

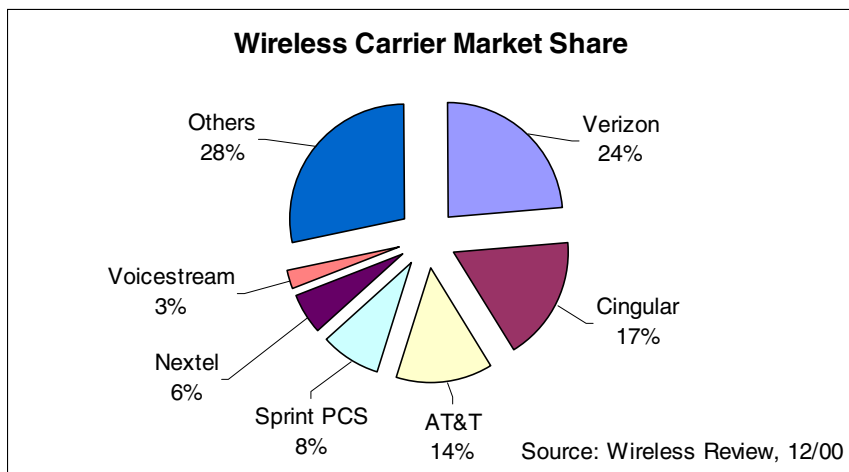
Wireless Telecommunications Carrier Industry Overview

This paper provides an overview of the wireless carriers that will be an essential part of 511 service provision. Industry landscape, business motivations and their possible impact on 511 service provision are addressed.

Conceived in the 1940s and first introduced in 1983, wireless carriers today have roughly 110 million subscribers and nearly \$50 billion in revenues in the United States. There can be up to nine wireless carriers operating in each market, in either the 800 MHz or 1800 MHz band.

Market Segments – There are three carrier segments: National, Regional and Small/Rural.

- *National Carriers* – Six wireless carriers offer their services across a nationwide footprint (each is available to over 190 million people). These six carriers serve approximately 80 million subscribers or, 72% of the market. Verizon, Cingular and Voicestream are all products of mergers in the past year.



- *Regional Carriers* – These carriers are typically associated with an incumbent local exchange carrier, as each ILEC was granted one of the original operating licenses in its service area. Examples include ALLTEL, Qwest Wireless, Cincinnati Bell Wireless, and Century-Tel Wireless. They typically have good market penetration in their service areas, but they can only offer a national service footprint through affiliate or roaming arrangements with other carriers. These arrangements are common.
- *Small/Rural Carriers* – Many of these carriers provide wireless services in small town or rural areas. These carriers are key roaming partners to many of the larger national and regional carriers. Many national or regional customer products (i.e., voice mail, data services, etc) are provided by these smaller carriers to preserve consistency with their larger roaming partners' services and features.

Market Trends and Issues – Several issues and trends are expected to continue in the wireless industry:

- *Consolidation:* Wireless carriers will continue increase their geographic footprint through mergers and acquisitions.
- *Flat rate plans:* The increasing popularity of flat rate, all-in-one calling plans should continue to grow.
- *Reduce churn:* Carriers will continue to seek methods to keep their customers from switching carriers for a better deal. Customer-tailored information services are considered one method to increase customer loyalty.
- *Continued pricing pressure:* With the effective price per minute charged to consumers continuing to drop, the number of wireless customers will continue to grow at significant levels. Thus carriers will seek to provide the network infrastructure at significantly lower incremental costs than delivered previously. Converting their networks to more efficient digital formats is one means of doing this.
- *Maintain or increase monthly bills:* With the effective price/minute and flat rate plans charged to the consumer continuing to drop, carriers are struggling to keep the revenue from each customer from eroding. The average phone bill was \$80 in 1990, \$40 in 1999, and increased to \$45 in 2000. As a result, carriers will continue to find ways to increase the customer usage through new and different incremental services.
- *Internet/Data:* As Carriers increasingly convert their networks to digital formats, internet and other data services are being added to their service portfolio. Some offer these services for an additional fee, others include them in their monthly plans.
- *Capital investment requirements:* Continuing support of federal mandates (E911, 711, Local Number Portability), digital conversion activities, network capacity and build out activities, in addition to Merger/Acquisitions are placing significant demands on carriers for capital investment.

Implications to 511 – The most significant implications are in two areas:

- Carriers view information services as an opportunity for value-added service to increase revenue or reduce churn. Traveler information services are already provided by the six national carriers to their customers, and these services have been tailored for their network, their devices and their customer base. As more wireless devices become internet accessible, these services will increasingly be location-based and customizable by the customer. Generic 511 services will be treated by carriers as just another voice call.
- Increased geographic presence by the wireless carriers will increase the desire for a consistent implementation and cost-recovery model for 511 services. A consistent DOT interconnection and cost recovery model will be helpful in expediting the delivery of wireless 511 calls to the designated service provider.

Wireless Carrier Trends Implications on 511:

- 511: A competitive service? Or just another call?
- Pressure for 511 implementation consistency across boundaries