III Nonrecurring Costs

Problems with Nonrecurring Cost Studies

Q. Have you identified any problems with the Company's nonrecurring cost studies?

A. Yes. The Company's nonrecurring cost estimates are not fully consistent with the TELRIC concept. In particular, the Company's work time estimates and its cost estimates for the Coordination Bureau, are not consistent with an environment in which the nonrecurring activities are being accomplished in the least costly, most economically efficient manner, consistent with the long-run, forward-looking principals that should apply to this proceeding. In addition, I have some concerns about the Company's assumptions regarding new and "hotcut" loops.

Q. Let's discuss the Company's work time estimates. Can you elaborate upon your concerns?

A. First, I have serious reservations about an estimating process that relies upon the subjective opinion of a few of the Company's employees. For most studies, the company interviewed 5 or fewer workers. Although this is a weakness with many of the studies, it is particularly obvious in the case of the Coordination Bureau, where the time estimate being used in the cost study is simply the opinion of the single employee who was interviewed. They provided their estimate of the time necessary to coordinate the provisioning of loops in a standard (automated) environment, but no other opinions were offered, and no other evidence was considered or provided. [Aulisio, Attachment A, WP XII, Study B] This one employee's time estimates resulted in a cost of $43.95, which is 63 percent of the total nonrecurring cost of provisioning a single analog loop. [Id., WP I].

Q. Are the number of employees surveyed the only problem with the Company's work time estimates?

A. No. Even if the surveys had involved a much larger sample of employee opinions, I would still be concerned about the use of these types of time estimates. These opinions are based upon employee perceptions of the work required to provide unbundled elements from the perspective of someone just starting to move down the learning curve. These employees, like the entire industry, have very limited experience operating in a wholesale environment. As explained by Mr. Aulisio, in areas where the Company has operating experience provisioning unbundled elements, the company interviewed craft and supervisory personnel who have actually performed those functions in the context of unbundled elements provided to CLECs.

While the Company has been operating in a retail environment for this entire century, it has been operating in an unbundled element/wholesale environment for a very brief period. These employees and the entire industry are at the very beginning of what is likely to be a long and very steep learning curve. As individual employees, and the industry gains experience with the unbundled element/multi-carrier environment, activities which currently seem very difficult and time consuming may become highly routinized and simplified. There is every reason to anticipate that the time required to perform the various functions included in the nonrecurring cost studies will significantly diminish as experience is gained, and the most efficient, cost-effective methods are learned.

It is clear that the Company's time estimates are based upon their limited experience, encountered at the initial point on the learning curve. The long-run cost estimates being developed in this proceeding should reflect the time requirements associated with maximally efficient methods of operation which will ultimately prevail, once the industry moves down the learning curve. With the exception of the adjustments associated with distinguishing between standard and manual charges, the Company has not made any significant effort to convert its employee's time estimates to ones that would be appropriate for use in a long run cost study.

Q. Are there any other problems with the Company's work time estimates?

A. Yes. The Company has not demonstrated that the time estimates were developed in manner which adequately protected against inaccuracies and bias. In any survey, the results can be greatly influenced by the manner in which the questions are worded, and the context in which they are asked. It isn't clear what information was conveyed to the employees being surveyed, or what steps, if any, were established to protect against the potential for survey bias.

There is a direct linkage between the responses of the employees and subject matter experts and the proposed charges to be imposed on CLECs. If the respondents recognized this linkage, they would realize that the higher the time estimates they provided, the higher the nonrecurring charges that might be imposed on the Company's competitors. In turn, higher charges would mean less competitive pressures facing the Company and less risk of layoffs and reductions in the number of BA-North employees. It would not be surprising if some of these employees have the perception that as an industry is opened to increased competition, it can have a substantial adverse impact on employees of the dominant firms. The airline industry is a case in point: while leisure air travelers have been a big "winner" of airline deregulation, arguably unionized employees have been the biggest "loser". Employees may be worried about the potential effects of increased competition from CLECs, and thus would not be eager to see low nonrecurring charges which could translate into rapid growth by competitors. Furthermore, to some degree the structure and wording of the survey questions could translate into upward bias.

Q. Can you explain your last point, that the structure and wording of the survey questions could bias upward the time estimates?

A. Each participant was asked to estimate the minimum, maximum and most likely time required to perform a function that may include a variety of different tasks. A copy of one of the questionnaires given to the CATC employees is provided as Attachment B. As shown, for provisioning multiple hotcut loops in a manual environment, a long list of potential work tasks was provided. Confronted with a long list of tasks, employees may respond as if all of the listed tasks would need to be performed.

Furthermore, some of the items on the list were rather ambiguous, and could involve a wide range of effort, depending upon circumstances. Consider these examples:

-Error correction
-Determine need for field survey
-Determine if partial or complete service transfer
-Provide status, answer queries and enter customer requested changes such as due date and withdrawals.

Confronted with a long list of tasks, including ones that could involve extraordinary levels of effort, it isn't shocking that one employee estimated a minimum time of three hours, a maximum time of 1.5 days, and a most likely time of 1 day. It is impossible to know how many employees were confused by the wording of the questions, which included long lists of potential tasks that might need to be performed and gave no indication of how many of these tasks the employee should assume will actually be required in the "minimum," "most likely," and "maximum" cases.

One final point should be made concerning the structure of the survey process: The Company took steps to assure the non-management survey participants that their responses would remain anonymous. Undoubtedly, this reduced the risk that employees would worry about their estimates being compared with those of other participants in an effort to detect the least and most productive employees. Without this assurance of anonymity, some employees might have been tempted to minimize their time estimates, to ensure that they would seem as efficient as their fellow participants. By providing anonymity, the Company protected against this type of downward bias, but it increased the risk of upward bias, since the participants would not be held accountable for their estimates. In other words, an employee that was tempted to estimate high for any of the reasons I mentioned earlier, could do so with impunity. The employee could feel confident that a manager wouldn't come back and ask why his/her estimates were so much higher than those of the other participants. With anonymity to protect against downward bias, and little or no protection against upward bias, it is quite possible that

all of the participants tended to estimate high, and thus no single estimate would stand out as unusually high.

Q. What alternative is there to basing work time estimates on subjective opinions of how long tasks will take in a wholesale environment?

A. One alternative is to base estimates upon the Company's experience in performing the same or similar functions in its retail operations. During discovery, Staff asked for any available information that shows what the Company is currently spending on job functions that are analogous to the job functions included in the Company's nonrecurring cost studies. [TCR1-9]. The only such evidence offered by the Company related to loop connection activity within the central office. The Company provided total productive hours for the Central Office Frameperson on New Hampshire during 1996. According to the Company, these employees worked a total of 78,417 hours on tasks associated with various accounts. The Company divided these hours by 1996 "access line inward movement" of 184,442, to calculate the number of hours worked per line by Framepersons.. According to the Company, these employees spent .425 hours per inward line in 1996 on the specified tasks.

Q. Is this estimate comparable to the times used in the Company's nonrecurring cost studies?

A. No, not without making further adjustments to the data. In its nonrecurring cost studies, the Company is using work time estimates for central office wiring of .42 and .52 hours for new and hotcut loops, respectively. On the surface, this compares favorably with the ARMIS data, which seem to work out to .42 hours per line connected. Upon further examination, however, it becomes clear that the comparative ARMIS data do not support the reasonableness of the .42 and .52 hour estimates. To the contrary, the data suggest that the time expended on these types of activities in the retail environment is far less than 78,417 hours, or .42 hours per loop connected.

First, the Company did not remove from the total New Hampshire frameperson hours (78,417) time expended on maintenance activities performed by these employees. Maintenance

expenses are part of the Phase II recurring cost studies and are not appropriately included in an analysis related to nonrecurring activities. Second, the Company didn't remove time expended on installing new facilities (e.g., line cards). These costs are analogous to those included in the investment amounts reflected in the recurring cost studies which are part of phase II, and thus should not be included in this particular analysis. Third, these 78,417 hours included time expended on ISDN, DS-1 and other nonbasic lines. The time required for installation of these lines is logically greater than the time required for a basic loop, biasing the results upward if they are to be applied in the context of basic loops alone. Fourth, the 78,417 hours include time associated with ports as well as loops. The Company has not made any adjustment to remove hours associated with ports, or to allocate the 78,417 hours between loops and ports. Fifth, these hours include time associated with interoffice trunks as well as loops. The Company has not made any adjustment to remove hours associated with interoffice trunks, or to allocate the 78,417 hours between lines and trunks.

The information supplied by the Company is not sufficiently detailed to develop a precise allocation of these hours between nonrecurring installation activities required for basic loops and the various other categories I just cited. However, it seems clear that a very substantial portion of these 78,417 hours is attributable to these other categories. For example, 42,886 of the 78,417 hours are attributable to circuit equipment investment and expenses. Yet, just 1,780 of these hours are specifically attributable to subscriber pair gain systems--the one subcategory of circuit equipment that is specifically associated with ordinary subscriber loops. The other 41,106 of the 42,886 hours include time expended on maintaining and configuring specialized data services (digital data systems) and interoffice trunks. Perhaps some work associated with connecting ordinary subscriber loops is also lumped in with the 41,106 hours, but any such inclusion is likely to be a relatively small fraction of this total. Consider, for instance, that just 25 percent of the Company's working loops involve the use of circuit equipment. The other 75 percent rely upon ordinary analog copper facilities. [See the Company's response to Technical Conference Request 1-8]. In contrast, nearly 100 percent of the Company's interoffice trunks involve the use of circuit equipment. Accordingly, one can reasonably assume that the work involved in installing, reconfiguring, maintaining, and repairing

these interoffice circuits would constitute the majority of this 41,106 hour total.

The other major component of the 78,417 total hours is apparently associated with switching equipment (29,828 hours). Presumably, this category includes much of the time required to connect loops to ports. It isn't obvious what fraction of these 29,828 hours should be allocated to the nonrecurring activities associated connecting loops, and what fraction is attributable to other work, including the activity required to connect ports. However, it is obvious that one can't simply take the total amount and attribute it entirely to nonrecurring loop activity, as the Company did in its response to the Technical Conference Request. A more reasonable approach would be to allocate no more than half of these hours to the nonrecurring loop activities.

Consider the results if this allocation approach is used, so that just half of the switching hours are included, together with 1,780 hours of subscriber pair gain activity and 25 percent of the 41,106 hours of other circuit equipment activity. These calculations add up to roughly 27,000 hours. Dividing this figure by the total volume of inward access line movement (184,442), one arrives as a figure of just .146 hours, or 8.8 minutes per line. This is substantially less than the .425 figure calculated by the Company in its response to Technical Conference Request 1-9, and more importantly it is far below the .42 to .52 hours per line that the Company has estimated for CLEC nonrecurring loop connections.