REC	U.S. DEPARTMENT OF COMMERC'S Patent and Trademark Office of T  ney's Docket No. 021238-402 (PM 1948)
	Prease record the attached original documents or copy thereof.
1. Name of conveying party(ies):  (1) ARUN SINHA (2) WENDY MARIN (3) BRENDAN ANDERSON (4) JAN JONES (5) ROBERT PANDORF (6) JAMES COLLINS (7) CHARLES T. HIGGINS (8) WILLIAM JAMES CROWE (9) TAKAHIDE TAKEDA  Additional name(s) of conveying party(ies) attached?     Yes   X  No  3. Nature of conveyance:  [X] Assignment [ ] Merger [ ] Security Agreement [ ] Change of Name Other:  Execution Date: November 17, June 30, June 23, June 29, August 17, August 17, June 15, July 20, and August 25, 2000	2. Name and address of receiving party(ies):  Name:PHILIP MORRIS INCORPORATED  Address:120 PARK AVENUE
4. Application number(s) or patent number(s):  If this document is being filed together with a new application, the A. Patent Application No.(s)  29/120,626	B. Patent No.(s)
Additiona numbers attac	ched? [ ] Yes [X] No
5. Name and address of party to whom correspondence concerning document should be mailed:	6. Total number of applications and patents involved 1
Name: Peter K. Skiff  Address: BURNS, DOANE, SWECKER & MATHIS, I.L.P.  P.O. Box 1404  Alexandria, Virginia 22313-1404	7. Total fee (37 CFR 3.41): \$40.00  [ ] Enclosed  [X] Authorized to be charged to deposit account, if necessary  8. Deposit account number:  02-4800
DO NOT US	E THIS SPACE
9. Statement and signature. To the best of my knowledge and belief, the foregoing information is true  Wendi L. Weinstein, Registration No. 34,456  Name of Person Signing	and correct and any attached copy is a true copy of the original document.  November 20, 21000  Signature

Mail documents to be recorded with required cover sheet information to:

Commissioner of Patents and Trademarks Box Assignments Washington, D.C. 20231

Total number of pages including cover sheet, attachments, and document: 11

PM 1948
BDSM 021238-402
Attorney Docket Nos.

### **ASSIGNMENT**

(JOINT)

THIS ASSIGNMENT, by 1) Arun Sinha. 2) Wendy Marin. 3) Brendan Anderson. 4) Jan Jones, 5) Robert Pandorf, 6) James Collins, 7) Charles T. Higgins, 8) William James Crowe, and 9) Takahide Takeda, (hereinafter referred to as "the Assignors"), residing at 1) 143 Emery Drive East, Stamford, Connecticut 06902; 2) 56 Woodlawn Avenue, New Rochelle, New York 10804; 3) 200 East 89th Street, Apt. 17A, New York, New York 10128; 4) 14328 Regatta Pte. Road, Midlothian, Virginia 23112; 5) 231 Pascack Avenue, Emerson, New Jersey 07630; 6) 449 West 44th Street, Apt. 2E, New York, New York 10036; 7) 30 Glenbrooke Circle West, Richmond, Virginia 23229; 8) 11120 Chalkley Road, Chester, Virginia 23831; and 9) 2325-13 Shizuki, Tsuna-cho Tsuna-gun, Hyogo 656-2131, Japan, respectively, witnesseth:

WHEREAS, the Assignors have made certain new and useful inventions in <u>LIGHTER</u> set forth in an application for Letters Patent of the United States of America,

[] having an oath or declaration executed on even date herewith;

IX I bearing Serial No. 29/120,630 , and filed on March 23, 2000 ; and

WHEREAS, PHILIP MORRIS INCORPORATED, a corporation duly organized under and pursuant to the laws of the State of Virginia and having an office and place of business at 120 Park Avenue, New York, New York 10017, is desirous of acquiring the entire right, title, and interest in and to the inventions for the United States and the application for Letters Patent of the United States, and in and to any United States Letters Patent or Patents, to be obtained therefor and thereon; and

WHEREAS, PHILIP MORRIS PRODUCTS INC., a corporation organized and existing under the laws of the State of Virginia and having an office and place of business at 3601 Commerce Road, Richmond, Virginia 23234, is desirous of acquiring the entire right, title, and interest in and to the inventions for countries foreign to the United States, and in and to any foreign patent applications, and in and to any foreign Letters Patent or Patents to be obtained therefor and thereon; and

NOW, THEREFORE, be it known that for and in consideration of the sum of One Dollar (\$1.00) to each of us paid and other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged:

# ASSIGNMENT OF UNITED STATES PATENT RIGHTS

We do hereby sell, assign and transfer unto PHILIP MORRIS INCORPORATED, its successors, assigns and legal representatives all right, title, and interest in and to the inventions, for the United States, and in and to the United States patent application, including any continuations and divisions thereof, and any substitute applications therefor and any United States patents which may issue thereon and any reissues and extensions of the same; and we hereby authorize and request the Commissioner of Patents to grant and issue any and all patents on the inventions in the United States to PHILIP MORRIS INCORPORATED as the assignee thereof.

Page 1 of 5

PATENT REEL: 011335 FRAME: 0002

#### ASSIGNMENT OF EQREIGN PATENT RIGHTS

Further in view of the consideration hereinabove referred to, we do hereby sell, assign, and transfer unto PHILIP MORRIS PRODUCTS INC., its successors, assigns and legal representatives, all right, title and interest in and to the inventions for all countries foreign to the United States, including the right to claim priority under the International Convention based on the United States patent application, and in and to any foreign patent application, including renewals, revivals, continuations and divisions thereof, and any substitute applications therefor, and any foreign patents which may issue thereon, and any reissues and extensions of the same; and we hereby authorize and request competent authorities to grant and issue any and all patents on the inventions in any foreign country to PHILIP MORRIS PRODUCTS INC. as the assignee thereof.

We further agree to execute upon request of the assignee PHILIP MORRIS INCORPORATED such additional documents, if any, as are necessary and proper to secure patent protection on the inventions in the United States, and to execute upon request of assignee PHILIP MORRIS PRODUCTS INC. such additional documents, if any, as are necessary and proper to secure patent protection on the inventions in countries foreign to the United States, and to otherwise give full effect to and perfect the rights of the assignee PHILIP MORRIS INCORPORATED in the United States and of assignee PHILIP MORRIS PRODUCTS INC. in countries foreign to the United States.

AND for the same consideration, the Assignors hereby covenant and agree to and with the assignees, their successors, legal representatives, and assigns, that, at the time of execution and delivery of these presents, the Assignors are the sole and lawful owners of the entire right, title, and interest in and to the invertions and any and all applications for Letters Patent abovementioned, and that the same are unencumbered, and that the Assignors have good and full right and lawful authority to sell and convey the same in the manner herein set forth;

AND for the same consideration, the Assignors hereby covenant and agree to and with the assignees, their successors, legal representatives, and assigns, that the Assignors will, whenever counsel of the assignees, or counsel of their successors, legal representatives, and assigns, shall advise that any proceeding in connection with the inventions or any and all applications for Letters Patent, or any proceeding in connection with Letters Patent for the inventions in any country, including interference proceedings, is lawful and desirable, or that any division, continuation, or continuation—in-part of any application for Letters Patent, or any reissue or extension of any Letters Patent to be obtained thereon, is lawful and desirable, sign all papers and documents, take all lawful oaths, and so all acts necessary or required to be done for the procurement, maintenance, enforcement, and defense of Letters Patent for the inventions, without charge to the assignees, their successors, legal representatives, and assigns, but at the cost and expense of the assignees, their successors, legal representatives, and assigns,

IN TESTIMONY	THEREOF, we have h	ereunto signed our n	iames on the dates	hereinafter
indicated:		$\mathcal{M}$ -	,	
Date 11/17/070	_ Name of Assignor	Mr.		
		Arun SINHA		
STATE OF VIRGINIA )				
CITY OF RICHMOND )				
On this $17$	day of Novinibl	/, 2000, aj	ppeared before me i	n person the
above-named individual, and	acknowledged the abov	e to be his signature	and that he signed	l, sealed and
delivered the above instrument	: as his voluntary act and	deed, and for the uses	s and purposes there	ein set forth.
My Commission Expires:	~ <u>~ 1</u>	Membrer	Sup	
	NC	TARY PUBLIC	7. –	
(Notarial Seal)		V		
MERRILYNN DUDE	CZKA		V	

Page 2 of 5

NOTARY PUBLIC
MY COMMISSION EXPIRES 9/30/2003

PATENT REEL: 011335 FRAME: 0003

Date	Name of Assignor	
		Wendy MARIN
STATE OF VIRGINIA )		
CITY OF RICHMOND )		
On thisabove-named individual, and a delivered the above instrument	day of acknowledged the a as his voluntary act :	2000, appeared before me in person the bove to be his signature and that he signed, sealed and and deed, and for the uses and purposes therein set forth.
My Commission Expires:		NOTARY PUBLIC
(Notarial Seal)		
Date	Name of Assignor	
Date	_ Marie or Assignor	Brendan ANDERSON
STATE OF VIRGINIA )		
CITY OF RICHMOND )		
On thisabove-named individual, and delivered the above instrument	day of acknowledged the a as his voluntary act	, 2000, appeared before me in person the bove to be his signature and that he signed, sealed and and deed, and for the uses and purposes therein set forth.
My Commission Expíres:		NOTARY PUBLIC
(Notarial Seal)		
Date	_ Name of Assignor	
		Jan JONES
STATE OF VIRGINIA ) : ss		
CITY OF RICHMOND }		
On thisabove-named individual, and delivered the above instrument	day of	, 2000, appeared before me in person the above to be his signature and that he signed, sealed and and deed, and for the uses and purposes therein set forth.
My Commission Expires:		NOTARY PUBLIC

Page 3 of 5

Date	Name of Assignor	
		Robert PANDORF
STATE OF VIRGINIA ) : ss		
CITY OF RICHMOND )		
On thisabove-named individual, and delivered the above instrument	day of	bove to be his signature and that he signed, sealed and and deed, and for the uses and purposes therein set forth.
My Commission Expires:		NOTARY PUBLIC
		HOTANT FUBLIC
(Notarial Seal)		
Date	Name of Assignor	
STATE OF VIRGINIA )		James COLLINS
: ss CITY OF RICHMOND )		
On this above-named individual, and delivered the above instrumen	day of	, 2000, appeared before me in person the above to be his signature and that he signed, sealed and and deed, and for the uses and purposes therein set forth.
My Commission Expires:		NOTARY PUBLIC
(Notarial Seal)		
Date	Name of Assigno:	Charles T. HIGGINS
STATE OF VIRGINIA )		Chanes 1. Integrited
CITY OF RICHMOND )		
On thisabove-named individual, and delivered the above instrumen	day of	, 2000, appeared before me in person the above to be his signature and that he signed, sealed and and deed, and for the uses and purposes therein set forth.
My Commission Expires:		NOTARY PUBLIC

Page 4 of 5

STATE OF VIRGINIA )  STATE OF VIRGINIA )  On this day of 2000, appeared before me in person above-named individual, and acknowledged the above to be his signature and that he signed, sealed a delivered the above instrument as his voluntary act and deed, and for the uses and purposes therein set for My Commission Expires:  NOTARY PUBLIC  (Notarial Seal)  Date Name of Assignor  Takahide TAKEDA  STATE OF VIRGINIA    CITY OF RICHMOND )  On this day of 2000, appeared before me in person to above-named individual, and acknowledged the above to be his signature and that he signed, sealed a delivered the above instrument as his voluntary act and deed, and for the uses and purposes therein set for delivered the above instrument as his voluntary act and deed, and for the uses and purposes therein set for delivered the above instrument as his voluntary act and deed, and for the uses and purposes therein set for delivered the above instrument as his voluntary act and deed, and for the uses and purposes therein set for delivered the above instrument as his voluntary act and deed, and for the uses and purposes therein set for delivered the above instrument as his voluntary act and deed, and for the uses and purposes therein set for delivered the above instrument as his voluntary act and deed, and for the uses and purposes therein set for delivered the above instrument as his voluntary act and deed, and for the uses and purposes therein set for delivered the above instrument as his voluntary act and deed, and for the uses and purposes therein set for delivered the above instrument as his voluntary act and deed, and for the uses and purposes therein set for delivered the above instrument as his voluntary act and deed, and for the uses and purposes therein set for delivered the above instrument as his voluntary act and deed, and for the uses and purposes therein set for delivered the above instrument as his voluntary act and deed, and for the uses and purposes therein act and deed, and for the use	Date	_ Name of Assignor	
CITY OF RICHMOND )  On this day of 2000, appeared before me in person above-named individual, and acknowledged the above to be his signature and that he signed, sealed a delivered the above instrument as his voluntary act and deed, and for the uses and purposes therein set for My Commission Expires:  NOTARY PUBLIC  (Notarial Seal)  Date Name of Assignor Takahide TAKEDA  STATE OF VIRGINIA    CITY OF RICHMOND }  On this day of 2000, appeared before me in person to above-named individual, and acknowledged the above to be his signature and that he signed, sealed a delivered the above instrument as his voluntary act and deed, and for the uses and purposes therein set for My Commission Expires:	STATE OF VIRGINIA )		William James CROWE
My Commission Expires:    NOTARY PUBLIC			
NOTARY PUBLIC  (Notarial Seal)  Name of Assignor  Takahide TAKEDA  STATE OF VIRGINIA    SS  CITY OF RICHMOND    On this day of 2000, appeared before me in person to above-named individual, and acknowledged the above to be his signature and that he signed, sealed a delivered the above instrument as his voluntary act and deed, and for the uses and purposes therein set for My Commission Expires:	On thisabove-named individual, and delivered the above instrument	day of	, 2000, appeared before me in person the above to be his signature and that he signed, sealed and and deed, and for the uses and purposes therein set forth.
(Notarial Seal)  DateName of Assignor  STATE OF VIRGINIA	My Commission Expires:		
DateName of Assignor			NOTARY PUBLIC
STATE OF VIRGINIA    SS  CITY OF RICHMOND    On this	(Notarial Seal)		
STATE OF VIRGINIA    SS  CITY OF RICHMOND    On this	Date	_ Name of Assignor	
On this day of, 2000, appeared before me in person to above-named individual, and acknowledged the above to be his signature and that he signed, sealed a delivered the above instrument as his voluntary act and deed, and for the uses and purposes therein set for My Commission Expires:		•	Takahide TAKEDA
My Commission Expires:			
	On thisabove-named individual, and addiversed the above instrument	day ofacknowledged the a as his voluntary act	, 2000, appeared before me in person the bove to be his signature and that he signed, sealed and and deed, and for the uses and purposes therein set forth.
NOTARY PUBLIC	My Commission Expires:		
			NOTARY PUBLIC

PM 1948
BDSM 021238-402
Attorney Docket Nos.

### **ASSIGNMENT**

(JOINT)

THIS ASSIGNMENT, by 1) Arun Sinha, 2) Wendy Marin, 3) Brendan Anderson, 4) Jan Jones, 5) Robert Pandorf, 6, James Collins, 7) Charles T. Higgins, 8) William James Crowe, and 9) Takahide Takeda, (hereinafter referred to as "the Assignors"), residing at 1) 143 Emery Drive East, Stamford, Connecticut 06902; 2) 56 Woodlawn Avenue, New Rochelle, New York 10804; 3) 200 East 89th Street, Apt. 17A, New York, New York 10128; 4) 14328 Regatta Pte. Road, Midlothian, Virginia 23112; 5) 231 Pascack Avenue, Emerson, New Jersey 07630; 6) 449 West 44th Street, Apt. 2E, New York, New York 10036; 7) 30 Glenbrooke Circle West, Richmond, Virginia 23229; 8) 11120 Chalkley Road, Chester, Virginia 23831; and 9) 2325-13 Shizuki, Tsuna-cho Tsuna-gun, Hyogo 656-2131, Japan, respectively, witnesseth:

WHEREAS, the Assignors have made certain new and useful inventions in <u>LIGHTER</u> set forth in an application for Letters Patent of the United States of America,

[] having an oath or declaration executed on even date herewith;

[X ] bearing Serial No. 29/120,630 , and filed on March 23, 2000 ; and

WHEREAS, PHILIP MORRIS INCORPORATED, a corporation duly organized under and pursuant to the laws of the State of Virginia and having an office and place of business at 120 Park Avenue, New York, New York 10017, is desirous of acquiring the entire right, title, and interest in and to the inventions for the United States and the application for Letters Patent of the United States, and in and to any United States Letters Patent or Patents, to be obtained therefor and thereon; and

WHEREAS, PHILIP MORRIS PRODUCTS INC., a corporation organized and existing under the laws of the State of Virginia and having an office and place of business at 3601 Commerce Road, Richmond, Virginia 23234, is desirous of acquiring the entire right, title, and interest in and to the inventions for countries foreign to the United States, and in and to any foreign patent applications, and in and to any foreign Letters Patent or Patents to be obtained therefor and thereon; and

NOW, THEREFORE, be it known that for and in consideration of the sum of One Dollar (\$1.00) to each of us paid and other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged:

## ASSIGNMENT OF UNITED STATES PATENT RIGHTS

We do hereby sell, assign and transfer unto PHILIP MORRIS INCORPORATED, its successors, assigns and legal representatives, all right, title, and interest in and to the inventions, for the United States, and in and to the United States patent application, including any continuations and divisions thereof and any substitute applications therefor and any United States patents which may issue thereon and any reissues and extensions of the same; and we hereby authorize and request the Commissioner of Patents to grant and issue any and all patents on the inventions in the United States to PHILIP MORRIS INCORPORATED as the assignee thereof.

Page 1 of 5

PATENT REEL: 011335 FRAME: 0007

### ASSIGNMENT OF FOREIGN PATENT RIGHTS

Further in view of the consideration hereinabove referred to, we do hereby sell, assign, and transfer unto PHILIP MORRIS PRODUCTS INC., its successors, assigns and legal representatives, all right, title and interest in and to the inventions for all countries foreign to the United States, including the right to claim priority under the International Convention based on the United States patent application, and in and to any foreign patent application, including renewals, revivals, continuations and divisions thereof, and any substitute applications therefor, and any foreign patents which may issue thereon, and any reissues and extensions of the same; and we hereby authorize and request competent authorities to grant and issue any and all patents on the inventions in any foreign country to PHILIP MORRIS PRODUCTS INC. as the assignee thereof.

We further agree to execute upon request of the assignee PHILIP MORRIS INCORPORATED such additional documents, if any, as are necessary and proper to secure patent protection on the inventions in the United States, and to execute upon request of assignee PHILIP MORRIS PRODUCTS INC. such additional documents, if any, as are necessary and proper to secure patent protection on the inventions in countries foreign to the United States, and to otherwise give full effect to and perfect the rights of the assignee PHILIP MORRIS INCORPORATED in the United States and of assignee PHILIP MORRIS PRODUCTS INC. in countries foreign to the United States.

AND for the same consideration, the Assignors hereby covenant and agree to and with the assignees, their successors, legal representatives, and assigns, that, at the time of execution and delivery of these presents, the Assignors are the sole and lawful owners of the entire right, title, and interest in and to the inventions and any and all applications for Letters Patent abovementioned, and that the same are unencumbered, and that the Assignors have good and full right and lawful authority to sell and convey the same in the manner herein set forth;

AND for the same consideration, the Assignors hereby covenant and agree to and with the assignees, their successors, legal representatives, and assigns, that the Assignors will, whenever counsel of the assignees, or counsel of their successors, legal representatives, and assigns, shall advise that any proceeding in connection with the inventions or any and all applications for Letters Patent, or any proceeding in connection with Letters Patent for the inventions in any country, including interference proceedings, is lawful and desirable, or that any division, continuation, or continuation-in-part of any application for Letters Patent, or any reissue or extension of any Letters Patent to be obtained thereon, is lawful and desirable, sign all papers and documents, take all lawful oaths, and do all acts necessary or required to be done for the procurement, maintenance, enforcement, and defense of Letters Patent for the inventions, without charge to the assignees, their successors, legal representatives, and assigns, but at the cost and expense of the assignees, their successors, legal representatives, and assigns;

IN TESTIMONY THERE OF, we rave hereunto signed our names on the dates hereinafter indicated:

Date	Name of Assignor _	Arun SINHA
STATE OF VIRGINIA )		Aldii Oliviia
: ss CITY OF RICHMOND )		
above-named individual, and	acknowledged the al	, 2000, appeared before me in person the bove to be his signature and that he signed, sealed and and deed, and for the uses and purposes therein set forth.
My Commission Expires:	-	NOTARY PUBLIC
(Notarial Seal)		

page 2 of 5

Date V 120/CC Name of Assignor
STATE OF VIRGINIA )  SITT OF HICKMOND)  SS
On this day of, 2000, appeared before me in person the above-named individual, and acknowledged the above to be his signature and that he signed, sealed and delivered the above instrument as his voluntary act and deed, and for the uses and purposes therein set forth.
My Commission Expires 6/30/01 Sanda 2. Allmond NOTARY PUBLIC
(Notarial Seal)
DateName of Assignor
STATE OF-VIRGINIA ): ss
On this $\frac{23^{16}}{\text{day of }}$ day of $\frac{1}{\text{day of }}$ , 2000, appeared before me in person the above-named individual, and acknowledged the above to be his signature and that he signed, sealed and
delivered the above instrument as his voluntary act and deed, and for the uses and purposes therein set forth.
My Commission Expires: Takhlees M. Neilligan NOTARY PUBLIC
KATHLEEN M. MULLIGAN (Notarial Spatiary Public, State of New York Qualified in Suffolk County Certificate Filed in New York County Reg. #4883282 Expires Jan. 20.
Date
STATE OF VIRGINIA )
On this 21 day of
My Commission Expires: 6/30/6 NOTARY PUBLIC

DateName of Assigno	MA Famil
STATE OF ANDINIA	Robert PANDORF
CITY OF RICENIOND)	<i>,</i>
On this day ofabove-named individual, and acknowledged the	above to be his signature and that he signed, sealed and and deed, and for the uses and purposes therein set forth.
My Commission Expires:	NOTARY PUBLIC TO THE PORT OF T
(Notarial Seal)	PORENT L MEMORY.
Date Name of Assignation   STATE OF VIRGINIA	James COLLINS
On this day of above-named individual, and acknowledged the delivered the above instrument as his voluntary at	, 2000, appeared before me in person the above to be his signature and that he signed, sealed and and deed, and for the uses and purposes therein set forth.
My Commission Expires:	NOTARY PUBLIC TO SECOND
(Notarial Seal)	AN ATTORNEY AT CAW OF THE
Date 6/15/5t Name of Assign	or Charles T. Higgins Charles T. HIGGINS
STATE OF VIRGINIA ) : ss	
CITY OF RICHMOND )	
On this day of above-named individual, and acknowledged the delivered the above instrument as his voluntary a	, 2000, appeared before me in person the above to be his signature and that he signed, sealed and ct and deed, and for the uses and purposes therein set forth.
My Commission Expires $2/23/63$	NOTARY PUBLIC
(Notarial Seal)	

Date	7-20-00 Name of Assignor	- William James hove
		William James CROWE
STATE OF \		
County 1	Hanover :ss <del>ICHMOND</del> )	
CHY OF RIC	CHMOND)	
	On this 21 the day of Audit	2000 anneared before me in person the
ahove-name	ned individual, and acknowledged the above	, 2000, appeared before me in person the to be his signature and that he signed, sealed and
delivered the	ne above instrument as his voluntary act and d	leed, and for the uses and purposes therein set forth.
	ission Expires: $6/30/01$ $\frac{5a}{}$	adden 2 Allmani
My Commis	ssion Expires: $\varphi / \Im U / U / 2$	ndra 2. allnund
	NOT	ANT FUBLIC
(Notarial Se	eal)	
	gradients and the second second	and a second Advisor
Date	Name of Assignor	ARACTIPE CAKE DA IL (1) 2/
		Takahide TAKEDA
STATE OF Y	VIRGINIA )	
	Zarovet ss <del>IGHMON</del> D)	
	25th June to	2000
ahaya nami	Un this (A) day of (A) Uniting (A) above	, 2000, appeared before me in person the to be his signature and that he signed, sealed and
delivered the	he above instrument as his voluntary act and o	deed, and for the uses and purposes therein set forth.
donvoida (iii	To above metramore do mo voluntary det and e	acca, and to the account perpendicular
	. /2 /	1 1711
My Commis	ission Expires: $6/30/2001$	range 2. allmond
	NOT	TARY PUBLIC
(Notarial Se	eal)	