IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE

RATES TECHNOLOGY INC., Plaintiff, v. PRIMUS TELECOMMUNICATIONS INC. and PRIMUS TELECOMMUNICATIONS GROUP INC. Defendants.	)	C.A. No. 07-441-JF

DECLARATION OF ROBERT L. EPSTEIN

I, Robert L. Epstein, hereby declare:

1. I am a partner in Epstein Drangel Bazerman & James, LLP, a law firm specializing in intellectual property matters, located at 60 East 42nd Street, Suite 820, New York, New York 10165. The matters stated below are true of my own knowledge, and if called as a witness, I could and would testify truthfully to the same.

2. I make this declaration in support of Plaintiff Rates Technology Inc.'s opposition to Defendant's Primus Telecommunications, Inc. and Primus Telecommunications Group, Inc.'s Motion To Dismiss Or, In The Alternative, Stay Plaintiff Rates Technology Inc.'s Complaint.

3. I am a patent attorney registered to practice before the United States Patent and Trademark Office (PTO) since 1973. I have over thirty years experience in preparing

and prosecuting patent applications, and representing clients in related patent matters, before the PTO.

4. I am admitted in good standing to practice before the courts of the State of New York, the United States District Courts for the Southern and Eastern Districts of New York, the Court of Appeals for the Second Circuit, the Court of Appeals for the Federal Circuit and the Supreme Court of the United States of America.

5. Over the last twenty two years, I have represented Rates Technology Inc. (RTI) on a number of intellectual property matters including: (a) the original prosecution before the PTO of the applications upon which U.S. Patent Nos. 5,425,085 ('085) and U.S. Patent No. 5,579,769 ('769), the RTI patents involved in this lawsuit (collectively the "RTI patents") are based, leading to the allowance of each of the RTI patents; (b) the 1999 re-examination by the PTO of each of the RTI patents, leading to the confirmation of the validity of all of the claims of each of the RTI patents; and (c) the current re-examination by the PTO of the '085. As a result, I am familiar with both RTI patents involved in this case, the prosecution history of each RTI patent, the re-examination history of each RTI patent and the references considered by the PTO in conjunction with the original prosecution and the re-examinations of each of the RTI patents.

6. RTI's Complaint against Primus in this case alleges, in part, that Primus directly and/or contributorily infringes the claims of '085 patent and the '769 patent. Only one of those patents, the '085 patent, is currently involved in a re-examination before the United Stats Patent and Trademark Office. The '769 patent is not currently under re-examination.

7. As is true with respect to all current re-examinations, all non-confidential documents in the current re-examination of the claims of the '085 patent are accessible on the United States Patent and Trademark Office website and hence are of public record, available for review by anyone having a computer with an Internet connection.

8. In its motion, Primus argues that RTI's Complaint should be dismissed because "RTI kept from Primus the fact that a request to re-examine the validity of the '085 claims had been filed in February 2006."

9. Primus cites no authority, and I am not aware of any authority, that requires a plaintiff to advise a defendant in a patent infringement suit that the claims asserted are the subject of a re-examination, or of the status of the re-examination, as such information is publicly available.

10. Primus cites no authority, and I am not aware of any authority, that supports the proposition that the failure of a plaintiff to advise a defendant in a patent infringement suit about a re-examination is grounds for dismissal of the patent infringement lawsuit under Rule 12(b)(6) or otherwise.

11. Primus cites no authority, and I am not aware of any authority, that supports the proposition that patent claims involved in a re-examination are considered to be are invalid or unenforceable until there has been a final decision that the claims are invalid or unenforceable.

12. Primus mischaracterizes the status of the current re-examination of the claims of the '085 patent. A request for re-examination is not granted unless the PTO believes that the requestor has raised a prima facie new issue relating to patentability. Accordingly, most re-examinations involve at least the issuance of a first Office Action

with a preliminary rejection of claims based upon the prior art patents or publications presented by the requester. However, the issuance of an Office Action with a preliminary rejection is by no means a determination that the rejected claims are invalid or unenforceable.

13. Once the first Office Action with a preliminary rejection is issued in a re-examination, the patent owner has an opportunity to present arguments as to why the claims are not rendered unpatentable by the prior art cited by the requestor and/or, under certain circumstances, why the cited prior art is not applicable because of an earlier date of invention of the patented invention.

14. In the present re-examination, there has been a first Office Action with a preliminary rejection of claims 1-5, 7-16 and 18-26 of the '085 patent and a confirmation of the patentability of claims 6 and 17, see Exhibit K to the Dowd Declaration.

15. However, the Mr. Dowd fails to advise the Court that RTI has filed a response to the preliminary rejection set forth in the first Office Action, a copy of which is presented herewith as Exhibit 1. A review of RTI's response, also publicly available on the United States Patent and Trademark website, shows that RTI has advanced significant arguments on the merits with regard to each reference cited by the Examiner as a basis for rejection of claims under 35 USC 102 of the Patent Law (anticipation) as well as the declarations of the inventors to demonstrate an earlier date of invention of the patented invention than the dates of the references cited as a basis of rejection of claims under 35 USC 103 of the Patent Law (obviousness).

16. RTI has good grounds to believe that the patentability of all of the claims of the '085 patent will be confirmed by the United States Patent and Trademark Office in this re-examination, as they were in the 1999 re-examination of the '085 patent.

17. By statute, each claim of an issued patent is presumed valid and it is the burden of one who asserts invalidity to establish invalidity.

35 USC 282 reads in pertinent part:

> **§ 282 Presumption of validity; defenses**
>
> A patent shall be presumed valid. Each claim of a patent whether independent, dependent, or multiple dependent form) shall be presumed valid independently of the validity of other claims; ... The burden of establishing invalidity of a patent or any claim thereof shall rest on the party asserting such invalidity.

18. I have also provided litigation support to RTI's counsel in a variety of litigations involving the patents asserted in this lawsuit by RTI. Several of those litigations involved VoIP telephone systems operated by various Internet telephone service providers. As a result of my work on these litigations, I have become familiar with the components of VoIP telephone systems and the operation thereof.

19, I have been advised that Primus operates a VoIP telephone service called Lingo and supplies to subscribers of the Lingo VoIP telephone service certain devices, called Analogy Telephone Adapters (ATA's), that are configured especially for use in the Lingo VoIP telephone system.

20. Among other things, RTI's Complaint alleges that the Lingo VoIP system directly infringes the claims of the '085 patent and the '769 patent and further that the

Primus ATA's specifically configured for use with the Lingo VoIP telephone system contributorily infringe the claims of the'085 patent.

21. ATA's are devices that are connected between the telephone of the user and the telephone system of the VoIP service provider. Generally speaking, the function of an ATA is to receive analog signals from the calling telephone and to convert those signals into digital signals that are transferred to and used by the VoIP telephone system, which routes the call to its destination and maintains the connection between the calling telephone and the called telephone for the duration of the call. As part of that function, the ATA provides current to power the calling telephone. In order for the ATA to communication with the service provider's VoIP telephone system, a communications protocol understood by the ATA and by the VoIP telephone system is required. RTI believes that the Primus ATA's are made for use exclusively with the Lingo VoIP telephone system because they utilize a communications protocol that is unique to the Lingo VoIP telephone system. Because of that, Primus' ATA's configured to use the Lingo communications protocol cannot be used with any other telephone system.

22. Primus argues that RTI acted in bad faith by pursuing this lawsuit because Primus told RTI that it does not infringe the claims of the RTI patents. In that regard, Primus' asserts that its ATA's themselves do not have many of the elements of the claims of the '085 patent and that the Lingo VoiP telephone system does not have a database that is automatically updated, a requirement of the claims of the '769 patent.

23. No testimonial or documentary technical information has ever been provided by Primus to RTI, or is now provided by Primus to this Court, to substantiate Primus' defense of non-infringement. Clearly, just because a defendant in a patent

infringement suit says it does not infringe (which virtually all defendants in patent infringement lawsuits do) a plaintiff is not obligated to take their unsubstantiated word for it and refrain from pursuing its infringement claim. Likewise, a court should not take a defendant's unsubstantiated denial of a claim and on that basis dismiss a complaint in an infringement lawsuit.

24. Further, Primus' non-infringement defenses are totally without merit.

Regarding contributory infringement of the claims of the '085 patent by the ATA's made by Primus for use with the Lingo VoiP telephone system, contributory infringement does not require that the product in question (here the Primus ATA) itself meet each element of the claims.

Contributory infringement is defined by statute:

> **§ 271 Infringement of patent**
>
> (c) Whoever offers to sell or sells within the United States or imports into the United States a component of a patented machine, manufacture, combination or composition, or a material or apparatus for use in practicing a patented process, constituting a material part of the invention, knowing the same to be especially made or especially adapted for use in an infringement of such patent, and not a staple article or commodity of commerce suitable for substantial non-infringing use, shall be liable as a contributory infringer.

A finding of contributory infringement requires only that the infringer sell a component of an infringing system that is not suitable for substantial non-infringing use. Accordingly, even if all of Primus' assertions about what its ATA's does not have are true, the sale of the Primus ATAs specifically configured for use in the Lingo VoIP

telephone system still contributorily infringe the '085 patent claims if the Lingo VoIP system directly infringes the claims.

25. VoIP telephone systems rapidly make call routing decisions for each of the many telephone calls they handle based upon a variety of cost related factors. That is accomplished by storing the cost related information in a database. When a call is dialed, the database is assessed to determine cost related information for possible routes for the call. The costs are then compared and a route for each call is selected.

In order for the system to route calls efficiently, it is necessary that the database that stores the cost related information have current cost information stored in it. Accordingly, every VoIP system that RTI knows of automatically updates the database on a periodic basis because there is a great deal of cost related information that goes into routing the high volume of calls handled by the VoIP system and that cost information is changing constantly.

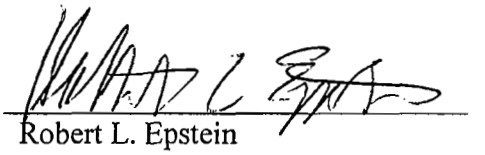
26. On that basis, RTI believes that it is virtually impossible that any VoIP telephone system could operate in the real world without a system for automatically updating the cost related information in its routing databases on a period basis.

27. In view of the above, Primus' allegations that RTI has acted in bad faith in pursuing its infringement claims because Primus has asserted wholly unsupported (and in fact, unbelievable) defenses of non-infringement is totally without merit.

I declare under penalty of perjury under the laws of the United States of America

and the State of Delaware that the foregoing is true and correct.

Executed this 27th day of September 2007, at New York City, New York.



Robert L. Epstein

EXHIBIT 1

PTO/SB/21 (04-07)
Approved for use through 09/30/2007. OMB 0651-0031
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TRANSMITTAL FORM

(to be used for all correspondence after initial filing)

Total Number of Pages in This Submission

Patent No.	5,425,085
Granted	June 13, 1995
First Named Inventor	WEINBERGER, Gerald J.
Art Unit	3992
Examiner Name	Joseph R. Pokrzywa
Attorney Docket Number	1690-110

ENCLOSURES *(Check all that apply)*

- [✓] Fee Transmittal Form
- [ ] Fee Attached
- [✓] Amendment/Reply
  - [ ] After Final
  - [ ] Affidavits/declaration(s)
- [ ] Extension of Time Request
- [ ] Express Abandonment Request
- [ ] Information Disclosure Statement
- [ ] Certified Copy of Priority Document(s)
- [ ] Reply to Missing Parts/ Incomplete Application
  - [ ] Reply to Missing Parts under 37 CFR 1.52 or 1.53
- [ ] Drawing(s)
- [ ] Licensing-related Papers
- [ ] Petition
- [ ] Petition to Convert to a Provisional Application
- [ ] Power of Attorney, Revocation
- [ ] Change of Correspondence Address
- [ ] Terminal Disclaimer
- [ ] Request for Refund
- [ ] CD, Number of CD(s) _____
  - [ ] Landscape Table on CD
- [ ] After Allowance Communication to TC
- [ ] Appeal Communication to Board of Appeals and Interferences
- [ ] Appeal Communication to TC **(Appeal Notice, Brief, Reply Brief)**
- [ ] Proprietary Information
- [ ] Status Letter
- [✓] Other Enclosure(s) (please Identify below):

Supplemental Response
Return Receipt Postcard
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Remarks

SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT

Firm Name	EPSTEIN DRANGEL BAZERMAN & JAMES, LLP		
Signature			
Printed name	Robert L. Epstein		
Date	July 26, 2007	Reg. No.	26451

CERTIFICATE OF TRANSMISSION/MAILING

I hereby certify that this correspondence is being facsimile transmitted to the USPTO or deposited with the United States Postal Service with sufficient postage as ~~first class~~ Express mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on the date shown below: Express Mail No. EB 201870644 US

Signature			
Typed or printed name	Robert L. Epstein	Date	July 26, 2007

This collection of information is required by 37 CFR 1.5. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and1.14. This collection is estimated to 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

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Effective on 12/08/2004.
Fees pursuant to the Consolidated Appropriations Act, 2005 (H.R. 4818).

FEE TRANSMITTAL
For FY 2007

☑ Applicant claims small entity status. See 37 CFR 1.27

TOTAL AMOUNT OF PAYMENT ($)

Complete if Known	
Patent No.	5,425,085
Granted	June 13, 1995
First Named Inventor	WEINBERGER, Gerald J.
Examiner Name	Joseph R. Pokrzywa
Art Unit	3992
Attorney Docket No.	1690-110

METHOD OF PAYMENT (check all that apply)

☐ Check ☐ Credit Card ☐ Money Order ☐ None ☐ Other (please identify): _____

☑ Deposit Account Deposit Account Number: 502978 Deposit Account Name: EPSTEIN DRANGEL

For the above-identified deposit account, the Director is hereby authorized to: (check all that apply)

☐ Charge fee(s) indicated below ☐ Charge fee(s) indicated below, **except for the filing fee**

☑ Charge any additional fee(s) or underpayments of fee(s) under 37 CFR 1.16 and 1.17 ☑ Credit any overpayments

WARNING: Information on this form may become public. Credit card information should not be included on this form. Provide credit card information and authorization on PTO-2038.

FEE CALCULATION

1. BASIC FILING, SEARCH, AND EXAMINATION FEES

	FILING FEES		SEARCH FEES		EXAMINATION FEES		
		Small Entity		Small Entity		Small Entity	
Application Type	Fee ($)	Fee ($)	Fee ($)	Fee ($)	Fee ($)	Fee ($)	Fees Paid ($)
Utility	300	150	500	250	200	100	
Design	200	100	100	50	130	65	
Plant	200	100	300	150	160	80	
Reissue	300	150	500	250	600	300	
Provisional	200	100	0	0	0	0	

2. EXCESS CLAIM FEES

Fee Description	Fee ($)	Small Entity Fee ($)
Each claim over 20 (including Reissues)	50	25
Each independent claim over 3 (including Reissues)	200	100
Multiple dependent claims	360	180

Total Claims		Extra Claims	Fee ($)	Fee Paid ($)
_____	- 20 or HP =	_____	x _____	= _____

HP = highest number of total claims paid for, if greater than 20.

Indep. Claims		Extra Claims	Fee ($)	Fee Paid ($)
_____	- 3 or HP =	_____	x _____	= _____

HP = highest number of independent claims paid for, if greater than 3.

Multiple Dependent Claims	
Fee ($)	Fee Paid ($)
_____	_____

3. APPLICATION SIZE FEE

If the specification and drawings exceed 100 sheets of paper (excluding electronically filed sequence or computer listings under 37 CFR 1.52(e)), the application size fee due is $250 ($125 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).

Total Sheets		Extra Sheets		Number of each additional 50 or fraction thereof	Fee ($)	Fee Paid ($)
_____	- 100 =	_____	/ 50 =	_____ (round up to a whole number)	x _____	= _____

4. OTHER FEE(S)

	Fees Paid ($)
Non-English Specification, $130 fee (no small entity discount)	
Other (e.g., late filing surcharge): _____	

SUBMITTED BY

Signature	Registration No. (Attorney/Agent) 26451	Telephone (212) 292-5390
Name (Print/Type) Robert L. Epstein		Date July 26, 2007

This collection of information is required by 37 CFR 1.136. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 30 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

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In re Reexamination of U.S. Patent No. 5,425,085

Inventor: Gerald J. Weinberger et al.

Title: LEAST COST ROUTING DEVICE FOR SEPARATE CONNECTION INTO PHONE LINE

July 26, 2007
New York, New York 10165

Reexamination Control No.: 90/007,939

Reexamination Examiner : Joseph R. Pokrzywa

Art Unit: 3992

----------x

1690-110

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SUPPLEMENTAL RESPONSE

This communication is supplemental to the response filed June 22, 2007 which was in response to the Ex Parte Reexamination Communication mailed May 21, 2007.

STATUS OF THE CLAIMS

1. (pending) A device for routing telephone calls along a least cost route originating from a first telephone to a second telephone having an associated telephone number via a network having a plurality of alternate communication switch paths corresponding to different carriers which can be chosen to route the call and normally providing a current to said first telephone when said first telephone is in use, comprising

a housing forming an enclosure and comprising first jack means for connection to said first telephone and second jack means for connection to said network

switch means operatively connected to said first jack means for disconnecting said first telephone from said network,

means operatively connected to said switch means for generating a current through said switch means to the first telephone, corresponding to a current provided by said network,

database means for storing billing rate parameters for determining a least cost communication path for call corresponding to said telephone number,

means operatively connected to said switch means for detecting and storing said telephone number originating from the first telephone

means for addressing said database means for identifying a plurality of communication switch paths to said second telephone and the cost rate of each path,

means for comparing the cost rate of each path so as to determine a least cost route, and

means operatively connected to said switch means and said second jack means for generating a number sequence corresponding to a desired carrier so that said call is routed through said second jack means to the selected communication path and carrier to establish a switched connection between said first telephone and said second telephone phone.

2. (pending) The device according to claim 1 wherein said least cost communication path parameters include the time and date of the call.

3. (pending) The device according to claim 1 wherein said switch means connects said first telephone to said network during an incoming call.

4. (pending) The device according to claim 1 including an internal power supply

connected to said means for generating a current.

5. (pending) The device according to claim 1 wherein said means for generating said number sequence comprises a dual tone multifrequency generator.

6. (pending) The device according to claim 1 wherein said housing is substantially cylindrical with opposing ends, wherein said first jack means is positioned on one end and said second jack means is positioned on the opposite end.

7. (pending) The device according to claim 1 wherein said detecting means includes a dual tone multifrequency detector.

8. (pending) The device according to claim 1 including means for maintaining the time and date so as to determine the least cost route based on the time and date of the call.

9. (pending) The device according to claim 1 wherein said cost may be given a bias for preference to a given carrier.

10. (pending) The device according to claim 1 including means for updating said database means with a current billing rate schedule.

11. (pending) The device according to claim 10 wherein said update means

includes a circuit board mounted inside said enclosure, and said database means comprises a removable chip on said circuit board, and means for accessing said removable chip from outside said housing.

12. (pending) The device according to claim 11 wherein said means for accessing said removable chip includes a removable cover on said housing for accessing said chip.

13. (pending) The device according to claim 10 wherein said update means includes a modem for receiving signals through said telephone line and downloading the update information.

14. (pending) A device for routing telephone calls along a least cost route originating from a first telephone to a second telephone having an associated telephone number via a network having a plurality of alternate communication switch paths corresponding to different carriers which can be chosen to route the call and normally providing a current to said first telephone when said first telephone is in use, comprising

a housing forming an enclosure and comprising first jack means for connection to said first telephone, and second jack means for connection to said network,

means positioned on said housing for visibly displaying the time and date,

switch means operatively connected to said first jack means for disconnecting said first telephone from said network,

means operatively connected to said switch means for generating a current through said switch means to said first telephone corresponding to said current provided by said network,

means operatively connected to said time and date display means and said switch means for receiving a predetermined dial sequence from said first telephone corresponding to a predetermined date and time to be displayed and

means for changing the displayed time and date based on the received signals,

database means for storing billing rate parameters for determining a least cost communication path for a call corresponding to said telephone number, based on such factors as the time and date of the call,

means operatively connected to said switch means for detecting and storing said telephone number originating from the first telephone,

means for addressing said database means for identifying a plurality of

communication switch paths to said second telephone and the cost rate of each path,

means for comparing the cost rate of each path so as to determine a least cost route, and means operatively connected to said switch means and said second jack means for generating a number sequence corresponding to a desired carrier so that said call is routed through said second jack means to the selected communication path and carrier to establish a switched connection between said first telephone and said second telephone.

15. (pending) The device according to claim 14 including means positioned on said housing for manually changing the date and time of the display.

16. (pending) The device according to claim 14 wherein said means for generating said number sequence comprises a dual tone multifrequency generator.

17. (pending) The device according to claim 14 wherein said housing is substantially cylindrical with opposing ends, wherein said first jack means is positioned on one end and second jack means is positioned on the other end.

18. (pending) The device according to claim 14 wherein said detecting means includes a dual tone multifrequency detector.

19. (pending) The device according to claim 14 including means for updating said database means with a current billing rate schedule.

20. (pending) The device according to claim 19 wherein said update means includes a circuit board mounted inside said enclosure, and said database means comprises a removable chip on said circuit board, and means for accessing said removable chip from outside said housing.

21. (pending) The device according to claim 20 wherein said means for accessing said removable chip includes a removable cover on said housing for accessing said chip.

22. (pending) The device according to claim 19 wherein said update means includes a modem for receiving signals through said telephone line and downloading the update information.

23. (pending) The device according to claim 14 wherein said cost may be given a bias for preference to a given carrier.

24. (pending) An apparatus for displaying a time quantity which can be initiated from a telephone of the type capable of generating dual tone multifrequency signals comprising

a housing forming an enclosure and comprising first jack means for interconnection to said telephone, and second jack means for connection to a telephone switching network, said network normally providing a current to said telephone when said telephone is in use,

means positioned on said housing for visibly displaying a time quantity,

switch means operatively connected to said first jack means for disconnecting said telephone from said network,

means operatively connected to said switch means for generating a current through said switch means to said telephone corresponding to said current provided by said network,

means operatively connected to said means for displaying a time quantity and said first jack means for receiving said dual tone multifrequency signals, from said telephone when said telephone is disconnected from said network, said signals corresponding to said time quantity and for changing the displayed time quantity based on signals from said telephone,

and means responsive to a dialing sequence originating on said telephone and operatively connected to said switch means for connecting said telephone to said network.

25. (pending) The apparatus according to claim 24 wherein said time quantity is the time of day.

26. (pending) The apparatus according to claim 24 wherein said time quantity is the date.

AMENDMENTS TO THE CLAIMS (Marked-up Version)

27 (new) A device for routing telephone calls along a least cost route originating from a first telephone to a second telephone having an associated telephone number via a network having a plurality of alternate communication switch paths corresponding to different carriers which can be chosen to route the call and normally providing a current to said first telephone when said first telephone is in use, comprising

a housing forming an enclosure and comprising first jack means for connection to said first telephone and second jack means for connection to said network,

switch means operatively connected to said first jack means for disconnecting said first telephone from said network during routing of a telephone call from said first telephone,

means operatively connected to said switch means for generating a current through said switch means to the first telephone, corresponding to a current provided by said network, when said first telephone is disconnected from said network by said switch means,

database means for storing billing rate parameters for determining a least cost communication path for call corresponding to said telephone number,

means operatively connected to said switch means for detecting and storing said telephone number originating from the first telephone,

means for addressing said database means for identifying a plurality of communication switch paths to said second telephone and the cost rate of each path,

means for comparing the cost rate of each path so as to determine a least cost route, and

means operatively connected to said switch means and said second jack means for generating a number sequence corresponding to a desired carrier so that said call is routed through said second jack means to the selected communication path and carrier to establish a switched connection between said first telephone and said second telephone phone.

28. (new) A device for routing telephone calls along a least cost route originating from a first telephone to a second telephone having an associated telephone number via a network having a plurality of alternate communication switch paths corresponding to different carriers which can be chosen to route the call and normally providing a current to said first telephone when said first telephone is in use, comprising

a housing forming an enclosure and comprising first jack means for connection to said first telephone, and second jack means for connection to said network, means positioned on said housing for visibly displaying the time and date,

switch means operatively connected to said first jack means for disconnecting said first telephone from said network during routing of a telephone call from said first telephone,

means operatively connected to said switch means for generating a current through said switch means to said first telephone corresponding to said current provided by said network, when said first telephone is disconnected from said network by said switch means,

means operatively connected to said time and date display means and said switch means for receiving a predetermined dial sequence from said first telephone corresponding to a predetermined date and time to be displayed,

means for changing the displayed time and date based on the received signals,

database means for storing billing rate parameters for determining a least cost communication path for a call corresponding to said telephone number, based on

such factors as the time and date of the call,

means operatively connected to said switch means for detecting and storing said telephone number originating from the first telephone,

means for addressing said database means for identifying a plurality of communication switch paths to said second telephone and the cost rate of each path,

means for comparing the cost rate of each path so as to determine a least cost route, and means operatively connected to said switch means and said second jack means for generating a number sequence corresponding to a desired carrier so that said call is routed through said second jack means to the selected communication path and carrier to establish a switched connection between said first telephone and said second telephone.

29. (new) An apparatus for displaying a time quantity which can be initiated from a telephone of the type capable of generating dual tone multifrequency signals comprising

a housing forming an enclosure and comprising first jack means for interconnection to said telephone, and second jack means for connection to a telephone switching network, said network normally providing a current to said

telephone when said telephone is in use, means positioned on said housing for visibly displaying a time quantity,

switch means operatively connected to said first jack means for disconnecting said telephone from said network,

means operatively connected to said switch means for generating a current through said switch means to said telephone corresponding to said current provided by said network, when said telephone is disconnected from said network by said switch means,

means operatively connected to said means for displaying a time quantity and said first jack means for receiving said dual tone multifrequency signals, from said telephone when said telephone is disconnected from said network, said signals corresponding to said time quantity and for changing the displayed time quantity based on signals from said telephone, and means responsive to a dialing sequence originating on said telephone and operatively connected to said switch means for connecting said telephone to said network.

AMENDMENTS TO THE CLAIMS (Clean Version)

27 (new) A device for routing telephone calls along a least cost route originating from a first telephone to a second telephone having an associated telephone number via a network having a plurality of alternate communication switch paths corresponding to different carriers which can be chosen to route the call and normally providing a current to said first telephone when said first telephone is in use, comprising

a housing forming an enclosure and comprising first jack means for connection to said first telephone and second jack means for connection to said network,

switch means operatively connected to said first jack means for disconnecting said first telephone from said network during routing of a telephone call from said first telephone,

means operatively connected to said switch means for generating a current through said switch means to the first telephone, corresponding to a current provided by said network, when said first telephone is disconnected from said network by said switch means,

database means for storing billing rate parameters for determining a least cost communication path for call corresponding to said telephone number,

means operatively connected to said switch means for detecting and storing said telephone number originating from the first telephone,

means for addressing said database means for identifying a plurality of communication switch paths to said second telephone and the cost rate of each path,

means for comparing the cost rate of each path so as to determine a least cost route, and

means operatively connected to said switch means and said second jack means for generating a number sequence corresponding to a desired carrier so that said call is routed through said second jack means to the selected communication path and carrier to establish a switched connection between said first telephone and said second telephone phone.

28. (new) A device for routing telephone calls along a least cost route originating from a first telephone to a second telephone having an associated telephone number via a network having a plurality of alternate communication switch paths corresponding to different carriers which can be chosen to route the call and

normally providing a current to said first telephone when said first telephone is in use, comprising

a housing forming an enclosure and comprising first jack means for connection to said first telephone, and second jack means for connection to said network, means positioned on said housing for visibly displaying the time and date,

switch means operatively connected to said first jack means for disconnecting said first telephone from said network during routing of a telephone call from said first telephone,

means operatively connected to said switch means for generating a current through said switch means to said first telephone corresponding to said current provided by said network, when said first telephone is disconnected from said network by said switch means,

means operatively connected to said time and date display means and said switch means for receiving a predetermined dial sequence from said first telephone corresponding to a predetermined date and time to be displayed,

means for changing the displayed time and date based on the received signals,

database means for storing billing rate parameters for determining a least cost

communication path for a call corresponding to said telephone number, based on such factors as the time and date of the call,

means operatively connected to said switch means for detecting and storing said telephone number originating from the first telephone,

means for addressing said database means for identifying a plurality of communication switch paths to said second telephone and the cost rate of each path,

means for comparing the cost rate of each path so as to determine a least cost route, and means operatively connected to said switch means and said second jack means for generating a number sequence corresponding to a desired carrier so that said call is routed through said second jack means to the selected communication path and carrier to establish a switched connection between said first telephone and said second telephone.

29. (new) An apparatus for displaying a time quantity which can be initiated from a telephone of the type capable of generating dual tone multifrequency signals comprising

a housing forming an enclosure and comprising first jack means for interconnection to said telephone, and second jack means for connection to a

telephone switching network, said network normally providing a current to said telephone when said telephone is in use, means positioned on said housing for visibly displaying a time quantity,

switch means operatively connected to said first jack means for disconnecting said telephone from said network,

means operatively connected to said switch means for generating a current through said switch means to said telephone corresponding to said current provided by said network, when said telephone is disconnected from said network by said switch means,

means operatively connected to said means for displaying a time quantity and said first jack means for receiving said dual tone multifrequency signals, from said telephone when said telephone is disconnected from said network, said signals corresponding to said time quantity and for changing the displayed time quantity based on signals from said telephone, and means responsive to a dialing sequence originating on said telephone and operatively connected to said switch means for connecting said telephone to said network.

REMARKS

The patented invention relates to a device for routing telephone calls along a least cost route between a first telephone, where the call originates by the caller dialing the digits of the telephone number of the called telephone, and a second telephone where the call is received. The routing takes place through a network. The network includes a plurality of alternate communication paths along which the call can be routed.

Those communication paths, in the context of the public switched telephone network as it existed at the time the invention was made, included hundreds of local and long-distance telephone service carriers in the United States alone. AT&T, MCI and Sprint are probably the most well known of the hundreds of competing carriers.

Those carriers offer different rates for telephone calls depending, for example, on the time of day, the day of week, and the destination. Other factors may also influence the cost of calls.

A caller can choose which company he or she wants to carry the call by dialing a prefix or access code (such as 10-288 for AT&T or 10-624 for MCI) before dialing the destination telephone number. However, because the rates change so often, and because there are so many carriers, it is difficult for the caller to determine which carrier is offering the best rates for the call that the caller wishes to make. In addition, the public utility commissions of the various states, and the federal government, set tariffs on call rates. Moreover, the tariffs and call rates change frequently.

With so many factors influencing the cost of calls, the patented device is of great benefit because it includes a database of the current call rates and a means for automatically determining which carrier offers the best rate for a particular call.

The telephone network comprises a group of telephones (located in residences or businesses, for example) connected to a central office where the connections between calling telephone and called telephones are made. Each telephone is connected to a central office by a pair of wires known as the "local loop". One wire of the local loop is called the "tip", and the other wire of the pair is called the "ring".

The central office contains the switching equipment that connects calls from one caller to another. The central office also contains a power source that powers the network, signaling equipment, and other equipment for supervising the progress of calls. Each central office is connected to other central offices and to the switching facilities of intermediate and long-distance networks.

A telephone has two basic states. In the idle state, the receiver (also known as the handset) is resting in the cradle ("switchhook") of the telephone. This state is known as the "on-hook" state. Although the circuit between the central office and the transmission and signaling circuitry of the telephone is open in the on-hook state, the central office is always electrically connected to the telephone's ringer circuitry.

Lifting the handset off the cradle activates the telephone by completing the circuit between the telephone and the central office, allowing current provided by the central office to flow through the local loop. This active state is known as "off-hook" state. The current provided by the central office to the telephone has two components: a DC

(constant) current for powering the telephone, and an AC current for signaling and transmission.

The central office senses that current is flowing through the local loop and thus knows that the telephone is in operation. The central office then sends a dial tone to the telephone to let the caller know that the central office is ready to accept a telephone number (the "address"). The caller then dials the number, and the central office switch attempts to connect the caller to the called telephone. If the called telephone is in use (already off-hook), the central office returns a busy signal to the originating telephone. Otherwise, the central office returns a ringing signal. (Dial tones, busy signals, rings, and like signals are known as "call-progress" signals.) When the user of the called telephone picks up the handset, a communication link is established. When either telephone is hung up (returned to the on-hook condition), the local telephone company switch associated with that telephone senses the transition and initiates action that returns both telephone lines to their idle states.

Thus, telephones have two functions: signaling and transmission. Signaling is further divided into "supervision" and "addressing." Supervision signals are those that let the central office know the state of the telephone and enable the telephone to seize a line for making a call (i.e., to connect into the central office switching equipment). Addressing signals are those for providing the telephone number of the destination telephone to the network. Older rotary telephone signal an address by means of pulse dialing, which interrupts the steady DC current in the local loop. Modern touch tone telephones signal by means of a combination of audio tones known as "DTMF" (dual tone multifrequency). The transmission function is simply the sending of speech or data

over the network. Thus, the purpose of a telephone is to get the attention of the network and to send address information so that the central office can establish the communication path to the called telephone (which is achieved through signaling), enabling a conversation or data exchange (transmission).

The patented invention is a device that is designed to be interposed between the originating telephone and the network. It intercepts the digits dialed by the originating telephone, ascertains the cost of the possible routes for the call based on the dialed digits, compares the cost to select a route, provides the necessary access code to the dialed digits to tell the central office how to route the call (which carrier to select) and then sends to the access code and dialed digits to the network.

The device accomplishes those tasks through the use route selection circuits which detect and store the digits as they are dialed, address a memory having billing information for possible routes based on the dialed digits to obtain the cost of each route through which the dialed call can be sent, compare the costs to select a route, and provide the appropriate access code for insertion into the dialed number to reflect the chosen route.

However, during the time that the route selection is taking place, it is necessary to prevent the digits that are dialed at the originating telephone from being sent to the network central office. In other words, the signaling function of the originating telephone is disabled during the period of time that route selection is taking place in the patented device. That function is performed by "switch means" and a current generator which is connected to that switch means. Those elements are required in all of the claims in the patent under reexamination.

The "switch means" consists of one or more switches for controlling a circuit so that one state or position permits signaling between the originating telephone and the network and a second state or position disables signaling between the originating telephone and the network. In other words, the switch means is a mechanism for isolating the telephone addressing signals (i.e., the number dialed) from the telephone network.

The embodiment of the switch means element in the specification includes the "2 Form C" switch arrangement shown in Fig. 2 (block 36) of the patent. A "2 Form C" switch is also known in electrical engineering as a "double-pole, double-throw" switch. There are many configurations of switches--whether Form A, B, or C switches, shunting mechanisms, relays, or other mechanical or solid state devices--that could be easily substituted for the 2 Form C switch to accomplish the same function (disconnecting the originating telephone form the network), to get the same result (isolation of the originating telephone from the network during the period when the call is being routed).

The means connected to the switch means for generating a current through the switch means, corresponding to a current provided by the network, is local circuitry or equivalents that, when put in connection with the originating telephone by operation of the switch means, provides power to excite or operate the telephone that substitutes for the power that would otherwise be provided by the network.

One embodiment of this means for generating a current is disclosed in the specification as the "local CO current source 38" at col. 3, lines 54-56, and in Fig. 2, block 38. According to Fig. 2, this circuitry draws power from the telephone network and converts it to a current capable of energizing the telephone. There are many

configurations of circuitry that would be capable of performing this current generating function. Such circuitry could include current regulators, voltage regulators, voltage regulators configured as current regulators, and any other circuitry capable of providing power to energize the originating telephone.

Aside form the above, it should be noted that the circuit for detecting and storing the dialed number is required by the claims to be connected to the switch means. That circuitry detects the tones associated with the telephone number entered by the caller (the user of the originating telephone) and places data corresponding to that dialed telephone number into memory or a storage device. Such circuitry could include, but is not limited to, the DTMF tone detector described in the specification (Fig. 2, block 88; col. 2, lines 24-27). There are a variety of common and readily available integrated circuits with DTMF detection capabilities that typically include registers or other circuitry capable of storing one or more digits of the telephone.

Further, the claims require a means for generating a number sequence (such as the access code) corresponding to a desired carrier to route the call. That means is required to be connected to the switch means and to the jack (second jack means) that connects the device to the network.

In the patent, that means is disclosed as a signal generator (such as a DTMF tone generator or equivalent circuitry), which, among other functions, generates the tone signals corresponding to the numerical prefix of the selected carrier. Those tone signals are then sent through the second jack means (i.e., the connection between the device and the network) out to the network and the telephone company's central office, which recognizes the signals as the destination for the call and makes the appropriate

connections through the central office switches to allow for communication between the first and second telephones.

Thus, all of the claims of the patent require:

"switch means operatively connected to said first jack means for disconnecting said first telephone from said network, " and

"means operatively connected to said switch means for generating a current through said switch means to the first telephone, corresponding to a current provided by said network,".

In addition, claims 1 through 23 each require:

"means operatively connected to said switch means for detecting and storing said telephone number originating from the first telephone" and

"means operatively connected to said switch means and said second jack means for generating a number sequence corresponding to a desired carrier so that said call is routed through said second jack means to the selected communication path and carrier to establish a switched connection between said first telephone and said second telephone phone."

Further, the patented call routing device requires: (a) a database that stores billing rate parameters for determining a least cost route; (b) a circuit for addressing the database based on the dialed digits stored by the detecting and storing means to identify a plurality of routes and the cost rate for each of those routes; and (c) a circuit for comparing the cost rate of each route so as to determine a least cost route.

In order to anticipate any of the patent claims 1 - 23, a reference must include both: (a) the "switch means" that operates and is connected as specified in the claims; and (b) the routing circuitry (database means, addressing means and cost rate comparison means) as set forth in the claims. Neither the Vodavi, Isoetec, STC '595 nor the Jabs et al. references teaches both of those aspects of the patented invention.

Regarding claims 24 – 26, Isoetec does not teach the "switch means" or current generating means connected to the switch means for generating current through the switch means, and hence does not anticipate claims 24 - 26.

Claims 1-5, 7-10 and 13 have been rejected under 35 USC 102(b) as anticipated Vodavi (Starplus SPX Telephone System Manual).

Vodavi does not anticipate claim 1 of the patent, or claims 2-5, 7-10 and 13 dependant thereon, because it does not teach the "switch means." Those claims require: (a) switch means for disconnecting the telephone from the network; (b) means connected to the switch means for generating a current through the switch means to the telephone; (c) means connected to the switch means for detecting and storing the telephone member; and (d) means connected to the switch means for generating the number sequence corresponding to the desired carrier.

With regard to the "switch means", the Examiner points to pages 100-1, 400-5 though 400-11 and 500-16 of Vodavi. Clearly, the Vodavi system (as does any telephone system) includes many switches (for example, the Normal/Service switch referred to in those pages) that provide a variety of functions. However, none of the switches disclosed in the Vodavi reference are comparable to the claimed "switch means" nor are they connected to other components in the system in the claimed manner.

Further, the Examiner has not pointed out a single switch or combination of switches disclosed in Vodavi that could be considered to meet the claim limitations directed to the switch means or the claim limitations reciting the manner in which the switch means is connected.

The only switch that is specifically disclosed in the pages noted by the Examiner is part of the Power Failure Transfer Circuit which is shown in the schematic of Figure 500.7 on page 500-16. The function of the Power Failure Transfer Circuit is described on page 500-12.

That circuit normally connects the telephones to the Vodavi system and not to the trunks of the network. In the event of a power failure, the switch in the circuit changes state and connects the telephones directly to the trunks of the network, thereby bypassing the (then powerless) Vodavi system so the telephones are powered by the network and can be used in an emergency.

The switch in the Vodavi Power Failure Transfer Circuit is not at all comparable to the claimed "switch means" because it simply functions as an emergency bypass. It does not act to disable the signaling function of the telephone during route selection by

disconnecting the telephone from the network. It operates to connect the telephones to the network in the event of a power failure.

The current generator of the Vodavi system is not connected to the Power Failure Transfer Circuit switch so as to power the telephones and disable the signaling function during route selection. Nor is current provided to the telephones through the Power Failure Transfer Circuit switch. The dialed telephone number detecting and storing means of the Vodavi system is not connected to the Power Failure Transfer Circuit switch. The number sequence generator of the system is not connected to the Power Failure Transfer Circuit switch.

Moreover, the Vodavi system does not include the routing circuitry required by claim 1 of the patent.

The Vodavi system includes an automatic route selection feature that selects a trunk group for a call based upon a pre-determined preference hierarchy that is stored in a memory. For example, a call placed to Boston from a Vodavi system located in New York could be routed along one of a number of different groups of trunk lines, for example, Trunk Group A, Trunk Group B or Trunk Group C. The memory contains a list including each of the truck groups and the trunk group's ranking in the hierarchy, according to desirability. For example: Trunk Group A (least economical) ranked third; Trunk Group B (most economical) ranked first; Trunk Group C (second most economical) ranked second.

In response to the call dialed to Boston, the memory is addressed to determine, for the particular time of day and day of week, the first ranked trunk group (Trunk Group B). The system then determines if any of the lines of Trunk Group B is available to send the

call. If so, Trunk Group B is selected and the call is routed to Boston using one of the lines of that that trunk group.

If none of the lines of Trunk Group B are available, for example, due to high traffic at that time, the next ranked trunk group (Trunk Group C) is selected and if a line in that group is available, it will be used to route the call. Each trunk group is thus selected in turn in accordance with its pre-determined ranking in the stored hierarchy.

In the patented invention, the database memory does not contain a pre-determined route preference hierarchy. Instead, it contains the actual billing parameters associated with each possible route. Subsequent to the detection of the dialed number, the database is accessed and the cost rate of the call for each possible route is obtained based upon the stored billing parameters. The cost for sending the call via each route is downloaded from the database to a circuit which compares the cost rate for each route and selects a route on that basis.

Thus, in the patented invention, billing parameters for the possible routes and not pre-determined route preference rankings are stored in the database. The preferred route is selected through a cost comparison that takes place only after the number is dialed, not on the basis of a pre-determined route preference hierarchy.

The Vodavi system route selection is described in the last paragraph of the first column of pages 300-5 which confirms that, from within the route list entry selected, the first choice trunk group is searched for an available trunk line. If none are available, the other trunk groups in the route list (if allowed) are searched. Trunks are accessed based on the pre-determined order programmed in the memory, not based upon a cost comparison made during route selection.

Page 200-8 of Vodavi describes in more detail the criteria used in the software to select routes. It should be noted that cost, that is, the amount of money associated with each route, is not one of the criteria listed and thus no comparison of the costs for the possible routes is made.

Based upon the above, it is clear that Vodavi does not anticipate claims 1-5, 7-10 and 13 of the patent.

Claims 1-5, 7-10, 13-16, 18, 19, 20-26 are rejected under 35 USC 102(b) as being anticipated by Isoetec. However, Isoetec also lacks the "switch means" required by independent claims 1, 14 and 24, and thus claims 2-5, 7-10, 13, 15-16, 18, 20-23, 25, 26 dependent thereon.

Regarding the "switch means" as recited in claims 1 and 14, the Examiner refers to pages 1.5 to 1-15, 3.6-3.9 on pages 3.20-3.23, page 4.131 and 4.146 of the Isoetec reference. Pages 1.5 to 1.15 relate to the port cards that make up the Isoetec system. Those port cards probably contain various conventional switches. However, there is no teaching that any are comparable to the "switch means" recited in the patent claims.

Sections 3.6-3.9 on pages 3.20-3.23 do not disclose any switch comparable to the claimed "switch means" either. Section 3.6 relates to an off premise extension interface (OPXI) to which a telephone can be connected. The OPXI, according to Section 3.7, can be used to connect that telephone to a trunk for use in a power failure. This is similar to the above mentioned Power Failure Transfer Circuit of Vodavi and does not meet the claim requirement for "switch means" for exactly the same reasons as Vodavi.

Specifically, the Isoetec Power Failure Transfer circuit is not comparable to the claimed "switch means" because it simply functions as an emergency bypass. It does not

include a switch that disables the signaling function of the telephone during route selection by disconnecting the telephone from the network. The current generator of the Isoetec system is not connected to a switch in the Power Failure Transfer circuit. Nor is current provided to the telephone from the Isoetec system through a switch in the Power Failure Transfer circuit. The dialed telephone number detecting and storing means of the Isoetec system is not connected to a switch in the Power Failure Transfer circuit. The number sequence generator of the Isoetec system is not connected to a switch in the Power Failure Transfer circuit.

Section 3.8 relates to the relay and sensor interface. Section 3.9 relates to the digital data interface. Neither of those interfaces includes the claimed "switch means."

Page 4.131 relates to the release key. That key is used instead of the switch-hook on a telephone station to answer and disconnect calls. It is not connected between the telephone and the network. It does not function to disable the signaling function during route selection by disconnecting the telephone from the network. The current generator of the Isoetec system is not connected through that switch to the telephone.

Page 4.146 relates to the split key which allows the user to place and receive multiple calls at the same time. It in no way relates to the claimed "switch means."

Regarding claim 24, the Examiner refers to page 1.8 and page 2.4 of the Isoetec reference with respect to the "switch means." Page 1.8 discusses the voice control module which includes the circuitry for voice switching and conference connections as well as system tones, system timing and station status control. The claimed "switch means" does not involve voice switching. Page 2.4 discusses the site requirements for the Isoetec system and discloses nothing comparable to the "switch means."

Regarding the portion of claim 24 requiring the current generator to be connected to and generate current through the switch means, the examiner refers to pages 1.16 and 2.4. Page 1.16 discusses the two power supplies. The primary power supply provides system voltages to the common control cards and the first 9 port cards. The second power supply provides power for extra port cards. There is no teaching that either power supply is connected to or provides current through any switch comparable to the claimed "switch means." As noted above, page 2.4 discusses the site requirements for the Isoetec system and discloses nothing comparable to the "switch means."

Accordingly, Isoetec does not anticipate claim 24 or claims 25 and 26 dependant thereon.

Claims 1, 2, 5, 7 and 10 are rejected under 35 USC 102(b) as being anticipated by STC '595.

As mentioned above, one of the features of the patented device is that route section is accomplished by obtaining billing parameters for each possible route from a database and comparing the cost rate for each route to determine the least cost route. That is accomplished by three circuits: the database that stores billing rate parameters for the possible routes; the address circuit for addressing the database to obtain the cost rate for each route and the comparison circuit for comparing the cost rates to select a route.

Claim 1 contains the following limitations in that regard:

> database means for storing billing rata parameters for determining at least cost communication path for call corresponding to said telephone number,
>
> means for addressing said database means for identifying a plurality of communication switch paths to said second telephone and the cost rate of each path,

means for comparing the cost rate of each path so as to determine a least cost route.

The Examiner is correct that STC '595 relates to a device that selects British Telecom (BT) to route all calls unless it is cheaper to route the calls via another carrier, Mercury Communications Limited (MCL). However, the STC '595 device does not make its route determination based upon a comparison of cost rates for each of the carriers obtained from a database containing billing parameters for BT and MCL. Nor does the device have circuits that can meet the above limitations of claim 1.

The STC '595 device cannot meet the limitations of claim 1 because:

(a) There is no database in which billing parameters for calls routed via by BT and by MCL are stored;

(b) There is no means for addressing the database to obtain the cost rate of BT and of MCL for the dialed call; and

(c) There is no means of comparing the cost rate of the call for BT and for MCL to select the least cost route.

As described beginning at the last full paragraph of page 5 of the reference, when a call to be routed is made, the digits are dialed. The dialed digits are detected and stored. If the processor determines from the digits that the call is a local call, the digits are simply redialed and the call is routed via BT.

However, if the first four digits are determined by the device to indicate a Mercury routed number (a call that would be cheaper if routed via MCL than BT) the MCL access code (131) is first dialed automatically and placed in front of the dialed digits to route the call via MCL.

Accordingly, the STC '595 device has no means for selecting a route based upon a comparison of stored cost rates of the call for each carrier. In STC '595, route selection is based only on the digits dialed.

The Examiner points to the look-up table described in the second paragraph of page 5 of the reference as constituting the claimed database means. However, that paragraph does not indicate what information is stored in the look-up table. It merely says that the data from the table is passed in DTMF tones, and involves the user calling a remote database number.

The paragraph at the top of page 6 indicates that the dialed digits are stored and examined by the processor 1. If the processor determines that the call is a local call, it causes the number to be redialed so the call is sent via BT. The second full paragraph of page 6 says that the call is sent via MCL if the device determines from the first four digits of the dialed number that the call should be routed via MCL or under processor control that the call would be cheaper if sent by MCL. Although the processor is connected to EEPROM 7 that contains the look-up table, the reference does not specify what data is stored in the look-up table, how the table is addressed or what is done with the data retrieved from the look-up table, other than it is converted into DTMF tones.

Accordingly, there is no teaching in this reference that supports the view that the look-up table contains billing parameters for a call routed by each carrier. In fact, it appears that since the data stored in the look-up table is "passed in DTMF tones" the look-up table contains all combinations of the first four digits of a dialed number for calls that would be cheaper if sent via MCL and when any of those digit combinations is

detected, the access code for MCL calls is automatically generated in DTMF tones to route the call via MCL.

In any case, it is clear that any teaching of means for comparing stored cost rates for sending the call by BT and by MCL is entirely lacking in this reference. Although the examiner points to page 3, paragraph 4 through page 4, paragraph 1 in that regard, there is no mention there or any where in this reference of any circuit that compares stored cost rates for BT and MCL to select a least cost route.

Accordingly, the STC '595 reference does not anticipate claim 1, or claims 2, 5, 7, and 10 dependant thereon.

Claims 1-5 and 7-11 are rejected as anticipated by Jabs et al. However, Jabs lacks both the "switch means" and the routing circuitry required by claim 1.

Jabs et al. relates to a system for routing calls from an ocean going vessel. It involves an interface between mobile communications stations on the vessel and land trunks that link with communication carriers or various communication media, such as satellite communications, cellular lines, and land lines.

Regarding the "switch means" the Examiner points to column 8, lines 24-25 of the reference. However, that section merely says that ports 100, 104, 108 and 122 have "tip" and "ring" wire connections, as is standard for all telephone circuits. It does not disclose anything comparable to the claimed 'switch means." The is no circuitry in the interface of Jabs et al. connected to a jack that connects the interface and a call originating telephone or that functions to disconnect the call originating telephone from a network to disable its signaling function.

Further, there is no teaching in this reference that indicates that the call originating telephone is disconnected from the trunk channels leading to the various carriers during route selection. It would appear that such a function would not be necessary because the call originating telephone is not connected by the interface to any trunk channel until the route (and hence, the trunk channel) is selected.

Claim 1 also requires current generating means that: (a) is connected to the switch means; and (b) generates a current through the switch means to the call originating telephone that corresponds to the current provided by the network. Jabs et al. does not teach such a circuit or anything comparable.

In that regard, the Examiner refers again to column 8, lines 24-25 and to column 9, line 64 – column 10, line 3. However, as mentioned above, column 8, lines 24-25 does not disclose the "switch means."

Column 9, line 64 – column 10, line 3 discusses the telecommunications station tone decoder and states that the decoder scans each of the station channels to detect the presence of loop current, which is a dial tone, indicating that a subscriber is seeking an out-going connection. There is no indication that current generated by the interface is ever supplied to any station, much less through a "switch means" as is required by the claim. In addition, the telecommunications stations referred to are shipboard telephones, facsimile machines, modems or PBX's, all of which are powered by electrical generators on the ship, or when the ship is in port, land based power systems. Thus, none of those stations are powered by current from a telephone network. Since those stations are not powered by a network, there is no need for "switch means" that disables the signaling function by disconnecting the stations from the network during the call routing operation

or provides locally generated current to the stations when they are disconnected from the network.

Regarding the route selection circuitry, Jabs et al. teaches automatic route selection using a pre-determined routing hierarchy, similar to that taught by Vodavi. It does not compare stored cost rates for the various communication carriers or media to determine the least cost route. As a consequence, Jabs et al. does not disclose a database for storing billing parameters for the various communications carriers or media, addressing circuitry to obtain the cost rates for each of the communications carriers or media or circuitry for comparing the cost rates to determine a least cost route.

As set forth in Jabs et al., at column 4, starting at line 24:

> The interface has a programmable routing feature such that it automatically provides the route from one of the station channels to the available trunk channel linked to the communication carrier having the medium of least cost. The communication medium of least cost is determined by selecting the appropriate medium according to a hierarchy. If the ship is docked and there is a line plugged in and available, the interface will route a telephone call originating from a station channel to the trunk channel connected to the land line. If the trunk channel connected to the land line is not available, the interface looks for a trunk channel connected to a cellular line and, if available, routes the telephone call accordingly. If neither land line nor cellular line is available, the interface will route the call to a plurality of carriers via satellite communications. The interface then selects the CES of least cost based upon the ocean area in which the vessel is sailing, the destination of the call, the time of day, and any preferential rates extended to the shipping line.

The Coast Earth Station (CES) of least cost is selected based upon the published service charge and additional charges for each CES. Both standard and off-peak rates are used. Those rates are used to create a preference hierarchy table. The reference makes it

clear that: "The tables are structured such that the least expensive CES resides at the top of the table and progressively more expensive coast earth stations towards the bottom." See column 12, line 44-46.

As set forth in detail in the following sections from Jabs et al., to select a CES, either the standard or off-peak table is consulted, based upon the time of the call. The CES at the top of the chart (predetermined to be the least cost) will be selected to route the call if that CES is available. If not, the next CES on the list is selected and availability determined. That process continues until an available CES is located and the call is sent.

The reference, beginning at the first full paragraph of column 11, describes in detail how the route is selected:

> The determination of the least cost service is now described. The interface of the present invention accomplishes least cost routing in two different steps. The interface first selects the least expensive communication medium that is available in the geographic area in which the ocean going vessel is located. If it is determined that satellite is the only communications medium available, the interface then selects the least expensive CES to provide international telephone gateway service to the country designated by the caller.
>
> In order to select the least cost communication medium, the interface must be programmed during installation to recognize the available media and their respective connection to the communication channels, for example, port 1; satellite; port 2; cellular; port 3; land line; port 4; no connection. The setting of the trunk channels to reflect the type of communication terminal connected thereto is depicted below in FIGS. 16A and 16B and described in the text below that references these figures. The hierarchy of selection between the media is defaulted such that land lines are selected as a first choice, cellular lines as a second

> choice, and satellite communications third. The sequencing of the trunk channels to reflect this hierarchy is depicted in FIGS. 15A and 15B below and described in the text that references these figures below. The hierarchy can be changed during installation to reflect duplicate systems or additional communication media. The interface, upon placement of a call, selects the channel of least cost (first choice) off hook, and look for loop current and/or dial tone. If loop current is not detected, the interface on hooks this channel and try either another channel of the same media (as there could be two or more cellular or land lines) if available, or bring the channel off hook for the second choice. The interface continues this process until the channels that are of less cost than satellite are exhausted. If the interface then selects satellite, the interface selects the least expensive coast earth station. If no channels are available due to equipment malfunction or medium cover is not present, the interface passes reorder tone back to the subscriber.

As is further explained at column 11, line 62 with regard to the selection of the CES:

> If the medium selected is via satellite, the interface interprets the country code selected by the caller in the dialing sequence and look through the search tables to select the least expensive CES to route the call. The interface performs this routing by knowing its location (as programmed during installation and updated upon relocation of the vessel according of FIG. 11, below) and also knowing the available coast earth stations providing coverage in the region that the ocean going vessel is located. The interface also takes the time of day into consideration as certain coast earth stations have "off-peak" rates at varying times. The interface scans its search tables and selects the coast earth station having the least cost into the geographic zone which contains the selected country. If the selected CES is busy or not available the next least expensive CES is selected and this will alternate back and forth if for some reason they are both at maximum capacity (busied out). An override

> feature is provided to allow a caller to override least cost routing and select a preferred CES choice should they require that option.

Thus, the reference teaches that the interface will scan its search tables and select the coast earth station having the least cost into the geographic zone which contains the selected country. How the search tables are used to select the coast earth station (CES) to route the call is explained in detail starting at the first full paragraph of Column 12:

> In order to further explain the search tables, the Intmarsat satellite network is used as an example. The Inmarsat satellite network is divided up into three regions: Atlantic Ocean Region (AOR), Pacific Ocean Region (POR), and Indian Ocean Region (IOR). The AOR will be divided into the AOR East and AOR West in the fall of 1990, thereby making four ocean regions. Each of these ocean regions is defined by and serviced by a single geosynchronous satellite. Each ocean region has several coast earth stations that provide gateway services for telephone and telex communications into the international dial up network. The rates charged by these coast earth stations vary both in CES service fees as well as additional "tail end" long distance charges.
>
> In order to arrive at the tariff calculations; the world is divided into a plurality of geographic zones, similar to charge bans used by most international telephone providers. Additionally, the countries having a coast earth station are assigned a band in themselves as in most cases this was the least cost access via satellite into that country. Each zone contains the international 1, 2, or 3 digit code assigned to a country as its calling "country code," for the countries grouped in that geographic zone. A rate is calculated, dependent on a coast earth stations published service charge and the additional tail end charges, for each CES to call into the various geographic zones. A plurality of tables is constructed to encompass both standard and off-peak rates. The tables are structured

> such that the least expensive CES resides at the top of the table and progressively more expensive coast earth stations towards the bottom. The calculations are done using a standard international currency, for example "Gold Franc," which is the industry standard for maritime communication charges in most instances.

Thus, first the available communications carrier or media is selected based upon a predetermined hierarchy or ranking of communications carriers or media stored in a memory. Only if the selected medium is satellite, is further processing required to select the CES. However, as set forth above, even the CES selection is based upon a pre-determined hierarchy in a look-up table.

Consequently, Jabs et al. does not teach: (a) any database storing billing rata parameters for possible communications carriers or media, or for possible CES, for a call corresponding to the dialed telephone number; (b) any means for addressing a database for identifying a plurality of communication switch paths to the called telephone and the cost rate of each path; or (c) any circuitry for comparing the cost rate of each path so as to determine a least cost route.

In Jabs et al., the memory does not store "billing rate parameters" but instead a pre-determined hierarchy (ranking) of possible communications carriers or media and (for use when satellite is the selected communications media) a pre-determined hierarchy (ranking) of each CES. Thus, there is no necessity for comparing the cost rates of the possible routes. Each hierarchy is prepared prior to loading the memory.

Accordingly, Jabs et al. does not anticipate claim 1 or claims 2 - 5 and 7 - 11 dependent thereon.

Claim 12 is rejected under 35 USC 103(a) as unpatentable over Jabs et al. However, claim 12 is not unpatentable over Jabs et al. for the same reasons, set forth in detail above, that Jabs et al. does not anticipate claim 1, from which claim 12 depends.

Claims 20 and 21 are rejected under 35 USC 103(a) as unpatentable over Isoetec and Jabs et al. However, claims 20 and 21 are not unpatentable over Isoetec and Jabs et al., either individually or in combination, because neither of those references teach "switch means" for disconnecting the call originating telephone from the network during call routing or the current generating means for providing current to the telephone through the switch means when the originating telephone is disconnected from the network by the switch means. Further, those references disclose very different systems with very different objectives. Finally, there is no teaching or suggestion in either reference to provide the motivation for one skilled in the art to make the proposed combination.

In addition, the declarations of Roger C. Lee and Gerald Weinberger, the co-inventors of the device claimed in US Patent No. 5,425,085, are presented herewith under 37 CFR 1.131 to "swear back" of both Isoetec and Jabs et al. Those declarations establish a date of invention prior to July, 1988. The Isoetec reference is dated July 1988. Jabs et al. was filed on September 25, 1990, over two years after the invention date. The declarations clearly establish that the patented invention was conceived and reduced to practice prior to the publication of Isoetec and prior to the filing date of Jabs et al. and hence neither of those references can be used under 35 USC 103(a) to render the patent claims unpatentable. In fact, those declarations establish an invention date that predates the effective date of each of the references cited.

Further, new claims 27, 28 and 29 are presented herewith. Those claims correspond to claims 1, 14 and 24, respectively, but include to additional requirements.

In claims 27 and 28, the switch means is now required to disconnect the originating telephone from the network "during routing of a telephone call from said first telephone."

In claims 27, 28 and 29, the means for generating a current through the switch means to the originating telephone, corresponding to a current provided by the network, is now required to be operative "when said (first) telephone is disconnected from said network by said switch means."

None of the references cited, whether considered individually or in combination, can meet either of those newly added limitations.

The additional limitations are supported in the patent disclosure by Figure 2 and by the specification, beginning on line 16 of column 5. The drawing and text indicate that when the telephone connected to jack 24 is on hook, switch 36 connects jack 24 to the network through jack 25 such that the telephone can receive incoming calls from the network and the network can detect when the telephone goes off hook.

When the telephone goes off hook, indicating that a call to be routed is going to be made from the telephone, that condition is sensed by the device and switch 36 is caused to change state. The change of state of switch 36 disconnects jack 24 from jack 25, and thus the telephone from the network, during routing of the call. At the same time, switch 36 connects jack 24 to local current source 38 which provides current to the telephone through switch 36 and jack 24, when the telephone is disconnected from the network by switch 36.

An updated list of the litigations in which the US Patent No. 5,425,085 has been involved since August, 2006, and the status of each of the litigations, is provided herewith.

Respectfully submitted,

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Enc. (Declarations and List)

Matter	Case No.	Status
Rates Technology Inc. v. Mediatrix Telecom, Inc., et al.	E.D.N.Y. Case No. CV-05-2755	Pending
Rates Technology Inc. v. Cablevision Systems Corp.	E.D.N.Y. Case No. CV-05-3583	Pending
Rates Technology Inc. v. Vonage America, Inc., et al.	E.D.N.Y. Case No. CV-05-4727	Dismissed – terms are confidential
Rates Technology Inc. v. Uniden America Corp., et al.	E.D.N.Y. Case No. CV-05-5982	Settled
Rates Technology Inc. v. Net2Phone, Inc., et al.	E.D.N.Y. Case No. CV-06-3604	Dismissed – terms are confidential
D-Link Systems, Inc. v. Rates Technology Inc., and related counterclaim	C.D. Cal. Case No. SA CV 07-0144	Pending
Rates Technology Inc. v. Time Warner Telecom, Inc.	E.D.N.Y. Case No. CV 06-5243	Dismissed
Rates Technology Inc. v. ShoreTel Inc.	N.D. Cal. Case No. C 07-1830	Settled

RTI Supplemental List of '085 Litigation 8/25/06 – 6/13/07

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Attorney Docket No.: 1690-110

REEXAMINATION OF PATENT NO.: 5,425,085

Issue Date: June 13, 1995

Title: LEAST COST ROUTING DEVICE FOR SEPARATE CONNECTION INTO PHONE LINE

Inventors: Gerald Weinberger, et al.

Rexam Control No.: 90/007,939

Examiner: Pokrzywa, J.

Art Unit: 3992

DECLARATION OF GERALD J. WEINBERGER

GERALD J. WEINBERGER declares and states as follows:

1. I reside at 11 Oak Tree Drive, Smithtown, New York.
2. I make this declaration to demonstrate completion of the invention disclosed in the above captioned patent in this country prior to July, 1988.
3. I am the president of Rates Technology Inc., the owner of the above captioned patent.
4. I am a co-inventor of the invention which is the subject of the above captioned patent, along with Roger C. Lee.

5. Roger C. Lee became employed as an engineer at Rates Technology Inc. in November of 1987. Together we worked on telecommunications systems, including the least cost routing device for separate connection into phone line which forms the subject of the above patent. Mr. Lee's employment at Rates Technology Inc. terminated on February 24, 1995. I am currently employed at Rates Technology Inc. and have been at all times relevant hereto.

6. The device which is the subject of the above patent was conceived and reduced to practice by my co-inventor, Roger C. Lee, and me in Smithtown, New York prior to July, 1988.

7. The reduction to practice was accomplished by Roger C. Lee by building a programmable prototype routing device, programming the device to store telephone billing rate information, use the rate information to select carriers and to communicate with a central office computer, through the telephone network, to place calls with the selected carriers.

8. In order to build the prototype, Roger C. Lee modified a pre-existing telephone, called the "RTI Restaurant Phone" and the software program for that phone to create the call routing device.

9. Once the routing device was built and programmed, Roger C. Lee connected it to a telephone and to the Bell Telephone System to demonstrate that the routing device operated satisfactorily. I observed the tests and verified the results.

10. The device was successfully tested in the manner described above, under my supervision, by Roger C. Lee, working with others at the Rates Technology Inc. facility in Smithtown, New York, shortly after the building and programming of the prototype call routing device.

11. Prior to the execution of my declaration dated May 17, 2001, in Reexamination Control No. 90/005,472, I asked Roger C. Lee to conduct a search to locate documents relating to the building and testing of the prototype call routing device. Mr. Lee's search located the schematic drawings for the RTI Restaurant Phone and the software program for that phone, copies of which are exhibits to Mr. Lee's declaration dated May 17, 2001, in Reexamination Control No. 90/005,472.

12. I have reviewed Roger C. Lee's declaration dated June 19, 2007 prepared for this Reexamination and I can confirm that the facts set forth in Mr. Lee's declaration dated June 19, 2007 prepared for this Reexamination are correct.

13. I cannot say for certain the exact date when the first successful test of the prototype call routing device took place. I can however state with great certainty that all tests of the device were completed within a short period after the building and programming to the prototype call routing device, prior to July, 1988.

14. Accordingly, I can say with great certainty that the device described in the above patent was reduced to practice by successful testing in this country prior to July, 1988.

15. I have been warned that willful false statements and the like made herein are punishable by fine or imprisonment, or both (18 U.S.C. 1001) and may jeopardize the validity of the above captioned patent.

16. All statements made herein are made of my own knowledge and are true. All statements made herein on information and belief are believed to be true.

Dated: June 20, 2007

Gerald J. Weinberger

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Attorney Docket No.: 1690-110

REEXAMINATION OF PATENT NO.: 5,425,085

Issue Date: June 13, 1995

Title: LEAST COST ROUTING DEVICE FOR SEPARATE CONNECTION INTO PHONE LINE

Inventors: Gerald Weinberger, et al.

Rexam Control No.: 90/007,939

Examiner: Pokrzywa, J.

Art Unit: 3992

DECLARATION OF ROGER C. LEE

ROGER C. LEE declares and states as follows:

1. I reside at 6 Francis Street, Wading River, New York 11792.
2. I make this declaration to demonstrate completion of the invention disclosed in the above captioned patent in this country prior to July, 1988.
3. My educational history is: I have a Bachelor of Science degree in Physics (1964) from San Diego State College and the University of California at Berkeley and a Masters in Computer Science (1974) from New York State University at Stony Brook.
4. In 1969 I became employed at Brookhaven National Laboratories as an engineer. I continued to be so employed until 1985 when I started a

consulting business. I went to work as an engineer for Rates Technology Inc. of Smithtown, New York on November 2, 1987.

5. At Rates Technology Inc., I worked on telecommunications systems, including the telephone call least cost routing device that forms the subject of the above patent. My employment at Rates Technology Inc. terminated on February 24, 1995. I am currently employed at Brookhaven National Laboratories.

6. The telephone call least cost routing device which is the subject of the above patent was conceived and reduced to practice by my co-inventor, Gerald J. Weinberger, and me in Smithtown, New York prior to July, 1988.

7. The reduction to practice was accomplished by building a programmable prototype of the device, programming the device to store telephone billing rate information, testing the device by connecting the device to a telephone, dialing numbers on the telephone, causing the device to use the rate information to select carriers and to communicate with a central office computer, through the telephone network, to place calls with the selected carriers.

8. The programmable prototype call routing device was built and tested by me at Rates Technology Inc., Smithtown, New York. I began with a pre-existing telephone which we called the RTI Restaurant Phone that did not have call routing capability. I modified the RTI Restaurant Phone and its software program to create a call routing device capable of being connected between a standard telephone and standard telephone wall jack.

9. Complete copies of the schematic drawings of the RTI Restaurant Phone that was modified to create the prototype call routing device were previously presented with my declaration dated May 17, 2001 in Reexamination Control No. 90/005,472 as Exhibit 1. Exhibit 1 consisted of two sheets, dated January 26, 1988 and January 27, 1988, respectively. Those drawings were made by me on or about those dates.

10. In order to modify the hardware shown on Exhibit 1 to build the prototype, I made the following changes:

    1) I reversed RELAY2 such that the phone, J2 RJ11, was connected to the common and the telephone line, and J3 RJ11 was connected to the normally open contacts.

    2) I connected a 20ma current source to the normally closed contacts of RELAY2 so as to provide power to the telephone when the telephone was disconnected from the telephone network which normally provided the power.

    3) I connected the ring detect, U2, and the inputs to amplifier, U6A, to the common contacts of RELAY2, instead of the normally open contacts of RELAY1.

11. In addition, it was necessary to modify the software program for the RTI Restaurant Phone such the device could operate as a call routing device.

12. A diskette of the software program for the RTI Restaurant Phone was previously presented with my declaration dated May 17, 2001 in

Reexamination Control No. 90/005,472, as Exhibit 2. The diskette of Exhibit 2 is undated but the software program was completed by me by May of 1988.

13. In order for the modified RTI Restaurant Phone to function as a call routing device, I made the following changes to the software program of Exhibit 2:

1) I added least cost routing software from a previously existing telephone capable of least cost routing.

2) I limited the software to one line card and disabled features such as printing, turning LEDs on and off, assigning the phone a table and waiter that were required in the RTI Restaurant Phone.

3) I modified the modern dialing routines to send the telephone number as determined from the least cost routing portion of the program.

14. Once the prototype call routing device was built and programmed, I ran a series of tests to demonstrate that the device operated satisfactorily. This was done by connecting the prototype device between a telephone and the Bell System network, placing a series of calls through the telephone and monitoring the routing of each call to see if the least cost route was selected.

15. The device was successfully tested in the manner described above by me, working with others at the Rates Technology Inc. facility in Smithtown, New York, within a few days of the completion and programming of the prototype call routing device, prior to July, 1988.

16. Shortly before I executed my declaration dated May 17, 2001, in Reexamination Control No. 90/005,472, I conducted a search to locate

documents relating to the prototype and software for the prototype. However, the only documents which I could find were Exhibits 1 and 2.

17. I cannot say for certain the exact date when the first successful test of the prototype call routing device took place. I can however state with great certainty that the call routing device was successfully tested within a short time of the completion and programming of the prototype call routing device.

18. Accordingly, I can say with great certainty that the device described in the above patent was reduced to practice by successful testing in this country prior to July, 1988.

19. I have been warned that willful false statements and the like made herein are punishable by fine or imprisonment, or both (18 U.S.C. 1001) and may jeopardize the validity of the above captioned patent.

20. All statements made herein are made of my own knowledge and are true. All statements made herein on information and belief are believed to be true.

Dated: June 19, 2007

ROGER C. LEE

CERTIFICATE OF SERVICE BY MAIL

A true copy of the foregoing Supplemental Response and the accompanying Declaration of Gerald J. Weinberger, dated June 20, 2007 and accompanying Declaration of Roger C. Lee, dated June 19, 2007 and RTI Supplemental Litigation List were served on Requestor via first class mail, postage prepaid on July 26, 2007, sent to the following address:

Kory D. Christensen, Esq.
Stoel Rives LLP
201 South Main Street
One Utah Center, Suite 1100
Salt Lake City, Utah 84111



Robert L. Epstein