

Demand Analysis

The demand for national directory assistance reached an estimated 1.17 billion requests in 2000. These requests are the number of calls made by end users to wireline providers solely for national directory listings. The total includes both paid for searches and those included in the price of the initial search. The volume of calls does not include searches conducted over wireless directories, Internet directories, or payphones. International directory assistance volume is not included in the forecasts.

Figure 20 illustrates the anticipated volume levels through 2007. According to the forecast, demand for wireline directory assistance has been increasing since 1997. From 2007, however, the growth rate has been steadily declining. The volume in 2000 is an increase of nearly seven percent from the previous year. By 2007, volume for the national directory assistance market is expected to increase to 1.55 billion requests. This is a conservative calculation for the volume as opposed to several carrier's expectations for the future. The projected increase in national search requests equates to a Compound Annual Growth Rate (CAGR) of 4.12 percent.

FIGURE 20

National Directory Assistance Services Market: Demand Forecasts (U.S.), 1997-2007

Year	Call Volume (Billion)	Growth Rate (%)
1997	0.99	---
1998	1.04	5.2
1999	1.10	6.4
2000	1.17	6.0
2001	1.25	6.7
2002	1.31	5.5
2003	1.38	4.8
2004	1.43	3.7
2005	1.47	3.1
2006	1.52	2.9
2007	1.55	2.3

Compound Annual Growth Rate (2000-2007): 4.12%

Note: All figures are rounded; the base year is 2000. Source: Frost & Sullivan

Volume is expected to increase over the forecast period for several reasons, the most pervasive being:

- Growing number of new area codes and annexation of some areas into existing area codes
- Successful efforts of directory assistance providers to promote their NDA products
- Lower 1+411 NDA prices will drive acceptance and usage of product
- Efforts of AT&T and WorldCom to offer one source NDA products will be copied by other carriers to increase overall demand

The growing American population has increased the density of metropolitan areas. The population has increased so much that new area codes are being created to serve the growing population residing in close proximity to each other. Many large cities now have two or more area codes to handle their population's telecom needs. Unincorporated areas are also forcing telecom carriers to adjust the breadth of existing area codes. Rather than create new area codes in every instance, carriers are merely extending the range of area that nearby area codes encompass.

This changing environment drives the use of national directory assistance services. It is the easiest way for someone not familiar with area code changes to access correct listings.

The ILECs, particularly the RBOCs and Sprint, have done excellent jobs of advertising and promoting their 1+411 NDA services. Before National 411, subscribers had to go through a drawn-out process of calling 1+area code+555-1212 to find a national listing. The subscriber had to know the area code he/she was calling, or be prepared to make multiple 1+NPA calls. 1+411 allows subscribers to search for listings without having to know anything more than a name and city. In addition to this, 1+411 is priced much lower than traditional 1+NPA products or one source NDA products.

The one source NDA products (10-10-9000, 10-10-ATT-00) offered by WorldCom and AT&T have successfully included the cost of call completion in the initial price for national searches. They charge \$0.99 and \$1.49, respectively; slightly higher than basic 1+411 service and much lower than traditional 1+NPA service. The bundled offering will increase the demand for the service, and as both are available to any potential end user, it may take volume away from RBOCs that cannot offer call completion service on national listings.

The factors that will restrain the rampant growth of wireline NDA volume are:

- Impact of wireless directory assistance on wireline market
- Emergence and acceptance of Internet directories, especially among commercial users
- Rise of inaccurate listings and non-listings among all types of directory assistance providers

Listings from wireless directory assistance providers are as accurate as wireline listings. This is a result of shared databases, especially among ILECs that offer both wireless and wireline service. Wireless communication is also beginning to be used more frequently as consumers' primary form of communication. It is mobile and more convenient than wireline service. As more individuals purchase wireless service, wireline directory assistance will continue to experience reductions in its volume.

Internet directories are becoming more attractive to end users because they are free. Also, they have the excitement and intrigue about them because the Internet is still cutting edge to most people. Additionally, it is getting easier to access the Internet. The boom in DSL and cable modems means that more businesses and consumers have an "always on" Internet connection. Now the time to access a directory site and retrieve the information is relatively the same as using wireline service, especially for listings with common names. Web directories also include information about commercial listings that end users were going to inquire about. Internet directory assistance providers must and will improve upon their product's accuracy so that they may continue to attract advertising customers. If Internet directories do not improve upon their accuracy rate, then volume for wireline directory assistance will not decrease as forecasted.

Inaccuracy is an increasing trend for all directory assistance providers. Private citizens are requesting to have their names omitted from the database of listings. They cite privacy and security as the main reasons for their decision. The result is either an incorrect listing or a "no listing found" result. This affects wireline providers in addition to wireless and Internet, but since wireline is usually their first source after the phone book, end users become upset faster with wireline directory assistance. This leads to apathy for the service and frustration when they must call the carrier back to receive a credit for an incorrect listing. The free searches offered by Internet directories become more attractive when end users become overly frustrated with wireline and wireless directories.

Price Trends

Overall, national directory assistance prices have fallen over the past few years. This is largely due to the entrance of ILECs, particularly RBOCs, into the NDA market. 1+411, offered by most large ILECs and some CLECs, costs much less than the traditional 1+NPA product. As a result, the 1+NPA product, which can cost end users as much as \$1.99 per call, is decreasing in popularity and usage.

IXC's have worked to successfully promote their one source directory assistance products. These products cost more than National 411 services. The highest national search from an RBOC is \$1.25 (Qwest). The average is \$0.98 among all RBOCs. AT&T and WorldCom charge \$1.49 and \$0.99 respectively, and include call completion in their initial price. Most ILECs cannot offer call completion on national searches, so they are already at a disadvan-

tage against one source products. Another advantage that one source providers have over ILECs is that their products can be used by anyone. The service is not limited to subscribers.

Besides competition from within their industry, wireline pricing trends are affected by the following factors:

- Intense competition from wireless directory assistance providers
- Growing acceptance of, and easier access to, Internet directories, particularly among commercial enterprises
- Increasing usage of directory and call completion services by providers

The declining wireless prices and their increasing subscriber base is suppressing the growth of wireline voice services, including directory assistance. The rise in consumer mobility coupled with the need for constant communications is leading to a greater demand for wireless service. Add to this future improvements and enhancements promised by Third Generation technology, wireline communication is in serious trouble of losing some of its subscriber base. Wireless growth rate is constantly in double digits year after year. Wireline growth, while still positive, is decreasing. This is the best and most concrete proof that the trend towards less wireline service is growing. Wireless directory assistance is viewed as superior to wireline service for several reasons. The most pertinent are:

- Wireless databases are as accurate as wireline directory assistance databases
- End users may use the service when they are in transit, which makes it use more spontaneous and convenient

Internet directories, while not as accurate as other directory products, can be a significant influence on wireline pricing; especially among business subscribers. Commercial enterprises receive few, if any, call allowances from their directory assistance provider. The emergence of Internet directories means that businesses no longer have to submit to this unequal treatment. Internet directories are generally free of charge and provide most every piece of information that end users would normally request from directory assistance. Their only drawback is their higher than normal inaccuracy. Internet directories generate most of their revenue from advertisers and listed participants. Improvements must and will be made to Internet directories in order to increase their accuracy. If they remain as unreliable as they are today, they will receive fewer visitors and will not have any significant influence on wireline directory assistance. Frost & Sullivan believes that Internet directories will improve upon their accuracy because they must keep their number of visitors above a certain level to justify their advertisement fees. This factor, plus the increasing use of "always on" broadband Internet access, will contribute to the declining revenue growth in the wireline directory assistance industry over the latter part of the forecast period.

Figure 21 shows the most popular national directory assistance providers and the cost of their directory assistance products. The prices for the 1+411 products represent an average of the fees charged to the individual ILEC's subscribers within its territory.

FIGURE 21

National Directory Assistance Services Market: Most Popular NDA Providers and the Cost of Their Products per Call (U.S.), 2001

Wireline NDA Provider	< \$1.00	\$1.00-	\$1.26-	\$1.50 +
		\$1.25	\$1.49	
AT&T (1+NPA product)				■
AT&T (10-10-ATT-00 & "00" INFO products)			■	
WorldCom (1+NPA product)				■
WorldCom (10-10-9000 product)	■			
Sprint (1+NPA product)				■
Sprint ("00" DA product)			■	
Sprint (1+411 product)		■		
Global Crossing (1+NPA product)			■	
Excel (1+NPA product)		■		
SBC (1+411 product)		■		
Verizon (1+411 product)	■			
BellSouth (1+411 product)	■			
Qwest (1+411 product)		■		

Source: Frost & Sullivan

Competitive Structure

Figure 22 illustrates the current competitive structure in the U.S. wireline national directory assistance market. The market consists of interexchange carriers (IXCs) and ILECs, particularly the RBOCs, that offer 1+411 national directory assistance. The number of market participants has increased due to the entrance of ILECs offering national search assistance.

FIGURE 22

Wireline National Directory Assistance Market: Competitive Structure (U.S.), 2000

Types of Competitors	RETAIL ONLY: Incumbent local exchange carriers, dominated by regional bell operating companies (RBOCs). Competitive local exchange carriers that purchase service for their subscribers. AT&T & WorldCom that offer true single number directory assistance products.
Tiers of Competition	Two tiers of competition: Tier 1: IXC's that offer one source products. RBOCs. SBC, Verizon, BellSouth, and Qwest that offer 1+411. Large IXCs that offer directory assistance (Excel, Global Crossing, Sprint). Tier 2: Other IXCs and smaller ILECs that offer 1+NPA products.
Key End-User Groups	Subscribers in the consumer market. Commercial enterprises. Non subscribers (One source products only)
Competitive Factors	Accuracy and reliability of listings and service. Pricing schedules. Ability to offer call completion at attractive enough prices to subscribers. Customer awareness of product availability and features. Customer service: automated assistance, voice recognition.

Source: Frost & Sullivan

Frost & Sullivan has identified two levels of market participants in the national directory assistance industry. The first tier consists of large IXCs. Those IXCs are further differentiated between those that offer one source products and those that provide 1+NPA+555-1212 service. Also included in this first tier are the RBOCs and Sprint which provide national directory assistance through their 1+411 products. IXCs have traditionally controlled the dominant market share in the national directory assistance market. WorldCom and AT&T are trying to increase their share of the market by promoting their one source directory assistance products. These products are different from the traditional 1+NPA products and newer 1+411 service because they include call completion in the price of their offering, and are available to any potential end user. Despite this type of product, Frost & Sullivan believes that ILECs that offer 1+411 service will acquire market share from the IXC's. This is especially true of those IXC's that still receive most, if not all, of their NDA revenues from their 1+NPA products. The biggest differentiator between one source products and 1+411 service is the one source providers' ability to offer call completion on every national search. If and when RBOCs gain this ability, Frost & Sullivan expects them to acquire an even larger portion NDA revenues.

The second tier of competitors is comprised of the smaller IXCs and ILECs that either only offer a 1+NPA product or are so small in size that their 1+411 product does not reach many subscribers. Other tier two competitors include independent call centers and all other providers of wireline national directory assistance.

Directory assistance is used on a daily basis for a multitude of reasons. Commercial enterprises use the service to contact potential clients or business partners (suppliers, distributors, vendors). Consumers use it to find the numbers for acquaintances and businesses. Presently, national directory assistance accounts for less than 38 percent of the total directory assistance market. By 2007, Frost & Sullivan expects NDA revenues to total over 46 percent of total directory assistance revenues.

CALL COMPLETION SERVICES MARKET

Introduction

INTRODUCTION TO THE CALL COMPLETION SERVICE MARKET

The call completion services market is difficult to accurately report on because it is subject to restrictions on what types of calls can be completed and by what types of carriers can complete calls. RBOCs cannot complete calls outside of their Local Access and Transport Area (LATA) until the FCC believes they have complied with Section 271 of the 1996 Telecommunications Act. This presents a challenge to forecasting call completion growth, since it is uncertain what carrier will gain interLATA access next, and how many regions will be opened up to ILECs before the end of the forecast period.

In 2000, revenues for call completion services were approximately \$576 million. Some of the challenges faced by providers attempting to increase their revenues by offering call completion services are:

- Convincing an end user to pay an additional fee for call completion, after they already have the number
- Successfully promoting the service as a value added service that justifies a premium when other providers offer the service for free
- Offering call completion services in all of the states that they cover (Qwest does not offer service in Iowa or Montana)
- Creating a pricing structure for the service that will make money for the provider and still be attractive enough for customers to use
- Creating a successful marketing campaign to target higher income end users that may not balk at paying for call completion charges

Call connection charges for one source NDA products are promoted as free, or included in the initial search function. AT&T "00" INFO and WorldCom's 10-10-9000 charge \$1.49 and \$0.99, respectively, for their service which includes call completion. Sprint, in contrast,

charges comparable prices among its different business segments, but charges an additional fee for call completion. Local directory providers are using varying pricing schedules in an attempt to increase their revenues.

Many are raising their fee for conducting a listings search and lowering their call completion charge. Others offer call completion service for free and increase the fee for conducting the search even more. The least successful method of pricing is for providers to offer the two services as separate functions. Following are a few selected examples of pricing schedules:

- Qwest in Arizona: 85 cent charge for search and no charge for call completion
- Qwest in Oregon: 50 cent charge for search and 35 cent charge for call completion
- SBC in Texas: 75 cent charge for search and 5 cent charge for call completion
- SBC in Arkansas: 50 cent charge for search and 30 cent charge for call completion
- SBC in Nevada: 50 cent charge for search and 45 cent charge for call completion

DEFINITIONS

Call completion is defined as the service executed by a directory assistance provider of automatically connecting a call after a listing is given to the end user. Some of the wireline providers offer call completion free of charge to all of their customers. Others such as SBC and Qwest charge for local call completion in some states, but provide the service free of charge in others.

The term "one source" single number directory assistance (NDA) product is a description for products that meet the following four characteristics. First, they are available to any potential end user. 10-10-9000 and 10-10-ATT-00 are two examples of products that can be used by subscribers and non subscribers of a carrier. The second characteristic is that single number NDA can be used for national and local listings. Third, the product must include a call completion feature. The fourth characteristic is a seamless listing search. One single point of contact should be able to complete the search for the end user. The end user should not have to dial another number to complete the search. Most CLECs cannot offer seamless searches on every call, and ILECs cannot offer their products to all potential users, even in their calling regions. As such, they are not defined as one source NDA products in this deliverable.

Once calls are completed, the carrier receives revenue for carrying the call between the two parties. Those revenues are not included in this deliverable.

MARKET SEGMENTATION

The market is segmented into carriers that offer call completion and those that do not offer the service. The majority of those that do not offer service in on local searches have made a

business decision not to do so. This decision may be based on demand, lack of ability, or on cost. They may decide to add the service at a later time. Some of the providers interviewed for this deliverable acknowledged as much. Within the group of carriers that offer call completion service, the market is further segmented. IXC's can complete the calls on national searches. WorldCom and AT&T, through their 10-10-9000 and 10-10-ATT-00 numbers, include the cost of completing the call in their price for the initial call. Other IXC's treat the service as a complementary product and charge separate prices for it.

The second group of carriers that offer call completion service are the ILECs, particularly the RBOCs. These carriers cannot yet offer call completion service on national searches. They have been very successful in offering call completion for local calls. As mentioned earlier in this introduction, RBOCs offer different pricing schedules to attract end users. The third tier of call completion providers are the facility based and service buying CLECs.

Key Market Segment Trends

The enhanced service of call completion is becoming widely accepted in both the national and local directory assistance markets. In the local area, where most of the carriers include call completion as a feature of the initial listings search, acceptance is over 80 percent. In regions where call completion is separate, but the majority of the cost is included in the directory search, acceptance remains above 70 percent.

Carriers that market call completion as a less complementary service do not have as high of an acceptance rate. End users do not see the benefit of paying an equal or nearly equal amount for call completion as they do for directory assistance. Sprint and SBC charge as high as 45 and 50 cents, respectively, for local call completion charges in two regions. In those two states, there is only a 5 cent differential between the cost of the search and the cost for the call to be completed. Frost & Sullivan expects more carriers to adopt the pricing strategy that includes all or some of the cost in the price for a listings search. It is easier to gain acceptance of the service if the end user believes the service is free or very inexpensive.

In the national directory assistance market, AT&T and WorldCom offer one source single number directory assistance products that include call completion as a product feature. Among the IXC's, use of the 1+NPA product means that carriers can charge as high as \$1.00 to complete a call. If customers used the 10-10-9000 or 10-10-ATT-00 products from WorldCom and AT&T, they would only be charged \$0.99 and \$1.49, respectively. This price includes the cost of call completion whether they use the service or not. As a result, most end users of the one source single NDA products accept the service. Excluding those customers, Frost & Sullivan estimates that only 7 to 12 percent of NDA end users agree to have their calls connected by their IXC. This ratio should increase as call completion is added to NDA offerings.

Revenue Forecasts

Frost & Sullivan was not able to secure a precise revenue level for call completion service among national or local directory assistance providers. The major reason for our inability to accurately assess and forecast revenues is due to the growing trend by carriers to include call completion as a "free" enhanced service feature in their directory assistance products. While IXCs primarily separate the two services, the two largest carriers, AT&T and WorldCom, offer successful products that include call completion as part of the basic service. In many local directory assistance markets, providers are also providing some or all of the cost for call completion service in the initial price of the listings search. Some pricing examples are listed below:

- Qwest in Arizona: 85 cent charge for search and no charge for call completion
- Qwest in Oregon: 50 cent charge for search and 35 cent charge for call completion
- SBC in Texas: 75 cent charge for search and 5 cent charge for call completion
- SBC in Arkansas: 50 cent charge for search and 30 cent charge for call completion
- SBC in Nevada: 50 cent charge for search and 45 cent charge for call completion
- Sprint: \$1.00 for national call completion service
- AT&T and WorldCom (one source products): \$1.49 and \$0.99, respectively for products that provide call completion at no additional charge

Using estimates from primary research and wholesale prices providing call completion services (\$0.18), Frost & Sullivan created an estimate for call completion revenues. National directory assistance providers reported a call completion acceptance rate of between 7 and 12 percent when the service is not included in the listings search price. When products that provide call completion service which is included are taken into account, the acceptance rate jumps to roughly 20 percent. Call completion among local directory assistance providers is nearly 80 percent. This includes all call completion accepted services whether all or some of the cost of the service was rolled into the price for the listings search, or whether the service was charged separately from the listings search.

Taking this information into account, and using the total volume of calls for both the national and local directory assistance market, Frost & Sullivan estimates that 3.2 billion calls were completed in 2000. The overwhelming majority of those (3.11 billion) were on local directory calls. Those 3.11 billion calls multiplied by \$0.18 per call equates to \$576 million in call completion revenues in 2000. Again, these numbers are revenues for all completed calls both separately billed and included as a "free" feature.

Going forward, Frost & Sullivan is uncertain as to how call completion revenues will be affected by ILECs offering call completion service on national searches; or how one source

products will affect revenues among IXC's. As such, Frost & Sullivan has determined that any attempt to forecast future market revenues would be pure speculation, and decided not to create one.

Demand Analysis

The market demand for call completion service equated to approximately 3.2 billion requests. These requests are the number of calls completed by carriers for national and local directory assistance searches. The total includes both completed calls that were marketed as "free" to end-users and those that were provided to end-users for a disclosed amount. The volume does not include completed calls conducted over wireless directories, Internet directories, or payphones. International calls are also excluded from the analysis.

Figure 23 illustrates the anticipated volume levels through 2007. Call completion service is becoming more of an attractive feature for many end-users. The fact that the service is erroneously considered "free" has and will continue to increase the demand for the service. Increased demand, however, will not cause the total number of calls to increase. Even though more directory assistance calls will transition into completed calls, there will be fewer directory assistance requests in the future. Directory assistance searches is expected to decrease by a negative Compound Annual Growth Rate (CAGR) of 2.41 percent. As a result, wireline directory assistance providers will have fewer opportunities to complete calls. By the end of the forecast period, directory assistance completed calls will amount to approximately 2.6 billion requests. This is a negative CAGR of 2.93 percent.

As stated in earlier segments, directory assistance volume is decreasing for several reasons. Call completion is most affected by:

- Impact of wireless directory assistance on wireline market
- Emergence and acceptance of Internet directories, especially among commercial users

Listings from wireless directory assistance providers are as accurate as wireline listings. This is a result of shared databases, especially among ILECs that offer both wireless and wireline service. Wireless communication is also beginning to be used more frequently as consumers' primary form of communication. It is mobile and more convenient than wireline service. As more individuals purchase wireless service, wireline directory assistance will continue to recognize reductions in its volume. In relation to call completion service, wireless end users generally receive call completion service for much less than wireline end users.

FIGURE 23

Call Completion Service within the DA Market: Demand Forecasts (U.S.), 1997-2007

Year	Volume (Billion)	Growth Rate (%)
1997	2.95	---
1998	3.00	0.7
1999	3.04	1.5
2000	3.20	5.2
2001	3.19	(0.2)
2002	3.14	(1.4)
2003	3.04	(3.2)
2004	2.95	(3.2)
2005	2.82	(4.2)
2006	2.70	(4.4)
2007	2.60	(3.8)
Compound Annual Growth Rate (2000-2007): (2.93)%		

Note: All figures are rounded; the base year is 2000. Source: Frost & Sullivan

Internet directories are becoming more attractive to end users because they are free. Also, they have the excitement and intrigue about them because the Internet is still cutting edge to most people. Additionally, it is getting easier to access the Internet. The boom in DSL and cable modems means that more businesses and consumers have an "always on" Internet connection. Now the time to access a directory site and retrieve the information is relatively the same as using wireline service, especially for listings with common names. Web directories also include information about commercial listings that end users were going to inquire about. Internet directory assistance providers must and will improve upon their product's accuracy so that they may continue to attract advertising customers. If Internet directories do not improve upon their accuracy rate, then volume for wireline directory assistance will not decrease as forecasted.

Wireless directory assistance and complimentary call completion services are expected to adversely impact both the national and local markets for call completion. The larger impact, however, will be on local directory assistance. While it may limit the growth of national call completion service, it has a negative influence on the local market. Figure 24 shows the demand forecast for call completion service in the local directory assistance market.

FIGURE 24

Call Completion Service within the LDA Market: Demand Forecasts (U.S.), 1997-2007

Year	Volume (Billion)	Growth Rate (%)
1997	2.89	---
1998	2.93	1.4
1999	3.01	2.7
2000	3.11	3.2
2001	3.09	(0.5)
2002	3.03	(1.8)
2003	2.93	(3.6)
2004	2.82	(3.6)
2005	2.70	(4.6)
2006	2.56	(4.8)
2007	2.45	(4.2)

Compound Annual Growth Rate (2000-2007): (3.30)%

Note: All figures are rounded; the base year is 2000. Source: Frost & Sullivan

In 2000, completed calls equated to roughly 69 percent of local searches. Through 2007, that acceptance rate is expected to climb to the mid to high 70 percentile. Despite the growing acceptance of the service, the actual number of LDA completed calls will decline from 3.11 billion calls, in 2000, to 2.46 billion in 2007. This is a negative CAGR of 3.30 percent.

While local call completion service volume declines, Figure 25 illustrates the growth expectations for national call completion service. In 2000, approximately 90 million calls were completed by IXCs and some ILECs. By 2007, that number is expected to increase to 1.41 billion calls. This is a CAGR of a very healthy 6.42 percent. Call completion is expected to increase due to the successful emergence of one source directory assistance products. Again, end users perceive that call completion service is a free feature of the search service. This will increase call completion service usage. Additionally, Frost & Sullivan is expecting that there will be an increase in the number of national calls made throughout the forecast period. The entrance of ILECs, and their lower 1+411 products, into the national market will increase the number of national calls. Frost & Sullivan believes that RBOCs will eventually be permitted to offer national call completion service. This, combined with their lower NDA products, will increase the number of requests for call completion service.

FIGURE 25

Call Completion Service within the NDA Market: Demand Forecasts (U.S.), 1997-2007

Year	Volume (Billion)	Growth Rate (%)
1997	0.06	---
1998	0.07	13.8
1999	0.08	15.5
2000	0.09	16.9
2001	1.01	11.0
2002	1.10	8.7
2003	1.19	7.9
2004	1.26	6.0
2005	1.32	5.1
2006	1.37	3.4
2007	1.41	3.1
Compound Annual Growth Rate (2000-2007): 6.42%		

Note: All figures are rounded; the base year is 2000. Source: Frost & Sullivan

Pricing Trends

Call completion service is priced differently by each carrier. Even within their own calling regions, carriers charge different rates among their states. Among IXC's there are two carriers that offer a directory assistance product available to any potential end user, which markets call completion service as an included feature of the product. All other call completion services on national listings are charged separate from the initial listings search. This complementary pricing schedule is obviously less successful than one source bundling practice. Frost & Sullivan believes that more IXCs and, eventually RBOCs, will develop one source directory assistance products to increase revenues from call completion service.

The local directory assistance providers also incorporate different pricing methods to encourage call completion usage among their end users. The most successful method of increasing the demand for call completion service is to include the cost of completing a call in the initial price for the search. Several ILECs, particularly the RBOCs, provide call completion as an included feature of their directory assistance product. In those states, however, the price for a listings search is typically much higher than in a state where call completion is marketed as a separate service. Others offer call completion service at a reduced rate, and include most of the cost of completing the call in the listings search. The least successful

method of pricing is for providers to offer the two services as separate functions. Following are a few selected examples of pricing schedules:

- Qwest in Arizona: 85 cent charge for search and no charge for call completion
- Qwest in Oregon: 50 cent charge for search and 35 cent charge for call completion
- SBC in Texas: 75 cent charge for search and 5 cent charge for call completion
- SBC in Arkansas: 50 cent charge for search and 30 cent charge for call completion
- SBC in Nevada: 50 cent charge for search and 45 cent charge for call completion

An important factor to note is that states can regulate how much carriers can charge for service. Carriers then have to create pricing schemes that will allow them to generate the most potential revenue while adhering to the laws. Frost & Sullivan believes that local carriers will investigate the possibility of increasing their price for listing searches and market call completion as a "free" feature. Qwest epitomizes what most local directory assistance providers may evolve to in the future. It includes call completion service in its local directory assistance product in 64 percent of its region. In those states that have call completion included in basic directory assistance, the average local directory assistance price is \$1.07. In the states where the service is not available, or where end users are charged for the service, the average local directory assistance price is \$0.59.