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Inbound LCR Gains Ground

By Aelea Christofferson

Least-cost routing and disaster recovery have been understood and applied to outgoing calls for years. Programming a switch to select a traffic route is as old as the introduction of the PBX, but understanding that the same capabilities apply to incoming toll-free traffic has long been overlooked. Although the technology has been available since 1993, the use of it has been slow in coming. The capability involves multicarrier routing of toll-free traffic.

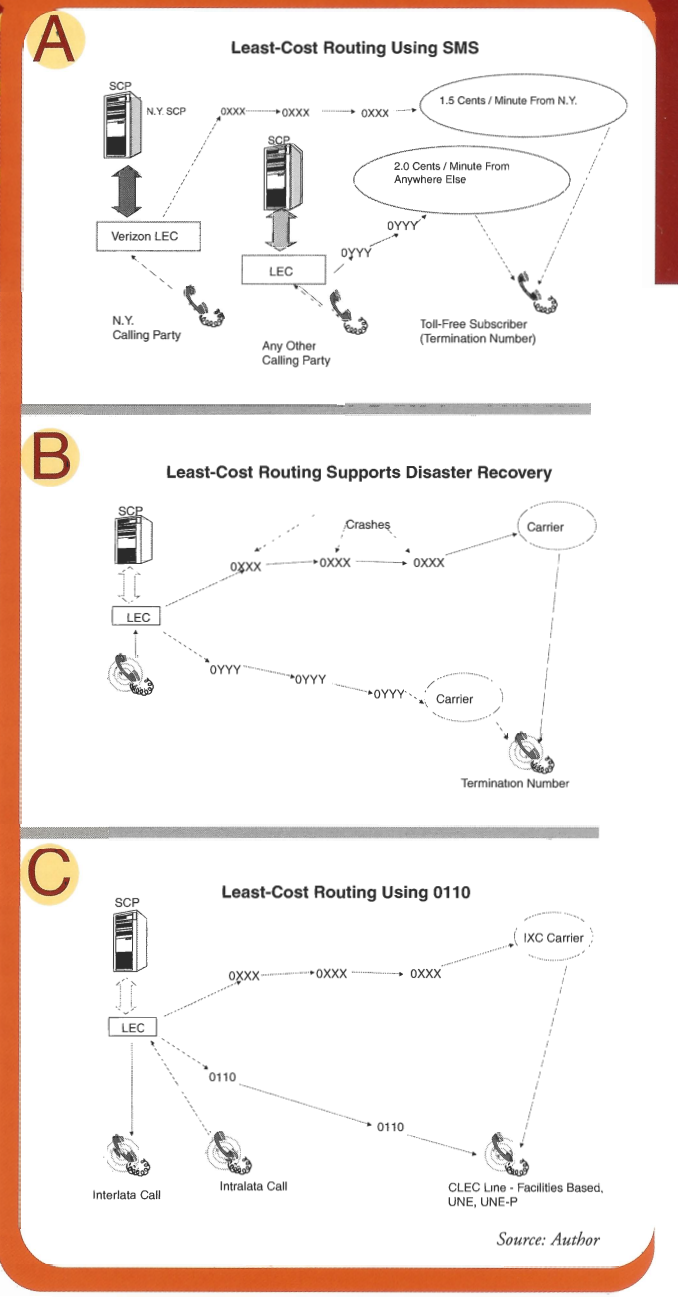
There are several reasons for the growing use of multiple-carrier routing. The first is acceptance of Tier 2 and Tier 3 carriers has grown. As networks and switching have improved, the notion that only the largest carriers provide stable service has lessened. This has given rise to a number of carriers that can offer choice to the consumer.

Another reason that multiple-carrier routing has become more attractive is the per-minute rate has dropped. When carriers and reseller could charge customers 12 cents per minute, a half a cent one way or another was irrelevant, but as competition has grown and margins have shrunk, fractions of a cent have become important.

Both of these elements led the carriers and resellers to multicarrier-routing arrangements. End users, especially very large users, now are discovering this option and demanding that choice. In the past, large carriers might have dismissed a customer's suggestion that traffic be split, but in this competitive market, that action is not an option.

Least-cost routing is an important part of managing toll-free traffic because it allows control of carrier costs, the ability to make use of regional or perspective carriers and the manipulation of current carrier contracts. In order to understand how to accomplish these tasks it is first important to know how the national toll-free database works.

The Service Management System (SMS) was developed in the late 1980s to support FCC-ordered toll-free number portability. The system



Source: Author

is based on the entity that controls the toll-free number, the Responsible Organization, (Resp Org) building a routing record that then downloads to service control points (SCPs) around the country. This design allows traffic to be routed via carrier identification code (CIC) to different carriers based on where traffic originates. This routing can be accomplished at a state, area code, LATA or even NPA/NXX level. Carriers have used this capability for a more than a decade to serve geographic areas not covered by their network. All but the few largest carriers send traffic to other carriers in places like Alaska, Canada and an island in New York because it is not cost-effective to have their own networks in these areas.

This same approach can be used to accomplish least-cost routing (see Diagram A, top right). For example, two calls originating from different parts of the country will arrive at different SCPs. The call originating in New York can be sent to a carrier with especially good rates in New York while the one from anywhere in the rest of the country can be sent to another carrier.

The Resp Org has instructed SCPs to route traffic to two different CIC codes. In this case, rather than overcoming coverage issues, the routing is used to make the best use of different carrier rates. Due to their own coverage, carriers frequently have different rates in different places or times of day. Sometimes these differences are driven by a desire to keep traffic on their networks and sometimes the differences are used to fill underutilized facilities.

This same process can be used to try out new or unfamiliar carriers or resellers. Rather than risk all of their traffic to the new carrier, they will send portions of the traffic to test the prospective carrier. Traffic load can be changed at any time and within 15 minutes if the Resp Org used is efficient and properly staffed. These changes can take place at any time, so the carrier has risked very little.

Another option is to use multiple carriers through percentage allocation. This is especially useful to manipulate carrier contracts. Let's say a carrier negotiated a contract for 3 cents per minute — when that was a good rate — and committed a minimum of 100,000 minutes per month. Now the going rate is 2.2 cents per minute, but the carrier can't leave its original carrier because it is still under contract, but the company now is running 200,000 minutes per month. The Resp Org can build a record that sends 50 percent of the traffic to the contract carrier and 50 percent to a carrier with better rates. This ratio can be changed any time. If midway through the month, it is determined volume is going to reach only 150,000 minutes, the percentage sent to the contract carrier could be increased to 75 percent to fulfill the volume commitment.

All these capabilities also support disaster recovery (see Diagram B on page 44). As long as traffic is flowing to two or more carriers, traffic immediately can be moved from a carrier that is having network problems. Again, within 15 minutes the record can be changed to eliminate the carrier while it is down and just as quickly changed back when the carrier's network is restored.

Another routing option is using the 0110 code. Unlike other CIC codes, the 0110 code is not carrier-specific. The code is meant to drive intraLATA traffic to the intraLATA carrier. That carrier is determined by the terminating location (see Diagram C on page 44). To use 0110 the code, the LEC must "own" that line. In the case of a CLEC, the line must either be a facility-based line or a UNE-P line. The intraLATA traffic cost then moves to the CLEC's wholesale contract. In most cases this is far less costly than either local retail rates or interLATA carrier rates.

So what does a carrier need to make use of all these routing capabilities? They need Resp Org expertise or to outsource to a company that does — either a carrier or independent third party. Becoming a Resp Org is expensive. The set-up fee and deposit now is about $7,000. This does not count the cost and time for training administrators. To support an in-house Resp Org requires at least 2,000 transactions per month. Transaction means changing the routing of numbers or setting up new numbers. The number of numbers is not as relevant as the per-month SMS database cost (currently 18.33 cents per number per month) is the same in-house or outsourced Resp Org services. (Note: These costs are based on the author's company's rates and may not apply using another independent Resp Org.) Using a carrier may seem to be the best choice because there may not be an identifiable cost for Resp Org responsibility, however the cost often is built into the per-minute rate. However, routing control may be limited. Often carriers cannot or will not agree to adding competitors to their records. In addition, changes may not be made in a timely (within 15 minutes) manner.

The bottom line is to look at your toll-free traffic in the same way you look at your outgoing traffic. Can use of multiple carriers lower your cost and/or provide effective disaster recovery? If the answer is yes, the next step is to ask yourself who is my Resp Org?"

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