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BEFORE THE

IDAHO PUBLIC UTILITIES COMMISSION

IN THE MATTER OF THE APPLICATION OF QWEST CORPORATION FOR DEREGULATION OF BASIC LOCAL EXCHANGE RATES IN ITS BOISE, NAMPA, CALDWELL, MERIDIAN, TWIN FALLS, IDAHO FALLS, AND POCATELLO EXCHANGES.	)	CASE NO. QWE-T-02-25

DIRECT TESTIMONY OF BEN JOHNSON, Ph.D.

IDAHO PUBLIC UTILITIES COMMISSION

MARCH 19, 2003

BEFORE THE IDAHO PUBLIC UTILITIES COMMISSION

Before Commissioners:	Dennis S. Hansen, President Marsha H. Smith Paul Kjellander

In the Matter of the Application of Qwest Corporation for Price Deregulation of Basic Local Exchange Services	))))	Case No. QWE-T-02-25

Direct Testimony

of

Ben Johnson, Ph.D.

on behalf of the

Idaho Public Utilities Commission

March 19, 2003

Introduction

Q. Would you please state your name and address?

A. Ben Johnson, 2252 Killearn Center Boulevard, Tallahassee, Florida 32309.

Q. What is your present occupation?

A. I am a consulting economist and president of Ben Johnson Associates, Inc., an economic research firm specializing in public utility regulation.

Q. Have you prepared an appendix that describes your qualifications in regulatory and utility economics?

A. Yes. Appendix A, attached to my testimony, will serve this purpose.

Q. Can you briefly explain the corporate names and acronyms that you will be using in your testimony?

A. Throughout my testimony, I will use the terms "Qwest" or "the Company" when referring to Qwest Corporation, a subsidiary of Qwest Communications International, Inc.

Q. What is your purpose in making your appearance at this hearing?

A. My firm has been retained by the Staff of the Idaho Public Utilities Commission ("the Commission") to assist with Staff's participation in this proceeding. We have been asked to analyze Qwest's Application for Price Deregulation of Basic Local Exchange Services ("Application") and determine whether the deregulation of local exchange rates sought by

Qwest in its Application is valid in light of statutory mandates. Specifically, I analyze whether wireless services are functionally equivalent and comparably priced to Qwest's wireline local exchange services.

Q. Would you please explain how your testimony is organized, and briefly summarize its major elements?

A. Yes. Following this introduction, my testimony has five sections. The first section contains a brief discussion of the background of this proceeding. In the second section I analyze whether services provided by wireless carriers are functionally equivalent to those offered by Qwest. I discuss the concept of functional equivalency from an economic perspective, and discuss the extent to which consumers can freely substitute wireless services for wireline local exchange services. In the third section I discuss whether wireless and wireline services are comparably priced in seven specific Idaho exchanges. In this section, I outline the difficulties in making competitive pricing comparisons, given structural differences in the typical pricing of wireless and wireline services, as well as the fluid nature of the wireless market. In the fourth section I examine various aspects of the Application from a public interest perspective. In the fifth and final section, I present my conclusions and recommendations.

Background

Q. Let's turn to the first section of your testimony. Would you please start by outlining the history of this proceeding?

A. Yes. Qwest filed its Application on December 17, 2002 pursuant to Idaho Code §62-622(3)(b). Therein Qwest sought the deregulation of its local exchange rates in seven southern Idaho exchanges: Boise, Caldwell, Idaho Falls, Meridian, Nampa, Pocatello and Twin Falls (the "seven exchanges"). The Company contends that wireless carriers are effectively competing with it in these seven exchanges. It put forward five main pieces of evidence in support of this claim: (1) the functionality of wireless service, (2) a comparison of wireless and Qwest price plans, (3) the number of wireless carriers operating in the seven exchanges, (4) the exploding growth of wireless subscription in Idaho and the increase in wireless substitution for wireline services, and (5) wireline customers perceive wireless service to be a functionally equivalent, competitively priced and reasonably available alternative to Qwest's wireline local exchange services in these seven exchanges. [Application, pp. 6-8] The Company contends that rate deregulation in the seven exchanges is in the public interest, because it would allow Qwest to better respond to competitive forces. [Id., pp. 8-9]

Q. Can you briefly discuss your understanding of the statutory framework which governs this proceeding?

A. Yes. It is my understanding that, in order for the Commission to approve the Company's Application under Idaho Code §62-622(3)(b), Qwest must demonstrate that effective

competition exists, as indicated by the fact that one or more competitive carriers are offering "functionally equivalent" and "competitively priced" services to customers in the seven exchanges. Specifically, the statute states the following.

> The commission shall cease regulating basic local exchange rates in a local exchange calling area upon a showing by an incumbent telephone corporation that effective competition exists for basic local exchange service throughout the local exchange calling area. Effective competition exists throughout a local exchange calling area when either
>
> (a) Actual competition from a facilities-based competitor is present for both residential and small business basic local exchange customers; or
>
> (b) There are functionally equivalent, competitively priced local services reasonably available to both residential and small business customers from a telephone corporation unaffiliated with the incumbent telephone corporation.

The Commission has dealt previously with a very similar Application. On July 23, 1999, US West (now a part of Qwest) filed an Application pursuant to Idaho Code §62-622(3) generally seeking deregulation of its basic local exchange rates in its Burley, Idaho exchange. [Order No. 28369, p. 1] In its Order No. 28369, ruled that Qwest had not sufficiently demonstrated that effective competition, as outlined in the Code, was present in the Burley exchange. [Id., p. 13] The Commission pointed out that Idaho Code §62-602(2) further clarifies the standards that must be met for it to be able to recognize the presence of effective competition and, in turn, deregulate local exchange rates. Idaho Code §62-602(2) provides as follows:

> It is the intent of this legislature that effective competition throughout a local exchange calling area will involve a significant number of customers having both service provider and service option choices and that actual competition means more than the

> mere presence of a competitor. Instead, for there to be actual and effective competition there needs to be substantive and meaningful competition throughout the incumbent telephone corporation's local exchange calling area.

In the case of the Burley exchanges, the Commission found that there was another carrier operating in that exchange in competition with US West, but that the mere presence of another carrier "does not demonstrate the existence of effective competition required by the legislature in Section 62-622(3) for rates to be deregulated." [Id.]

Q. Can you briefly describe the direct testimony filed by Qwest in this proceeding?

A. Yes. Testimony of Dr. Douglas Lincoln, Harry Shooshan, John Souba, and David Teitzel was concurrently filed with the Application. In his testimony, Dr. Lincoln presents two studies meant to show that (1) wireless and wireline services are comparably priced and (2) that customers view these services as "functionally equivalent, competitively priced, and reasonably available alternative to Qwest's basic local exchange service in these seven exchange areas." [Lincoln, p. 6] Regarding the first of these two studies, Dr. Lincoln concludes the following.

> First, one can conclude that wireless service providers have a variety of service offerings to meet nearly everyone's telecommunications needs. These options all seem to represent competitive choices for Qwest's basic local exchange service customers. Second, it appears that the prices for wireless and basic local exchange services, while not identical, are comparable. Differences in prices can be explained based on the additional functionality (including mobility) and the inclusion of line features or long-distance benefits in certain wireless packages. Wireless service providers have clearly priced their services in a comparable

range with Qwest's basic local exchange service. [Id., pp. 15-16]

In his testimony, Mr. Shooshan undertakes an analysis of wireless competition for local exchange services nationally and in the seven exchanges. He concludes that effective competition exists both nationally and in these seven exchanges, that wireless service is an effective substitute for wireline service, and the public benefits from a more competitive Qwest. [Shooshan, pp. 4, 5, 16, 17] Regarding wireless substitution, Mr. Shooshan finds

> While noting studies that estimate that between 3% and 5% of wireless subscribers have disconnected their wireline phone, significantly, the FCC describes the "growing evidence that consumers are substituting wireless service for traditional wireline communications." In its most recent assessment of the mobile services market, the FCC acknowledges claims by wireline telecommunications carriers that the numbers of access lines and of minutes of use on their networks have decreased as a result of increasing use of mobile services. Additionally, the FCC cites studies that indicate all wireline communications (i.e., local and long distance) are affected. Estimates suggest that 20% of residential customers have replaced "some" wireline usage with wireless usage, while 11% have replaced a "significant percentage." [Id., pp. 9-10]

Mr. Souba introduces the other Qwest witnesses, provides an overview of the history of the issues involved in the case, and lays out functional equivalence and public interest analyses. [Souba, pp. 4-23] He contends that wireless services are widely available to all customers in the seven exchanges.

> Unlike the Burley case, in which the Commission indicated it would be "difficult to foresee circumstances where competition could be deemed effective and throughout the local exchange

> calling area where less than half the customers have a choice of provider" (Order No. 28369, page 12), the "service area" of wireless providers tends to blanket the populated areas of the seven exchanges reaching even areas where no land-based facilities exist today. ... Essentially all residents and small businesses throughout the seven exchanges have access to service from wireless competitors as an alternative to Qwest's basic local exchange service. [Id., pp. 14-15]

Finally, Mr. Teitzel expands on points made by Mr. Shooshan and Mr. Souba in their testimonies. He describes various attributes of wireless and wireline services, emphasizing various similarities. [Teitzel, pp. 8, 22-25]

> The following are service attributes of Qwest's basic local exchange landline services that should be viewed as points of reference in determining whether alternative services are functionally equivalent: the ability to originate or receive a voice telephone call at a fixed location, the ability to access operator assistance (by dialing "0" or accessing directory assistance), the ability to place and receive long distance voice calls, the ability to contact emergency service providers and the ability to have the customer's assigned telephone number and address listed in a printed telephone directory. [Id., p. 8]

Mr. Teitzel also presents some evidence concerning wireless promotions in the seven exchanges. [Id., pp. 25-26]

Following receipt of the Application, the Commission issued a Notice of Application and Notice of Right to Intervene on December 17, 2002. The Commission notified parties to the case "that all proceedings in this case will be held pursuant to the Commission s jurisdiction under Title 61 of the Idaho Code and that the Commission may enter any final Order consistent with its authority under Title 61." [Notice, p. 2]

Parties were given 24 days from the date of the Notice to file petitions for intervention if they so chose. [Id.]

Finally, on February 7, 2003, the Commission issued a Notice of Hearing and Procedural Order which set filing and hearing dates. [Notice, p. 1] My testimony is submitted in accordance with this schedule.

Functional Equivalency

Q. Let's turn to the second section of your testimony. Would you please begin by explaining your understanding of why functional equivalency is key to the resolution of this proceeding?

A. Yes. Qwest filed their Application for deregulation of local exchange rates in the seven exchanges pursuant to Idaho Code §62-622(3)(b). Recall that in order for the Commission to approve deregulation, the petitioning carrier must demonstrate that

> there are functionally equivalent, competitively priced local services reasonably available to both residential and small business customers from a telephone corporation unaffiliated with the incumbent telephone corporation. [§62-622(3)(b) emphasis added.]

Qwest witnesses claim that wireless service is functionally equivalent to wireline service, at least in the seven exchanges. In this section, I will explain what I believe "functionally equivalent" means in the context of effective competition. I will outline the functional similarities and differences between wireless and wireline services, and I will respond to the Company's claims that the two services are functionally equivalent.

Definition

Q. Can you please explain your understanding of the phrase "functionally equivalent"?

A. Yes. This is best accomplished by carefully looking at the phrase's piece parts. First, the word "functionally" is simply the adverb form of the word functional. Merriam-Webster defines functional as "of, connected with, or being a function." [http://www.m-w.com/cgi-bin/dictionary] It defines function as "the action for which a person or thing is specially fitted or used or for which a thing exists: PURPOSE." [Id.] Second, equivalent is defined as "equal in force, amount, or value" or "corresponding or virtually identical especially in effect or function."

Having defined the components of the phrase, we can combine them to achieve an overall definition. The word "functionally" indicates the active purpose for which an object (service) exists or is used. The word "equivalent" indicates equality in force, amount, or value–suggesting that the two services are virtually identical with respect to their function. Accordingly, for two services to be "functionally equivalent" these services need to be virtually identical with respect to their functional attributes–those characteristics of the service which relate directly to the purpose for which each service is specially fitted or used.

Q. How has Qwest attempted to meet the definition of functionally equivalent?

A. Although four Qwest witnesses touch on the issue of functional equivalency in their direct testimonies, none of these witnesses provide a detailed, comprehensive discussion

of this issue.

Dr. Lincoln suggests that wireless and wireline services are functionally equivalent based on the results of a survey of 800 residential and business customers in the seven exchanges. [Lincoln, p. 38] However, the survey did not directly ask customers whether they considered wireless and wireline services to be functionally equivalent, nor did it explore this issue indirectly, by probing deeply into consumer attitudes with respect to these services.

Mr. Shooshan discusses functional equivalency as "line substitution" and "usage substitution" without really analyzing the functions involved, or the extent to which these functions are accomplished identically. [Shooshan, p. 5] Mr. Souba's testimony contains a section titled "functionally equivalent service" and an allusion to "functionally equivalent wireless communications services." However, his discussion is actually quite superficial, focusing on the presence of wireless competitors and growth in wireless lines. [Souba, pp. 13-15] Finally, Mr. Teitzel argues that

> multiple unaffiliated wireless providers now offer telephone services that are certainly similar to and, in fact, have attributes not available with to Qwest's voice grade landline service. [Teitzel, p. 8]

He outlines five service attributes that he feels should be the Commission's standard for determining that wireless and wireline services are functionally equivalent. [Id.]

Substitution

Q. More than one Qwest witness has used substitutability as a proxy for functional equivalency. Is this appropriate?

A. No. If two products are functionally equivalent, they will tend to be substitutable. But, it is equally true that if two products are substitutable they may or may not be functionally equivalent. To see why this is true, consider first the example of two Hondas Accords that are identical in every way except that one is dark blue and the other is light blue. Clearly these alternatives are functionally identical, and thus substitutable. In contrast, consider a pickup truck and a sports car. Both are vehicles that can carry two people from one place to another, but they clearly are not functionally equivalent. For some purposes a pickup truck is ideal; for others, a sports car is ideal. While it may sometimes be possible to substitute one for the other, that doesn't change the fact that there are important functional differences. In evaluating whether or not these functional differences are significant, it is worth noting that some people own both a pickup truck and a car. This strongly suggests they are not equivalent–otherwise one or the other would be redundant, and people would rarely incur the added cost of owning both.

A similar factual situation exists with regard to wireless and wireline service. Because of important functional differences, the vast majority of consumers do not substitute wireless for wireline service or vice versa. Most people purchase both services, using their mobile phone in situations where it will function best and using their conventional phone where it will function best. The very fact that so many people keep both phones (if they can afford to double their expenditure on phone service) tends to prove that these services are functionally different. Similarly, some people can afford, and are willing to pay for, both a pickup truck and a car, but very few people own two cars

that are functionally identical.

If the data revealed that 95% of all satellite TV customers disconnect their cable television service upon subscribing to DirectTV or the Dish Network and vice versa, we could reasonably conclude that satellite service and cable service are close substitutes. However, that wouldn't necessarily mean they are functionally equivalent. There might, for example, be significant functional differences with respect to local programming or the reliability of the signal during rain storms.

Clearly, the mere existence of some degree of substitution is not sufficient to demonstrate or infer functional equivalence. To the contrary, substitution and functional equivalency are distinctly different concepts. Because of budget constraints, consumers will sometimes substitute one item for a different item even though it has completely different functional characteristics. For example, a family might decide not to vacation in France this year, and instead decide to install a swimming pool. From a budgetary perspective, and in terms of keeping the family happy during the summer, the new swimming pool may be an adequate substitute for a European vacation, but these alternatives are not functionally equivalent.

Unlike satellite and cable television services, the available evidence concerning consumer substitution patterns strongly suggests that wireless and wireline services are not close substitutes, and this same evidence tends to prove the latter services are not functionally equivalent. By Qwest's own admission, less than 10% of all wireless customers disconnect their Qwest wireline service upon subscribing to a wireless service. It is reasonable to infer that wireless and wireline services are not close substitutes, and that they are not functionally equivalent from the perspective of most consumers. If the

two services were functionally equivalent, they would tend to be redundant and thus most people would decide it was a waste of money to pay for both services at the same time.

In any event, evidence concerning whether, or to what extent, wireless and wireline services are substitutes (or complements) is not sufficient to determine whether they are functionally equivalent for purposes of this proceeding. This is particularly clear in this context, where the evidence (and the issue of functional equivalence) is a step towards addressing the ultimate question of whether or not effective competition exists. The mere existence of a limited degree of substitution cannot be sufficient to reach this conclusion anymore than one can reasonably conclude that effective competition exists for Boise swimming pool contractors merely because a small percentage of the people in Boise would rather take a vacation in England than buy a new swimming pool if airline ticket prices are low.

To adequately address the question of effective competition, Qwest needs to demonstrate, among other things, that wireless and wireline services are "corresponding or virtually identical" in the functions they perform (with respect to their intended use). Qwest has instead set out to prove that some consumers can or do disconnect their conventional phone and rely exclusively on their mobile phone. While this type of limited substitution may be feasible or necessary for some consumers (e.g. due to budget constraints), it doesn't adequately address the question of functional equivalence. Consumers can and do make trade-offs between all sorts of products and services that are not functionally equivalent. A limited degree of substitution is clearly not sufficient to infer functional equivalence, much less suggest that effective competition exists.

Q. Would you please explain the concept of product substitution in the context of standard economic theory?

A. Yes. One text define substitutes as

> products that have a relation such that an increase in the price of one will increase the demand for the other or a decrease in the price of one will decrease the demand for the other. [Economics, Robert B. Ekelund, Jr. and Robert D. Tollison, Little, Brown and Company, 1986, p. 74]

A simple example of this concept would be apples and oranges. Many people like both of these fruits and they tend to purchase some of each. It is fair to primarily classify these fruits as substitutes because, when the price of apples goes up, consumers tend to decrease their consumption of apples and increase their consumption of oranges. Although they are substitutes, apples and oranges are not close substitutes, as indicated by the fact that people tend to eat oranges (rather than apples) at breakfast, and they tend to use apples (rather than oranges) when baking a pie.

The opposite concept in economics is that of complements. In the same text, Ekelund and Tollison define this concept as

> products that have a relation such that an increase in the price of one will decrease the demand for the other or a decrease in the price of one will increase the demand for the other. [Id.]

An example here would be peanut butter and jelly. Since many people like to consume these products together on sandwiches, if the price for one increases, consumption of both goods will typically decrease. If a poor crop leads to more expensive peanut butter, for

example, consumers will tend to buy less jelly. Another good example of complements are copier toner and paper.

In many cases, products have characteristics that allow them to be either substitutes or complements–it is simply a matter of degree. If goods and services are close complements, an increase in the price will typically lead to a decrease in the consumption of the other. However, some degree of substitution may also be possible. Similarly, goods may be close substitutes, but a decrease in the price of one product may nevertheless lead particular consumers to reduce their consumption of the other product under certain circumstances. Thus, it is more meaningful to think about these concepts as matters of degree.

In this regard, it is helpful to remember that some goods and services may be totally unrelated and thus it would be impossible to classify them as substitutes or complements without careful empirical research. Consider, for example, the relationship between eggs and gasoline. Fluctuations in the price of eggs will have virtually no measurable impact on consumption of gasoline, and the reverse would also be true except, perhaps, for what is referred to as an "income effect" (the impact of a price change on the consumer's overall budget constraint).

Some products have characteristics that potentially would allow them to be substitutes, but in practice they may accurately be classified as complements. For example, from a consumer perspective, hamburger buns and hamburger meat are complementary. I am not aware of any empirical studies evaluating the pricing relationship between these two goods, but I suspect they would be appropriately classified as complements. Thus, for example, an increase in the price of hamburger probably leads

to a decrease in the demand for hamburger buns. Of course, upon reflection one realizes that it is possible to substitute one of these products for the other, at least under some circumstances. For example, when planning a school picnic, if the price of hamburger meat increases, it is possible to buy less meat and more buns, putting a smaller burger on each bun. Some folks will eat more potato salad, others will eat an extra burger, but the overall level of caloric consumption may be about the same–at lower cost than if larger burgers were served. However, this situation is the exception to the general rule. More typically, the limited degree of substitution that is possible between hamburger buns and meat will be swamped by the complementary characteristics of these products.

Q. How do wireless and wireline service relate to this discussion?

A. While a limited degree of substitution occurs in practice, these services are primarily complementary to each other. Some consumers stop purchasing Qwest's service when they obtain a mobile phone, but even these consumers don't necessarily consider these services to be "close substitutes" nor do they necessarily think they are functionally equivalent. Perhaps they want the functional advantages of a mobile telephone, they can't afford (or don't want to pay for) two telephones, and they can live without the functional advantages of a wireline telephone.

In the more typical situation, a consumer will continue to use their wireline telephone after they get a mobile phone. In fact, their total volume of calling may increase, and there will be calls from their wireline phone to their mobile phone and vice versa. For instance, they may start calling their spouse at home during their afternoon commute–calls that did not occur before they obtained wireless service. Rather than

reducing the benefit of having a wireline phone at home, their mobile phone will serve a complementary function, increasing the value of that phone. For instance, when shopping for groceries they can call home to find out whether they need to buy more of a certain item (or to obtain their spouse's opinion concerning which brand to buy).

Of course, it is also true that once a consumer purchases wireless service, they may use their mobile phone for some conversations that would otherwise have occurred using a conventional phone. Data analyzed by the FCC and presented by Mr. Shooshan bears this out, though the frequency of this type of usage substitution is surprisingly small. According to Yankee Group analyst Knox Bricken, just 20% of residential customers use their mobile phone for "some" calls for which they would have otherwise used a conventional phone. This implies that the vast majority of residential customers never use their mobile phone for calls they can place using a conventional phone. In other words, most consumers only use mobile phone when they need to place a call while traveling around–because of the usage fees associated with wireless calls, poorer sound quality, physical discomfort, or other reasons.

Moreover, according to Mr. Bricken's data just 11% of residential customers have replaced a "substantial number" of conventional phone calls with mobile phone calls. At the extreme, just 3 to 5% of wireless customers now use their wireless phone exclusively. [Seventh Report, FCC 02-179, July 3, 2002, p. 32] The lack of substitution in practice is confirmed by the fact that although 45% of Americans now purchase wireless service, more than 90% of all Americans still have wireline service. [Id., pp. 31, 32] It is evident from these statistics that most consumers do not view wireless and wireline service as close substitutes, much less functionally equivalent. To the contrary, these are largely

complementary services which are only substitutable to a limited degree under special circumstances.

Q. Don't the results of Dr. Lincoln's consumer research contradict this conclusion?

A. No they do not. For one thing, the data contained in Dr. Lincoln's study is much too limited to be reliable. Dr. Lincoln arrived at his definition of *functional equivalent* from his interpretation of a survey of

> 36 adults living in the Boise and Twin Falls areas. We asked these individuals what the three terms used in the statute meant to them. Each individual wrote down and then submitted their responses. Dr. MacDonald and I next independently reviewed all 36 responses to identify the most common interpretation of the key terms. After considering our separate reviews, we arrived at agreement as to how most of the respondents interpreted the statutory terms. We found that "functionally equivalent" means that one product could serve as a substitute for another. Our respondents spoke about the two products being able to "do the same thing." [Lincoln, p. 19]

This is certainly an unusual way of grappling with issues of statutory interpretation. The survey results confirm that this small group of individuals had a good, intuitive grasp of the concept of "functional equivalence." However, they weren't provided with nearly enough information to allow them to be precise in their definition, or to provide much insight into whether or not wireless and wireline services qualify as functionally equivalent as this term is used in Idaho Code §62-622(3)(b). Nor is there any opportunity to cross examine these individuals concerning their responses. For instance, we have no way of knowing what these 36 individuals would say if they were confronted with the

example of a pickup truck and a sports car. If they were told two vehicles can be used to drive from one end of town to the other, they might agree these vehicles can "do the same thing." But, if they were told one of the vehicles was a pickup truck and the other was a sports car, and the driver needs to carry a large quantity of lumber between the two locations, they might agree that these two vehicles actually cannot "do the same thing."

When dealing with a subtle issue like functional equivalency, the conclusion one reaches may depend upon how much information one is provided and how carefully relevant aspects of the issue are considered. According to Dr. Lincoln's interpretation of this survey data, the respondents generally agreed that wireless and wireline service can "do the same thing." [Id.] But, that doesn't necessarily mean these services can do all of the same things, or that they can do them equally well–just as pickup trucks and cars can sometimes "do the same thing" but not equally well.

The other survey data provided by Dr. Lincoln is also problematic. A group of consumers were asked if they "could solely rely upon cell phone service for the purpose of making and receiving local phone calls." [Id.] Half of residential users responded yes they could, 40% responded in the negative, and 10% were undecided. Of the small business customers, 31% percent said they could solely rely on wireless while 65% responded in the negative. [Id., pp. 28, 33]

There are two key problems with this survey. First, the results are skewed upward because the question fails to consider whether consumers are willing to solely rely upon wireless service. To use an example, I could give up my mobile phone and rely solely on wireline service, but I would rather not. The convenience of being able to make calls while traveling around town more than outweighs the expense. Likewise, I could get rid

of my wireline service but I'm not willing to–unless someone forces me to (e.g. by drastically raising the price). By using the word "could" in the question, Dr. Lincoln ensured that a large percentage of the respondents would answer in the affirmative–regardless of how dissimilar these services might be. We can safely assume that the great majority of the respondents who stated they could give up their wireline phone have not actually done so. Dr. Lincoln didn't ask enough questions to find out why these respondents haven't actually done so, despite the fact that they indicated they could.

Just because a consumer could rely entirely on a mobile phone does not mean that all of the same purposes would be fully and adequately served if they were to do so. For example, one could exclusively rely on a bicycle, motorcycle or taxi services, but very few people actually do so. Even if 50% of customers were to answer a survey that they "could" get rid of their car wouldn't mean the alternatives are functionally equivalent. The fact that many customers "could" solely rely on taxis doesn't mean they would freely choose to do so, or that taxi service is functionally equivalent to car ownership.

Dr. Lincoln's interpretation of his survey results is contradicted by the fact that so few consumers today actually do solely rely on a cell phone. If wireless and wireline service were functionally equivalent, we would see many more users eliminate one service or the other. There would be no need to pay for both services, since wireline service would be redundant and therefore a waste of money. Yet, according to data cited by the FCC, only 3- 5% of telecommunications consumers use their mobile phone as their only phone.

Further, I find it puzzling that Dr. Lincoln can conclude that wireless and wireline services are functionally equivalent when over 40% of residential customers and 65% of

small business customers say they could not solely rely on cell phone service. Even under the ambiguous standard used by Dr. Lincoln ("could"), a very large number of residential and business customers indicate they could not survive without their regular telephone. These responses would not make sense unless these consumers perceive significant functional differences between wireless and wireline services. For these customers, the functional differences are sufficiently important and vivid that they don't consider these services to be substitutable even as a possibility–much less something they would be willing to do.

Q. How does the economist's concept of product substitution relate to the economist's concept of effective competition?

A. Usually, four conditions are considered sufficient to ensure that sellers will behave as "price takers," or effectively compete with each other. If any one of these conditions is absent, the prospects for effective competition are diminished or eliminated.

First, no one firm can have a dominant share of the market. If a firm engages in price leadership, dominant firm pricing, or price discrimination, its behavior is inconsistent with competitive behavior. Needless to say, this condition is violated in the provision of any service where a firm's market share is considerably greater than that of all its competitors combined.

Second, the products of the supplying firms must be reasonably uniform (from the perspective of the buyers in the market). If consumers view the product or service as unique, the firm will not need to behave as a "price taker."

Third, the number of supplying firms must be large enough so that the total

amount supplied to the market cannot be restricted. It always is in the interest of suppliers to limit the total amount supplied to the market, because by limiting supply, they can charge a higher rate and earn greater returns (economic profits) than under the conditions of competition.

Fourth, as noted in the criteria cited above, firms must be free to enter and exit the market. If any firm decides to produce the service, no substantial legal, financial, or other barrier must stand in its way. Patents or trademarks (such as brand names) and other legal barriers can preclude effective entry, making effective competition less likely.

The concept of product substitution pertains directly to the second criteria for effective competition-the reasonable uniformity of competing products. To the extent consumers perceive two products to have very similar attributes, and thus consider them to be close substitutes, the availability of these alternatives will enhance the prospects for effective competition.

Attributes

Q. What attributes of Qwest's wireline services does the Company think should be compared to wireless services, in order to determine whether these services are functionally equivalent?

A. Qwest witness Teitzel lists the following attributes, which he recommends be used as "points of reference" when determining whether these services are functionally equivalent: 1)the ability to originate or receive a voice telephone call at a fixed location; 2) the ability to access operator assistance (by dialing "0" or accessing directory

assistance), 3); the ability to place and receive long distance voice calls; 4) the ability to contact emergency service providers; and, 5) the ability to have the customer's assigned telephone number and address listed in a printed telephone directory. [Teitzel Direct, p. 8] Mr. Teitzel concludes that each of these attributes are "reasonable available" from wireless service providers in the 7 exchanges.

Q. Are there problems with the list of "attributes" provided by Mr. Teitzel?

A. Yes. First, there is some redundancy in this list. For example, the third item is really a subset of the first item. More importantly, the list is not sufficiently comprehensive or detailed. Thus, it doesn't allow one to draw meaningful conclusions concerning whether wireless and wireline services are functionally equivalent. Rather than limiting my discussion to Mr. Teitzel's list, I will respond to his suggested attributes in the context of a longer list of attributes and a broader discussion of the relative advantages of wireless and wireline services.

Comparing these services on a more detailed basis may help the Commission to gain a better understanding of why so many consumers choose to pay for both services. As well, I believe this detailed analysis confirms that these are not "functionally equivalent". In fact, there are many functional differences between these services. The importance of specific attributes, and the extent to which specific attributes represent advantages or disadvantages can vary from customer to customer and, in some cases, from call to call.

Q. What advantages does wireless service have over wireline services?

A. The primary advantage of wireless services is mobility; certainly this is its strongest advantage over traditional wireline service. Wireline services can offer a limited amount of mobility. For example, with cordless phones one can talk while roaming around one's house or yard, and possibly while walking short distances from one's property. Also, with the use of extension phones, and/or through the use of call forwarding, one can place and receive calls at other fixed locations. However, the mobility offered by wireline phones is not equivalent to the mobility offered by wireless services. With a wireless phone, one can make and receive calls on the same line from literally anywhere in the country, as long as the location is close enough to a wireless tower or antenna. With wireless services, one can make calls and be reached by acquaintances while traveling around town, out of town, or across the country. Even within a single town or city, the mobility provided by wireless services is far superior to that offered by wireline service. Customers can place and receive calls while traveling around town and they can even start a conversation in one location, continue talking while walking to their car, and can then finish the call while driving to another location. This type of flexibility is only offered by wireless services, and it largely explains why these services have grown so popular. In this respect, wireline services are not functionally equivalent to wireless services.

Q. Are there other differences between wireline and wireless services that help explain why relatively few consumers simply pick one or the other?

A. Yes. I have identified 10 key attributes of wireline services that distinguish them from wireless services.

First, there are ergonomic differences between conventional and mobile phones. Due to differences in the size and shape of the phone instrument, as well as the fact that some mobile phones warm up during usage, people may find a conventional phone to be more comfortable to use than a mobile phone, particularly during long phone calls, and thus they will opt to use their wireline service whenever feasible.

Second, wireline services typically provide higher quality, more reliable communication than wireless services. Calls placed over land lines are typically dropped less often than calls placed over wireless facilities. Further, land line calls are less subject to weather interference; they are not subject to structural interference; they are less subject to congestion problems; they are less frequently subject to cross talk; and, they are less frequently subject to static and poor sound quality. Because of these quality differences, wireless services are not functionally equivalent to wireline services. Given a choice between pulling a cell phone out of their pocket or walking across the room to use a conventional phone, consumers will often choose the latter option because of these quality differences.

Third, wireline services provide the ability to have multiple (extension) phones share the same line and the same phone number. Most residential consumers have more than one phone in their home. It is not uncommon to have a phone in the living room, the kitchen, and every bedroom. Many small businesses also have multiple phones sharing a single line. Functionally, wireless service is very different. Customers are typically provided with a separate wireless account for each phone desired, although they can "share" the same package of minutes. Even if the minutes associated with a single account are "shared", the consumer is required to pay substantial additional monthly fees

for each additional phone. Furthermore, each wireless phone will have a separate phone number, which defeats one of the purposes of extension phones.

Fourth, wireline services allow multiple family members or employees to share the same line. With multiple wireless phones, other parties need to dial different numbers, depending upon which family member or employee they are trying to reach. With wireline service, a family or business can be reached at a single number, and anyone can take the call from any location within the house or business. In contrast, with wireless service multiple accounts and phone numbers are typically maintained. Whether this is an advantage or disadvantage will depend on the context, but clearly there is a functional difference in the way the two services are offered and used.

Fifth, wireline services allow consumers to reliably and conveniently access the internet, and transmit large volumes of data at minimal cost. Although it is possible to access the internet and transmit data through wireless facilities, it cannot be accomplished with the same reliability, speed and ease associated with wireline services. If one wants to access the internet through their wireless services, they must either use their mobile phone or PDA, with their small screens and limited keypads, or combine technologies in unusual ways. While wireless services are improving their capabilities, the speed at which data can be transmitted over wireless services is typically slower than the speed at which one can typically transmit data over land lines, and the user isn't necessarily given the option of connecting to the internet service provider of their choice.

Sixth, wireline services allow consumers to conveniently and reliably transmit and receive faxes. While it may be theoretically possible to transmit faxes using wireless service, in practice consumers do not use mobile phones for this purpose. From the

perspective of most consumers, only wireline service offers the option of transmitting and receiving paper FAXes.

Seventh, wireline services currently provide better access to emergency services, particularly E911 services. Although the FCC wants the wireless industry to develop and implement technology which will allow the transmission of a wireless caller's location and 10 digit phone number to emergency service operators, deployment of this technology is not yet widely available.

Eighth, wireline service subscribers automatically have their phone number listed in the telephone directory for free. Wireless subscribers have the option of having their number listed, but they must pay an additional monthly fee. In practice, most consumers do not opt to have their mobile number listed, and thus a major functional difference exists. If another party wants to talk with a wireless subscriber, they cannot do so unless they somehow discover, or are told, their mobile phone number.

Ninth, wireline service subscribers can keep (port) their phone numbers when they change carriers. Wireless subscribers currently cannot port their numbers from carrier to carrier.

Tenth, there are safety concerns (real or perceived) associated with wireless services that do not apply to wireline services. For example, there are concerns that extensive hand-held mobile phone usage can cause brain cancer or other medical complications. As well, many gasoline stations have warnings on their gas pumps advising customers to leave their cell phones in their cars while fueling because of the danger of sparks from the phone igniting fumes from the gas line or the automobile fuel tank. Due to these warnings and concerns, some consumers may refuse to use a wireless

phone, or they may try to avoid using one as much as possible.

Q. Do these differences help explain why consumers use both wireline and wireless services?

A. Yes. Because of these functional differences, wireline and wireless services are often used for different purposes. As a result, most consumers who choose to purchase wireless service also continue to purchase wireless service. Whether consumers perceive particular differences to be significant advantages or disadvantages can vary, depending on their respective tastes and preferences, as well as the particular purposes for which the service will be used.

While apples and oranges may be substitutes, most families buy both types of fruit, because they are so different. Much the same can be said for wireless and wireline services. Consumers who want, and can afford, greater mobility will purchase a wireless service, but that doesn't mean they necessarily stop using their wireline service.

The differences between apples and oranges may range from highly significant to relatively unimportant, depending on the tastes and preferences of each consumer as well as the particular purpose for which the fruit will be used. The same can be said about wireless and wireline services. Some customers' top priority may be mobility and giving all their friends a single number where they can always be reached. In that case, they may decide to save money be dropping their wireline service. Another consumer's top priority may be quality and reliability of service, in which case they may not obtain a mobile phone, or they may use it as little as feasible.

Finally, it should be noted that there are pricing differences that can influence

consumer purchasing decisions. Wireline services are typically priced on a flat fee (unlimited usage) basis. Wireless services, on the other hand, are typically priced on a usage basis. The more you use the phone, the higher your monthly bill. This difference in pricing structure follows directly from differences in the underlying cost characteristics of the two technologies. Wireless costs are primarily a function of the usage. A wireless carrier incurs little, if any, additional cost with the addition of more phone "lines" (actually, just additional phone numbers). In contrast, wireline costs are primarily a function of the number of access lines on their network. A wireline carrier incurs very little additional cost as more phone calls are placed over its network.

Consistent with this underlying cost difference, the pricing structure of wireline services typically allows users to pick up the phone as often as they want, and allows them to talk as much as they want, without having to be concerned they might receive a large bill at the end of the month. The limited number of package minutes available with most wireless services, and the very high charges imposed on excess usage (typically in the vicinity of 35 to 45 cents per minute) discourage customers from using their wireless phone. This difference in billing risk gives consumers an incentive to keep and to continue to use their wireline phone (rather than relying entirely on a wireless phone).

Q. At pages 5 and 6 of his direct testimony, Mr. Shooshan claims that, to the extent some consumers need Qwest's wireline service for use with internet access and fax machines, this relates to "non-voice" services, and is therefore irrelevant to this proceeding. Do you agree?

A. No. To begin with, I would point out that ordinary local exchange lines are routinely

used to place and receive fax transmissions, and to connect with internet access providers. These types of transmissions take place using sounds that occur within the same frequency range as the human voice, and thus the same line can be used for ordinary conversations and fax and internet communications. When customers obtain an extra phone line for their fax machine (or decide to occasionally use an existing line for this purpose) they pay the tariffed basic local exchange rate. The same holds true for customers who use their phone line to reach America Online or another internet access provider. While it might be fair to characterize these uses as "data or 'non-voice" uses," they are fully relevant to this proceeding, contrary to Mr. Shooshan's assertion. If basic local exchange service is deregulated in this proceeding, and as a result Qwest increases its basic local exchange rates, customers who depend on basic local service for fax transmissions and internet access will be forced to pay the higher rates. Wireless service does not provide a viable competitive alternative for these local exchange customers, since wireless service is not functionally equivalent to basic local exchange service in the context of these types of phone calls.

Furthermore, as pointed out by Staff witness Wayne Hart, the term "basic local exchange services" is used throughout Section §62-622. However, in subsection §62-622(3)(b) (the section under which Qwest filed its application), the Legislature used the broader term "local services". As discussed by Mr. Hart, in order to determine whether two different services are functionally equivalent, one must consider both their similarities and their differences. If the legislature wanted the Commission to limit its analysis to the use of tariffed services for two-way switched voice communications, it could have clearly stated this. Given the overall purpose of this portion of the statute (a

determination of whether or not services should be deregulated because of the presence of effective competition) it would be inappropriate to artificially exclude consideration of those types of phone calls where the services being compared are not functionally equivalent.

Q. In your opinion, are wireless and wireline services functionally equivalent?

A. No. Wireless and wireline service are clearly not "corresponding or virtually identical" with regard to their functional attributes. These differences largely explain why most wireless customers continue to pay for wireline service–and why they would continue to do so even if the price of wireline service were to increase substantially.

Competitive Pricing

Q. Please turn to Section 3 of your testimony. Can you clarify your understanding of Idaho Code § 62-622(3)(b) with respect to the phrase "competitively priced" alternatives?

A. In order for a service to be deregulated under § 62-622(3)(b), Qwest must show that there are "competitively priced" alternative services. While more than one interpretation of this provision is possible, given the context (whether or not effective competition exists), I interpret this language to mean that the alternative service must compete with the service to be deregulated on the basis of price. In other words, the issue isn't whether the price of the alternative service (e.g. wireless service) is determined by competitive market forces. Rather, the issue is whether the price of wireless service and the price of the wireline

services that are the subject of this proceeding are similar enough, and viewed by market participants as being closely related, so that one can conclude that the services in question are "competitively priced."

The phrase "competitively priced" isn't specifically defined in the statute. From my perspective as an economist, this phrase suggests that prices of the alternative services aren't determined independently of each other; rather, providers are forced by competitive pressures to keep their prices in close alignment with the prices set by providers of the alternative services. As well, it suggests that the prices observed in the market are relatively similar, indicating that customers who are using one alternative could choose another alternative without experiencing a significant increase in the amount they pay for the services in question.

Q. Has the Company provided evidence that competitive pressures push wireless providers to keep their prices closely aligned with the price of Qwest's wireline services, or vice versa?

A. No. The Company has provided a small amount of data showing some recent examples of wireless service rates. This data is not comprehensive, and it certainly isn't sufficient to draw the conclusion that wireless and wireline prices are closely aligned due to competitive market forces. Furthermore, the Company hasn't even taken the necessary steps to meaningfully compare wireless and wireline prices from a consumer perspective. These services typically have different pricing structures which makes it difficult to make an "apples to apples" comparison between particular wireline services and particular wireless offerings.

Q. Can you elaborate on the differences between the pricing of wireless services and wireline services?

A. The primary difference relates to usage. Most wireless services are priced on the basis of usage. Wireless plans usually include a flat per month charge which entitles the customer to a limited number of minutes per month. The wireless provider typically charges higher rates for plans that include more minutes, and they impose substantial per-minute fees for every minute in excess of the package allowance. Hence, wireless service costs some customers a lot more than other customers. In fact, any given customer could pay widely different amounts, depending upon the plan they select and the number of calls they place and receive each month. On the other hand, most wireline local services are not usage based. Customers can place an unlimited number of outgoing local calls, and they can receive an unlimited number of incoming calls, without needing to select a particular "plan" and without running the risk of incurring additional per-minute charges.

Q. Are there other pricing differences which make it difficult to compare wireless and wireline services?

A. Yes. For example, most wireless services price incoming and outgoing calls the same. In selecting a particular calling plan, the customer needs to consider both incoming and outgoing calls. Furthermore, if the customer exceeds the allowed number of minutes associated with their calling plan during a particular month, they will be charged extra–regardless of whether the excess relates to calls they place or calls they receive from others. Although there are some very minor exceptions, such as collect calls, most wireline services do not impose any charge for incoming calls, and thus customers don't

have to be concerned about how many calls they receive, regardless of whether the incoming calls are local or long distance.

Another difference is that many wireless services treat at least some long distance calls the same as local calls. Depending upon the particular wireless carrier and calling plan, calls within some specified geographic area will be treated, for billing purposes, as if they were placed across town. These geographic areas are typically larger than the local exchange area used in pricing wireline services. It may include a large portion of the state, the entire state, a large portion of the country, or the entire country. On the other hand, with most wireline services, long distance calls are more expensive than local calls (local calls are typically "free"). Similarly, most wireless services charge more for calls placed during the day than for those placed at night or on the weekend. With the exception of some long distance prices, most wireline prices do not distinguish between weekday and night/weekend calls. Finally, the price of most wireless service plans include features like Voice Mail and CallerID, regardless of whether the customer wants or uses the feature. In sharp contrast, most wire line services charge a premium price for these features. Customers who don't want these features can reduce their bill by avoiding them.

Q. What is the significance of these differences in wireless and wireline pricing characteristics?

A. These differences make it impossible to draw meaningful comparisons between wireless and wireline prices in the highly simplified manner used by Qwest's witnesses. Instead, it is necessary to consider a wide variety of different wireless pricing plans, and it is

necessary to analyze these prices from the perspective of a variety of different types of customers. Even a comparison between a single wireless rate plan and a typical local exchange rate will only be meaningful for a small group of customers with specified usage characteristics.

To prepare a meaningful comparison between wireless prices and wireline prices, one must take into consideration both incoming and outgoing usage patterns. One must assume the number of minutes that are used in an average month, as well as the number that are used in a busy month (when the customer's usage peaks above its long term norm). It also becomes necessary to consider what vertical features the customer likes to use, and whether they are willing to pay a premium for the use of these features. Finally, it is necessary to take into consideration the fact that customers don't necessarily have enough information to select the least costly, or optimum wireless plan. Needless to say, regardless of how carefully these factors are considered, they may or may not be accurate with respect to particular individuals. The comparison will be meaningless with respect to customers with characteristics that are significantly different than those assumed.

Q. Hasn't Qwest attempted to compare its prices to prices charged by wireless providers in the 7 southern Idaho exchanges?

A. Yes. Staff Witness Wayne Hart provides a more detailed discussion of the Company's attempt to compare the price of wireless and wireline services. However, I offer the following brief comments.

Qwest witness Lincoln presents a study in which he compares wireless and wireline prices. The study was intended to "identify the degree to which prices and features were comparable". [Lincoln Direct, p. 6] Dr. Lincoln compares Qwest's local exchange prices to 3 different wireless calling plans. Dr. Lincoln labels these plans "Economy", "Standard" and "Premium". [Id., p. 13] As explained by Dr. Lincoln,

> The first service package is aimed at customers who use the phone infrequently, who require few, if any, line features and who wish to minimize their communications expenditure. ... The second service package is tailored for those customers who do not need a large amount of conversation time, but do require more conversation time than they can obtain with the economy plan. These customers also do not require or do not wish to pay extra for line features. ... The third service package is designed for those customers who are heavy users of telecommunications services. They require a large amount of conversation time. They also value many of the line features designed to improve the efficiency and convenience of telephone usage. [Id., pp. 14, 15]

From this greatly oversimplified comparative analysis, Dr. Lincoln draws the following conclusion:

> [I]t appears that the prices for wireless and basic local exchange services, while not identical, are comparable. Differences in prices can be explained based on the additional functionality (including mobility) and the inclusion of line features or long-distance benefits in certain wireless packages. [Id., pp. 15-16]

To the extent some wireless services are comparably priced, or cheaper than, some wireline services, this isn't sufficient to conclude that wireless service is competitively priced with the services included in Qwest's request. Even if some customers could

substitute wireless service for their wireline service without experiencing a significant increase in their monthly bill, this doesn't mean that all customers could do so, or that most customers perceive wireless services to be an affordable alternative to Qwest's local exchange service. To the contrary, many customers may place or receive so many calls, wireless service would be much more costly. Other customers may be risk averse, and unwilling to switch from a flat rated service to one that can vary with usage–especially if their usage fluctuates from month to month, and thus it is difficult to predict how much their monthly bill will be (unless they select an extremely costly plan that includes a very large package of minutes).

Q. To the extent wireless prices have been declining, isn't it possible that they will be competitively priced with wireline service in the future?

A. This is certainly a possibility, since some wireless prices have been declining. However, there are indications that this downward trend has slowed, and there is no basis for assuming that wireless prices will eventually decline below the level of Qwest's local exchange rates. Regardless of whether wireless prices decline further, flatten out, or increase, wireless prices may continue to be determined independently of wireline prices. There is no evidence that wireless providers have been forced by competitive pressures to keep their prices in close alignment with the Qwest's wireline prices (or vice versa), and there is no reason to assume this will happen in the future. Although the total cost of some wireless services may currently be below the total cost of using Qwest's local exchange services for some customers, this is only true for some customers. For other customers, wireless service doesn't provide a viable alternative (even aside from all the

functional differences) because they use the phone too much, and thus they would experience a significant increase in the amount they pay for telephone service. In any event, differences in wireless and wireline pricing structures will continue to make it difficult for customers (or the Commission) to meaningfully compare the two types of services.

Q. Aren't some wireless providers beginning to price their services in a manner more comparable to wireline pricing?

A. As noted by Qwest witness Shooshan, at least one wireless provider operating in Idaho is currently experimenting with an "unlimited minutes" pricing plan. [See, Shooshan Direct, p. 6] Leap Wireless, through its Cricket subsidiaries, is marketing "Comfortable Wireless". "With this service, customers can make unlimited calls in their local service area – and receive calls from anywhere in the world – for as low as just $32.99 a month plus tax". [http://leapwireless.com/bindex.html; obtained March 11, 2003] However, this remains an anomaly–a pricing approach that has not been copied by other, better established wireless carriers. In fact, Leap Wireless' business plan, which is based primarily on its "unlimited minutes" pricing plan, is largely unproven.

Q. Is there any indication that Leap Wireless' business plan may not be successful?

A. Yes. Although I have not performed an in-depth analysis of this company's financial condition, it is clear that Leap Wireless is struggling to meet its debt obligations. In May, 2002, Leap began cutting jobs in order to improve its cash position. [Leap Wireless Comes Tumbling Down, Telephony, September 9, 2002, obtained from

http://currentissue.telephonyonline.com/ar/telecom_leap_wireless_comes/] A few months later, Leap announced slowing subscriber growth, and lowered future growth estimates. [Id.] By September 30, 2002, the company was in default on vendor credit facilities totaling approximately $1.5 billion. [See, http://news.moneycentral.msn.com/ticker/sigdev.asp?Symbol=US%3aLWIN] In April, 2002, Leap's shares were trading in the $10-11 range. By July, 2002, Leap's shares were trading for less than $1. On December 11, 2002, the company announced that it had been delisted by NASDAQ. [Id.] Leap's shares are now trading for approximately $0.13.

Some have suggested that Leap's unusual pricing strategy has contributed to its financial difficulties–which could be one reason why other carriers have declined to follow its lead in pricing wireless services more like wireline services.

> The company has little room to maneuver, though, in part because its all-you-can-talk pricing plans. Restricting coverage within the city limits of any given market initially yielded cost savings on infrastructure, licenses, marketing and distribution. Leap's cost per gross add, however, increased in the second quarter to $316 from $246 in the first quarter because of higher marketing expenses, lower customer additions, price competition and fraud. Meanwhile, Leap's churn runs higher than the 3% industry average. Indeed, many question whether Leap's business plan — conceived when wireless competition was less fierce — is still applicable. [Leap Wireless Comes Tumbling Down, Telephony, September 9, 2002]

Public Interest Analysis

Q. Please turn to Section 4 of your testimony. How should the Commission proceed under Idaho Code § 62-622(3)(b)?

A. The Idaho legislature has left the appropriate interpretation of the terms "functionally equivalent" and "competitively priced" to the Commission's judgment. Given the ambiguities involved, I believe the Commission should proceed cautiously and should not reclassify services prematurely. Qwest has been operating under a regulated monopoly structure for nearly a century. While there has been a strong trend towards increased competition, this trend is still in its infancy–particularly in local exchange markets.

Despite the best efforts of the Idaho legislature, this Commission, the U.S. Congress, and the Federal Communications Commission (FCC), local competition has been slow to emerge. Much uncertainty remains concerning how competitive local exchange markets will become. The Commission should not assume that wireless carriers are providing effective competition merely because some people use mobile phones to place calls they previously would have placed using Qwest's local exchange service, nor should it assume that the trend towards increased competition will continue unabated. If the Commission were to grant Qwest's application, to my knowledge, it would be the first state commission to deregulate local exchange services on the basis of wireless competition.

Q. Are there important considerations the Commission should keep in mind when evaluating Qwest's application?

A. Yes. There certainly has been an increased demand for and reliance upon wireless services. At the end of 2001, the FCC estimated a national penetration rate for wireless services of 45%. [Annual Report and Analysis of Competitive Market Conditions With Respect to Commercial Mobile Services, Seventh Report, July 3, 2002, p. 20] However,

according to reports cited by the FCC, at the end of 2001, only 3-5% of these wireless customers had eliminated their land line. [Id., p. 32] In other words, only 1.4% to 2.3% of the nation had eliminated their land line in favor of wireless services by the end of 2001. (3-5% times 45% equals 1.4-2.3%) These statistics indicate that a few customers treat wireless and wireline services as substitutes, but most treat them as complementary products.

More than half of all households still do not have a mobile phone. Of those households that do subscribe to a wireless services, the vast majority have less than one cell phone per household member. Thus, it is not surprising that an extremely high percentage of all households still depend upon their land line for most of their phone calls. A small minority of all households have replaced traditional wireline service with wireless service, but that does not demonstrate these two services are functionally equivalent. To the contrary, the lack of more widespread substitution strongly suggests that they are not good substitutes, because they differ in so many important ways.

The significance of these differences varies from attribute to attribute, and from customer to customer. Clearly, for most customers these wireless and wireline services are no more functionally equivalent than apples and oranges, peanut butter and jelly, or pickup trucks and sports cars. Many customers could survive without one or the other of these alternatives, but that doesn't mean they are functionally equivalent, or that one effectively competes with the other.

Due to functional differences, competition in the wireless market doesn't necessarily spill over to the wireline market–any more than airline competition spills over to the market for swimming pool contractors. If the Commission were to grant Qwest's

request in this proceeding, most customers would be placed at the mercy of Qwest's monopoly power, forced to pay whatever rates it elects to impose. Some customers might abandon their land lines in protest, or due to budget constraints, but that would be true even if wireless service did not exist. At this early stage in the evolution towards a more competitive market, the Commission continues to have an important role in protecting captive customers from monopoly power.

Q. Would your opinion change if the evidence showed that more and more customers were dropping their land lines in favor of wireless services?

A. Not necessarily. Even if the majority of customers were willing to "cut the cord", that wouldn't necessarily confirm that these services are functionally equivalent–any more than an increase in the popularity of pickup trucks proves they are now equivalent to cars. To the extent functional differences remain between these two services, and a substantial number of customers would not freely abandon their wire line service because they perceive it to be redundant to their wireless service, Qwest will continue to have substantial monopoly power in this market segment, and it would not be subject to effective competition due to wireless offerings. When evaluating Qwest's application, the Commission must consider the interests of all customers, not just those for whom functional differences are not important. Rather than focusing on those customers who would rather own a pickup truck than a car, one must also consider the extent to which functional differences exist that are important to a significant fraction of the overall market.

Q. Why should the Commission be concerned about those customers who do not consider the services to be equivalent?

A. Even if this segment of the market were to dwindle in size (e.g. due to changing perceptions or improving technology), it will remain important because Qwest will retain monopoly power over these customers, for whom functional differences are significant. This segment of the market will be unable or unwilling to abandon their land line, and therefore Qwest will be able to charge higher rates, extracting monopoly profits from this market segment.

Q. Has Qwest indicated whether it intends to raise any rates if its application is granted?

A. Qwest has conceded this is a possibility. Qwest witness Souba explains that the Company is seeking the same pricing freedom for local services that it gained for other services in 1989 [Souba Direct Testimony, pp. 10-12] Mr. Souba explains that after services were deregulated in 1989, access and long distance prices were lowered. However, "[p]rices for other services, including line features and certain data transport services, were increased over time to meet competitive offerings or to help cover their provisioning costs. [Id., p. 11] When asked whether local exchange prices could increase if it were giving pricing freedom, Mr. Souba states:

> Yes, of course that is possible. Certainly in an open market, prices move up or down depending on a variety of factors. As I stated before, and as supported by Dr. Lincoln, I believe wireless competition limits the amount Qwest could raise its prices without risking significant loss of customers. It is equally possible that some prices may be decreased in order to

respond to competitive market forces. [Souba Direct Testimony, pp. 19-20]

Mr. Souba further states:

> The current competitive environment will not allow Qwest to charge "excessive" rates for local exchange services without a significant risk of losing large numbers of customers to wireless providers. [Souba Direct Testimony, p. 17]

Q. Do you agree that wireless competition will prevent Qwest from charging "excessive" rates?

A. No. Admittedly, some customers may react in the manner Mr. Souba suggests–those who are indifferent to the functional differences between these two services. For instance, some aren't particularly concerned about sound quality and reliability, they don't send or receive large amounts of data or faxes, they don't care about access to E911 services and they don't want or need to have multiple family members share the same phone line. For these customers, the obvious response to an increase in basic exchange rates would be to abandon their land line and rely exclusively on wireless service. For most other customers, wireless service doesn't provide much relief from Qwest's monopoly power.

Q. Hasn't Qwest provided data which shows that customers are using wireless phones for calls that would otherwise be carried over a wireline network?

A. Qwest witness Shooshan cites an FCC Report for the assertion that

> Estimates suggest that 20% of residential customers have replaced "some" wireline usage with wireless usage, while 11% have replaced a "significant percentage. [Id.]

These statistics are merely estimates developed by one analyst, and were not independently verified by the FCC. In any event, the statistics do not demonstrate that wireless services is functionally equivalent to wireline local exchange services. First, it is not clear what portion of the "replaced" wireline usage was actually long distance, and what portion was local usage. Given current pricing patterns in the wireless and long distance industries, I would not be surprised if a substantial portion of this usage substitution has been at the expense of long distance carriers like AT&T and Worldcom, rather than local exchange carriers like Qwest. Second, there is a drastic distinction between occasionally using one's wireless phone in lieu of the wireline phone, and completely eliminating wireline services in favor of wireless services. For example, one may make a wireless call on the way home from work rather than waiting to use the wireline home phone. This sort of usage substitution won't significantly impact Qwest's profitability, nor does it significantly affect its monopoly power. Usage reductions can modestly reduce Qwest's revenues (e.g. through reductions in access and long distance minutes) but it also will modestly reduce Qwest's costs (e.g. through reductions in switching and transport investments and expenses). Regardless of whether this sort of usage substitution has a net positive or negative impact on Qwest's bottom line, it is unlikely to be significant. Furthermore, usage substitution doesn't imply functional equivalency. Occasional usage of a pickup truck instead of a car does not demonstrate that cars and trucks are functionally equivalent. Someone who owns both a truck and a

car may occasionally use their truck to go somewhere where they previously would have driven in their car. That sort of usage substitution doesn't indicate the two vehicles are functionally equivalent.

Q. Qwest has limited its application to seven Idaho exchanges. Should the Commission also be concerned about customers in the rest of Qwest's Idaho service territory?

A. Yes. As explained earlier, Staff does not believe wireless services in the seven exchanges are"functionally equivalent" to or "competitively priced" with Qwest's local services. If the Commission were to disagree, and therefore were to reclassify these services as "competitive" it would set a precedent that will quickly affect customers in other exchanges, as well. If a "competitive" classification is upheld for these seven exchanges on the basis of wireless "competition", on what basis will the Commission be able to refuse a "competitive" classification for the rest of the Company's exchanges, including those where the quality and reliability of wireless service is poor, and fewer wireless carriers offer service?

If the Commission accepts a weak standard of functional "equivalency" in this proceeding, it will not be easy for the Commission to draw future distinctions on the basis of subtle (yet significant) differences in wireless service quality or competitive intensity. If the Company can gain freedom from regulatory control in these seven exchanges, it will be very difficult, if not impossible, to deny similar requests for deregulation in other exchanges, even if the competitive pressures exerted by wireless carriers in those locations are extremely weak, (e.g. due to poor quality service).

Recommendations

Q. Would it be appropriate to grant Qwest's application at this time?

A. No. In my opinion, the evidence does not justify the relief Qwest has requested because reclassification would not be in the public interest. For certain customers, wireless services may offer a viable alternative to Qwest's wireline local exchange services. However, for many customers (perhaps most), wireless services are not a functionally equivalent alternative to wireline services. Moreover, it would not be in the public interest to grant the application because it would allow Qwest to increase prices, and to engage in discriminatory pricing tactics that would adversely affect its captive customers–particularly those who prefer wireline service for at least some of their calling. Given the functional differences between wireless and wireline services, and the limited willingness of many customers to substitute one service for the other, it would be a mistake to deregulate local exchange services on the basis of wireless competition.

Q. Qwest has indicated that it is seeking greater freedom to compete. If the Commission decides to reject Qwest's application, are there other steps which could be taken to provide Qwest with greater freedom to respond to competitive market forces?

A. Yes. There are many other ways the Commission can provide Qwest with increased freedom to compete. For example, Qwest could request the Commission set maximum rates for local exchange service provided to residential and small business customers in these seven exchanges, pursuant to §62-622(1). Once the Commission sets maximum

rates:

> Changes to tariffs or price lists that are for nonrecurring services and that are quoted directly to the customer when an order for service is placed, or changes that result in price reductions or new service offerings, shall be effective immediately upon filing with the commission and no other notice shall be required. [§62-622(1)(e), I.S.]

Other changes become effective ten days after giving notice to the Commission and effective customers. [Id.] §62-622(1) could be used to provide Qwest with increased competitive pricing freedom.

The Company purports to be seeking increased pricing flexibility in order to respond to competitive pressures. To the extent competition is intensifying, Qwest may legitimately need greater freedom to reduce its prices, to provide promotional discounts, and to "package" various combinations of services in creative ways. However, this sort of pricing and marketing flexibility can be accommodated within the framework of §62-622(1). While this provision provides 10 days notice of Qwest's pricing changes, that should be of little concern unless the Company wants to exploit its monopoly power. To provide the Company with greater flexibility to respond to wireless competition there is no need to grant its application. This can be accommodated within the structure of §62-622(1).

Q. Does this complete your direct testimony, which was prefiled on March 19th, 2003?

A. Yes, it does.

Appendix A

Qualifications

Present Occupation

Q. What is your present occupation?

A. I am a consulting economist and President of Ben Johnson Associates, Inc.®, a firm of economic and analytic consultants specializing in the area of public utility regulation.

Educational Background

Q. What is your educational background?

A. I graduated with honors from the University of South Florida with a Bachelor of Arts degree in Economics in March 1974. I earned a Master of Science degree in Economics at Florida State University in September 1977. The title of my Master's Thesis is a "A Critique of Economic Theory as Applied to the Regulated Firm." Finally, I graduated from Florida State University in April 1982 with the Ph.D. degree in Economics. The title of my doctoral dissertation is "Executive Compensation, Size, Profit, and Cost in the Electric Utility Industry."

Clients

Q. What types of clients employ your firm?

A Much of our work is performed on behalf of public agencies at every level of government involved in utility regulation. These agencies include state regulatory commissions, public counsels, attorneys general, and local governments, among others.

We are also employed by various private organizations and firms, both regulated and unregulated. The diversity of our clientele is illustrated below.

Regulatory Commissions

Alabama Public Service Commission—Public Staff for Utility Consumer Protection
Alaska Public Utilities Commission
Arizona Corporation Commission
Arkansas Public Service Commission
Connecticut Department of Public Utility Control
District of Columbia Public Service Commission
Idaho Public Utilities Commission
Idaho State Tax Commission
Iowa Department of Revenue and Finance
Kansas State Corporation Commission
Maine Public Utilities Commission
Minnesota Department of Public Service
Missouri Public Service Commission
National Association of State Utility Consumer Advocates
Nevada Public Service Commission
New Hampshire Public Utilities Commission
North Carolina Utilities Commission—Public Staff
Oklahoma Corporation Commission
Ontario Ministry of Culture and Communications
Staff of the Delaware Public Service Commission
Staff of the Georgia Public Service Commission
Texas Public Utilities Commission
Virginia State Corporation Commission
Washington Utilities and Transportation Commission
West Virginia Public Service Commission—Division of Consumer Advocate
Wisconsin Public Service Commission

Wyoming Public Service Commission

Public Counsels

Arizona Residential Utility Consumers Office
Colorado Office of Consumer Counsel
Colorado Office of Consumer Services
Connecticut Consumer Counsel
District of Columbia Office of People's Counsel
Florida Public Counsel
Georgia Consumers' Utility Counsel
Hawaii Division of Consumer Advocacy
Illinois Small Business Utility Advocate Office
Indiana Office of the Utility Consumer Counselor
Iowa Consumer Advocate
Maryland Office of People's Counsel
Minnesota Office of Consumer Services
Missouri Public Counsel
New Hampshire Consumer Counsel
Ohio Consumer Counsel
Pennsylvania Office of Consumer Advocate
Utah Department of Business Regulation---Committee of Consumer Services

Attorneys General

Arkansas Attorney General
Florida Attorney General—Antitrust Division
Idaho Attorney General
Kentucky Attorney General
Michigan Attorney General
Minnesota Attorney General

Nevada Attorney General's Office of Advocate for Customers of Public Utilities
South Carolina Attorney General
Utah Attorney General
Virginia Attorney General
Washington Attorney General

Local Governments

City of Austin, TX
City of Corpus Christi, TX
City of Dallas, TX
City of El Paso, TX
City of Galveston, TX
City of Norfolk, VA
City of Phoenix, AZ
City of Richmond, VA
City of San Antonio, TX
City of Tucson, AZ
County of Augusta, VA
County of Henrico, VA
County of York, VA
Town of Ashland, VA

Town of Blacksburg, VA
Town of Pecos City, TX

Other Government Agencies

Canada—Department of Communications
Hillsborough County Property Appraiser
Provincial Governments of Canada

Sarasota County Property Appraiser
State of Florida—Department of General Services
United States Department of Justice—Antitrust Division
Utah State Tax Commission

Regulated Firms

Alabama Power Company
Americall LDC, Inc.
BC Rail
CommuniGroup
Florida Association of Concerned Telephone Companies, Inc.
LDDS Communications, Inc.
Louisiana/Mississippi Resellers Association
Madison County Telephone Company
Montana Power Company
Mountain View Telephone Company
Nevada Power Company
Network I, Inc.
North Carolina Long Distance Association
Northern Lights Public Utility
Otter Tail Power Company
Pan-Alberta Gas, Ltd.
Resort Village Utility, Inc.
South Carolina Long Distance Association
Stanton Telephone
Teleconnect Company
Tennessee Resellers' Association
Westel Telecommunications
Yelcot Telephone Company, Inc.

Other Private Organizations

Arizona Center for Law in the Public Interest
Black United Fund of New Jersey
Casco Bank and Trust
Coalition of Boise Water Customers
Colorado Energy Advocacy Office
East Maine Medical Center
Georgia Legal Services Program
Harris Corporation
Helca Mining Company
Idaho Small Timber Companies
Independent Energy Producers of Idaho
Interstate Securities Corporation
J.R. Simplot Company
Merrill Trust Company
MICRON Semiconductor, Inc.
Native American Rights Fund
PenBay Memorial Hospital
Rosebud Enterprises, Inc.
Skokomish Indian Tribe
State Farm Insurance Company
Twin Falls Canal Company
World Center for Birds of Prey

Prior Experience

Q. Before becoming a consultant, what was your employment experience?

A. From August 1975 to September 1977, I held the position of Senior Utility Analyst with Office of Public Counsel in Florida. From September 1974 until August 1975, I

held the position of Economic Analyst with the same office. Prior to that time, I was employed by the law firm of Holland and Knight as a corporate legal assistant.

Q. In how many formal utility regulatory proceedings have you been involved?

A. As a result of my experience with the Florida Public Counsel and my work as a consulting economist, I have been actively involved in approximately 400 different formal regulatory proceedings concerning electric, telephone, natural gas, railroad, and water and sewer utilities.

Q. Have you done any independent research and analysis in the field of regulatory economics?

A. Yes, I have undertaken extensive research and analysis of various aspects of utility regulation. Many of the resulting reports were prepared for the internal use of the Florida Public Counsel. Others were prepared for use by the staff of the Florida Legislature and for submission to the Arizona Corporation Commission, the Florida Public Service Commission, the Canadian Department of Communications, and the Provincial Governments of Canada, among others. In addition, as I already mentioned, my Master's thesis concerned the theory of the regulated firm.

Q. Have you testified previously as an expert witness in the area of public utility regulation?

A. Yes. I have provided expert testimony on more than 250 occasions in proceedings before state courts, federal courts, and regulatory commissions throughout the United States and in Canada. I have presented or have pending expert testimony before 35 state commissions, the Interstate Commerce Commission, the Federal Communications

Commission, the District of Columbia Public Service Commission, the Alberta, Canada Public Utilities Board, and the Ontario Ministry of Culture and Communication.

Q. What types of companies have you analyzed?

A. My work has involved more than 425 different telephone companies, covering the entire spectrum from AT&T Communications to Stanton Telephone, and more than 55 different electric utilities ranging in size from Texas Utilities Company to Savannah Electric and Power Company. I have also analyzed more than 30 other regulated firms, including water, sewer, natural gas, and railroad companies.

Teaching and Publications

Q. Have you ever lectured on the subject of regulatory economics?

A. Yes, I have lectured to undergraduate classes in economics at Florida State University on various subjects related to public utility regulation and economic theory. I have also addressed conferences and seminars sponsored by such institutions as the National Association of Regulatory Utility Commissioners (NARUC), the Marquette University College of Business Administration, the Utah Division of Public Utilities and the University of Utah, the Competitive Telecommunications Association (COMPTEL), the International Association of Assessing Officers (IAAO), the Michigan State University Institute of Public Utilities, the National Association of State Utility Consumer Advocates (NASUCA), the Rural Electrification Administration (REA), North Carolina State University, and the National Society of Rate of Return Analysts.

Q. Have you published any articles concerning public utility regulation?

A. Yes, I have authored or co-authored the following articles and comments:

"Attrition: A Problem for Public Utilities—Comment." *Public Utilities Fortnightly*, March 2, 1978, pp. 32-33.

"The Attrition Problem: Underlying Causes and Regulatory Solutions." *Public Utilities Fortnightly*, March 2, 1978, pp. 17-20.

"The Dilemma in Mixing Competition with Regulation." *Public Utilities Fortnightly,* February 15, 1979, pp. 15-19.

"Cost Allocations: Limits, Problems, and Alternatives." *Public Utilities Fortnightly,* December 4, 1980, pp. 33-36.

"AT&T is Wrong." *The New York Times,* February 13, 1982, p. 19.

"Deregulation and Divestiture in a Changing Telecommunications Industry," with Sharon D. Thomas. *Public Utilities Fortnightly*, October 14, 1982, pp. 17-22.

"Is the Debt-Equity Spread Always Positive?" *Public Utilities Fortnightly,* November 25, 1982, pp. 7-8.

"Working Capital: An Evaluation of Alternative Approaches." *Electric Rate-Making,* December 1982/January 1983, pp. 36-39.

"The Staggers Rail Act of 1980: Deregulation Gone Awry," with Sharon D. Thomas. *West Virginia Law Review,* Coal Issue 1983, pp. 725-738.

"Bypassing the FCC: An Alternative Approach to Access Charges." *Public Utilities Fortnightly*, March 7, 1985, pp. 18-23.

"On the Results of the Telephone Network's Demise—Comment," with Sharon D. Thomas. *Public Utilities Fortnightly*, May 1, 1986, pp. 6-7.

"Universal Local Access Service Tariffs: An Alternative Approach to Access Charges." In *Public Utility Regulation in an Environment of Change,* edited by Patrick C. Mann and Harry M. Trebing, pp. 63-75. Proceedings of the Institute of Public Utilities Seventeenth Annual Conference. East Lansing, Michigan: Michigan State University Public Utilities Institute, 1987.

With E. Ray Canterbery. Review of *The Economics of Telecommunications: Theory and Policy* by John T. Wenders. *Southern Economic Journal* 54.2 (October 1987).

"The Marginal Costs of Subscriber Loops," A Paper Published in the Proceedings of the Symposia on Marginal Cost Techniques for Telephone Services. The National Regulatory Research Institute, July 15-19, 1990 and August 12-16, 1990.

With E. Ray Canterbery and Don Reading. "Cost Savings from Nuclear Regulatory Reform: An Econometric Model." *Southern Economic Journal,* January 1996.

Professional Memberships

Q. Do you belong to any professional societies?

A. Yes. I am a member of the American Economic Association.

CERTIFICATE OF SERVICE

I HEREBY CERTIFY THAT I HAVE THIS 19TH DAY OF MARCH 2003, SERVED THE FOREGOING **DIRECT TESTIMONY OF BEN JOHNSON, Ph.D.,** IN CASE NO. QWE-T-02-25, BY MAILING A COPY THEREOF, POSTAGE PREPAID, TO THE FOLLOWING:

MARY S HOBSON
STOEL RIVES LLP
SUITE 1900
101 S. CAPITOL BLVD
BOISE, ID 83702

ADAM L SHERR
QWEST
1600 7TH AVE, ROOM 3206
SEATTLE, WA 98191

CONLEY WARD
GIVENS PURSLEY LLP
277 N 6TH ST, SUITE 200
PO BOX 2720
BOISE, ID 83701-2720

CLAY R STURGIS
MOSS ADAMS LLP
601 W. RIVERSIDE, SUITE 1800
SPOKANE, WA 99201-0663

DEAN J MILLER
McDEVITT & MILLER LLP
420 W. BANNOCK ST.
PO BOX 2564 (83701)
BOISE, ID 83702

BRIAN THOMAS
TIME WARNER TELECOM
223 TAYLOR AVE. NORTH
SEATTLE, WA 98109

SUSAN TRAVIS
WORLDCOM INC.
707 17TH STREET, SUITE 4200
DENVER, CO 80202

MARY JANE RASHER
AT&T COMMUNICATIONS OF THE MOUNTAIN STATES INC.
10005 S. GWENDELYN LANE
HIGHLANDS RANCH, CO 80129-6217

MARLIN D ARD
WILLARD L FORSYTH
HERSHNER, HUNTER, ANDREWS, NEILL & SMITH, LLP
180 E 11TH AVE, PO BOX 1475
EUGENE, OR 97440-1475

DEAN RANDALL
VERIZON NORTHWEST INC.
17933 NW EVERGREEN PKWY
BEAVERTON, OR 97006-7438

JOHN GANNON
ATTORNEY AT LAW
1101 W. RIVER, SUITE 110
BOISE, ID 83702

BEN JOHNSON ASSOCIATES INC.
2252 KILLEARN CENTER BLVD
TALLAHASSSEE, FL 32308

Jo Nelson
SECRETARY