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J. H. SALTZER

Research and Development Subcontract

Subcontract effective this 1st day of January, 1974, by and between the Massachusetts Institute of Technology (hereinafter referred to as "Subcontractor") a corporation organized under the laws of the Commonwealth of Massachusetts, having its principal place of business in Cambridge, Massachusetts and Honeywell Information Systems Inc. (hereinafter referred to as "Contractor") a Delaware corporation having a place of business within the Commonwealth of Virginia at 7900 Westpark Drive, McLean, Virginia.

Whereas, the Contractor and Subcontractor entered into a research agreement dated December 31, 1973; and

Whereas, the Contractor and Subcontractor desire to execute this new agreement entitled "Research and Development Subcontract" which Subcontract is intended to and hereby does supersede the agreement dated December 31, 1973 in its entirety.

Now, Therefore, in consideration of the premises and mutual covenants herein contained, the parties hereto agree as follows:

1. All payments made and services performed pursuant to the research agreement between the Contractor and the Subcontractor dated December 31, 1973, which is hereby superseded in its entirety, shall be deemed made and performed pursuant to this subcontract.
2. The total amount of this Subcontract shall not be in excess of \$497,970.
3. Delivery of all items to be supplied under this Subcontract shall be F.O.B. destination.
4. This Subcontract is certified for national defense purposes pursuant to BDSA Regulation 2 and/or DMS Regulation 1 and has a priority rating DO-A7.
5. This Subcontract and the work to be performed hereunder may not be assigned, further subcontracted, or otherwise transferred in whole or in part without the prior written consent of the Contractor.
5. Sections A, B, C, and D and Attachments A and B attached hereto are hereby made a part hereof as if fully set forth herein.

In Witness Whereof, Honeywell Information Systems Inc. has caused this Subcontract to be signed in its name and on its behalf by its duly authorized representative, and the Massachusetts Institute of Technology has caused this Subcontract to be signed in its name and on its behalf by its duly authorized representative, as of the day and year first above written.

HONEYWELL INFORMATION SYSTEMS INC.

MASSACHUSETTS INSTITUTE OF TECHNOLOGY

By _____

By _____

Title _____

Title _____

Section A:

List of References/Attachments
Order of Precedence

References

1. Basic Agreement between the United States of America and Massachusetts Institute of Technology - F18600-74-A-0161.
2. Multics Software Agreement between Massachusetts Institute of Technology and Honeywell Information Systems Inc., dated 13 February 1973 and Amendment I thereto.

Attachments

3. Attachment A, Statement of Work - Security Kernel Evaluation for Multics.
4. Attachment B, Subcontract Data Requirements List, Data Item Description Sheets, and Backup Sheets for Data Items.

Order of Precedence

5. The following documents are listed in the order of precedence and in the event of any inconsistency in this contract, the inconsistency shall be resolved by giving precedence in the following order:
 - A. Section A, Order of Precedence Clause.
 - B. Research and Development Subcontract dated the 1st day of January, 1974.
 - C. Section B, Subcontract Schedule.
 - D. Attachment A, Statement of Work.

- E. Attachment B, Subcontract Data Requirements List, Data Item Description Sheets, and Backup Sheets for Data Items.
- F. Section C, Special Provisions.
- G. Section D, General Provisions.

Section B:

Subcontract Schedule

1. Type of Subcontract and Amount

This is a cost reimbursement (No Fee) Research and Development type subcontract. The total estimated cost for performance of the work called for herein is \$497,970. Massachusetts Institute of Technology acknowledges receipt to date of \$200,000 of such sum.

2. Description of Services to be Provided

The Subcontractor shall conduct a program of research in accordance with Attachment A entitled "Statement of Work for Security Kernel Evaluation for Multics" and under and in accordance with the written direction of the Contractor Project Manager. The Subcontractor shall also furnish data and reports to support this project as called for in the Subcontract Data Requirements List (SDRL). This Subcontract supersedes the Research Agreement between Honeywell Information Systems Inc. and Massachusetts Institute of Technology dated December 31, 1973, in its entirety.

3. Term of Subcontract

This Subcontract covers the period from its effective date through 30 June 1975 with the exception that data items and references will be submitted as required by the SDRL.

4. Inspection and Acceptance

All data items and reports will be subject to inspection and acceptance by Contractor for purposes of format and compliance with the Statement of Work.

Section C:

Special Provisions

1. Acknowledgment of Sponsorship

a. The Subcontractor agrees that in the release of information relating to this subcontract, such release shall include a statement to the effect that the project or effort depicted was or is sponsored by Air Force Information Systems Technology Applications Office, Air Force Systems Command and Defense Advanced Research Projects Agency, DOD under Prime Contract No. F19628-74-C-0193, and by Honeywell Information Systems, Inc., and the subcontract is under the technical cognizance of the Air Force Information Systems Technology Application Office.

b. For the purpose of this clause, "information" includes, but is not limited to, news releases, articles, manuscripts, brochures, advertisement, still and motion pictures, speeches, trade association meetings, symposia, etc.

c. Nothing in the foregoing shall affect compliance with the requirements of the clause of this subcontract entitled "Military Security Requirements."

d. The Subcontractor further agrees to include this provision in any further subcontract awarded as a result of this subcontract.

2. The Subcontractor shall report, in writing, to the Contract Administrator (R.L. Carlson, Honeywell Information Systems Inc., 7900 Westpark Drive, McLean, Virginia 22101) all deliveries made under this subcontract at the time of delivery. This includes products, services, reports and any other data as appropriate.

3. General Systems Engineering and Technical Direction (GSE/TD) Clause

A. Formalization of general systems engineering and technical direction generated by the MITRE Corporation of effort under this subcontract will be documented by issuance of a serially numbered "Technical Directive," executed by representatives of the MITRE Corporation and the Electronic Systems Division. The Subcontractor shall comply with the terms of a "Technical Directive" only if it is in writing and signed by the Contractor's Project Manager and Contract Administrator and compliance with such "Technical Directive" is directed pursuant to the clause of this subcontract entitled "Changes".

b. Should Subcontractor receive general systems engineering supervision, technical direction or requests for cooperation or data directly from either Air Force or MITRE Corporation personnel, then the Subcontractor agrees not to accept such supervision or direction or to cooperate with or furnish data to such personnel without the prior written approval of the Contractor.

c. The ADP Systems Security Development Program covered by Prime Contract No. F19628-74-C-0193 is under general program management of Air Force Information Systems Technology Applications Office, Air Force Systems Command. The Electronic Systems Division has been assigned the responsibility of providing necessary management control over this subcontract. The Air Force has entered into a contract with the MITRE Corporation for the services of a technical group which will, under the program management of the Electronic Systems Division, be responsible for general systems engineering and corresponding technical direction of the efforts under this subcontract.

d. (1) General systems engineering is defined as that portion of systems engineering dealing with the overall integration of a system, design compromises among subsystems, definition of inter- and intra-system interfaces, analysis of subsystem and supervision of system testing, all to the extent required to assure that system concept and objectives are being met in an economical and timely manner.

(2) Technical direction is defined as a process by which the progress of the Contractor's or Subcontractor's technical efforts is reviewed, information on the various technical areas involved is exchanged, and plans for future contract efforts are formulated, and, where it will better achieve Air Force objectives, the Contractor's or Subcontractor's technical effort is modified, realigned or redirected.

(3) In the performance of this subcontract, the Subcontractor agrees, subject to the prior written approval of Contractor, to cooperate with the MITRE Corporation by responding to invitations to meetings, requests for technical information and requests for research and development planning data on all matters pertaining to this subcontract and by discussing with the MITRE Corporation employees, technical matters relating to this program. The Subcontractor further agrees to accept technical direction as described herein, provided that the prior written approval of the Contractor is received.

4. Incorporation of Basic Agreement Provisions F18600-74-A-0161

This Subcontract includes the below listed clauses which are a part of Section B: Special Provisions of Basic Agreement F18600-74-A-0161. Where applicable in the text of the clauses Subcontractor should be substituted for Contractor and Contractor should be substituted for Government.

B-5. Walsh-Healey Public Contracts Act

B-6. Filing of Patent Applications

B-9. Patent Rights

B-17. Price Reduction for Defective Cost or Pricing Data

B-21. Abstract of New Technology

B-23. Military Security Requirements

B-24. Subcontractor Cost or Pricing Data

B-27. Contract Schedule Items Requiring Experimental, Developmental or Research Work

B-32. Cost Accounting Standards

5. Principal Investigator for M.I.T.

This research program will be under the supervision of Professor Jerome H. Saltzer, Principal Investigator for this research.

6. Copyrightable Material

All copyrightable material, including computer programs and written documents, produced during and under the work and Services performed pursuant to this Subcontract by employees of Subcontractor and of Contractor assigned to perform such work or Services shall be jointly owned and shall be marked with statutory copyright notices jointly in the names of M.I.T. and HIS, and such notices applied to each separately copyrightable material shall have the form as specified:

For machine readable format--

Copyright (c) 1975 by Massachusetts Institute of Technology and Honeywell Information Systems, Inc.

For text and all other versions--

Copyright © 1975 by Massachusetts Institute of Technology and Honeywell Information Systems, Inc.

With respect to such copyrightable material, the parties agree as follows:

(i) Subject to an irrevocable, worldwide, fully paid-up, non-exclusive license in Subcontractor to reproduce and use such copyrightable material for its own purposes as an end user of computer hardware, Contractor shall have the exclusive worldwide right to license others to reproduce and use such copyrightable material and to lease, sell, or otherwise transfer to others copies of such copyrightable material. Income and royalties earned from the licensing of such copyrightable material shall be distributed in accordance with paragraph 10 of this subcontract.

(ii) Contractor shall have the first right to perfect and register in all countries of the world, as applicable, all copyrights available in and for such material and to perfect title in such copyrights.

(iii) Contractor shall bear all costs, expenses and fees associated with the perfecting and registering of such copyrights.

(iv) Contractor shall bear all costs, expenses and fees associated with the recording of any instrument of assignment or notice of license and any fee charged or tax levied thereon relating to such copyrights.

(v) Subcontractor shall disclose to Contractor promptly and fully in writing all such copyrightable material produced during and under the work and Services performed pursuant to this Subcontract by any employee of Subcontractor assigned to perform such work or Services and not otherwise furnished to Contractor in the reports and other material required to be delivered pursuant to Attachment B.

(vi) Subcontractor agrees that in Contractor's perfecting or registering such copyrights and any enforcement or defense thereof and upon request by Contractor, Subcontractor will furnish Contractor all necessary support and assistance with respect to matters within Subcontractor's exclusive domain. Such support and assistance shall include, but not be limited to, signing all documents necessary to perfect or validate title and licenses, signing all necessary communications in connection with such perfecting or registering, and furnishing affidavits and other formal documents necessary in connection with Contractor's perfecting and registering and any enforcing or defending of such copyrights. All reasonable costs and expenses for the furnishing of such support and assistance shall be borne by Subcontractor; however, any unusual or excessive costs and expenses, such as expenses incurred by an employee of Subcontractor in traveling or living away from his home shall be borne by Contractor.

7. Inventions

(a) The entire right, title and interest in all inventions made during and under the work and services performed pursuant to this subcontract solely by employees of the subcontractor shall vest in the subcontractor, provided, however, that the contractor shall have licensing rights in such invention as hereinafter provided.

(b) The entire right, title and interest in all inventions made during and under the work and services performed pursuant to this subcontract solely by employees of the contractor assigned to perform such work or services shall be vested in the contractor, provided, however, that the subcontractor shall receive an irrevocable, fully paid-up, non-exclusive license to use such inventions for its own use.

(c) The entire right, title and interest in all inventions made during and under the work and services performed pursuant to this subcontract jointly by employees of subcontractor and or contractor assigned to perform such work or services shall be vested jointly in both parties, provided, however, that the contractor shall have licensing rights in such inventions as hereinafter provided.

(d) As to inventions made solely by employees of subcontractor as described in Section 7(a) above and as to inventions made jointly by employees of contractor and subcontractor as described in Section 7(c) above, the contractor shall have an irrevocable, fully paid-up, worldwide, exclusive license with the right to sublicense under all patents, on all such inventions at reasonable royalty rates, provided, however, that the term of such exclusivity shall extend from eight years from the date of issuance of the United States Patent for each such invention, subject, however, to an irrevocable, fully paid-up, non-exclusive license to subcontractor to use such invention for its own use. At the expiration of said period of exclusivity, the license to contractor shall become non-exclusive for the remainder of the term of said Patent.

(e) Contractor shall have the first right to make applications for patents (which term hereinafter shall include, but not be limited to, patents of implementation, patents of addition, improvement patents, utility models, as well as reissues, divisions, continuations, renewals and extensions of the foregoing) in all countries of the world for the inventions described in Sections 7(a) and 7(c) above, and to perfect title in all consequent patents issuing from such applications.

(f) Contractor shall bear all costs, expenses and fees associated with the filing and prosecution of such applications and the continuation in existence of such consequent patents.

(g) Contractor shall bear all costs, expenses and fees associated with the recording of any instrument of assignment or notice of license and any fee charged or tax levied thereon relating to such applications or consequent patents.

(h) Subcontractor shall disclose to contractor promptly and fully in writing each such invention conceived or reduced to practice during and under the work and services performed pursuant to this subcontract by any employee of subcontractor assigned to perform such work or services.

(i) Subcontractor agrees that in contractor's filing and prosecution of an application for such an invention and any enforcement or defense of a consequent patent on such application, and upon request by contractor, subcontractor will furnish contractor all necessary support and assistance with respect to matters within subcontractor's exclusive domain. Such support and assistance shall include, but not be limited to, signing all documents necessary to perfect or validate title, licenses, and rights of priority, signing all necessary communications with the Patent Office of the country involved, reviewing the applications before their filing, advising on communications with the Patent Office of the country involved, advising on the scope and nature of the inventions and furnishing affidavits and other formal documents necessary in the filing and prosecution of the applications and any enforcement or defense of the patents. All reasonable costs and expenses for the furnishing of such support and assistance shall be borne by subcontractor; however, any unusual or excessive costs and expenses, such as expenses incurred by an employee inventor in traveling or living away from his home, shall be borne by contractor.

8. Data and Information

The entire right, title and interest in all copies of data and information produced during and under the work and services performed pursuant to this subcontract by employees of subcontractor assigned to perform such work and services and delivered to contractor shall be vested in contractor.

9. Publications

Subcontractor shall be free to publish papers dealing with results of research under this subcontract. Subcontractor shall use its best efforts to provide such papers to the contractor sufficiently in advance of publication so that patent applications based thereon may be considered.

10. Income and Royalties

Income and royalties earned by contractor from the licensing, leasing, selling or transferring of copyrightable material and computer programs, whether copyrightable or patentable, produced during and under the work and services performed pursuant to this subcontract by employees of subcontractor and/or contractor assigned to perform such work or services other than income or royalties earned by contractor from the licensing, leasing, selling or transferring of such computer programs incidental to computer hardware sold, leased or otherwise supplied by contractor or licensed for manufacture by contractor, shall be apportioned between subcontractor and contractor according to the provisions of Paragraph 8 of the Multics Software Agreement dated February 13, 1973, between subcontractor and contractor, as amended by subparagraph (ii) of Paragraph 2 of Amendment No. I to such Multics Software Agreement, except that the term "CHANGE OVER DATE" in such subparagraph (ii) shall be replaced by "June 30, 1975".

In the case of income and royalties earned by the contractor on the licensing of patents and patent applications on inventions described under Sections 7(a) and 7(c) (other than those describing and claiming computer software), except income or royalties earned from the licensing of such patents and patent applications to subsidiaries and affiliates of contractor, such income and royalties shall be apportioned 60 percent to contractor and 40 percent to subcontractor during the term of contractor's exclusivity. Where more than one patent or application is licensed together, income and royalties earned shall be prorated in accordance with the proportion of the invention covered by each patent-application to the total product licensed.

11. Use of the Name of the Subcontractor

The contractor agrees not to use the name of the subcontractor or any member of its staff in sales promotion work or advertising, or in any form of publicity without the written permission of the Office of Sponsored Programs, Massachusetts Institute of Technology, which permission shall not be unreasonably withheld.

12. Office Space

The subcontractor shall provide adequate office space for a contractor representative. This includes a desk and chair, heat, light, ventilation, electrical current and electrical outlet. They shall allow contractor to connect a telephone for their use. Charges for this telephone service will be paid for by subcontractor. This office space should be within a reasonable distance of the principal personnel performing this subcontract.

Section D:

General Provisions

1. Incorporation of Basic Agreement Provisions F-18600-74-A-0161

This subcontract includes all of the clauses included in Section A: General Provisions of Basic Agreement F18600-74-A-0161. Where applicable in the text of the clauses, Subcontractor shall be substituted for Contractor and Contractor shall be substituted for Government.