

TeleCommunication Systems, Inc.
Tariff No. 1
Washington Tariff

Original Sheet No. 1

WASHINGTON TELECOMMUNICATIONS
TARIFF
FOR
TELECOMMUNICATION SYSTEMS, INC.

275 West Street, Suite 200
Annapolis, MD 21401

This tariff contains the descriptions, regulations, and rates applicable to the furnishing of E9-1-1 services by TeleCommunication Systems, Inc. (TSYS). This tariff is on file with the Washington Utilities and Transportation Commission and copies may be inspected during normal business hours at the principal place of business of TSYS, at the above listed address.

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CHECK SHEET

The TITLE page and pages 1-19 inclusive of the Tariff are effective as of the date shown on an individual page. Original and revised pages, as named below, comprise all changes from the original Tariff in effect on the date indicated

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TARIFF FORMAT

Page Numbering. Page numbers appear in the upper right hand corner of the page. Pages are numbered sequentially. From time to time new pages may be added to the Tariff. When a new page is added between existing pages a decimal is added to the preceding page number. For example, a new page added between Pages 3 and 4 would be numbered 3.1.

Explanation of Symbols. When changes are made in any Tariff page, a revised page will be issued replacing the affected Tariff page. Changes will be identified on the revised page(s) in the right hand margin on each line changed through the use of the following symbols:

- (C) To signify a changed condition or regulation
- (D) To signify a discontinued rate, service, regulation, or condition
- (I) To signify a rate increase
- (K) To signify material transferred to another sheet in the tariff
- (M) To signify material transferred from another sheet in the tariff
- (N) To signify new rate, service, regulation, condition, or sheet
- (O) To signify discretionary (no change)
- (R) To signify a rate reduction
- (T) To signify a change in text for clarification

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I. DEFINITIONS

9-1-1

A three-digit telephone number to facilitate the reporting of an emergency requiring response by a public safety answering point (PSAP).

Automatic Location Information (ALI)

The automatic display at the PSAP of the caller's telephone number, the address/location of the telephone and supplementary emergency services information of the location from which a call originates.

Automatic Location Identification (ALI) Database Management System (DBMS)

An ALI database management system, which is a secure file transfer protocol (SFTP) and web-accessible application that supports authorized users in provisioning and maintaining the accuracy of the records in the ALI Database.

Automatic Location Identification (ALI) to Automatic Location Identification (ALI) data transfer

A feature by which Automatic Location Identification (ALI) data is transferred to another provider's Automatic Location Identification (ALI) system.

Automatic Location Identification (ALI) Public Safety Answering Point (PSAP) port

A port on the ALI database system used to deliver Automatic Number Identification (ANI) to the PSAP.

Automatic Number Identification (ANI)

Telephone number associated with the access line from which a call originates.

Communications Services Providers (CSPs)

This term is used generically to refer to any and all providers of telecommunications services that may be used to generate a 9-1-1 call, and who would interconnect in any fashion to the 9-1-1 network. CSPs include wireline ILECs and CLECs, Wireless Service Providers, VoIP Service Providers, operators of large PBXs and any other entity providing telecommunications services.

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DEFINITIONS (continued)

Company

TeleCommunication Systems, Inc., a Maryland corporation.

Customer

A municipality, state or local governmental unit, or an authorized agent of one or more of these units to whom authority has been lawfully delegated. The Customer must be legally authorized to subscribe to ESInet services and have a lawful, public safety responsibility to respond to emergency calls.

PS/ALI Customer

A private or governmental entity seeking Enhanced 9-1-1 services for telephone stations behind one or more private switches.

Emergency Services Internet Protocol 9-1-1 Network (ESInet)

An ESInet is a managed IP network that is used for emergency services communications, and which can be shared by all public safety agencies. It provides the IP transport infrastructure upon which independent application platforms and core services can be deployed, including, but not restricted to, those necessary for providing NG9-1-1 services. ESInets may be constructed from a mix of dedicated and shared facilities. ESInets may be interconnected at local, regional, state, federal, national, and international levels to form an IP-based inter-network (network of networks). The term ESInet designates the network, not the services that ride on the network.

Emergency Service Number (ESN)

A three to five digit number that represents one or more Emergency Service Zones.

Enhanced 9-1-1 (E9-1-1)

A telephone system which includes network switching, database, and Public Safety Answering Point (PSAP) premise elements capable of providing automatic location identification (ALI) data, selective routing, selective transfer, fixed transfer, and a call back number.

Enhanced 9-1-1 (E9-1-1) Control Office

The Central Office that provides the tandem switching of 9-1-1 calls. It controls delivery of the voice call with ANI to the PSAP and provides selective routing, speed calling, selective transfer, fixed transfer, and certain maintenance functions for each PSAP. Also known as 9-1-1 Selective Routing Tandem or Selective Router.

Graphical User Interface (GUI)

The Company's web-based tool, which authorized users can utilize to manage records in the ALI DBMS.

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DEFINITIONS (continued)

Master Street Address Guide (MSAG)

The document or computer file that lists the standard street names, address ranges, political community designations, and routing codes (ESNs).

Multi-Line Telephone System (MLTS)

A system comprised of common control unit(s), telephone sets, control hardware and software and adjunct systems used to support telephone and other capabilities, as more particularly defined in the National Emergency Number Association (NENA) Master Glossary of 9-1-1 Terminology. For greater certainty, this includes network and premises-based systems (e.g., Centrex, VoIP, as well as PBX, Hybrid, and Key Telephone Systems (“Hybrid” and “Key Telephone Systems” as defined in the NENA Master Glossary of 9-1-1 Terminology) and includes, but is not limited to, systems owned or leased by governmental agencies and non-profit entities, as well as for profit businesses.

NENA Master Glossary of 9-1-1 Terminology

The NENA Master Glossary of 9-1-1 Terminology may be updated and otherwise made available by NENA from time to time. As of the Effective Date of this tariff, the NENA Master Glossary is available at the following website:

<https://www.nena.org/page/Glossary?&hhsearchterms=%22nena+and+master+and+glossary+and+9-1-1+and+terminology%22>

Next Generation 9-1-1 (NG9-1-1)

NG9-1-1 is an IP-based system comprised of managed IP-based networks (ESInets), functional elements (applications), and databases that replicate traditional E9-1-1 features and functions and provide additional capabilities. NG9-1-1 is designed to provide access to emergency services from all connected communications sources and provide multimedia data capabilities for PSAPs and other emergency service organizations.

Next Generation 9-1-1 (NG9-1-1) Database Management System (DBMS)

NG9-1-1 DBMS is Company’s next-generation solution that provides the function of legacy ALI DBMS in a transitional Next Generation 9-1-1 (NG9-1-1) system.

Numbering Plan Area (NPA)

An established three-digit area code for a particular calling area, also known as the Area Code.

NXX

The three digits of a phone number immediately following the Area Code or NPA, which generally identified the central office switching location within a given area code.

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DEFINITIONS (continued)

Private Branch Exchange (PBX)

Customer premises equipment installed on a user's premises that functions as a switch, permitting the user to receive incoming calls, to dial any other telephone on the premises, to access a tie trunk leading to another PBX or to access an outside trunk to the public switched telephone network.

Private Switch/Automatic Location Information

A service option which provides Enhanced 9-1-1 features for telephone stations behind private switches (*e.g.* PBXs).

Private Switch/Automatic Location Information (PS/ALI) Database Management System (DBMS) Provider

An entity offering fee-based PS/ALI DBMS service directly to the public, or such classes of users to be effectively available directly to the public, regardless of the facilities used. A PS/ALI DBMS Provider's service enables the moves, adds, changes, and deletes (MACD) for entities requiring PS/ALI.

Private Switch/Automatic Location Information (PS/ALI) Database Management System (DBMS) Customer

The PS/ALI DBMS Customer may be a Private Switch or MLTS owner/operator or a Centrex/CENTRON customer who desires or is required to utilize a PS/ALI DBMS for the purpose of managing station location information in the ALI database.

Public Safety Answering Point (PSAP)

An answering location for 9-1-1 calls originating in a given area. A PSAP may be designated as Primary or Secondary, which refers to the order in which calls are directed for answering. Primary PSAPs respond first; Secondary PSAPs receive calls on a transfer basis only and generally serve as a centralized answering location for a particular type of emergency call. PSAPs are staffed by employees of service agencies such as police, fire, or emergency medical or by employees of a common bureau serving a group of such entities.

Selective Routing

A form of call routing that may or may not be applicable to Next Generation 9-1-1 that routes an E9-1-1 call from a central office to the designated primary PSAP based upon the identified number of the calling party.

Valid Location

An MSAG address, United States Postal Service (USPS) address, latitude/longitude, or any other PSAP-approved location description.

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DEFINITIONS (continued)

Voice over Internet Protocol (VoIP)

A service that: (1) enables real-time, two-way voice communications; (2) requires a broadband connection from the user's location; (3) requires Internet-protocol-compatible customer premises equipment (CPE); and (4) permits users generally to receive calls that originate on the public switched telephone network and to terminate calls to the public switched telephone network.”

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II. RULES AND REGULATIONS

1. Description of Service

a. ALI DBMS Service

NG9-1-1 ALI DBMS Service provides the necessary functionality for authorized users to manage ALI data within their control while still having the data professionally managed by TSYS' Data Integrity Group (DIG). The DIG uses the NG9-1-1 ALI Database Management System (DBMS) to assist in managing the Master Street Address Guide (MSAG) and ALI information with all authorized users. The NG9-1-1 ALI includes a web-based tool which includes searching capabilities that allow "wildcard" searches and USPS equivalents.

b. PS/ALI DBMS Service

TSYS's recommended PS/ALI DBMS Service provider in the State of Washington is AironeSG. AironeSG's PS/ALI DBMS Service provides the means for MLTS/PBX enterprise customers to effectively manage their ALI data in the NG9-1-1 ALI DBMS. AironeSG's PS-ALI Service includes a web-based tool for account activation, initial records migration, data screening, MSAG address validation, and notifications for records submitted into the NG9-1-1 ALI.

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RULES AND REGULATIONS (Continued)

2. Applications for Service

a. ALI DBMS Service

All applications for NG9-1-1 ALI DBMS Service shall be made in writing. Applications for NG9-1-1 ALI DBMS Service must be executed in writing by each Customer, or its agent. If application for service is made by an agent, the Company must be provided in writing with satisfactory proof of appointment of the agent by the Customer.

b. PS/ALI DBMS Service

All applications for the PS/ALI DBMS Service provided by TSYS's recommended provider shall be made to AironeSG in writing. Applications for AironeSG's PS/ALI DBMS Service must be executed in writing by each PS/ALI Customer.

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RULES AND REGULATIONS (Continued)

3. Individual Case Basis (ICB) Rates and Charges.

Certain rates and charges set forth in this Tariff are denoted as "ICB." Individual Case Basis (ICB) rates and charges may be established by any of the following methods:

- i. By being set forth in this Tariff; or
- ii. By written instrument signed on behalf of both the Company and the Customer.

Where an ICB rate applies and has been established by a written instrument signed on behalf of both the Company and the Customer, and the written instrument does not specify a mechanism for changing the rate prior to termination of the written instrument, the ICB rate may be changed by the Company upon sixty (60) days prior written notice to the Customer, unless such written instrument expressly includes alternative requirements.

4. Termination or Suspension of Service

Customers may cancel service in writing, unless specified differently within an ICB. The Company shall hold the Customer responsible for payment of all charges, including fixed fees, surcharges, etc., that accrue through the end of the Customer's billing cycle, unless otherwise noted in the description of the affected service.

5. Conditions

- a. The conditions set forth in this Tariff shall be consistent with any standard rules that may be adopted by the Emergency Management Division of the Washington Military Department and the Washington Utilities and Transportation Commission. The Company reserves the right to revise rates if a change is caused by the rules or standards that affects the cost of providing service. The Customer must furnish the Company its agreement to the following terms and conditions.

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III. SERVICES OFFERINGS AND FEATURES

1. NG9-1-1 ALI DBMS Service Features

NG9-1-1 ALI DBMS capabilities allow:

- i. Search of the ALI database for a telephone number record;
- ii. On-demand downloads of ALI or MSAG data;
- iii. Authorized users to search for ALI or MSAG data records;
- iv. ALI discrepancy management and MSAG change management via web-based workflow processes;
- v. Search for ALI data that matches NPA/NXX; and
- vi. Search the MSAG database for MSAG data records that match a street address.

a. Database Standards Compliance

The Company acts as the facilitator with the addressing authority in the maintenance of the MSAG utilizing NENA recommended standards.

b. Subscriber Record Management

The collection of service order records from Originating Service Providers (OSPs), validation of those records against the MSAG, and storage of the records for the generating of the ALI database.

c. ALI Database Updates

After processing and validating subscriber record updates, the Company processes ALI records to enable call routing and for retrieval and display by the PSAP during NG9-1-1 calls. Service Order Input (SOI) files, sent for processing in bulk, can contain a maximum of 500,000 records. Results are available within 24 hours from time of SOI submission.

d. ANI/ALI Discrepancy Resolution

An ANI/ALI discrepancy occurs when an ALI record being delivered to a PSAP does not match the information of the caller. The Company will investigate ANI/ALI discrepancy reports and refer each discrepancy to the respective OSP for resolution.

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SERVICE OFFERINGS AND FEATURES (continued)

e. Misroute Resolution

An ANI/ALI misroute occurs when a 9-1-1 call is delivered to the incorrect PSAP. The Company investigates ANI/ALI misroute reports and refers each misroute report to the OSP for resolution.

f. No Record Found (NRF) Resolution

An NRF occurs when the ANI provided does not exist in the ALI database and/or when the NRF is displayed at the PSAP. The Company will resolve or refer each NRF to the respective OSP for resolution. Resolution is performed within one (1) Business Day from the time of the report's submission. At their discretion, PSAPs may escalate directly to the NOC for discrepancies deemed to have a significant impact.

g. ALI Delivery

ALI Delivery provides location information to a PSAP during a 9-1-1 call. Legacy PSAP Gateway (LPG) and serial converter for ALI will be provided, if needed at the PSAP.

h. Data Support of Wireless and VoIP 9-1-1 Call Processing

The Company's DBMS support 9-1-1 call processing for both wireless and VoIP. This includes the E2 interface used by wireless service providers to communicate 9-1-1 caller location information to the ALI database.

i. ALI Metrics Reporting

The Company provides Customer with access to NENA 02-011 standard reports that provide details on data transactions, the number of records processed, and the number of errors.

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2. PS/ALI Service Features

The capabilities of the PS/ALI Service offered by AironeSG include:

- i. Initial account activation;
- ii. Initial migration of existing ALI data;
- iii. Analysis of submitted ALI upload files for errors;
- iv. PS/ALI Customer assistance with ALI data file errors;
- v. Loading data to the NG9-1-1 ALI DBMS, including MSAG validation;
- vi. Confirmation of all customer ALI database records provisioned on customers behalf; and
- vii. Access to a web-based PS/ALI file upload portal.

a. Customer ALI Data Migration

AironeSG will perform an initial migration of PS/ALI Customer's PS/ALI data into the NG9-1-1 ALI DBMS to replace the Data Provider (Company ID 2), as defined in the "NENA 2.1 Format for Data Exchange" standard, with the AOSG NENA CID.

b. Processing Updates

AironeSG will provide PS/ALI Customers with ongoing support for processing ALI file updates, as well as updating the NG9-1-1 ALI DBMS in a complete and timely manner. AironeSG's will automatically notify customers

c. Customer ALI Upload File Processing, Error Detection and Resolution of Data Errors

AironeSG will provide PS/ALI Customer with pre-formatted Excel spreadsheets to import their data and will review uploaded files to ensure proper format creation and script automation for uploading PS/ALI Customer data to the AironeSG PS-ALI service. As part of this process, AironeSG will screen PS/ALI Customer's submitted files for errors and omissions and will notify PS/ALI Customer of any initial screening errors. AironeSG will also work with PS/ALI Customer to resolve any data errors.

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d. Uploading Data and Ensuring Accuracy

AironeSG will upload PS/ALI Customer data into the NG9-1-1 ALI DBMS, as well as validate such data against the MSAG for accuracy. Any additional errors in record validation will be flagged and the PS/ALI Customer will be notified promptly. AironeSG service personnel will assist the PS/ALI Customer in getting their data corrected and loaded into the NG9-1-1 ALI DBMS.

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IV. RATES AND CHARGES

| Feature | Non-Recurring Fee | Recurring Fee |
|---|--------------------------|----------------------|
| NG9-1-1 ALI DBMS | ICB | ICB |
| Customer-Specific NG9-1-1 ALI DBMS | ICB | ICB |
| NG9-1-1 ALI DBMS Initial Load | ICB | ICB |
| PS/ALI DBMS | ICB | ICB |

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