

**Before the  
FEDERAL COMMUNICATIONS COMMISSION  
Washington, D.C. 20554**

In the Matter of )  
 )  
Developing a Unified Intercarrier )  
Compensation Regime ) CC Docket No. 01-92  
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**Comments of Alexicon Telecommunications Consulting**

Alexicon Telecommunications Consulting (“Alexicon”) submits these comments in response to the Commission’s Further Notice of Proposed Rulemaking (FNPRM) in the above mentioned proceeding seeking comment on various issues associated with developing a unified Intercarrier Compensation (IC) regime.

Alexicon provides management, financial and regulatory consulting services to small, rural, independent, and tribal telecommunications carriers in twelve states. Alexicon’s clients range from small, single wire center companies to medium-sized companies with multiple wire centers.

**Summary**

Alexicon suggests that several related issues surrounding IC need addressed in the context of applicability and fairness, as outlined below. Three areas within the IC umbrella need specific attention: compensation for use of networks, measurability of traffic, and fraud.

**Compensation**

Alexicon believes one of the fundamental flaws in today’s telecommunications marketplace is that the complexity of rules and regulations creates incentives for providers to utilize facilities without compensating the owner of those facilities. For

example, some wireless carriers do not have interconnection agreements in place with wireline companies for traffic that traverses both networks. If the wireline company utilizes yet another company's tandem switch to terminate the wireless company's traffic onto the wireline company's network, that tandem carrier often does not or will not provide the detail necessary for the wireline company to be compensated for use of their network by other carriers. Section 251(b)(5) states that "Each local exchange carrier has the...*duty* to establish reciprocal compensation arrangements for the transport and termination of telecommunications."<sup>1</sup> Section 251(g) further states that "...each local exchange carrier...shall provide exchange access, information access, and exchange services for such access to interexchange carriers and information service providers in accordance with the same equal access and nondiscriminatory interconnection restrictions and obligations (*including receipt of compensation*) that apply to such carrier on the date immediately preceding the date of the enactment of the Telecommunications Act of 1996..."<sup>2</sup> Compensation for use of networks is clearly within the spirit of the Telecommunications Act of 1996, as identified above.

Indeed, the FCC acknowledges the fact that carriers should be compensated for use of their networks. In their "No Consumer Per-Minute Charges to Access ISPs Fact Sheet", the FCC provides an example detailing the necessity of carriers to compensate one another for use of their network: "If a customer of Phone Company A makes a local call to a customer of Phone Company B, *Phone Company A must compensate Phone Company B for handling the last leg of the call*"; and "Reciprocal compensation is thus paid between telephone companies for use of the local network."<sup>3</sup> With the provisions contained in Section 251, Alexicon is suggesting the issue at hand is an enforcement issue and not necessarily one of "regulatory arbitrage" or "incentives for inefficient investment and deployment." The FCC is making a strong presumption in their statement, "These distinctions create both opportunities for regulatory arbitrage and incentives for inefficient investment and deployment decisions."<sup>4</sup> Customers in rural and

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<sup>1</sup> Telecommunications Act of 1996, Section 251

<sup>2</sup> Ibid, Section 251(g)

<sup>3</sup> Web link: [http://www.fcc.gov/Bureaus/Common\\_Carrier/Factsheets/nominute.html](http://www.fcc.gov/Bureaus/Common_Carrier/Factsheets/nominute.html)

<sup>4</sup> Developing a Unified Intercarrier Compensation Regime, CC Docket No. 01-92, para 3

high cost areas are entitled to the same services as those in urban, suburban, and metropolitan areas. Local exchange carriers (LECs) serving these rural and high cost areas make plant investment decisions based on the same economic and service-oriented premise that carriers make in the larger, more condensed areas. The difference in Regional Bell Operating Companies (RBOC aka Price Cap Companies) is specifically related to economies of scale. As an example, if an RBOC purchased a baseline/typical central office switch to serve an area with 100,000 inhabitants, then pricing could be developed based on this business model. If the same central office switch was purchased for a rural area that only contained 1,000 inhabitants, you can see how the “math doesn’t equate.” Congress mandated universal service to all customers in the United States, yet the FCC is implying “inefficient investment and deployment decisions” are being capitalized upon by LECs serving rural and high cost areas.

Section 406 of the Communications Act of 1934 reads:

“The district courts of the United States shall have jurisdiction upon the relation of any person alleging any violation, by a carrier subject to this Act, of any of the provisions of this Act which prevent the relator from receiving service in interstate or foreign communication by wire or radio, or in interstate or foreign transmission of energy by radio, from said carrier at the same charges, or upon terms or conditions as favorable as those given by said carrier for like communication or transmission under similar conditions to any other person, to issue a writ or writs of mandamus against said carrier commanding such carrier to furnish facilities for such communication or transmission to the party applying for the writ: *Provided*, That if any question of fact as to the proper compensation to the carrier for the service to be enforced by the writ is raised by the pleadings, the writ of peremptory mandamus may issue, notwithstanding such question of fact is undetermined, upon such terms as to security, payment of money into the court, or otherwise, as the court may think proper pending the determination of the question of fact: *Provided further*, That the remedy hereby given by writ of mandamus shall be cumulative and shall not be held to exclude or interfere with other remedies provided by this Act.”

It was clear when the Communications Act of 1934 was published that compensation for use of and furnishing of facilities was expected and mandatory. Nothing has changed from this underlying premise since the Communications Act of 1934 except the development of complicated rules and regulations that allow non-paying carriers to drag legislative interpretations through the court system – while all along avoiding payment of

rightful and due compensation to carriers for use of their networks. Alexicon urges the Commission to address this serious issue while undertaking the development of a Unified IC regime.

### **Traffic Measurement**

Several commenters in this proceeding believe that a Unified IC regime should include some kind of connection-based approach. While Alexicon agrees with these commenters that connections are identifiable and create measurability, there is a fundamental issue at hand. A connection to the public switched telephone network (PSTN) can take many shapes, identities, and is quantifiable in terms of up time and down time of the connection. Manufacturers and vendors of central office equipment corroborate this statement as follows: Siemens' website states, "EWSD is the answer....As a mature switch, it offers more than just solutions for numbering, routing, charging, *traffic measurement*, and voice processing."<sup>5</sup> Nortel states, "Optivity Policy Services (OPS) supports network managers by providing centralized control of advanced packet classification *and the ability to priority mark, police, meter, or block traffic.*"<sup>6</sup> Cisco states, "To create networkwide QoS policies for the *treatment of different types of traffic based on application, protocol, user, or other criteria*, administrators can use the Cisco Modular QoS Command-Line Interface (MQC)."<sup>7</sup> 3Com notes, "To support crystal-clear voice quality, the 3Com SuperStack 3 Switch 4400 works effortlessly with 3Com networked telephony products, *automatically identifying traffic* and prioritizing it above time-insensitive data traffic."<sup>8</sup> Why is this important? The telecommunications industry does not have an issue with the ability to measure traffic! The issue we are facing is having carriers utilizing other carriers' networks without paying for use of that network. Two critical steps are necessary in an effort to curtail this debacle: 1) All carriers should be earmarked or branded with a specific code whereby they can be readily identified on another carrier's network. This measure should assist in allowing carriers to detect other

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<sup>5</sup> Siemens.com

<sup>6</sup> QoS and Security policies for converged networks, Nortel Networks Optivity Policy Services 4.0

<sup>7</sup> Packet Magazine, "The IOS Difference"; web link:  
[www.cisco.com/warp/public/784/packet/technology.html](http://www.cisco.com/warp/public/784/packet/technology.html)

<sup>8</sup> 3Com SuperStack 3 Switch 4400: Supporting IP Telephony (application brief)

carriers that are utilizing their network; and 2) the Commission must institute enforcement measures for all carriers that utilize other carriers' networks. As I mentioned previously, the Commission acknowledges the fact that phone companies should compensate each other for "handling the last leg of the call."

*Internet Protocol (IP)*

In November 2001, as a work in progress, the Traffic Engineering Working Group drafted a paper entitled "A Framework for Internet Traffic Engineering Measurement."<sup>9</sup> The group consisted of AT&T labs, UUNET, Oak City Networks & Solutions, and Ghent University/IMEC. This paper states, "In this document, a measurement framework for supporting a traffic engineering of IP-based networks is presented. Uses of traffic measurement in service provider environments are described, and issues related to time scale and read-out period are discussed."<sup>10</sup> The paper goes on to read, "In this document, uses of traffic measurement in traffic characterization, network monitoring, and traffic control are first described" and "Traffic measurement can be performed on the basis of flows, interfaces, links, nodes, node-pairs, or paths. Based on these objects, different measurement entities can be defined, such as traffic volume, average holding time, bandwidth availability, throughput, delay, delay variation, packet loss, and resource usage."<sup>11</sup> With IP being the "wave of the future", there is no doubt whatsoever that this traffic has the ability to be measured. Even based on the one example above, it's clear that IP traffic is identifiable.

On the issue of IP, Alexicon would like to iterate how Voice over IP (VoIP) should be considered in the IC spectrum. Following are excerpts of a letter recently sent to members of Congress, which lay out the VoIP issue directly and to the point:

You need only to understand two fundamental elements of how today's telecommunications infrastructure works to realize that allowing telecommunications traffic to hide in disguise under the VoIP cloak is a recipe for telecommunications disaster for this country. The two fundamental aspects to understand are:

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<sup>9</sup> Reference: [www.pdnets.com/ieft/tewg/ietf52/i-ds/draft-ietf-tewg-measure-01.txt](http://www.pdnets.com/ieft/tewg/ietf52/i-ds/draft-ietf-tewg-measure-01.txt).

<sup>10</sup> Ibid, Para 1

<sup>11</sup> Ibid, Para 3

- **VoIP is utilizing networks of existing providers without paying for such access.** Nearly all VoIP calls are “riding the pipes” of the telephone companies servicing the last mile of telecommunications service nationwide. The last mile of service is and has always been supported by fees imposed on other companies wanting to deliver traffic to consumers at the end of the last mile. (It is as simple as; “if you would like to use my network to deliver services to my customers, then you should have to pay your fair share!” i.e., access fees and universal service fees.)
- **Why should VoIP be given preferential treatment?**  
VoIP is nothing more than another method of technology used to transport telephone calls. There have been many advancements in technology to transport calls in the past and none have been allowed to “sneak or pirate” in utilizing the most costly part of the nation’s telecommunications infrastructure.

Please be mindful that some companies would like utilization of telecom networks at no cost and will be in support of this bill. Who would not want to get a free ride? Also, large telecom companies that are required to pay into the universal service fund and serve big cities will also be in support of this as they see it as a way to avoid their inherent role in helping cover the cost of servicing rural Louisiana and the rural U.S. Your quest is to determine whether companies should get a free ride or be able to shun responsibilities to help keep rural America connected.<sup>12</sup>

Alexicon would like the Commission to consider the following analogy when determining whether to exempt VoIP from payment of access charges for accessing the PSTN: If a catastrophe happened that disabled the central office switch and mobile telephone switching office (MTSO) in any given area of the United States, the customers served off of those switches would be without telephone, wireless, data, broadband, and internet service. In other words, the “last mile” of connectivity is the ultimate originating and terminating points for all telecommunications traffic. VoIP would not be able to reach a given customers’ destination without this last mile. It is therefore critical that the Commission regulate VoIP as a telecommunications access service instead of allow carriers to “get a free ride.”

#### *Unidentified or “Phantom” Traffic*

One of the concerns Alexicon raises in this proceeding is the amount of traffic that goes unidentified on the PSTN. This is due to a variety of factors, including the concerns the Commission notes.<sup>13</sup> With the examples given above, it’s proven that traffic can be both measured and identified.

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<sup>12</sup> Letter dated February 2, 2005 to members of Congress, including “Bobby Jindal, William J. Jefferson, Charlie Melancon, Jim McCrery, Rodney Alexander, Richard H. Baker, and Charles W. Boustany, Jr. from John Scanlan – Executive President of East Ascension Tel.

<sup>13</sup> Developing a Unified Intercarrier Compensation Regime, CC Docket No. 01-92, para 3

As mentioned previously, it is critical that the Commission disallow carriers to utilize other carriers' networks without proper compensation. The Commission must enforce this issue if any IC regime is to be successful. Unidentified, or "phantom" traffic, is a serious matter in today's telecommunications market. Without proper identification processes in place phantom traffic will continue to be an ongoing threat to the viability of carriers in rural markets. This viability not only relates to financial well being but also correlates to service quality management and network optimization. One example of how manufacturers and vendors are combating the phantom traffic dilemma is by developing technology to properly identify and measure traffic. Steleus, for example, notes "The telecommunications business has changed dramatically from what was until recently a community of highly cooperative, competent and trust-worthy companies. Fierce competitive pressures, retirement and down-sizing of expert personnel and new market entrants are some of the factors that have changed the interconnect landscape for the independent operator. Trusting that bills and settlements are correct, without verification, is no longer a prudent business practice."<sup>14</sup> This is yet another example of how vendors and manufacturers are building a business practice to identify phantom traffic and hold carriers responsible and accountable for compensating other carriers for use of their network. Coupled with carrier-specific identification codes that can be recognized in any network on the PSTN, identifying phantom traffic should be able to become a reality.

## **Fraud**

According to *Webster's New World Dictionary*, fraud is defined as "the intentional deception to cause a person to give up property or some lawful right." According to *The Collaborative International Dictionary of English v.0.44*, fraud is defined as "Deception deliberately practiced with a view to gaining an unlawful or unfair advantage; artifice by which the right or interest of another is injured; injurious stratagem; deceit; trick." *Webster's Revised Unabridged Dictionary* has the same definition as *The Collaborative International Dictionary*. Common themes in these definitions are "gaining an unfair advantage" and "deception." Carriers terminating traffic onto a [rural] wireline carrier's

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<sup>14</sup> Steleus.com

network without that wireline carrier's consent or knowledge gives an unfair financial and operational advantage to the terminating carrier and is therefore fraud...plain and simple. Alexicon urges the Commission to implement enforcement measures to ascertain carriers are not "getting a free ride."

### **Bill and Keep**

One of the proposals presented in this proceeding relates to a "Bill and Keep" IC regime. The Commission notes, "Under a bill-and-keep approach, neither of the interconnecting networks charges the other network for terminating traffic that originates on the other carrier's network."<sup>15</sup> "Rather, 'each network recovers from its own end users the cost of both originating traffic delivered to the other network, and terminating traffic received from the other network.'"<sup>16</sup> In this FNPRM, the Commission notes and acknowledges on separate occasions the hesitancy of a regime such as this working: "Developments in the ability of consumers to manage their own telecommunications services undermine the premise that the calling party is the sole cost causer and should be responsible for all the costs of a call."<sup>17</sup> In addition, the Commission notes, "This increased ability of consumers to avoid calls for which they may not perceive a benefit (e.g. telemarketing calls) means that they generally will get benefit from calls they choose to accept. As a result, we question the assumption underlying our current rules that the calling party is the primary beneficiary of any given call and therefore should bear all the costs of the call."<sup>18</sup> Alexicon agrees with the Commission's theoretical and inherent perception that the calling party is not the only beneficiary of making a call. Is the farmer the only beneficiary of planting a wheat crop? Is a pharmaceutical company the only beneficiary of making prescription drugs? The answer to these questions is as obvious as knowing that an originating LEC is not the only entity receiving benefit when one of its customers accesses the PSTN.

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<sup>15</sup> Local Competition First Report and Order, 11 FCC Rcd at 16045, para 1096; CC Docket No. 01-92, FCC 05-33 para 37

<sup>16</sup> Id.

<sup>17</sup> CC Docket No. 01-92, FCC 05-33, para 17

<sup>18</sup> Ibid, para 27

### **Cost Recovery Issues**

The Commission makes the following statement in this FNPRM: “As competition has increased, the ability to shift costs to competitors through intercarrier charges increasingly distorts the competitive process.”<sup>19</sup> Alexicon disagrees with this statement. “Inter-carrier” is defined as “between carriers”, which denotes the process of settling between carriers in the telecommunications industry for the use of each others’ network. Inter-carrier compensation suggests payment between carriers for utilization of each others network. What is “distorting of the competitive process” is that carriers are not being compensated for the use of their networks. And since distortion typically means one party will receive favorable treatment at the other party’s expense, non-payment of use of a network favors the party not having to pay. Alexicon urges the Commission to enforce measures that will ensure carriers are properly compensated for use of their networks.

### *USF Considerations*

Section 252(d)(2) sets forth an “additional cost” standard for reciprocal compensation under Section 251(b)(5).<sup>20</sup> The Commission interpreted the “additional cost” standard to permit the use of the TELRIC cost standard that was established for interconnection and unbundled elements.<sup>21</sup> In this proceeding, the Commission is soliciting comment on whether this standard is, or could be, satisfied by the various reform proposals.<sup>22</sup> In our comments provided in CC Docket No. 96-45, Alexicon explained that the use of TELRIC, forward-looking, or Synthesis Model attributes cannot and does not replace the need to continue using embedded cost as the basis for recovery in small and rural areas.<sup>23</sup> Alexicon takes the same position in this proceeding.

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<sup>19</sup> Ibid, para 16

<sup>20</sup> 47 USC Section 252(d)(2)(a)

<sup>21</sup> Local Competition First Report and Order, 11 FCC Rcd at 16023, para 1054

<sup>22</sup> CC Docket 01-92, FCC 05-33, para 64

<sup>23</sup> Comments of Alexicon Telecommunications Consulting, CC Docket No. 96-45 filed October 2004, pages 5-13

### *Examples*

Alexicon has attached examples of cost characteristics (see Appendix A, attached). The purpose of this summary is not to suggest that “per-minute” or “per-access line” units of measurement continue to be utilized (even though Alexicon believes access lines, or “connections”, are still valid measurement tools for many of our clients when referencing embedded costs for rate of return carriers). Rather, these examples denote that, unlike metropolitan and urban areas, rural areas are generally high cost in need of universal service support to advocate the Commission’s goals of rates being “reasonably comparable” and “affordable” to urban areas of the United States per the Act. Using 47 C.F.R. Part 32, 36, and 64 Separations rules, Alexicon developed consolidated interstate access and state access revenue requirement for companies in which the data was available. Alexicon then identified measured minutes for these companies using the current IC regime. You can see that on average companies had an *embedded cost* of \$.2393 cents per minute. Using a similar methodology, Alexicon then developed total company revenue requirement using the same rules referenced above and calculated an “annual per access line” cost for companies, which equates to about \$1,208 per access line (on the average) annually. Not shockingly, the results were comparable in the context of illustrating how costly it is to provide telecommunications services in rural areas. When compared to approximate current rates of \$.005 per access minute or \$300.00 per access line (for national statistics), you can see there is a dire need to maintain universal funding and develop an IC regime that caters to the goals identified in the Act to bring affordable service to rural areas of the United States.

Alexicon would like to comment on the Commission’s request of replacing access charges with additional universal service support and/or subscriber charges.<sup>24</sup> Alexicon strongly encourages the Commission to review the record in light of affordability, comparability, and reasonable public interest issues in rural areas. The Commission notes, “Substantially reducing the access charges imposed on IXCs has the potential to resolve both [the number of interexchange calls and lower pricing] issues in a manner that benefits rural consumers. If interexchange rates decline with reductions in access

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<sup>24</sup> CC Docket No. 01-92, FCC 05-33, para 111

charges, as we would expect in a competitive marketplace, rural consumers could benefit even more than urban customers from a transition to a regime with substantially lower intercarrier payments.”<sup>25</sup> Alexicon has shown, and the record has proven, that rural areas are generally high cost. To avoid rate shock while keeping in step with public interest policy, Alexicon suggests not replacing access charges with subscriber charges, at least not on a “flash cut” basis. Historically, significant rate rebalancing issues have been phased in over time (e.g. weighted DEM, High Cost Loop, SLC increases). Should the record reflect that access rates do indeed need rebalanced/lowered while still keeping rate of return carriers whole, Alexicon suggests three to five years is the appropriate timeframe to phase in increased universal service support or subscriber charges.

### **Geographic Rate Averaging**

Section 254(g) is clear that “rates charged by providers of interexchange telecommunications services to subscribers in rural and high cost areas shall be no higher than the rates charged by each such provider to its subscribers in urban areas.”<sup>26</sup> In the Geographic Rate Averaging Order, the Commission acknowledged the fact “that geographic rate averaging benefits rural areas by providing access to a nationwide telecommunications network at rates that do not reflect the disproportionate burdens that may be associated with recovery of common line costs in rural areas. The Commission also noted that geographic rate averaging ensures that rural customers will share in lower prices resulting from nationwide interexchange competition.”<sup>27</sup> Acknowledging that costs are burdensome in rural areas, the Commission obviously understood that price “averaging” was and is a viable option for bringing advanced services and universal service to rural America. In this respect, Alexicon suggests that *cost* averaging continue to be utilized as the practice to set national benchmarks for average cost determination in an effort to allow those carriers who meet and exceed those benchmarks to draw from funding vehicles in order to keep rates affordable and comparable to urban areas.

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<sup>25</sup> Ibid

<sup>26</sup> Communications Act of 1934, Section 254(g), as amended

<sup>27</sup> Geographic Rate Averaging Order, 11 FCC Rcd at 9567, para 6

## **Conclusion**

Based on the positions presented above, Alexicon strongly urges the Commission to approach a new IC regime with a spirit of fairness, realizing that rural and high cost areas indeed need special recognition. Compensation, via stringent enforcement measures, for utilizing a rural carriers' network is vital to the ongoing operational, financial, and public interest aspects of the telecommunications market that these companies have relied on for decades. Alexicon pleads with the Commission to consider our comments with resolve in an effort to create a new IC regime that is just and reasonable to all parties but doesn't allow any segment of the telecommunications industry to "get a free ride."

Respectfully submitted,

**Alexicon Telecommunications Consulting**

[Filed Electronically]

Alexicon Telecommunications Consulting  
2055 Anglo Drive, Suite 201  
Colorado Springs, CO 80918

May 23, 2005

**Alexicon Telecommunications Consulting  
 Developing a Unified Intercarrier Compensation Regime  
 CC Docket No. 01-92**

**Appendix A**

State and Interstate Access Combined

| Company      | Combined Minutes   | Combined Revenue Requirement | Combined Cost Per Minute |
|--------------|--------------------|------------------------------|--------------------------|
| Company A    | 5,379,270          | \$1,496,070                  | \$0.2781                 |
| Company B    | 11,869,675         | \$1,759,871                  | \$0.1483                 |
| Company C    | 19,613,871         | \$2,086,389                  | \$0.1064                 |
| Company D    | 8,252,368          | \$4,072,897                  | \$0.4935                 |
| Company E    | 19,471,059         | \$5,297,412                  | \$0.2721                 |
| Company F    | 1,574,106          | \$732,224                    | \$0.4652                 |
| Company G    | 17,581,366         | \$2,070,670                  | \$0.1178                 |
| Company H    | 5,844,316          | \$2,746,566                  | \$0.4700                 |
| Company I    | 23,953,666         | \$6,335,368                  | \$0.2645                 |
| Company J    | 12,506,768         | \$3,565,345                  | \$0.2851                 |
| <b>TOTAL</b> | <b>126,046,465</b> | <b>\$30,162,812</b>          | <b>\$0.2393</b>          |

| Company      | Access Lines  | Total Revenue Requirement | Annual Cost Per Access line |
|--------------|---------------|---------------------------|-----------------------------|
| Company 1    | 2,222         | \$2,263,763               | \$ 1,018.80                 |
| Company 2    | 1,511         | \$2,723,080               | \$1,802.17                  |
| Company 3    | 39,750        | \$36,472,654              | \$917.55                    |
| Company 4    | 4,796         | \$3,084,145               | \$643.07                    |
| Company 5    | 1,633         | \$4,780,731               | \$2,927.58                  |
| Company 6    | 3,662         | \$7,622,314               | \$2,081.46                  |
| Company 7    | 332           | \$869,245                 | \$2,618.21                  |
| Company 8    | 392           | \$635,357                 | \$1,620.81                  |
| Company 9    | 2,325         | \$3,041,117               | \$1,308.01                  |
| Company 10   | 1,066         | \$2,712,803               | \$2,544.84                  |
| Company 11   | 1,272         | \$4,518,977               | \$3,552.65                  |
| Company 12   | 569           | \$647,049                 | \$1,137.17                  |
| Company 13   | 5,679         | \$7,924,672               | \$1,395.43                  |
| Company 14   | 2,349         | \$4,297,966               | \$1,829.70                  |
| <b>TOTAL</b> | <b>67,558</b> | <b>\$81,593,873</b>       | <b>\$1,207.76</b>           |