FORM PTO-1595 10-12-199	U.S. DEPARTMENT OF COMMERCE		
(Rev. 6-93)	R SHEET Patent and Trademark Office		
OMB No. 0651-0011 (exp. 4/94)	<b>Y</b> 53 687 -7 Mig: 12		
Tab settings → → → ▼ 101166623	3 • • • • • • • • • • • • • • • • • • •		
	missioner for Patents: ginal documents or copy thereof.		
1. Name of conveying party(ies):	2. Name and address of receiving party(ies)		
Regis J. NERO, Jr., Louis W. HIENER III, Richard A. BAIR, Jr., Frederick J. KIKO, Leo W. MANUEL II and Lester MINTZER	Name:       Tollgrade Communications, Inc.         Internal Address:		
Additional name(s of conveying party(ies) attached?  Ves  No			
3. Nature of conveyance:	Street Address: <u>103 Springer Building</u>		
🛛 Assignment 🗆 Merger	3411 Silverside Road		
□ Security Agreement □ Change of Name	City: <u>Wilmington</u>		
□ Other	State: <u>Delaware</u> ZIP: <u>19810</u>		
Execution Date: <u>May 22, 22, 22, 19, 26 and 22, 1998</u>	Additional name(s) & address(es) attached? 🗆 Yes 🛛 No		
A. Patent Application No.(s) PCT/US98/07613, filed April 17, 1998 Additional numbers a	B. Patent No.(s) attached? □ Yes ⊗ No		
5. Name and address of party to whom correspondence concerning document should be mailed: Name:	6. Total number of applications and 1 patents involved:		
Internal Address: Webb Ziesenheim Logsdon	7. Total fee (37 CFR 3.41)\$40.00		
Orkin & Hanson, P.C.	© Enclosed		
Street Address: _700 Koppers Building	Authorized to be charged to deposit account		
436 Seventh Avenue City: <u>Pittsburgh</u> State: <u>PA</u> ZIP: <u>15219-1818</u>	8. Deposit account number:		
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PATENT REEL: 010287 FRAME: 0900

## ASSIGNMENT

WHEREAS, WE, REGIS J. NERO, JR., LOUIS W. HIENER III, RICHARD A. BAIR, JR., FREDERICK J. KIKO, LEO W. MANUEL II and LESTER MINTZER, residing in Export, Pennsylvania; Plum Borough, Pennsylvania; Brackenridge, Pennsylvania; Carlsbad, California; San Diego, California; and Santa Ana, California, respectively, have invented certain new and useful improvements in TELEPHONY TEST SYSTEM WITH ADJUSTABLE OUTPUT IMPEDANCE.

AND, WHEREAS, TOLLGRADE COMMUNICATIONS, INC., a corporation of Delaware, having a place of business at 103 Springer Building, 3411 Silverside Road, Wilmington, Delaware 19810, hereinafter called the "assignee", is desirous of acquiring the entire right, title, and interest in and to said application and the inventions and improvements therein disclosed and claimed.

NOW, THEREFORE, for good and valuable consideration paid to us by said assignee, the receipt of which is hereby acknowledged, we do hereby assign, sell, transfer, and set over unto said assignee the entire right, title and interest, including all rights to claim priority in and to any and all improvements which are disclosed in the invention entitled: "TELEPHONY TEST SYSTEM WITH ADJUSTABLE OUTPUT IMPEDANCE", and which is found in PCT application serial no.  $\frac{PCT/US98/07613}{PCT/US98/07613}$  filed on April 17, 1998 and any legal equivalent thereof in a foreign country, including the right to claim priority, and all divisions, reissues, continuations, continuations-in-part, renewals, and/or extensions thereof, said assignee to have and to hold the interests herein assigned to the full ends of the terms of said Letters Patent and any and all divisions, reissues, continuations, continuations-in-part, renewals, and/or extensions thereof, respectively, as fully and entirely as the same would have been held and enjoyed by us had this assignment not been made.

To comply with 37 C.F.R. § 3.21 for recordal of this assignment, we hereby authorize and request our attorney to insert above the application serial number when it becomes known.

The Assistant Commissioner for Patents is requested to issue such Letters Patent in accordance herewith. We covenant that we are the lawful owners of the said application, inventions, and improvements, that the same are unencumbered, that no license has been granted to make, use, or vend the said inventions or improvements or any of them, and that we have the full right to make this assignment.

And for the consideration aforesaid, we agree jointly and individually that we will communicate to said assignee or the representatives thereof any facts known to us respecting said inventions and improvements, and will, upon request, but without expense to us, testify in any legal proceedings, sign all lawful papers, execute all divisional, reissue, continuation, continuation-in-part, renewal, and/or extension applications, make all rightful oaths, and generally do all other and further lawful acts, deemed necessary or expedient by said assignee or by counsel for said assignee, to assist or enable said assignee to obtain and enforce full benefits from the rights and interests herein assigned. This assignment shall be binding upon our heirs, executors, administrators, and/or assigns, and shall inure to the benefit of the heirs, executors, administrators, successors, and/or assigns, as the case may be, of said assignee.

EXECUTED May 22,1498, 1998 Regis / Nerg/ 5-22-98 Regis J. Nero, Jr.

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ss:

COMMONWEALTH OF PENNSYLVANIA

COUNTY OF ALLEGHENY

Before me, a Notary Public in and for the said County and Commonwealth, personally appeared Regis J. Nero, Jr., who acknowledged that he is the person who executed the foregoing assignment and acknowledged it to be his free and voluntary act and deed.

May Witness my hand and notarial seal this  $2m^d$  day of May

[NOTARJAL SEAL]

San the autil

Notarial Seal Sara M. Antol, Notary Public Harmar Twp., Allegherly County My Commission Expires Aug. 27, 2001 Member Penusylvania A. Condon of Notaries

EXECUTED _	22/5/98	1998 Joeus W. themen The	I
-		Louis W. Hiener III	

COMMONWEALTH OF PENNSYLVANIA

COUNTY OF ALLEGHENY

Before me, a Notary Public in and for the said County and Commonwealth, personally appeared Louis W. Hiener III who acknowledged that he is the person who executed the foregoing assignment and acknowledged it to be his free and voluntary act and deed.

:

ss:

Witness my hand and notarial seal this  $\frac{\partial \partial^{n}}{\partial d}$  day of  $M_{M}$ , 1998.

[NOTARIAL SEAL]

Notary Public

Notary Public

Notarial Seal Sara M. Antol, Notary Public Harmar Twp., Allegheny County My Commission Expires Aug. 27 Member, Pennsylvania Association of Notaries

EXECUTED \_

May 22, 1998 Richard A. Bair,

COMMONWEALTH OF PENNSYLVANIA

COUNTY OF ALLEGHENY

Before me, a Notary Public in and for the said County and Commonwealth, personally appeared Richard A. Bair, Jr., who acknowledged that he is the person who executed the foregoing assignment and acknowledged it to be his free and voluntary act and deed.

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ss:

Witness my hand and notarial seal this <u>32</u><sup>nd</sup> day of \_\_\_\_\_, 1998.

[NCTARIAL SEAL]

Notaria Sara M. Amorita and the Harman iwp., sileguene county My Commission Expression 201 201

Member. Pennsylwania Association of Notaries

EXECUTED MAY 19 1998( Frederick

COUNTY OF SALIFORNIA : SS:

Before me, a Notary Public in and for the said County and State, personally appeared Frederick J. Kiko who acknowledged that he is the person who executed the foregoing assignment and acknowledged it to be his free and voluntary act and deed.

Witness my hand and notarial seal this  $19^{\text{H}}$  day of 192, 1998.

Much Emigen

[NOTARIAL SEAL]



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Leo W. Manuel II

STATE OF CALIFORNIA

EXECUTED San Orac

COUNTY OF San Deyc

Before me, a Notary Public in and for the said County and State, personally appeared Leo W. Manuel II who acknowledged that he is the person who executed the foregoing assignment and acknowledged it to be his free and voluntary act and deed.

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: ss:

Witness my hand and notarial seal this  $\underline{-26^{m}}$  day of  $\underline{-26^{m}}$ , 1998.

[NOTARIAL SEAL]

Kolyn Schrum



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EXECUTED	May 22,,	1998	2

Lester Mintzer

: : ss: :

Before me, a Notary Public in and for the said County and State, personally appeared Lester Mintzer who acknowledged that he is the person who executed the foregoing assignment and acknowledged it to be his free and voluntary act and deed.

Witness my hand and notarial seal this  $\frac{22}{10}$  day of  $\frac{1}{10}$ , 1998.

-7-

[NOTARIAL SEAL]

STATE OF CALIFORNIA

COUNTY OF DRANGF

SANCTAB. Notary Public



**RECORDED: 10/07/1999**