Judgment rendered on December 26,2006

2006 (Ne) 10003, Appeal Case of Seeking Declaratory Judgment on Existence of Copyrights, etc. (Court of prior instance: Tokyo District Court, 2000 (Wa) 27552) (Date of conclusion of oral argument: September 19, 2006)

Judgment

Appellant: X

Appellee: Litigation successor of the National Space Development Agency of Japan

Japan Aerospace Exploration Agency

Appellee: CRC Solutions Corp.

Main text

This appeal shall be dismissed.

The appellant shall bear the cost of the appeal.

Facts and reasons

No. 1 Judicial decision sought by the parties

1. Appellant

(1) The judgment in prior instance shall be revoked.

(2) Primary claim

The court declares that the appellant holds copyrights and moral rights of an author for the programs described in Attachment 1 "Work List" (however, in Attachment 1 of the judgment in prior instance "Work List," "Attachment 4" in the "Title, etc. of the material containing the program" section of No. 12 is altered to "Attachment 4 of the judgment in prior instance," and "Attachment 6" in the "Title, etc. of the material containing the program" section of No. 13 is altered to "Attachment 6 of the judgment in prior instance"; other parts are the same as in said list [incidentally, in this judgment, Attachments 4 and 6 are vacant numbers]; hereinafter referred to as the "Attached Work List").

(3) Secondary claims

A. The court declares that the appellant holds rights of the original author for program No. 2 described in the Attached Work List, deeming said program to be a derivative work and program No. 11 described in the Attached Work List to be the original work.

B. The court declares that the appellant holds rights of the original author for program No. 3 described in the Attached Work List, deeming said program to be a derivative work and program No. 13 described in the Attached Work List to be the original work.

C. The court declares that the appellant holds rights of the original author for program No. 5 described in the Attached Work List, deeming said program to be a derivative work and program

No. 19 described in the Attached Work List to be the original work.

(4) The appellees shall bear the court costs for both the first and second instances.

2. Appellees

The same as the main text of this judgment.

No. 2 Outline of the case

1. Summary of the case

The appellant is a staff member of the appellee Japan Aerospace Exploration Agency (hereinafter referred to as the "Appellee Agency"), which was established as an incorporated administrative agency on October 1, 2003 by succeeding the rights and obligations of the National Space Development Agency of Japan (hereinafter referred to as "NASDA") that is the codefendant in the first instance (prior to the succession of the litigation), and was a staff member of NASDA as of the time when the programs described in the Attached Work List (hereinafter referred to as the "Programs") were made. In this case, as a primary claim against the Appellee Agency and appellee CRC Solutions Corp. (hereinafter referred to as "Appellee CRC"), which had provided NASDA with support for making programs, etc., the appellant seeks a declaratory judgment that the appellant holds copyrights and the moral rights of an author for the Programs, and as a secondary claim made on the premise that the appellant holds copyrights for program Nos. 11, 13, and 19 described in the Attached Work List (hereinafter, individual programs are referred to as "Program 1," etc. corresponding to the number assigned in said list), the appellant seeks a declaratory judgment that the appellant holds the rights of the original author, deeming Programs 2, 3, and 5 to be derivative works and Programs 11, 13, and 19 to be the original works, respectively. On the other hand, the appellees argue against the copyrightability of Programs 5, 11 to 13, and 15 out of the Programs, and also argue against the point that the appellant made the Programs. Furthermore, the appellees allege that even if the Programs were made by the appellant, NASDA becomes the author thereof, deeming the Programs to be works made in the course of duty, under the provisions of Article 15 of the Copyright Act (hereinafter referred to as the "Act"; hereinafter, Article 15 prior to amendment by Act No. 62 of 1985 [came into effect on January 1, 1986] is referred to as "Former Article 15," and Article 15 after said amendment is referred to as "Current Article 15") and that the Appellee Agency which succeeded the rights and obligations of NASDA holds copyrights for the Programs.

The court of prior instance ruled as follows: Programs 4, 5, 1, 2, 6, and 3 (note: in order of the date on which the programs were made) were not created by the appellant, and even if these programs were created by the appellant, all of the Programs, including said programs, are considered to be works made in the course of duty of NASDA, and the Appellee Agency, which succeeded the rights and obligations of NASDA, holds copyrights therefor. Based on this ruling,

the court dismissed all of the appellant's claims. Dissatisfied with this judgment, the appellant filed this appeal to seek the revocation of the judgment and the rendering of a declaratory judgment on the existence of the aforementioned copyrights, etc.

(omitted)

No. 4 Court decision

(omitted)

3. Regarding whether the plaintiff made (created) the Programs (Issue 1)

(1) Regarding Program 15 (orbit propagation analysis program [B010 program])

According to the fact determined in 1.(2) above, the appellant took charge of making and compiling a group of ECS mission analysis programs as the successor of A who went to France for study, and completed Program 15, which is a program relating to orbit propagation, by October 20, 1978. Therefore, the appellant is recognized as a person who created Program 15.

(2) Regarding Program 19

According to the fact determined in 1.(3) above, with regard to the analysis of ECS using Doppler data, etc. during the burning of the apogee motor, the appellant made Program 19 that is intended to conduct the analysis of satellite motion based on Doppler changes, which comprises 14 subroutines, by around September 1979 by using the subroutines of Program 15 as they are or by improving and developing other subroutines of the program which A had made in the past and Program 15. Therefore, the appellant is recognized as a person who created Program 19.

(3) Regarding Program 4 (SPD)

According to 1.(1) above, NASDA had entrusted part of its operations to external companies. In doing so, NASDA appointed supervisors who engage in on-site direction and supervision from amongst its staff members, and supervisors were supposed to engage in direction and supervision when a contracted external company makes, analyzes, etc. a program.

According to the fact determined in 1.(4) above, the following facts are recognized. In response to a radio blocking problem experienced by an experimental geostationary communications satellite (ECS) launched on February 6, 1979, NASDA started working to analyze satellite behavior during the burning of the apogee motor in order to find and identify the causes of the blocking, and concluded an entrustment contract with Appellee CRC in relation to the making of a program for analyzing satellite motion during the burning of the apogee motor and relevant calculation, etc. In addition to this, NASDA appointed the appellant

who belonged to the First Satellite Design Group, and C, who belonged to the department in charge of rocket development, as supervisors, and D, E, and F of Appellee CRC worked to make the program under the direction and supervision of the supervisors. In doing so, the appellant presented Thomson's paper describing a mathematical formula that serves as the basis for Program 4, C presented the outline design of the engine part of the program to be integrated, and D, etc. first confirmed the form of data to be input at the stage of using the program and the form of data output, and then conducted specific programming, that is, coding. At the stage when the program had just been made, all of them carried out verification and thereby found a mix-up between coordinates, defective assessment in the calculation results, etc., and therefore, they improved the software, verified and confirmed its functions, and conducted calculations. After that, Appellee CRC delivered Program 4 to NASDA in March 1980 by means of describing it in a report. The aforementioned entrustment contract between NASDA and Appellee CRC was a unit-price contract on which NASDA makes monthly performance-based payments to Appellee CRC.

In that case, the aforementioned contract between NASDA and Appellee CRC was to support the analysis work conducted by the appellant and C. D, E, and F of Appellee CRC are recognized as having conducted programming work jointly with the appellant and C under their direction and supervision as those who assist their operations, and thereby having completed Program 4.

Therefore, the appellant should be considered to be a person who created Program 4 jointly with C and D, etc. of Appellee CRC.

(4) Regarding Program 5 (DOPPELER [B063])

NASDA had entrusted part of its operations to external companies. In doing so, NASDA appointed supervisors who engage in on-site direction and supervision from amongst its staff members, and supervisors were supposed to engage in direction and supervision when a contracted external company makes, analyzes, etc. a program, as mentioned in (3) above.

According to the fact determined in 1.(5) above, the following facts are recognized. NASDA concluded an entrustment contract with Appellee CRC in relation to the making of a program for deterministically estimating the state quantity of a satellite during the burning of the apogee motor based on Doppler data as well as relevant calculation, etc. As a result, the appellant came to engage in on-site direction and supervision as a supervisor. The appellant gave directions to and supervised E, etc. of Appellee CRC and completed Program 5 by May 1980. In making Program 5, the appellant prepared an algorism and input conditions, etc., and also conducted the verification and confirmation of software functions and calculations jointly with Appellee CRC's persons in charge.

In that case, the aforementioned contract between NASDA and Appellee CRC is intended to

support the appellant's analysis work, that is, deterministic estimation of the state quantity of a satellite during the burning of the apogee motor based on Doppler data. E, etc. of Appellee CRC are recognized as having conducted programming work jointly with the appellant under the appellant's direction and supervision as those who assist the appellant's duty, and thereby having completed Program 5.

In this regard, the court of prior instance held as follows: The appellant "is recognized as having conducted preparation of an estimation algorithm and consideration of input and output conditions and also having carried out the verification and confirmation of software functions and calculations with the engineers of Appellee CRC in forming Program 5. However, there is no sufficient evidence to recognize that the plaintiff's thoughts or sentiments were creatively expressed in the specific statements of the program. Therefore, these activities cannot be considered to be acts that are evaluated as creatively expressing the plaintiff's thoughts or sentiments" (line 24 of page 104 to line 3 of page 105). However, this holding is unreasonable in light of the aforementioned instruction.

Therefore, the appellant should be considered to be a person who created Program 5 jointly with E, etc. of Appellee CRC.

(5) Regarding Program 12 (KALMAN [original, six dimension])

According to the fact determined in 1.(6) above, the appellant also carried forward the study of a method of analyzing the state quantity of a satellite by using Doppler data in the course of conducting the study, which was a training assignment at the CNES where the appellant was studying, and thereby made a rendezvous analysis program, including Program 12, in October 1981. Therefore, the appellant is recognized as a person who created Program 12.

(6) Regarding Program 13 (KALMAN [original, nine dimension])

According to the fact determined in 1.(7) above, the appellant made Program 13 in January 1983 for the purpose of an analysis using the Kalman filter based on Doppler data. Therefore, the appellant is recognized as a person who created Program 13.

(7) Regarding Programs 1 (DYNA) and 2 (STAT)

NASDA had entrusted part of its operations to external companies. In doing so, NASDA appointed supervisors who engage in on-site direction and supervision from amongst its staff members, and supervisors were supposed to engage in direction and supervision when a contracted external company makes, analyzes, etc. a program, as mentioned in (3) above.

According to the fact determined in 1.(9) above, the following facts are recognized. NASDA concluded an entrustment contract with Appellee CRC for the purpose of "Entrustment of Computer Calculation, etc. for CDC System, etc.: Support for Mission Analysis of Engineering Test Satellite V (ETS-V) (1)." As a result, the appellant came to engage in on-site direction and supervision as a supervisor, and completed Programs 1 and 2 in April 1984 by giving directions

to and supervising F and K of Appellee CRC. The aforementioned contract is intended to support the analysis of static dynamics relating to MOIR/RCS liquid fuel sloshing of ETS-V, which was suggested by the appellant, and in making Programs 1 and 2, the appellant gave specific advice, for example, by issuing overseas documents and materials, explaining a mathematical formula the appellant derived, conducting verification at the stage where the program was just prepared, and checking source codes. The aforementioned entrustment contract between NASDA and Appellee CRC was a unit-price contract on which NASDA makes monthly performance-based payments to Appellee CRC.

In that case, the aforementioned contract between NASDA and Appellee CRC is intended to support the appellant's analysis of static dynamics relating to MOIR/RCS liquid fuel sloshing of ETS-V, and E, etc. of Appellee CRC are recognized as having conducted programming work jointly with the appellant under the appellant's direction and supervision as those who assist the appellant's duty, and thereby having completed Programs 1 and 2.

In this regard, the court of prior instance held as follows: "In forming Program 1, the appellant presented technical materials, including formulation, algorism, input data, and output specification, and also conducted the verification and confirmation of software functions with the engineers of Appellee CRC. However, there is no sufficient evidence to recognize that the plaintiff's thoughts or sentiments were creatively expressed in the specific statements of the program. Therefore, these activities cannot be considered to be acts that are evaluated as creatively expressing the plaintiff's thoughts or sentiments" (lines 8 to 14 of page 130); "In forming Program 2, the appellant presented Program 11, and presented technical materials, including formulation, algorism, input data, and output specification. However, there is no sufficient evidence to recognize that the plaintiff's thoughts or sentiments were creatively expressed in the specific statements of the program. Therefore, these activities cannot be considered to be acts that are evaluated as creatively expressing the plaintiff's thoughts or sentiments" (lines 1 to 6 of page 130). However, both of these holdings are unreasonable in light of the aforementioned instruction.

Therefore, the appellant should be considered to be a person who created Programs 1 and 2 jointly with E, etc. of Appellee CRC.

The appellant alleges as follows: The essential part of Program 1 had already been made based on the appellant's "individual free research and idea"; the appellant conducted all the steps for making Program 1, and Appellee CRC merely conducted simple tasks in some steps under the appellant's direction; therefore, Program 1 is a creation made solely by the appellant.

However, as mentioned above, D, etc. of Appellee CRC conducted programming, including coding, based on their own ingenuity though they were under the appellant's direction and supervision. Therefore, it cannot be said that they have merely conducted simple tasks in some

steps.

(8) Regarding Program 6 (DYNA-A)

NASDA had entrusted part of its operations to external companies. In doing so, NASDA appointed supervisors who engage in on-site direction and supervision out of its staff members, and supervisors were supposed to engage in direction and supervision when a contracted external company makes, analyzes, etc. a program, as mentioned in (3) above.

According to the fact determined in 1.(10) above, the following facts are recognized. The appellant examined the spin stability of ETS-V on the basis of the results of analysis based on Programs 1 and 2, and considered that it was necessary to modify Program 1. NASDA concluded a contract with Appellee CRC for the aforementioned support for the mission analysis of ETS-V. Program 6 is to add a function to Program 1, and the appellant directed F and K, who were Appellee CRC's persons in charge, the mathematical formula and form of input, etc. of a function to be added. F and K conducted specific programming, and as a result, Program 6 was completed in March 1985. The aforementioned entrustment contract between NASDA and Appellee CRC was a unit-price contract on which NASDA makes monthly performance-based payments to Appellee CRC.

In that case, the aforementioned contract between NASDA and Appellee CRC is on the "leasing of support services for mission analysis of ETS-V." Therefore, said contract is to support the appellant's analysis work, and F, etc. of Appellee CRC are recognized as having conducted programming work jointly with the appellant under the appellant's direction and supervision and thereby having completed Program 6, in the same manner as the case of Programs 1 and 2.

In this regard, the court of prior instance held as follows: "In forming Program 6, which is the improved program of Program 1, the appellant found that there is a doubt about the results of the long-time calculation using Program 1, as well as a problem in the logical structure of Program 1 through overhaul thereof, and carried out bug fixing jointly with the engineers of Appellee CRC, and at the same time, presented a generalized motion equation so that liquid behavior in many tanks can be handled, in addition to conducting various activities mentioned in C. above (note: referring to the fact that "in forming Program 1, the appellant presented technical materials, including formulation, algorism, input data, and output specification, and also conducted the verification and confirmation of software functions with the engineers of Appellee CRC). However, there is no sufficient evidence to recognize that the plaintiff's thoughts or sentiments were creatively expressed in the specific statements of the program. Therefore, these activities cannot be considered to be acts that are evaluated as creatively expressing the plaintiff's thoughts or sentiments" (line 16 to the second line from the bottom of page 130). However, this holding is unreasonable in light of the aforementioned instruction.

Therefore, the appellant should be considered to be a person who created Program 6 jointly with F, etc. of Appellee CRC.

(9) Regarding Program 3 (KALMAN-1)

NASDA had entrusted part of its operations to external companies. In doing so, NASDA appointed supervisors who engage in on-site direction and supervision from amongst its staff members, and supervisors were supposed to engage in direction and supervision when a contracted external company makes, analyzes, etc. a program, as mentioned in (3) above.

According to the fact determined in 1.(11) above, the following facts are recognized. NASDA concluded a contract titled "Entrustment of Computer Calculation, etc. for CDC System; Support for Mission Analysis of ETS-V (3)" with Appellee CRC. The aforementioned contract was intended to improve the six-dimensional program of KALMAN suggested by the appellant. In making Program 3, the appellant presented to M the six-dimensional program of KALMAN, the paper that the appellant published at the CNES, and input and output conditions. M conducted the concept design and detailed design of the program and specific programming, and in that process, the appellant conducted checking and verification. As a result, Program 3 was completed by March 1986. The aforementioned entrustment contract between NASDA and Appellee CRC was a unit-price contract on which NASDA makes monthly performance-based payments to Appellee CRC.

In that case, the aforementioned contract between NASDA and Appellee CRC is intended for the support of the mission analysis of ETS-V, and it is to support the appellant's analysis work in the same manner as the case of Programs 1 and 2. M of the Appellee CRC is recognized as having conducted programming work jointly with the appellant under the appellant's direction and supervision as one who assists the appellant's duty, and thereby having completed Program 6.

In this regard, the court of prior instance held as follows: "In forming Program 3, the appellant presented technical materials, including formulation and algorism. However, there is no sufficient evidence to recognize that the plaintiff's thoughts or sentiments were creatively expressed in the specific statements of the program. Therefore, these activities cannot be considered to be acts that are evaluated as creatively expressing the plaintiff's thoughts or sentiments" (lines 1 to 6 of page 131). However, this holding is unreasonable in light of the aforementioned instruction.

The appellant alleges that Program 3 is a derivative of Program 13 and that Appellee CRC's person in charge merely conducted the simple tasks of input and output upgrading and the banal addition of an automatic charting function to the program.

However, M was directed by the appellant about the paper published at the CNES and the input and output conditions, conducted the concept design and detailed design of the program

and specific programming, and received checking and verification by the appellant, and thereby completed Program 3. Regarding the work to make the aforementioned program, the appellant gave a presentation at an academic conference and presented a paper in the joint names of the appellant and M. In that case, tasks conducted by M seem to have not been simple tasks but to have been those involving ingenuity. Therefore, the appellant's allegation that M merely conducted the simple tasks of input and output upgrading and the banal addition of an automatic charting function to the program is unreasonable.

Therefore, the appellant should be considered to be a person who created Program 6 jointly with M of Appellee CRC.

4. Regarding the issue of whether NASDA is the author of the Programs, deeming the Programs to be works made in the course of duty (Issue 2)

(1) Article 2, paragraph (1), item (i) of the Act defines "work" as a "production in which thoughts or sentiments are creatively expressed and which falls within the literary, academic, artistic or musical domain." Based on this, item (ii) of said paragraph defines "author" as a "person who creates a work." Only natural persons can creatively express their thoughts or sentiments. Therefore, originally, only natural persons can be authors. However, at the same time, Former Article 15 provides as follows: "For a work that the employee of a corporation or other employer (hereinafter in this Article referred to as a 'corporation, etc.'), makes in the course of duty at the initiative of the corporation, etc., and which the corporation, etc. makes public as a work of its own authorship, the author is the corporation, etc., so long as it is not stipulated otherwise in a contract, in employment rules, or elsewhere at the time the work is made." On the other hand, Current Article 15 provides that a corporation, etc. can be an author by stipulating as follows: "(1) For a work (except a work of computer programming) that the employee of a corporation or other employer (hereinafter in this Article referred to as a "corporation, etc."), makes in the course of duty at the initiative of the corporation, etc., and which the corporation, etc. makes public as a work of its own authorship, the author is the corporation, etc., so long as it is not stipulated otherwise in a contract, in employment rules, or elsewhere at the time the work is made"; "(2) For a work of computer programming that an employee makes at the initiative of a corporation, etc. in the course of duty, the author is the corporation, etc., so long as it is not stipulated otherwise in a contract, in employment rules, or elsewhere at the time the work is made." Looking at such provisions in the Act, it is reasonable to understand as follows: The Act provides, through Former Article 15 and Current Article 15, that the author of the prescribed work shall be a corporation, etc. by deeming a corporation, etc. to be an author, on the premise that only natural persons can commit the act of making a work and in consideration of the convenience of copyright trading, etc., while taking into account the actual condition that at a corporation, etc., the employee of the corporation, etc. makes a work at

the initiative of the corporation, etc. as part of performance of his/her duty under direction and supervision and the work is made public as a work of the authorship of the corporation, etc. (see the judgment of the Second Petty Bench of the Supreme Court of April 11, 2003, Hanji, No. 1822, at 133); however, for works of computer programming, many programs are made by many employees at corporations, such as companies, in an organized manner, and many of such programs are actually those that are originally not planned to be made public or are made public anonymously or as a work of the authorship of a person other than those who made them; in light of such characteristics of programs, paragraph (2) of Current Article 15 provides that a corporation, etc. becomes an author, irrespective of the name under which a work is made public.

Incidentally, as mentioned above, there are the following requirements for the establishment of a work made in the course of duty: there is the "initiative of the corporation, etc."; the work is a "work that the employee of a corporation, etc., makes in the course of duty"; and in Former Article 15, the "work is one which the corporation, etc. makes public as a work of its own authorship." Under paragraph (2) of the Supplementary Provisions of Act No. 62 of 1985, the provisions of paragraph (2) of Current Article 15 are applicable to works created after the coming into effect of said Act (January 1, 1986), and Former Article 15 is applicable to works created prior to the coming into effect of said Act. In light of the findings and determinations in 2. and 3. above, paragraph (2) of Current Article 15 is applicable only to Program 3 out of the Programs (however, excluding Program 11, for which copyrightability is denied), and Former Article 15 is applicable to all the other programs.

With regard to the requirement concerning the "initiative of the corporation, etc.," there is no objection to deeming that there is the initiative of the corporation, etc. in the case where the corporation, etc. plans and plots to make a work and orders the employee of the corporation, etc. to specifically make the work or where the employee of the corporation, etc. makes a work with the approval of the corporation, etc. Furthermore, it is reasonable to understand that where there is an employment relationship between the corporation, etc. and the employee and the employee performs the prescribed duty in accordance with a business plan of the corporation, etc., the requirement concerning the "initiative of the corporation, etc." is fulfilled as long as the work is planned or expected to be made in the course of performance of the duty of the employee, even if the corporation, etc. gives no specific direction or approval.

In addition, it should be considered that the requirement concerning the "work that the employee of a corporation, etc., makes in the course of duty" is fulfilled not only where the employee is directly ordered to make a program but also where the employee is planned or expected to make a program in the course of his/her duty.

Furthermore, it is reasonable to understand that the requirement concerning the "work [is

one] which the corporation, etc. makes public as a work of its own authorship" is also fulfilled where a work should be made public as a work of the authorship of the corporation, etc. when it is made public, even though it is not planned to be made public.

Looking at this case, the appellant was employed by NASDA and was the employee of NASDA as a member of NASDA's development department staff, as of the time when the Programs were made. Therefore, it is obvious that the appellant was the "employee of the corporation, etc." In addition, NASDA has no working regulations, etc. stipulating that a staff member is considered to be the author of a program made by him/herself, and there was no contract, etc. to that effect between the appellant and NASDA. The parties agree on these facts, as stated in 1.(5) in "No. 2 Outline of the case" in the "Facts and reasons" section of the judgment in prior instance, which is cited in No. 2, 2. above.

In that case, fulfillment of the following requirements becomes an issue in considering whether the Programs fall under works made in the course of duty: [i] there is the "initiative of the corporation, etc."; [ii] the work is a "work that the employee of a corporation, etc., makes in the course of duty"; and [iii] the "work is one which the corporation, etc. makes public as a work of its own authorship" (however, for Program 3, requirement [iii] is unnecessary, as mentioned above). Therefore, fulfillment of these requirements is considered in order.

(2) Regarding Programs 15 and 19

A. According to the fact determined in 1.(1) above, the following facts are recognized. As it was necessary for NASDA to develop various programs for gaining an overall understanding of rockets and satellites and performing operations to operate systems and accomplish missions, it was almost essential for technical staff members to make programs. In April 1977, the Software Committee was established in order to implement operations relating to the development and maintenance of software for NASDA's development operations in an effective and appropriate manner. On April 1, 1974, the appellant was recruited by NASDA and received an appointment letter as a development staff member. On January 11, 1977, the appellant was transferred from the Flight Safety Management Office to the Test Satellite Design Group (First Satellite Design Group after the organizational reform). The appellant took charge of making and compiling a group of ECS mission analysis programs at the direction of A, who was the appellant's superior, and also as the successor of A after A went abroad for study. With other members of said group, the appellant engaged in ECS mission analysis and the making of a group of programs therefor as approved by NASDA. Under such circumstances, the appellant conducted ECS mission analysis and made Programs 15 and 19 that are included in a group of programs therefor.

B. Considering the requirement concerning the "initiative of the corporation, etc.," the appellant engaged in ECS mission analysis and the making of a group of programs therefor. The appellant made the aforementioned programs at the direction of A, who was the appellant's superior, and

also as the successor of A after A went abroad for study. Those programs should be considered to be programs which the appellant was ordered to make by the corporation, etc., and it is thus reasonable to recognize the existence of the initiative of NASDA in relation to the making of the aforementioned programs.

C. Considering the requirement concerning the "work that the employee of a corporation, etc., makes in the course of duty," while the appellant was engaging in ECS mission analysis and the making of a group of programs, Programs 15 and 19 were those included in said group of programs. Therefore, it is obvious that Programs 15 and 19 are "works made in the course of duty" of the appellant.

D. Considering the requirement concerning the "work [is one] which the corporation, etc. makes public as a work of its own authorship," both Programs 15 and 19 are programs that are included in a group of ECS mission analysis programs, which NASDA, and in particular, the Test Satellite Design Group, is performing, as mentioned above. Although these programs have not actually been made public, if they are indeed made public, they are recognized as those that should be naturally made public as a work of NASDA's authorship.

E. Regarding the appellant's allegations

(A) The appellant alleges as follows: The making of a program was not positioned as the operation of the department to which the appellant belonged. That is, the Test Satellite Design Group (First Satellite Design Group), to which the appellant belonged at that time, engaged in the operation of coordination with other groups, such as the Second Satellite Design Group, which is in charge of applications satellites and supervision (organization), etc. of outsourced works in development, etc.; therefore, the appellant's duty did not include the research and development of technical matters, such as the making of analysis programs.

However, as determined above, it was necessary for NASDA to develop various programs in order to gain an overall understanding of rockets and satellites and perform operations to operate systems and accomplish missions. Therefore, it was almost essential for technical staff members to make programs. In April 1977, the Software Committee was established in order to implement operations relating to the development and maintenance of software for NASDA's development operations in an effective and appropriate manner. Right after the appellant started working at the Test Satellite Design Group, the appellant was directed by the appellant's superior, A, to make ECS programs relating to orbit propagation as a development staff member. After that, as the successor of A, the appellant took charge of making and compiling a group of ECS mission analysis programs, and completed Program 15. Following that, the appellant completed Program 19 by diverting, improving, and developing Program 15 and other programs for the analysis of ECS using Doppler data, etc. during the burning of the apogee motor. Therefore, it is obvious that making these programs was included in the appellant's duty at that

time. Consequently, the aforementioned appellant's allegation is unreasonable.

(B) The appellant alleges as follows: Although making programs for ETS-II or ECS was formally approved by NASDA, NASDA made no human or physical arrangements and continuously objected to the performance of suggestions, etc. for the programs; therefore, it cannot be said that Programs 15 and 19 were made in the course of the appellant's duty.

However, it is only stated in the appellant's written statement (Exhibit Ko 13) that NASDA made no human or physical arrangements and continuously objected to the performance of suggestions, etc. for the programs. Even looking at all the evidence in this case, there is no objective evidence supporting the existence of a fact corresponding to such a statement.

On the contrary, Program 15 is one which the appellant started making at the direction of A, who was the appellant's superior at that time, after being assigned to the Test Satellite Design Group. A was aiming at organizing ECS mission analysis programs, including improvement of a program made for ETS-II into one for ECS, and gave the appellant the aforementioned direction as part of efforts therefor. Originally, ETS-II and ECS were planned to share programs, etc. that are necessary for development, and it was an operation approved by NASDA to develop and organize a group of mission analysis programs and also to have them be used for ECS. As the successor of A, the appellant played a central role in these operations. Therefore, it is recognized that making Program 15 and Program 19, which uses some of the subroutines of Program 15, and both of which were completed in the course of such operations, was included in the appellant's duty at that time.

Consequently, the aforementioned appellant's allegation lacks its premise and is thus unreasonable.

(C) The appellant alleges as follows: Program 15 is a general and complex orbit propagation program which the appellant newly created based on many documents that the appellant purchased during his/her graduate school days, and the same goes for Program 19; both of these programs were created independently by the appellant through continued "private free research activities."

However, the appellant was recruited by NASDA as an engineer and was working as a development staff member just because the appellant studied space engineering in graduate school. In addition, the appellant was directed to make orbit propagation programs for ECS at the Test Satellite Design Group, to which the appellant was assigned. Therefore, it is nothing less than the appellant's duty to make programs based on many documents that the appellant purchased during his/her graduate school days.

(D) The appellant alleges that mission analysis was not included in the appellant's duty because there is no section about "ECS mission analysis" in NASDA's written budgetary request for fiscal 1977 (Exhibit Otsu 100) and written approval (Exhibit Otsu 88).

However, as mentioned above, numerical analysis is indispensable in satellite projects, and it is obvious that "mission analysis," which is one type of "numerical analysis" and is a series of analysis that is necessary in relation to orbit, attitude, etc. in carrying forward satellite design, is also indispensable. The "Development Status of Program for Mission Analysis of Geostationary Satellites and Scope/Sharing of Relevant Works" was suggested at NASDA on June 20, 1977, and it was approved on October 12 of the same year. Therefore, it is obvious that "mission analysis" was included in the appellant's duty at that time.

It is not necessarily clear from the evidence why there was no section about "ECS mission analysis" in NASDA's written budgetary request for fiscal 1977 (Exhibit Otsu 100) and written approval (Exhibit Otsu 88). However, this fact does not immediately lead to the conclusion that mission analysis was not included in the appellant's duty.

Therefore, there is no other way but to say that the appellant's allegation is unreasonable.

F. On these bases, Programs 15 and 19 should be considered to be those for which NASDA becomes the author, deeming them to be works made in the course of duty.

(3) Regarding Program 4 (SPD)

According to 1.(4) above, the operation to make the aforementioned programs was one that was approved by NASDA in response to the problem of radio blocking of ECS for the purpose of finding and identifying the causes thereof, as part of works to analyze satellite behavior during the burning of the apogee motor, and the appellant and C took charge of the operation. In addition, according to 3.(3) above, D, E, and F of Appellee CRC assisted said operation of the appellant and C and conducted programming work jointly with them under their direction and supervision, and thereby completed Program 4. Therefore, Program 4 should be considered to be one that the appellant was ordered to make by NASDA or one that the appellant and others made with the approval of NASDA. It is thus reasonable to recognize the existence of the initiative of NASDA in making Program 4.

In addition, as Program 4 was made through the aforementioned process, it is obviously a "work made in the course of duty" of the appellant.

Moreover, Program 4 is a program as mentioned above. Although it has not actually been made public, if it is indeed made public, it is recognized as one that should be naturally made public as a work of NASDA's authorship.

On these bases, Program 4 should be considered to be one for which NASDA becomes the author, deeming it to be a work made in the course of duty.

(4) Regarding Program 5 (DOPPLER [B063])

According to 1.(5) above, regarding Program 5, an experimental geostationary communications satellite, ECS-b, was launched, but problems resulted concerning radio blocking during the burning of the apogee motor. NASDA worked to determine and verify the

causes thereof, and the appellant decided to attempt a deterministic estimation of the state quantity of the satellite during the burning of the apogee motor based on Doppler data. This attempt was approved by NASDA. Moreover, according to 3.(4) above, E, etc. of Appellee CRC conducted programming work jointly with the appellant and another supervisor under their direction and supervision, and Program 5 was completed at the responsibility of the appellant and said other supervisor. Therefore, Program 5 should be considered to be one which the appellant was ordered to make by NASDA or one which the appellant and others made with the approval of NASDA. It is thus reasonable to recognize the existence of the initiative of NASDA in making Program 5.

Moreover, as Program 5 was created through the aforementioned process, it is obviously a "work made in the course of duty" of the appellant.

Program 5 is a program as mentioned in 1.(5) above. Although it has not actually been made public, if it was indeed made public, it is recognized as one that should be naturally made public as a work of NASDA's authorship.

On these bases, Program 5 should be considered to be one for which NASDA becomes the author, deeming it to be a work made in the course of duty.

(5) Regarding Program 12 (KALMAN [original, six dimension])

A. According to 1.(6) above, the following facts are recognized. [A] The appellant studied abroad at the Toulouse Space Centre of the CNES in France for the period from August 14, 1980 to February 17, 1982, as an overseas trainee for fiscal 1980, and as a foreign student sponsored by the Government of France. [B] The period of overseas dispatch as a student based on NASDA's overseas training plan was in principle up to 12 months. However, as a foreign student sponsored by the Government of France, the appellant was permitted to extend the period of study for one year. Therefore, upon the appellant's request for extension of the period of study, NASDA permitted the appellant to extend the period of study for one year by treating the appellant as being on leave. Although the appellant's salary was reduced to seventy-hundreds of the ordinary amount on August 18, 1981 and thereafter, treatment of the appellant under the Health Insurance Act, the Employment Insurance Act, and the Employees' Pension Insurance Act was not changed. [C] The appellant was promoted from a development staff member to the deputy chief development staff member on April 1, 1981 when the appellant was engaging in the aforementioned overseas study. [D] The appellant presented to NASDA the following matters as the content of training (technical training [Stage]) at the CNES: "(A) Research on the dynamics of a satellite in orbit consisting of the following three themes: [i] The problem of earth or lunar orbit rendezvous/docking is analyzed by means of the maximum-minimum method and the Encke perturbation method under time and fuel constraints, etc.; [ii] The problem of the mission analysis of a deep-space spacecraft having the weight as

prescribed for an Arian rocket or a space shuttle is analyzed by means of the patched conic method, the fly-by method, etc.; [iii] The problem of the dynamics of a geostationary satellite during the burning of the solid or liquid apogee motor is analyzed in consideration of the effects of jet damping and liquid sloshing. (B) Research and study on the projects that are being planned at the CNES: [i] research and study on a system for analysis operational software for satellites that are launched by an Arian rocket and [ii] research and study on future projects relating to space labs and space stations." The appellant also described as follows as the "effects of the training": "The field of 'mission analysis' relating to the design and operation of a satellite is one of the fields where NASDA and those engaging in space development in Japan are lagging behind. Therefore, I would like to reflect my training outcomes in conducing the 'mission analysis' of satellites, spacecraft, large space structures, etc. in the future, and furthermore, in planning the long and short-term concepts of the 'Satellite Software Organization Plan' that is now in the planning stage." Under such circumstances, the appellant carried forward research on the Kalman filter, which can estimate the orbit of a satellite more precisely as a method of estimating the orbit of a satellite that can substitute for the batch iteration method commonly used at that time, selected the Solaris satellite of the CNES as the subject of application of the relevant theory, and made a rendezvous analysis program, "TAKAKO," in October 1981. [E] After returning to Japan, in a report at NASDA's executive meeting, the appellant stated "acquisition of a mission analysis method mainly based on orbit dynamics" as "1. Training assignment," and cited "one preliminary mission analysis for the CNES's rendezvous plan" as "Problem 1." The appellant stated as follows in the "Simulation for preparation of a maneuver plan" section: "I conducted a simulation of the overall transition of Ariane injection orbit error based on the maneuver sequence before a rendezvous that is decided according to the strategy. Thereby, I could understand the tendency for increased orbit error and the tendency for error propagation at the maneuver point, estimation of orbit/error by the Kalman filter according to visibility from the earth station/geostationary satellite station (TDRS), and the tendency for convergence of error covariance."; "On these bases, I provided one piece of data about the system search of the Solaris Project. The CNES is now actually determining the orbit by means of the least-square method and is considering a more accurate determination method in relation to the SPOT mission. I think that I have also provided and established one new method therefor."; "Incidentally, for this analysis program, about 16,000 steps were newly developed." Thereby, the appellant reported the analysis program by means of the Kalman filter as the outcome of the overseas training, by stating that the appellant made a rendezvous analysis program for the CNES's satellite by means of the Kalman filter and confirmed the usefulness thereof. [F] After that, the appellant further developed this program and made Program 13 using the Kalman filter in January 1983.

As mentioned in 1.(6)D. above, a method using a constant coefficient linear filter and a method using the Kalman filter (non-linear filter) were being considered as methods of estimating the orbit of a satellite that can substitute for the batch iteration method commonly used at that time. Comparing these two methods, the method using the Kalman filter can obtain highly accurate values but has the disadvantages of requiring many calculation steps and large storage capacity. On the other hand, the method using a constant coefficient linear filter cannot obtain as accurate values as the method using the Kalman filter but can immediately obtain the flight orbit through simple calculation. Even if the opinion that a constant coefficient linear filter should be used as an orbit estimation program rather than the Kalman filter was dominant in terms of practice, that fact is a matter of mere technical debate inside NASDA. Then, NASDA could not neglect research on the Kalman filter itself as well as that on a constant coefficient linear filter, and research on the Kalman filter is recognized as having been an essential operation at NASDA.

B. Regarding the requirement concerning the "initiative of the corporation, etc." and the requirement concerning the "work that the employee of a corporation, etc., makes in the course of duty," whether Program 12 was planned or expected to be made in the course of the appellant's duty becomes a problem.

First, considering the appellant's duty during the training period, the appellant was NASDA's overseas trainee, and submitted an "overseas training plan" describing the content and effects of the training at the CNES before going abroad for study. Therefore, the appellant's duty during the training period was engaging in the training based on the aforementioned "overseas training plan." The content of the training included the "research and study on a system for analysis operational software for satellites that are launched by an Arian rocket" as one of the "research and study on the projects that are being planned at the CNES." In a paper titled "Preliminary Mission Analysis of Approach Phase/Rendezvous for the Solaris Project Planned by the CNES" (Exhibit Ko 5), which was prepared with a rendezvous analysis program, "TAKAKO," the appellant is described as an "engineer at the First Satellite Design Group of the National Space Development Agency of Japan," which was the appellant's position before going abroad for study. Furthermore, the appellant reported the analysis program by means of the Kalman filter as an outcome of the overseas training. In that case, the operation to make Program 12 that is contained in the rendezvous analysis program, "TAKAKO," as a subroutine should be considered to be one that NASDA could plan or expect as the appellant's training outcome based on the statements in the aforementioned "overseas training plan."

Therefore, it can be said that Program 12 was planned or expected to be made in the course of the performance of the appellant's duty during the training period. Consequently, there was the "initiative of the corporation, etc.," and Program 12 should be considered to fall under a

"work made in the course of duty" of the appellant.

Incidentally, as mentioned in 1.(6)G. above, said program is one that NASDA and the Appellee Agency came to know only after the appellant filed this action. However, this fact does not preclude the recognition of the "initiative of the corporation, etc." because the requirement concerning the "initiative of the corporation, etc." is fulfilled as long as the relevant work is planned or expected to be made in the course of the performance of the duty of the employee even if there had been neither specific direction nor approval of the corporation, etc. in making the relevant work, as mentioned in (1) above.

C. The appellant alleges as follows: Going to the CNES for study was a private overseas study, and the appellant independently made Program 12 through continued private free research activities while being on leave from NASDA; therefore, NASDA did not bear expenses for making the program; the purpose of the overseas study was to "learn overseas culture and thereby broadly deepen knowledge as an international citizen," and the overseas study was separated from NASDA's operations.

However, as determined above, it is obvious that the appellant's overseas study at the CNES was not a private overseas study. NASDA promoted the appellant during the overseas study and took the form of leave from NASDA in consideration of the appellant's wish for the extension of the period of study. In addition, even after August 18, 1981, NASDA supplied the salary in the amount of seventy-hundreds of the ordinary salary and did not change the treatment of the appellant under the Health Insurance Act, the Employment Insurance Act, and the Employees' Pension Insurance Act. It is thus obvious that the salary paid by NASDA supported a large part of the appellant's public and private life in France, including making programs. The appellant's duty during the training period is as stated by the appellant in the "overseas training plan," and it cannot be said to be mere act of "learning overseas culture and thereby broadly deepening knowledge as an international citizen."

All of the aforementioned allegations of the appellant are unreasonable.

D. The appellant alleges as follows: NASDA did not bear expenses for making Program 12 and usage fees for CNES's large computer; although the prescribed social insurance benefit during leave was supplied to the appellant, it does not fall under the expenses for making the program.

However, as mentioned above, the salary paid by NASDA supported a large part of the appellant's public and private life in France, including making programs. Therefore, it is obvious that NASDA indirectly bore expenses for making Program 12.

Even if the appellant bore usage fees for CNES's large computer, etc. in relation to Program 12, this does not affect the determination that the appellant made Program 12 in the course of the appellant's duty.

E. The appellant alleges as follows: NASDA recognized that all the rights as the author,

including copyrights, for the programs that the appellant made during the study in France belong to the appellant.

Considering NASDA's response after the appellant's return to Japan, the following facts are recognized according to evidence (Exhibits Ko 71 to 74).

(A) On October 25, 1985, under the transmitter's name of a "member of the Overall Development Section of the Engineering Test Satellite Group of the Satellite Development Headquarters," the appellant submitted to the Director of the International Relations and Research Department (Technical Information Division) a business communication (Exhibit Ko 71) titled "Regarding the ownership of computer software," which is accompanied by a document titled "Application for the ownership of computer software" (draft) that was prepared under the name of the appellant on November 6, 1985. Said business communication described as follows: "Regarding the topic mentioned above, a NASDA staff member is claiming the ownership of the computer software that he/she independently developed in-house, as mentioned in the attachment. In this regard, please consider whether NASDA can grant the ownership to the individual or divide it thereto." The aforementioned document titled "Application for the ownership of computer software" (draft) cites three subject programs. In relation to one of those programs, "Program for probabilistic estimation of the state quantity of a satellite during the burning of ABM (naming: KALMAN-1, 2, 3, etc.; about 5,000 steps)," the reason for application was that the program is one that the applicant (appellant) developed while studying at the CNES.

(B) The Director of the Tsukuba Space Center transmitted to the heads of the Planning and Coordination Division of the General Affairs Department, the Personnel Division, the International Relations and Research Department, and the Satellite Development Headquarters a business communication (Exhibit Ko 72) titled "Measures against obtainment of copyrights for computer programs (2)" on February 3, 1986. In said communication, the following was stated as a problem in the obtainment of copyrights for programs: "The copyright for a program made during overseas study does not fulfill the requirements for a work made in the course of duty, and is considered to belong to an individual. Therefore, it is necessary to review the relevant regulations, etc." This business communication was accompanied by tentative investigation results regarding the "attribution of rights for programs made in the course of duty," which summarizes the results of consultation with the Agency for Cultural Affairs, the Japan Copyright Council, and attorneys at law.

(C) The appellant transmitted to the Director of the International Relations and Research Department a business communication (Exhibit Ko 73) titled "Regarding your answer about the 'ownership of computer software'" that urges the Director to answer (A) mentioned above, under the transmitter's name of a "member of the Overall Development Section of the Engineering

Test Satellite Group of the Satellite Development Headquarters" on March 11, 1986.

(D) The Director of the International Relations and Research Department transmitted to the "member of the Overall Development Section of the Engineering Test Satellite Group of the Satellite Development Headquarters" mentioned in (C) above a business communication (Exhibit Ko 74) titled "Regarding the ownership of computer software (answer)" on March 27, 1986. In said communication, the following was stated in relation to the attribution of works of computer programming: "A program developed during the overseas study (one program) … belongs to the individual"; "NASDA is developing necessary regulations and procedures in order to ensure that the copyright for software made by a staff member which contributes to space development operations be completely succeeded by NASDA, irrespective of whether the software was made in the course of duty or otherwise.."

The following is stated in relation to "business communications" at NASDA in a NASDA's internal rule titled "Regarding handling of business communication documents" (Exhibit Otsu 68): "A business communication is used in the case of giving a simple direction or request, making referral, or giving an answer or notice, etc. as a means for facilitating mutual communication between organizations in NASDA and as a means for assisting paperwork"; "Incidentally, such business communication is not used in relation to a decision-making of NASDA or in relation to the illustrative rules or standards of NASDA." Thereby, said rule makes clear that a business communication is a document to communicate simple matters inside NASDA, and it is not one that shows the intention of NASDA.

Therefore, it cannot be said that NASDA recognized in the business communication of the Director of the Tsukuba Space Center or that of the Director of the International Relations and Research Department that all the rights of the author, including copyrights, for the program which the appellant made while studying in France belongs to the appellant.

F. Next, the requirement concerning the "work [is one] which the corporation, etc. makes public as a work of its own authorship" is considered.

(A) As mentioned in 1.(6)E. above, the appellant made a rendezvous analysis program, "TAKAKO," in October 1981, and also completed an English paper (Exhibit Ko 5) titled "Preliminary Mission Analysis of Approach Phase/Rendezvous for the Solaris Project Planned by the CNES" as a work of the appellant's authorship in January 1982 by describing the appellant's name and the title before the overseas study, "engineer at the First Satellite Design Group of the National Space Development Agency of Japan." The aforementioned paper is recognized as having been made public to the engineers of the CNES at the Toulouse Space Centre of the CNES.

(B) The appellant alleges that the appellant made Program 12 and relevant papers, and made them public at the CNES. On the other hand, the appellees allege as follows: All of the

aforementioned papers are related to publication of research on calculation formulas and theoretical formulas for mission analysis and do not make public the source code and object code of Program 12; therefore, these papers cannot be considered to be making public said work of computer programming.

Regarding the meaning of "making a work public," the Act provides that "A work has been made public if it is published or if a person that owns a right provided for in Articles 22 through 25 or a person authorized thereby presents the work to the public by means of a stage performance, musical performance, on-screen presentation, transmission to the public, recitation, or exhibition …" (Article 4, paragraph (1)). Regarding the meaning of "the public," the Act provides that "As used in this Act, 'the public' includes exclusive groups made up of many persons" (Article 2, paragraph (5)). Therefore, it should be considered that it is necessary to present Program 12 itself to many and unspecified persons or many and specified persons orally or by means of display, etc. in order to say that Program 12 has been made public.

Regarding this case, in the written statement (Exhibit Ko 156), the appellant states as follows: "This paper is a summary of the results of analysis using KALMAN (six dimension, original) (note: Program 12) that I made during my private overseas study… I have made public said paper and program to the engineers of the CNES at the Toulouse Space Centre of the CNES. At that time, NASDA had no concern with my private research activities, and I was not on duty. Even after I filed this action, the defendant explained that it did not know the existence of said program as well as said paper and publication thereof. That is, this presentation is to make public my private research, and it is thus obvious that I am the only copyright owner of KALMAN (six dimension, original)." According to evidence (Exhibit Ko 5), the aforementioned paper describes the theory and utilization guidance of a rendezvous analysis program, "TAKAKO," but does not describe the source code and object code of said program.

In addition, even in consideration of all the evidence in question, it is not sufficient to recognize that the appellant presented Program 12 itself to many and unspecified persons or many and specified persons orally or by means of display, etc. as a work of the appellant's authorship.

In that case, it is still hard to say that Program 12 has been made public as a work of the appellant's authorship.

(C) After returning to Japan, the appellant reported an analysis program using the Kalman filter as the outcome of the overseas training by stating that the appellant made a rendezvous analysis program for CNES's satellites using the Kalman filter and confirmed its effectiveness. Taking this fact and other circumstances into account, Program 12 can be considered to be one that should have been made public as a work of NASDA's authorship. Therefore, Program 12 fulfills the requirement concerning the "work [is one] which the corporation, etc. makes public as a

work of its own authorship" as set forth in Former Article 15 of the Act.

G. On these bases, Program 12 should be considered to be NASDA's work made in the course of duty.

(6) Regarding Program 13 (KALMAN [original, nine dimension])

A. According to the fact determined in 1.(7) above, on July 20, 1982, the appellant made a suggestion of the implementation of analysis using the Kalman filter on the basis of Doppler data, together with a specification of the operation plan for fiscal 1982 (Exhibit Ko 48), but the suggestion was not approved. Before making a suggestion of the same sort again, the appellant made Program 13 without NASDA's approval.

B. Incidentally, as mentioned in 1.(6)D. above, a method using a constant coefficient linear filter and a method using the Kalman filter (non-linear filter) were being considered as a method of estimating the orbit of a satellite that can substitute for the batch iteration method commonly used at that time. Comparing these two methods, the method using the Kalman filter can obtain highly accurate values but has disadvantages of requiring many calculation steps and large storage capacity. On the other hand, the method using a constant coefficient linear filter cannot obtain as accurate values as the method using the Kalman filter but can immediately obtain the flight orbit through simple calculation. Therefore, it is recognized that the opinion that a constant coefficient linear filter should be used as an orbit estimation program rather than the Kalman filter was dominant in terms of practice. However, this fact is a matter of mere technical debate in terms of operational management inside NASDA, and NASDA could not neglect research on the Kalman filter itself as well as that on a constant coefficient linear filter. In addition, theoretically, the Kalman filter is certainly effective as an orbit estimation program. The appellant's suggestion of the implementation of analysis using the Kalman filter based on Doppler data can be considered to have been meaningful for NASDA, irrespective of whether NASDA has given approval thereto. As mentioned in 1.(11) above, upon the appellant's suggestion, NASDA actually determined that it would be necessary to improve Program 13, and carried forward the development of Program 3 (KALMAN-1 [nine dimension]). In addition, as mentioned in 1.(7)C. above, regarding Program 13, the Follow-up Flight Control Development Office of the Tsukuba Space Center expressed the opinion that Program 13 has problems in terms of parameter and biased errors and cannot be used for a real-time estimation during the burning of the apogee motor as it is. Thereby, said office requested changes to the program. However, taking 1.(6)D. above into account, this request is presumed to fall under a mere technical debate in terms of operational management.

As mentioned above, the appellant made a suggestion of the implementation of analysis using the Kalman filter based on Doppler data, together with a specification of the operation plan for fiscal 1982, as the appellant's own duty, and continued further consideration.

Therefore, even if NASDA did not approve the appellant's making of Program 13, it is reasonable to recognize that said program was planned or expected to be made in the course of performance of the appellant's duty. Consequently, Program 13 should be considered to be one that fulfills the requirement concerning the "initiative of the corporation, etc."

C. The appellant alleges as follows: Both the appellant's suggestion of making Program 13 and suggestion of a development policy based thereon were opposed by NASDA, and the appellant independently carried out the entire process of making Program 13; in addition, NASDA did not pay expenses for making the program; therefore, Program 13 cannot be considered to have been made in the course of duty.

However, NASDA has been carrying forward the development of satellites, excluding applications satellites and earth observation satellites, from various perspectives, and even if development projects are approved or not by will or choice inside NASDA, all of those projects fall under NASDA's operations. Even if such a project is not approved by NASDA, it does not become a private project by being separated from NASDA's operations and being denied in terms of its relationship with the appellant's duty. In addition, even if NASDA does not adopt the appellant's suggestion concerning the Kalman filter based on its political determination because the opinion that a constant coefficient linear filter should be used rather than the Kalman filter was dominant inside NASDA as mentioned above, NASDA has not denied research on the Kalman filter and making of the relevant program, as stated above.

Moreover, as Program 13 was made through the aforementioned process, it is recognized as a "work made in the course of duty" of the appellant.

Program 13 is a program as stated in 1.(7) above, and although it has not actually been made public, if it is indeed made public, it is recognized as one that should be naturally made public as a work of NASDA's authorship.

D. On these bases, Program 13 is recognized as one for which NASDA becomes the author, deeming it to be a work made in the course of duty.

(7) Regarding Programs 1 (DYNA) and 2 (STAT)

According to the facts determined in 1.(8) and (9) above, the appellant had engaged in the development of ETS-V in the First Satellite Design Group since April 1983. The appellant thought that it was necessary to conduct analytical work not only on the static spin stability of ETS-V but also on the dynamic spin stability thereof, but MELCO and NASDA were reluctant to do so. Therefore, the appellant started introduction of equations, formulation, and creation of algorism for the purpose of making programs to analyze the sloshing problem, and created Programs 1 and 2 by directing and supervising Appellee CRC with the approval of NASDA.

In that case, NASDA naturally planned or expected that the appellant would make Programs 1 and 2 in the course of duty. Therefore, it is reasonable to recognize the existence of the

initiative of NASDA.

Next, Programs 1 and 2 are recognized as those that were made in the course of the appellant's duty as they were made as the outcomes of programming work after going through the process mentioned above.

Then, Programs 1 and 2 are programs as mentioned in 1.(9) above, and although they have not actually been made public, if they are indeed made public, they are recognized as those that should be naturally made public as a work of NASDA's authorship.

On these bases, Programs 1 and 2 are recognized as those for which NASDA becomes the author, deeming them to be works made in the course of duty.

(8) Regarding Program 6 (DYNA-A)

According to the facts determined in 1.(10) above, Program 6 is intended to add a function to Program 1, and the appellant made Program 6 by directing and supervising Appellee CRC with the approval of NASDA.

In that case, NASDA naturally planned or expected that the appellant would make Program 6 in the course of duty. Therefore, it is reasonable to recognize the existence of the initiative of NASDA.

Next, Program 6 is recognized as one that was made in the course of the appellant's duty as it was made as the outcome of programming work after going through the process mentioned above.

Then, Program 6 is a program as mentioned in 1.(10) above, and although it has not actually been made public, if it is indeed made public, it is recognized as one that should be naturally made public as a work of NASDA's authorship.

On these bases, Program 6 is recognized as one for which NASDA becomes the author, deeming it to be a work made in the course of duty.

(9) Regarding Program 3 (KALMAN-1 [nine dimension])

A. According to the fact determined in 1.(11) above, the appellant thought that it was necessary to improve the KALMAN program from six dimension to nine dimension, and made Program 3 by directing and supervising Appellee CRC with the approval of NASDA.

In that case, NASDA naturally planned or expected that the appellant would make Program 3 in the course of duty. Therefore, it is reasonable to recognize the existence of the initiative of NASDA.

Next, Program 3 is recognized as one that was made in the course of the appellant's duty as it was made as the outcome of programming work after going through the process mentioned above.

Incidentally, as mentioned in (1) above, it is not necessary to fulfill the requirement concerning the "work [is one] which the corporation, etc. makes public as a work of its own

authorship" as set forth in Former Article 15 in terms of Program 3 because paragraph (2) of Current Article 15 is applicable thereto.

On these bases, Program 3 is recognized as one for which NASDA becomes the author, deeming it to be a work made in the course of duty.

5. Regarding the appellant's allegations concerning the Programs as a whole in this instance

(1) The appellant alleges as follows: The appellant could make the Programs as the appellant had learned at graduate school about the technical fields pertaining to the Programs, such as spin dynamics, state quantity estimation, static stability, and orbit dynamics; therefore, the Programs are the outcomes of the appellant's "private free research activities," and the outcomes cannot be infringed just because the appellant became NASDA's staff member.

However, since being employed on April 1, 1974, the appellant has assumed the obligation to engage in NASDA's work and has received remuneration for the work. Therefore, when engaging in NASDA's work, the appellant must engage in the duty ordered by NASDA, and is not in a position to conduct "private free research activities" while being on duty.

Moreover, the appellant alleges as follows: The court of prior instance completely neglects facts, such as that the Programs are the outcomes of the appellant's "private free research activities," and that the root of the Programs, that is, the "initiative" thereof, had already existed in the appellant as a researcher when the appellant was studying at graduate school.

However, the Programs cannot be considered to be the outcomes of the appellant's "private free research activities," as mentioned above. In addition, the issue in this case is whether the Programs fall under works made in the course of duty, and the "initiative of the corporation, etc." mentioned in Former Article 15 of the Act is a concept meaning the case where a work is planned or expected to be made in the course of performance of the duty of the employee of a corporation, etc. even without specific direction or approval of the corporation, etc. in such cases as where the corporation, etc. plans and plots to make a work and specifically orders its employee to make the work, where the employee of the corporation, etc. makes a work with the approval of the corporation, etc., or where there is an employment relationship between the corporation, etc. and the employee and the employee performs the prescribed duty in accordance with a business plan of the corporation, etc., as mentioned in 4.(1) above. The motivation, etc. of the person who made the Programs does not become an issue.

Furthermore, the appellant also alleges that the appellant has never sold the appellant's "entire private life and free research activities" to the appellee just because the appellant was recruited by NASDA by chance.

However, even in consideration of all the evidence in question, there is only an employment relationship between the appellant and NASDA, and no special agreement can be recognized that the appellant can conduct "private free research activities" on duty while obtaining a salary

and that the outcomes thereof can be attributed to the appellant.

Therefore, all of the aforementioned allegations of the appellant are unacceptable.

(2) The appellant alleges as follows: The appellant's superior illegally sold the programs developed by the appellant to a manufacturer, and misappropriated the appellant's analysis results, suggestions, and programs behind the appellant's back without the appellant's permission; furthermore, NASDA unilaterally deleted the programs without holding any consultation with the appellant.

However, as indicated above, the Programs, excluding Program 11, fall under works made in the course of duty, and copyrights and moral rights of author therefor belong to NASDA as of the time when they were made. Therefore, for these programs, NASDA can exercise rights as the author at its own discretion.

Consequently, the appellant's allegation of NASDA's illegal sale, misappropriation without permission, and deletion without permission is originally unreasonable because it is based on an erroneous premise that the appellant holds the copyrights and moral rights of author for the aforementioned programs.

Incidentally, Program 11 cannot be considered to be a work as mentioned in 2.(2) above, and the illegal sale, misappropriation without permission, and deletion without permission mentioned by the appellant cannot become a problem at all.

(3) The appellant alleges that NASDA opposed all of the ECS mission analysis plan, ECS, analysis to find the causes of a failure of ECS-b, the plan for the development and analysis of satellite analysis software, etc., all of which are for the purpose of the "check and review" of the Programs, and squashed them as operations that do not belong to NASDA's operations.

However, for example, as mentioned in 1.(5) above, in the analysis to find the causes of a failure of ECS-b, A engaged in the determination of the causes of a defect through thermal analysis while the appellant attempted the deterministic estimation of the state quantity of the satellite during the burning of the apogee motor based on Doppler data and created Program 5. The Defect Task Force determined that the decisive determination of the causes would be conducted through thermal analysis that A had considered, and positioned the appellant's Doppler analysis as a complementary analysis. However, NASDA did not oppose the appellant's making of Program 5, but in fact approved it and had concluded a contract with Appellee CRC to have it support the appellant's duty.

Moreover, as mentioned in 1.(8) and (9) above, a technical dispute arose with MELCO as MELCO did not make sufficient response to the appellant's indication of problems in relation to the development of ETS-V. However, it is obvious that the appellant's achievement as a whole is not denied even if the appellant's suggestion is not chosen in a dispute involving options.

Furthermore, as mentioned in 1.(7) above, it is obvious that the appellant's achievement is

neither denied nor squashed even if the Follow-up Flight Control Development Office of the Tsukuba Space Center presented an objection to the appellant's theory and requested changes thereto in relation to the suggestion of the implementation of analysis using the Kalman filter based on the "Analysis Using the Kalman Filter for Estimation of Dynamic Characteristics and Input Drift Orbit of Satellite during the Burning of ABM" prepared by the appellant.

Even considering all the evidence in question, there is no other objective evidence that is sufficient to recognize that NASDA squashed the appellant's achievement as one that does not fall under NASDA's operations.

As mentioned above, the appellant's suggestions or opinions were not accepted several times. However, a determination of which suggestion or opinion NASDA adopts for the purpose of achieving its goal is a determination made in terms of NASDA's operational management. In addition, NASDA has approved the appellant's suggestions or opinions in not a few cases. Even if the appellant's suggestion or opinion is not adopted in some cases, the appellant's research and development does not become meaningless. The provision of multiple suggestions or opinions for the purpose of achievement of NASDA's goal must be considered to be important in terms of comparison and from the perspective of deepening discussions. Moreover, the appellant's allegation of NASDA's illegal sale, misappropriation without permission, and deletion without permission of the Programs means that the Programs are being made use of by NASDA. The appellant is thereby confirming that the appellant's research and development were not meaningless.

(4) The appellant alleges as follows: NASDA is not a research institute, and it manages only budgets and schedules and entrusts technology to contractors; under such NASDA's actual operations, NASDA moderately permits its staff members to conduct "private free research activities" by separating those activities from its operations; in particular, NASDA has given implicit approval to analysis conducted by its staff members as off-duty private research activities; on this premise, privately-made programs were considered to be private and were separated from NASDA's operations and considered to be not subject to NASDA's operational management; therefore, the copyrights and moral rights of author for the Programs belong to the appellant who made them.

However, according to the circumstances determined in 1.(1) to (11) above, it is obvious that NASDA was not as alleged by the appellant. Therefore, the aforementioned allegation of the appellant in relation to the attribution of the copyrights and moral rights of author for the Programs lacks its premise.

(5) The appellant alleges as follows: The appellant suggested the development of a technology management system inside NASDA, and the appellant and NASDA agreed that the appellant would manage and preserve the programs that the appellant developed and that other staff

members would apply to the appellant for permission for the use of these programs; according to this agreement, the appellant has given permission for use upon application for use of the programs that he/she developed while clearly specifying that the appellant is the copyright owner for the programs; therefore, NASDA has recognized that the copyrights and moral rights of author for the Programs belong to the appellant.

However, according to evidence (Exhibits Ko 80 to 86), the permission for use mentioned by the appellant is a "business communication" that was prepared and exchanged between the organizations inside NASDA, such as the Satellite Development Headquarters, the Rocket Development Headquarters (H-II Rocket Group), the NII and H-I Rocket Groups, the System Technical Development Department, and the Engineering Test Satellite Group. The appellant is recognized as engaging merely in the paper work for the leasing of the programs as a person in charge at the Satellite Department Headquarters. In addition, regarding a "business communication" inside NASDA, NASDA's internal rule provides that "Incidentally, such business communication is not used in relation to the decision-making of NASDA or in relation to the illustrative rules or standards of NASDA." A "business communication" is a document to communicate simple matters inside NASDA, and it is not one that shows the intention of NASDA, as mentioned in 4.(5)E.(D) above. Therefore, the aforementioned allegation of the appellant is unreasonable.

(6) On these bases, out of the appellant's claims in this action, there is no reason for the appellant's claim (primary claim) for a declaratory judgment that between the appellant and the appellees, the appellant holds the copyrights and moral rights of author for the Programs.

6. Regarding the issue of whether Program 2, Program 3, and Program 5 are an adaptation of Program 11, Program 13, and Program 19, respectively (Issue 4)

(1) The appellant alleges as follows: Program 2 was made by adding an additional function to Program 11 while using expressions concerning the essential function part of Program 11; therefore, Program 2 is a derivative work created through adaptation of Program 11.

However, as mentioned in 2.(5) above, Program 11 does not involve copyrightability. Therefore, the aforementioned allegation of the appellant that is premised on Program 11's being a work is unreasonable.

(2) The appellant alleges as follows: As the statement of the creative characteristic part of Program 13 can be directly felt from the statement of Program 3, Program 3 is a derivative work that was created through adaptation of Program 13.

However, as mentioned in 4.(6) above, Program 13 is a work made in the course of duty of NASDA, and the appellant holds neither the copyright nor moral rights of author therefor. Therefore, the aforementioned allegation of the appellant lacks its premise and is thus unreasonable.

(3) The appellant alleges that Program 5 is a derivative work of which the original work is Program 19.

However, as mentioned in 4.(2) above, Program 19 is NASDA's work made in the course of duty, and the appellant holds neither the copyright nor moral rights of author therefor. Therefore, the aforementioned allegation of the appellant lacks its premise and is thus unreasonable.

(4) On these bases, regarding the appellant's claims in this action, there is no reason for the appellant's claims (secondary claims) for a declaratory judgment that between the appellant and the appellees, the appellant holds the rights of the original author for Programs 2, 3, and 5 while deeming these programs to be derivative works and the original works thereof to be Programs 11, 13, and 19, respectively,.

7. As mentioned above, all the appellant's claims in this action shall be dismissed as there is no reason therefor. The judgment in prior instance to the same effect is reasonable, and there is no reason for this appeal.

Therefore, this appeal shall be dismissed, and the judgment shall be rendered in the form of the main text.

Intellectual Property High Court, First Division

Presiding judge: SHINOHARA Katsumi

Judge: SHISHIDO Mitsuru

Judge: SHIBATA Yoshiaki

(Attachment 1) "Work List"

No.	Program name	Title, etc. of the material containing the program
1	DYNA	Title: National Space Development Agency of Japan's unit-price contract report Support for Mission Analysis of Engineering Test Satellite V (ETS-V) (1) Registration Nos.: LRC8400301, LRC 8400311 Time of registration: May 14, 1984
2	STAT	Title: National Space Development Agency of Japan's unit-price contract report Support for Mission Analysis of Engineering Test Satellite V (ETS-V) (1) Registration Nos.: LRC8400301, LRC 8400311 Time of registration: May 14, 1984
3	KALMAN-1 (nine dimension)	Title: Support for Mission Analysis of Engineering Test Satellite V (ETS-V) (3) Registration Nos.: LRC8503881, LRC8503891 LRC8503901, LRC8503911 LRC8503921, LRC8503931 LRC8503941, LRC8503951 Time of registration: June 3, 1986
4	SPD	Title: Fiscal 1979 SPD I Program List Registration Nos.: 7925 (for CDC6600/CYBER74) 7926 (for FACOM230-75) Time of registration: October 16, 1995
5	DOPPLER	Title: National Space Development Agency of Japan's contracted operation accomplishment report Consideration of ECS-b antenna pattern and Doppler data Registration Nos.: LRC8001591, LRC8001601 LRC8001611, LRC8001621 LRC8001631 Time of registration: August 25, 1980
6	DYNA-A (dynamic analysis program for	Title: Support for Mission Analysis of Engineering Test Satellite V (ETS-V) (2) Registration Nos.: LRC8402971, LRC 8402991 Time of registration: August 12, 1985

	the ABM burning phase)	
11	STAT (original)	Program comprising the 14 execution steps described in Attachment 2
12	KALMAN (original, six dimension)	Program comprising the 30 subroutines/programs described in Attachment 3 which is indicated in Attachment 4 of the judgment in prior instance (however, excluding a subroutine, "MINVS1")
13	KALMAN (original, nine dimension)	Program comprising the 23 subroutines/programs described in Attachment 5 which is indicated in Attachment 6 of the judgment in prior instance
15	Orbit Propagation Analysis Program (B010 Program)	Title: National Space Development Agency of Japan's contracted operation accomplishment report Mission analysis program for an experimental geostationary communications satellite (ECS) Registration Nos.: LRC800038, LRC800039 LRC800040, LRC800041 LRC800042, LRC800043 Time of registration: April 1980
19	Satellite Motion Analysis Program Based on Doppler Changes (B061 Program)	Title: National Space Development Agency of Japan's contracted operation accomplishment report Mission analysis program for an experimental geostationary communications satellite (ECS) Registration Nos.: LRC800038, LRC800039 LRC800040, LRC800041 LRC800042, LRC800043 Time of registration: April 1980

*Nos. 7 to 10, 14, and 16 to 18 are vacant numbers.

（Attachment 2）

（別紙２）

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Z = r2 =
A = P = 1000.
B = r1 = 0.75.
C = L = 0.25
D = R = ~~0.56~~ = 0.28
E = I22 = 312.6
F = I11 = 330.5

G = ASIN((SQRT(2*D*D*(B*B+Z*Z)-D**4
        -(Z*Z-B*B)*(Z*Z-B*B))/2/B/Z)

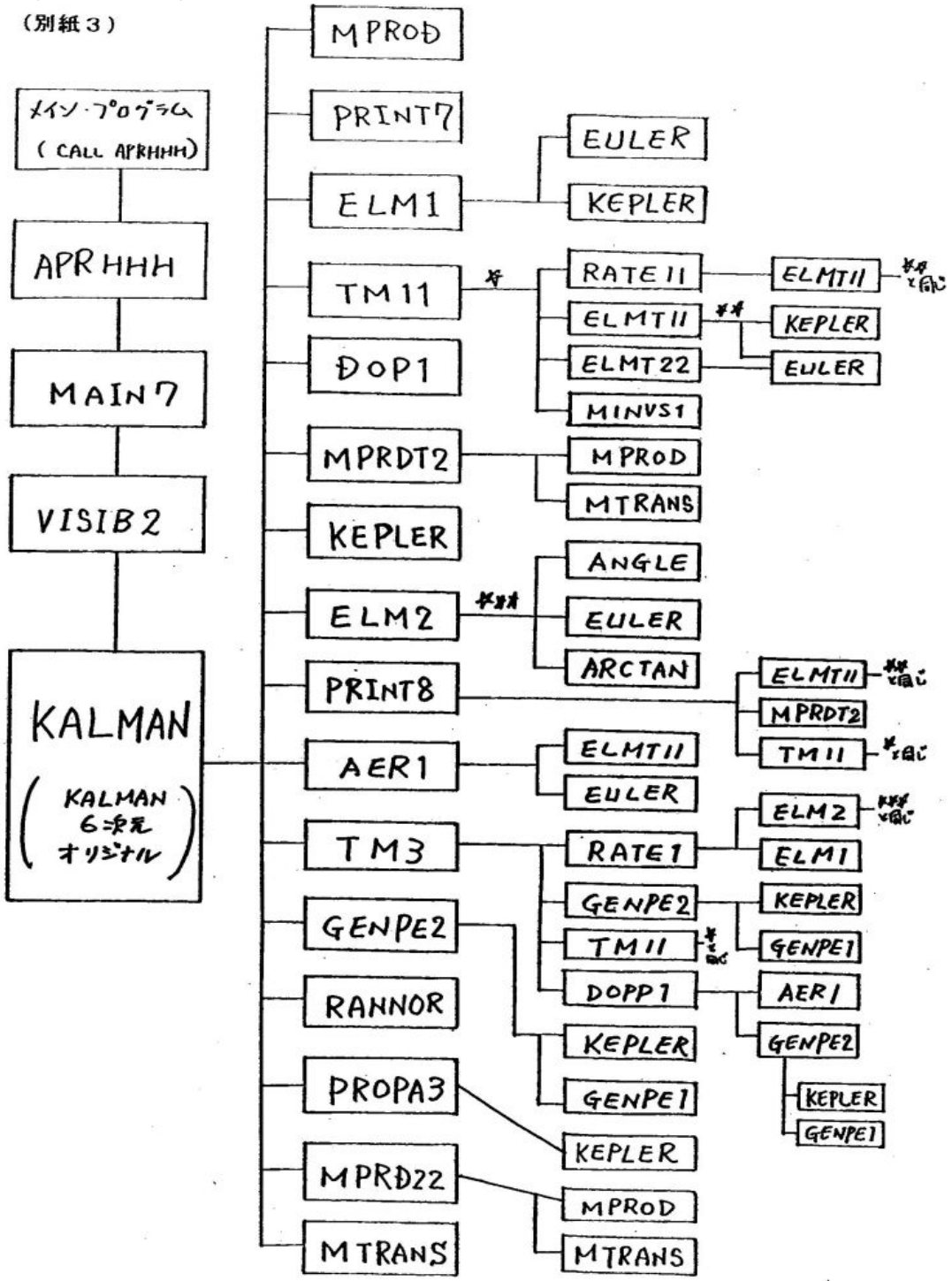
H = π/180.
L = Z*SIN(G)*
C0 I = 4/3*A*Z*Z*~~ABS(Z-B)~~*(3*C*C+~~ABS(Z-B)~~**2)
C1 J = I/F*(G*H-SIN(2*G)/2.)
C2 K = I/E*(G*H+SIN(2*G)/2.)

PRINT Z, G, I, J, K
END
```

STAT
オリジナル

(Attachment 3)

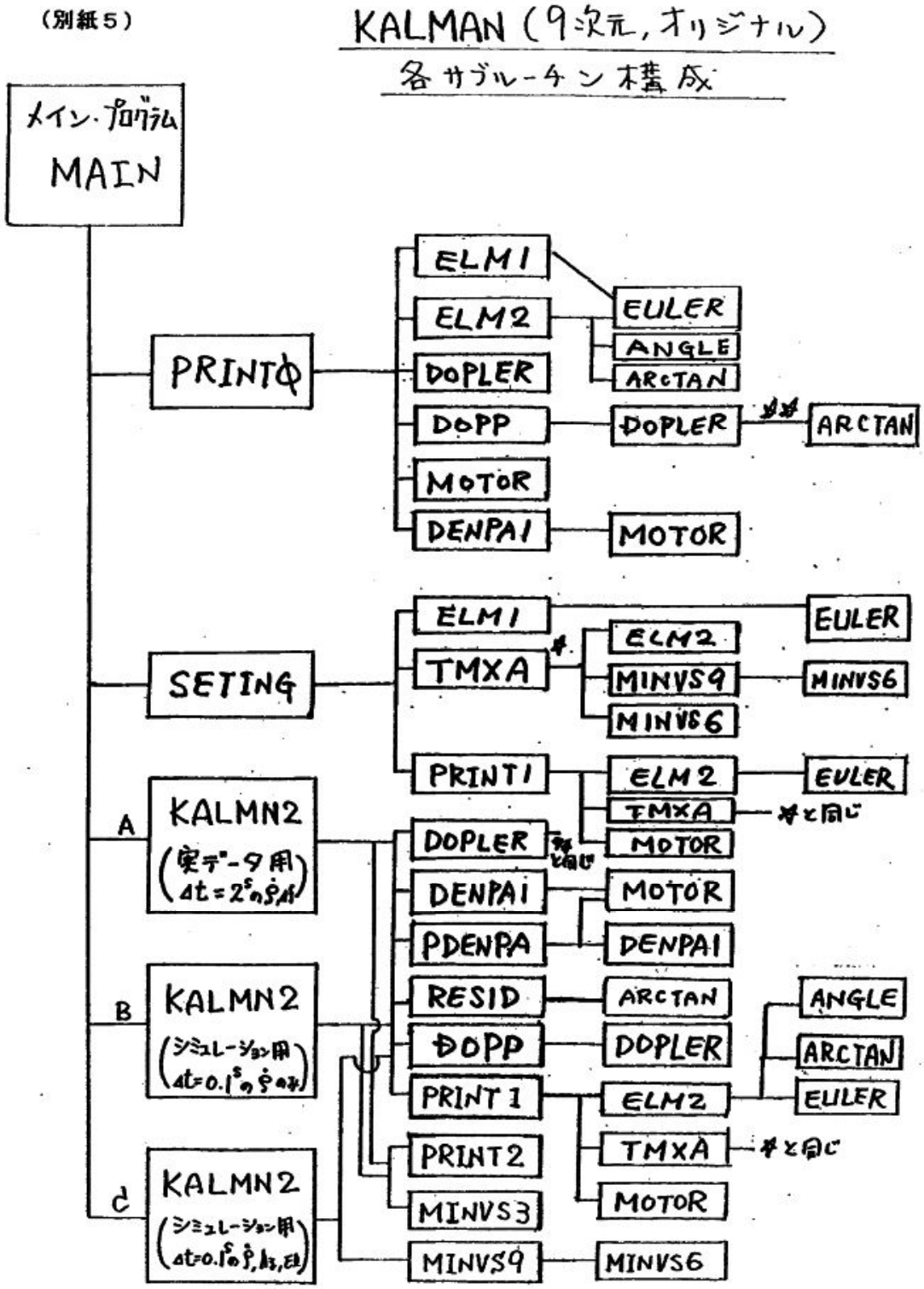
（別紙３）



KALMAN(6次元,オリジナル), 各サブルーチン構成

（Attachment 5）

（別紙５）



(Attachment 7) List of "Satellites Launched between 1975 and around 1997"

	Satellite name	Popular name	Launch date	Main purposes
1	Engineering Test Satellite I (ETS-I)	"Kiku"	September 9, 1975	Measurement of the environment during launch, measurement of satellite operating characteristics and environment during the steady state, attitude measurement, measurement of distance and distance change rate, and extension experiment of the extension antenna
2	Ionosphere Sounding Satellite (ISS)	"Ume"	February 29, 1976	Global distribution observation of ionosphere critical frequency, global distribution observation of radio noise source, and measurement of plasma characteristic/positive ion density in the space at the top of the ionosphere
3	Engineering Test Satellite II (ETS-II)	"Kiku No. 2"	February 23, 1977	Acquisition of technology for launching a geostationary satellite and technology for follow-up flight control of a geostationary satellite, testing of the attitude control function of a geostationary satellite, testing of a despun antenna, and testing of an oscillator for millimeter-wave propagation experiment
4	Geostationary Meteorological Satellite (GMS)	"Himawari"	July 14, 1977	Observation of earth imaging and sea surface and cloud top surface temperature, etc.
5	Experimental Intermediate Capacity Geostationary Communications	"Sakura"	December 15, 1977	Transmission experiment/ establishment of operational technology as a satellite communication system and establishment of communications

	Satellite (CS)			satellite flight control technology
6	Ionosphere Sounding Satellite (ISS-b)	"Ume No. 2"	February 16, 1978	Same as 2
7	Experimental Medium-sized Broadcast Satellite (BS)	"Yuri"	April 8, 1978	Experiment for the establishment/control of technical conditions for a satellite broadcasting system and for establishment of operational technology, and confirmatory experiment for the effect of receipt of radio waves
8	Experimental Geostationary Communications Satellite (ECS)	"Ayame"	February 6, 1979	Establishment of technology for launching a geostationary satellite, technology for the follow-up flight control thereof, and technology for the attitude control thereof, communication experiment in frequency bands, such as millimeter waves, and investigation of radio propagation characteristics
9	Experimental Geostationary Communications Satellite (ECS-b)	"Ayame No. 2"	February 22, 1980	Same as 8
10	Engineering Test Satellite IV (ETS-IV)	"Kiku No. 3"	February 11, 1981	Confirmation of the transfer orbit injection ability of N-II Rocket/learning of the launch environment conditions, and acquisition of technologies for manufacturing/handling a large satellite
11	Geostationary Meteorological Satellite No. 2 (GMS-2)	"Himawari No. 2"	August 11, 1981	Same as 4

12	Engineering Test Satellite III (ETS-III)	"Kiku No. 4"	September 3, 1982	Confirmation of the three-axis attitude control function, confirmation of solar array wing expansion function, and confirmation of the active thermal control function
13	Geostationary Communications Satellite No. 2-a (CS-2a)	"Sakura No. 2-a"	February 4, 1983	Securing of communication at the time of emergency disaster, setting of communication lines with isolated islands, setting of temporary communication lines, and development of technology relating to communications satellites
14	Communications Satellite No. 2-b (CS-2b)	"Sakura No. 2-b"	August 6, 1983	Same as 13
15	Broadcast Satellite No. 2 (BS-2a)	"Yuri No. 2a"	January 23, 1984	Elimination of difficulty in viewing television broadcasting, and development of technology relating to broadcast satellites
16	Geostationary Meteorological Satellite No. 3 (GMS-3)	"Himawari No. 3"	August 3, 1984	Same as 4
17	Broadcast Satellite No. 2-b (BS-2b)	"Yuri No. 2b"	February 12, 1986	Same as 15
18	Marine Observation Satellite No. 1 (MOS-1)	"Momo No. 1"	February 19, 1987	Establishment of basic technology for earth observation satellites, sensor development/functional capability confirmation, experimental observation, acquisition of technology for injection into the sun-synchronous orbit, etc.
19	Engineering Test	"Kiku No. 5"	August 27,	Performance confirmation of H-1

	Satellite V (ETS-V)		1987	Rocket, establishment of fundamental technology for geostationary three-axis satellites, and accumulation of independent technology necessary for the next large applications satellite
20	Communications Satellite No. 3 (CS-3a) (CS-3b)	"Sakura No. 3a, b"	February 19, 1988, September 16, 1988	Same as 13
21	Geostationary Meteorological Satellite No. 4 (GMS-4)	"Himawari No. 4"	September 6, 1989	Same as 4
22	Marine Observation Satellite No. 1-b (MOS-1b)	"Momo No. 1b"	February 7, 1990	Same as 18
23	Broadcast Satellite No. 3 (BS-3a) (BS-3b)	"Yuri No. 3a, b"	August 28, 1990, August 25, 1991	Same as 15
24	Earth Resources Satellite No. 1 (JERS-1)	"Fuyo No. 1"	February 11, 1992	Observation with a synthetic aperture radar/optical sensor, and development of earth test and observation equipment
25	Engineering Test Satellite VI (ETS-VI)	"Kiku No. 6"	August 28, 1994	Establishment of bus technology for 2-ton class applications satellites that suits needs in the fields of communications and broadcasting, and development of technology for high-level satellite communications
26	Geostationary Meteorological Satellite No. 5 (GMS-5)	"Himawari No. 5"	March 18, 1995	Same as 4

27	Earth Observation Satellite (ADEOS)	"Midori"	August 17, 1996	Monitoring of global changes in the global environment, maintenance of earth observation technology, and development of platform technology/data relay technology
28	Engineering Test Satellite VII (ETS-VII)	Kiku No. 7 "Orihime/hiko boshi"	November 28, 1997	Rendezvous/docking technology test, fundamental technology for space robots, and acquisition of on-orbit operation technology through a data relay satellite