

Arrival Communications Gains CALEA Compliance, Saves Over \$520,000 with Verisign® NetDiscovery™ Service

IN BRIEF

- **Goal:** For the telecommunications carrier Arrival Communications to comply with all the provisions of the Communications Assistance for Law Enforcement Act (CALEA) in assisting law enforcement agencies with their critical investigative tool, without increasing capital expenses, operational staffing, and other costs.
- **Solution:** Verisign NetDiscovery Service
- **Results:** Arrival is guaranteed compliance with the provisions of CALEA, and so is not liable for potential \$10,000-per-day fines that can be imposed for non-compliance. An immediate payback period, and a five-year net benefit of \$522,000, driven by staff savings and elimination of equipment and testing costs. Verisign also uncovered and fixed a non-compliant switch – and if the switch had not been made compliant, Arrival could have faced potentially over \$1 million in penalties.

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Complying with CALEA (Communications Assistance for Law Enforcement Act) can present enormous costs and potential liability for telecommunications carriers. CALEA is a mandate established by the FCC that requires that carriers allow law enforcement agencies (LEAs) to conduct electronic surveillance and that carriers deliver call identifying information and content to LEAs for specified subscribers. Carriers that do not comply with CALEA requirements may face stiff fines for each day they are out of compliance for each LEA request. Compliance with the act presents many technological, legal, and operational hurdles – and when done as an in-house solution (self-deployed by carriers) can lead to extensive capital and operational costs, and extensive legal liabilities. Arrival Communications chose the Verisign NetDiscovery Service to outsource compliance with CALEA, because NetDiscovery Service offered guaranteed compliance at low cost, required no incremental investment in staff, training, security clearances, developing security policies and procedures, legal/regulatory liaison, or hardware, and took the burden for compliance out of the carrier's hands. The solution has yielded \$522,000 in benefits, and Arrival Communications faces no legal liability with regards to CALEA – and without the service, a non-compliant switch could have potentially led to over \$1 million in non-compliance penalties.

NOTE: This case study was authored by the Case Study Forum. The Case Study Forum is dedicated to writing and publishing case studies for the IT community. The financial analysis that appears in this case study was performed by ITCentrix, the premier software and services company for measuring and managing the business value of information technology investments. Results shown are not a guarantee of equivalent performance.

Benefits

Objective	Benefits Achieved
Guaranteed current and ongoing compliance with CALEA	The Verisign NetDiscovery Service has continuous contact with the FBI and other law enforcement agencies (LEAs), and guarantees full compliance with the law – and Arrival Communications is not liable for the up-to-\$10,000 per day fines that can be imposed for non-compliance. Verisign's fixing of a non-compliant switch ensured that Arrival did not face potentially \$1 million in non-compliance penalties.
Simple implementation	Instead of being required to maintain and support multiple connections from every switch to every LEA, Arrival Communications has only a single connection to Verisign, which in turn connects to LEA facilities.
No increase in staffing and security clearance costs	Arrival Communications is able to comply with CALEA without having to add staff costs, and does not have to pay for employee security clearances, staff training, developing and maintaining security policies and procedures, for a total savings of \$522,000.
More effective use of company resources	Arrival Communications employees frequently have to perform more than a single function. By offloading CALEA compliance, staff can be more effectively utilized.
Elimination of hardware and security costs	Because CALEA compliance is outsourced, Arrival Communications does not have to buy and test specialized hardware for their switch or buy excess circuit hardware in their switch to meet FBI's intercept capacity requirements, or buy any special secure storage containers to secure sensitive documents.

“We’re a small company, and people have to wear many hats here. It could cost one hundred thousand dollars to provide security clearance for a single employee, and we don’t have the resources to be able to do that.”

KIDD FILBY
DIRECTOR OF ENGINEERING AND
PLANNING
ARRIVAL COMMUNICATIONS

About Arrival Communications

Arrival Communications, a full-service telephone company and Internet Service Provider, provides data and voice services to underserved cities throughout California, primarily concentrated in the Central Valley and Central Coastal areas. Based in Bakersfield, the firm offers a full suite of business products to small to medium-sized companies, including SDSL and T1 broadband Internet access in addition to local, Centrex, long-distance, toll free, and voice mail services.

The company has four sales offices, serves 22 cities, and bills approximately \$1.3 million per month. It has over 80 employees, and adds approximately 5,000 new lines for businesses per year. Founded in 1991, the privately held company believes that by focusing only on business accounts and maintaining a local presence, it can deliver greater personalized service and more billing flexibility than can traditional telephone companies.

The Challenge: Assure Complete CALEA Compliance at a Low Cost

“The costs of non-compliance with CALEA would have been devastating to our business plan, and the resulting bad press would cause serious problems as well.”

SCOTT GARRISON
VICE PRESIDENT OF BUSINESS
DEVELOPMENT
ARRIVAL COMMUNICATIONS

CALEA was passed in 1994 as a response to new telecommunications technologies that have made it increasingly difficult for law enforcement agencies to conduct authorized electronic surveillance. The federal law requires that telecommunications carriers ensure that their equipment, facilities, and services are able to comply with authorized electronic surveillance capabilities and interfaces. It specifies that telecommunications carriers access and deliver call content and call-identifying information for a specified subscriber to law enforcement agencies.

CALEA compliance, however, can come at a very high cost, especially for carriers the size of Arrival Communications, which does not have the sizable staff and capital resources. The legal and technical hurdles to compliance are high, and the consequences of non-compliance severe: Carriers that do not comply with CALEA requirements may face fines of up to \$10,000 per day.

The Difficulties Arrival Communications Faced in Complying with CALEA

In complying with CALEA, Arrival Communications faced a host of challenges:

If Arrival had not proactively outsourced the CALEA compliance to VeriSign and waited until a request for interception was received, it would have faced potentially over \$1 million in penalties for non-compliance.

- **High staffing costs.** Because the Arrival Communications staff is small, it would be difficult to afford the 24-hours-per-day, seven-day-per-week staffing resources needed to comply with the act. It would have required at least two, and possibly four or five employees to be assigned to the task, who are continuously trained in handling, processing and supporting various types of assistance requests in response to subpoenas, legal orders, and other authorization letters. Technical and network operations expertise would be required to provide support for network connectivity or other technical difficulties.
- **High security clearance costs.** Employees assigned to comply with the law may have required security clearances, and Arrival Communications would have to bear those costs, which can run up to \$100,000 per employee, say company executives.

Arrival Communications chose Verisign's NetDiscovery Service because it offers guaranteed CALEA compliance at a low monthly cost, done via a single connection to Verisign, and without Arrival Communications having to devote any staff or hardware resources to compliance.

- **High hardware costs.** To comply with FBI's intercept capacity requirements, each carrier has to ensure that their equipment is configured with interception hardware to support the necessary capacity requirements for its serving area. Hardware costs are high, because separate physical connections need to be made to each individual law enforcement agency (LEA) that requests surveillance. It is possible that five or more LEAs – such as federal agencies, state police, local police and others – may request electronic surveillance. And the law requires that telecommunications carriers support delivery of call-identifying information which requires a data connection to each LEA, and delivery of call content, which could require two or more circuits per intercept.
- **Safe storage and record retention requirements.** CALEA requires that documents about requests for surveillance and compliance with surveillance be kept in a special secure safe, and that the safe be located in a special secure area. This would have required that Arrival Communications bear the cost of the safe and associated secure office space. The law also requires retention of legal orders for number of years, adding an additional cost for potential off-site secure storage facilities.
- **Difficulties in legal administration.** The law has complex legal requirements, and Arrival Communications would have to have at least one or more people on staff who were trained in its requirements. Staff would have to be versed in knowing when a LEA surveillance request was valid and required compliance, and when a request was not valid, and so should not be complied with. Each request would have to reviewed based on the jurisdiction of the requesting LEA, adding additional legal burden for maintaining expertise with all the federal, state, and local jurisdictional nuisances.
- **High costs of non-compliance** The consequences for non-compliance can be severe: Fines of up to \$10,000 per day for each request. For a company the size of Arrival Communications, the resulting economic loss and potentially the negative publicity could be severely damaging.

Arrival Communications Chooses Verisign's NetDiscovery Service

Arrival had only two choices for complying with CALEA: Either hire the staff, build out a Security Compliance group, and add the hardware and do it in-house; or outsource compliance to Verisign's NetDiscovery Service.

“We already used Verisign for SS7 connectivity, and we were very pleased with the company and how it works. So it was an easy choice for us to enlist them to help us with CALEA compliance.”

KIDD FILBY
DIRECTOR OF ENGINEERING AND PLANNING
ARRIVAL COMMUNICATIONS

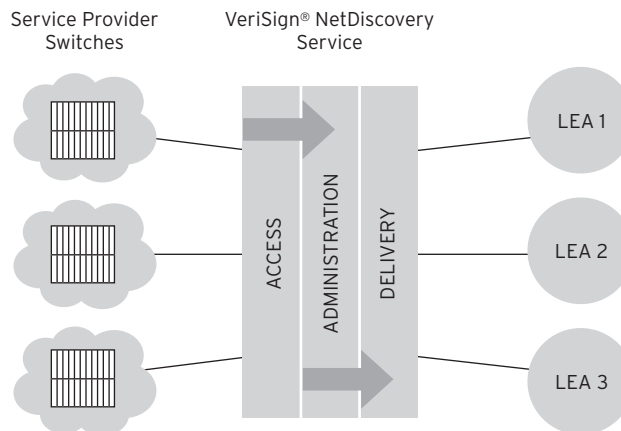
Arrival Communications decided it would use the NetDiscovery Service because it did not have the financial resources or the necessary expertise to comply with CALEA in-house. The turnkey solution allows Arrival Communications to make a single connection to Verisign, and then have Verisign handle all of the technical, operational, and legal aspects of CALEA compliance. NetDiscovery Service guarantees that Arrival Communications will comply with CALEA on an ongoing basis, and so Arrival Communications will not have to bear any costs of non-compliance. VeriSign NetDiscovery Service was an ideal option, given the sensitivity of CALEA and VeriSign’s reputation in providing trusted/secure infrastructure solutions for telecom and Internet Service Providers. Arrival Communications already had a relationship with Verisign, which provided it with Signaling System 7 (SS7) network services, and based on its positive experiences, trusted Verisign to deliver on its promises.

Because NetDiscovery requires only a single connection to Verisign, implementation went smoothly. During the service implementation, the Verisign NetDiscovery team found that the switch used by Arrival Communications was not fully compliant with the provisions of CALEA – something that Arrival Communications would not have had the expertise to discover on its own, and which could have ultimately led to fines for non-compliance. Verisign discovered that the problem was caused by CALEA-specific software code on the switch, and then worked with the manufacturer to ensure that changes were made so that the switch complied with the law. The switch manufacturer took more than 90 days to troubleshoot and resolve the problem, and during that time the VeriSign NetDiscovery team provided significant technical support to ensure that full compliance was met. If Arrival had not proactively outsourced the CALEA compliance to VeriSign and waited until a request for interception was received, it would have faced potentially over \$1 million in penalties for non-compliance.

An Inside Look at Verisign’s NetDiscovery Service

As shown in Figure 1, the NetDiscovery Service manages the call content and call data intercept process; administers and provisions the intercept data event; converts call content and call data into a required legal intercept standard format and delivers call data and call content directly to the law enforcement monitoring facilities via various delivery interface options. VeriSign offers the NetDiscovery Service for essentially all types of circuit-switched voice and packet data networks. The service is available for service providers in wireline, wireless, cable, and ISPs markets offering voice, VoIP, wireless data, broadband data, or internet services.

FIGURE 1: HOW VERISIGN'S NETDISCOVERY SERVICE WORKS



The Bottom Line for Arrival Communications

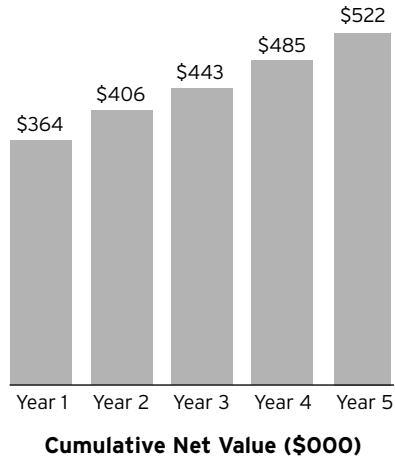
Arrival Communication's bottom line for the project: A cumulative five-year net benefit of \$522,000 and an immediate payback period. More importantly, Arrival has guaranteed continuous compliance with the provisions of CALEA, and is not liable for potential \$10,000-per-day fines – and if Verisign had not uncovered and fixed a non-compliant switch, Arrival Communications could have faced potentially over \$1 million in non-compliance penalties.

A detailed analysis of the implementation shows that Arrival Communications will gain a cumulative five-year net benefit of \$522,000 from the project. It has an immediate payback period, and in essence an infinite ROI, because the cost of achieving the benefits is essentially \$0. When the savings is spread out among all of the voice lines provided by Arrival Communications, it comes out to a savings of \$2.81 per line.

The benefit of \$522,000 is made up of staff savings, because Arrival Communications did not have to hire extra employees or pay for security clearances and training; savings in equipment and testing; and the elimination of any risks associated with not complying with the law.

Perhaps most important is that Arrival Communications is guaranteed continuous CALEA compliance, and so bears no risks associated with the law, vital for a company of its size, which could not afford to pay potentially sizable fines.

The following chart provides a detailed, five-year analysis.



BUSINESS ANALYSIS OF THE SOLUTION

Project Summary

Cumulative Five Year Net Benefit	\$522,000
Payback Period (months)	0
Reduction in Cost/Line of CALEA Compliance	\$2.81

Original Cost of CALEA Compliance (\$000)

	Startup	Year 1	Year 2	Year 3	Year 4	Year 5
Equipment and Installation Costs	\$340	\$0	\$0	\$0	\$0	\$0
Annual Maintenance		\$34	\$34	\$34	\$34	\$34
Testing	\$5	\$0	\$5	\$0	\$5	\$0
Security Space & Equipment Cost		\$14	\$12	\$12	\$12	\$12
Total Costs	\$345	\$48	\$51	\$46	\$51	\$46

Cost of CALEA Compliance with Verisign (\$000)

	Startup	Year 1	Year 2	Year 3	Year 4	Year 5
Equipment & Testing Costs	\$10	\$0	\$0	\$0	\$0	\$0
Verisign Costs	\$10	\$9	\$9	\$9	\$9	\$9
Total Costs	\$20	\$9	\$9	\$9	\$9	\$9

Financial Analysis (\$000)

	Startup	Year 1	Year 2	Year 3	Year 4	Year 5
Net Value	\$325	\$39	\$42	\$37	\$42	\$37
Cumulative Value	\$325	\$364	\$406	\$443	\$485	\$522
Net Present Value	\$477					
Annual ROI*	Infinite					
IRR*	Infinite					
Payback Period (months)	0					

Key Performance Indicators (KPIs)

Reduction in Cost/Line of CALEA Compliance	\$2.81
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*Explanation of "Infinite": The ROI and IRR are infinite because the cost of achieving the benefits is essentially \$0.

Arrival Communications Looks to the Future

Arrival Communications can now use its additional staff resources to continue to grow its business, rather than devoting resources to complying with CALEA. Arrival has been growing at approximately 15 percent per year, and freed from the constraints that an in-house CALEA compliance might have imposed, it is looking to the future and even greater growth.

"We simply didn't have the resources, authority or the expertise to comply with CALEA internally. Verisign tried even harder than we did to make sure that it worked. We're grateful that there's a company like Verisign that provides this service for us."

SCOTT GARRISON
VICE PRESIDENT OF BUSINESS
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