

# TECHNICAL DATA INSTRUCTION

NUMBER 523

06 Jan 2011

## INSTRUCTIONS FOR THE PREPARATION OF

### AN ENGINEERING CHANGE PROPOSAL UTILIZING RDMR FORM 523

#### 1. GENERAL

1.1 SCOPE. This Technical Data Instruction (TDI) establishes uniform requirements for the preparation of the RDMR Form 523, "Engineering Change Proposal (ECP)," Pages 1-7. A copy of RDMR Form 523 is included in this TDI as Appendix A. The information contained herein is intended to assist in completing the RDMR Form 523.

1.2 Application. The provisions of this TDI apply to all ECP preparing activities and to proposed engineering changes for systems, configuration items (CIs), hardware configuration items (HWCIs), and computer software configuration items (CSCIs).

#### 2. APPLICABLE DOCUMENTS

EIA-649 – National Consensus Standard for Configuration Management

MIL-HNBK-61 – Military Handbook: Configuration Management Guidance

#### 3. DEFINITIONS

3.1 Definitions. For purposes of this TDI, the definitions contained in EIA-649 and MIL-HDBK-61 shall apply unless in conflict with this TDI, in which case this TDI shall govern.

#### 4. GENERAL REQUIREMENTS

4.1 Use of the ECP forms. RDMR Form 523 (Pages 1-7) shall be used for the submission and processing of all Class I engineering changes. When ECP Short Form procedures are specified, only require Page 1 of the ECP form. Supplemental page(s) may be used with the ECP forms as necessary.

4.2 Supporting data. In addition to the information required by this TDI, the ECP package shall include adequate supporting technical data required for proper evaluation.

4.3 Local reproduction. Local reproduction of RDMR Form 523 (Pages 1-7) is authorized.

4.4 Distribution statement. The appropriate distribution markings shall be affixed to the ECP package in accordance with the requirements of the contract.

5. DETAILING REQUIREMENTS. Detailed instructions for completion of the RDMR Form 523 (Pages 1-7).

5.1 RDMR Form 523 (Page 1), "Engineering Change Proposal."

5.1.1 Block 1. Date. Enter the submittal date of the ECP. If the submittal is a Revision (Block 8f), then the date will be the date of submittal for the Revision.

5.1.2 Block 2. Procuring activity number. To be used by Government for entry of internal processing number if desired.

5.1.3 Block 3. DODAAC. Department of Defense Activity Address Code (DODAAC). The DODAAC is in the Logistics Integration Data Base and is managed by the Army Central Service Point. Enter the DODAAC of the procuring activity.

5.1.4 Block 4. Originator name, phone number, and address. In 4a, enter the person's name and phone number. In 4b, enter the Company name and address of the contractor or the Government activity submitting the ECP.

5.1.5 Block 5. Class of ECP. Enter I or II for the applicable ECP as defined in the contract or as defined below if not addressed in the contract. If addressed in the contract, the contract governs.

5.15.1 Class I ECPs should be limited to those that are necessary or offer significant benefit to the Government. Class I ECPs are those that affect the performance, reliability, maintainability, survivability, weight, balance, moment of inertia, interface characteristics, electromagnetic characteristics, or other technical requirements in the specifications and drawings. Class I ECPs also include those changes that affect Government Furnished Equipment, safety, compatibility, retrofit, operation and maintenance manuals, interchangeability, substitutability, replaceability, source control specifications and drawings, costs, guarantees or warranties, deliveries, or schedules. Class II ECPs are those that do not affect form, fit, function, cost, or schedule or the system Configuration Item and do not meet the other criteria described above for Class I ECPs.

5.1.6 Block 6. Justification code. Enter the justification code from the codes provided below which best describes to the proposed Class I engineering change.

CODES

C	-	Correct documentation design problem or deficiency
O	-	Operational or logistics support
P	-	Production stoppage
R	-	Cost Reduction
S	-	Safety
V	-	Value engineering

5.1.6.1 Value engineering ECP. When the contract contains a value-engineering clause, each value engineering ECP shall be identified both by the "V" in block 6 and by the all capital letters entry of the following notation as the first line in Block 19 (Description of Change) on Page 1 of the ECP form: "VALUE ENGINEERING CHANGE PURSUANT TO CONTRACT CLAUSE."

5.1.7 Block 7. Priority. The contractor shall recommend a priority to the Government and enter an "E," "U," or "R" (Emergency, Urgent, or Routine). Emergency priorities will be assigned to those ECPs for which approval are needed within 48 hours. Urgent priorities are assigned to those ECPs for which approvals are needed within 30 days. Routine priorities are assigned for those ECPs for which approvals can wait for up to 90 days.

5.1.8 Block 8. ECP designation.

5.1.8.1 Block 8a. Model/Type. Enter model or type designation of the CI for which this proposal is being filled out. For CSCIs, enter the CSCI identification number.

5.1.8.2 Block 8b. CAGE code. Enter the Commercial and Government Entity (CAGE) code as shown in Defense Logistic Agency (DLA) Cataloging Handbook H4/H8 for the activity originating the ECP.

5.1.8.3 Block 8c. System designation. The system or top-level CI designation or nomenclature assigned by the Government shall be entered, if known.

5.1.8.4 Block 8d. ECP number. Once an ECP number is assigned to the first submission of a change proposal, that number shall be retained for all subsequent submissions of that change proposal. The number of characters is limited to 15. Use of Government assigned numbers assures the numbers are unique. Otherwise, one of the following methods of assigning ECP numbers may be used unless otherwise stated in the contract:

a. A very descriptive method for composing the ECP number for a commercial company is to begin the number with the two to six letter company abbreviation followed by a dash, then the last four digit of the contract number, followed by another dash, and finally followed by the sequential number of the ECP written under that contract.

b. When an ECP is split into a basic ECP and related ECPs, the basic ECP shall be identified with the number prescribed above and each related ECP shall be identified by the basic number plus a separate dash number. The number of characters in the ECP number, dash number, type, and revision identification shall not exceed 15.

c. Other systems may be used provided the ECP number is unique for any CAGE code identified activity, and the IS-character limitation is not exceeded.

5.1.8.5 Block 8e. Type. Enter either a "P" for preliminary or "F" for formal. Formal (type F) changes contain all the documentation required to make the proposed change to the technical data. Type P or preliminary ECPs will be clearly identified as preliminary in Blocks 19 and 20.

5.1.8.6 Block 8f. Revision. If an ECP is being revised, enter the proper identification of the

revision, i.e., R 1 for the first revision. The letter R will precede the numbers for subsequent revisions. (The date submitted shall be the date of the revised ECP.)

5.1.9 Block 9. Baseline affected. Place an "X" in the box(es) according to the baseline(s) affected.

5.1.10 Block 10. Other systems/configuration items affected. Enter an "X" in the "yes" or "no" box, as applicable, to indicate whether there is an effect on other systems or CIs, which will require the submittal of related Class I ECPs. Supply details in Blocks 28 and 30.

5.1.11 Block 11. Specification affected. If specifications cited in the contract are affected by the ECP, their identity by the CAGE code of the design activity, document number, revision letter, and number of the SCN (or NOR) being submitted with the ECP, shall be entered.

5.1.12 Block 12. Drawings affected. Enter the indicated information for all drawings affected by the ECP. The CAGE code to be entered is that of the design activity whose number is assigned to the listed drawings. If more than three drawings are affected, enter the information required in the first line for the top-level drawing affected by the ECP and make direct reference on the second line to the enclosure and paragraph containing the list of all the affected drawings.

5.1.13 Block 13. Title of change. Enter a brief title to identify the component or system affected by the ECP. Do not include the purpose or description which are to be entered in Block 16. For example: F18 Aircraft Air Turbine Start Connector Backshell Replacement; AN/AYK-14(v) CP-1502/CP-1503. Reconfiguration to CP-1799; (CSCI name) Block Update.

5.1.14 Block 14. Contract number(s) and line item(s). Enter the number(s) of all currently active contract(s), and the affected contract line item number(s), at the originating CAGE-coded activity that are affected by the engineering change. If more contracts are affected than can be fit in the block, make reference to the enclosure and paragraph where this information is provided. In the case of a Government-prepared change, the task number under which the ECP will be funded and implemented shall be provided in this block.

5.1.15 Block 15. Procuring contracting officer. Enter the procuring contracting officer's name, code, and telephone number applicable to the CI shown in Block 16.

5.1.16 Block 16. Configuration item nomenclature. Enter the Government assigned name and type designation, CSCI name and number if applicable, or authorized name and number of the CI(s) affected by the ECP.

5.1.17 Block 17. In production. The "yes" box shall be marked if deliveries have not been completed on the contract(s). The "no" box shall be marked if the deliveries have been completed. This block is not always applicable to software. If not applicable, so indicate.

5.1.18 Block 18. All lower level items affected.

a. For hardware, an appropriate, complete descriptive name of the part(s) shall be given here without resorting to such terms as "Numerous bits and pieces." The number(s) of the part(s) shall also be entered. Additionally, applicable National Stock Numbers (NSNs) shall be entered. An attached list may be used when necessary.

b. For CSCI's, enter the name and identifier of each lower level CI and computer software unit affected.

5.1.19 Block 19. Description of change. The description of the proposed change shall include the purpose and shall be given in sufficient detail to adequately describe what is to be accomplished. It shall be phrased in definitive language such that, if it is repeated in the contractual document authorizing the change, it will provide the authorization desired. A description as to which part of the item or system is being changed shall be provided. Supplemental drawings and sketches shall be provided to the extent necessary to clearly portray the proposed change. If the proposed change is an interim solution, it shall be so stated. If additional space is needed, use continuation pages for details but provide an overview in this block. Information should be included as to whether the revision is a resubmittal, replacing the existing ECP in its entirety, or provides change pages to the existing ECP.

5.1.20 Block 20. Need for change. Enter an explanation of the need for the change to include specifically identifying the benefit of the change to the Government. The nature of the defect, failure, incident, malfunction, etc. substantiating the need for the change shall be described in detail. Full utilization shall be made of available failure data. If a new capability is to be provided, improvements in range, speed, performance, endurance, striking power, defensive or offensive capabilities, etc. shall be described in quantitative terms. Correspondence establishing requirements for the change and any testing accomplished prior to the submission shall be identified and summarized. If the ECP is needed to correct maintenance/logistics problems, that fact will be included with sufficient detail to identify the issues. If the ECP is being submitted as a response to a request for ECP or Government direction, cite that authority herein. Additional pages may be added as required.

5.1.21 Block 21. Production effectivity by serial number.

a. For hardware, enter the contractor's estimated production effectivity point for the production items including serial number, or other item identification (e.g., block or lot number) as approved by the Government. In determining the effectivity point for the proposed change, the contractor shall consider, in addition to the time factors, the availability of all support elements affected and the most economical point of introduction consistent with all the salient factors involved. The earliest production incorporation is not necessarily the singular or most important factor in the establishment of a proposed change effectivity point. The effectivity point will be based on concurrent availability of all logistics support elements and materials affected by the change to the item.

b. For CSCI's, identify the CSCI version number into which the change will be incorporated. Where applicable, the effectivity of the end item CI and vehicle (aircraft, tank, ship, etc.) into which the capability represented by the new version of the software is proposed to be incorporated, shall also be provided. If the impact of the ECP merits the release of a new

software version, Block 21 of the ECP submittal shall include a recommendation to this effect. Serial numbers may be used in lieu of version numbers if approved by the Government.

5.1.22 Block 22. Effect on production delivery schedule. State the estimated delivery schedule of items incorporating the change, either in terms of days after contractual approval, or by specific dates contingent upon contractual approval by a specified date. If there will be no effect on the delivery schedule, so state. For a complex ECP, or for related ECPs, this delivery date will be repeated on the milestone chart together with the schedule for other interrelated actions.

5.1.23 Block 23. Retrofit.

5.1.23.1 Block 23a. Recommended item effectivity. When the contractor recommends that the engineering change be accomplished in accepted items by retrofit (see block 43), the quantities and serial (or lot) numbers of accepted items in which the change will be incorporated by retrofit shall be entered in block 23a, or in a referenced enclosure. Such statement regarding items currently in production shall be based upon the estimated approval date of the ECP.

5.1.23.2 Block 23b. Ship/vehicle class affected. When the delivered CI is installed in one or more ship/vehicle classes, enter the identification of such classes. Not applicable when ECP Short Form procedure is specified by contract.

5.1.23.3 Block 23c. Estimated kit delivery schedule. State estimated kit delivery schedule by quantity and date. When special tooling for retrofit is required for Government use, reference an enclosure in block 23b on which is specified the dates of availability of tools, jigs, and test equipment required in conjunction with the kits to accomplish the change.

5.1.23.4 Block 23d. Locations or ship/vehicle numbers affected. State the location(s) at which retrofit is to be accomplished in. If retrofit is to be accomplished in ships (or in vehicles for which the serial numbers are not shown in the block 23), enter the ship hull numbers (or vehicle numbers). Not applicable when ECP Short Form procedure is specified by contract.

5.1.23.5 For CSCI's, this block shall apply if the change is part of a hardware or equipment change and implementation of the CSCI change is per a hardware retrofit schedule, or the fielded version of the software is to be replaced. If the CSCI change is part of a larger hardware or equipment change and incorporation of the CSCI change is per a hardware retrofit schedule, that information will be included here either directly or by reference.

5.1.24 Block 24. Estimated costs/savings under contract. Enter the total estimated costs/savings impact of the ECP on the contract for the subject CI. This figure normally will be the same as that in column 5, line 3, of RDMR Form 523 (Page 5). (Savings shall be shown in parentheses.)

5.1.25 Block 25. Estimated net total costs/savings. Enter the total estimated costs/savings impact of the basic and all related ECPs, including other costs/savings to the Government. This figure normally will be the same as that in column 6 the bottom line of Page 4 or, if there are related ECPs, in column 4, line e, of Page 5. Not applicable when ECP Short Form procedures

are specified by contract.

5.1.26 Block 26. Submitting activity authorized. An authorized official of the activity entered in Block 1 shall sign this block and provide title and personal company phone number in Block 26b. This indicates the ECP has the official sanction of the submitting activity.

5.1.27 Block 27. Approval/disapproval. This block is for use by the Government. (Note: the Contract Administration Office will review all engineering changes. It will recommend approval or disapproval of Class I ECPs by marking Block 27a and completing Block 27d. It will concur or nonconcur in the classification of Class II engineering changes by marking Block 27c accordingly and by completing Block 27d, 27e, and 27f. When the Government requires approval of Class II engineering changes prior to contractor implementation, the designated approval activity will mark Block 27b accordingly and will complete Block 27d. For Class I ECPs, the Government contracting officer will mark Block 27g accordingly and will complete Block 27h, 27i, and 27j.

5.2 Engineering Change Proposal, (ECP) Page 2: Effects on Functional/Allocated Configuration Identification. RDMR Form 523 (Page 2) is to be completed only if the proposed change affects the system specification or the item development specification(s). If a separate product function specification is used, effects on such specification of changes proposed after the PBL has been established shall be described either on RDMR Form 523 (Page 3) or on enclosures referenced thereon.

5.2.1 ECP Number. Enter the same ECP number as in Block 8d of RDMR Form 523 (Page 1). If the ECP number is assigned on the basis of the system, the system designation also shall be given.

5.2.2 Block 28. Other systems affected. Insert data when Block 10 RDMR Form 523 (Page 1) is checked "yes."

5.2.3 Block 29. Other contractors/activities affected. Identify the other contractors or Government activities which will be affected by this engineering change.

5.2.4 Block 30. Configuration items affected. Enter the names and numbers of all CIs, maintenance and operator training equipment, and support equipment affected.

5.2.5 Block 31. Effects on performance allocations and interfaces in system specification. Describe in this block the changes in performance allocations and in the functional/physical interfaces defined in the system specification.

5.2.6 Block 32. Effects on employment, integrated logistic support, training, operational effectiveness, or software.

- a. For hardware, describe the effects of the proposed change on employment, deployment, logistics, and/or personnel and training requirements which have been specified in the approved system and/or CI specifications, including any changes or effects on the

operability of the system. In particular, there shall be an entry detailing any effect on interoperability.

b. For CSCIs, the following information shall be entered as applicable to the degree of design development of the CSCI at the time of ECP submission:

- (1) Identify any required changes to the data base parameters or values, or to data base management procedures;
- (2) Identify and explain any anticipated effects of the proposed change on acceptable computer operating time and cycle-time utilization;
- (3) Provide an estimate of the net effect on computer software storage; and,
- (4) Identify and explain any other relevant impact of the proposed change on utilization of the system.

5.2.7 Block 33. Effects on configuration item specifications. The effect of the proposed change on performance shall be described in quantitative terms as it relates to the parameters contained in the CI development specifications.

5.2.8 Block 34. Developmental requirements and status.

a. For hardware, when the proposed engineering change requires a major revision of the development program (e.g., new prototypes, additional design review activity, tests to be reaccomplished), the nature of the new development program shall be described in detail, including the status of programs already begun.

b. For CSCIs, the contractor shall identify the scheduled sequence of computer software design and test activities which will be required. ECPs initiated after preliminary design which affect the FBL and/or the ABL shall identify, as appropriate, significant requirements for computer software redesign, recoding, repetition of testing, changes to the software engineering/test environments, special installation, adaptation, checkout, and live environment testing. In addition, the specific impact of these factors on approved schedules shall be identified. The impact of the software change on the hardware design and input/output cabling shall also be detailed.

5.2.9 Block 35. Trade-offs and alternative solutions. A summary of the various solutions considered shall be included with an analysis showing the reasons for adopting the solution proposed by the ECP.

5.2.10 Block 36. Date by which contractual authority is needed. Enter the date contractual authority will be required in order to maintain the established schedule.

5.3 RDMR Form 523 (Page 3), "Engineering Change Proposal," Effects on product configuration documentation, logistics and operations. Certain information required on RDMR Form 523 (Page 3) may have been required on RDMR Form 523 (Pages 1 and 2) or does not



apply to computer software. When this information has already been supplied, a cross-reference to such information will be adequate.

- a. For hardware, if any specific logistic interoperability factors are affected, the contractor shall provide information detailing the possible impact on the operational configuration on an attached page.
- b. For CSCIs, the software engineering and test environments are usually not affected by changes in the product configuration of a CSCI. In Block 42, the contractor shall provide information about the status of the software redesign and retesting effort. There shall also be a review of the intent of Blocks 40, 41, 45, 46, 47, and 49, to document CSCI impacts in these areas.

5.3.1 ECP number. Enter the same ECP number as in Block 8d of RDMR Form 523 (Page 1). If the number is assigned by system, include the system designation.

5.3.2 Block 37. Effect on product configuration documentation or contract. The effects on the approved CI product specifications shall be described by reference to the SCNs, NORs, or other enclosure(s) which cover such proposed text changes in detail. The effects on performance, weight, moment, etc., which are covered in the enclosure(s), shall be indexed by proper identification adjacent to the factor affected. The effects on drawings, when not completely covered on Page 1, shall be described in general terms by means of a referenced enclosure. Such enclosure may consist of a list of enclosed NORs if submittal of an NOR for each drawing affected is a requirement of the contract. Indicate any technical data submittal which is not provided for in the CDRL by means of a referenced enclosure. Address nomenclature change when applicable.

5.3.3 Block 38. Effect on integrated logistics support elements. The effects of the engineering change on logistic support of the item shall be indicated by checking the appropriate boxes. These effects shall be explained in detail on an enclosure indexed by appropriate identification adjacent to the subject under discussion. The information required all indicate the method to be used to determine the integrated logistic support plans and items which will be required for the previously delivered items to the same configuration. The following shall be covered as applicable:

- a. Effect on schedule and content of the Integrated Logistics Support (ILS) plan.
- b. Effect on maintenance concept and plans for the levels of maintenance and procedures.
- c. System and/or CI Logistics Support Analysis (LSA) tasks (MIL-STD-1388-1) to be accomplished and LSA data (MIL-STD-1388-2) requiring update wherever it exists in the contract.
- d. Extension/revision of the interim support plan.
- e. Spares and repair parts that are changed, modified, obsoleted, or added, including

detailed supply data for interim support spares.

NOTES: Failure to include detailed supply data will delay ECP processing.

f. Revised or new technical manuals.

g. Revised or new facilities requirements and site activation plan.

h. New, revised, obsoleted, or additional support equipment (SE), test procedures and software. For items of SE and trainers which require change, furnish a cross reference to the related ECPs, and for any related ECP not furnished with the basic ECP, furnish a brief description of the proposed change(s) in SE and trainers.

i. Qualitative and quantitative personnel requirements data which identify additions or deletions to operator or maintenance manpower in terms of personnel skill levels, knowledge, and numbers required to support the CI as modified by the change.

j. New operator and maintenance training requirements in terms of training equipment, trainers, and training software for operator and maintenance courses. This information should include identification of specific courses, equipment, technical manuals, personnel, etc. required to set up the course at either the contractor or Government facility.

k. See paragraph i above for instructions.

l. See paragraph j above for instructions.

m. Any effect on contract maintenance that increases the scope or dollar limitation established in the contract.

n. Effects on packaging, handling, storage, and transportability resulting from changes in materials, dimensions, fragility, inherent environmental or operating conditions.

5.3.4 Block 39. Effect on operational employment. The effects of the engineering change of CI utilization shall be indicated by checking the appropriate factors and providing details by enclosures. Quantitative values shall be used whenever details by enclosures practicable but are required when reliability and service life are impacted. Survivability includes nuclear survivability.

5.3.5 Block 40. Other considerations. The effects of the proposed engineering change on the following shall be identified on an enclosure indexed by appropriate identification adjacent to the factor affected:

a. Interfaces having an effect on adjacent or related items (output, input, size, mating connections, etc.).

- b. Government Furnished Equipment (GFE) or Government Furnished Data (GFD) changed, modified, or obsolete.
- c. Physical constraints. Removal or repositioning of items, structural rework, increase or decrease in overall dimensions.
- d. Software (other than operational, maintenance, and training software) requiring a change to existing code and/or, resources or addition of new software.
- e. Rework required on other equipment not included previously which will effect the existing operational configuration.
- f. Additional or modified system test procedures required.
- g. Any new or additional changes having an effect on existing warranties or guarantees.
- h. Changes or updates to the parts control program.
- i. Effects on life cycle cost projections for the configuration item or program, including projections of operation and support costs/savings for the item(s) affected over the contractually defined life and projections of the costs/savings to be realized in planned future production and spares buys of the item(s) affected.

5.3.6 Block 41. Alternate solutions. A summary of the various alternative solutions considered, including the use of revised operation or maintenance procedures, revised inspection of servicing requirements, revised part replacement schedules, etc., shall be included. The contractor shall provide an analysis of the alternatives, identify the advantages and disadvantages inherent in each feasible alternative.

5.3.7 Block 42. Developmental status. When applicable, the contractor shall make recommendations as to the additional tests, trails, installations, prototypes, fit checks, etc., which will be required to substantiate the proposed engineering change. these recommendations shall include the test objective and test vehicle(s) to be used. The contractor shall indicate the development status of the major items of OFE which will be used in conjunction with the change and the availability of the equipment in terms of the estimated production incorporation point.

5.3.8 Block 43. Recommendations for retrofit. When applicable, the contractor shall make recommendations for retrofit of the engineering change into accepted items with substantiating data, any implications thereto, and a brief description of the action required. Where retrofit is not recommended, an explanation of this determination shall be provided. Reference shall be made

to any enclosure required to state recommended retrofit effectivity (see Block 23a).

5.3.9 Block 44. Work-hours per unit to install retrofit kits. Complete Blocks 44a through 44d to show the amount of work which must be programmed for various activities to install retrofit kits. Estimate work-hours to install retrofit kits when weapon system is undergoing overhaul.

5.3.10 Block 45. Work-hours to conduct system tests after retrofit. Enter the work-hours required to test the system or the item following installation of the retrofit kit.

5.3.11 Block 46. This change must be accomplished. Where previously approved engineering changes must be incorporated in a specific order in relation to the proposed change, such order should be specified.

5.3.12 Block 47. Is contractor field service engineering required? Check applicable box. If "yes" attached proposed program for contractor participation.

5.3.13 Block 48. Out of service time. Estimate the total time period from removal of the equipment from operational service until equipment will be returned to operational status after being retrofitted.

5.3.14 Block 49. Effect of this ECP and previously approved ECPs on item. The contractor shall summarize the cumulative effect upon performance, weight, electrical load, etc., of this ECP and previously approved ECPs when design limitations are being approached or exceeded. Consequences of ECP disapproval may be stated in this block or in a referenced enclosure.

5.3.15 Block 50. Data contractual authority needed. The contractor shall provide the date by which contractual authority to proceed is needed to maintain the estimated effectiveness specified in the ECP and to provide concurrent ILS and logistics support item deliveries. The contractor should consider the targets for decision allowing additional time for review, mailing, and other incidental handling and processing.

5.4 RDMR Form 523 (Page 4) "Engineering Change Proposal," Estimated net total cost impact. RDMR Form 523 (Page 4) is intended as the summary of the estimated net total cost/savings impact of a single ECP. In Blocks 51 a through d, each cost factor associated with the ECP shall be considered as to whether such cost or portion thereof under the subject contract is recurring or nonrecurring. Enter cost savings in columns 1 and 4, as applicable, using entries in the "unit" and "quantity" columns when appropriate. Savings shall be enclosed with parentheses. Other costs/savings to the Government resulting from approval of this ECP shall be entered in column 6 to the extent these costs can be determined by the contractor. This estimate of cost impact will be used for planning purposes and for a cost reduction or VE ECP analysis as to the net saving that would result. Firm cost proposals shall be submitted on standard form (SF) 1411, together with the appropriate costs breakdown. If an ECP affects items being delivered to more than one service, a separate RDMR Form 523 (Page 4) shall be filled out for the quantities to be delivered to each service. Unless otherwise prescribed, costs of special tooling, scrap,

redesign, etc. shall be divided between the using services on the basis of the percent of items furnished to each. The cost analysis applicable to each service shall be appropriately labeled at the top of the form.

5.4.1 ECP number. Enter the same ECP number as in Block 8d of RDMR Form 523 (Page 1). If the number is assigned by system, include system designation.

5.4.2 Block 51. Estimated Costs/Savings Summary, Related ECPs.

5.4.2.1 Block 51a. Production costs/savings. Enter the estimate of costs/savings applicable to production of the CI resulting from incorporation of the change. Show redesign costs for the CI in the block titled "engineering, engineering data revisions" when the item is in production. Enter the projected life cycle costs/savings applicable to the planned production and spares buys of the item that are not yet on contract on the CONFIGURATION ITEM/CSCI line in column 6. enter the subtotal of production costs both nonrecurring and recurring) in the fifth column.

5.4.2.2 Block 51b. Retrofit costs. Enter the estimate of costs applicable to retrofit of the item, including installation and testing costs. When government personnel accomplish, or are involved in, the installation and/or testing activities, the estimated costs shall be entered in column 6 on the affected lines. Show design costs of the retrofit kit and data revision costs strictly related to retrofit when the CI is in production; show all redesign and data revision costs when the item is not in production. Costs of modifications required to existing GFE and subsequent testing also shall be shown. Enter the subtotal of retrofit costs in the fifth column. If some or all of the retrofit activities and costs will have to be deferred and placed on contract at a future date, show that deferred portion of the cost applicable to each line of Block 51 b in column 6.

5.4.2.3 Block 51c. Integrated Logistic Support (ILS) costs/savings. Enter the estimated cost of the various elements of ILS applicable to the item covered by the ECP. On the line titled "interim support," estimated costs shall be entered based upon the period of time between initial installation/operation of the item (aircraft, tank, etc.) as modified by the ECP and Government attainment of support capability. Such "interim support" costs shall include costs estimates of contractor recommended/provided spares and repair parts, special support equipment, training equipment, and personnel training program. On the line titled "maintenance manpower" shall be entered the estimated costs/savings for the contracted maintenance support for the remainder of existing maintenance contracts. Other ILS costs/savings associated with ILS elements for which appropriate titles do not appear in Block 51c may be entered in place of a factor not used unless such costs are covered on RDMR Form 523 (Page 5) or in related ECPs. Enter the subtotal of ILS costs/savings in column 5. Enter the operation and support portion of the life cycle cost/savings on the subtotal line in column 6.

5.4.2.4 Block 51d. Other costs/savings. If there are other costs under the contract which do not fall under the production, retrofit or ILS headings, enter the total of such costs in Block 51 d, column 5. If there are other costs to the Government which do not fall under the production, retrofit or ILS headings or under Block 51g, "coordination changes by Government, enter the

total of such costs in Block 51d, column 6.

5.4.2.5 Block 51e. subtotal costs/savings. Enter the subtotals of columns 1, 4, 5, and 6 on this line. The subtotal in column 5 shall be the sum of columns 1 and 4. This subtotal under the contract then shall be entered on the line so titled in column 6 and on RDMR Form 523 (Page 1), Block 24.

5.4.2.6 Block 51f. Coordination of changes with other contractors. This term applies to interface changes to items other than and changes to GFE being covered under 51b. If such coordination changes are covered by related ECPs and summarized on RDMR Form 523 (Page 5), the estimated costs thereof shall not be entered in Block 51f. However if Page 6 is not required, or if costs of certain coordination changes are not tabulated on Page 6, estimate of such costs shall be entered in Block 51f, when available.

5.4.2.7 Block 51g. Coordination changes by Government. Enter in this block an estimate of the cost to the government of interface changes which must be accomplished in delivered items (aircraft, ships, facilities, etc.) to the extent such costs are not covered in Block 51b or on RDMR Form 523 (Page 5).

5.4.2.8 Block 51h. Estimated net total costs/savings. Enter the sum of all cost savings on column 6 and on RDMR Form 523 (Page 1), Block 25.

5.5 RDMR Form 523 (Page 5), Engineering Change Proposal,” Estimated costs/savings summary, related ECPs. RDMR Form 523 (Page 5) is intended as the summary of the estimated net total cost impact of both the package of related ECPs and other associated new requirements which are needed to support the modified items. A few revised requirements for ILS, such as ILS plans and maintenance concepts do not appear as headings on RDMR Form 523 (Page 4). When only a single ECP is involved, these additional costs for revision of ILS plans, ect. Should be shown on Page 5 under the ILS heading, and Page 6 may be omitted.

a. Responsibility for preparation:

(1) Prime contractor. The prime contractor shall summarize the costs/savings of all related ECPs for which the contractor is responsible, on RDMR Form 523 (page 5). If there is no system-integrating contractor, the prime contractor submitting the basic ECP shall include the costs of related ECPs being submitted by other affected contractors to the extent such information is available.

(2) System integrating contractor. When a system integrating contractor (or coordinating contractor) has contractual responsibility for ECP coordination, the contractor shall summarize the costs of related ECPs of the several primes involved in an interface or interrelated ECP on RDMR Form 523 (Page 5) and shall attach this page to the ECP package.

b. Summarization techniques. The costs of certain related ECPs are entirely ILS costs. Thus costs of ECPs for trainers, other training equipment, and SE shall be listed in total under the "ILS costs" heading. Other ECPs (applicable to weapons, aircraft, tanks, subsystems thereof, etc.) shall be split into the four subtotals of production, "retrofit," "ILS," and RDMR Form 523 (Page 5). The sum of the four subtotals attributed on Page 6, column (3), to an individual ECP should agree with the subtotal of costs/savings under contract, line 3, column (5) of RDMR Form 523 (Page 4) of that ECP. Cost breakdowns should be arranged in such manner that costs/savings are neither included more than once on the summary nor omitted. The purpose of the grouping on the cost summary is to arrive at a total ILS cost, and a net total cost of all actions for the complete group of related ECPs. If more related ECPs will have to be summarized than there is room available in the blocks on the form, the summarization of each cost area shall be accomplished on a separate enclosure and the total for that cost area entered on the subtotal line for that area on RDMR Form 523 (Page 5).

c. Software changes only. This form shall not apply in the case where all the related ECPs being summarized refer to software changes only. However, a separate page(s) shall be provided with the ECP detailing the summary of the individual CSCI costs/savings for each of the related ECPs, grouped by the cost areas, and providing the total costs/savings for all of the related software ECPs.

5.5.1 RDMR Form 523 (Page 6), ECP number. Enter the same ECP number as in Block 8d of RDMR Form 523 (Page 1). If the number is assigned by system, include system designation.

5.5.2 Block 52a. Production cost/savings. Enter the ECP number in column (2). Enter the production subtotals from columns (5) and (6) of Block 51a of each ECP applicable to weapons, aircraft, tanks, subsystems thereof, etc. in columns (3) and (4) respectively. (Note that total costs of ECPs on trainers, training equipment, and SE are entered in Block 52c.)

5.5.3 Block 52b. Retrofit costs. Retrofit costs may be charged by the Government to production funds or maintenance funds or may be split between the two. The type of funds used depends upon the phase in the items life cycle. If the practice of the Government in this regard is known to the originator of Page 6, retrofit costs shall be entered in, or split between, Blocks 52b and 52.c.1, as appropriate. If such practice is unknown, enter in Block 52b the ECP number and the retrofit subtotals from the columns (5) and (6) of Block 51b for each applicable ECP.

5.5.4 Block 52c. ILS costs/savings. Enter retrofit costs in Block 52.c.1, if appropriate. Enter in Block 52.2.c the ILS subtotals from columns (5) and (6) of block 51c of each ECP. As stated in D.5.4.4, enter costs of ECPs for ILS items in blocks 52.c.3, 4, 5, and 6. Enter costs of revision or preparation of ILS plans and LSA records for the CI or complete system in Block 52.c.7. Enter in Block 52.c.9 costs of revision of the interim support plan to the extent such costs have not already been covered under Block 51c of RDMR Form 523 (Page 4) of the applicable ECPs. Enter in Blocks 52.c.10 through 52.c.18 the costs of all new requirements for ILS not covered by ECPs, such costs being broken down into nonrecurring and recurring costs, as appropriate, and

totaled in column (3).

5.5.5 Block 52d. Other costs/savings. Enter in Block 52d the sum of the "other costs" totals from column (5) and (6) of Block 51d of each ECP applicable to weapons aircraft, tanks, subsystems thereof, etc. Enter the subtotals of columns (3) and 94) on this line. The subtotal under contract(s) shall then be entered on the line so titled in column (4).

5.5.6 Block 52e. Estimated net total costs/savings. Enter the sum of the preceding two lines of column 4.

5.6 RDMR Form 523 "Engineering Change Proposal (Hardware)." See 5.4.18.8 for information as to when RDMR Form 523 (Page 6) is required. (An equivalent format may be substituted, when appropriate.) For software-only ECPs, the Form 523 (Page 7), shall be used instead to summarize the detailed software events schedule. If the ECP impacts both software and hardware, both Pages 6 and 7 shall be used, as appropriate.

5.6.1 ECP number. Enter the same ECP number as in Block 8d of RDMR Form 523 (Page 1). If the number is assigned by system, include system designation.

5.6.2 Block 53. Cage code. Enter the CAGE code for the activity originating the ECP.

5.6.3 Block 54. Configuration item nomenclature. Enter the information from Block 16.

5.6.4 Block 55. Title of change. Enter the information from Block 13.

5.6.5 Block 56. Milestone chart. Enter the symbols (see legend on form) , as appropriate for the activity, to show the time phasing of the various deliveries of items, support equipment, training equipment, and documentation incorporating the basic and related ECPs. Enter other symbols and notations to show the initiation or termination of significant actions. All dates are based upon months after contractual approval of the basic ECPs.

5.7 RDMR Form 523 (Page 7), "Engineering Change Proposal (Software)." See 5.4.18.8 for information as to when RDMR Form 523 (Page 7) is required. (An equivalent format may be substituted, when appropriate.) for hardware-only ECPs, the RDMR Form 523 (Page 6), shall be used instead to summarize the detailed hardware events schedule. If the ECP impacts both software and hardware, both Page 6 and Page 7 shall be used, as appropriate.

5.7.1 ECP number. Enter the same ECP number as in Block 8d RDMR Form 523 (Page 1). If the number is assigned by system, include system designation.

5.7.2 Block 57. Cage code. Enter the CAGE code for the activity originating the ECP.



5.7.3 Block 58. CSCI nomenclature. Enter the CSCI name and identification number if applicable, or authorized name and number of the CI(s) affected by the ECP.

5.7.4 Block 59. Title of change. Enter the information from Block 10.

5.7.5 Block 60. Milestone chart. Enter the symbols (see legend on form), as appropriate for the activity, to show the time phasing of the various deliveries of items, training equipment, and documentation incorporating the basic and related ECPs. Enter other symbols and notations to show the initiation of termination of significant actions. All dates are based upon months after contractual approval of the basic ECP.

5.8 ECP form continuation pages. Continuation pages should have the same heading as previous ECP pages including the ECP number. These pages shall address the block numbers. Note: Do not use the designation; attachment (yy), enclosure ( ), etc. The continuation pages are to be numbered consecutively such as: Page 6 of 8, Page 7 of 8, and Page 8 of 8.

**Preparing Activity:**

Configuration Management Group  
Technical Data Management Division  
RDMR-SET  
Redstone Arsenal, AL 35898  
(256) 876-1335

# Appendix A

<b>ENGINEERING CHANGE PROPOSAL (ECP), PAGE 1</b>					1. DATE (YYMMDD)		<i>Form Approved RDMR-SET</i>		
Send comments and/or questions regarding use of this form to Commander, US Army Aviation and Missile Command, RDMR-SET, Redstone Arsenal, AL 35898-5000. <b>PLEASE RETURN YOUR COMPLETED FORM TO THE GOVERNMENT ISSUING CONTRACTING OFFICER FOR THE CONTRACT/PROCURING ACTIVITY WITH A COPY TO THIS ADDRESS.</b>							2. PROCURING ACTIVITY NO.		
DISTRIBUTION STATEMENT							3. DODAAC		
4. ORIGINATOR			b. ADDRESS (Street, City, State, Zip Code)			5. CLASS OF ECP			
a. TYPED NAME (First, Middle Initial, Last)						6. JUST. CODE		7. PRIORITY	
8. ECP DESIGNATION						9. BASELINE AFFECTED			
a. MODEL/TYPE		b. CAGE CODE		c. SYSTEM DESIGNATION		<input type="checkbox"/> FUNCTIONAL <input type="checkbox"/> PRODUCTION <input type="checkbox"/> ALLOCATED			
d. ECP NO.			e. TYPE	f. REV		10. OTHER SYS./CONFIG. ITEMS AFFECTED			
						<input type="checkbox"/> YES <input type="checkbox"/> NO			
11. SPECIFICATIONS AFFECTED					12. DRAWINGS AFFECTED				
	CAGE Code	Specification/Document No.	REV.	SCN	CAGE Code	NUMBER	REV.	NOR	
a. SYSTEM									
b. DEVELOPMENT									
c. PRODUCTION									
13. TITLE OF CHANGE									
14. CONTRACT NO. AND LINE ITEM					15. PROCURING CONTRACTING OFFICER				
					a. NAME (First, Middle, Last)			b. CODE	
16. CONFIGURATION ITEM NOMENCLATURE							17. IN PRODUCTION		
							<input type="checkbox"/> YES <input type="checkbox"/> NO		
18. ALL LOWER LEVEL ITEMS AFFECTED									
a. NOMENCLATURE				b. PART NO.			c. NSN		
19. DESCRIPTION OF CHANGE									
20. NEED FOR CHANGE									
21. PRODUCTION EFFECTIVITY BY SERIAL NUMBER					22. EFFECT ON PRODUCTION DELIVERY SCHEDULE				
23. RETROFIT									
a. RECOMMENDED RETROFIT EFFECTIVITY					b. SHIP/VEHICLE CLASS AFFECTED				
c. ESTIMATED KIT DELIVERY SCHEDULE					d. LOCATIONS OR SHIP/VEHICLE NUMBERS AFFECTED				
24. ESTIMATED COST/SAVINGS UNDER CONTRACT					25. ESTIMATED NET TOTAL COSTS/SAVINGS				
23. SUBMITTING ACTIVITY					b. TITLE AND PHONE NUMBER				
a. AUTHORIZED SIGNATURE									
27. APPROVAL/DISAPPROVAL									
a. CLASS I			b. CLASS II			c. CLASS II			
<input type="checkbox"/> APPROVAL RECOMMENDED		<input type="checkbox"/> DISAPPROVAL RECOMMENDED		<input type="checkbox"/> APPROVED		<input type="checkbox"/> DISAPPROVED		<input type="checkbox"/> CONCUR IN CLASSIFICATION OF CHANGE	
								<input type="checkbox"/> DO NOT CONCUR IN CLASSIFICATION OF CHANGE	
d. GOVERNMENT ACTIVITY					e. SIGNATURE		f. DATE SIGNED (YYMMDD)		
g. APPROVAL		h. GOVERNMENT ACTIVITY			i. SIGNATURE		j. DATE SIGNED (YYMMDD)		
<input type="checkbox"/> APPROVED <input type="checkbox"/> DISAPPROVED									

**ENGINEERING CHANGE PROPOSAL (ECP), PAGE 2***Form Approved  
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ECP NUMBER

**EFFECTS ON FUNCTIONAL/ALLOCATED CONFIGURATION DOCUMENTATION**

28. OTHER SYSTEMS AFFECTED

29. OTHER CONTRACTORS/ACTIVITIES AFFECTED

30. CONFIGURATION ITEMS AFFECTED

31. EFFECTS ON PERFORMANCE ALLOCATIONS AND INTERFACES IN SYSTEM SPECIFICATION

32. EFFECTS ON EMPLOYMENT, INTEGRATED LOGISTICS SUPPORT, TRAINING, OPERATIONAL EFFECTIVENESS OR SOFTWARE

33. EFFECTS ON CONFIGURATION ITEM SPECIFICATIONS

34. DEVELOPMENTAL REQUIREMENTS AND STATUS

35. TRADE-OFFS AND ALTERNATE SOLUTIONS

36. DATE BY WHICH CONTRACTUAL AUTHORITY IS NEEDED (YYMMDD)

# ENGINEERING CHANGE PROPOSAL (ECP), PAGE 3

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## EFFECTS ON PRODUCT CONFIGURATION DOCUMENTATION, LOGISTICS AND OPERATIONS

(X)	FACTOR	ENCL.	PAR.	(X)	FACTOR	ENCL.	PAR.
	<b>37. EFFECTS ON PRODUCTION CONFIGURATION DOCUMENTATION OR CONTRACT</b>				<b>39. EFFECTS ON OPERATIONAL EMPLOYMENT</b>		
	a. PERFORMANCE				a. SAFETY		
	b. WEIGHT-BALANCE-STABILITY ( <i>Aircraft</i> )				b. SURVIVABILITY		
	c. WEIGHT-MOVEMENT ( <i>Other equipment</i> )				c. RELIABILITY		
	d. CDRL, TECHNICAL DATA				d. MAINTAINABILITY		
	e. NOMENCLATURE				e. SERVICE LIFE		
					f. OPERATING PROCEDURES		
	<b>38. EFFECT ON INTEGRATED LOGISTICS SUPPORT (ILS) ELEMENTS</b>				g. ELECTROMAGNETIC INTERFERENCE		
	a. ILS PLANS				h. ACTIVATION SCHEDULE		
	b. MAINTENANCE CONCEPT, PLANS AND PROCEDURES				i. CRITICAL SINGLE POINT FAILURE ITEMS		
	c. LOGISTICS SUPPORT ANALYSES				j. INTEROPERABILITY		
	d. INTERIM SUPPORT PROGRAMS						
	e. SPARES AND REPAIR PARTS				<b>40. OTHER CONSIDERATIONS</b>		
	f. TECH MANUALS/PROGRAMMING TAPES				a. INTERFACE		
	g. FACILITIES				b. OTHER AFFECTED EQUIPMENT/GFE/GFP		
	h. SUPPORT EQUIPMENT				c. PHYSICAL CONSTRAINTS		
	i. OPERATOR TRAINING				d. COMPUTER PROGRAMS AND RESOURCES		
	j. OPERATOR TRAINING EQUIPMENT				e. REWORK OF OTHER EQUIPMENT		
	k. MAINTENANCE TRAINING				f. SYSTEM TEST PROCEDURES		
	l. MAINTENANCE TRAINING EQUIPMENT				g. WARRANTY/GUARANTEE		
	m. CONTRACT MAINTENANCE				h. PARTS CONTROL		
	n. PACKAGING, HANDLING, STORAGE TRANSPORTABILITY				i. LIFE CYCLE COSTS		

**41. ALTERNATE SOLUTIONS**

**42. DEVELOPMENTAL STATUS**

**43. RECOMMENDATIONS FOR RETROFIT**

**44. WORK-HOURS PER UNIT TO INSTALL RETROFIT KITS**

a. ORGANIZATION    b. INTERMEDIATE    c. DEPOT    d. OTHER

**45. WORK-HOURS TO CONDUCT SYSTEM TESTS AFTER RETROFIT**

**46. THIS CHANGE MUST BE ACCOMPLISHED**

BEFORE     WITH     AFTER THE FOLLOWING CHANGES

**47. IS CONTRACTOR FIELD SERVICE ENGINEERING REQUIRED?**

YES     NO

**48. OUT OF SERVICE TIME**

**49. EFFECT OF THIS ECP AND PREVIOUSLY APPROVED ECP'S ON ITEM**

**50. DATE CONTRACTUAL AUTHORITY NEEDED FOR (YYMMDD)**

a. PRODUCTION  
b. RETROFIT

# ENGINEERING CHANGE PROPOSAL (ECP), PAGE 4

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ECP NUMBER

**51. ESTIMATED NET TOTAL COST IMPACT** *(Use parentheses for savings)*

FACTOR	COST/SAVINGS UNDER CONTRACT					Other Costs/ Savings to the Government (f)
	Non- Recurring (a)	RECURRING			Total (e)	
		Unit (b)	Quantity (c)	Total ( <i>Recurring</i> ) (d)		
<b>a. PRODUCTION COST/SAVINGS</b>						
(1) CONFIGURATION ITEM/CSCI						
(2) FACTORY TEST EQUIPMENT						
(3) SPECIAL FACTORY TOOLING						
(4) SCRAP						
(5) ENGINEERING, ENGINEERING DATA REV						
(6) REVISION OF TEST PROCEDURES						
(7) QUALIFICATION OF NEW ITEMS						
(8) SUBTOTAL OF PROD COSTS/SAVINGS						
<b>b. RETROFIT COSTS</b>						
(1) ENGINEERING DATA REVISION						
(2) PROTOTYPE TESTING						
(3) KIT PROOF TESTING						
(4) RETROFIT KITS FOR OPERATIONAL SYS						
(5) PREP. OF MWO/TCTO/SC/ALT/TD						
(6) SPECIAL TOOLING FOR RETROFIT						
(7) INSTALLATION - CONTRACTOR PERSONNEL						
(8) INSTALLATION - GOVERNMENT PERSONNEL						
(9) TESTING AFTER RETROFIT						
(10) MODIFICATION OF GFE/GFP						
(11) QUALIFICATION OF GFE/GFP						
(12) SUBTOTAL OF RETROFIT COSTS/SAVINGS						
<b>c. INTEGRATED LOGISTICS SUPPORT COSTS/SAVINGS</b>						
(1) SPARES/REPAIR PARTS REWORK						
(2) NEW SPARES AND REPAIR PARTS						
(3) SUPPLY/PROVISIONING DATA						
(4) SUPPORT EQUIPMENT						
(5) RETROFIT KITS FOR SPARES						
(6) OPERATOR TRAINING COURSES						
(7) MAINTENANCE TRAINING COURSES						
(8) REVISION OF TECHNICAL MANUALS						
(9) NEW TECHNICAL MANUALS						
(10) TRAINING/TRAINERS						
(11) INTERIM SUPPORT						
(12) MAINTENANCE MANPOWER						
(13) COMPUTER PROGRAMS/DOC						
(14) SUBTOTAL OF ILS COSTS/SAVINGS						
<b>d. OTHER COSTS/SAVINGS</b>						
<b>e. SUBTOTAL COSTS/SAVINGS</b>						
(1) SUBTOTAL UNDER CONTRACT						
<b>f. COORDINATION OF CHANGES WITH OTHER CONTRACTORS</b>						
<b>g. COORDINATION CHANGES BY GOVERNMENT</b>						
<b>h. ESTIMATED NET TOTAL COSTS/SAVINGS</b>						

# ENGINEERING CHANGE PROPOSAL (ECP), PAGE 5

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ECP NUMBER

**52. ESTIMATED COSTS/SAVINGS SUMMARY, RELATED ECP'S** *(Use parentheses for savings)*

	CAGE CODE	ECP NUMBER	COSTS / SAVINGS UNDER CONTRACTS	OTHER COSTS / SAVINGS TO GOVERNMENT
	(a)	(b)	(c)	(d)
<b>a. PRODUCTION COSTS/SAVINGS</b> <i>(Subtotal of Costs/Savings Elements from Page 4, Item 4.a., applicable to aircraft, ship, tank vehicle, missile or its subsystem)</i>				
(1) SUBTOTAL PRODUCTION COSTS / SAVINGS				
<b>b. RETROFIT COSTS</b> <i>(Applicable to aircraft, ship, tank, vehicle, missile or its subsystem)</i>				
(1) SUBTOTAL RETROFIT COSTS				
<b>c. INTEGRATED LOGISTICS SUPPORT COSTS / SAVINGS REVISED REQUIREMENTS</b>				
(1) ITEM RETROFIT <i>(If not covered under "b") (Applicable to aircraft, ship, tank, vehicle, missile or its subsystem)</i>				
(2) ILS SUBTOTAL <i>(Applicable to aircraft, ship, tank, vehicle, missile or its subsystem)</i>				
(3) OPERATOR TRAINER <i>(Net total cost / saving from each ECP covering operator trainer)</i>				
(4) MAINTENANCE TRAINER <i>(Net total cost saving from each ECP covering maintenance trainer)</i>				
(5) OTHER TRAINING EQUIPMENT				
(6) SUPPORT EQUIPMENT <i>(Net total cost / saving from each ECP on support equipment)</i>				
(7) ILS PLANS				
(8) MAINTENANCE CONCEPT, PLANS, SYSTEM DOCUMENTS				
(9) INTERIM SUPPORT PLAN				
<b>NEW REQUIREMENTS</b>	<b>CAGE CODE</b>	<b>NON-RECURRING COSTS</b>	<b>RECURRING COSTS</b>	
			<b>UNIT</b>	<b>QTY</b>
			<b>TOTAL</b>	
(10) PROVISIONING DOCUMENTATION				
(11) OPER TRNR / TRNG DEVICES / EQUIP				
(12) MANUALS / SPARES, REPAIR PARTS <i>(For (11))</i>				
(13) MAINTENANCE TRNR/TRNG DEVICES/EQUIP				
(14) MANUALS/SPARES, REPAIR PARTS <i>(For (13))</i>				
(15) SUPPORT EQUIPMENT				
(16) MANUALS <i>(For (15))</i>				
(17) PROVISIONING DOCUMENTATION <i>(For (15))</i>				
(18) REPAIR PARTS <i>(For (15))</i>				
(19) SUBTOTAL ILS COSTS / SAVINGS <i>(Sum of c(1) through c(18))</i>				
<b>d. OTHER COSTS / SAVINGS</b> <i>Total from Page 4, Item 4.d., or related ECP's</i>	<b>CAGE CODE</b>	<b>ECP NUMBER</b>		
(1) TOTAL OTHER COSTS / SAVINGS				
(2) SUBTOTAL OF COLUMNS				
(3) SUBTOTAL UNDER CONTRACT				
<b>e. ESTIMATED NET TOTAL COSTS / SAVINGS</b> <i>(a + b + c + d)</i>				



# ENGINEERING CHANGE PROPOSAL (ECP) (SOFTWARE), PAGE 7

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**ECP NUMBER**

DISTRIBUTION STATEMENT

**53. CAGE CODE**

**54. CONFIGURATION ITEM NOMENCLATURE**

**55. TITLE OF CHANGE**

**56. DATE AUTHORIZATION TO PROCEED RECEIVED BY CONTRACTOR** ▼

START DELIVERY PROGRESS POINT **S** **C**

COMPLETE DELIVERY ▼

NO. OF MONTHS		1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1	2	2	2	2	2	2	2	2	2	2	3	3	3	3	3	3	3	3
a . C O N F I G U R A T I O N  I T E M	(1) Software Engineering																																			
	(2) Software Documentation																																			
	(3) Software Replication																																			
	(4) Software Distribution																																			
b . S U P P O R T E Q U I P M E N T	(1) Software Engineering Environment Upgrade																																			
	(2) Software Test Environment Upgrade																																			
c . T R A I N E R	(1) Operator																																			
	(2) Maintenance																																			
NO. OF MONTHS		1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1	1	2	2	2	2	2	2	2	2	2	2	3	3	3	3	3	3	3