Disaggregation and Targeting of Universal Service Support

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Introduction

The actual cost of providing telecommunications services in rural America is generally higher, per customer, than is the cost of providing these services in urban areas. This difference is due in part to the lower density of population of rural areas. Rural carriers, in contrast to urban carriers, have fewer customers to share basic fixed costs (for example, switches) and these customers are separated by greater distances, increasing outside plant costs, than are their urban counterparts. The disparity in costs is also related to the economies of scale and economies of skill enjoyed by large urban carriers that are not available to rural carriers. For example, the Federal Communications Commission's forward-looking economic cost model shows a cost of $866.27, without adjustment for overhead costs, to provide a local loop in a Wyoming wire center, compared to a cost of $9.97 to provide a local loop in a New York City wire center.

During the era of monopoly service, the disparity in costs between rural and non-rural service was addressed through implicit subsidies between geographic areas and classes of service. Between 1984 and 1996, a series of opinions, rulings and regulations began to coalesce and focus attention on the need to restructure these subsidies. The Telecommunications Act of 1996 had three primary goals: to promote competition, to reduce regulation, and to ensure all Americans receive the benefits of telecommunications (that is, to ensure universal service). Under the provisions of the Act, universal service would continue to be subsidized, satisfying the third of these goals, but the previously implicit subsidies would be transformed into explicit subsidies. This transformation would also further the first goal by making federal universal service support portable to all certified eligible telecommunications carriers.

Federal universal service support consists of three categories of support, with a fourth category scheduled for implementation in the near future. The first category is High

Cost Loop Support, or HCLS. This category focuses on the costs associated with high-cost local loop outside plant costs. The second category is Long Term Support, or LTS. This category provides support for the interstate loop cost of rate-of-return carriers that participate in the National Exchange Carrier Association (NECA) common line pool. The FCC tentatively has concluded that LTS should be merged with Interstate Common Line Support (ICLS) as of July 1, 2003, after which participation in the NECA common line pool would not be required for receipt of support. The third category is Local Switching Support, or LSS. As its name suggests, this category focuses on the relatively higher costs for carriers with fewer than 50,000 access lines of providing basic switching services. All three categories of support are affected by a process known as the "averaging" of support.

Averaging of Support

Under existing embedded cost mechanisms, federal universal service high-cost support for rural carriers is averaged across all lines served by a carrier within its study area. The FCC's definition of a "study area" confirms a specific service territory and states that "[study area boundaries shall be frozen as they are on November 15, 1984" to reflect "[a] telephone holding company's operations within a single state. Figure 1 represents an hypothetical study area with a centrally located town (the shaded oval). The difficulty with averaging support across all lines served by a carrier within a study area is that the support in low-cost areas of a study area may exceed the cost of serving those areas while support in high-cost areas may be insufficient to offset the higher cost of serving those areas.

The Rural Task Force (RTF), an independent advisory panel appointed by the Federal–State Joint Board on Universal Service to provide guidance on universal service issues affecting rural telephone companies, produced a series of six white papers detailing the results of its inquiry and its recommendations to the Federal Communications Commissions (FCC), which culminated in an FCC Order.[1] Two of these white papers were dedicated to the question of averaging support. The RTF recommended that rural carriers should be permitted to depart from study area averaging and to disaggregate and target per-line high-cost universal service support (that is, HCLS, LTS and LSS) to geographic areas below (that is, smaller than) the study area level. Disaggregation to this finer level of granularity would define per-line support that would reflect the actual cost of providing service in particular geographic sub-areas within the study area.

Disaggregation Paths

The RTF stated that rural carriers needed flexibility in the manner in which federal high-cost universal service support is disaggregated and targeted due to variations in the characteristics and operating environments of rural carriers. To provide this flexibility, the RTF recommended a disaggregation system that consisted of three options or "paths." These paths would allow rural carriers to identify zones of relative cost variation (if any) and to develop appropriate methods of specifying which zones should receive more support.

The FCC adopted the RTF's recommendation of three paths for disaggregation and targeting of high-cost universal service support. The FCC agreed that there should be flexibility in the manner in which support was disaggregated and targeted for rural carriers. The FCC confirmed that support should be disaggregated and targeted below the study area level to ensure that per-line level of support would be more closely associated with the cost of providing services.

- *Path One*

  Path One allows a carrier to certify to the state commission or other appropriate regulatory authority that it does not want to disaggregate support (Figure 2). However, a state could require disaggregation and targeting of support, either on its own motion or on the motion of an interested party, in which case the carrier would be required to disaggregate its support zones. After selection, the plan will remain in effect until a state commission or appropriate regulatory authority requires, on its own motion or upon petition by an interested party (including the affected carrier), a change to a different disaggregation and targeting methodology. The rationale for these restrictions was the desire to eliminate "gaming" of the system.
- *Path Two*

  Path Two is available to carriers that want state commission review and approval of a relatively complex disaggregation plan. Path Two allows a carrier to disaggregate and target support to multiple levels below a wire center. A disaggregation and targeting method can be tailored with precision, subject to state approval, to the cost and geographic characteristics of the carrier and the competitive and regulatory environment (Figure 3). The plan must show a per-line amount of support for each element in each disaggregation zone. Path Two provides the most flexibility in the development of a disaggregation plan, but also provides for regulatory approval to ensure that the methodology implemented is competitively neutral.
- *Path Three*

  Path Three would permit carriers to self-certify a method of disaggregation with the state commission or other appropriate regulatory authority. Path Three Permits carriers to choose 1) a disaggregation plan of up to two cost zones per wire center (Figure 4) or 2) a disaggregation plan that complies with a prior regulatory determination.

Under the terms of Path Three, self-certifying carriers must provide state regulators (or other appropriate regulatory authority) and the Universal Service Administrative Company (USAC) with a description of the rationale used to disaggregate support, including the methods and data, and a discussion of how the plan complies with the self-certification guidelines. If the plan uses a benchmark, it must be generally consistent with how the total study area level of support for each category of costs (HCLS, LSS and LTS) is derived, to enable a competitor to compare the disaggregated costs used to determine support for each zone. The plan must show a per-line amount of support for each element in each disaggregation zone.

Levels of Support

The FCC order requires that an incumbent carrier's total support for a given study area using the chosen disaggregated method must equal the total support available in that study area on a non-disaggregated (that is, averaged) basis. In this way, the FCC sought to limit the impact of disaggregation on the universal service funding requirements.

The FCC also requires that the relative per-line support relationships between disaggregation zones for each disaggregated category of support must remain fixed over time and that such relationships must be made publicly available. That is, the FCC requires that the per-line support for each category of support (HCLS, LTS & LSS) in each disaggregation zone must be determined so the relative support relationships between zones will be maintained.

The FCC recognized that there is some variation in costs with different categories of support. Specifically, the HCLS and LTS mechanisms support loop costs and therefore share similar cost characteristics. Carriers would be required to allocate the same ratio of HCLS and LTS to each disaggregation zone. However, a carrier's local switching cost characteristics might differ from its loop cost characteristics in different disaggregation zones. Therefore, it would be allowed to allocate a different ratio for LSS to the extent that the cost characteristics of providing loop and switching service in disaggregation zones differ.

The FCC requires that the product of all of the ILEC's lines for each cost zone multiplied by the per-line support for those zones when added together must equal the sum of the ILEC's total level of support. FCC requires that per-line support amounts for each zone must be recalculated whenever an ILEC's total annual support changes. The recalculated support amount must be based on the changed support amounts and lines at that point in time.

After a CLEC is designated as a competitive eligible telecommunications carrier (CETC) in a rural study area, determination of per-line amounts of support for the CLEC will be based on the ILEC's total support levels, lines and disaggregated support relationships.

Timeframes

In its order, the FCC directed carriers to choose a disaggregation path within 270 days of the effective date of the rules adopted in the order. The order stated that carriers that failed to do so would not be permitted to disaggregate and target support unless ordered to by an appropriate regulatory authority. This requirement meant that carriers were required to submit their disaggregation plans to USAC no later than March 18, 2002. The FCC's Multi-Association Group (MAG) Order extended this date to May 15, 2002. (We note in passing that this extension resolved an ambiguity in the original order that in at one case suggested a date of March 15, rather than March 18.)

A carrier electing Path Two or Path Three must, by May 15, 2002, file with the relevant state regulatory authority its proposed disaggregation plan or its self-certified disaggregation plan. State approval of a carrier's proposed disaggregation plan pursuant to Path Two would not be required by that date, but the disaggregation plan could not go into effect until approval was received.

After selection, the Path will remain in effect until a state commission or appropriate regulatory authority requires a change to a different disaggregation and targeting methodology. Such a requirement could be based on its own motion or on petition by an interested party (including the affected carrier).

Restrictions

The FCC adopted several general restrictions for all paths.

- *Competitive Carrier Designated*

  For study areas in which a CLEC was designated as a CETC prior to the effective date of these rules, an ILEC could elect Path Three only to the extent that it was self-certifying a disaggregation and targeting plan that had already been approved by the state.

  In all other instances in which an eligible CLEC had been designated as a CETC prior to the effective date of these rules, the ILEC must seek prior state approval of its disaggregation and targeting plan under Path Two.

- *Certifying Boundaries*
  Rural ILECs must submit to USAC maps in which the boundaries of the designated disaggregation zones of support are clearly specified, which USAC will make available for public inspection by competitors and other interested parties.
- *Algorithm Used*

  FCC required that, when submitting information in support of self-certification, a carrier must provide USAC with publicly available information that allowed competitors to verify and reproduce the algorithm used to determine zone support levels. The carrier also must demonstrate that the underlying rationale is reasonably related to the cost of providing service for each cost zone within each disaggregated category.
- *Certification*
  FCC requires carriers electing Path One to submit to USAC a copy of the certification to the state commission or appropriate regulatory authority certifying that it will not disaggregate and target support.

  Carriers selecting Path Two must submit a copy to USAC of the order approving the disaggregation plan submitted by the carrier to the state commission or appropriate regulatory authority. Carriers selecting Path Two also must submit a copy of the disaggregation plan approved by the state commission or appropriate regulatory authority.

  Carriers selecting Path Three must provide the state and USAC with a description of the rationale used to disaggregate support, including the methods and data, and a discussion of how the plan complies with the self-certification guidelines. The plan must show a per-line amount of support for each element in each disaggregation zone.
- *MAG Plan*
  The initial purpose of the disaggregation and targeting Paths was to allocate appropriate levels of support to geographic sub-areas within a study area. This purpose has been extended, at least by implication, as a result of the MAG Plan's application of the same zones.[2]

  In the MAG Plan Order, the FCC ordered that the RTF system for geographic disaggregation and targeting below the study area level would also apply to the newly-defined Interstate Common Line Support (ICLS) category of portable high-cost universal service support. The FCC noted that disaggregation by allowing ILECs to target explicit universal service support to regions within a study area that costs relatively more to serve would ensure that a competitive entrant would receive targeted support only if it also serves the high-cost region. Disaggregation would prevent the competitive entrant from receiving greater support than was needed to serve relatively low-cost regions, a circumstance that would give the competitive carrier a potential price advantage over the incumbent.

The FCC noted that the same three paths would be available for the disaggregation of ICLS as for other types of support defined in the RTF Order. The MAG Plan Order extended the deadline for selecting a path to May 15, 2002 and reaffirmed that after that date a carrier would not be permitted to disaggregate and target support unless ordered to do so by a state commission or other appropriate regulatory authority.

The MAG Plan order confirmed that a carrier's choice of disaggregation paths would remain in place for four years, unless a state commission or other appropriate regulatory authority ordered disaggregation and targeting of support in a different manner. Rate-of-return carriers would be required to select identical disaggregation zones for all forms of high-cost universal service support, with the exception of forward-looking intrastate high-cost support received by non-rural carriers that are also rate-of-return carriers. For example, if a rural rate-of-return carrier self-certified two cost zones per wire center under Path Three, it would be required to disaggregate all forms of high-cost universal service support -- HCLS, LTS, LSS and ICLS -- to the same two cost zones per wire center. The FCC noted that there was no reason why support should be allocated differently in different disaggregation zones.

The FCC reaffirmed that there is some variation in costs with different categories of support. The HCLS, LTS and ICLS mechanisms support loop costs and share similar cost characteristics; carriers are required to allocate the same ratio of HCLS, LTS and ICLS to each disaggregation zone. However, a carrier's local switching cost characteristics might differ from its loop cost characteristics in different disaggregation zones. Therefore, it would be allowed to allocate a different ratio for LSS to the extent that the cost characteristics of providing loop and switching service in disaggregation zones differ.

The FCC rules for the disaggregation and targeting of portable ICLS and LTS apply to both rural and non-rural rate-of-return carriers. Non-rural rate-of-return carriers are required to adopt a disaggregation and targeting path only for their receipt of ICLS and LTS. Non-rural intrastate high-cost support, including forward-looking high-cost support and interim hold-harmless support, will continue to be targeted to high-cost wire centers, consistent with FCC rules for targeting such support to high-cost wire centers.

Conclusion

Although the deadline for filing a disaggregation plan may have passed by the time this article appears, that deadline may have been extended as it was with the release of the MAG Plan. In any event, any carrier may file a request with the appropriate regulatory authority to investigate a change in disaggregation at any time. Therefore, it remains appropriate to consider whether, and how, a rural rate-of-return carrier should disaggregate and target support.

The range of specific circumstances that rural carriers face prevents us from offering a general recommendation regarding an approach to disaggregation. The significant amounts of support fund that are affected by this issue justify careful analysis of each individual case to ensure the availability of all appropriate support.

[1] Rural Task Force, Competition And Universal Service, White Paper No. 5, September 2000; Rural Task Force, Disaggregation And TargetingOf Universal Service Support, White Paper No. 6, September 2000; *Federal-State Joint Board on Universal Service*, CC Docket No. 96-45, Recommended Decision, FCC 00J-4 (Joint Board released December 22, 2000) and FCC Fourteenth Report And Order, Twenty-Second Order On Reconsideration, And Further Notice Of Proposed Rulemaking In CC Docket No. 96-45, and Report And Order In CC Docket No. 00-256, released May 23, 2001.

[2] FCC Second Report And Order And Further Notice Of Proposed Rulemaking In CC Docket No. 00-256, Fifteenth Report And Order In Cc Docket No. 96-45, And Report And Order In CC Docket Nos. 98-77 And 98-166, released November 8, 2001.

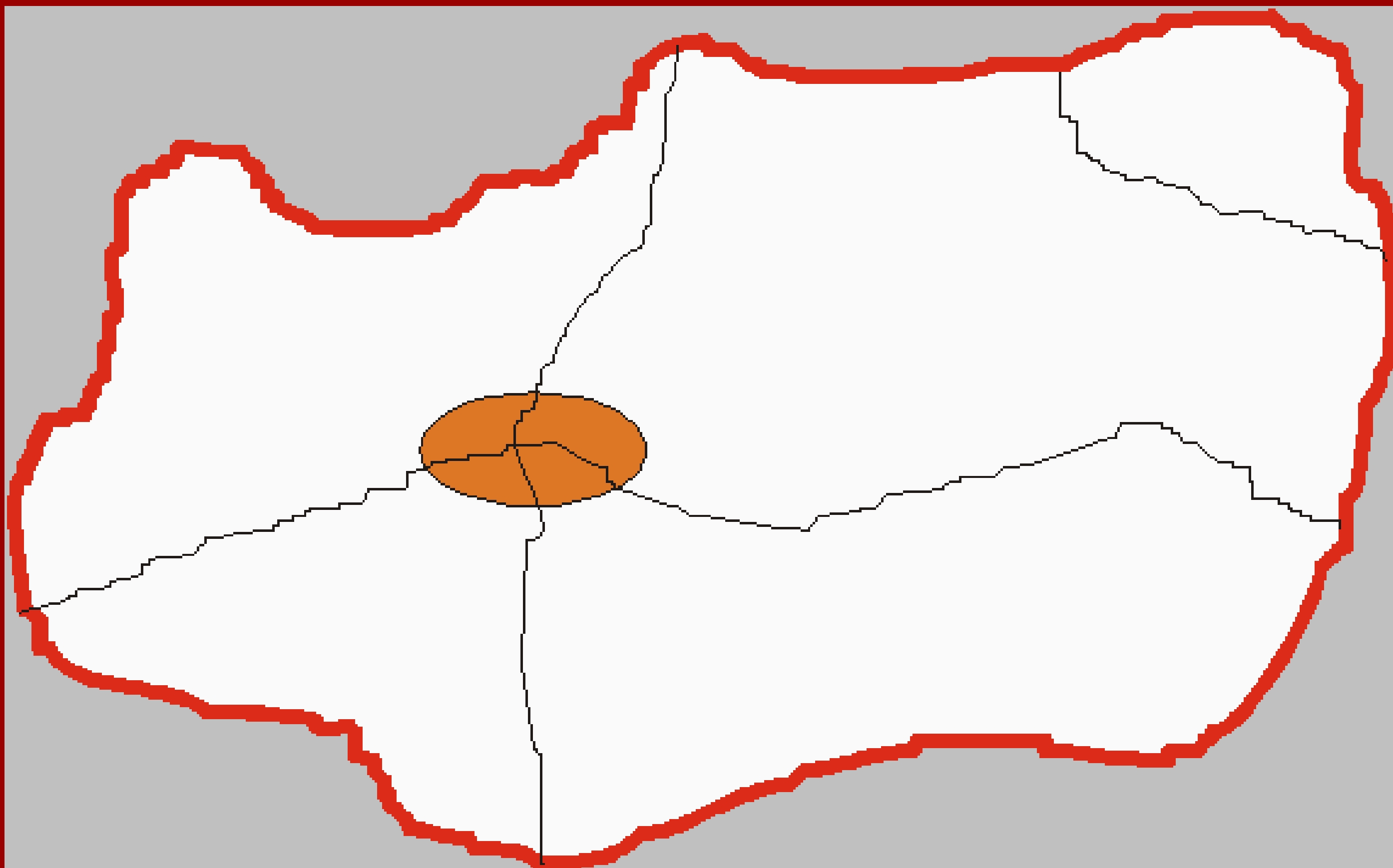

Figure 1. Typical Study Area

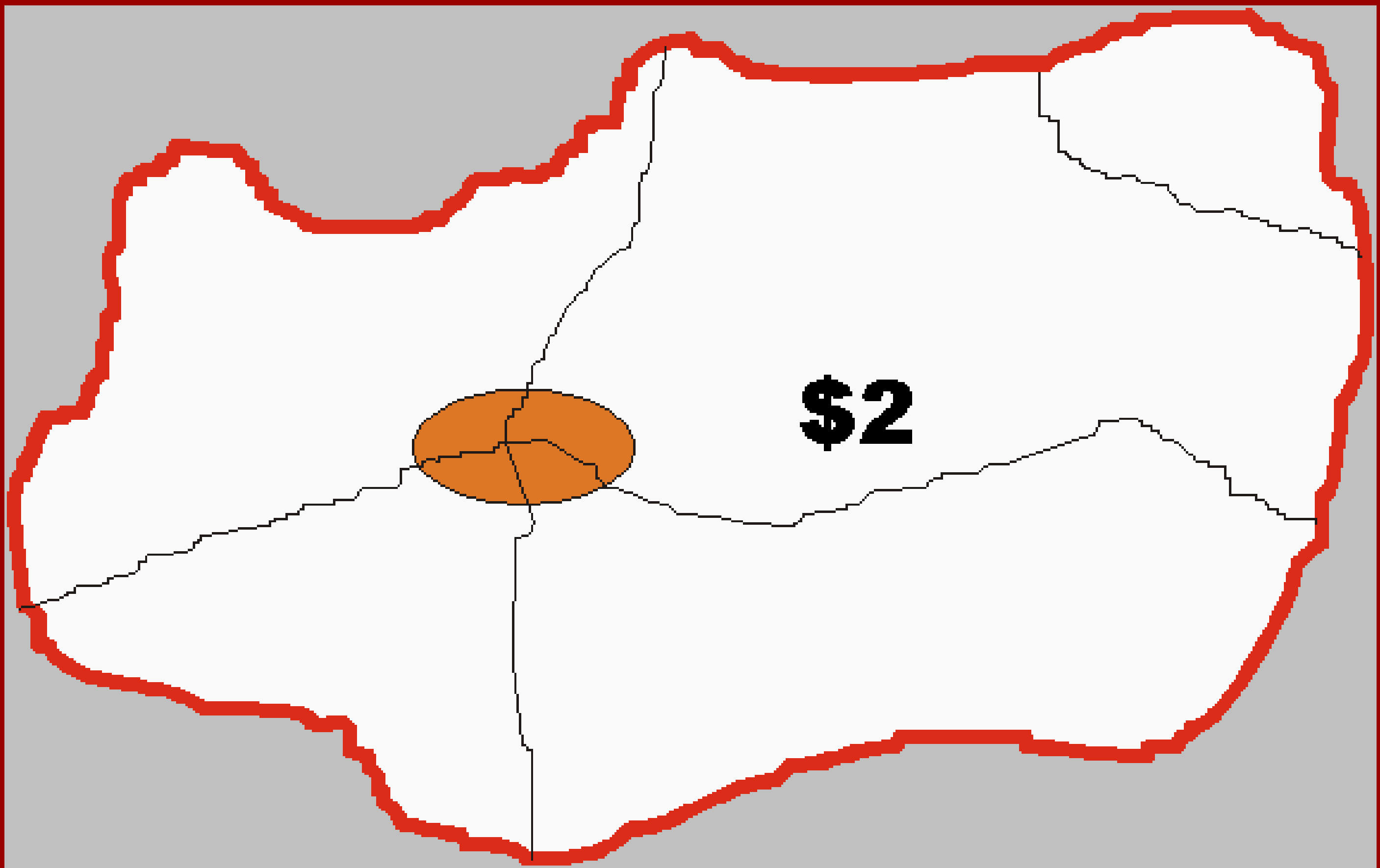

Figure 2. Homogeneous Costs

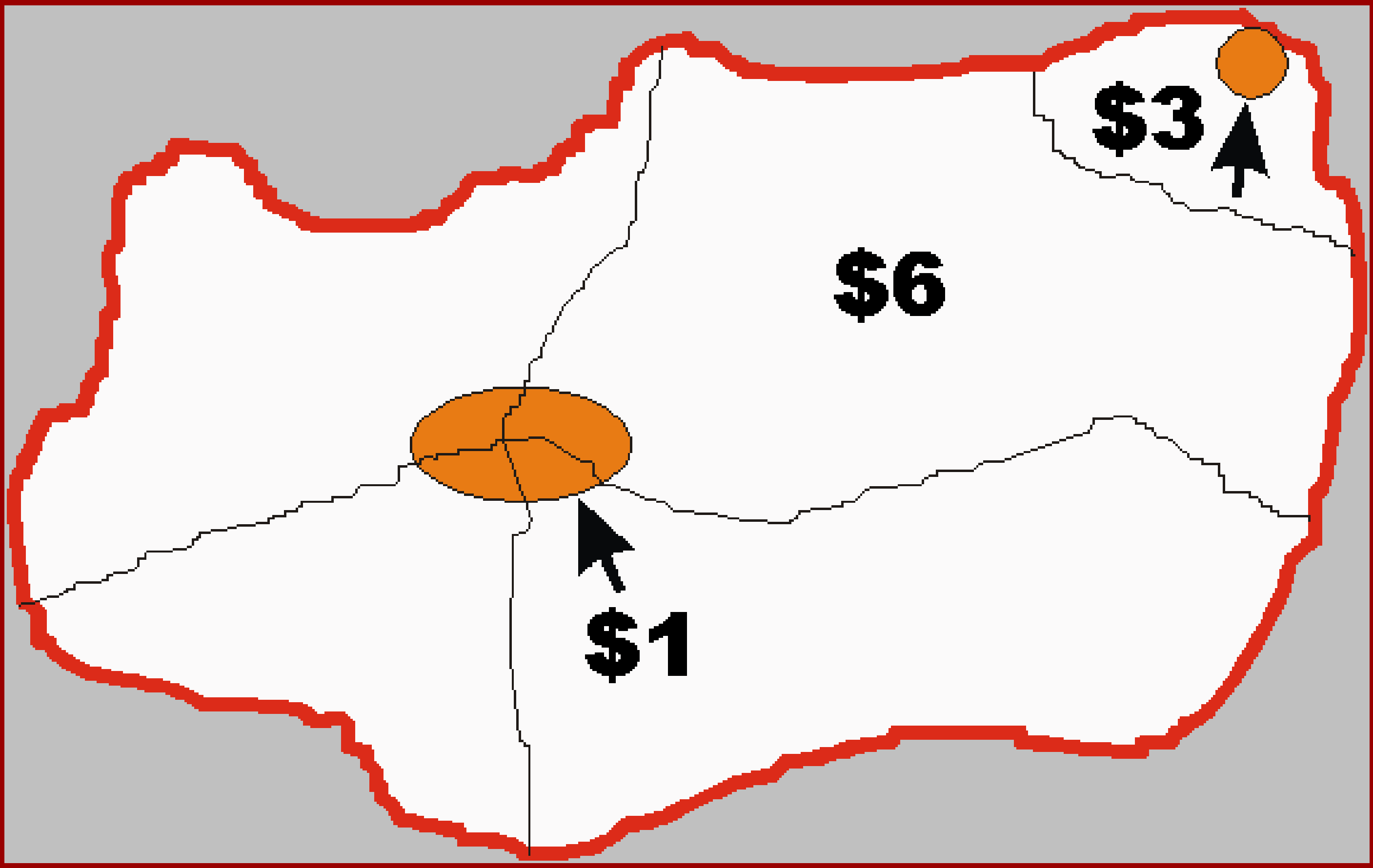

Figure 3. Path 2 – Multiple Cost Levels

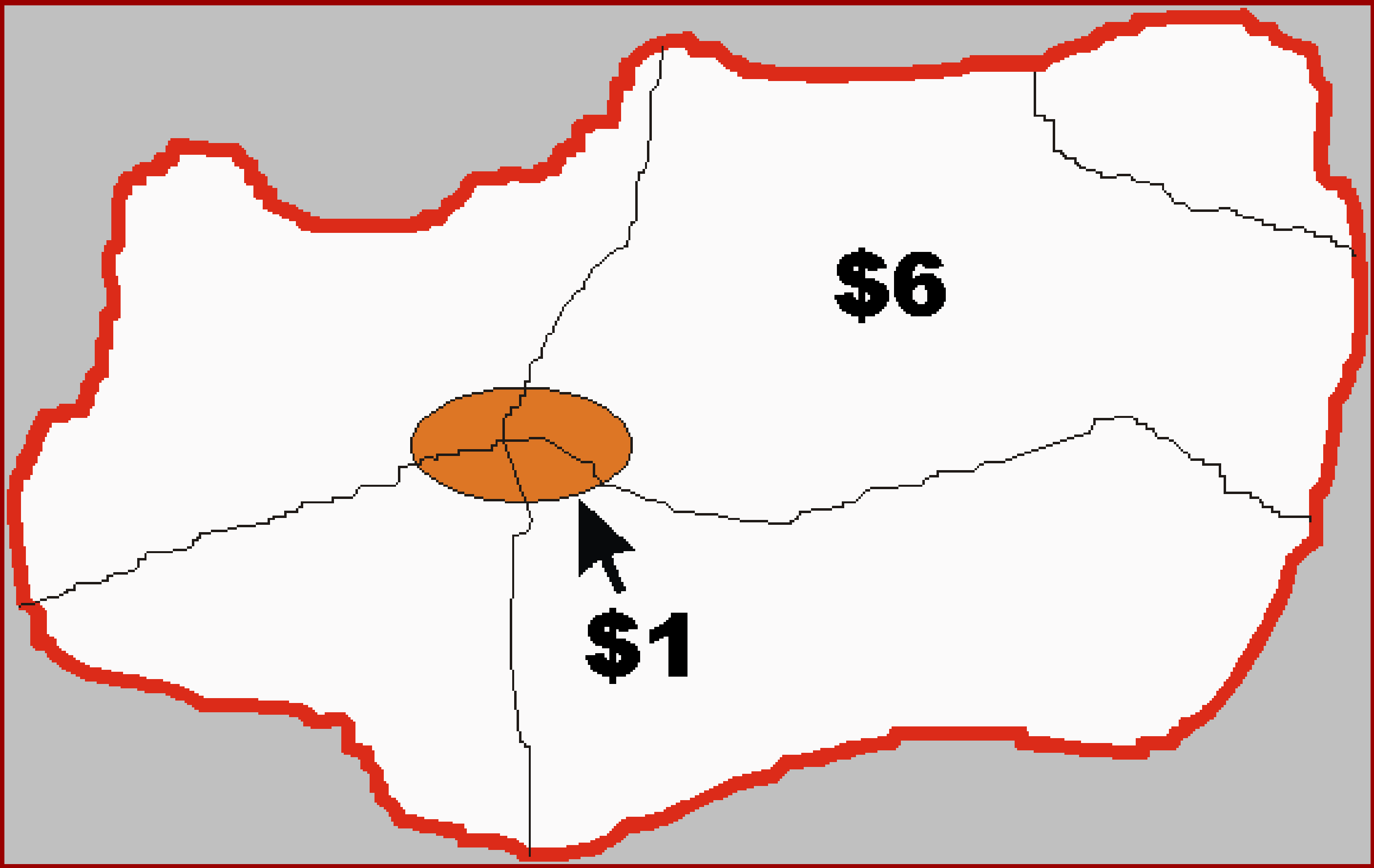

Figure 4. High Cost and Higher Cost Zones