07-23-2001 U.S. Department of Commerce FORM PTO-1594 RE(Patent and Trademark Office 1-31-92 Attorney Docket No. 04202.0137 1.01787330 To the Honorable Commissioner of Patents and Tr. ATTN. BOX ASSIGNMENTS Please record the attached original documents or c 1. 2. Name and address of receiving party(ies): Name of conveying party(ies): 1. Shuichi WATANABE 2. Hideto HORIGUCHI 3. Yuta SUGIYAMA 4. Koji ICHIKAWA 5. Hiroyuki ITOH Name: HITACHI METALS, LTD. Additional name(s) of conveying party(ies) attached? □ Yes ☑ No Internal Address: 7-16-0) 2-1, Shibaura 1-chome, Minato-ku Nature of conveyance: Street Address: Tokyo, Japan City: Zip Code: State: Assignment Merger X Security Agreement Change of Name Other Additional name(s) & Address(es) attached? **Execution Date:** □ Yes

No June 11, 2001 Application number(s) or patent number(s): If this document is being filed together with a new application, the execution date of the 4. application: B. Patent Number(s): Patent Application Number(s): A. 09/816,115 Additional numbers attached? □ Yes ☑ No Total number of applications and registrations involved: 5. Name and address of party to whom correspondence concerning document should be mailed: Total fee (37 CFR 3.41): \$40 / 7. Mr. Ernest F. Chapman Name: FINNEGAN, HENDERSON, FARABOW, GARRETT Enclosed (Please charge deficiency to deposit account) Internal Address: & DUNNER, L.L.P. Authorized to be charged to deposit account 00000142 09816115 7/20/2001 00HNED1 40.00 0 01 FC:581 Street Address: 1300 | Street, N.W City: Washington 8. Deposit account number: 06-0916 State: DC Zip: 20005-3315 9. Statement and signature. 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.

Signature,

Total number of pages including cover sheet, attachments and documents:

Ernest F. Chapman

Reg. No. 25,961

PATENT REEL: 011990 FRAME: 0838

Date

July 16, 2001

ATTORNEY DOCKET NO.	

SOLE/JOINT INVENTION (U.S. Rights Only)

ASSIGNMENT

WHEREAS I/We, the below named inventor(s), [hereinafter referred to as Assignor(s)], have made an invention entitled:

NON-RECIPROCAL CIRCUIT DEVICE AND WIRELESS COMMUNICATIONS EQUIPMENT COMPRISING SAME

for which I/WE executed an application for United States Letters Patent concurrently herewith or on June 11 and June 18, 2001 or filed an application for United States Letters Patent on March 26, 2001 (Serial No. 09/816,115); and

WHEREAS, HITACHI METALS, LTD., a corporation of Japan, whose post office address is 2-1, Shibaura 1-chome, Minato-ku, Tokyo, Japan

(hereinafter referred to as Assignee), is desirous of securing the entire right, title, and interest in and to this invention, the application for United States Letters Patent on this invention and the Letters Patent to be issued upon this application;

NOW THEREFORE, be it known that, for good and valuable consideration the receipt of which from assignee is hereby acknowledged, I/WE, as assignor(s), have sold, assigned, transferred, and set over, and do hereby sell, assign, transfer, and set over unto the assignee, its lawful successors and assigns, my/our entire right, title, and interest in and to this invention and this application, and all divisions, and continuations thereof, and all Letters Patent of the United States which may be granted thereon, and all reissues thereof; and I/WE hereby authorize and request the Commissioner of Patents and Trademarks of the United States to issue all Letters Patent for this invention to assignee, its successors and assigns, in accordance with the terms of this Assignment;

AND, I/WE HEREBY further covenant and agree that I/We will, without further consideration, communicate with assignee, its successors and assigns, any facts known to me/us respecting this invention and testify in any legal proceeding, sign all lawful papers when called upon to do so, execute and deliver all papers that may be necessary or desirable to perfect the title to this invention in said assignee, its successors and assigns, execute all divisional, continuation, and reissue applications, make all rightful oaths and generally do everything possible to aid assignee, its successors and assigns, to obtain and enforce proper patent protection for this invention in the United States, it being understood that any expense incident to the execution of such papers shall be borne by the assignee, its successors and assigns.

AND, I/W	E HEREBY authorize and request the attorneys I/we have empowered in the Declaration and
Power of Attorne	y in this application, to insert here in parentheses (Application No,
filed) the filing date and application number of said application when known.

IN TESTIMONY WHEREOF, I/We have hereunto set our hand(s).

Sole or First Assignor

Full Name	Signature	Date
Shuichi WATANABE	Shuichi Watanale	June 11, 2001
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Full Name	Signature	Date
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Fifth Assignor

RECORDED: 07/16/2001

Full Name	Signature	Date
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