

Workforce Solutions
For
E911 Compliance

A White Paper
For Buyers of Temporary
Labor Services

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Introduction

Over the past several years the telecommunications industry has suffered downward trends caused by a variety of factors, including overcapacity and loss of subscribers, which forced companies to downsize in order to remain competitive. With a limited staff currently in place, wireless companies are now scrambling to meet impending FCC deadlines pertaining to Enhanced 911 (E911) compliance.

However, conformity with E911 doesn't have to be an expensive proposition as there are a variety of staff augmentation and managed service solutions available that can help you meet your compliance goals in shorter cycle times, while also saving money.

You can choose from a number of staff augmentation solutions, which can provide you with a qualified, experienced project team, to meet your requirements, while potentially reducing costs. In this white paper, we will discuss the available staffing options that should best meet the unique needs of the companies involved in E911 compliance.

What is E911?

E911 is also known as **Enhanced 911**.

In 1996, the FCC passed a mandate called E911 that required all wireless service operators to provide the cell phone user's location in the event of a 911 call. It is required that the caller's location be pinpointed to the Public Service Answering Point (PSAP) within 100 meters 67% of the time.

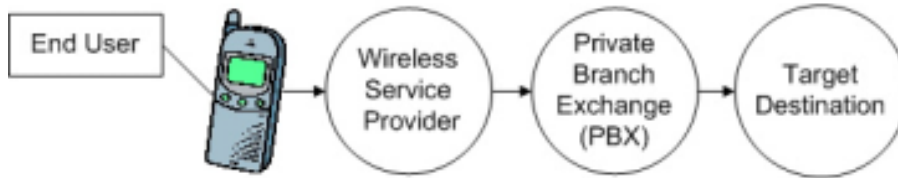
The initial deadline for E911 compliance was set for October 1, 2001 — a deadline that no major carrier met. Temporary waivers and the revised deadline of February 1, 2006 was set by the FCC to allow ample compliance time.

The official national emergency number in the United States and Canada is 911. When you dial 911 you are connected to a Public Safety Answering Point (PSAP) dispatcher trained to route your call to the appropriate local emergency service: medical, fire, and law enforcement agencies.

Unfortunately, if the phone line you are calling from is a part of a Private Branch Exchange (PBX) network, the phone number received by the PSAP will probably not be the number of the phone you are dialing from. Instead it will be the main number for the PBX. The address displayed may be for billing purposes only and will not indicate the location where the emergency call was placed.

The 911 networks play a vital role in our nation's emergency response and disaster preparedness systems. Continuous upgrades to this network are made. An example of an upgrade is the capability of most 911 systems to automatically report the telephone number and location of 911 calls being made from landline phones.

Wireless routing flow of typical call



Currently there are two alternative systems used to determine the caller's location after placing a 911 call on a cell phone:

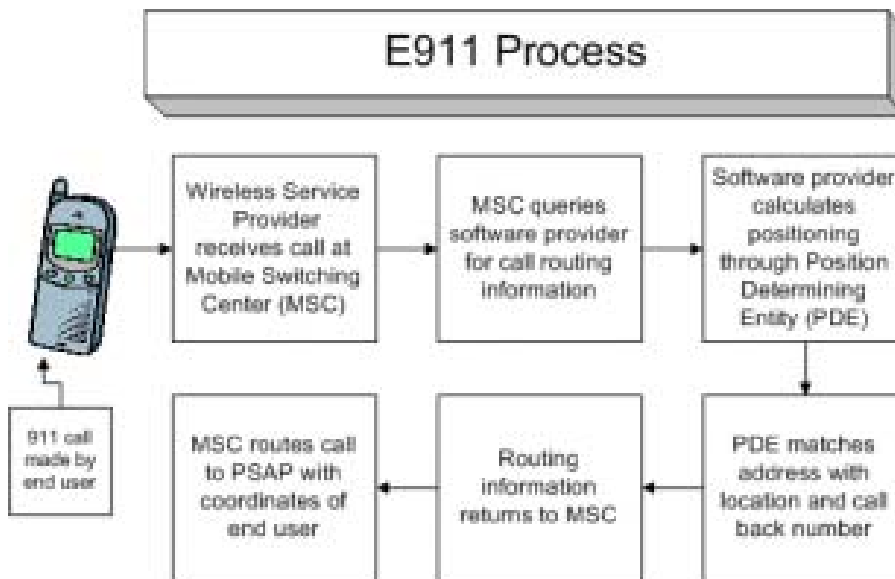
- **Global Positioning Systems (GPS)**
- **Enhanced Observed Time Difference (E-OTD)**

Both require system and hardware upgrades, but are very different when it comes to cost and timing considerations.

Enabling GPS systems in cell phones is a costly alternative for the wireless industry and requires intensive capital expenditures. Although GPS systems are precise in determining location, the cost and time to upgrade the systems is prohibitive. The alternative method, statistical modeling, presents a feasible alternative that meets the FCC requirements surrounding E911. Using the less costly E-OTD alternative, wireless carriers can meet their benchmarking requirements faster while spending less money.

For the wireless industry, the FCC passed a mandate called E911 in 1996 that required all wireless service operators to provide the user's location following a 911 call. It is required that the caller's location be pinpointed to the PSAP within 100 meters 67% of the time. The FCC has mandated that wireless carriers must achieve full compliance with E911 requirements by February 1, 2006. In order to comply with these standards, wireless carriers have set compliance milestones to meet on a quarterly basis. The carriers must file quarterly reports on February 1, May 1, August 1, and November 1 of each year with the Chief of the Wireless Telecommunications Bureau. These reports are intended to provide specific and verifiable information to monitor E911 progress and determine compliance with each of the benchmarks outlined.

According to the FCC, a wireless carrier needs to demonstrate that it has complied with the required fractional percentage figures. For example, a carrier's benchmark can be used to demonstrate that 50% of new handsets are activated with Automatic Location Identification (ALI) capability by December 31, 2003. The carrier then needs to demonstrate that during the course of the following year, that 50% of new handsets were indeed activated with ALI. If the carrier misses the benchmark, they are then subject to stiff penalties.



The Importance of The Right Talent in an E911 Compliance Program

Talent is the key element of any successful company. As the telecommunications industry continues to evolve, companies must be able to flex the size and make-up of their workforce to remain competitive in the rapidly changing global marketplace.

Selecting a staffing partner that will attract, evaluate and quickly deliver high-impact telecommunications professionals can enable you to:

- **Focus on E911** compliance goals while reducing your permanent workforce
- **Ramp up** the compliance workforce as necessary
- **Acquire talent** for a specific project in a short time frame
- **Reduce costs** associated with recruiting and screening talent
- **Employ** Independent Contractors as part of your project team
- **Transition** professionals to the staffing partner's payroll
- **Enable** web-based options to help manage your workforce

As a current provider of talent to more than 30 telecommunications customers, including eight of the leading carriers in the U.S., Yoh Telecom understands the industry's needs, business issues, and processes. We have developed a customized recruitment and placement process tailored to E911, and we comprehend the compliance issues facing this initiative. As a result of our strong working relationship with the industry, we developed an alternative approach by repositioning our offering as a project solutions provider.

In addition to providing the industry experts necessary to obtain E911 compliance, we can supply any necessary equipment to employees, including lap tops, cell phones, etc. We can also tailor a bonus program as an incentive to meet project deadlines and customize compensation packages to meet our customers' needs.

Key Talent Needed For Successful E911 Compliance

Following is representative sampling of some of the talent needed for the E911 compliance effort:

- **Project Manager** - Seasoned project manager with E911 and 911 experience
- **Technicians** - Circuit integration background with router and switch configuration experience
- **Software Engineers** - Technical expertise for integrated systems applications that support installation, configuration and load testing. Assists with E-OTD design and configuration.
- **Network Circuit Specialist** - Coordinates circuit orders, disconnects and circuit changes.
- **Telecommunications Analysts** - Provides support in ACD design, programming and developing strategic solutions
- **Test Engineers** - Performs QA testing during development and postdevelopment phases of E911 systems and networks
- **PBX Engineers** - Responsible for switch upgrades and assisting in the overall management and maintenance of the Private Branch Exchange (PBX)
- **Network Engineers** - Experience in trouble shooting, compiling traffic reports, network and switch monitoring, and extensive knowledge of networks, frame relay and voice compression.
- **Dispatchers** - Homeland Security has an increased need for a robust E911 system which will require additional Dispatchers to service state and county offices.

Value-Added Services

As payrollees and independent contractors look to play a vital role in the compliance workforce effort, Yoh Telecom has the experience and resources to deliver a comprehensive workforce solution utilizing these types of talent.

As more and more companies engage the services of payrollees and 1099 independent contractors, increased scrutiny is being placed on companies to ensure that they are used effectively and in accordance with employment laws. Following is a description of the value-added services that Yoh provides:

- **Independent Contractor/1099 Compliance Management** – Independent contractor management services allow you to avoid the hassles of hiring, managing and paying independent contractors. This will reduce your administrative burden while helping you navigate complex IRS and state laws governing the IC environment.
- **Payroll Services** – The use of payroll services has increased as leading companies look to engage the best available talent in the most cost-effective manner. Former independent contractors, returning former employees and other contract employees can be transitioned to Yoh Telecom's payroll.
- **Yoh Exchange** – Yoh Telecom has pioneered the development of staffing solutions, relying on extensive experience and a commitment to the use of technology, including web-based tools, to provide real-time services to our customers. Through our innovative Yoh Exchange, we deliver the power of the Internet to your staffing environment.

About Yoh

Yoh is one of the largest providers of talent and outsourcing services to customers in the United States. With over 374 million USD in total sales, Yoh operates from more than 75 locations and provides long- and short-term temporary and direct placement of technology and professional personnel, as well as managed staffing services, for the information technology, scientific, engineering, health care and telecommunications communities. For more information, visit yoh.com. Yoh is part of Yoh Services LLC, a Day & Zimmermann Company.

About Day & Zimmermann

Day & Zimmermann accelerates customer success by delivering reliable managed services. Operating from more than 150 worldwide locations with 2.2 billion USD in revenues, the Day & Zimmermann family of companies employs 24,000 professionals and is currently ranked in the top one percent of private companies in America by *Forbes*. Founded in 1901 and headquartered in Philadelphia, PA, Day & Zimmermann is a former winner of the U.S. National Family Business of the Year award. For more information, visit dayzim.com.

