FR/UK/US
4-2-700	25 May 95	PROPELLING CHARGES FR/GE/UK/US
Change 1	14 Jul 98	
4-2-802	19 Oct 95	PROJECTILE SEATING AND FALLBACK

		FR/GE/UK/US
4-2-804	6 Sep 99	STICKER TESTING OF SEPARATE LOADING ARTILLERY AMMUNITION FR/GE/UK/US
4-2-805	15 Apr 99	PROJECTILE VELOCITY AND TIME OF FLIGHT MEASUREMENTS FR/GE/UK/US
4-2-806	6 Sep 99	ARMING DISTANCE AND IMPACT SENSITIVITY OF FUZES FR/GE/UK/US
4-2-809	6 Sep 99	RECOVERY OF FIRED AMMUNITION FR/GE/UK/US
4-2-812	1 Nov 83	PENETRATION TESTS OF HEAT WARHEADS GE/US
4-2-813	30 Mar 93	STATIC TESTING OF HIGH-EXPLOSIVE MUNITIONS FOR OBTAINING FRAGMENT SPATIAL DISTRIBUTION GE/UK/US
4-2-814	31 Jul 85	RICOCHET OF DIRECT-FIRE PROJECTILES GE/US
4-2-820	9 Sep 99	HUMIDITY TESTS OF AMMUNITION FR/GE/UK/US

2.5 PUBLISHED

INTERNATIONAL TEST OPERATIONS PROCEDURES (ITOPs cont'd)

for

2.6 Large Caliber Weapons and Ammunition Working Group 2.1

NUMBER		**TITLE**
4-2-826	21 Sep 83	SOLAR RADIATION TESTS GE/US
4-2-829	7 Sep 99	VERTICAL TARGET ACCURACY AND DISPERSION FR/GE/UK/US

2.6.1.1

2.6.1.2 3

2.6.1.3

2.6.1.4 WS 26 Apr 01

2.7 PUBLISHED

INTERNATIONAL TEST OPERATIONS PROCEDURES (ITOPs)

for

2.8 Vulnerability/Lethality Working Group 2.5

NUMBER		**TITLE**
2-2-617	17 Nov 97	VULNERABILITY TESTING OF COMBAT SYSTEMS

		TO CONVENTIONAL WEAPONS FR/GE/UK/US
2-2-716	25 Oct 96	MEASUREMENT OF BEHIND ARMOR DEBRIES FR/GE/UK/US

PUBLISHED
INTERNATIONAL TEST OPERATIONS PROCEDURES (ITOPS)

for

Tracked Vehicles Working Group 1.1

NUMBER		ITLE
1-2-500(1)	18 May 87	TRACKED-VEHICLE TRANSPORTABILITY R/GE/UK/US
2-2-500(1)	21 May 87	TRACKED-VEHICLE PHYSICAL CHARACTERISTICS R/GE/UK/US
2-2-501(1)	20 May 87	TRACKED-VEHICLE SWIMMING TESTS R/GE/UK/US
2-2-506(1)	15 May 87	TRACKED-VEHICLE ENDURANCE TESTING R/GE/UK/US
2-2-509(1)	6 Mar 87	TRACKED-VEHICLE RELIABILITY, AVAILABILITY AND MAINTAINABILITY
Change 1	28 May 87	FR/GE/UK/US
2-2-602(1)	9 Mar 87	TRACKED-VEHICLE ACCELLERATION, MAXIMUM AND MINIMUM SPEEDS FR/GE/UK/US
2-2-603(1)	18 May 87	TRACKED-VEHICLE FUEL CONSUMPTION FR/GE/UK/US
2-2-604(1)	9 Mar 87	TRACKED-VEHICLE DRAWBAR PULL ON SOFT SOIL
Change 1	11 Aug 87	FR/GE/UK/US
2-2-604(3)	21 May 87	TRACKED-VEHICLE DRAWBAR PULL ON HARD SURFACE FR/GE/UK/US
2-2-605(1)	13 Mar 87	TRACKED-VEHICLE TOWING RESISTANCE FR/GE/UK/US
2-2-607(1)	21 May 87	TRACKED-VEHICLE FULL-LOAD COOLING FR/GE/UK/US
2-2-609(1)	18 May 87	TRACKED-VEHICLE STEERING

		FR/GE/UK/US
2-2-610(1)	21 May 87	TRACKED-VEHICLE GRADEABILITY AND SIDE-SLOPE PERFORMANCE FR/GE/UK/US
2-2-611(1)	21 May 87	TRACKED-VEHICLE OBSTACLES FR/GE/UK/US
2-2-612(1)	18 May 87	TRACKED VEHICLE FORDING FR/GE/UK/US
2-2-619(1)	1 Jun 87	TRACKED VEHICLE SOFT-SOIL MOBILITY FR/GE/UK/US
2-2-627(1)	21 May 87	TRACKED VEHICLES, BRAKING FR/GE/UK/US

3 PUBLISHED

INTERNATIONAL TEST OPERATIONS PROCEDURES (ITOPs cont'd)

Tracked Vehicles Working Group 1.1

NUMBER		TITLE
2-2-650(1)	18 May 87	ENGINE COLD-STARTING AND WARMUP TEST FR/GE/UK/US
2-2-702(1)	15 May 87	TRACKED VEHICLE ALTITUDE EFFECTS FR/GE/UK/US
2-2-800(1)	15 May 87	TRACKED VEHICLE CENTER OF GRAVITY FR/GE/UK/US
2-2-801(1)	15 May 87	TRACKED VEHICLE WEIGHT DISTRIBUTION GROUND PRESSURE FR/GE/UK/US
2-2-808(1)	15 May 87	TRACKED VEHICLE MECHANICAL VIBRATION FR/GE/UK/US
2-2-816(1)	21 May 87	HIGH AND LOW-TEMPERATURE TEST OF VEHICLE FR/GE/UK/US

4 PUBLISHED

INTERNATIONAL TEST OPERATIONS PROCEDURES (ITOPs)

Fire Control Optics and Electrooptics Working Group 3.5

NUMBER		TITLE
3-2-712	1 Jun 98	OPTICAL TRANSFER FUNCTION FOR DIRECT VIEW TELESCOPES
Change 1	30 Jun 00	FR/UK/US
3-2-836 (2.1.1)	31 Mar 87	MAIN BATTLE-TANK FIRE CONTROL SYSTEMS-BORE-SIGHT AND MUZZLE-REFERENCE SYSTEM ALIGNMENT/RETENTION GE/US
3-2-836 (2.1.2)	31 Mar 87	MAIN BATTLE-TANK FIRE CONTROL SYSTEMS-GUN SIGHT SYNCHRONIZATION GE/US
3-2-836 (2.2.1)	29 Jun 95	MAIN BATTLE-TANK FIRE CONTROL SYSTEMS STABILIZATION ACCURACY FR/GE/UK/US
3-2-836 (2.2.2)	27 Jun 85	MAIN BATTLE-TANK FIRE CONTROL SYSTEMS DRIFT GE/US
3-2-836 (2.2.3)	29 Jun 95	MAIN BATTLE-TANK FIRE CONTROL SYSTEMS COINCIDENCE FR/GE/UK/US
3-2-836 (2.3.1)	6 Mar 92	MAIN BATTLE-TANK FIRE CONTROL SYSTEMS WEAPON SYSTEM RESPONSE TO CONTROL HANDLE FR/GE/UK/US
3-2-836 (2.3.2)	27 Apr 93	MAIN BATTLE-TANK FIRE CONTROL SYSTEMS FREQUENCY RESPONSE OF WEAPON SERVO SYSTEM

		FR/GE/UK/US
3-2-836 (2.3.3)	27 Apr 93	MAIN BATTLE-TANK FIRE CONTROL SYSTEMS TRANSIENT RESPONSE TO STEP COMMANDS FR/GE/UK/US
3-2-836 (2.3.4)	26 Oct 99	COMBAT VEHICLE FIRE CONTROL SYSTEMS TARGET ENGAGEMENT TIMES FR/GE/UK/US
3-2-836 (2.3.5)	10 Apr 00	COMBAT VEHICLE FIRE CONTROL SYSTEMS TARGET TRACKING FR/GE/UK/US
3-2-836 (2.4.1)	29 Jun 95	MAIN BATTLE-TANK FIRE CONTROL SYSTEMS COMPUTERIZED CORRECTIONS FR/GE/UK/US

INTERNATIONAL TEST OPERATIONS PROCEDURES (ITOPs cont'd)

Fire Control Optics and Electrooptics Working Group 3.5

NUMBER		TITLE
3-2-836 (2.4.2)	13 Oct 97	COMBAT VEHICLE FIRE CONTROL SYSTEMS AUXILIARY SIGHT ACCURACY FR/GE/UK/US
3-2-836 (1.1.2.1)	25 Oct 99	COMBAT VEHICLE FIRE CONTROL SYSTEMS EXTERIOR BALLISTIC SENSORS – AIR TEMPERATURE FR/GE/UK/US
3-2-836 (1.1.2.2)	25 Oct 99	COMBAT VEHICLE FIRE CONTROL SYSTEMS EXTERIOR BALLISTIC SENSORS – ATMOSPHERIC PRESSURE FR/GE/UK/US
3-2-836 (1.1.2.3)	25 Oct 99	COMBAT VEHICLE FIRE CONTROL SYSTEMS EXTERIOR BALLISTIC SENSORS – CROSSWIND FR/GE/UK/US
3-2-836 (1.3.2.1)	10 Apr 00	COMBAT VEHICLE FIRE CONTROL SYSTEMS GUN TURRET DRIVE SYSTEMS - DRIFT

		FR/GE/UK/US
3-2-836	13 Oct 97	COMBAT VEHICLE FIRE CONTROL SYSTEMS
(2.5.1.1)		SIMULATED FIRING, LABORATORY
		FR/GE/UK/US
3-2-836	8 Apr 97	COMBAT VEHICLE FIRE CONTROL SYSTEMS
(2.5.1.2)		SIMULATED FIRING, FIELD
		FR/GE/UK/US
3-2-836	14 Mar 96	COMBAT VEHICLE FIRE CONTROL SYSTEMS
(2.5.2.2)		REAL FIRING FIELD TEST
		FR/GE/UK/US
3-2-838	2 Jun 98	DIRECT VIEW OPTICS
		FR/UK/US
Change 1	30 Jun 00	

PUBLISHED
INTERNATIONAL TEST OPERATIONS PROCEDURES (ITOPs)

Unmanned Target Activated Weapons (UTAW) Working Group 2.3

NUMBER		TITLE
4-2-510	15 May 00	GENERAL TEST REQUIREMENTS FOR UNMANNED TARGET ACTIVATED WEAPONS (UTAW) FR/GE/UK/US
4-2-511	20 May 99	MEASUREMENT OF UNMANNED TARGET ACTIVATED WEAPON (UTAW) WARHEAD PERFORMANCE FR/GE/UK/US
4-2-513	15 May 00	TESTING OF POWER SOURCES FOR UTAWS GE/FR/UK/US
4-2-520	20 May 99	GENERAL TEST REQUIREMENTS FOR COUNTERMINE AND HUMANITARIAN DEMINING EQUIPMENT FR/GE/UK/US

4-2-521	20 May 99	TARGET STANDARDIZATION FOR COUNTERMINE UND HUMANITARIAN DEMINING TESTING FR/GE/UK/US
4-2-523	20 May 99	MINE DETECTION EQUIPMENT FOR COUNTERMINE AND HUMANITARIAN DEMINING (HAND-HELD OR VEHICLE MOUNTED) FR/GE/UK/US

ACTION OFFICER:
Wolfgang H.R. Schmidt
AMSTE-TM-T

WS 19 Jul 00

PUBLISHED
INTERNATIONAL TEST OPERATIONS PROCEDURES (ITOPs)

Radar Working Group 3.1

NUMBER		TITLE
6-2-020	10 Mar 97	RADAR ANTENNA TESTS FR/GE/US
6-2-242	13 Oct 93	ANALOG COMMUNICATION TRANSMITTER AND RECEIVER TEST PROCEDURES
Change 1	20 Nov 95	FR/GE/US
6-2-246	12 Oct 95	DIGITAL COMMUNICATION TRANSMITTER AND RECEIVER TEST PROCEDURES FR/GE/US
6-2-529	9 Jun 99	RADAR RECEIVER PROCEDURES FR/GE/US
6-2-530	31 Mar 93	RADAR TRANSMITTER PROCEDURES FR/GE/US
6-2-531	31 Mar 93	RADAR RECEIVER PULSE COMPRESSION RATIO FR/GE/US
6-2-532	10 Mar 97	ANTENNA SCAN RATE TEST FR/GE/US

6-2-533	11 May 98	RADOME TEST PROCEDURE FR/GE/US

ACTION OFFICER:
Wolfgang H.R. Schmidt
CSTE-DTC-TT-M

WS 19 Jul 00

PUBLISHED
INTERNATIONAL TEST OPERATIONS PROCEDURES (ITOPs)

Intrusion Detection Working Group 3.3

NUMBER		TITLE
6-3-027	31 Dec 87	PASSIVE INFRARED SENSORS FOR INTERIOR APPLICATION GE/US
6-3-028	31 Dec 87	ULTRASONIC MOTION SENSORS FOR INTERIOR APPLICATION GE/US
6-3-029	31 Dec 87	MICROWAVE MOTION SENSORS FOR INTERIOR APPLICATION GE/US
6-3-030	30 Mar 89	BALANCED MAGNETIC SWITCH SENSORS FOR INTERIOR APPLICATION GE/US
6-3-031	30 Mar 89	PASSIVE ULTRASONIC SENSOR FOR INTERIOR APPLICATIONS GE/US
6-3-032	30 Mar 89	VIDEO MOTION SENSORS FOR INTERIOR APPLICATION GE/US
6-3-033	4 Oct 90	VIBRATION SENSORS FOR INTERIOR APPLICATIONS GE/US
6-3-035	4 Oct 90	CAPACITANCE PROXIMITY SENSORS (CPS) FOR INTERIOR APPLICATIONS

		GE/US
6-3-036	30 Aug 91	RF MOTION SENSOR FOR INTERIOR APPLICATIONS GE/US
6-3-038	30 Aug 91	PORTED-COAX SENSORS FOR INTERIOR APPLICATIONS GE/US

ACTION OFFICER:
Wolfgang H.R. Schmidt
CSTE-DTC-TT-M

WS 19 Jul 00

PUBLISHED
INTERNATIONAL TEST OPERATIONS PROCEDURES (ITOPs)

Missiles and Rockets Working Group 5.1

NUMBER		TITLE
1-2-057	4 Jun 98	SAFETY CRITICAL SOFTWARE ANALYSIS AND TESTING FR/GE/UK/US
5-2-506	4 Jun 99	LABORATORY SHOCK TESTING OF MISSILES AND ROCKETS FR/GE/UK/US
5-2-507	19 Jun 98	LABORATORY VIBRATION TESTING OF MISSILES AND ROCKETS
Change 1	3 Dec 99	FR/GE/UK/US
5-2-619	6 Dec 96	SAFETY TESTING OF MISSILE AND ROCKET SYSTEMS EMPLOYING MANNED LAUNCH

		STATIONS FR/GE/UK/US
5-2-620	24 Oct 97	SAFETY TESTING OF REMOTELY LAUNCHED MISSILES FR/GE/UK/US
5-2-622	19 Jun 98	GENERAL REQUIREMENTS FOR FLIGHT TERMINATION SUBSYSTEMS FOR MISSILES, ROCKETS, AERIAL TARGETS, AND UNMANNED AERIAL VEHICLES (UAVs) FR/GE/UK/US

ACTION OFFICER:
Wolfgang H.R. Schmidt
CSTE-DTC-TT-M

WS 19 Jul 00

PUBLISHED
INTERNATIONAL TEST OPERATIONS PROCEDURES (ITOPs)

Airdrop Transportability Working Group 6.1

NUMBER		TITLE
7-2-507	17 Sep 98	AIRDROP OF PERSONNEL WITH RAM AIR PARACHUTES FR/GE/UK/US
7-2-509	27 May 94	AIRDROP OF EQUIPMENT FR/GE/UK/US

ACTION OFFICER:

Wolfgang H.R. Schmidt
CSTE-DTC-TT-M

WS 19 Jul 00

PUBLISHED
INTERNATIONAL TEST OPERATIONS PROCEDURES (ITOPs)

Personnel Airdrop Working Group 6.2

NUMBER	TITLE

None at this time.

ACTION OFFICER:
Wolfgang H.R. Schmidt
CSTE-DTC-TT-M

WS 19 Jul 00

PUBLISHED
INTERNATIONAL TEST OPERATIONS PROCEDURES (ITOPs)

Helicopter External Loads Working Group 6.3

NUMBER	TITLE

None at this time.

ACTION OFFICER:
Wolfgang H.R. Schmidt
CSTE-DTC-TT-M