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To the Honorable Commissioner of Patents and Trademarks: Please record the attached original documents or copy thereof.

<p>1. Name of conveying party(ies) <b>2002 MAR 13 AM 11:04</b></p> <p>Masahiro FUJITA, Tsuyoshi TAKAGI, <b>FINANCE ADVISOR</b> RIKO HASEGAWA, Osamu HANAGATA, Jun YOKONO, Gabriel COSTA, Hideki SHIMOMURA</p> <p>Additional name(s) of conveying party(ies) attached?  <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <b>3-13-02</b></p>	<p>2. Name and address of receiving party(ies)</p> <p>Name: SONY CORPORATION 7-35 Kitashinagawa 6-chome Shinagawa-Ku, Tokyo 141-0001, Japan</p> <p>Additional name(s) &amp; address(es) attached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p>
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3. Nature of conveyance:

Assignment  
 Security Agreement  
 Merger  
 Change of Name  
 Other

Execution Date: November 27, November 27, December 1, December 12, November 27, December 13 and December 12, 2001

4. Application number(s) or patent number(s):

If this document is being filed together with a new application, the execution date of the application is:


A. Int'l Patent Application No.(s) PCT/JP01/02867 (USSN 09/980,132) filed 2 April 2001

Additional numbers attached?  Yes  No

<p>5. Name and address of party to whom correspondence concerning document should be mailed:</p> <p>Name: WILLIAM S. FROMMER  Internal Address: FROMMER LAWRENCE &amp; HAUG LLP  Street Address: 745 FIFTH AVENUE  City: <u>NEW YORK</u> State: <u>N.Y.</u> Zip: <u>10151</u></p>	<p>6. Total number of applications and patents involved . . . . . <u>1</u></p> <p>7. Total fee (37 CFR 3.41) . . . . . \$ <u>40.00</u>  <input checked="" type="checkbox"/> Enclosed  <input type="checkbox"/> Authorized to be charged to deposit account 50-0320</p> <p>8. Deposit account number: (Attach duplicate copy of this page if paying by deposit account)</p>
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To the best of my knowledge and belief, the foregoing information is true and correct and any attached copy is a true copy of the original document.

Bruno Polito  March 5, 2002

Name of Person Signing Signature Date

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**ASSIGNMENT**

WHEREAS, I, as below named inventors, residing at the addresses stated next to our names, am a sole inventor (if only one name is listed below) or a joint inventor (if plural names are listed below) of certain new and useful improvements in

**ROBOT APPARATUS, METHOD FOR CONTROLLING ROBOT APPARATUS ACTION,  
AND EXTERNAL-FORCE DETECTING APPARATUS AND METHOD**

for which application for Letters Patent of the United States of America was executed by me on the date indicated next to my name and address;

AND WHEREAS, SONY CORPORATION, a Japanese corporation, with offices at 7-35, Kitashinagawa 6-chome, Shinagawa-ku, Tokyo 141-0001 Japan (hereinafter referred to as ASSIGNEE) is desirous of acquiring all interest in, to and under said invention, said application disclosing the invention and in, to and under any Letters Patent or similar legal protection which may be granted therefor in the United States and in any and all foreign countries;

NOW THEREFORE, in consideration of the sum of One Dollar (\$1.00), and other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, I, as a sole or joint inventor as indicated below, by these presents do hereby assign, sell and transfer unto the said ASSIGNEE, its successors, assigns, and legal representatives, the entire right, title and interest in the said invention, said application, including any divisions and continuations thereof, and in and to any and all Letters Patent of the United States, and countries foreign thereto, which may be granted for said invention, and in and to any and all priority rights and/or convention rights under the International Convention for the Protection of Industrial Property, Inter-American Convention Relating to Patents, Designs and Industrial Models, and any other international agreements to which the United States of America adheres, and to any other benefits accruing or to accrue to me with respect to the filing of applications for patents or securing of patents in the United States and countries foreign thereto, and I hereby authorize and request the Commissioner of Patents to issue the said United States Letters Patent to said ASSIGNEE, as the assignee of the whole right, title and interest thereto;

And I further agree to execute all necessary or desirable and lawful future documents, including assignments in favor of ASSIGNEE or its designee, as ASSIGNEE or its successors, assigns and legal representatives may from time-to-time present to me and without further remuneration, in order to perfect title in said invention, modifications, and improvements in said invention, applications and Letters Patent of the United States and countries foreign thereto;

And I further agree to properly execute and deliver and without further remuneration, such necessary or desirable and lawful papers for application for foreign patents, for filing subdivisions of said application for patent, and or, for obtaining any reissue or reissues of any Letters patent which may be granted for my aforesaid invention, as the ASSIGNEE thereof shall hereafter require and prepare at its own expense;

And I further agree that ASSIGNEE will, upon its request, be provided promptly with all pertinent facts and documents relating to said application, said invention and said Letters Patent and legal equivalents in foreign countries as may be known and accessible to me and will testify as to the same in any interference or litigation related thereto;

And I hereby covenant that no assignment, sale, agreement or encumbrance has been or will be made or entered into which would conflict with this assignment and sale.

And I hereby authorize and request my attorney(s) of record in this application to insert the serial number and filing date of this application in the spaces that follow: International Serial Number: PCT/JP01/02867, International Filing Date: 02 April 2001.

This assignment executed on the dates indicated below.

Masahiro FUJITA

Name of first or sole inventor

Execution date of U.S. Patent Application

Saitama, Japan

Residence of first or sole inventor

*Masahiro Fujita*

*Nov. 27 '01*

Signature of first or sole inventor

Date of this assignment

Tsuyoshi TAKAGI

Name of second inventor

Execution date of U.S. Patent Application

Kanagawa, Japan

Residence of second inventor

*Tsuyoshi Takagi*

*Nov. 27. 01*

Signature of second inventor

Date of this assignment

Rika HASEGAWA

Name of third inventor Execution date of U.S. Patent Application  
 Chiba , Japan

Residence of third inventor

Rika Hasegawa Dec. 1, '01  
 Signature of third inventor Date of this assignment

Osamu HANAGATA

Name of fourth inventor Execution date of U.S. Patent Application  
 Tokyo , Japan

Residence of fourth inventor

Osamu Hanagata Dec. 12, '01  
 Signature of fourth inventor Date of this assignment

Jun YOKONO

Name of fourth inventor Execution date of U.S. Patent Application  
 KANAGAWA , Japan

Residence of fourth inventor

Jun Yokono Nov 27, '01  
 Signature of fourth inventor Date of this assignment

COSTA Gabriel

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 Tokyo, Japan

Residence of fourth inventor

Gabriel Costa Dec, 13 '01  
 Signature of fourth inventor Date of this assignment

Hideki SHIMOMURA

Name of fourth inventor Execution date of U.S. Patent Application  
 Kanagawa, Japan

Residence of fourth inventor

Hideki Shimomura Dec, 12, '01  
 Signature of fourth inventor Date of this assignment