

DIRECT TESTIMONY
OF
KAREN BUCKLEY

TELECOMMUNICATIONS DIVISION
ILLINOIS COMMERCE COMMISSION

Illinois Commerce Commission
Illinois Bell Telephone Company
Unbundled Local Switching with Shared Transport
DOCKET NO. 00-0700

March 06, 2001

1 **Q. Please state your name and business address.**

2 A. My name is Karen Buckley and my business address is 527 East Capitol Avenue,
3 Springfield, Illinois 62701.

4

5 **Q. By whom are you employed and in what capacity?**

6 A. I am employed by the Illinois Commerce Commission as an Economic Analyst in
7 the Telecommunications Division.

8

9 **Q. Please briefly describe your work duties with the Illinois Commerce**
10 **Commission.**

11 A. My responsibilities include analyzing tariff filings filed by telecommunication
12 providers, providing written analysis for the Commission, and evaluating
13 telecommunication provider applications for certification.

14

15 **Q. Please state your educational background.**

16 A. I graduated from the University of Illinois in Springfield with a Bachelors degree in
17 Accountancy in 1993. I obtained the Certified Public Accountant designation in the
18 following year and the Certified Internal Auditor designation in 1999.

19

20 **Q. What is your work experience?**

21 A. Since 1988, I have worked in the accounting and auditing field for private firms and
22 government agencies. My primary expertise lies in financial reporting, internal
23 control structures, and regulatory compliance audits.

24

25 **Q. Have you provided testimony in any other docketed case?**

26 A. Yes. I provided expert witness testimony in Docket 00-0552, the proposed
27 reorganization between Citizens Communications Company, Global Crossing North
28 America, Inc., and Frontier Communications Inc..

29

30 **Q. What is the purpose of your testimony in this proceeding?**

31 A. The purpose of my testimony is to address the 2001 Unbundled Local Switching
32 with Shared Transport (ULS-ST) cost study, produced by the Network Usage Cost
33 Analysis Tool (NUCAT) model. I will mention very little about Shared and Common
34 costs because that issue will be addressed by Staff witness Judy Marshall, in Staff
35 Exhibit 2.0.

36

37 **Q. Did you analyze the NUCAT model for tariffs other than ULS-ST?**

38 A. No. The NUCAT model has not been evaluated by Rate Staff prior to this docket.

39

40 **Q. Please describe your perception of the electronic cost model NUCAT.**

41 A. NUCAT is a model that generates consistent cost study data across various
42 jurisdictions for various service types. The model takes output from other models,

43 including Ameritech Regional Partners in Provisioning Switch Model (ARPSM),
44 Common Channel Switching Cost Information (CCSCIS), Economic Cost of
45 Network Services Program (ECONS) and other network data and calculates costs
46 for different services. There are five files in the model, four service specific files:
47 Switched Access, Local Usage, IntraLATA Toll and Reciprocal Compensation, plus
48 the “NUCAT Version 2-0 FINAL.xls” file. Each service file contains state specific
49 input data which is updated semi-annually. The “NUCAT Version 2-0 FINAL.xls”
50 allows for hyperlink interface to facilitate the creation of the cost studies.

51

52 **Q. How was the NUCAT model used in the ULS-ST cost study?**

53 A. The ULS-ST cost study consists of six rate elements, including ULS Switch Usage
54 per MOU, ULS-ST Reciprocal Compensation per MOU, ULS-ST SS7 Signaling
55 Transport per Message, ULS-ST Blended Transport Usage per MOU, Common
56 Transport per MOU, and ULS-ST Tandem Switching per MOU, all of which utilize
57 output from the NUCAT model. The first three elements are direct outputs of the
58 NUCAT model and the other three are manually constructed using NUCAT output.
59 The Company’s Cost Analysts constructed Excel spreadsheets for different routing
60 scenarios. Based on the activities involved in each scenario, the analysts took
61 NUCAT generated cost components to calculate costs for each element.

62

63 **Q. What is the driving concept for the NUCAT model?**

64 A. It is a conversion of investment resources to activity costs, based on activities
65 resources provided. The model assumes assets are usage sensitive which result in
66 unit cost per activity, per minute of use or per message. Then, unit costs become
67 the basis for computation of various service costs.

68

69 **Q. How does the NUCAT model generate unit costs for activities?**

70 A. The majority of the input to NUCAT is from other cost models. For example: unit
71 investment costs are an output of the ARSPM model, annual cost factors (ACF) are
72 from LFAM, conversation and non-conversation factors are from the CCSCIS
73 model, while investment units and usage data are from company data bases. [It
74 should be noted that ARPSM is being reviewed in this docket for UNE usage, and
75 LFAM has been reviewed in Docket 98-0252/98-0335/00-0764 (Consolidated) and
76 found questionable for use in developing costs for retail usage.] NUCAT performs
77 calculations using all the inputs to obtain per unit activity costs. A unit investment
78 cost for End Office Setup per Message, for example, uses investment costs from
79 ARPSM, multiplied by units in use, multiplied by a non-conversation ratio (22.19%)
80 and ACF to determined the annual cost of total investment in providing the End
81 Office Setup activity. Finally, the total investment is divided by annual usage to
82 obtain the unit cost for End Office Setup per Message.

83

84 **Q. To what extent did Staff investigate the NUCAT model?**

85 A. Staff was provided an electronic copy of the NUCAT model updated in April, 1999.
86 By following the technical manual, Staff learned the data flow within each of the four
87 service categories. Staff also validated the NUCAT processing consistency by
88 performing sensitivity analyses on all four service files. However, Staff was unable
89 to test the NUCAT Version 2-0 FINAL.xls because of inadequate hyperlink interface
90 capabilities at the Staff location.

91

92 **Q. What steps did Staff take to ensure NUCAT output adequately represents**
93 **cost of services to be paid by competitive carriers?**

94

95 A. For each activity cost NUCAT processed, the first step Staff undertook was to verify
96 the inputs by tracing them to the source documents. Second, Staff evaluated the
97 concept and formulas used in cost allocations to determine relevancy of the
98 process. Third, some basic math footing and cross footing was performed to
99 ensure accuracy. Finally, Staff reviewed the cost study as a whole to determine if it
100 measures services in a just manner and that regulatory requirements are met.

101

102 **Q. Does Staff find the ULS-ST cost study reliable?**

103 A. Staff was impressed with the NUCAT infrastructure. It processes and produces
104 consistent output quickly. However, as Staff traced input to referenced sources,
105 problems were found. For example, the cost for ULS Switch Usage per MOU is
106 \$0.000817 and the cost source is Tab 3.0c, Line c. In Tab 3.0c, Staff found that the

107 UL Switch Usage per MOU involved a cost of \$0.001629 in the calculation for
108 setting up a Local call. Staff traced to Tab 3.1 as referenced and identified item (k),
109 \$0.000840 for billing and call center per message as being a component of the
110 local call setup activity. Then, Staff went to Tab 5.3 and 7.7 to find this source
111 documented as the Ameritech 1999 study. The Shared and Common cost study
112 was reviewed to determine if this particular cost was included. That study is based
113 on 1997 costs. In addition, the annual charge factors used were based on year
114 2001 Maintenance factor.

115

116 **Q. What is Staff's opinion of the complex make up of the ULS-ST cost study?**

117 A. Staff believes the matching principle is violated. Generally, revenues and expenses
118 are to match the period of occurrence. Even though specific requirements are
119 provided by TELRIC or LRSIC, Staff believes a consistent starting base would
120 greatly decrease the skepticism of the regulator and carriers.

121

122 **Q. Are there other uncertainties in the ULS-ST cost study?**

123 A. Yes. Staff is not comfortable with the usage sensitivity method of allocation of
124 resource costs. My understanding is that existing contract agreements between
125 Ameritech and vendors are based on the quantity of units rather than minutes of use.
126 When Ameritech charges other carriers by minutes of use it does not adequately
127 establish that costs increase based on usage.

128

129 **Q. Based on your analysis, do you agree that the NUCAT model develops**
130 **proper usage costs for rate-setting purpose?**

131 A. Staff believes that NUCAT is effective in pulling data and generating cost studies.
132 Staff does not believe NUCAT model represents appropriate usage costs for rate-
133 setting purpose.

134

135 **Q. Does this conclude your testimony?**

136 A. Yes.