



DETERMINING 'IMPAIRMENT' USING  
THE HORIZONTAL MERGER GUIDELINES' ENTRY ANALYSIS

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## The Commission's Impairment Inquiry Is Analogous To The Entry Assessment In The *Guidelines*

- The *Guidelines* ask whether there would be new supply and requisite investment in facilities in response to a price increase that would be sufficient to constrain the price increase.
  - If not, the antitrust authorities would sue to block the otherwise anticompetitive merger.
- The impairment standard under section 252(d)(2) asks whether, if prices for telecommunications services were too high or vulnerable to being raised, would CLECs be able to enter with requisite investment to provide effective competition if particular network elements were not unbundled.
  - If not, then the FCC should require the network element in question to be unbundled.

## The *Guidelines*' Entry Test

- In assessing the likelihood of entry, the *Guidelines* make three fundamental inquiries:
  - Sunk Costs - “A significant sunk cost is one which would not be recouped within one year of the commencement of [service], assuming a ‘small but significant and non-transitory’ price increase in the relevant market.” *Guidelines* §1.32.
  - Minimum Viable Scale (MVS) - Where entry requires significant sunk costs, the *Guidelines* examine whether the “minimum viable scale” of entry is less than the “likely sales opportunities available to entrants.” Minimum viable scale is the “smallest annual level of sales that the committed entrant must persistently achieve for profitability.” *Guidelines* § 3.3.
  - Other Entry Barriers - The *Guidelines* also examine whether potential entrants suffer from any absolute cost disadvantages *vis-a-vis* the incumbent, regardless of the investments they would have to make. *Guidelines* §§ 1.11, 1.32.

## Sunk Costs -- Unrecoverable If The Firm Fails

- The relevant empirical inquiry is the level of sunk costs relative to expected revenues.
- Are sunk costs significant enough (5%) that the entrant must worry about long term and wasteful market over-capacity?
- Sunk costs make entry risky, because:
  - It is rational for the incumbent to respond to new entry by lowering prices down to its short run marginal cost, which (because of the existence of sunk costs) is likely below both the incumbent's and the entrant's long average cost. The rational prospect that the incumbent will do so makes it less likely that a second entrant can be profitable, thus deterring its entry *ex ante*.
  - If sunk costs are also fixed, higher sunk costs also indicate the existence of greater scale economies. Where such scale economies exist, an entrant must deploy substantial capacity in order to achieve a cost structure comparable to the incumbent's. But entry on such a massive scale would flood the market with excess capacity and make it unlikely that the entrant would be able to sell services at prices that allow it to recover its sunk investment. Knowing this, the entrant will be deterred from entering and sinking its costs.

## The *Guidelines*' Entry Test -- Minimum Viable Scale

- MVS is the smallest scale at which an entrant can achieve a cost structure comparable to the incumbent and thereby achieve profitability. If MVS is greater than likely sales opportunities, then entry is considered unlikely.
- If the MVS is too big ( $> 5\%$ ), then responsive entry is unlikely due to creation of wasteful market over-capacity
- “The minimum viable scale of an entry alternative will be relatively large when the fixed costs of entry are large [and] when the fixed costs of entry are largely sunk . . . .” *Guidelines* § 3.3 n.31.
- Under the *Guidelines*, likely sales opportunities are usually low where:
  - the ILEC has locked up customers with long-term contracts, making it difficult for entrants to gain share.
  - the market is declining, thereby depriving CLECs of the ability to capture expansion of demand.
  - the ILEC has made sunk investment in capacity that is capable of serving both existing and foreseeable market demand.

## Other Entry Barriers

- The *Guidelines* recognize that where a potential entrant suffers from any absolute cost disadvantage (5%) *vis-a-vis* the incumbent, entry will be less likely to occur.
- This is true even where the incumbent's prices are well above costs. In such cases, the incumbent could drop its prices below the entrant's costs. The incumbent would remain profitable even at a reduced price, but setting prices below the entrant's costs would make it impossible for the entrant to remain economically viable. This prospect deters entry.

## Application -- Loops

- Approximately 78% of loop costs arise from sunk investments.
- Loops are generally considered to account for the majority of the overall cost of telecommunications services, so that any sunk/scale/scope driven cost disadvantage represents a significant percentage of a CLEC's overall costs.
- Loops are characterized by steep scale and scope economies.
- The MVS of loops is large; Dr. Clarke shows a 57% per-line loop cost penalty for a 30% share.
- AT&T cannot economically deploy a fiber lateral even to a nearby AT&T fiber ring unless the building provides at least 3 DS3s of traffic. Only a small fraction of buildings generate that level of demand.
- CLECs cannot gain access to many buildings where self-deployment might otherwise be feasible because of unreasonable conditions imposed by landlords
- Delays in obtaining necessary rights-of-way make it difficult for CLECs to self-deploy loops, because:
  - (a) customers will not sign a contract and wait months to receive service and
  - (b) the sunk cost nature of loops precludes CLECs from building "on spec."



## Application -- Transport

- Approximately 64% of transport costs arise from sunk investment.
- The MVS of transport is high. AT&T cannot economically deploy a transport facility to an LSO unless it can carry 18 DS3s of traffic, the level at which it achieves costs somewhat comparable to (albeit higher than) the ILEC.
- 18 DS3s of traffic constitute the majority of traffic in even a large LSO. Thus, it is unrealistic to assume that CLECs can be expected to capture this level of traffic.
- Any attempt to enter at lower scale would put the CLEC at an insurmountable cost disadvantage. A CLEC with a 5% market share for an LSO would have transport costs at least 9 times higher than the ILEC. Even if transport were only 10% of the total cost of telecommunications service, that would translate into an overall 90% penalty.
- UNEs can be used to mitigate these disadvantages by allowing CLECs to “hub” traffic from several LSOs to a central point of aggregation and then build transport to connect the hub locations. However, use and commingling restrictions prevent such mitigation.

## Application -- Switching

- About 25% of direct switching costs arise from sunk investment.
- Switching is also characterized by steep scale economies.
- CLECs must pay the ILEC for a “hot cut” to break the connection between a customer and the ILEC’s switch and re-establish that connection onto the competitive carrier’s network. The CLEC must also incur costs to “coordinate” this hot cut.
  - AT&T has estimated that the overall level of cost incurred by CLECs for this loop provisioning is nearly 20% of expected first year revenues for the typical residential customer.
  - In addition, the quality of service provisioned through hot cuts creates additional disadvantages.
- Switching deployed with ILEC-style architecture has high MVS, and is impractical.



## Application -- Switching

- CLECs can in theory achieve greater scale and effectively increase the size of the addressable market by using a single switch to serve a broad geographic area.
- To do so, however, CLECs must deploy “long” loops, *i.e.*, a combination of loops and transport facilities to connect the CLEC’s customers to its own switch. This type of “flat” network architecture causes disabling cost disadvantages.
- CLECs must incur substantial “backhaul” costs to carry traffic from the ILEC LSO where customer’s loops terminate to the CLEC’s (usually remote) switch. Not only does this require transport facilities, but CLECs must also multiplex and digitize the traffic on its “long loops” in order to avoid loss of signal strength. This in turn requires CLECs to collocate DLC equipment.
- AT&T estimates that the “backhaul” penalty can be as high as \$20 per line per month. This represents a significant percentage of monthly local revenues.

## Sufficiency of Entry

- Finally, the *Guidelines* not only require that prospective entry be likely, but also that it be “sufficient.” *Guidelines* § 3.4.
- The fact that a single firm may be able to self-supply an element does not necessarily mean that access regulation is no longer necessary to prevent the incumbents from exercising market power. The *Guidelines* recognize this point, and provide that entry is only sufficient when “*multiple entry generally is possible and individual entrants may flexibly choose their scale.*” *Guidelines* § 3.4 (emphasis added).
- Even the ILECs now agree that “the mere presence of a single competitive facility in a particular market [does not] necessarily preclude a finding of impairment in that market.” SBC Reply at 10.
- Thus, CLECs are impaired without unbundled access to the ILECs’ network elements unless the entry barriers identified by the *Guidelines* are sufficiently attenuated so that *multiple* carriers can profitably duplicate the facility in question, which is needed to support competitive outcomes.

# The ILECs' Counter-Arguments Lack Economic Support

- **Access Services Are Not A Substitute For UNEs**
- ILEC claims that CLECs can use “access services” to acquire customers and mitigate sunk cost and first mover disadvantages are insufficient because
  - The ILECs do not offer access services that correspond to the UNE-P or voice grade loops.
  - ILEC access services are priced at up to twice TELRIC.
  - CLECs cannot offer effective competition if their costs are substantially greater than the ILECs’.

# The ILECs' Counter-Arguments Lack Economic Support

- **Operational Barriers Must Be Actually Overcome**
  - ILECs claim that real world “operational” barriers should not be treated as impairments but rather should be dealt with “directly.”
  - But from an economic perspective, those impairments are real until they are actually eliminated.
- **First Mover Barriers Cannot Be Easily Overcome**
  - ILECs claim that their first mover advantages can be overcome, but
    - Municipalities generally see little benefit in extending ROWs to second-mover CLECs; as a result, CLECs still find it harder to construct facilities than ILECs.
    - Landlords force CLECs to accept more limited and costly terms for access to their buildings.
    - ILEC “fault” with respect to these real economic disadvantages is irrelevant in assessing the effects of CLECs’ disadvantages.