FORM PTO-1619A Expires 06/30/99 OMB 0651-0027

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01-02-2001

U.S. Department of Commerce Patent and Trademark Office

PATENT

12/14/00

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RECORDA	ATION FORM COVER SHEET
TO: The Commissioner of Patents and Trademarl	PATENTS ONLY ks: Please record the attached original document(s) or copy(ies).
Submission Type	Conveyance Type
X New	ATION FORM COVER SHEET PATENTS ONLY ks: Please record the attached original document(s) or copy(ies). Conveyance Type X Assignment Security Agreement
Resubmission (Non-Recordation) Document ID#	License Change of Name
Correction of PTO Error Reel # Frame # Corrective Document	Merger U.S. Government (For Use ONLY by U.S. Government Agencies)
Reel # Frame #	Departmental File Secret File
Conveying Party(ies)	X Mark if additional names of conveying parties attached Execution Date
Name (line 1) Toshiaki Motonaga	12/6/00
Name (line 2)	7
Second Party	Execution Date Month Day Year
Name (line 1) Toshifumi Yokoyama	12/6/00
Name (line 2)	
Receiving Party	Mark if additional names of receiving parties attached
Name (line 1) Dai Nippon Printing Co	If document to be record is an assignment and the
Name (line 2) 1-1, Ichigaya-kagacho	receiving party is not domiciled in the United States, an appointment
Address (line 1)	of a domestic representative is attache
Address (line 2)	(Designation must be a separate document from Assignment.)
Address (line 3) Tokyo-to	Japan 162-8001
Domestic Representative Name and Ad	State/Country Zip Code
Name Timothy J. Keefer	
Address (line 1) Wildman, Harrold, Alle	n & Dixon
Address (line 2) 225 West Wacker Drive	
Address (line 3) Chicago, Illinois 606	06
Address (line 4) Inited States of Amoni	
United States of Ameri	ca

Public burden reporting for this collection of information is estimated to average approximately 30 minutes per Cover Sheet to be recorded, including time for reviewing the document and gathering the data needed to complete the Cover Sheet. Send comments regarding this burden estimate to the U.S. Patent and Trademark Office, Chief Information and Regulatory Affairs, Office of Management and Budget, Paperwork Reduction Project (0651-0027), Washington, D.C. 2053. See OMB Information and Office of Information and Trademark Assignment Practice. DO NOT SEND REQUESTS TO RECORD ASSIGNMENT DOCUMENTS TO THIS ADDRESS.

Mail documents to be recorded with required cover sheet(s) information to: Commissioner of Patents and Trademarks, Box Assignments, Washington, D.C. 20231

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PATENT

FORM PTO-1619C Expires 06/30/99 OMB 0651-0027

RECORDATION FORM COVER SHEET CONTINUATION PATENTS ONLY

U.S. Department of Commerce Patent and Trademark Office PATENT

Conveying Party(ies) X Mark if additional names of conveying parties attached	O H
Enter additional Conveying Parties	Execution Date Month Day Year
Name (line 1) Takafumi Okamura	12/6/00
Name (line 2)	27
	Execution Date Month Day Year
Name (line 1) Yoshinori Kinase	12/6/00
Name (line 2)	7
	Execution Date Month Day Year
Name (line 1) Hiroshi Mohri	12/6/00
Name (line 2)]
Receiving Party(ies) Mark if additional names of receiving part	ies attached
Enter additional Receiving Party(ies)	
Name (line 1)	If document to be recorded is an assignment and the
Name (line 2)	receiving party is not domiciled in the United
Address (line 1)	States, an appointment of a domestic representative is attached. (Designation
	must be a separate document from
Address (line 2)	Assignment.)
Address (line 3)	
City State/Country Zip Co	ode
Name (line 1)	If document to be recorded is an assignment and the
Name (line 2)	receiving party is not domiciled in the United
Address (III., 4)	States, an appointment of a domestic representative is
Address (line 1)	attached. (Designation must be a separate document from
Address (line 2)	Assignment.)
Address (line 3)	
Application Number(s) or Patent Number(s) Mark if additional numbers attached	Code
Enter either the Patent Application Number or the Patent Number (DO NOT ENTER BOTH numbers for the s	
Patent Application Number(s) Patent Num	ber(s)
3	

PATENT

FORM PTO-1619C Expires 06/30/99 OMB 0651-0027

RECORDATION FORM COVER SHEET CONTINUATION PATENTS ONLY

U.S. Department of Commerce Patent and Trademark Office PATENT

Conveying Pa	rty(ies)	Mark if additi	onal names of conveying	parties attached	u. 73.
Enter additional C	onveying Parties		, , , , , , , , , , , , , , , , , , ,		Execution Date Month Day Year
Name (line 1)	Junji Fujikawa				12/6/00 P
Name (line 2)					
					Execution Date Month Day Year
Name (line 1)	Hiro-o Nakagawa				12/6/00
Name (line 2)]
			-		Execution Date Month Day Year
Name (line 1)	Shigeki Sumida	-			12/6/00
Name (line 2)					
Receiving Par	rty(ies)		Mark if additional names	of receiving parti	es attached
Enter additional R	eceiving Party(ies)				
Name (line 1)					If document to be recorded is an assignment and the
Name (line 2)					receiving party is not domiciled in the United
·					States, an appointment of a domestic representative
Address (line 1)			·		is attached. (Designation must be a separate
Address (line 2)					document from Assignment.)
A alalana a					
Address (line 3)	City		State/Country	Zip Co	de
Name (line 1)					If document to be recorded
Nome (t. a)					is an assignment and the receiving party is not
Name (line 2)					domiciled in the United States, an appointment of a
Address (line 1)					domestic representative is attached. (Designation must be a separate document from
Address (line 2)					Assignment.)
Address (line 3)					
	City		State/Country	Zip C	ode
	umber(s) or Patent N		Mark if additional n		
	Patent Application Number or		(DO NOT ENTER BOTH		
Pa	tent Application Number	r(s)		Patent Numi	per(s)
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FORM PTO-1619C Expired 06/30/99 OMB 0651-0027

RECORDATION FORM COVER SHEET CONTINUATION PATENTS ONLY

U.S. Department of Commerce Patent and Trademark Office PATENT

PAIENTS UNLY	TATENT
Conveying Party(ies) Enter additional Conveying Parties Mark if additional names of conveying parties a	ttached Execution Date Month Day Year
Name (line 1) Satoshi Yusa	12/6/00
Name (line 2)	Execution Date
Name (line 1) Masashi Ohtsuki	Month Day Year 5
Name (line 2)	
Name (line 1)	Execution Date Month Day Year
Name (line 2)	
Receiving Party(ies) Enter additional Receiving Party(ies) Mark if additional names of receiving Party(ies)	ing parties attached
Name (line 1)	If document to be recorded is an assignment and the receiving party is not
Name (line 2)	domiciled in the United States, an appointment
Address (line 1)	of a domestic representative is attached. (Designation must be a separate
Address (line 2)	document from Assignment.)
Address (line 3) City State/Country	Zip Code
Name (line 1)	if document to be recorded is an assignment and the
Name (line 2)	receiving party is not domiciled in the United States, an appointment of a
Address (line 1)	domestic representative is attached. (Designation must
Address (line 2)	be a separate document from Assignment.)
Address (line 3) City State/Country	Zip Code
Application Number(s) or Patent Number(s) Mark if additional numbers a	
Enter either the Patent Application Number or the Patent Number (DO NOT ENTER BOTH numbers to	
	t Number(s)

PATENT

FORM PTO- Expires 06/30/99 OMB 0651-0027	-1619B	Page 2	U.S. Department of Commerce Patent and Trademark Office PATENT
Corresponde	ent Name and Address Area	Code and Telephone Nu	mber 312/201-2000
Name [Timothy J. Keefer		
Address (line 1)	Wildman, Harrold, Allen	& Dixon	
Address (line 2)	225 West Wacker Drive		
Address (line 3)	Chicago, Illinois 60606		
Address (line 4)	U.S.A.		
Pages	Enter the total number of pages of including any attachments.	the attached conveyance	document # /5
• •	Number(s) or Patent Number(s	'	Mark if additional numbers attached
	e Patent Application Number or the Patent N ent Application Number(s)	umber (DO NOT ENTER BOTH n	
rate	Application Number(s)		Patent Number(s)
	being filed together with a <u>new</u> Patent Applic t named executing inventor.	eation, enter the date the patent a	application was Month Day Year
-	eration Treaty (PCT)	РСТ	PCT
<u>only</u>	r PCT application number <u>if</u> a U.S. Application Number _{PCT} [PCT	PCT
nas r Number of P	not been assigned. roperties		
	Enter the total num	nber of properties involved	d. # 1
Fee Amount	Fee Amount for Pro	perties Listed (37 CFR 3.	41): \$ 40.00
Method o Deposit	of Payment: Enclosed 2	Deposit Account	
	payment by deposit account or if additional fe	es can be charged to the account Account Number:	# 23-2126
	Authoriz	ation to charge additional fe	es: Yes X No
Statement an	nd Signature		
attache	best of my knowledge and belief, the desired of the original and herein.	e foregoing information is document. Charges to d	true and correct and any eposit account are authorized, as
	Keefer, Reg. No. 35,567		14/2000
Name o	of Person Signing	Signature	* Date

Docket Number (Optional)

PTO/S8/15 (8-96)
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Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

ASSIGNMENT OF APPLIC	JATION	1JK/145
		7
Whereas, I, Toshiaki MOTONAGA	of Shinjuku-ku, Toky	o-to, Japan , hereaft
referred to as applicant, have invented certain nev		
PHASE SHIFT PHOTOMASK AND HALFTONE		
for which an application for a United States Application Number/	s Patent was filed on	
for which an application for a United State		, and
Whereas, DAI NIPPON PRINTING CO., LTD	ofJapan	herein referred
"assignee" whose post office address is Tokyo-to	nigaya-kagacho 1-cho o, 162-8001 Japan	ome, Shinjuku-ku, is de
sirous of acquiring the entire right, title and interes		
Now, therefore, in consideration of the sum of) the receipt whereof is as
knowledged, and other good and valuable conside		
and transfer unto said assignee the full and exclusi		
entire right, title and interest in and to any and all Pa		
I hereby authorize and request the Commissioner	of Patents and Trademarks	to issue said United States
Patent to said assignee, of the entire right, title, and	l interest in and to the same,	for his sole use and behoof
and for the use and behoof of his legal representati	ves, to the full end of the terr	m for which said Patent may
be granted, as fully and entirely as the same would	have been held by me had it	-:
been made.	nave been field by the flad th	nis assignment and sale no
Executed this 6th day of	December	2005 00
China 1 1 2 - 1		20000
at Shinjuku-ku, Tokyo-to, Japan		•
	Joshaki hat	vraça
State of SS:	(Sig	gnature)
County of) Before me personally appeared said		
and acknowledged the foregoing instrument to be his	free act and deed this	
day of, 19		
Seal		
	(Nota	ary Public)

Burden Hour Statement: This form is estimated to take 0.1 hours to complete. Time will vary depending upon the needs of the individual case. Any Comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, Patent and Trademark Office, Washington, DC 20231.

Washington, DC 20231.

ASSIGNME	VI OF APPLIC	AHON	1 12K	1145
	, , , , , , , , , , , , , , , , , , , 			
Whereas, I, Toshifumi Yo	OKOYAMA	of <u>Shinjuku-ku, Tok</u>	yo-to, Japa	n_, hereafte
referred to as applicant, have inv PHASE SHIFT PHOTOMASI				R HALFTON
for which an application Application Number	for a United States	Patent was filed on		1
		Patent was executed on		, and
Whereas, DAI NIPPON PRIN	ring co.,LTD	fJapan	her	ein referred t
"assignee" whose post office add	1–1, Ich ress is <u>Tokyo–to</u>	igaya-kagacho 1-ch , 162-8001 Japan	ome, Shinju	ku-ku, is de
sirous of acquiring the entire righ	nt, title and interest	in the same;		
Now, therefore, in consideration	of the sum of or	nedollars (\$1.00), the receipt w	hereofis ac
knowledged, and other good and	t valuable conside	ration, I, the applicant, by t	hese presents d	o sell. assigi
and transfer unto said assignee t				_
entire right, title and interest in an				
I hereby authorize and request t				
Patent to said assignee, of the er				
and for the use and behoof of his				
be granted, as fully and entirely a				_
been made.		nave bearing by me had	i una assignmeni	. and sale no
Executed this6th	day.of	December	20	0000
atShinjuku-ku, Tok			,	
		~ . /1 · // ·	1.0	
		Joshifumi	Joroyan	ia
State of Scounty of	S:	(1	oignature)	
Refore me personally assessed	said			
and acknowledged the foregoing day of, 19	nstrument to be his 	free act and deed this		
Seal		/N	otany Public)	

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PATENT

ASSIGNMENT OF APPI	LICATION	TJK1145
Takafumi OKAMURA	of Shinjuku-ku, To	okyo-to, Japan , hereafter
referred to as applicant, have invented certain	new and useful improvemen	ts in BLANK FOR HALFTON
PHASE SHIFT PHOTOMASK AND HALFT	ONE PHASE SHIFT PHO	I'OMASK
for which an application for a United St Application Number/	ates Patent was filed on	,
for which an application for a United S	tates Patent was executed o	n, and
Whereas, DAI NIPPON PRINTING CO., I	ЛО _{of} Japan	herein referred to
Whereas, DAL NIPPON PRINTING W., L 1-1, "assignee" whose post office address is <u>Tokyc</u>	Ichigaya-kagacho 1- -to, 162-8001 Japan	chome, Shinjuku-ku, is de
sirous of acquiring the entire right, title and into		
Now, therefore, in consideration of the sum of	one dollars (\$_1.	00), the receipt whereof is ac
knowledged, and other good and valuable con	sideration, I, the applicant, b	y these presents do sell, assign
and transfer unto said assignee the full and ex	clusive right to the said inver	ntion in the United States and th
entire right, title and interest in and to any and a	all Patents which may be gran	nted therefor in the United States
I hereby authorize and request the Commission	oner of Patents and Tradem	arks to issue said United States
Patent to said assignee, of the entire right, title	, and interest in and to the sa	ame, for his sole use and behoo
and for the use and behoof of his legal repress	entatives, to the full end of the	e term for which said Patent may
pe granted, as fully and entirely as the same w	ould have been held by me h	nad this assignment and sale no
been made.		
Executed this 6th da	December ay of	20000
shinjuku-ku, Tokyo-to		
	Jakabrumi	Okamura
State of SS:		(Signature)
County of)		
Before me personally appeared saidand acknowledged the foregoing instrument to	he his free act and deed this	
day of, 19	DO THE HEE AUT BITCHEEU THE	
Seal		(Notary Public)

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ASSIGNMENT OF APPLICATION	N	Docket Number (Optional) TJK 1145
Whereas, I, Yoshinori KINASE of Shi	njuku-ku, Tok	yo-to, Japan , hereaf
referred to as applicant, have invented certain new and us PHASE SHIFT PHOTOMASK AND HALFTONE PHASI	seful improvements	in BLANK FOR HALFTON
	·	
for which an application for a United States Patent		
for which an application for a United States Paten	t was executed on _	, and
Whereas DAI NIPPON PRINTING CO.,LTD of	Japan	herein referred
1-1, Ichigaya "assignee" whose post office address is <u>Tokyo-to</u> , 162	i-kagacho 1-ch 2-8001 Japan	ome, Shinjuku-ku, is
sirous of acquiring the entire right, title and interest in the	same;	
Now, therefore, in consideration of the sum ofone	dollars (\$1.00) _), the receipt whereof is a
knowledged, and other good and valuable consideration,	, the applicant, by tl	nese presents do sell, assi
and transfer unto said assignee the full and exclusive right	to the said inventio	n in the United States and t
entire right, title and interest in and to any and all Patents w		
I hereby authorize and request the Commissioner of Pate		
Patent to said assignee, of the entire right, title, and interes		
and for the use and behoof of his legal representatives, to		
be granted, as fully and entirely as the same would have be		
been made.		
Executed this 6th day of	December	20000
atShinjuku-ku, Tokyo-to, Japan		
	Goshinori Ein	nuse
State of	/ (§	signature)
day of, 19		
Seal	()1-	otary Public)

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ASSIGNMENT OF APPLICATION Docket Number (C	Optional) 45
Whereas, I, Hiroshi MOHRI of Shinjuku-ku, Tokyo-to, Japan	_, hereafter
referred to as applicant, have invented certain new and useful improvements in BLANK FOR I PHASE SHIFT PHOTOMASK AND HALFTONE PHASE SHIFT PHOTOMASK	HALFTONE
for which an application for a United States Patent was filed on Application Number/	
for which an application for a United States Patent was executed on	, and
Whereas, DAI NIPPON PRINTING CO., LTD of Japan herein 1-1, Ichigaya-kagacho 1-chome, Shinjuku "assignee" whose post office address is Tokyo-to, 162-8001 Japan	referred to 1-ku, is de-
sirous of acquiring the entire right, title and interest in the same;	
Now, therefore, in consideration of the sum of dollars (\$1.00_), the receipt whe	ereofis ac-
knowledged, and other good and valuable consideration, I, the applicant, by these presents do s	sell, assign
and transfer unto said assignee the full and exclusive right to the said invention in the United Sta	ates and the
entire right, title and interest in and to any and all Patents which may be granted therefor in the Un	ited States,
I hereby authorize and request the Commissioner of Patents and Trademarks to issue said Un	ited States
Patent to said assignee, of the entire right, title, and interest in and to the same, for his sole use a	and behoof;
and for the use and behoof of his legal representatives, to the full end of the term for which said I	atent may
be granted, as fully and entirely as the same would have been held by me had this assignment a	nd sale not
been made.	
Executed this day of, 200	000
atShinjuku-ku, Tokyo-to, Japan	
Hiroshi Inohri	
State of	
Seal (Notary Public)	

Burden Hour Statement: This form is estimated to take 0.1 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner of Patents and Trademarks, Washington, DC 20231.

PATENT

ASSIGNMENT OF APPLICATIO	N	TJK/145
		ı
Whereas, I, Junji FUJIKAWA of Sh	<u>injuku-ku, T</u>	okyo-to, Japan , hereafter
referred to as applicant, have invented certain new and u	ıseful improveme	nts in BLANK FOR HALFTONE
PHASE SHIFT PHOTOMASK AND HALFTONE PHA	SE SHIFT PHO	TOMASK
for which an application for a United States Pater Application Number/	nt was filed on	
for which an application for a United States Pate	nt was executed	on, and
Whereas, DAI NIPPON PRINTING CO., LITD of	Japan	herein referred to
Whereas, DAI NIPPON PRINTING CO., LITD 1-1, Ichigay "assignee" whose post office address is Tokyo-to, 16	/a-kagacho 1-	-chome, Shinjuku-ku, isde-
sirous of acquiring the entire right, title and interest in th		0.0
Now, therefore, in consideration of the sum of one	dollars (\$ [⊥] _	• 00), the receipt whereof is ac-
knowledged, and other good and valuable consideration	n, I, the applicant,	by these presents do sell, assign
and transfer unto said assignee the full and exclusive rig	ht to the said inve	ention in the United States and the
entire right, title and interest in and to any and all Patents	which may be gra	anted therefor in the United States
I hereby authorize and request the Commissioner of Pa	atents and Trader	marks to issue said United States
Patent to said assignee, of the entire right, title, and inter	rest in and to the s	same, for his sole use and behoof;
and for the use and behoof of his legal representatives,	to the full end of ti	ne term for which said Patent may
be granted, as fully and entirely as the same would have	been held by me	had this assignment and sale not
been made.		
Executed this 6th day of	December	20000
at Shinjuku-ku, Tokyo-to, Japan		
	1	4 ~l
	Junji	Tyrkana (Signature)
State of SS:	y	(a/gnature)
County of) Before me personally appeared said		
and acknowledged the foregoing instrument to be his free	e act and deed this	S
day of, 19		
Seal -		(Notary Public)

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ASSIGNMENT OF APPLICATION	NC	Docket Number (Optional)
Whereas, I, Hiro NAKAGAWA of Sh	<u>iinjuku-ku, Tok</u>	yo-to, Japan hereafte
referred to as applicant, have invented certain new and the PHASE SHIFT PHOTOMASK AND HALFTONE PHASE SHIFT PHOTOMASK PHASE SHIFT PH	•	
for which an application for a United States Pater Application Number/	nt was filed on	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
for which an application for a United States Pate		, and
Whereas, DAI NIPPON PRINTING CO., LTD of	Japan	herein referred t
"assignee" whose post office address is Tokyo-to, 16	ra-kagacho 1-cho 12-8001 Japan	ome, Shinjuku-ku, is de
sirous of acquiring the entire right, title and interest in the		
Now, therefore, in consideration of the sum ofone	_ dollars (\$1.00	_), the receipt whereof is ac
knowledged, and other good and valuable consideration,		
and transfer unto said assignee the full and exclusive righ		
entire right, title and interest in and to any and all Patents v		
I hereby authorize and request the Commissioner of Pat		
Patent to said assignee, of the entire right, title, and intere		
and for the use and behoof of his legal representatives, to		
be granted, as fully and entirely as the same would have be		
been made.	been neid by me had t	nis assignment and sale not
Executed this 6th day of	December	200000
atShinjuku-ku, Tokyo-to, Japan	· —	2000
	Hiro-o Nak	agawa
State of	(Si	ignature)
Seal	(2)	ary Public)

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Docket Number (Optional)

PTO/SB/15 (8-96)

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Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE.

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ASSIGNMENT	OF APPLICATI	ON	1JK1145	
Whereas, I, Shigeki SUMID	A of <u>S</u>	hinjuku-ku, Tokyo-	to, Japan hereafte	
referred to as applicant, have inver	nted certain new and	useful improvements in _	BLANK FOR HALFTON	
PHASE SHIFT PHOTOMASK A	ND HALFTONE PH	ASE SHIFT PHOTOMAS	<u>K</u>	
for which an application for Application Number	r a United States Pat /	ent was filed on		
for which an application for	r a United States Pat	tent was executed on	, and	
Whereas, DAI NIPPON PRINTI	NG CO.,LTD _{of}	Japan	herein referred	
"assignee" whose post office addre	1–1, Ichiga ss is <u>Tokyo–to,</u> 1	aya-kagacho 1-chome 162-8001 Japan	e, Sninjuku-ku, is d	
sirous of acquiring the entire right,	title and interest in t	he same;		
Now, therefore, in consideration of	the sum of <u>one</u>	dollars (\$1.00_),	the receipt whereof is a	
knowledged, and other good and v	aluable consideratio	on, I, the applicant, by thes	e presents do sell, assig	
and transfer unto said assignee the	e full and exclusive ri	ight to the said invention in	the United States and t	
entire right, title and interest in and	to any and all Patent	s which may be granted the	erefor in the United State	
I hereby authorize and request the	Commissioner of F	Patents and Trademarks to	issue said United State	
Patent to said assignee, of the enti	re right, title, and inte	erest in and to the same, fo	r his sole use and behoo	
and for the use and behoof of his le	egal representatives	, to the full end of the term	for which said Patent ma	
be granted, as fully and entirely as	the same would hav	e been held by me had this	s assignment and sale n	
been made.				
Executed this6th	day of	December	200000	
Shinjuku-ku, Toky				
		Thigeki Su	mvda	
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		(Notary Public)		

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PATENT

ASSIGNMENT OF APPLICATION			TJKlivs	
			kyo-to, Japan hereafte	
referred to as applicant, I	nave invented certain new a	nd useful improvement	s in BLANK FOR HALFTON	
PHASE SHIFT PHO	TOMASK AND HALFTONE	PHASE SHIFT PHOT	OMASK	
	lication for a United States F			
for which an app	lication for a United States F	Patent was executed on	, and	
Whereas DAI NIPPON	PRINTING CO.,LTD of	Japan	herein referred to	
"assignee" whose post of	1-1, Ichi fice address is <u>Tokyo-to</u> ,	gaya-kagacho 1-cl 162-8001 Japan	herein referred to home, Shinjuku-ku, is de	
sirous of acquiring the er	itire right, title and interest in	n the same;		
Now, therefore, in consid	eration of the sum of	dollars (\$ 1.0	$\frac{0}{2}$), the receipt whereof is ac	
			these presents do sell, assign	
			•	
			on in the United States and the	
			ed therefor in the United States	
			ks to issue said United States	
Patent to said assignee, o	of the entire right, title, and in	nterest in and to the sam	ne, for his sole use and behoof	
and for the use and behod	of of his legal representative	s, to the full end of the t	erm for which said Patent may	
be granted, as fully and er	ntirely as the same would ha	ave been held by me had	d this assignment and sale not	
been made.		- -	5	
Executed this6th	day of	December	200000	
	u, Tokyo-to, Japan		,	
		D # - 1 M		
0	no.	Satosh, Zusa (Signature)		
State of County of) SS:)			
Before me personally app and acknowledged the for day of,	peared said egoing instrument to be his fi 19	ee act and deed this		
				
Seal		(Notary Public)		

Burden Hour Statement: This form is estimated to take 0.1 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner of Patents and Trademarks.

ASSIGNMENT OF APPLICATION			TJK1145
Whereas, I, Masashi OHTSUKI	of Shinjuku-	-ku, Tokyo-	to, Japan , hereafte
referred to as applicant, have invented certain	n new and useful imp	rovements in	BLANK FOR HALFTON
PHASE SHIFT PHOTOMASK AND HALF	TONE PHASE SHIF	T PHOTOMAS	K
for which an application for a United S	States Patent was file	d on	,
for which an application for a United	States Patent was ex	ecuted on	, and
Whereas DAI NIPPON PRINTING CO.,	LTD _{af} Jaj	oan .	herein referred (
Whereas, DAI NIPPON PRINTING CO., 1-1, "assignee" whose post office address is Toky	Ichigaya-kaga o-to, 162-8001	cho 1-chome Japan	s, Shinjuku-ku,
sirous of acquiring the entire right, title and in	iterest in the same;		
Now, therefore, in consideration of the sum o	fonedollars (\$	the receipt whereof is ac
knowledged, and other good and valuable co	nsideration, I, the app	olicant, by these	e presents do sell, assig
and transfer unto said assignee the full and e	xclusive right to the s	aid invention in	the United States and th
entire right, title and interest in and to any and	all Patents which ma	y be granted the	erefor in the United State
I hereby authorize and request the Commiss	ioner of Patents and	Trademarks to	issue said United State
Patent to said assignee, of the entire right, titl	e, and interest in and	to the same, fo	r his sole use and behoo
and for the use and behoof of his legal repres	entatives, to the full e	and of the term f	or which said Patent ma
be granted, as fully and entirely as the same v	would have been held	by me had this	assignment and sale no
been made.		·	5
Executed this 6th	ay ofDecemb	er	200000
at Shinjuku-ku, Tokyo-to,		· 	1
	masa	shi O	htsuki
State of SS:		(Signature)	
Before me personally appeared said			
and acknowledged the foregoing instrument to day of	be his free act and de	ed this	
Seal		/\$1-4	v Public)

Burden Hour Statement: This form is estimated to take 0.1 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner of Patents and Trademarks, Washington, DC 20231.

PATENT REEL: 011372 FRAME: 0637

RECORDED: 12/14/2000