

PATENT ASSIGNMENT

Electronic Version v1.1

Stylesheet Version v1.1

SUBMISSION TYPE:

NEW ASSIGNMENT

NATURE OF CONVEYANCE:

ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
Mark J. Dapper	01/27/1997
Michael J. Geile	01/22/1997
Terrance J. Hill	01/23/1997
Harold A. Roberts	01/21/1997
Brian D. Anderson	01/24/1997
Jeffrey Brede	01/22/1997
Mark S. Wadman	01/30/1997
Robert J. Kirscht	01/21/1997
James J. Herrmann	01/23/1997
Michael J. Fort	01/22/1997
Steven P. Buska	01/22/1997
Jeff Solum	01/21/1997
Debra Lea Enfield	05/05/1997
Darrell Berg	01/21/1997
Thomas Smigelski	01/30/1997
Thomas C. Tucker	01/27/1997
Joe Hall	01/31/1997
John M. Logajan	01/22/1997
Somvay Boualouang	01/22/1997
Heng Lou	01/22/1997
Mark D. Elpers	01/21/1997
Matt Downs	01/21/1997
Tammy Ferris	01/21/1997
Adam Opoczynski	01/24/1997
David S. Russell	01/22/1997
Calvin G. Nelson	05/22/1997
Niranjan R. Samant	01/23/1997
Joseph F. Chiappetta	01/23/1997
Scott Sarnikowski	05/22/1997

PATENT

500748504

REEL: 022071 FRAME: 0612

OP \$840.00 11736324

## RECEIVING PARTY DATA

Name:	ADC Telecommunications, Inc.
Street Address:	4900 West 78th Street
City:	Bloomington
State/Country:	MINNESOTA
Postal Code:	55435

## PROPERTY NUMBERS Total: 21

Property Type	Number
Application Number:	11736324
Application Number:	12272522
Application Number:	12272529
Application Number:	12272530
Application Number:	12272535
Application Number:	12272542
Application Number:	12272546
Application Number:	11746823
Patent Number:	7436812
Application Number:	11686808
Application Number:	11734064
Patent Number:	7440391
Application Number:	11746407
Application Number:	11747577
Application Number:	11734075
Application Number:	11736305
Application Number:	11734686
Application Number:	11763188
Application Number:	11747033
Application Number:	11736915
Application Number:	11749305

## CORRESPONDENCE DATA

Fax Number: (952)465-0771

*Correspondence will be sent via US Mail when the fax attempt is unsuccessful.*

Phone: 952-465-0770

Email: [docketing@fogglaw.com](mailto:docketing@fogglaw.com)

Correspondent Name: Fogg & Powers LLC  
Address Line 1: 5810 W. 78th St  
Address Line 2: Ste 100  
Address Line 4: Minneapolis, MINNESOTA 55439

ATTORNEY DOCKET NUMBER:

100.070MI01

NAME OF SUBMITTER:

Julia M. Sisterman

**Total Attachments: 105**

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## ASSIGNMENT

WHEREAS, WE, Mark J. Dapper, residing at 6558 Baywood Lane, Cincinnati, OH 45224, and Michael J. Geile, residing at 316 Miami Valley Drive, Loveland, OH 45140, and Terrance J. Hill, residing at 1765 Garrett House Lane, Fairfield, OH 45014, and Harold A. Roberts, residing at 7017 Beacon Circle, Eden Prairie, MN 55346, and Brian D. Anderson, residing at 11430 - 50th Place North, Plymouth, MN 55442, and Jeffrey Brede, residing at 8073 Curtis Lane, Eden Prairie, MN 55347, and Mark S. Wadman, residing at 8956 Braxton Drive, Eden Prairie, MN 55347, and Robert J. Kirscht, residing at 13106 Vernon Avenue South, Savage, MN 55378, and James J. Herrmann, residing at 1894 Sunrise Court, Eagan, MN 55122, and Michael J. Fort, residing at 1045 Northview Park, Eagan, MN 55123, and Steven P. Buska, residing at 13370 Stanton Drive, Minnetonka, MN 55305, and Jeff Solum, residing at 4900 West 78th Street, Bloomington, MN 55435, and Debra Lea Enfield, residing at 464 Ridge Court, Chaska, MN 55318, and Darrell Berg, residing at 4900 West 78th Street, Bloomington, MN 55435, and Thomas Smigelski, residing at 230 Waterford Drive, Lake Zurich, IL 60047, and Thomas C. Tucker, residing at 205 Silver Creek Trail, Chapel Hill, NC 27514, and Joe Hall, residing at 4900 West 78th Street, Bloomington, MN 55435, and John M. Logajan, residing at 4248 Hamline Avenue, Arden Hills, MN 55112, and Somvay Boualouang, residing at 4900 West 78th Street, Bloomington, MN 55435, and Heng Lou, residing at 4900 West 78th Street, Bloomington, MN 55435, and Mark D. Elpers, residing at 16303 205th Avenue NW, Elk River, MN 55330, and Matt Downs, residing at 4900 West 78th Street, Bloomington, MN 55435, and Tammy Ferris, residing at 4900 West 78th Street, Bloomington, MN 55435, and Adam Opoczynski, residing at 8911 Sylvan Ridge, Eden Prairie, MN 55347, and David S. Russell, residing at 5145 Luverne Avenue, Minneapolis, MN 55419, and Calvin G. Nelson, residing at 6070 Lake Virginia Drive So., Shorewood, MN 55331, and Niranjan R. Samant, residing at 229 Ridgefield Drive, Middletown, CT 06547, and Joseph F. Chiappetta, residing at 6 Ranch Drive, Trumbull, CT 06611, and Scott Sarnikowski, residing at 13235 57th Avenue North, Plymouth, MN 55442, made certain new and useful inventions and improvements for which We filed an application for Letters Patent of the United States on June 28, 1996, and was assigned US serial number 08/673,002, and is entitled COMMUNICATION SYSTEM WITH MULTICARRIER TELEPATHY TRANSPORT.

AND WHEREAS, ADC Telecommunications, Inc., a corporation organized and existing under and by virtue of the laws of the State of Minnesota, and having an office and place of business at 4900 West 78th Street, Bloomington, MN 55435, (hereinafter "Assignee") is desirous of acquiring the entire right, title and interest in and to said inventions, improvements and application and in and to the Letters Patent to be obtained therefor;

NOW, THEREFORE, to all whom it may concern, be it known that for good and valuable consideration, the receipt and sufficiency whereof is hereby acknowledged, we have sold, assigned, and transferred, and by these presents do sell, assign and transfer unto said Assignee, its successors or assigns, the entire right, title and interest for all countries in and to all inventions and improvements disclosed in the aforesaid application, and in and to the said application, all divisions, continuations, or renewals thereof, all Letters Patent which may be granted therefrom, and all reissues or extensions of such patents, and in and to any and all applications which have been or shall be filed in any foreign countries for Letters Patent on the said inventions and improvements, including an assignment of all rights under the provisions of the International Convention, and all Letters Patent of foreign countries which may be granted therefrom; and we do hereby authorize and request the Commissioner of Patents and Trademarks to issue any and all United States Letters Patent for the aforesaid inventions and improvements to the said Assignee as the assignee of the entire right, title and interest in and to the same, for the use of the said Assignee, its successors and assigns.

AND, for the consideration aforesaid, we do hereby agree that we and our executors and legal representatives will make, execute and deliver any and all other instruments in writing including any and all further application papers, affidavits, assignments and other documents, and will communicate to said Assignee, its successors and representatives all facts known to us relating to said improvements and the history thereof and will testify in all legal proceedings and generally do all things which may be necessary or desirable more effectually to secure to and vest in said Assignee, its successors or assigns the entire right, title and interest in and to the said improvements, inventions, applications, Letters Patent, rights, titles, benefits, privileges and advantages hereby sold, assigned and conveyed, or intended so to be.

AND, furthermore we covenant and agree with said Assignee, its successors and assigns, that no assignment, grant, mortgage, license or other agreement affecting the rights and property herein conveyed has been made to others by me/us and that full right to convey the same as herein expressed is possessed by us.

IN TESTIMONY WHEREOF, I have hereunto set my hand this \_\_\_\_ day of \_\_\_\_\_, 1996.

---

Mark J. Dapper

STATE OF \_\_\_\_\_ )  
 )ss.  
COUNTY OF \_\_\_\_\_ )

On this \_\_\_\_ day of \_\_\_\_\_, 1996 before me personally appeared Mark J. Dapper to me known and known to me to be the person described in and who executed the foregoing instrument, and he/she duly acknowledged to me that he/she executed the same for the uses and purposes therein set forth.

[SEAL]

Notary Public



IN TESTIMONY WHEREOF, I have hereunto set my hand this \_\_\_\_ day of \_\_\_\_\_, 1996.

Michael J. Geile

STATE OF \_\_\_\_\_ )  
 )ss.  
COUNTY OF \_\_\_\_\_ )

On this \_\_\_\_ day of \_\_\_\_\_, 1996 before me personally appeared Michael J. Geile to me known and known to me to be the person described in and who executed the foregoing instrument, and he/she duly acknowledged to me that he/she executed the same for the uses and purposes therein set forth.

[SEAL]

Notary Public

IN TESTIMONY WHEREOF, I have hereunto set my hand this \_\_\_\_ day of \_\_\_\_\_, 1996.

Terrance J. Hill

STATE OF \_\_\_\_\_ )  
 )ss.  
COUNTY OF \_\_\_\_\_ )

On this \_\_\_\_ day of \_\_\_\_\_, 1996 before me personally appeared Terrance J. Hill to me known and known to me to be the person described in and who executed the foregoing instrument, and he/she duly acknowledged to me that he/she executed the same for the uses and purposes therein set forth.

[SEAL]

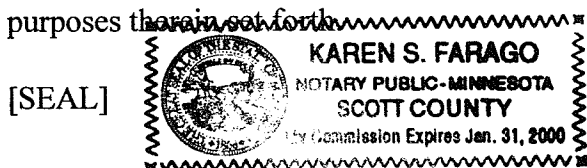
Notary Public

IN TESTIMONY WHEREOF, I have hereunto set my hand this 21 day of January 1996.

Harold A. Roberts


STATE OF Minnesota)  
COUNTY OF Stearns) ss.

On this 21<sup>st</sup> day of January, 1998 before me personally appeared Harold A. Roberts  
to me known and known to me to be the person described in and who executed the foregoing  
instrument, and he/she duly acknowledged to me that he/she executed the same for the uses and  
purposes therein set forth.



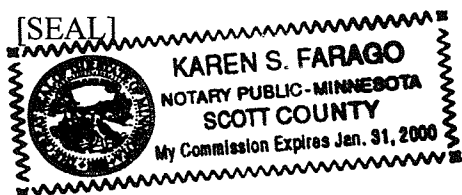
*Loren S. Larozo*  
Notary Public

IN TESTIMONY WHEREOF, I have hereunto set my hand this 24 day of January, 1996.

  
Brian D. Anderson

STATE OF Minnesota)  
COUNTY OF Hennepin) ss.

On this 24<sup>th</sup> day of January, 1996 before me personally appeared Brian D. Anderson  
to me known and known to me to be the person described in and who executed the foregoing  
instrument, and he/she duly acknowledged to me that he/she executed the same for the uses and  
purposes therein set forth.



*Karen S. Sarago*  
Notary Public

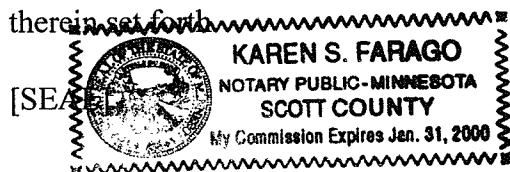
IN TESTIMONY WHEREOF, I have hereunto set my hand this 22 day of January, 1996.

Jeffrey Breda

STATE OF Minnesota)  
COUNTY OF Hennepin)ss.

On this 22<sup>nd</sup> day of January, 1998 before me personally appeared Jeffrey Brede to me known and known to me to be the person described in and who executed the foregoing instrument, and he/she duly acknowledged to me that he/she executed the same for the uses and purposes

therein set forth



Notary Public

IN TESTIMONY WHEREOF, I have hereunto set my hand this \_\_\_\_ day of \_\_\_\_\_, 1996.

---

Mark S. Wadman

STATE OF \_\_\_\_\_ )  
 )ss.  
COUNTY OF \_\_\_\_\_ )

On this \_\_\_\_ day of \_\_\_\_\_, 1996 before me personally appeared Mark S. Wadman to me known and known to me to be the person described in and who executed the foregoing instrument, and he/she duly acknowledged to me that he/she executed the same for the uses and purposes therein set forth.

[SEAL]

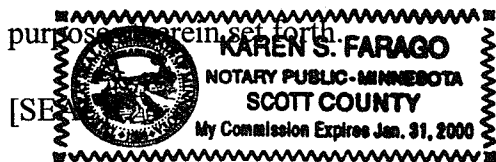
Notary Public

IN TESTIMONY WHEREOF, I have hereunto set my hand this 21<sup>st</sup> day of Jan, 1997.

Robert J. Kirscht  
Robert J. Kirscht

STATE OF Minnesota)  
)ss.  
COUNTY OF Hennepin)

On this 21<sup>st</sup> day of January, 1997 before me personally appeared Robert J. Kirscht to me known and known to me to be the person described in and who executed the foregoing instrument, and he/she duly acknowledged to me that he/she executed the same for the uses and



Karen S. Farago  
Notary Public

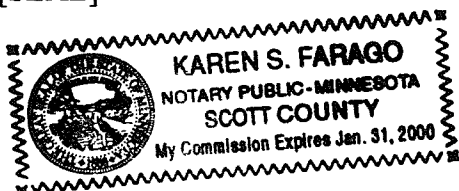
IN TESTIMONY WHEREOF, I have hereunto set my hand this 23<sup>rd</sup> day of January, 1997.

James J. Herrmann  
James J. Herrmann

STATE OF Minnesota)  
)ss.  
COUNTY OF Hennepin)

On this 23<sup>rd</sup> day of January, 1997 before me personally appeared James J. Herrmann to me known and known to me to be the person described in and who executed the foregoing instrument, and he/she duly acknowledged to me that he/she executed the same for the uses and purposes therein set forth.

[SEAL]



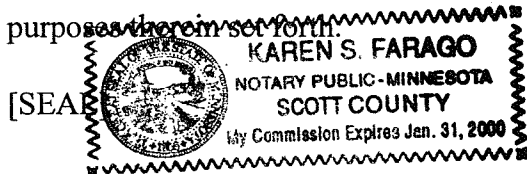
Karen S. Farago  
Notary Public

IN TESTIMONY WHEREOF, I have hereunto set my hand this 22<sup>nd</sup> day of January, 1996.

Michael J. Fort  
Michael J. Fort

STATE OF Minnesota  
)ss.  
COUNTY OF Hennepin

On this 22<sup>nd</sup> day of January, 1996 before me personally appeared Michael J. Fort to me known and known to me to be the person described in and who executed the foregoing instrument, and he/she duly acknowledged to me that he/she executed the same for the uses and purposes therein set forth.



Karen S. Farago  
Notary Public

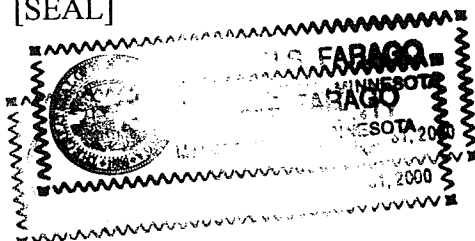
IN TESTIMONY WHEREOF, I have hereunto set my hand this 22<sup>nd</sup> day of January, 1996.

Steven P. Buska  
Steven P. Buska

STATE OF Minnesota  
)ss.  
COUNTY OF Hennepin

On this 22<sup>nd</sup> day of January, 1996 before me personally appeared Steven P. Buska to me known and known to me to be the person described in and who executed the foregoing instrument, and he/she duly acknowledged to me that he/she executed the same for the uses and purposes therein set forth.

[SEAL]



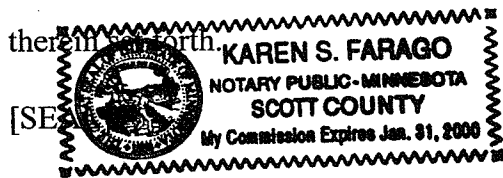
Karen S. Farago  
Notary Public

IN TESTIMONY WHEREOF, I have hereunto set my hand this 21 day of January, 1996.

Jeff Solum  
Jeff Solum

STATE OF Minnesota  
COUNTY OF Scott )ss.

On this 21<sup>st</sup> day of January, 1996 before me personally appeared Jeff Solum to me known and known to me to be the person described in and who executed the foregoing instrument, and he/she duly acknowledged to me that he/she executed the same for the uses and purposes



Karen S. Farago  
Notary Public

IN TESTIMONY WHEREOF, I have hereunto set my hand this \_\_\_ day of \_\_\_\_\_, 1996.

Debra Lea Enfield

STATE OF \_\_\_\_\_ )  
COUNTY OF \_\_\_\_\_ )ss.

On this \_\_\_ day of \_\_\_\_\_, 1996 before me personally appeared Debra Lea Enfield to me known and known to me to be the person described in and who executed the foregoing instrument, and he/she duly acknowledged to me that he/she executed the same for the uses and purposes therein set forth.

[SEAL]

\_\_\_\_\_  
Notary Public

IN TESTIMONY WHEREOF, I have hereunto set my hand this \_\_\_\_ day of \_\_\_\_\_, 1996.

\_\_\_\_\_  
Darrell Berg

STATE OF \_\_\_\_\_ )  
\_\_\_\_\_)ss.  
COUNTY OF \_\_\_\_\_ )

On this \_\_\_\_ day of \_\_\_\_\_, 1996 before me personally appeared Darrell Berg to me known and known to me to be the person described in and who executed the foregoing instrument, and he/she duly acknowledged to me that he/she executed the same for the uses and purposes therein set forth.

[SEAL]

\_\_\_\_\_  
Notary Public

IN TESTIMONY WHEREOF, I have hereunto set my hand this 30<sup>th</sup> day of January, 1996<sup>7</sup>  
Thomas Smigelski  
Thomas Smigelski

STATE OF IL. )  
\_\_\_\_\_)ss.  
COUNTY OF COOK )

On this 30<sup>th</sup> day of January, 1996<sup>7</sup> before me personally appeared Thomas Smigelski to me known and known to me to be the person described in and who executed the foregoing instrument, and he/she duly acknowledged to me that he/she executed the same for the uses and purposes therein set forth.

[SEAL]

\_\_\_\_\_  
Notary Public

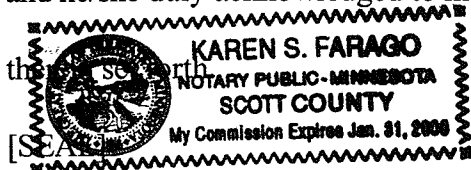


IN TESTIMONY WHEREOF, I have hereunto set my hand this 1<sup>st</sup> day of January, 1996.

Darrell Berg

STATE OF Minnesota)  
COUNTY OF Dennet) ss.

On this 21<sup>st</sup> day of January, 1997 before me personally appeared Darrell Berg to me known and known to me to be the person described in and who executed the foregoing instrument, and he/she duly acknowledged to me that he/she executed the same for the uses and purposes



Notary/Public

IN TESTIMONY WHEREOF, I have hereunto set my hand this \_\_\_\_ day of \_\_\_\_\_, 1996.

---

Thomas Smigelski

STATE OF \_\_\_\_\_ )  
 )ss.  
COUNTY OF \_\_\_\_\_ )

On this \_\_\_\_ day of \_\_\_\_\_, 1996 before me personally appeared Thomas Smigelski  
to me known and known to me to be the person described in and who executed the foregoing  
instrument, and he/she duly acknowledged to me that he/she executed the same for the uses and  
purposes therein set forth.

[SEAL]

Notary Public



IN TESTIMONY WHEREOF, I have hereunto set my hand this \_\_\_\_ day of \_\_\_\_\_, 1996.

\_\_\_\_\_  
Thomas C. Tucker

STATE OF \_\_\_\_\_ )  
\_\_\_\_\_)ss.  
COUNTY OF \_\_\_\_\_ )

On this \_\_\_\_ day of \_\_\_\_\_, 1996 before me personally appeared Thomas C. Tucker  
to me known and known to me to be the person described in and who executed the foregoing  
instrument, and he/she duly acknowledged to me that he/she executed the same for the uses and  
purposes therein set forth.

[SEAL]

\_\_\_\_\_  
Notary Public

IN TESTIMONY WHEREOF, I have hereunto set my hand this 31 day of January, 1996<sup>7</sup>

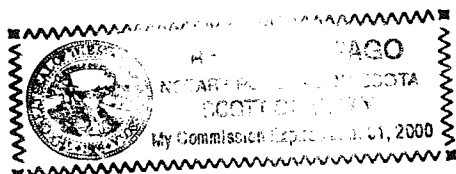
Joe Hall  
Joe Hall

STATE OF Minnesota )  
\_\_\_\_\_)ss.  
COUNTY OF Hennepin )

On this 21<sup>st</sup> day of January, 1996<sup>7</sup> before me personally appeared Joe Hall to me  
known and known to me to be the person described in and who executed the foregoing instrument,  
and he/she duly acknowledged to me that he/she executed the same for the uses and purposes  
therein set forth.

[SEAL]

Karen S. Sarago  
Notary Public



IN TESTIMONY WHEREOF, I have hereunto set my hand this 22 day of Jan, 1996.

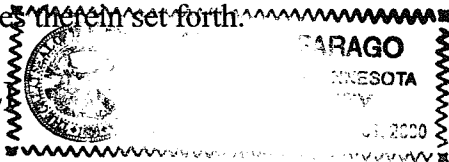
John M. Logajan  
John M. Logajan

STATE OF Minnesota

COUNTY OF Hennepin )SS. r

On this 22<sup>nd</sup> day of January, 1996 before me personally appeared John M. Logajan to me known and known to me to be the person described in and who executed the foregoing instrument, and he/she duly acknowledged to me that he/she executed the same for the uses and purposes therein set forth.

[SEAL]



Karen S. Farago  
Notary Public

IN TESTIMONY WHEREOF, I have hereunto set my hand this 22 day of Jan, 1996.

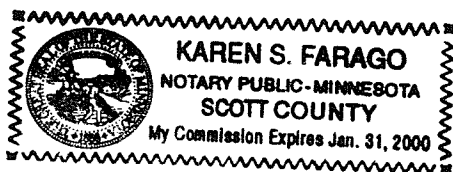
Somvay Boualouang  
Somvay Boualouang

STATE OF Minnesota

COUNTY OF Hennepin )SS. r

On this 22<sup>nd</sup> day of January, 1996 before me personally appeared Somvay Boualouang to me known and known to me to be the person described in and who executed the foregoing instrument, and he/she duly acknowledged to me that he/she executed the same for the uses and purposes therein set forth.

[SEAL]



Karen S. Farago  
Notary Public

IN TESTIMONY WHEREOF, I have hereunto set my hand this 22<sup>nd</sup> day of January, 1996.

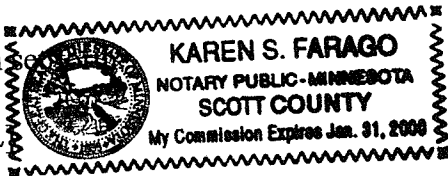
Heng Lou

STATE OF Minnesota  
COUNTY OF Scott

On this 22<sup>nd</sup> day of January, 1996 before me personally appeared Heng Lou to me known and known to me to be the person described in and who executed the foregoing instrument, and he/she duly acknowledged to me that he/she executed the same for the uses and purposes

therein

[SEAL]



Notary Public

Karen S. Farago

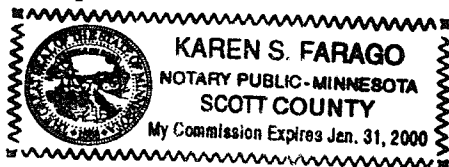
IN TESTIMONY WHEREOF, I have hereunto set my hand this 21 day of Jan, 1996.

Mark D. Elpers

STATE OF Minnesota  
COUNTY OF Scott

On this 21<sup>st</sup> day of January, 1996 before me personally appeared Mark D. Elpers to me known and known to me to be the person described in and who executed the foregoing instrument, and he/she duly acknowledged to me that he/she executed the same for the uses and purposes therein set forth.

[SEAL]



Notary Public

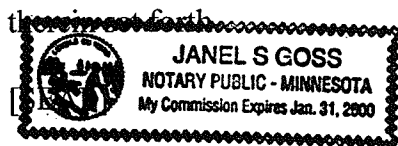
Karen S. Farago

IN TESTIMONY WHEREOF, I have hereunto set my hand this 21 day of January, 1997.

Matt Downs  
Matt Downs

STATE OF Minnesota )  
 )ss.  
COUNTY OF Hennepin )

On this 21<sup>st</sup> day of January, 1997 before me personally appeared Matt Downs to me known and known to me to be the person described in and who executed the foregoing instrument, and he/she duly acknowledged to me that he/she executed the same for the uses and purposes



Janel S. Goss  
Notary Public

IN TESTIMONY WHEREOF, I have hereunto set my hand this \_\_\_ day of \_\_\_\_\_, 1996.

\_\_\_\_\_  
Tammy Ferris

STATE OF \_\_\_\_\_ )  
 )ss.  
COUNTY OF \_\_\_\_\_ )

On this \_\_\_ day of \_\_\_\_\_, 1996 before me personally appeared Tammy Ferris to me known and known to me to be the person described in and who executed the foregoing instrument, and he/she duly acknowledged to me that he/she executed the same for the uses and purposes therein set forth.

[SEAL]

\_\_\_\_\_  
Notary Public

IN TESTIMONY WHEREOF, I have hereunto set my hand this \_\_\_\_ day of \_\_\_\_\_, 1996.

## Matt Downs

STATE OF \_\_\_\_\_ )  
 )ss.  
COUNTY OF \_\_\_\_\_ )

On this \_\_\_\_ day of \_\_\_\_\_, 1996 before me personally appeared Matt Downs to me known and known to me to be the person described in and who executed the foregoing instrument, and he/she duly acknowledged to me that he/she executed the same for the uses and purposes therein set forth.

[SEAL]

Notary Public

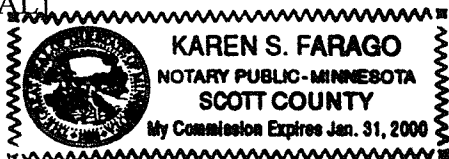
IN TESTIMONY WHEREOF, I have hereunto set my hand this 2<sup>nd</sup> day of January, 1996.


Tammy Ferris  
Tammy Ferris

STATE OF Minnesota, )  
COUNTY OF Hennepin )SS.

On this 21<sup>st</sup> day of January, 1996 before me personally appeared Tammy Ferris to  
me known and known to me to be the person described in and who executed the foregoing  
instrument, and he/she duly acknowledged to me that he/she executed the same for the uses and  
purposes therein set forth.

[SEAL]



  
\_\_\_\_\_  
Notary Public

IN TESTIMONY WHEREOF, I have hereunto set my hand this \_\_\_\_ day of \_\_\_\_\_, 1996.

## Adam Opoczynski

STATE OF \_\_\_\_\_ )  
 )ss.  
COUNTY OF \_\_\_\_\_ )

On this \_\_\_\_ day of \_\_\_\_\_, 1996 before me personally appeared Adam Opoczynski  
to me known and known to me to be the person described in and who executed the foregoing  
instrument, and he/she duly acknowledged to me that he/she executed the same for the uses and  
purposes therein set forth.

[SEAL]

Notary Public

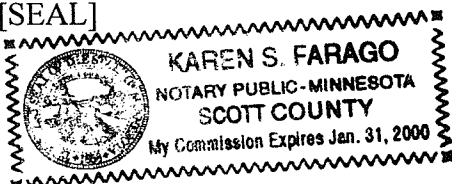
IN TESTIMONY WHEREOF, I have hereunto set my hand and this 23 day of January, 1996.

David S. Russell

STATE OF Minnesota )  
 )ss.  
COUNTY OF Hennepin )

On this 22<sup>nd</sup> day of January, 1996, before me personally appeared David S. Russell to  
me known and known to me to be the person described in and who executed the foregoing  
instrument, and he/she duly acknowledged to me that he/she executed the same for the uses and  
purposes therein set forth.

[SEAL]



Notary Public

IN TESTIMONY WHEREOF, I have hereunto set my hand this \_\_\_\_ day of \_\_\_\_\_, 1996.

---

Calvin G. Nelson

STATE OF \_\_\_\_\_ )  
 )ss.  
COUNTY OF \_\_\_\_\_ )

On this \_\_\_\_ day of \_\_\_\_\_, 1996 before me personally appeared Calvin G. Nelson to me known and known to me to be the person described in and who executed the foregoing instrument, and he/she duly acknowledged to me that he/she executed the same for the uses and purposes therein set forth.

[SEAL]

Notary Public

IN TESTIMONY WHEREOF, I have hereunto set my hand this \_\_\_\_ day of \_\_\_\_\_, 1996.

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Niranjan R. Samant

STATE OF \_\_\_\_\_ )  
 )ss.  
COUNTY OF \_\_\_\_\_ )

On this \_\_\_\_ day of \_\_\_\_\_, 1996 before me personally appeared Niranjan R. Samant to me known and known to me to be the person described in and who executed the foregoing instrument, and he/she duly acknowledged to me that he/she executed the same for the uses and purposes therein set forth.

[SEAL]

Notary Public

IN TESTIMONY WHEREOF, I have hereunto set my hand this \_\_\_\_ day of \_\_\_\_\_, 1996.

Joseph F. Chiappetta

STATE OF \_\_\_\_\_ )  
 )ss.  
COUNTY OF \_\_\_\_\_ )

On this \_\_\_\_ day of \_\_\_\_\_, 1996 before me personally appeared Joseph F. Chiappetta to me known and known to me to be the person described in and who executed the foregoing instrument, and he/she duly acknowledged to me that he/she executed the same for the uses and purposes therein set forth.

[SEAL]

Notary Public

IN TESTIMONY WHEREOF, I have hereunto set my hand this \_\_\_\_ day of \_\_\_\_\_, 1996.

---

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Scott Sarnikowski

STATE OF \_\_\_\_\_ )  
 )ss.  
COUNTY OF \_\_\_\_\_ )

On this \_\_\_\_ day of \_\_\_\_\_, 1996 before me personally appeared Scott Sarnikowski  
to me known and known to me to be the person described in and who executed the foregoing  
instrument, and he/she duly acknowledged to me that he/she executed the same for the uses and  
purposes therein set forth.

[SEAL]

Notary Public



## ASSIGNMENT

WHEREAS, WE, Mark J. Dapper, residing at 6558 Baywood Lane, Cincinnati, OH 45224, and Michael J. Geile, residing at 316 Miami Valley Drive, Loveland, OH 45140, and Terrance J. Hill, residing at 1765 Garrett House Lane, Fairfield, OH 45014, and Harold A. Roberts, residing at 7017 Beacon Circle, Eden Prairie, MN 55346, and Brian D. Anderson, residing at 11430 - 50th Place North, Plymouth, MN 55442, and Jeffrey Brede, residing at 8073 Curtis Lane, Eden Prairie, MN 55347, and Mark S. Wadman, residing at 8956 Braxton Drive, Eden Prairie, MN 55347, and Robert J. Kirscht, residing at 13106 Vernon Avenue South, Savage, MN 55378, and James J. Herrmann, residing at 1894 Sunrise Court, Eagan, MN 55122, and Michael J. Fort, residing at 1045 Northview Park, Eagan, MN 55123, and Steven P. Buska, residing at 13370 Stanton Drive, Minnetonka, MN 55305, and Jeff Solum, residing at 4900 West 78th Street, Bloomington, MN 55435, and Debra Lea Enfield, residing at 464 Ridge Court, Chaska, MN 55318, and Darrell Berg, residing at 4900 West 78th Street, Bloomington, MN 55435, and Thomas Smigelski, residing at 230 Waterford Drive, Lake Zurich, IL 60047, and Thomas C. Tucker, residing at 205 Silver Creek Trail, Chapel Hill, NC 27514, and Joe Hall, residing at 4900 West 78th Street, Bloomington, MN 55435, and John M. Logajan, residing at 4248 Hamline Avenue, Arden Hills, MN 55112, and Somvay Boualouang, residing at 4900 West 78th Street, Bloomington, MN 55435, and Heng Lou, residing at 4900 West 78th Street, Bloomington, MN 55435, and Mark D. Elpers, residing at 16303 205th Avenue NW, Elk River, MN 55330, and Matt Downs, residing at 4900 West 78th Street, Bloomington, MN 55435, and Tammy Ferris, residing at 4900 West 78th Street, Bloomington, MN 55435, and Adam Opoczynski, residing at 8911 Sylvan Ridge, Eden Prairie, MN 55347, and David S. Russell, residing at 5145 Luverne Avenue, Minneapolis, MN 55419, and Calvin G. Nelson, residing at 6070 Lake Virginia Drive So., Shorewood, MN 55331, and Niranjan R. Samant, residing at 229 Ridgefield Drive, Middletown, CT 06547, and Joseph F. Chiappetta, residing at 6 Ranch Drive, Trumbull, CT 06611, and Scott Sarnikowski, residing at 13235 57th Avenue North, Plymouth, MN 55442, made certain new and useful inventions and improvements for which We filed an application for Letters Patent of the United States on June 28, 1996, and was assigned US serial number 08/673,002, and is entitled COMMUNICATION SYSTEM WITH MULTICARRIER TELEPATHY TRANSPORT.

AND WHEREAS, ADC Telecommunications, Inc., a corporation organized and existing under and by virtue of the laws of the State of Minnesota, and having an office and place of business at 4900 West 78th Street, Bloomington, MN 55435, (hereinafter "Assignee") is desirous of acquiring the entire right, title and interest in and to said inventions, improvements and application and in and to the Letters Patent to be obtained therefor;

NOW, THEREFORE, to all whom it may concern, be it known that for good and valuable consideration, the receipt and sufficiency whereof is hereby acknowledged, we have sold, assigned, and transferred, and by these presents do sell, assign and transfer unto said Assignee, its successors or assigns, the entire right, title and interest for all countries in and to all inventions and improvements disclosed in the aforesaid application, and in and to the said application, all divisions, continuations, or renewals thereof, all Letters Patent which may be granted therefrom, and all reissues or extensions of such patents, and in and to any and all applications which have been or shall be filed in any foreign countries for Letters Patent on the said inventions and improvements, including an assignment of all rights under the provisions of the International Convention, and all Letters Patent of foreign countries which may be granted therefrom; and we do hereby authorize and request the Commissioner of Patents and Trademarks to issue any and all United States Letters Patent for the aforesaid inventions and improvements to the said Assignee as the assignee of the entire right, title and interest in and to the same, for the use of the said Assignee, its successors and assigns.

AND, for the consideration aforesaid, we do hereby agree that we and our executors and legal representatives will make, execute and deliver any and all other instruments in writing including any and all further application papers, affidavits, assignments and other documents, and will communicate to said Assignee, its successors and representatives all facts known to us relating to said improvements and the history thereof and will testify in all legal proceedings and generally do all things which may be necessary or desirable more effectually to secure to and vest in said Assignee, its successors or assigns the entire right, title and interest in and to the said improvements, inventions, applications, Letters Patent, rights, titles, benefits, privileges and advantages hereby sold, assigned and conveyed, or intended so to be.

AND, furthermore we covenant and agree with said Assignee, its successors and assigns, that no assignment, grant, mortgage, license or other agreement affecting the rights and property herein conveyed has been made to others by me/us and that full right to convey the same as herein expressed is possessed by us.

IN TESTIMONY WHEREOF, I have hereunto set my hand this \_\_\_\_ day of \_\_\_\_\_, 1996.

---

Mark J. Dapper

STATE OF \_\_\_\_\_ )  
 )ss.  
COUNTY OF \_\_\_\_\_ )

On this \_\_\_\_ day of \_\_\_\_\_, 1996 before me personally appeared Mark J. Dapper to  
me known and known to me to be the person described in and who executed the foregoing  
instrument, and he/she duly acknowledged to me that he/she executed the same for the uses and  
purposes therein set forth.

[SEAL]

Notary Public

IN TESTIMONY WHEREOF, I have hereunto set my hand this \_\_\_\_ day of \_\_\_\_\_, 1996.

Michael J. Geile

STATE OF \_\_\_\_\_ )  
 )ss.  
COUNTY OF \_\_\_\_\_ )

On this \_\_\_\_ day of \_\_\_\_\_, 1996 before me personally appeared Michael J. Geile to me known and known to me to be the person described in and who executed the foregoing instrument, and he/she duly acknowledged to me that he/she executed the same for the uses and purposes therein set forth.

[SEAL]

Notary Public

IN TESTIMONY WHEREOF, I have hereunto set my hand this \_\_\_\_ day of \_\_\_\_\_, 1996.

---

Terrance J. Hill

STATE OF \_\_\_\_\_ )  
 )ss.  
COUNTY OF \_\_\_\_\_ )

On this \_\_\_\_ day of \_\_\_\_\_, 1996 before me personally appeared Terrance J. Hill to me known and known to me to be the person described in and who executed the foregoing instrument, and he/she duly acknowledged to me that he/she executed the same for the uses and purposes therein set forth.

[SEAL]

Notary Public

IN TESTIMONY WHEREOF, I have hereunto set my hand this \_\_\_\_ day of \_\_\_\_\_, 1996.

Harold A. Roberts

STATE OF \_\_\_\_\_ )  
 )ss.  
COUNTY OF \_\_\_\_\_ )

On this \_\_\_\_ day of \_\_\_\_\_, 1996 before me personally appeared Harold A. Roberts to me known and known to me to be the person described in and who executed the foregoing instrument, and he/she duly acknowledged to me that he/she executed the same for the uses and purposes therein set forth.

[SEAL]

Notary Public

IN TESTIMONY WHEREOF, I have hereunto set my hand this \_\_\_\_ day of \_\_\_\_\_, 1996.

---

Brian D. Anderson

STATE OF \_\_\_\_\_ )  
 )ss.  
COUNTY OF \_\_\_\_\_ )

On this \_\_\_\_ day of \_\_\_\_\_, 1996 before me personally appeared Brian D. Anderson to me known and known to me to be the person described in and who executed the foregoing instrument, and he/she duly acknowledged to me that he/she executed the same for the uses and purposes therein set forth.

[SEAL]

Notary Public

IN TESTIMONY WHEREOF, I have hereunto set my hand this \_\_\_\_ day of \_\_\_\_\_, 1996.

Jeffrey Brede

STATE OF \_\_\_\_\_ )  
 )ss.  
COUNTY OF \_\_\_\_\_ )

On this \_\_\_\_ day of \_\_\_\_\_, 1996 before me personally appeared Jeffrey Brede to me known and known to me to be the person described in and who executed the foregoing instrument, and he/she duly acknowledged to me that he/she executed the same for the uses and purposes therein set forth.

[SEAL]

Notary Public

IN TESTIMONY WHEREOF, I have hereunto set my hand this \_\_\_\_ day of \_\_\_\_\_, 1996.

Mark S. Wadman

STATE OF \_\_\_\_\_ )  
 )ss.  
COUNTY OF \_\_\_\_\_ )

On this \_\_\_\_ day of \_\_\_\_\_, 1996 before me personally appeared Mark S. Wadman to me known and known to me to be the person described in and who executed the foregoing instrument, and he/she duly acknowledged to me that he/she executed the same for the uses and purposes therein set forth.

[SEAL]

Notary Public

IN TESTIMONY WHEREOF, I have hereunto set my hand this \_\_\_\_ day of \_\_\_\_\_, 1996.

Robert J. Kirscht

STATE OF \_\_\_\_\_ )  
 )ss.  
COUNTY OF \_\_\_\_\_ )

On this \_\_\_\_ day of \_\_\_\_\_, 1996 before me personally appeared Robert J. Kirscht to me known and known to me to be the person described in and who executed the foregoing instrument, and he/she duly acknowledged to me that he/she executed the same for the uses and purposes therein set forth.

[SEAL]

Notary Public

IN TESTIMONY WHEREOF, I have hereunto set my hand this \_\_\_\_ day of \_\_\_\_\_, 1996.

James J. Herrmann

STATE OF \_\_\_\_\_ )  
 )ss.  
COUNTY OF \_\_\_\_\_ )

On this \_\_\_\_ day of \_\_\_\_\_, 1996 before me personally appeared James J. Herrmann  
to me known and known to me to be the person described in and who executed the foregoing  
instrument, and he/she duly acknowledged to me that he/she executed the same for the uses and  
purposes therein set forth.

[SEAL]

Notary Public

IN TESTIMONY WHEREOF, I have hereunto set my hand this \_\_\_\_ day of \_\_\_\_\_, 1996.

Michael J. Fort

STATE OF \_\_\_\_\_ )  
 )ss.  
COUNTY OF \_\_\_\_\_ )

On this \_\_\_\_ day of \_\_\_\_\_, 1996 before me personally appeared Michael J. Fort to me known and known to me to be the person described in and who executed the foregoing instrument, and he/she duly acknowledged to me that he/she executed the same for the uses and purposes therein set forth.

[SEAL]

Notary Public

IN TESTIMONY WHEREOF, I have hereunto set my hand this \_\_\_\_ day of \_\_\_\_\_, 1996.

---

Steven P. Buska

STATE OF \_\_\_\_\_ )  
 )ss.  
COUNTY OF \_\_\_\_\_ )

On this \_\_\_\_ day of \_\_\_\_\_, 1996 before me personally appeared Steven P. Buska to me known and known to me to be the person described in and who executed the foregoing instrument, and he/she duly acknowledged to me that he/she executed the same for the uses and purposes therein set forth.

[SEAL]

Notary Public



IN TESTIMONY WHEREOF, I have hereunto set my hand this \_\_\_\_ day of \_\_\_\_\_, 1996.

**Jeff Solum**

STATE OF \_\_\_\_\_ )  
 )ss.  
COUNTY OF \_\_\_\_\_ )

On this \_\_\_\_ day of \_\_\_\_\_, 1996 before me personally appeared Jeff Solum to me known and known to me to be the person described in and who executed the foregoing instrument, and he/she duly acknowledged to me that he/she executed the same for the uses and purposes therein set forth.

[SEAL]

Notary Public

IN TESTIMONY WHEREOF, I have hereunto set my hand this \_\_\_\_ day of \_\_\_\_\_, 1996.

Debra Lea Enfield

STATE OF \_\_\_\_\_ )  
 )ss.  
COUNTY OF \_\_\_\_\_ )

On this \_\_\_\_ day of \_\_\_\_\_, 1996 before me personally appeared Debra Lea Enfield to me known and known to me to be the person described in and who executed the foregoing instrument, and he/she duly acknowledged to me that he/she executed the same for the uses and purposes therein set forth.

[SEAL]

Notary Public

IN TESTIMONY WHEREOF, I have hereunto set my hand this \_\_\_\_ day of \_\_\_\_\_, 1996.

Darrell Berg

STATE OF \_\_\_\_\_ )  
 )ss.  
COUNTY OF \_\_\_\_\_ )

On this \_\_\_\_ day of \_\_\_\_\_, 1996 before me personally appeared Darrell Berg to me known and known to me to be the person described in and who executed the foregoing instrument, and he/she duly acknowledged to me that he/she executed the same for the uses and purposes therein set forth.

[SEAL]

Notary Public

IN TESTIMONY WHEREOF, I have hereunto set my hand this \_\_\_\_ day of \_\_\_\_\_, 1996.

---

Thomas Smigelski

STATE OF \_\_\_\_\_ )  
 )ss.  
COUNTY OF \_\_\_\_\_ )

On this \_\_\_\_ day of \_\_\_\_\_, 1996 before me personally appeared Thomas Smigelski  
to me known and known to me to be the person described in and who executed the foregoing  
instrument, and he/she duly acknowledged to me that he/she executed the same for the uses and  
purposes therein set forth.

[SEAL]

Notary Public

IN TESTIMONY WHEREOF, I have hereunto set my hand this \_\_\_\_ day of \_\_\_\_\_, 1996.

Thomas C. Tucker

STATE OF \_\_\_\_\_ )  
 )ss.  
COUNTY OF \_\_\_\_\_ )

On this \_\_\_\_ day of \_\_\_\_\_, 1996 before me personally appeared Thomas C. Tucker  
to me known and known to me to be the person described in and who executed the foregoing  
instrument, and he/she duly acknowledged to me that he/she executed the same for the uses and  
purposes therein set forth.

[SEAL]

Notary Public

IN TESTIMONY WHEREOF, I have hereunto set my hand this \_\_\_\_ day of \_\_\_\_\_, 1996.

Joe Hall

STATE OF \_\_\_\_\_ )  
 )ss.  
COUNTY OF \_\_\_\_\_ )

On this \_\_\_\_ day of \_\_\_\_\_, 1996 before me personally appeared Joe Hall to me known and known to me to be the person described in and who executed the foregoing instrument, and he/she duly acknowledged to me that he/she executed the same for the uses and purposes therein set forth.

[SEAL]

Notary Public

IN TESTIMONY WHEREOF, I have hereunto set my hand this \_\_\_\_ day of \_\_\_\_\_, 1996.

John M. Logajan

STATE OF \_\_\_\_\_ )  
 )ss.  
COUNTY OF \_\_\_\_\_ )

On this \_\_\_\_ day of \_\_\_\_\_, 1996 before me personally appeared John M. Logajan to me known and known to me to be the person described in and who executed the foregoing instrument, and he/she duly acknowledged to me that he/she executed the same for the uses and purposes therein set forth.

[SEAL]

Notary Public

IN TESTIMONY WHEREOF, I have hereunto set my hand this \_\_\_\_ day of \_\_\_\_\_, 1996.

---

Somvay Boualouang

STATE OF \_\_\_\_\_ )  
 )ss.  
COUNTY OF \_\_\_\_\_ )

On this \_\_\_\_ day of \_\_\_\_\_, 1996 before me personally appeared Somvay  
Boualouang to me known and known to me to be the person described in and who executed the  
foregoing instrument, and he/she duly acknowledged to me that he/she executed the same for the  
uses and purposes therein set forth.

[SEAL]

Notary Public

IN TESTIMONY WHEREOF, I have hereunto set my hand this \_\_\_\_ day of \_\_\_\_\_, 1996.

Heng Lou

STATE OF \_\_\_\_\_ )  
 )ss.  
COUNTY OF \_\_\_\_\_ )

On this \_\_\_\_ day of \_\_\_\_\_, 1996 before me personally appeared Heng Lou to me known and known to me to be the person described in and who executed the foregoing instrument, and he/she duly acknowledged to me that he/she executed the same for the uses and purposes therein set forth.

[SEAL]

Notary Public

IN TESTIMONY WHEREOF, I have hereunto set my hand this \_\_\_\_ day of \_\_\_\_\_, 1996.

---

Mark D. Elpers

STATE OF \_\_\_\_\_ )  
 )ss.  
COUNTY OF \_\_\_\_\_ )

On this \_\_\_\_ day of \_\_\_\_\_, 1996 before me personally appeared Mark D. Elpers to me known and known to me to be the person described in and who executed the foregoing instrument, and he/she duly acknowledged to me that he/she executed the same for the uses and purposes therein set forth.

[SEAL]

Notary Public

IN TESTIMONY WHEREOF, I have hereunto set my hand this \_\_\_\_ day of \_\_\_\_\_, 1996.

Matt Downs

STATE OF \_\_\_\_\_ )  
 )ss.  
COUNTY OF \_\_\_\_\_ )

On this \_\_\_\_ day of \_\_\_\_\_, 1996 before me personally appeared Matt Downs to me known and known to me to be the person described in and who executed the foregoing instrument, and he/she duly acknowledged to me that he/she executed the same for the uses and purposes therein set forth.

[SEAL]

Notary Public

IN TESTIMONY WHEREOF, I have hereunto set my hand this \_\_\_\_ day of \_\_\_\_\_, 1996.

Tammy Ferris

STATE OF \_\_\_\_\_ )  
 )ss.  
COUNTY OF \_\_\_\_\_ )

On this \_\_\_\_ day of \_\_\_\_\_, 1996 before me personally appeared Tammy Ferris to me known and known to me to be the person described in and who executed the foregoing instrument, and he/she duly acknowledged to me that he/she executed the same for the uses and purposes therein set forth.

[SEAL]

Notary Public

IN TESTIMONY WHEREOF, I have hereunto set my hand this \_\_\_\_ day of \_\_\_\_\_, 1996.

Adam Opoczynski

STATE OF \_\_\_\_\_ )  
 )ss.  
COUNTY OF \_\_\_\_\_ )

On this \_\_\_\_ day of \_\_\_\_\_, 1996 before me personally appeared Adam Opoczynski  
to me known and known to me to be the person described in and who executed the foregoing  
instrument, and he/she duly acknowledged to me that he/she executed the same for the uses and  
purposes therein set forth.

[SEAL]

Notary Public

IN TESTIMONY WHEREOF, I have hereunto set my hand this \_\_\_\_ day of \_\_\_\_\_, 1996.

---

David S. Russell

STATE OF \_\_\_\_\_ )  
 )ss.  
COUNTY OF \_\_\_\_\_ )

On this \_\_\_\_ day of \_\_\_\_\_, 1996 before me personally appeared David S. Russell to me known and known to me to be the person described in and who executed the foregoing instrument, and he/she duly acknowledged to me that he/she executed the same for the uses and purposes therein set forth.

[SEAL]

Notary Public

IN TESTIMONY WHEREOF, I have hereunto set my hand this \_\_\_\_ day of \_\_\_\_\_, 1996.

## Calvin G. Nelson

STATE OF \_\_\_\_\_ )  
 )ss.  
COUNTY OF \_\_\_\_\_ )

On this \_\_\_\_ day of \_\_\_\_\_, 1996 before me personally appeared Calvin G. Nelson to  
me known and known to me to be the person described in and who executed the foregoing  
instrument, and he/she duly acknowledged to me that he/she executed the same for the uses and  
purposes therein set forth.

[SEAL]

Notary Public

IN TESTIMONY WHEREOF, I have hereunto set my hand this 23 day of January, <sup>1997</sup>~~1996~~.

Niranjan R. Samant

STATE OF Connecticut )  
 )ss.  
COUNTY OF New Haven )

On this 23 day of January, <sup>1997</sup>~~1996~~ before me personally appeared Niranjan R. Samant to me known and known to me to be the person described in and who executed the foregoing instrument, and he/she duly acknowledged to me that he/she executed the same for the uses and purposes therein set forth.

[SEAL]

Notary Public

Heidi M. Powell  
Notary Public  
My Commission Exp. 3/31/99



IN TESTIMONY WHEREOF, I have hereunto set my hand this 23 day of January, <sup>1997</sup>~~1996~~.

Joseph F. Chiappetta  
Joseph F. Chiappetta

STATE OF Connecticut )  
 )ss.  
COUNTY OF New Haven

On this 23 day of January, <sup>1997</sup>~~1996~~ before me personally appeared Joseph F.

Chiappetta to me known and known to me to be the person described in and who executed the foregoing instrument, and he/she duly acknowledged to me that he/she executed the same for the uses and purposes therein set forth.

[SEAL]

Rebecca M. Paul  
Notary Public my commission exp. 3/31/99

IN TESTIMONY WHEREOF, I have hereunto set my hand this \_\_\_ day of \_\_\_\_\_, 1996.

\_\_\_\_\_  
Scott Sarnikowski

STATE OF \_\_\_\_\_ )  
 )ss.  
COUNTY OF \_\_\_\_\_ )

On this \_\_\_ day of \_\_\_\_\_, 1996 before me personally appeared Scott Sarnikowski to me known and known to me to be the person described in and who executed the foregoing instrument, and he/she duly acknowledged to me that he/she executed the same for the uses and purposes therein set forth.

[SEAL]

\_\_\_\_\_  
Notary Public

## ASSIGNMENT

WHEREAS, WE, Mark J. Dapper, residing at 6558 Baywood Lane, Cincinnati, OH 45224, and Michael J. Geile, residing at 316 Miami Valley Drive, Loveland, OH 45140, and Terrance J. Hill, residing at 1765 Garrett House Lane, Fairfield, OH 45014, and Harold A. Roberts, residing at 7017 Beacon Circle, Eden Prairie, MN 55346, and Brian D. Anderson, residing at 11430 - 50th Place North, Plymouth, MN 55442, and Jeffrey Brede, residing at 8073 Curtis Lane, Eden Prairie, MN 55347, and Mark S. Wadman, residing at 8956 Braxton Drive, Eden Prairie, MN 55347, and Robert J. Kirscht, residing at 13106 Vernon Avenue South, Savage, MN 55378, and James J. Herrmann, residing at 1894 Sunrise Court, Eagan, MN 55122, and Michael J. Fort, residing at 1045 Northview Park, Eagan, MN 55123, and Steven P. Buska, residing at 13370 Stanton Drive, Minnetonka, MN 55305, and Jeff Solum, residing at 4900 West 78th Street, Bloomington, MN 55435, and Debra Lea Enfield, residing at 464 Ridge Court, Chaska, MN 55318, and Darrell Berg, residing at 4900 West 78th Street, Bloomington, MN 55435, and Thomas Smigelski, residing at 230 Waterford Drive, Lake Zurich, IL 60047, and Thomas C. Tucker, residing at 205 Silver Creek Trail, Chapel Hill, NC 27514, and Joe Hall, residing at 4900 West 78th Street, Bloomington, MN 55435, and John M. Logajan, residing at 4248 Hamline Avenue, Arden Hills, MN 55112, and Somvay Boualouang, residing at 4900 West 78th Street, Bloomington, MN 55435, and Heng Lou, residing at 4900 West 78th Street, Bloomington, MN 55435, and Mark D. Elpers, residing at 16303 205th Avenue NW, Elk River, MN 55330, and Matt Downs, residing at 4900 West 78th Street, Bloomington, MN 55435, and Tammy Ferris, residing at 4900 West 78th Street, Bloomington, MN 55435, and Adam Opoczynski, residing at 8911 Sylvan Ridge, Eden Prairie, MN 55347, and David S. Russell, residing at 5145 Luverne Avenue, Minneapolis, MN 55419, and Calvin G. Nelson, residing at 6070 Lake Virginia Drive So., Shorewood, MN 55331, and Niranjan R. Samant, residing at 229 Ridgefield Drive, Middletown, CT 06547, and Joseph F. Chiappetta, residing at 6 Ranch Drive, Trumbull, CT 06611, and Scott Sarnikowski, residing at 13235 57th Avenue North, Plymouth, MN 55442, made certain new and useful inventions and improvements for which We filed an application for Letters Patent of the United States on June 28, 1996, and was assigned US serial number 08/673,002, and is entitled COMMUNICATION SYSTEM WITH MULTICARRIER TELEPATHY TRANSPORT.

AND WHEREAS, ADC Telecommunications, Inc., a corporation organized and existing under and by virtue of the laws of the State of Minnesota, and having an office and place of business at 4900 West 78th Street, Bloomington, MN 55435, (hereinafter "Assignee") is desirous of acquiring the entire right, title and interest in and to said inventions, improvements and application and in and to the Letters Patent to be obtained therefor;

NOW, THEREFORE, to all whom it may concern, be it known that for good and valuable consideration, the receipt and sufficiency whereof is hereby acknowledged, we have sold, assigned, and transferred, and by these presents do sell, assign and transfer unto said Assignee, its successors or assigns, the entire right, title and interest for all countries in and to all inventions and improvements disclosed in the aforesaid application, and in and to the said application, all divisions, continuations, or renewals thereof, all Letters Patent which may be granted therefrom, and all reissues or extensions of such patents, and in and to any and all applications which have been or shall be filed in any foreign countries for Letters Patent on the said inventions and improvements, including an assignment of all rights under the provisions of the International Convention, and all Letters Patent of foreign countries which may be granted therefrom; and we do hereby authorize and request the Commissioner of Patents and Trademarks to issue any and all United States Letters Patent for the aforesaid inventions and improvements to the said Assignee as the assignee of the entire right, title and interest in and to the same, for the use of the said Assignee, its successors and assigns.

AND, for the consideration aforesaid, we do hereby agree that we and our executors and legal representatives will make, execute and deliver any and all other instruments in writing including any and all further application papers, affidavits, assignments and other documents, and will communicate to said Assignee, its successors and representatives all facts known to us relating to said improvements and the history thereof and will testify in all legal proceedings and generally do all things which may be necessary or desirable more effectually to secure to and vest in said Assignee, its successors or assigns the entire right, title and interest in and to the said improvements, inventions, applications, Letters Patent, rights, titles, benefits, privileges and advantages hereby sold, assigned and conveyed, or intended so to be.

AND, furthermore we covenant and agree with said Assignee, its successors and assigns, that no assignment, grant, mortgage, license or other agreement affecting the rights and property herein conveyed has been made to others by me/us and that full right to convey the same as herein expressed is possessed by us.

IN TESTIMONY WHEREOF, I have hereunto set my hand this 27 day of January 1997.

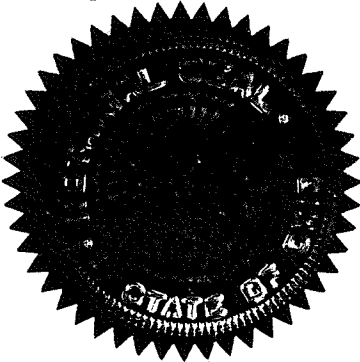
Mark J. Dapper  
Mark J. Dapper

STATE OF Ohio )  
 )ss.  
COUNTY OF Butler )

On this 27 day of January, 1997 before me personally appeared Mark J. Dapper to  
me known and known to me to be the person described in and who executed the foregoing  
instrument, and he/she duly acknowledged to me that he/she executed the same for the uses and  
purposes therein set forth.

Brenda Berger  
Notary Public

**BRENDA BERGER**  
Notary Public, State of Ohio  
My Commission Expires April 18, 2000



IN TESTIMONY WHEREOF, I have hereunto set my hand this 22 day of January, 1997.

Michael J. Geile  
Michael J. Geile

STATE OF Ohio )  
 )ss.  
COUNTY OF Butler )

On this 22 day of JANUARY, 1996 before me personally appeared Michael J. Geile to  
me known and known to me to be the person described in and who executed the foregoing  
instrument, and he/she duly acknowledged to me that he/she executed the same for the uses and  
purposes therein set forth.



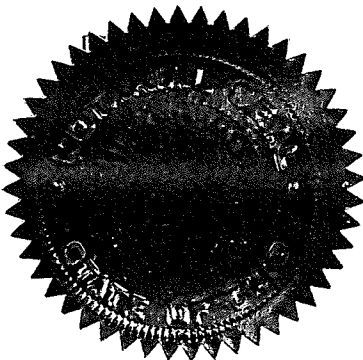
Brenda Berger  
Notary Public  
BRENDA BERGER  
Notary Public, State of Ohio  
My Commission Expires April 18, 2000

IN TESTIMONY WHEREOF, I have hereunto set my hand this 23 day of JAN., 1997.

Terrance J. Hill  
Terrance J. Hill

STATE OF Ohio )  
 )ss.  
COUNTY OF Butler )

On this 23 day of JANUARY, 1997 before me personally appeared Terrance J. Hill to  
me known and known to me to be the person described in and who executed the foregoing  
instrument, and he/she duly acknowledged to me that he/she executed the same for the uses and  
purposes therein set forth.



Brenda Berger  
Notary Public

BRENDA BERGER  
Notary Public, State of Ohio  
My Commission Expires April 18, 2000

IN TESTIMONY WHEREOF, I have hereunto set my hand this \_\_\_\_ day of \_\_\_\_\_, 1996.

---

Harold A. Roberts

STATE OF \_\_\_\_\_ )  
 )ss.  
COUNTY OF \_\_\_\_\_ )

On this \_\_\_\_ day of \_\_\_\_\_, 1996 before me personally appeared Harold A. Roberts to me known and known to me to be the person described in and who executed the foregoing instrument, and he/she duly acknowledged to me that he/she executed the same for the uses and purposes therein set forth.

[SEAL]

Notary Public

IN TESTIMONY WHEREOF, I have hereunto set my hand this \_\_\_\_ day of \_\_\_\_\_, 1996.

---

Brian D. Anderson

STATE OF \_\_\_\_\_ )  
 )ss.  
COUNTY OF \_\_\_\_\_ )

On this \_\_\_\_ day of \_\_\_\_\_, 1996 before me personally appeared Brian D. Anderson to me known and known to me to be the person described in and who executed the foregoing instrument, and he/she duly acknowledged to me that he/she executed the same for the uses and purposes therein set forth.

[SEAL]

Notary Public

IN TESTIMONY WHEREOF, I have hereunto set my hand this \_\_\_\_ day of \_\_\_\_\_, 1996.

Jeffrey Brede

STATE OF \_\_\_\_\_ )  
 )ss.  
COUNTY OF \_\_\_\_\_ )

On this \_\_\_\_ day of \_\_\_\_\_, 1996 before me personally appeared Jeffrey Brede to me known and known to me to be the person described in and who executed the foregoing instrument, and he/she duly acknowledged to me that he/she executed the same for the uses and purposes therein set forth.

[SEAL]

Notary Public

IN TESTIMONY WHEREOF, I have hereunto set my hand this \_\_\_\_ day of \_\_\_\_\_, 1996.

Mark S. Wadman

STATE OF \_\_\_\_\_ )  
 )ss.  
COUNTY OF \_\_\_\_\_ )

On this \_\_\_\_ day of \_\_\_\_\_, 1996 before me personally appeared Mark S. Wadman to me known and known to me to be the person described in and who executed the foregoing instrument, and he/she duly acknowledged to me that he/she executed the same for the uses and purposes therein set forth.

[SEAL]

Notary Public

IN TESTIMONY WHEREOF, I have hereunto set my hand this \_\_\_\_ day of \_\_\_\_\_, 1996.

\_\_\_\_\_  
Robert J. Kirscht

STATE OF \_\_\_\_\_ )  
\_\_\_\_\_)ss.  
COUNTY OF \_\_\_\_\_ )

On this \_\_\_\_ day of \_\_\_\_\_, 1996 before me personally appeared Robert J. Kirscht to  
me known and known to me to be the person described in and who executed the foregoing  
instrument, and he/she duly acknowledged to me that he/she executed the same for the uses and  
purposes therein set forth.

[SEAL]

\_\_\_\_\_  
Notary Public

IN TESTIMONY WHEREOF, I have hereunto set my hand this \_\_\_\_ day of \_\_\_\_\_, 1996.

\_\_\_\_\_  
James J. Herrmann

STATE OF \_\_\_\_\_ )  
\_\_\_\_\_)ss.  
COUNTY OF \_\_\_\_\_ )

On this \_\_\_\_ day of \_\_\_\_\_, 1996 before me personally appeared James J. Herrmann  
to me known and known to me to be the person described in and who executed the foregoing  
instrument, and he/she duly acknowledged to me that he/she executed the same for the uses and  
purposes therein set forth.

[SEAL]

\_\_\_\_\_  
Notary Public



IN TESTIMONY WHEREOF, I have hereunto set my hand this \_\_\_\_ day of \_\_\_\_\_, 1996.

Michael J. Fort

STATE OF \_\_\_\_\_ )  
 )ss.  
COUNTY OF \_\_\_\_\_ )

On this \_\_\_\_ day of \_\_\_\_\_, 1996 before me personally appeared Michael J. Fort to me known and known to me to be the person described in and who executed the foregoing instrument, and he/she duly acknowledged to me that he/she executed the same for the uses and purposes therein set forth.

[SEAL]

Notary Public

IN TESTIMONY WHEREOF, I have hereunto set my hand this \_\_\_\_ day of \_\_\_\_\_, 1996.

---

Steven P. Buska

STATE OF \_\_\_\_\_ )  
 )ss.  
COUNTY OF \_\_\_\_\_ )

On this \_\_\_\_ day of \_\_\_\_\_, 1996 before me personally appeared Steven P. Buska to me known and known to me to be the person described in and who executed the foregoing instrument, and he/she duly acknowledged to me that he/she executed the same for the uses and purposes therein set forth.

[SEAL]

Notary Public

IN TESTIMONY WHEREOF, I have hereunto set my hand this \_\_\_\_ day of \_\_\_\_\_, 1996.

Jeff Solum

STATE OF \_\_\_\_\_ )  
 )ss.  
COUNTY OF \_\_\_\_\_ )

On this \_\_\_\_ day of \_\_\_\_\_, 1996 before me personally appeared Jeff Solum to me known and known to me to be the person described in and who executed the foregoing instrument, and he/she duly acknowledged to me that he/she executed the same for the uses and purposes therein set forth.

[SEAL]

Notary Public

IN TESTIMONY WHEREOF, I have hereunto set my hand this \_\_\_\_ day of \_\_\_\_\_, 1996.

Debra Lea Enfield

STATE OF \_\_\_\_\_ )  
 )ss.  
COUNTY OF \_\_\_\_\_ )

On this \_\_\_\_ day of \_\_\_\_\_, 1996 before me personally appeared Debra Lea Enfield  
to me known and known to me to be the person described in and who executed the foregoing  
instrument, and he/she duly acknowledged to me that he/she executed the same for the uses and  
purposes therein set forth.

[SEAL]

Notary Public

IN TESTIMONY WHEREOF, I have hereunto set my hand this \_\_\_\_ day of \_\_\_\_\_, 1996.

Darrell Berg

STATE OF \_\_\_\_\_ )  
 )ss.  
COUNTY OF \_\_\_\_\_ )

On this \_\_\_\_ day of \_\_\_\_\_, 1996 before me personally appeared Darrell Berg to me known and known to me to be the person described in and who executed the foregoing instrument, and he/she duly acknowledged to me that he/she executed the same for the uses and purposes therein set forth.

[SEAL]

Notary Public

IN TESTIMONY WHEREOF, I have hereunto set my hand this \_\_\_\_ day of \_\_\_\_\_, 1996.

---

Thomas Smigelski

STATE OF \_\_\_\_\_ )  
 )ss.  
COUNTY OF \_\_\_\_\_ )

On this \_\_\_\_ day of \_\_\_\_\_, 1996 before me personally appeared Thomas Smigelski  
to me known and known to me to be the person described in and who executed the foregoing  
instrument, and he/she duly acknowledged to me that he/she executed the same for the uses and  
purposes therein set forth.

[SEAL]

Notary Public

IN TESTIMONY WHEREOF, I have hereunto set my hand this \_\_\_\_ day of \_\_\_\_\_, 1996.

Thomas C. Tucker

STATE OF \_\_\_\_\_ )  
 )ss.  
COUNTY OF \_\_\_\_\_ )

On this \_\_\_\_ day of \_\_\_\_\_, 1996 before me personally appeared Thomas C. Tucker  
to me known and known to me to be the person described in and who executed the foregoing  
instrument, and he/she duly acknowledged to me that he/she executed the same for the uses and  
purposes therein set forth.

[SEAL]

Notary Public

IN TESTIMONY WHEREOF, I have hereunto set my hand this \_\_\_\_ day of \_\_\_\_\_, 1996.

Joe Hall

STATE OF \_\_\_\_\_ )  
 )ss.  
COUNTY OF \_\_\_\_\_ )

On this \_\_\_\_ day of \_\_\_\_\_, 1996 before me personally appeared Joe Hall to me known and known to me to be the person described in and who executed the foregoing instrument, and he/she duly acknowledged to me that he/she executed the same for the uses and purposes therein set forth.

[SEAL]

Notary Public

IN TESTIMONY WHEREOF, I have hereunto set my hand this \_\_\_\_ day of \_\_\_\_\_, 1996.

John M. Logajan

STATE OF \_\_\_\_\_ )  
 )ss.  
COUNTY OF \_\_\_\_\_ )

On this \_\_\_\_ day of \_\_\_\_\_, 1996 before me personally appeared John M. Logajan to  
me known and known to me to be the person described in and who executed the foregoing  
instrument, and he/she duly acknowledged to me that he/she executed the same for the uses and  
purposes therein set forth.

[SEAL]

Notary Public

IN TESTIMONY WHEREOF, I have hereunto set my hand this \_\_\_\_ day of \_\_\_\_\_, 1996.

---

Somvay Boualouang

STATE OF \_\_\_\_\_ )  
 )ss.  
COUNTY OF \_\_\_\_\_ )

On this \_\_\_\_ day of \_\_\_\_\_, 1996 before me personally appeared Somvay  
Boualouang to me known and known to me to be the person described in and who executed the  
foregoing instrument, and he/she duly acknowledged to me that he/she executed the same for the  
uses and purposes therein set forth.

[SEAL]

Notary Public

IN TESTIMONY WHEREOF, I have hereunto set my hand this \_\_\_\_ day of \_\_\_\_\_, 1996.

Heng Lou

STATE OF \_\_\_\_\_ )  
 )ss.  
COUNTY OF \_\_\_\_\_ )

On this \_\_\_\_ day of \_\_\_\_\_, 1996 before me personally appeared Heng Lou to me known and known to me to be the person described in and who executed the foregoing instrument, and he/she duly acknowledged to me that he/she executed the same for the uses and purposes therein set forth.

[SEAL]

Notary Public

IN TESTIMONY WHEREOF, I have hereunto set my hand this \_\_\_\_ day of \_\_\_\_\_, 1996.

---

Mark D. Elpers

STATE OF \_\_\_\_\_ )  
 )ss.  
COUNTY OF \_\_\_\_\_ )

On this \_\_\_\_ day of \_\_\_\_\_, 1996 before me personally appeared Mark D. Elpers to me known and known to me to be the person described in and who executed the foregoing instrument, and he/she duly acknowledged to me that he/she executed the same for the uses and purposes therein set forth.

[SEAL]

Notary Public

IN TESTIMONY WHEREOF, I have hereunto set my hand this \_\_\_\_ day of \_\_\_\_\_, 1996.

Matt Downs

STATE OF \_\_\_\_\_ )  
 )ss.  
COUNTY OF \_\_\_\_\_ )

On this \_\_\_\_ day of \_\_\_\_\_, 1996 before me personally appeared Matt Downs to me known and known to me to be the person described in and who executed the foregoing instrument, and he/she duly acknowledged to me that he/she executed the same for the uses and purposes therein set forth.

[SEAL]

Notary Public

IN TESTIMONY WHEREOF, I have hereunto set my hand this \_\_\_\_ day of \_\_\_\_\_, 1996.

## Tammy Ferris

STATE OF \_\_\_\_\_ )  
 )ss.  
COUNTY OF \_\_\_\_\_ )

On this \_\_\_\_ day of \_\_\_\_\_, 1996 before me personally appeared Tammy Ferris to me known and known to me to be the person described in and who executed the foregoing instrument, and he/she duly acknowledged to me that he/she executed the same for the uses and purposes therein set forth.

[SEAL]

Notary Public

IN TESTIMONY WHEREOF, I have hereunto set my hand this \_\_\_\_ day of \_\_\_\_\_, 1996.

Adam Opoczynski

STATE OF \_\_\_\_\_ )  
 )ss.  
COUNTY OF \_\_\_\_\_ )

On this \_\_\_\_ day of \_\_\_\_\_, 1996 before me personally appeared Adam Opoczynski  
to me known and known to me to be the person described in and who executed the foregoing  
instrument, and he/she duly acknowledged to me that he/she executed the same for the uses and  
purposes therein set forth.

[SEAL]

Notary Public

IN TESTIMONY WHEREOF, I have hereunto set my hand this \_\_\_\_ day of \_\_\_\_\_, 1996.

David S. Russell

STATE OF \_\_\_\_\_ )  
 )ss.  
COUNTY OF \_\_\_\_\_ )

On this \_\_\_\_ day of \_\_\_\_\_, 1996 before me personally appeared David S. Russell to me known and known to me to be the person described in and who executed the foregoing instrument, and he/she duly acknowledged to me that he/she executed the same for the uses and purposes therein set forth.

[SEAL]

Notary Public



IN TESTIMONY WHEREOF, I have hereunto set my hand this \_\_\_\_ day of \_\_\_\_\_, 1996.

Calvin G. Nelson

STATE OF \_\_\_\_\_ )  
 )ss.  
COUNTY OF \_\_\_\_\_ )

On this \_\_\_\_ day of \_\_\_\_\_, 1996 before me personally appeared Calvin G. Nelson to me known and known to me to be the person described in and who executed the foregoing instrument, and he/she duly acknowledged to me that he/she executed the same for the uses and purposes therein set forth.

[SEAL]

Notary Public

IN TESTIMONY WHEREOF, I have hereunto set my hand this \_\_\_\_ day of \_\_\_\_\_, 1996.

---

Niranjan R. Samant

STATE OF \_\_\_\_\_ )  
 )ss.  
COUNTY OF \_\_\_\_\_ )

On this \_\_\_\_ day of \_\_\_\_\_, 1996 before me personally appeared Niranjan R. Samant to me known and known to me to be the person described in and who executed the foregoing instrument, and he/she duly acknowledged to me that he/she executed the same for the uses and purposes therein set forth.

[SEAL]

Notary Public

IN TESTIMONY WHEREOF, I have hereunto set my hand this \_\_\_\_ day of \_\_\_\_\_, 1996.

Joseph F. Chiappetta

STATE OF \_\_\_\_\_ )  
 )ss.  
COUNTY OF \_\_\_\_\_ )

On this \_\_\_\_ day of \_\_\_\_\_, 1996 before me personally appeared Joseph F. Chiappetta to me known and known to me to be the person described in and who executed the foregoing instrument, and he/she duly acknowledged to me that he/she executed the same for the uses and purposes therein set forth.

[SEAL]

Notary Public

IN TESTIMONY WHEREOF, I have hereunto set my hand this \_\_\_\_ day of \_\_\_\_\_, 1996.

---

Scott Sarnikowski

STATE OF \_\_\_\_\_ )  
 )ss.  
COUNTY OF \_\_\_\_\_ )

On this \_\_\_\_ day of \_\_\_\_\_, 1996 before me personally appeared Scott Sarnikowski  
to me known and known to me to be the person described in and who executed the foregoing  
instrument, and he/she duly acknowledged to me that he/she executed the same for the uses and  
purposes therein set forth.

[SEAL]

Notary Public

## ASSIGNMENT

WHEREAS, WE, Mark J. Dapper, residing at 6558 Baywood Lane, Cincinnati, OH 45224, and Michael J. Geile, residing at 316 Miami Valley Drive, Loveland, OH 45140, and Terrance J. Hill, residing at 1765 Garrett House Lane, Fairfield, OH 45014, and Harold A. Roberts, residing at 7017 Beacon Circle, Eden Prairie, MN 55346, and Brian D. Anderson, residing at 11430 - 50th Place North, Plymouth, MN 55442, and Jeffrey Brede, residing at 8073 Curtis Lane, Eden Prairie, MN 55347, and Mark S. Wadman, residing at 8956 Braxton Drive, Eden Prairie, MN 55347, and Robert J. Kirscht, residing at 13106 Vernon Avenue South, Savage, MN 55378, and James J. Herrmann, residing at 1894 Sunrise Court, Eagan, MN 55122, and Michael J. Fort, residing at 1045 Northview Park, Eagan, MN 55123, and Steven P. Buska, residing at 13370 Stanton Drive, Minnetonka, MN 55305, and Jeff Solum, residing at 4900 West 78th Street, Bloomington, MN 55435, and Debra Lea Enfield, residing at 464 Ridge Court, Chaska, MN 55318, and Darrell Berg, residing at 4900 West 78th Street, Bloomington, MN 55435, and Thomas Smigelski, residing at 230 Waterford Drive, Lake Zurich, IL 60047, and Thomas C. Tucker, residing at 205 Silver Creek Trail, Chapel Hill, NC 27514, and Joe Hall, residing at 4900 West 78th Street, Bloomington, MN 55435, and John M. Logajan, residing at 4248 Hamline Avenue, Arden Hills, MN 55112, and Somvay Boualouang, residing at 4900 West 78th Street, Bloomington, MN 55435, and Heng Lou, residing at 4900 West 78th Street, Bloomington, MN 55435, and Mark D. Elpers, residing at 16303 205th Avenue NW, Elk River, MN 55330, and Matt Downs, residing at 4900 West 78th Street, Bloomington, MN 55435, and Tammy Ferris, residing at 4900 West 78th Street, Bloomington, MN 55435, and Adam Opoczynski, residing at 8911 Sylvan Ridge, Eden Prairie, MN 55347, and David S. Russell, residing at 5145 Luverne Avenue, Minneapolis, MN 55419, and Calvin G. Nelson, residing at 6070 Lake Virginia Drive So., Shorewood, MN 55331, and Niranjan R. Samant, residing at 229 Ridgefield Drive, Middletown, CT 06547, and Joseph F. Chiappetta, residing at 6 Ranch Drive, Trumbull, CT 06611, and Scott Sarnikowski, residing at 13235 57th Avenue North, Plymouth, MN 55442, made certain new and useful inventions and improvements for which We filed an application for Letters Patent of the United States on June 28, 1996, and was assigned US serial number 08/673,002, and is entitled COMMUNICATION SYSTEM WITH MULTICARRIER TELEPATHY TRANSPORT.

AND WHEREAS, ADC Telecommunications, Inc., a corporation organized and existing under and by virtue of the laws of the State of Minnesota, and having an office and place of business at 4900 West 78th Street, Bloomington, MN 55435, (hereinafter "Assignee") is desirous of acquiring the entire right, title and interest in and to said inventions, improvements and application and in and to the Letters Patent to be obtained therefor;

NOW, THEREFORE, to all whom it may concern, be it known that for good and valuable consideration, the receipt and sufficiency whereof is hereby acknowledged, we have sold, assigned, and transferred, and by these presents do sell, assign and transfer unto said Assignee, its successors or assigns, the entire right, title and interest for all countries in and to all inventions and improvements disclosed in the aforesaid application, and in and to the said application, all divisions, continuations, or renewals thereof, all Letters Patent which may be granted therefrom, and all reissues or extensions of such patents, and in and to any and all applications which have been or shall be filed in any foreign countries for Letters Patent on the said inventions and improvements, including an assignment of all rights under the provisions of the International Convention, and all Letters Patent of foreign countries which may be granted therefrom; and we do hereby authorize and request the Commissioner of Patents and Trademarks to issue any and all United States Letters Patent for the aforesaid inventions and improvements to the said Assignee as the assignee of the entire right, title and interest in and to the same, for the use of the said Assignee, its successors and assigns.

AND, for the consideration aforesaid, we do hereby agree that we and our executors and legal representatives will make, execute and deliver any and all other instruments in writing including any and all further application papers, affidavits, assignments and other documents, and will communicate to said Assignee, its successors and representatives all facts known to us relating to said improvements and the history thereof and will testify in all legal proceedings and generally do all things which may be necessary or desirable more effectually to secure to and vest in said Assignee, its successors or assigns the entire right, title and interest in and to the said improvements, inventions, applications, Letters Patent, rights, titles, benefits, privileges and advantages hereby sold, assigned and conveyed, or intended so to be.

AND, furthermore we covenant and agree with said Assignee, its successors and assigns, that no assignment, grant, mortgage, license or other agreement affecting the rights and property herein conveyed has been made to others by me/us and that full right to convey the same as herein expressed is possessed by us.

IN TESTIMONY WHEREOF, I have hereunto set my hand this \_\_\_\_ day of \_\_\_\_\_, 1996.

Mark J. Dapper

STATE OF \_\_\_\_\_ )  
 )ss.  
COUNTY OF \_\_\_\_\_ )

On this \_\_\_\_ day of \_\_\_\_\_, 1996 before me personally appeared Mark J. Dapper to  
me known and known to me to be the person described in and who executed the foregoing  
instrument, and he/she duly acknowledged to me that he/she executed the same for the uses and  
purposes therein set forth.

[SEAL]

Notary Public

IN TESTIMONY WHEREOF, I have hereunto set my hand this \_\_\_\_ day of \_\_\_\_\_, 1996.

---

Michael J. Geile

STATE OF \_\_\_\_\_ )  
 )ss.  
COUNTY OF \_\_\_\_\_ )

On this \_\_\_\_ day of \_\_\_\_\_, 1996 before me personally appeared Michael J. Geile to me known and known to me to be the person described in and who executed the foregoing instrument, and he/she duly acknowledged to me that he/she executed the same for the uses and purposes therein set forth.

[SEAL]

Notary Public

IN TESTIMONY WHEREOF, I have hereunto set my hand this \_\_\_\_ day of \_\_\_\_\_, 1996.

Terrance J. Hill

STATE OF \_\_\_\_\_ )  
 )ss.  
COUNTY OF \_\_\_\_\_ )

On this \_\_\_\_ day of \_\_\_\_\_, 1996 before me personally appeared Terrance J. Hill to me known and known to me to be the person described in and who executed the foregoing instrument, and he/she duly acknowledged to me that he/she executed the same for the uses and purposes therein set forth.

[SEAL]

Notary Public

IN TESTIMONY WHEREOF, I have hereunto set my hand this \_\_\_\_ day of \_\_\_\_\_, 1996.

---

Harold A. Roberts

STATE OF \_\_\_\_\_ )  
 )ss.  
COUNTY OF \_\_\_\_\_ )

On this \_\_\_\_ day of \_\_\_\_\_, 1996 before me personally appeared Harold A. Roberts to me known and known to me to be the person described in and who executed the foregoing instrument, and he/she duly acknowledged to me that he/she executed the same for the uses and purposes therein set forth.

[SEAL]

Notary Public

IN TESTIMONY WHEREOF, I have hereunto set my hand this \_\_\_\_ day of \_\_\_\_\_, 1996.

## Brian D. Anderson

STATE OF \_\_\_\_\_ )  
 )ss.  
COUNTY OF \_\_\_\_\_ )

On this \_\_\_\_ day of \_\_\_\_\_, 1996 before me personally appeared Brian D. Anderson  
to me known and known to me to be the person described in and who executed the foregoing  
instrument, and he/she duly acknowledged to me that he/she executed the same for the uses and  
purposes therein set forth.

[SEAL]

Notary Public

IN TESTIMONY WHEREOF, I have hereunto set my hand this \_\_\_\_ day of \_\_\_\_\_, 1996.

Jeffrey Brede

STATE OF \_\_\_\_\_ )  
 )ss.  
COUNTY OF \_\_\_\_\_ )

On this \_\_\_\_ day of \_\_\_\_\_, 1996 before me personally appeared Jeffrey Brede to me known and known to me to be the person described in and who executed the foregoing instrument, and he/she duly acknowledged to me that he/she executed the same for the uses and purposes therein set forth.

[SEAL]

Notary Public

IN TESTIMONY WHEREOF, I have hereunto set my hand this \_\_\_\_ day of \_\_\_\_\_, 1996.

---

Mark S. Wadman

STATE OF \_\_\_\_\_ )  
 )ss.  
COUNTY OF \_\_\_\_\_ )

On this \_\_\_\_ day of \_\_\_\_\_, 1996 before me personally appeared Mark S. Wadman to me known and known to me to be the person described in and who executed the foregoing instrument, and he/she duly acknowledged to me that he/she executed the same for the uses and purposes therein set forth.

[SEAL]

Notary Public





IN TESTIMONY WHEREOF, I have hereunto set my hand this \_\_\_\_ day of \_\_\_\_\_, 1996.

Michael J. Fort

STATE OF \_\_\_\_\_ )  
 )ss.  
COUNTY OF \_\_\_\_\_ )

On this \_\_\_\_ day of \_\_\_\_\_, 1996 before me personally appeared Michael J. Fort to  
me known and known to me to be the person described in and who executed the foregoing  
instrument, and he/she duly acknowledged to me that he/she executed the same for the uses and  
purposes therein set forth.

[SEAL]

Notary Public

IN TESTIMONY WHEREOF, I have hereunto set my hand this \_\_\_\_ day of \_\_\_\_\_, 1996.

---

Steven P. Buska

STATE OF \_\_\_\_\_ )  
 )ss.  
COUNTY OF \_\_\_\_\_ )

On this \_\_\_\_ day of \_\_\_\_\_, 1996 before me personally appeared Steven P. Buska to  
me known and known to me to be the person described in and who executed the foregoing  
instrument, and he/she duly acknowledged to me that he/she executed the same for the uses and  
purposes therein set forth.

[SEAL]

Notary Public

IN TESTIMONY WHEREOF, I have hereunto set my hand this \_\_\_\_ day of \_\_\_\_\_, 1996.

Jeff Solum

STATE OF \_\_\_\_\_ )  
 )ss.  
COUNTY OF \_\_\_\_\_ )

On this \_\_\_\_ day of \_\_\_\_\_, 1996 before me personally appeared Jeff Solum to me known and known to me to be the person described in and who executed the foregoing instrument, and he/she duly acknowledged to me that he/she executed the same for the uses and purposes therein set forth.

[SEAL]

Notary Public

IN TESTIMONY WHEREOF, I have hereunto set my hand this \_\_\_\_ day of \_\_\_\_\_, 1996.

Debra Lea Enfield

STATE OF \_\_\_\_\_ )  
 )ss.  
COUNTY OF \_\_\_\_\_ )

On this \_\_\_\_ day of \_\_\_\_\_, 1996 before me personally appeared Debra Lea Enfield  
to me known and known to me to be the person described in and who executed the foregoing  
instrument, and he/she duly acknowledged to me that he/she executed the same for the uses and  
purposes therein set forth.

[SEAL]

Notary Public

IN TESTIMONY WHEREOF, I have hereunto set my hand this \_\_\_\_ day of \_\_\_\_\_, 1996.

Darrell Berg

STATE OF \_\_\_\_\_ )  
 )ss.  
COUNTY OF \_\_\_\_\_ )

On this \_\_\_\_ day of \_\_\_\_\_, 1996 before me personally appeared Darrell Berg to me known and known to me to be the person described in and who executed the foregoing instrument, and he/she duly acknowledged to me that he/she executed the same for the uses and purposes therein set forth.

[SEAL]

Notary Public

IN TESTIMONY WHEREOF, I have hereunto set my hand this \_\_\_\_ day of \_\_\_\_\_, 1996.

---

Thomas Smigelski

STATE OF \_\_\_\_\_ )  
 )ss.  
COUNTY OF \_\_\_\_\_ )

On this \_\_\_\_ day of \_\_\_\_\_, 1996 before me personally appeared Thomas Smigelski  
to me known and known to me to be the person described in and who executed the foregoing  
instrument, and he/she duly acknowledged to me that he/she executed the same for the uses and  
purposes therein set forth.

[SEAL]

Notary Public

IN TESTIMONY WHEREOF, I have hereunto set my hand this \_\_\_\_ day of \_\_\_\_\_, 1996.

Thomas C. Tucker

STATE OF \_\_\_\_\_ )  
 )ss.  
COUNTY OF \_\_\_\_\_ )

On this \_\_\_\_ day of \_\_\_\_\_, 1996 before me personally appeared Thomas C. Tucker  
to me known and known to me to be the person described in and who executed the foregoing  
instrument, and he/she duly acknowledged to me that he/she executed the same for the uses and  
purposes therein set forth.

[SEAL]

Notary Public

IN TESTIMONY WHEREOF, I have hereunto set my hand this \_\_\_\_ day of \_\_\_\_\_, 1996.

Joe Hall

STATE OF \_\_\_\_\_ )  
 )ss.  
COUNTY OF \_\_\_\_\_ )

On this \_\_\_\_ day of \_\_\_\_\_, 1996 before me personally appeared Joe Hall to me known and known to me to be the person described in and who executed the foregoing instrument, and he/she duly acknowledged to me that he/she executed the same for the uses and purposes therein set forth.

[SEAL]

Notary Public

IN TESTIMONY WHEREOF, I have hereunto set my hand this \_\_\_\_ day of \_\_\_\_\_, 1996.

John M. Logajan

STATE OF \_\_\_\_\_ )  
 )ss.  
COUNTY OF \_\_\_\_\_ )

On this \_\_\_\_ day of \_\_\_\_\_, 1996 before me personally appeared John M. Logajan to me known and known to me to be the person described in and who executed the foregoing instrument, and he/she duly acknowledged to me that he/she executed the same for the uses and purposes therein set forth.

[SEAL]

Notary Public

IN TESTIMONY WHEREOF, I have hereunto set my hand this \_\_\_\_ day of \_\_\_\_\_, 1996.

---

Somvay Boualouang

STATE OF \_\_\_\_\_ )  
 )ss.  
COUNTY OF \_\_\_\_\_ )

On this \_\_\_\_ day of \_\_\_\_\_, 1996 before me personally appeared Somvay Boualouang to me known and known to me to be the person described in and who executed the foregoing instrument, and he/she duly acknowledged to me that he/she executed the same for the uses and purposes therein set forth.

[SEAL]

Notary Public

IN TESTIMONY WHEREOF, I have hereunto set my hand this \_\_\_\_ day of \_\_\_\_\_, 1996.

Heng Lou

STATE OF \_\_\_\_\_ )  
 )ss.  
COUNTY OF \_\_\_\_\_ )

On this \_\_\_\_ day of \_\_\_\_\_, 1996 before me personally appeared Heng Lou to me known and known to me to be the person described in and who executed the foregoing instrument, and he/she duly acknowledged to me that he/she executed the same for the uses and purposes therein set forth.

[SEAL]

Notary Public

IN TESTIMONY WHEREOF, I have hereunto set my hand this \_\_\_\_ day of \_\_\_\_\_, 1996.

---

Mark D. Elpers

STATE OF \_\_\_\_\_ )  
 )ss.  
COUNTY OF \_\_\_\_\_ )

On this \_\_\_\_ day of \_\_\_\_\_, 1996 before me personally appeared Mark D. Elpers to me known and known to me to be the person described in and who executed the foregoing instrument, and he/she duly acknowledged to me that he/she executed the same for the uses and purposes therein set forth.

[SEAL]

Notary Public

IN TESTIMONY WHEREOF, I have hereunto set my hand this \_\_\_\_ day of \_\_\_\_\_, 1996.

## Matt Downs

STATE OF \_\_\_\_\_ )  
 )ss.  
COUNTY OF \_\_\_\_\_ )

On this \_\_\_\_ day of \_\_\_\_\_, 1996 before me personally appeared Matt Downs to me known and known to me to be the person described in and who executed the foregoing instrument, and he/she duly acknowledged to me that he/she executed the same for the uses and purposes therein set forth.

[SEAL]

Notary Public

IN TESTIMONY WHEREOF, I have hereunto set my hand this \_\_\_\_ day of \_\_\_\_\_, 1996.

## Tammy Ferris

STATE OF \_\_\_\_\_ )  
 )ss.  
COUNTY OF \_\_\_\_\_ )

On this \_\_\_\_ day of \_\_\_\_\_, 1996 before me personally appeared Tammy Ferris to me known and known to me to be the person described in and who executed the foregoing instrument, and he/she duly acknowledged to me that he/she executed the same for the uses and purposes therein set forth.

[SEAL]

Notary Public



IN TESTIMONY WHEREOF, I have hereunto set my hand this 24 day of January, 1997.

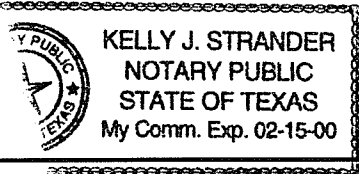
Adam Opoczynski

STATE OF TEXAS )  
 )ss.  
COUNTY OF COLLIN )

*A. Opoczynski*

On this 24 day of JANUARY, 1997 before me personally appeared Adam Opoczynski to me known and known to me to be the person described in and who executed the foregoing instrument, and he/she duly acknowledged to me that he/she executed the same for the uses and purposes therein set forth.

[SEAL]



*Kelly J. Strander*  
Notary Public

IN TESTIMONY WHEREOF, I have hereunto set my hand this \_\_\_ day of \_\_\_\_\_, 1996.

David S. Russell

STATE OF \_\_\_\_\_ )  
 )ss.  
COUNTY OF \_\_\_\_\_ )

On this \_\_\_ day of \_\_\_\_\_, 1996 before me personally appeared David S. Russell to me known and known to me to be the person described in and who executed the foregoing instrument, and he/she duly acknowledged to me that he/she executed the same for the uses and purposes therein set forth.

[SEAL]

Notary Public

IN TESTIMONY WHEREOF, I have hereunto set my hand this \_\_\_\_ day of \_\_\_\_\_, 1996.

Calvin G. Nelson

STATE OF \_\_\_\_\_ )  
 )ss.  
COUNTY OF \_\_\_\_\_ )

On this \_\_\_\_ day of \_\_\_\_\_, 1996 before me personally appeared Calvin G. Nelson to  
me known and known to me to be the person described in and who executed the foregoing  
instrument, and he/she duly acknowledged to me that he/she executed the same for the uses and  
purposes therein set forth.

[SEAL]

Notary Public

IN TESTIMONY WHEREOF, I have hereunto set my hand this \_\_\_\_ day of \_\_\_\_\_, 1996.

---

Niranjan R. Samant

STATE OF \_\_\_\_\_ )  
 )ss.  
COUNTY OF \_\_\_\_\_ )

On this \_\_\_\_ day of \_\_\_\_\_, 1996 before me personally appeared Niranjan R. Samant to me known and known to me to be the person described in and who executed the foregoing instrument, and he/she duly acknowledged to me that he/she executed the same for the uses and purposes therein set forth.

[SEAL]

Notary Public

IN TESTIMONY WHEREOF, I have hereunto set my hand this \_\_\_\_ day of \_\_\_\_\_, 1996.

Joseph F. Chiappetta

STATE OF \_\_\_\_\_ )  
 )ss.  
COUNTY OF \_\_\_\_\_ )

On this \_\_\_\_ day of \_\_\_\_\_, 1996 before me personally appeared Joseph F. Chiappetta to me known and known to me to be the person described in and who executed the foregoing instrument, and he/she duly acknowledged to me that he/she executed the same for the uses and purposes therein set forth.

[SEAL]

Notary Public

IN TESTIMONY WHEREOF, I have hereunto set my hand this \_\_\_\_ day of \_\_\_\_\_, 1996.

---

Scott Sarnikowski

STATE OF \_\_\_\_\_ )  
 )ss.  
COUNTY OF \_\_\_\_\_ )

On this \_\_\_\_ day of \_\_\_\_\_, 1996 before me personally appeared Scott Sarnikowski  
to me known and known to me to be the person described in and who executed the foregoing  
instrument, and he/she duly acknowledged to me that he/she executed the same for the uses and  
purposes therein set forth.

[SEAL]

Notary Public

## ASSIGNMENT

WHEREAS, WE, Mark J. Dapper, residing at 6558 Baywood Lane, Cincinnati, OH 45224, and Michael J. Geile, residing at 316 Miami Valley Drive, Loveland, OH 45140, and Terrance J. Hill, residing at 1765 Garrett House Lane, Fairfield, OH 45014, and Harold A. Roberts, residing at 7017 Beacon Circle, Eden Prairie, MN 55346, and Brian D. Anderson, residing at 11430 - 50th Place North, Plymouth, MN 55442, and Jeffrey Brede, residing at 8073 Curtis Lane, Eden Prairie, MN 55347, and Mark S. Wadman, residing at 8956 Braxton Drive, Eden Prairie, MN 55347, and Robert J. Kirscht, residing at 13106 Vernon Avenue South, Savage, MN 55378, and James J. Herrmann, residing at 1894 Sunrise Court, Eagan, MN 55122, and Michael J. Fort, residing at 1045 Northview Park, Eagan, MN 55123, and Steven P. Buska, residing at 13370 Stanton Drive, Minnetonka, MN 55305, and Jeff Solum, residing at 4900 West 78th Street, Bloomington, MN 55435, and Debra Lea Enfield, residing at 464 Ridge Court, Chaska, MN 55318, and Darrell Berg, residing at 4900 West 78th Street, Bloomington, MN 55435, and Thomas Smigelski, residing at 230 Waterford Drive, Lake Zurich, IL 60047, and Thomas C. Tucker, residing at 205 Silver Creek Trail, Chapel Hill, NC 27514, and Joe Hall, residing at 4900 West 78th Street, Bloomington, MN 55435, and John M. Logajan, residing at 4248 Hamline Avenue, Arden Hills, MN 55112, and Somvay Boualouang, residing at 4900 West 78th Street, Bloomington, MN 55435, and Heng Lou, residing at 4900 West 78th Street, Bloomington, MN 55435, and Mark D. Elpers, residing at 16303 205th Avenue NW, Elk River, MN 55330, and Matt Downs, residing at 4900 West 78th Street, Bloomington, MN 55435, and Tammy Ferris, residing at 4900 West 78th Street, Bloomington, MN 55435, and Adam Opoczynski, residing at 8911 Sylvan Ridge, Eden Prairie, MN 55347, and David S. Russell, residing at 5145 Luverne Avenue, Minneapolis, MN 55419, and Calvin G. Nelson, residing at 6070 Lake Virginia Drive So., Shorewood, MN 55331, and Niranjan R. Samant, residing at 229 Ridgefield Drive, Middletown, CT 06547, and Joseph F. Chiappetta, residing at 6 Ranch Drive, Trumbull, CT 06611, and Scott Sarnikowski, residing at 13235 57th Avenue North, Plymouth, MN 55442, made certain new and useful inventions and improvements for which We filed an application for Letters Patent of the United States on June 28, 1996, and was assigned US serial number 08/673,002, and is entitled COMMUNICATION SYSTEM WITH MULTICARRIER TELEPATHY TRANSPORT.

AND WHEREAS, ADC Telecommunications, Inc., a corporation organized and existing under and by virtue of the laws of the State of Minnesota, and having an office and place of business at 4900 West 78th Street, Bloomington, MN 55435, (hereinafter "Assignee") is desirous of acquiring the entire right, title and interest in and to said inventions, improvements and application and in and to the Letters Patent to be obtained therefor;

NOW, THEREFORE, to all whom it may concern, be it known that for good and valuable consideration, the receipt and sufficiency whereof is hereby acknowledged, we have sold, assigned, and transferred, and by these presents do sell, assign and transfer unto said Assignee, its successors or assigns, the entire right, title and interest for all countries in and to all inventions and improvements disclosed in the aforesaid application, and in and to the said application, all divisions, continuations, or renewals thereof, all Letters Patent which may be granted therefrom, and all reissues or extensions of such patents, and in and to any and all applications which have been or shall be filed in any foreign countries for Letters Patent on the said inventions and improvements, including an assignment of all rights under the provisions of the International Convention, and all Letters Patent of foreign countries which may be granted therefrom; and we do hereby authorize and request the Commissioner of Patents and Trademarks to issue any and all United States Letters Patent for the aforesaid inventions and improvements to the said Assignee as the assignee of the entire right, title and interest in and to the same, for the use of the said Assignee, its successors and assigns.

AND, for the consideration aforesaid, we do hereby agree that we and our executors and legal representatives will make, execute and deliver any and all other instruments in writing including any and all further application papers, affidavits, assignments and other documents, and will communicate to said Assignee, its successors and representatives all facts known to us relating to said improvements and the history thereof and will testify in all legal proceedings and generally do all things which may be necessary or desirable more effectually to secure to and vest in said Assignee, its successors or assigns the entire right, title and interest in and to the said improvements, inventions, applications, Letters Patent, rights, titles, benefits, privileges and advantages hereby sold, assigned and conveyed, or intended so to be.

AND, furthermore we covenant and agree with said Assignee, its successors and assigns, that no assignment, grant, mortgage, license or other agreement affecting the rights and property herein conveyed has been made to others by me/us and that full right to convey the same as herein expressed is possessed by us.

IN TESTIMONY WHEREOF, I have hereunto set my hand this \_\_\_\_ day of \_\_\_\_\_, 1996.

Mark J. Dapper

STATE OF \_\_\_\_\_ )  
 )ss.  
COUNTY OF \_\_\_\_\_ )

On this \_\_\_\_ day of \_\_\_\_\_, 1996 before me personally appeared Mark J. Dapper to me known and known to me to be the person described in and who executed the foregoing instrument, and he/she duly acknowledged to me that he/she executed the same for the uses and purposes therein set forth.

[SEAL]

Notary Public

IN TESTIMONY WHEREOF, I have hereunto set my hand this \_\_\_\_ day of \_\_\_\_\_, 1996.

---

Michael J. Geile

STATE OF \_\_\_\_\_ )  
 )ss.  
COUNTY OF \_\_\_\_\_ )

On this \_\_\_\_ day of \_\_\_\_\_, 1996 before me personally appeared Michael J. Geile to me known and known to me to be the person described in and who executed the foregoing instrument, and he/she duly acknowledged to me that he/she executed the same for the uses and purposes therein set forth.

[SEAL]

Notary Public

IN TESTIMONY WHEREOF, I have hereunto set my hand this \_\_\_\_ day of \_\_\_\_\_, 1996.

Terrance J. Hill

STATE OF \_\_\_\_\_ )  
 )ss.  
COUNTY OF \_\_\_\_\_ )

On this \_\_\_\_ day of \_\_\_\_\_, 1996 before me personally appeared Terrance J. Hill to me known and known to me to be the person described in and who executed the foregoing instrument, and he/she duly acknowledged to me that he/she executed the same for the uses and purposes therein set forth.

[SEAL]

Notary Public

IN TESTIMONY WHEREOF, I have hereunto set my hand this \_\_\_\_ day of \_\_\_\_\_, 1996.

Harold A. Roberts

STATE OF \_\_\_\_\_ )  
 )ss.  
COUNTY OF \_\_\_\_\_ )

On this \_\_\_\_ day of \_\_\_\_\_, 1996 before me personally appeared Harold A. Roberts to me known and known to me to be the person described in and who executed the foregoing instrument, and he/she duly acknowledged to me that he/she executed the same for the uses and purposes therein set forth.

[SEAL]

Notary Public

IN TESTIMONY WHEREOF, I have hereunto set my hand this \_\_\_\_ day of \_\_\_\_\_, 1996.

---

Brian D. Anderson

STATE OF \_\_\_\_\_ )  
 )ss.  
COUNTY OF \_\_\_\_\_ )

On this \_\_\_\_ day of \_\_\_\_\_, 1996 before me personally appeared Brian D. Anderson  
to me known and known to me to be the person described in and who executed the foregoing  
instrument, and he/she duly acknowledged to me that he/she executed the same for the uses and  
purposes therein set forth.

[SEAL]

Notary Public



IN TESTIMONY WHEREOF, I have hereunto set my hand this \_\_\_\_ day of \_\_\_\_\_, 1996.

Jeffrey Brede

STATE OF \_\_\_\_\_ )  
 )ss.  
COUNTY OF \_\_\_\_\_ )

On this \_\_\_\_ day of \_\_\_\_\_, 1996 before me personally appeared Jeffrey Brede to me known and known to me to be the person described in and who executed the foregoing instrument, and he/she duly acknowledged to me that he/she executed the same for the uses and purposes therein set forth.

[SEAL]

Notary Public

IN TESTIMONY WHEREOF, I have hereunto set my hand this \_\_\_\_ day of \_\_\_\_\_, 1996.

Mark S. Wadman

STATE OF \_\_\_\_\_ )  
 )ss.  
COUNTY OF \_\_\_\_\_ )

On this \_\_\_\_ day of \_\_\_\_\_, 1996 before me personally appeared Mark S. Wadman to me known and known to me to be the person described in and who executed the foregoing instrument, and he/she duly acknowledged to me that he/she executed the same for the uses and purposes therein set forth.

[SEAL]

Notary Public

IN TESTIMONY WHEREOF, I have hereunto set my hand this \_\_\_\_ day of \_\_\_\_\_, 1996.

Robert J. Kirscht

STATE OF \_\_\_\_\_ )  
 )ss.  
COUNTY OF \_\_\_\_\_ )

On this \_\_\_\_ day of \_\_\_\_\_, 1996 before me personally appeared Robert J. Kirscht to me known and known to me to be the person described in and who executed the foregoing instrument, and he/she duly acknowledged to me that he/she executed the same for the uses and purposes therein set forth.

[SEAL]

Notary Public

IN TESTIMONY WHEREOF, I have hereunto set my hand this \_\_\_\_ day of \_\_\_\_\_, 1996.

James J. Herrmann

STATE OF \_\_\_\_\_ )  
 )ss.  
COUNTY OF \_\_\_\_\_ )

On this \_\_\_\_ day of \_\_\_\_\_, 1996 before me personally appeared James J. Herrmann to me known and known to me to be the person described in and who executed the foregoing instrument, and he/she duly acknowledged to me that he/she executed the same for the uses and purposes therein set forth.

[SEAL]

Notary Public

IN TESTIMONY WHEREOF, I have hereunto set my hand this \_\_\_\_ day of \_\_\_\_\_, 1996.

Michael J. Fort

STATE OF \_\_\_\_\_ )  
 )ss.  
COUNTY OF \_\_\_\_\_ )

On this \_\_\_\_ day of \_\_\_\_\_, 1996 before me personally appeared Michael J. Fort to me known and known to me to be the person described in and who executed the foregoing instrument, and he/she duly acknowledged to me that he/she executed the same for the uses and purposes therein set forth.

[SEAL]

Notary Public

IN TESTIMONY WHEREOF, I have hereunto set my hand this \_\_\_\_ day of \_\_\_\_\_, 1996.

Steven P. Buska

STATE OF \_\_\_\_\_ )  
 )ss.  
COUNTY OF \_\_\_\_\_ )

On this \_\_\_\_ day of \_\_\_\_\_, 1996 before me personally appeared Steven P. Buska to  
me known and known to me to be the person described in and who executed the foregoing  
instrument, and he/she duly acknowledged to me that he/she executed the same for the uses and  
purposes therein set forth.

[SEAL]

Notary Public

IN TESTIMONY WHEREOF, I have hereunto set my hand this \_\_\_\_ day of \_\_\_\_\_, 1996.

Jeff Solum

STATE OF \_\_\_\_\_ )  
 )ss.  
COUNTY OF \_\_\_\_\_ )

On this \_\_\_\_ day of \_\_\_\_\_, 1996 before me personally appeared Jeff Solum to me known and known to me to be the person described in and who executed the foregoing instrument, and he/she duly acknowledged to me that he/she executed the same for the uses and purposes therein set forth.

[SEAL]

Notary Public

IN TESTIMONY WHEREOF, I have hereunto set my hand this \_\_\_\_ day of \_\_\_\_\_, 1996.

Debra Lea Enfield

STATE OF \_\_\_\_\_ )  
 )ss.  
COUNTY OF \_\_\_\_\_ )

On this \_\_\_\_ day of \_\_\_\_\_, 1996 before me personally appeared Debra Lea Enfield  
to me known and known to me to be the person described in and who executed the foregoing  
instrument, and he/she duly acknowledged to me that he/she executed the same for the uses and  
purposes therein set forth.

[SEAL]

Notary Public

IN TESTIMONY WHEREOF, I have hereunto set my hand this \_\_\_\_ day of \_\_\_\_\_, 1996.

---

Darrell Berg

STATE OF \_\_\_\_\_ )  
 )ss.  
COUNTY OF \_\_\_\_\_ )

On this \_\_\_\_ day of \_\_\_\_\_, 1996 before me personally appeared Darrell Berg to me known and known to me to be the person described in and who executed the foregoing instrument, and he/she duly acknowledged to me that he/she executed the same for the uses and purposes therein set forth.

[SEAL]

Notary Public

IN TESTIMONY WHEREOF, I have hereunto set my hand this \_\_\_\_ day of \_\_\_\_\_, 1996.

---

Thomas Smigelski

STATE OF \_\_\_\_\_ )  
 )ss.  
COUNTY OF \_\_\_\_\_ )

On this \_\_\_\_ day of \_\_\_\_\_, 1996 before me personally appeared Thomas Smigelski  
to me known and known to me to be the person described in and who executed the foregoing  
instrument, and he/she duly acknowledged to me that he/she executed the same for the uses and  
purposes therein set forth.

[SEAL]

Notary Public

IN TESTIMONY WHEREOF, I have hereunto set my hand this 27<sup>th</sup> day of January, 1996.

Thomas C. Tucker  
Thomas C. Tucker

STATE OF North Carolina )  
 )ss.  
COUNTY OF Durham

On this 27<sup>th</sup> day of January, 1996 before me personally appeared Thomas C. Tucker to me known and known to me to be the person described in and who executed the foregoing instrument, and he/she duly acknowledged to me that he/she executed the same for the uses and purposes therein set forth.

[SEAL]

Notary Public  
Notary Public

COMMISSION EXPIRES: 8/11/98

IN TESTIMONY WHEREOF, I have hereunto set my hand this \_\_\_ day of \_\_\_\_\_, 1996.

Joe Hall  
Joe Hall

STATE OF \_\_\_\_\_ )  
 )ss.  
COUNTY OF \_\_\_\_\_ )

On this \_\_\_ day of \_\_\_\_\_, 1996 before me personally appeared Joe Hall to me known and known to me to be the person described in and who executed the foregoing instrument, and he/she duly acknowledged to me that he/she executed the same for the uses and purposes therein set forth.

[SEAL]

Notary Public  
Notary Public

IN TESTIMONY WHEREOF, I have hereunto set my hand this \_\_\_\_ day of \_\_\_\_\_, 1996.

John M. Logajan

STATE OF \_\_\_\_\_ )  
 )ss.  
COUNTY OF \_\_\_\_\_ )

On this \_\_\_\_ day of \_\_\_\_\_, 1996 before me personally appeared John M. Logajan to me known and known to me to be the person described in and who executed the foregoing instrument, and he/she duly acknowledged to me that he/she executed the same for the uses and purposes therein set forth.

[SEAL]

Notary Public

IN TESTIMONY WHEREOF, I have hereunto set my hand this \_\_\_\_ day of \_\_\_\_\_, 1996.

Somvay Boualouang

STATE OF \_\_\_\_\_ )  
 )ss.  
COUNTY OF \_\_\_\_\_ )

On this \_\_\_\_ day of \_\_\_\_\_, 1996 before me personally appeared Somvay Boualouang to me known and known to me to be the person described in and who executed the foregoing instrument, and he/she duly acknowledged to me that he/she executed the same for the uses and purposes therein set forth.

[SEAL]

Notary Public

IN TESTIMONY WHEREOF, I have hereunto set my hand this \_\_\_\_ day of \_\_\_\_\_, 1996.

Heng Lou

STATE OF \_\_\_\_\_ )  
 )ss.  
COUNTY OF \_\_\_\_\_ )

On this \_\_\_\_ day of \_\_\_\_\_, 1996 before me personally appeared Heng Lou to me known and known to me to be the person described in and who executed the foregoing instrument, and he/she duly acknowledged to me that he/she executed the same for the uses and purposes therein set forth.

[SEAL]

Notary Public

IN TESTIMONY WHEREOF, I have hereunto set my hand this \_\_\_\_ day of \_\_\_\_\_, 1996.

Mark D. Elpers

STATE OF \_\_\_\_\_ )  
 )ss.  
COUNTY OF \_\_\_\_\_ )

On this \_\_\_\_ day of \_\_\_\_\_, 1996 before me personally appeared Mark D. Elpers to  
me known and known to me to be the person described in and who executed the foregoing  
instrument, and he/she duly acknowledged to me that he/she executed the same for the uses and  
purposes therein set forth.

[SEAL]

Notary Public



IN TESTIMONY WHEREOF, I have hereunto set my hand this \_\_\_\_ day of \_\_\_\_\_, 1996.

Matt Downs

STATE OF \_\_\_\_\_ )  
 )ss.  
COUNTY OF \_\_\_\_\_ )

On this \_\_\_\_ day of \_\_\_\_\_, 1996 before me personally appeared Matt Downs to me known and known to me to be the person described in and who executed the foregoing instrument, and he/she duly acknowledged to me that he/she executed the same for the uses and purposes therein set forth.

[SEAL]

Notary Public

IN TESTIMONY WHEREOF, I have hereunto set my hand this \_\_\_\_ day of \_\_\_\_\_, 1996.

Tammy Ferris

STATE OF \_\_\_\_\_ )  
 )ss.  
COUNTY OF \_\_\_\_\_ )

On this \_\_\_\_ day of \_\_\_\_\_, 1996 before me personally appeared Tammy Ferris to me known and known to me to be the person described in and who executed the foregoing instrument, and he/she duly acknowledged to me that he/she executed the same for the uses and purposes therein set forth.

[SEAL]

Notary Public

IN TESTIMONY WHEREOF, I have hereunto set my hand this \_\_\_\_ day of \_\_\_\_\_, 1996.

Adam Opoczynski

STATE OF \_\_\_\_\_ )  
 )ss.  
COUNTY OF \_\_\_\_\_ )

On this \_\_\_\_ day of \_\_\_\_\_, 1996 before me personally appeared Adam Opoczynski  
to me known and known to me to be the person described in and who executed the foregoing  
instrument, and he/she duly acknowledged to me that he/she executed the same for the uses and  
purposes therein set forth.

[SEAL]

Notary Public

IN TESTIMONY WHEREOF, I have hereunto set my hand this \_\_\_\_ day of \_\_\_\_\_, 1996.

David S. Russell

STATE OF \_\_\_\_\_ )  
 )ss.  
COUNTY OF \_\_\_\_\_ )

On this \_\_\_\_ day of \_\_\_\_\_, 1996 before me personally appeared David S. Russell to me known and known to me to be the person described in and who executed the foregoing instrument, and he/she duly acknowledged to me that he/she executed the same for the uses and purposes therein set forth.

[SEAL]

Notary Public

IN TESTIMONY WHEREOF, I have hereunto set my hand this \_\_\_\_ day of \_\_\_\_\_, 1996.

---

Calvin G. Nelson

STATE OF \_\_\_\_\_ )  
 )ss.  
COUNTY OF \_\_\_\_\_ )

On this \_\_\_\_ day of \_\_\_\_\_, 1996 before me personally appeared Calvin G. Nelson to me known and known to me to be the person described in and who executed the foregoing instrument, and he/she duly acknowledged to me that he/she executed the same for the uses and purposes therein set forth.

[SEAL]

Notary Public

IN TESTIMONY WHEREOF, I have hereunto set my hand this \_\_\_\_ day of \_\_\_\_\_, 1996.

---

Niranjan R. Samant

STATE OF \_\_\_\_\_ )  
 )ss.  
COUNTY OF \_\_\_\_\_ )

On this \_\_\_\_ day of \_\_\_\_\_, 1996 before me personally appeared Niranjan R. Samant to me known and known to me to be the person described in and who executed the foregoing instrument, and he/she duly acknowledged to me that he/she executed the same for the uses and purposes therein set forth.

[SEAL]

Notary Public

IN TESTIMONY WHEREOF, I have hereunto set my hand this \_\_\_\_ day of \_\_\_\_\_, 1996.

Joseph F. Chiappetta

STATE OF \_\_\_\_\_ )  
 )ss.  
COUNTY OF \_\_\_\_\_ )

On this \_\_\_\_ day of \_\_\_\_\_, 1996 before me personally appeared Joseph F. Chiappetta to me known and known to me to be the person described in and who executed the foregoing instrument, and he/she duly acknowledged to me that he/she executed the same for the uses and purposes therein set forth.

[SEAL]

Notary Public

IN TESTIMONY WHEREOF, I have hereunto set my hand this \_\_\_\_ day of \_\_\_\_\_, 1996.

## Scott Sarnikowski

STATE OF \_\_\_\_\_ )  
 )ss.  
COUNTY OF \_\_\_\_\_ )

On this \_\_\_\_ day of \_\_\_\_\_, 1996 before me personally appeared Scott Sarnikowski  
to me known and known to me to be the person described in and who executed the foregoing  
instrument, and he/she duly acknowledged to me that he/she executed the same for the uses and  
purposes therein set forth.

[SEAL]

Notary Public

Jeffrey Brede

STATE OF \_\_\_\_\_ )  
 )ss.  
COUNTY OF \_\_\_\_\_ )

On this \_\_\_\_ day of \_\_\_\_\_, 1996 before me personally appeared Jeffrey Brede to me known and known to me to be the person described in and who executed the foregoing instrument, and he/she duly acknowledged to me that he/she executed the same for the uses and purposes therein set forth.

[SEAL]

Notary Public

IN TESTIMONY WHEREOF, I have hereunto set my hand this 30 day of Jun, <sup>1997</sup>~~1996~~.

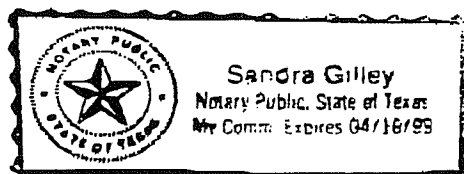
Mark S. Wadman

STATE OF Texas )  
 )ss.  
COUNTY OF Dallas )

On this 30<sup>th</sup> day of January, 1996 before me personally appeared Mark S. Wadman to me known and known to me to be the person described in and who executed the foregoing instrument, and he/she duly acknowledged to me that he/she executed the same for the uses and purposes therein set forth.

[SEAL]

~~Notary Public~~



## ASSIGNMENT

WHEREAS, WE, Mark J. Dapper, residing at 6558 Baywood Lane, Cincinnati, OH 45224, and Michael J. Geile, residing at 316 Miami Valley Drive, Loveland, OH 45140, and Terrance J. Hill, residing at 1765 Garrett House Lane, Fairfield, OH 45014, and Harold A. Roberts, residing at 7017 Beacon Circle, Eden Prairie, MN 55346, and Brian D. Anderson, residing at 11430 - 50th Place North, Plymouth, MN 55442, and Jeffrey Brede, residing at 8073 Curtis Lane, Eden Prairie, MN 55347, and Mark S. Wadman, residing at 8956 Braxton Drive, Eden Prairie, MN 55347, and Robert J. Kirscht, residing at 13106 Vernon Avenue South, Savage, MN 55378, and James J. Herrmann, residing at 1894 Sunrise Court, Eagan, MN 55122, and Michael J. Fort, residing at 1045 Northview Park, Eagan, MN 55123, and Steven P. Buska, residing at 13370 Stanton Drive, Minnetonka, MN 55305, and Jeff Solum, residing at 4900 West 78th Street, Bloomington, MN 55435, and Debra Lea Enfield, residing at 464 Ridge Court, Chaska, MN 55318, and Darrell Berg, residing at 4900 West 78th Street, Bloomington, MN 55435, and Thomas Smigelski, residing at 230 Waterford Drive, Lake Zurich, IL 60047, and Thomas C. Tucker, residing at 205 Silver Creek Trail, Chapel Hill, NC 27514, and Joe Hall, residing at 4900 West 78th Street, Bloomington, MN 55435, and John M. Logajan, residing at 4248 Hamline Avenue, Arden Hills, MN 55112, and Somvay Boualouang, residing at 4900 West 78th Street, Bloomington, MN 55435, and Heng Lou, residing at 4900 West 78th Street, Bloomington, MN 55435, and Mark D. Elpers, residing at 16303 205th Avenue NW, Elk River, MN 55330, and Matt Downs, residing at 4900 West 78th Street, Bloomington, MN 55435, and Tammy Ferris, residing at 4900 West 78th Street, Bloomington, MN 55435, and Adam Opoczynski, residing at 8911 Sylvan Ridge, Eden Prairie, MN 55347, and David S. Russell, residing at 5145 Luverne Avenue, Minneapolis, MN 55419, and Calvin G. Nelson, residing at 6070 Lake Virginia Drive So., Shorewood, MN 55331, and Niranjan R. Samant, residing at 229 Ridgefield Drive, Middletown, CT 06547, and Joseph F. Chiappetta, residing at 6 Ranch Drive, Trumbull, CT 06611, and Scott Sarnikowski, residing at 13235 57th Avenue North, Plymouth, MN 55442, made certain new and useful inventions and improvements for which We filed an application for Letters Patent of the United States on June 28, 1996, and was assigned US serial number 08/673,002, and is entitled COMMUNICATION SYSTEM WITH MULTICARRIER TELEPATHY TRANSPORT.

AND WHEREAS, ADC Telecommunications, Inc., a corporation organized and existing under and by virtue of the laws of the State of Minnesota, and having an office and place of business at 4900 West 78th Street, Bloomington, MN 55435, (hereinafter "Assignee") is desirous of acquiring the entire right, title and interest in and to said inventions, improvements and application and in and to the Letters Patent to be obtained therefor;

NOW, THEREFORE, to all whom it may concern, be it known that for good and valuable consideration, the receipt and sufficiency whereof is hereby acknowledged, we have sold, assigned, and transferred, and by these presents do sell, assign and transfer unto said Assignee, its successors or assigns, the entire right, title and interest for all countries in and to all inventions and improvements disclosed in the aforesaid application, and in and to the said application, all divisions, continuations, or renewals thereof, all Letters Patent which may be granted therefrom, and all reissues or extensions of such patents, and in and to any and all applications which have been or shall be filed in any foreign countries for Letters Patent on the said inventions and improvements, including an assignment of all rights under the provisions of the International Convention, and all Letters Patent of foreign countries which may be granted therefrom; and we do hereby authorize and request the Commissioner of Patents and Trademarks to issue any and all United States Letters Patent for the aforesaid inventions and improvements to the said Assignee as the assignee of the entire right, title and interest in and to the same, for the use of the said Assignee, its successors and assigns.

AND, for the consideration aforesaid, we do hereby agree that we and our executors and legal representatives will make, execute and deliver any and all other instruments in writing including any and all further application papers, affidavits, assignments and other documents, and will communicate to said Assignee, its successors and representatives all facts known to us relating to said improvements and the history thereof and will testify in all legal proceedings and generally do all things which may be necessary or desirable more effectually to secure to and vest in said Assignee, its successors or assigns the entire right, title and interest in and to the said improvements, inventions, applications, Letters Patent, rights, titles, benefits, privileges and advantages hereby sold, assigned and conveyed, or intended so to be.

AND, furthermore we covenant and agree with said Assignee, its successors and assigns, that no assignment, grant, mortgage, license or other agreement affecting the rights and property herein conveyed has been made to others by me/us and that full right to convey the same as herein expressed is possessed by us.

IN TESTIMONY WHEREOF, I have hereunto set my hand this \_\_\_\_ day of \_\_\_\_\_, 1996.

Mark J. Dapper

STATE OF \_\_\_\_\_ )  
 )ss.  
COUNTY OF \_\_\_\_\_ )

On this \_\_\_\_ day of \_\_\_\_\_, 1996 before me personally appeared Mark J. Dapper to me known and known to me to be the person described in and who executed the foregoing instrument, and he/she duly acknowledged to me that he/she executed the same for the uses and purposes therein set forth.

[SEAL]

Notary Public



IN TESTIMONY WHEREOF, I have hereunto set my hand this \_\_\_\_ day of \_\_\_\_\_, 1996.

Michael J. Geile

STATE OF \_\_\_\_\_ )  
 )ss.  
COUNTY OF \_\_\_\_\_ )

On this \_\_\_\_ day of \_\_\_\_\_, 1996 before me personally appeared Michael J. Geile to me known and known to me to be the person described in and who executed the foregoing instrument, and he/she duly acknowledged to me that he/she executed the same for the uses and purposes therein set forth.

[SEAL]

Notary Public

IN TESTIMONY WHEREOF, I have hereunto set my hand this \_\_\_\_ day of \_\_\_\_\_, 1996.

Terrance J. Hill

STATE OF \_\_\_\_\_ )  
 )ss.  
COUNTY OF \_\_\_\_\_ )

On this \_\_\_\_ day of \_\_\_\_\_, 1996 before me personally appeared Terrance J. Hill to me known and known to me to be the person described in and who executed the foregoing instrument, and he/she duly acknowledged to me that he/she executed the same for the uses and purposes therein set forth.

[SEAL]

Notary Public

IN TESTIMONY WHEREOF, I have hereunto set my hand this \_\_\_\_ day of \_\_\_\_\_, 1996.

---

Harold A. Roberts

STATE OF \_\_\_\_\_ )  
 )ss.  
COUNTY OF \_\_\_\_\_ )

On this \_\_\_\_ day of \_\_\_\_\_, 1996 before me personally appeared Harold A. Roberts to me known and known to me to be the person described in and who executed the foregoing instrument, and he/she duly acknowledged to me that he/she executed the same for the uses and purposes therein set forth.

[SEAL]

Notary Public

IN TESTIMONY WHEREOF, I have hereunto set my hand this \_\_\_\_ day of \_\_\_\_\_, 1996.

---

Brian D. Anderson

STATE OF \_\_\_\_\_ )  
 )ss.  
COUNTY OF \_\_\_\_\_ )

On this \_\_\_\_ day of \_\_\_\_\_, 1996 before me personally appeared Brian D. Anderson  
to me known and known to me to be the person described in and who executed the foregoing  
instrument, and he/she duly acknowledged to me that he/she executed the same for the uses and  
purposes therein set forth.

[SEAL]

Notary Public

IN TESTIMONY WHEREOF, I have hereunto set my hand this \_\_\_\_ day of \_\_\_\_\_, 1996.

\_\_\_\_\_  
Jeffrey Brede

STATE OF \_\_\_\_\_ )  
\_\_\_\_\_)ss.  
COUNTY OF \_\_\_\_\_ )

On this \_\_\_\_ day of \_\_\_\_\_, 1996 before me personally appeared Jeffrey Brede to me known and known to me to be the person described in and who executed the foregoing instrument, and he/she duly acknowledged to me that he/she executed the same for the uses and purposes therein set forth.

[SEAL]

\_\_\_\_\_  
Notary Public

IN TESTIMONY WHEREOF, I have hereunto set my hand this \_\_\_\_ day of \_\_\_\_\_, 1996.

\_\_\_\_\_  
Mark S. Wadman

STATE OF \_\_\_\_\_ )  
\_\_\_\_\_)ss.  
COUNTY OF \_\_\_\_\_ )

On this \_\_\_\_ day of \_\_\_\_\_, 1996 before me personally appeared Mark S. Wadman to me known and known to me to be the person described in and who executed the foregoing instrument, and he/she duly acknowledged to me that he/she executed the same for the uses and purposes therein set forth.

[SEAL]

\_\_\_\_\_  
Notary Public

IN TESTIMONY WHEREOF, I have hereunto set my hand this \_\_\_\_ day of \_\_\_\_\_, 1996.

Robert J. Kirscht

STATE OF \_\_\_\_\_ )  
 )ss.  
COUNTY OF \_\_\_\_\_ )

On this \_\_\_\_ day of \_\_\_\_\_, 1996 before me personally appeared Robert J. Kirscht to me known and known to me to be the person described in and who executed the foregoing instrument, and he/she duly acknowledged to me that he/she executed the same for the uses and purposes therein set forth.

[SEAL]

Notary Public

IN TESTIMONY WHEREOF, I have hereunto set my hand this \_\_\_\_ day of \_\_\_\_\_, 1996.

James J. Herrmann

STATE OF \_\_\_\_\_ )  
 )ss.  
COUNTY OF \_\_\_\_\_ )

On this \_\_\_\_ day of \_\_\_\_\_, 1996 before me personally appeared James J. Herrmann to me known and known to me to be the person described in and who executed the foregoing instrument, and he/she duly acknowledged to me that he/she executed the same for the uses and purposes therein set forth.

[SEAL]

Notary Public

IN TESTIMONY WHEREOF, I have hereunto set my hand this \_\_\_\_ day of \_\_\_\_\_, 1996.

\_\_\_\_\_  
Michael J. Fort

STATE OF \_\_\_\_\_ )  
\_\_\_\_\_)ss.  
COUNTY OF \_\_\_\_\_ )

On this \_\_\_\_ day of \_\_\_\_\_, 1996 before me personally appeared Michael J. Fort to  
me known and known to me to be the person described in and who executed the foregoing  
instrument, and he/she duly acknowledged to me that he/she executed the same for the uses and  
purposes therein set forth.

[SEAL]

\_\_\_\_\_  
Notary Public

IN TESTIMONY WHEREOF, I have hereunto set my hand this \_\_\_\_ day of \_\_\_\_\_, 1996.

\_\_\_\_\_  
Steven P. Buska

STATE OF \_\_\_\_\_ )  
\_\_\_\_\_)ss.  
COUNTY OF \_\_\_\_\_ )

On this \_\_\_\_ day of \_\_\_\_\_, 1996 before me personally appeared Steven P. Buska to  
me known and known to me to be the person described in and who executed the foregoing  
instrument, and he/she duly acknowledged to me that he/she executed the same for the uses and  
purposes therein set forth.

[SEAL]

\_\_\_\_\_  
Notary Public

IN TESTIMONY WHEREOF, I have hereunto set my hand this \_\_\_\_ day of \_\_\_\_\_, 1996.

\_\_\_\_\_  
Jeff Solum

STATE OF \_\_\_\_\_ )  
\_\_\_\_\_)ss.  
COUNTY OF \_\_\_\_\_ )

On this \_\_\_\_ day of \_\_\_\_\_, 1996 before me personally appeared Jeff Solum to me known and known to me to be the person described in and who executed the foregoing instrument, and he/she duly acknowledged to me that he/she executed the same for the uses and purposes therein set forth.

[SEAL]

\_\_\_\_\_  
Notary Public

IN TESTIMONY WHEREOF, I have hereunto set my hand this 5<sup>th</sup> day of May, 1996<sup>7</sup>.

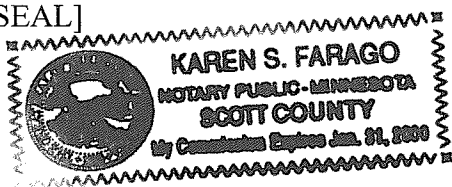
\_\_\_\_\_  
Debra Lea Enfield

STATE OF Minnesota )  
\_\_\_\_\_)ss.  
COUNTY OF Shenandoah )

Debra Lea Enfield

On this 5<sup>th</sup> day of May, 1996 before me personally appeared Debra Lea Enfield to me known and known to me to be the person described in and who executed the foregoing instrument, and he/she duly acknowledged to me that he/she executed the same for the uses and purposes therein set forth.

[SEAL]



Karen S. Farago  
Notary Public

IN TESTIMONY WHEREOF, I have hereunto set my hand this \_\_\_\_ day of \_\_\_\_\_, 1996.

---

Darrell Berg

STATE OF \_\_\_\_\_ )  
 )ss.  
COUNTY OF \_\_\_\_\_ )

On this \_\_\_\_ day of \_\_\_\_\_, 1996 before me personally appeared Darrell Berg to me known and known to me to be the person described in and who executed the foregoing instrument, and he/she duly acknowledged to me that he/she executed the same for the uses and purposes therein set forth.

[SEAL]

Notary Public

IN TESTIMONY WHEREOF, I have hereunto set my hand this \_\_\_\_ day of \_\_\_\_\_, 1996.

Thomas Smigelski

STATE OF \_\_\_\_\_ )  
 )ss.  
COUNTY OF \_\_\_\_\_ )

On this \_\_\_\_ day of \_\_\_\_\_, 1996 before me personally appeared Thomas Smigelski to me known and known to me to be the person described in and who executed the foregoing instrument, and he/she duly acknowledged to me that he/she executed the same for the uses and purposes therein set forth.

[SEAL]

Notary Public

IN TESTIMONY WHEREOF, I have hereunto set my hand this \_\_\_\_ day of \_\_\_\_\_, 1996.

Thomas C. Tucker

STATE OF \_\_\_\_\_ )  
 )ss.  
COUNTY OF \_\_\_\_\_ )

On this \_\_\_\_ day of \_\_\_\_\_, 1996 before me personally appeared Thomas C. Tucker  
to me known and known to me to be the person described in and who executed the foregoing  
instrument, and he/she duly acknowledged to me that he/she executed the same for the uses and  
purposes therein set forth.

[SEAL]

Notary Public

IN TESTIMONY WHEREOF, I have hereunto set my hand this \_\_\_\_ day of \_\_\_\_\_, 1996.

Joe Hall

STATE OF \_\_\_\_\_ )  
 )ss.  
COUNTY OF \_\_\_\_\_ )

On this \_\_\_\_ day of \_\_\_\_\_, 1996 before me personally appeared Joe Hall to me known and known to me to be the person described in and who executed the foregoing instrument, and he/she duly acknowledged to me that he/she executed the same for the uses and purposes therein set forth.

[SEAL]

Notary Public



IN TESTIMONY WHEREOF, I have hereunto set my hand this \_\_\_\_ day of \_\_\_\_\_, 1996.

\_\_\_\_\_  
John M. Logajan

STATE OF \_\_\_\_\_ )  
\_\_\_\_\_)ss.  
COUNTY OF \_\_\_\_\_ )

On this \_\_\_\_ day of \_\_\_\_\_, 1996 before me personally appeared John M. Logajan to me known and known to me to be the person described in and who executed the foregoing instrument, and he/she duly acknowledged to me that he/she executed the same for the uses and purposes therein set forth.

[SEAL]

\_\_\_\_\_  
Notary Public

IN TESTIMONY WHEREOF, I have hereunto set my hand this \_\_\_\_ day of \_\_\_\_\_, 1996.

\_\_\_\_\_  
Somvay Boualouang

STATE OF \_\_\_\_\_ )  
\_\_\_\_\_)ss.  
COUNTY OF \_\_\_\_\_ )

On this \_\_\_\_ day of \_\_\_\_\_, 1996 before me personally appeared Somvay Boualouang to me known and known to me to be the person described in and who executed the foregoing instrument, and he/she duly acknowledged to me that he/she executed the same for the uses and purposes therein set forth.

[SEAL]

\_\_\_\_\_  
Notary Public

IN TESTIMONY WHEREOF, I have hereunto set my hand this \_\_\_\_ day of \_\_\_\_\_, 1996.

Heng Lou

STATE OF \_\_\_\_\_ )  
 )ss.  
COUNTY OF \_\_\_\_\_ )

On this \_\_\_\_ day of \_\_\_\_\_, 1996 before me personally appeared Heng Lou to me known and known to me to be the person described in and who executed the foregoing instrument, and he/she duly acknowledged to me that he/she executed the same for the uses and purposes therein set forth.

[SEAL]

Notary Public

IN TESTIMONY WHEREOF, I have hereunto set my hand this \_\_\_\_ day of \_\_\_\_\_, 1996.

---

Mark D. Elpers

STATE OF \_\_\_\_\_ )  
 )ss.  
COUNTY OF \_\_\_\_\_ )

On this \_\_\_\_ day of \_\_\_\_\_, 1996 before me personally appeared Mark D. Elpers to me known and known to me to be the person described in and who executed the foregoing instrument, and he/she duly acknowledged to me that he/she executed the same for the uses and purposes therein set forth.

[SEAL]

Notary Public

IN TESTIMONY WHEREOF, I have hereunto set my hand this \_\_\_\_ day of \_\_\_\_\_, 1996.

## Matt Downs

STATE OF \_\_\_\_\_ )  
 )ss.  
COUNTY OF \_\_\_\_\_ )

On this \_\_\_\_ day of \_\_\_\_\_, 1996 before me personally appeared Matt Downs to me known and known to me to be the person described in and who executed the foregoing instrument, and he/she duly acknowledged to me that he/she executed the same for the uses and purposes therein set forth.

[SEAL]

Notary Public

IN TESTIMONY WHEREOF, I have hereunto set my hand this \_\_\_\_ day of \_\_\_\_\_, 1996.

Tammy Ferris

STATE OF \_\_\_\_\_ )  
 )ss.  
COUNTY OF \_\_\_\_\_ )

On this \_\_\_\_ day of \_\_\_\_\_, 1996 before me personally appeared Tammy Ferris to me known and known to me to be the person described in and who executed the foregoing instrument, and he/she duly acknowledged to me that he/she executed the same for the uses and purposes therein set forth.

[SEAL]

Notary Public

IN TESTIMONY WHEREOF, I have hereunto set my hand this \_\_\_\_ day of \_\_\_\_\_, 1996.

Adam Opoczynski

STATE OF \_\_\_\_\_ )  
 )ss.  
COUNTY OF \_\_\_\_\_ )

On this \_\_\_\_ day of \_\_\_\_\_, 1996 before me personally appeared Adam Opoczynski  
to me known and known to me to be the person described in and who executed the foregoing  
instrument, and he/she duly acknowledged to me that he/she executed the same for the uses and  
purposes therein set forth.

[SEAL]

Notary Public

IN TESTIMONY WHEREOF, I have hereunto set my hand this \_\_\_\_ day of \_\_\_\_\_, 1996.

David S. Russell

STATE OF \_\_\_\_\_ )  
 )ss.  
COUNTY OF \_\_\_\_\_ )

On this \_\_\_\_ day of \_\_\_\_\_, 1996 before me personally appeared David S. Russell to me known and known to me to be the person described in and who executed the foregoing instrument, and he/she duly acknowledged to me that he/she executed the same for the uses and purposes therein set forth.

[SEAL]

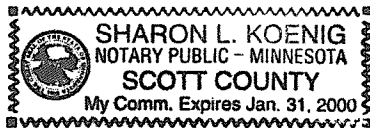
Notary Public

IN TESTIMONY WHEREOF, I have hereunto set my hand this 22 day of Mar, 1996.

Calvin G. Nelson

STATE OF Minnesota)  
 )ss.  
COUNTY OF Hennepin )

On this 22 day of May, 1996<sup>7</sup> before me personally appeared Calvin G. Nelson to  
me known and known to me to be the person described in and who executed the foregoing  
instrument, and he/~~she~~ duly acknowledged to me that he/~~she~~ executed the same for the uses and  
purposes therein set forth.



Notary Public

IN TESTIMONY WHEREOF, I have hereunto set my hand this \_\_\_\_ day of \_\_\_\_\_, 1996.

Niranjan R. Samant

STATE OF \_\_\_\_\_ )  
 )ss.  
COUNTY OF \_\_\_\_\_ )

On this \_\_\_\_ day of \_\_\_\_\_, 1996 before me personally appeared Niranjana R. Samant to me known and known to me to be the person described in and who executed the foregoing instrument, and he/she duly acknowledged to me that he/she executed the same for the uses and purposes therein set forth.

[SEAL]

Notary Public

IN TESTIMONY WHEREOF, I have hereunto set my hand this \_\_\_\_ day of \_\_\_\_\_, 1996.

\_\_\_\_\_  
Joseph F. Chiappetta

STATE OF \_\_\_\_\_ )  
\_\_\_\_\_)ss.  
COUNTY OF \_\_\_\_\_ )

On this \_\_\_\_ day of \_\_\_\_\_, 1996 before me personally appeared Joseph F. Chiappetta to me known and known to me to be the person described in and who executed the foregoing instrument, and he/she duly acknowledged to me that he/she executed the same for the uses and purposes therein set forth.

[SEAL]

\_\_\_\_\_  
Notary Public

IN TESTIMONY WHEREOF, I have hereunto set my hand this 22<sup>nd</sup> day of May, <sup>1997</sup>1996.

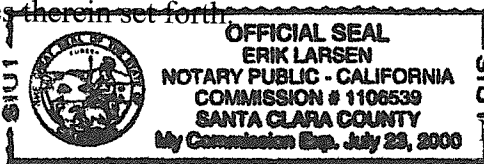
Scott Sarnikowski  
Scott Sarnikowski

STATE OF CALIFORNIA )  
\_\_\_\_\_)ss.  
COUNTY OF SANTA CLARA )

On this 22<sup>nd</sup> day of MAY, <sup>1997</sup>1996 before me personally appeared Scott Sarnikowski

to me known and known to me to be the person described in and who executed the foregoing instrument, and he/she duly acknowledged to me that he/she executed the same for the uses and purposes therein set forth.

[SEAL]



\_\_\_\_\_  
Notary Public