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Docket No.: 062758-025972 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	
To the Director of the U. S. Patent and T 103566	
1. Name of Conveying Party(ies)	2. Name and address of receiving party(ies)
Kenji KAWAMURA	Name: HITACHI COMMUNICATION TECHNOLOGIES, LTD.
	Internal Address:
Additional name(s) of conveying party(ies) attached? Yes No	
3. Nature of Conveyance/Execution Date(s)	Address: 26-3, Minami Ooi 6-chome, Shinagawa-ku, Tokyo, JAPAN
Execution Date(s): May 18, 2009	
Security Agreement Change of Name	
Joint Research Agreement	
Government Interest Assignment	
Executive Order 9424, Confirmatory License	Additional name(s) & address(es) attached?  Yes  No
Other	This document is being filed together with a new application.
4. Application or patent number(s):  A. Patent Application No(s).	B. Patent No(s).
12/468,483 filed May 19, 2009	<i>D. Talont No(3).</i>
Additional numbers attached?  Yes No	
5. Name and address to whom correspondence concerning document should be mailed:	6. Total number of applications and patents involved:
Name: MCDERMOTT WILL & EMERY LLP	7. Total fee (37 CFR 1.21(h) & 3.41) \$40.00
Internal Address:	Authorized to be charged by credit card
	Authorized to be charged to deposit account
Street Address: 600 13th Street, N.W.	☐ Enclosed
	None required (government interest not affecting title)
City: Washington State: D. C. Zip: 20005-3096	
Phone Number: 202.756.8000	8. Payment Information:
Fax Number: 202.756.8087	
Email Address:	a. Credit Card Last 4 Numbers Expiration Date
	b. Deposit Account Number 500417
	Authorized User Name
9. Signature.	67/86/2889 DBYRNE   68888885 586417 12468483
Keith E. George 34,111	81 FC:8021 (40.00 DA July 1, 2009
Name and Registration No. of Person Signing Signature Date	
Total number of pages including cover sheet, attachments and documents: 2	

PATENT REEL: 022918 FRAME: 0293

## **ASSIGNMENT**

(譲渡証)

As a below named inventor, I hereby declare that:

IN CONSIDERATION of the sum of One Dollar (\$1.00) or the equivalent thereof, and other good and valuable consideration paid to me citizen of Japan by Hitachi Communication Technologies,Ltd. a corporation organized under the laws of Japan,

located at 26-3, Minami Ooi 6-chome, Shinagawa-ku, Tokyo, Japan,

receipt of which is hereby acknowledged I do hereby sell and assign to said. Hitachi Communication Technologies,Ltd. its successors and assigns, all my right, title and interest, in and for the United States of America, in and to

## DIGITAL PHASE DETECTOR AND PHASE-LOCKED LOOP

invented by me (if only one is named below) or us (if plural inventors are named below) and described in the application for United States Letters Patent therefor, executed on even date herewith, and all United States Letters Patent which may be granted therefor, and all divisions, continuations and extensions thereof, the said interest being the entire ownership of the said Letters Patent when granted,

to be held and enjoyed by said Hitachi Communication Technologies, Ltd.

its successors, assigns or other legal representatives, to the full end of term for which said Letters Patent may be granted as fully and entirely as the same would have been held and enjoyed by me or us if this assignment and sale had not been made:

And I hereby agree to sign and execute any further documents or instruments which may be necessary, lawful, and proper in the prosecution of the above-named application or in the preparation and prosecution of any continuing, continuation-in-part, substitute, divisional, renewal, reviewed or reissue applications or in any amendment, extension, or interference proceedings, or otherwise to secure the title thereto in said assignee;

And I do hereby authorize and request the Commissioner of Patents to issue said Letters Patent to said Hitachi Communication Technologies,Ltd.

Signed on the date(s) indicated aside our signatures:

INVENTOR(S)	Date Signed
(発明者フルネームサイン)	(署名日)
1) Kenji Kawamura Kenji Kawamura	5/18/09
2)	
3)	
4)	
5)	
6)	
7)	
8)	
9)	
10)	

PATENT REEL: 022918 FRAME: 0294

**RECORDED: 07/01/2009**