

location information services CLLI™

Consistently and accurately defining a location is important when communicating between individuals, departments and companies. Ordering, provisioning, interconnection and servicing are key areas requiring the accurate description of a location, often not satisfied with GPS coordinates or street addresses. Frequently, companies believe they can make do with their own representation of a location only to find their management of locations has become an expensive, complex affair, with numerous entries for the same place, different interpretations of a location and either not enough information, or too many versions of the same information, to fulfill a task.

When interconnecting between service providers, a service provider's point-of-interface (POI) needs to be communicated in a clear, unambiguous form. With a single street having multiple names, this can be a challenge. Without a uniform approach to location identification, automating the process of interconnection or communicating location is near impossible, forcing stakeholders to manually identify and quality check location information.

Location definition and clarity is often underestimated, with those entering the location information not appreciating the needs of the consumers of that information. Importantly, stricter financial rules are requiring service providers to identify the location of their assets; this is not easy when the location CLLI Codes information is represented by a GPS location of a 17 floor building or via a full postal address, with its associated inconsistencies around road names and lack of detail around what is at that location. Lack of discipline in managing the location information leads to significant overheads and requires additional layers of quality control to avoid mistakes.

Simple differences such naming Main Street as Main St. or where a single location has multiple names can cost a service provider thousands in errors and correcting those errors.

Managing location information is more than just describing an address. The type of location, ensuring it is uniquely described internally and between other companies, the use of that location and the equipment available there are used for tracking and running a complex business. Through the discipline and experience of iconectiv® TruOps Common Language® the management of the locations becomes efficient, allowing the service provider to concentrate on delivering services to their customers.

Defining a location is important

Not satisfied with GPS coordinates

Numerous entries for the same place

A single street can have multiple names

Automate the communication of locations

Those entering location information may not appreciate the needs of the consumers of that information

Stricter financial rules are requiring Service Providers to identify the location of their assets

Managing a location is more than just describing an address

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CLLI Codes

The CLLI code is an 11 character, globally unique code that represents a physical location for a network site (e.g. cell sites, data centers, central offices, customer locations, huts CEVs, poles, manholes etc.) and what type of functionality that site represents (e.g. session border controller, wireless switch, NCTE, PBX etc). CLLI codes facilitate rapid and accurate communication of points of interface for interconnection. CLLI codes may also be used to identify the precise location of assets for regulatory and operational reasons. A CLLI is required for NPA/NXX assignment and for the ASR/LSR process.

CLONES and Locatelt

CLONES is the centralized database of location information for many of the world's largest service providers. The combination of CLONES and Locatelt provides support for complex address analysis enabling:

- the identification of duplicate addresses, such as: Main Str and Main Street.
- the understanding that two street names may represent the same location, e.g., 111th St and College Blvd.
- the unique identification of a location for which no street address applies, e.g., a cabinet or a cell site.
- the determination of whether a CLLI already exists for that location, by Latitude and Longitude coordinates, under the same or alternative name.
- confidence in the accuracy of the location position and location type information.

Reduce Costs

Service providers spend precious resources deliberating over naming locations according to some internal standard, analyzing reports for consistency and accuracy, correcting errors in the communication of location information and translating location information between various standards. Use of an unambiguous industry-wide naming standard eliminates these costs.

The CLLI standard is continually assessed to ensure it remains relevant and complete. As new challenges emerge for location identification and the identification of functionality at a location, industry-wide solutions are devised and implemented. This saves reinventing the wheel when managing locations internally and removing the need for bespoke translation solutions when communicating between fellow subscribers.

CLLI Code

11 character standardized location code to represent locations and their use (e.g.

outside plant site types, switches, etc)

Required for NPA/NXX assignment

Required on ASR/LSRs

Electronic communication of location information

CLONES/Locatelt

Central repository of location information

Validation of addresses

Geocoding to associate latitude & longitude and v&h with address

Support for locations which do not have a street address

Network functionality identification down the floor, suite and room

Remove duplication of address

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cost saving

Remove the need to translate various methods of defining locations

Remove issues related to duplicate entries for the same location

Eliminate the overhead of internally managing location naming standards – software and human resources



resources available with a subscription

- CLONES/Locatelt and CLLI Codes
- Support from our CLLI Subject Matter Experts
- XML Extracts of the CLONES database
- Industry forums for service providers to meet and discuss the evolution and best practice of implementing Common Language with other service providers.
- iconectiv policy management of key data elements, ensuring consistency in the data
- Coding discipline and implementation support from Common Language data infrastructure experts.
- Key documentation, including, but not limited to:
 - BR-751-100-050, COMMON LANGUAGE® Geographical Codes
 - BR-751-100-055, COMMON LANGUAGE® Geographical Code Description and Listings
 - BR-751-100-460, Switching System Codes
 - BR-751-100-440, Switching System Codes Private Branch Exchange (PBX) Centrex and Special Service
 - BR 795-100-100, CLLI™ Codes Description for Location Identification

about iconectiv

As the authoritative partner of the communications industry for more than 30 years, iconectiv's market-leading solutions enable the interconnection of networks, devices, and applications for more than two billion people every day. Working closely with private, government and non-governmental organizations, iconectiv continues to protect and secure telecommunication infrastructures for service providers, governments and enterprises, while providing network and operations management, numbering, registry, messaging and fraud and identity solutions to more than 1,200 organizations globally. A US-based company, Telcordia Technologies, does business as iconectiv.

make the connection.

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FAQs

What exactly is a Location Code common language (CLLI Code)?

A CLLI code is an 11-character, standardized, geographic identifier that uniquely identifies the geographic location of places and certain functional categories of equipment unique to the telecommunications industry.

All valid CLLI codes are created, updated and maintained in the Central Location Online Entry System (CLONES) database.

How are CLLI codes used?

common language location codes (CLLI Codes) are used worldwide to identify and describe three types of locations:

Network sites:

These include such network locations as central office buildings, business and commercial offices, microwave radio structures and earth stations.

Network support sites:

These include such locations as international boundaries or crossing points, end points, fiber nodes, cable and facility junctions, manholes, poles and repeaters.

Customers' sites:

These include customer locations and associated circuit terminations, facilities or equipment for each

How are CLLI codes used?

CLLI codes are used throughout the world. The CLONES database contains the details of millions of locations across the world, enabling automation and process efficiency for the largest Service Providers.

Why are CLLI Codes and CLONES Needed?

CLLI Codes are required for a number of reasons:

- CLLI codes offer a unique way of unambiguously identifying a location and its function. The code itself is concise and meaningful, enabling:
 - Process automation within and between service providers
 - Rapid understanding of the network through an enforced coding standard for network sites and entities. Reports may be compiled by finance and engineering using the same data, ensuring consistency.
- A CLLI Code is required to obtain an NPA NXX code.
- CLLI codes are required in the ASR/LSR process.
- The CLLI code is also used as a primary key into the CLONES database to enable further details to be understood about a location.
- The combination of CLLI and CLONES enables departments within an organization to refer to the same location in the same way, without risk of ambiguity.
 - This is further enhanced when sharing location information between Service Providers where mistakes communicating location information can lead to expensive work around or litigation.

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FAQs

How do I Create, Query, Amend, or Delete CLLI codes?

There are two ways to obtain CLLI Codes. Details of both methods are available via the Customer Support Center.

one:

CLLI codes may be purchased individually from the iconectiv Store, via our LOA process. This process enables you to obtain your CLLI code, which includes having it entered into the CLONES database, for a one-time fee. Once the CLLI code is delivered to you, iconectiv will continue to store the CLLI code in CLONES, per the terms and conditions of the LOA agreement. To order CLLI codes via the iconectiv

two:

Obtaining a license to the CLLI code set provides you with the ability to access CLONES and create your CLLI codes directly. The license takes the form of an annual subscription fee, plus a usage charge to create, amend, delete, and query CLLI codes via CLONES. Training, SME Support and TAG membership are among the benefits of a CLLI license.

How do I gain access to the CLONES database?

A special login and permissions are required in order to create, delete or update CLLI codes residing in the CLONES database. CLONES access is only available to CLLI licensees. Licensees may call the Common Language Customer Support Center to obtain the relevant documents and support for accessing CLONES.

How do licensees request new geographical or geopolitical codes?

The contact details for the Common Language Customer Support Center are in the bottom- right corner of this FAQ document.

How do I get complete listings of geographical and geopolitical codes?

Complete listings of geographical and geopolitical codes can be found in the BRs in Code Center. These, or any other BR document may be viewed or downloaded directly from Code Center. Alternatively, products can contact the Common Language Customer Support Center.

How do licensees request new geographical or geopolitical codes?

Licensees are welcome to submit their coding requests to the Common Language Customer Support Center.

How do non-licensees request new CLLI codes?

As CLLI code set maintenance agent for the American National Standard Institute (ANSI), we also administer non-licensees' requests. Per the LOA process described previously, codes may be ordered online here or via the Common Language Customer Support Center.

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FAQs

How Are CLLI Codes Developed?

Each CLLI code conforms to one of four basic formats (Network Site, Network Entity, Network Support Site and Customer Site). Each format, in turn, determines how the following six coding elements are used:

1. Geographical Codes (Example: DNVR = Denver)

Typically assigned to cities, towns, suburbs, villages, hamlets, military installations and international airports, geographical codes can also be mapped to mountains, bodies of water and satellites in fixed-earth orbit.

2. Geopolitical Codes (Example: CO = Colorado)

Typically assigned to countries, states and provinces, geopolitical and geographical codes can be combined to form a location identifier that is unique worldwide.

3. Network-Site Codes (Example: 56 = A central office on Main Street)

This element is used with geographical and geopolitical codes to represent buildings, structures, enclosures or other locations at which there is a need to identify and describe one or more functional entities.

This category includes central office buildings, business and commercial offices, certain microwave-radio relay buildings and earth stations, universities, hospitals, military bases and other government complexes, garages, sheds and small buildings, phone centers and controlled environmental vaults.

4. Network-Entity Codes (Example: DS0 = A digital switch)

This element can be used with geographical, geopolitical and network-site codes to identify and describe functional categories of equipment, administrative groups or maintenance centers involved in the operations taking place at a given location.

5. Network Support-Site Codes (Example: P1234 = A telephone pole)

This element can be used with geographical and geopolitical codes to identify and describe the location of international boundaries or crossing points, end points, fiber nodes, cable and facility junctions, manholes, poles, radio-equipment sites, repeaters and toll stations.

6. Customer Site Codes (Example: 1A101 = A customer)

This element can be used with geographical and geopolitical codes to identify and describe customer locations associated with switched-service networks, centrex installations; trunk forecasting, cable, carrier or fiber terminations, NCTE, CPE and PBX equipment, military installations, shopping malls, universities and hospitals.

I want to know more, what do I do?

Contact the Common Language Customer Support Center.