Q. Up to this point you have focused on changes in productivity and costs as the network expands. Does network growth also result in increased revenues?

A. Yes. As a network expands over time, we can look at the incremental customers, or the incremental volume of access lines and traffic volumes, and ask the question: what incremental revenues will the firm generate as a result of serving this market expansion? For any one customer, the answer can vary widely. If the customer never places or receives a long distance call, and never uses any of the optional services that are offered by the firm, the incremental revenues may amount to little more than the revenues from basic local exchange service and the FCC's subscriber line charge. Even in this is extreme case, however, some other incremental revenues will arise.

Consider directory publishing revenues, for example. The incumbent local exchange carriers earn very substantial revenues (and profits) from yellow page advertising. These rates vary directly with the number of subscribers included in (and receiving) the directory. As additional customers are added to the network, directory publishing revenues and profits will expand. These incremental revenues can appropriately be considered in evaluating the impact of network growth. Analogously, a magazine publisher that is evaluating a marketing effort targeted at selling additional subscriptions should not simply consider the direct revenues generated by the subscription. She should consider all of the incremental revenues that can be expected as additional subscriptions are sold. These include the additional ads that are sold as the circulation base expands, as well as the increase in advertising rates that can be achieved as the number of subscribers increases.

In evaluating the effect of growth on a local exchange carrier, one should also consider ancillary revenue sources. When speaking of the across-the-board growth that occurs from year to year, the expected revenue growth will be quite diverse. It will include increased revenues from numerous different sources. Consider, for example, what revenues can be expected as the area population expands, and the number of lines per household increases. As the number of residential lines increases over time, the LEC can anticipate substantial incremental revenues and profits from numerous different sources. For instance, directory advertising revenues will increase as the scope of each directory expands to include additional people. Not only will the circulation increase, the directory may be used more frequently, and thus be more useful to subscribers and advertisers. As a result, the number of ads will tend to increase, the size of the ads will tend to increase, and the rates per column inch will tend to increase as the network expands.

Similarly, the volume of switched access minutes sold to interexchange carriers will increase, as the number of subscribers increases. Expansion of the network will unquestionably translate into substantially higher volumes of access traffic. Not only will the incremental customers place outgoing toll calls, and receive numerous long distance calls, the existing customers are also likely to place more calls each month. Hence, one can anticipate that switched access revenues will expand even more rapidly than the number of access lines where this traffic is originated and terminated.

Moreover, many of the incremental customers, once they decide to purchase basic telephone service, will also opt to purchase one or more discretionary services. For example, call waiting service is very popular. Over time, the number of people paying for this premium-priced service tends to increase, as more and more calls are placed, and busy signals and missed calls become more frequent.

As a final example, consider the likelihood that some of the marginal customers will purchase inside wire maintenance. Whether or not this is a wise purchasing decision (some would argue it is greatly overpriced insurance), the carrier may reasonably anticipate incremental revenues from this ancillary source, as marginal customers are added to the network--some of whom will agree to pay a monthly fee in order to have their inside wires maintained. Regardless of whether the analysis considers all of these revenue streams, or just some, it is clear that the rate of growth in revenues will tend to outstrip the rate of growth in costs. Put schematically, over time one would expect to observe the following pattern:

	Costs	Revenues	Profits
Local Loops	DOWN	UP	UP
Local Minutes	UP	SAME	DOWN
Access Minutes	DOWN	UP	UP
Toll Minutes	DOWN	UP	UP
Custom Calling	DOWN	UP	UP
Directory	DOWN	UP	UP

The table below illustrates the net effect of this general pattern for a typical residential customer over a five-year span, during which the rate for basic local exchange service (including the FCC's subscriber line charge) is assumed to be held constant.

	Year 1	Year 2	Year 3	Year 4	Year 5
Revenues					
Basic	15.00	15.00	15.00	15.00	15.00
Other	24.00	24.96	25.96	27.00	28.08
Total	39.00	39.96	40.96	42.00	43.08
Costs					
Basic	2.04	2.12	2.21	2.29	2.39
Other	3.40	3.54	3.68	3.82	3.98
Joint	11.77	11.72	11.58	11.44	11.30
Total	17.21	17.38	17.46	17.56	17.66
Contribution	21.79	22.58	23.49	24.44	25.41

In this table, the "other" category includes switched access, intraLATA toll, custom calling, and directory publishing. The "joint" category includes the cost of the drop and termination at the customer premise, the local loop connecting him to the central office, and the non-traffic sensitive portion of the central office equipment. Many of these costs tend to decline as the size of the network expands in the long run. This pattern of decline is reflected in this example, derived from our economic costing model.

In developing both the cost and revenue figures shown above, I have used assumptions that are generally reflective of conditions in the Company's North Carolina service territory, although I do not claim they provide an exact representation of the average residential customer. Note that the costs of local usage increase with increased calling volumes, but this is not offset by any increase in basic local revenues per loop (since the customer pays a flat rate). However, this uncompensated cost increase is more than offset by favorable trends in other categories. Although not shown here, the same general pattern holds for other types of wire centers and other types of customers, including business customers. The net effect, then, is that growth in the size of the local network, as well as growth in calling volumes can lead to higher profit margins over time, as reflected in the "contribution" line above.