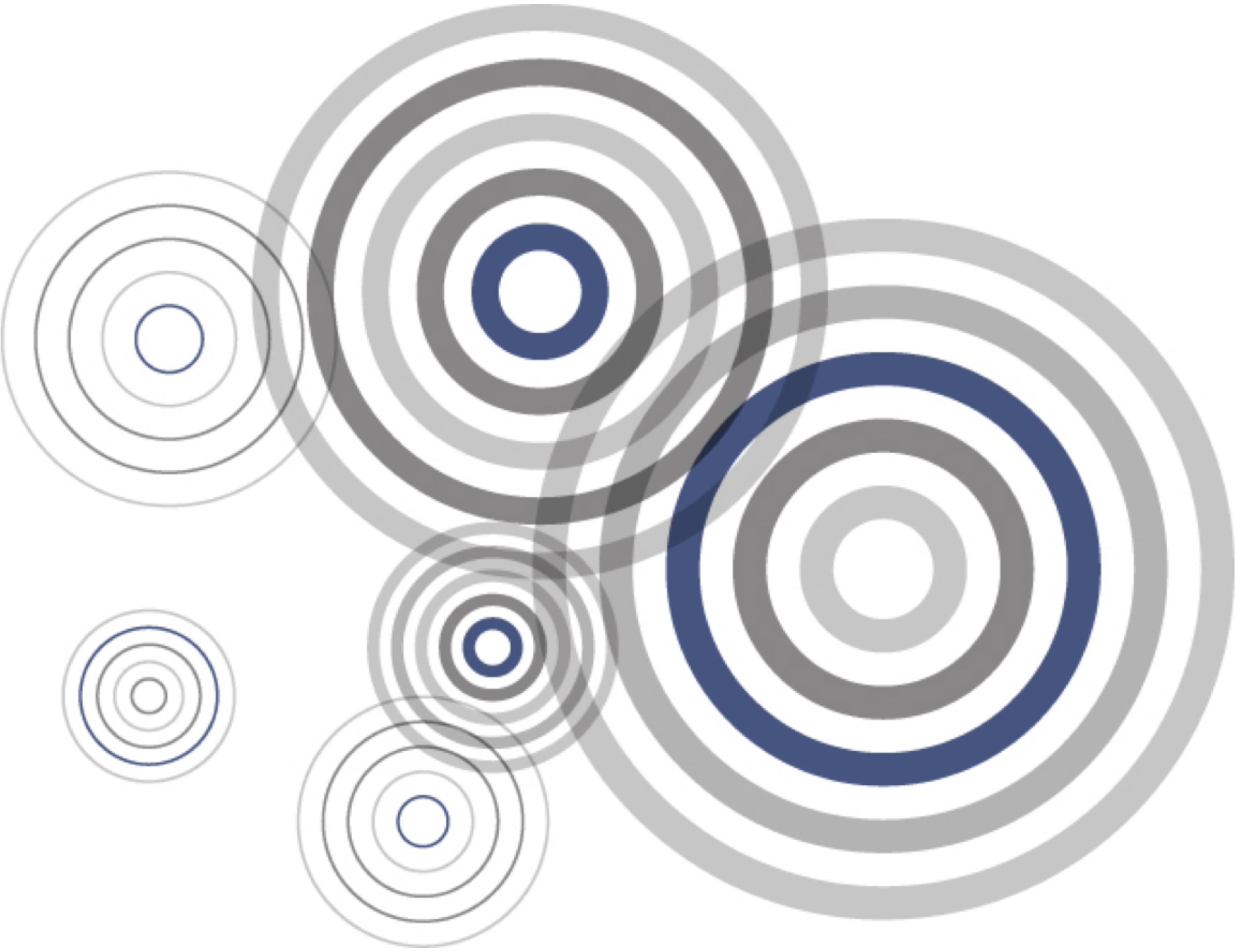
LEI | GLOBAL LEGAL ENTITY IDENTIFIER FOUNDATION

Public

Common Data File Formats – Questions and Answers

FINAL V2.2 , 2017-05-04



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About this Document

This document provides answers to common questions on the Common Data File formats developed by the Legal Entity Identifier Regulatory Oversight Committee (LEI ROC) and further developed and maintained by GLEIF.

Change History

Date	Version	Description of change	Author
2017-05-04	FINAL, 2.2	New Level 2 version, major updates: LEI-CDF V2.1, RR-CDF	GLEIF
2016-11-11	FINAL, 1.0	Final version	GLEIF

1. General topics

1.1. What are the GLEIF data formats?

The GLEIF data formats include

- LEI-CDF,
- RR-CDF,
- Reporting Exceptions, and
- Parent Reference Data.

They are technical specifications supporting the ISO 17442 Legal Entity Identifier (LEI) standard.

The GLEIF standards are proposed and developed by the Legal Entity Identifier Regulatory Oversight Committee (LEI-ROC), and further developed and maintained by GLEIF as the operational arm of the Global LEI System, always under LEI-ROC oversight.

1.2. How are the GLEIF data formats applied?

The LEI- and RR-CDF, Reporting Exceptions, and code lists such as the RAL, specify data elements and values that can be checked (“validated”) automatically. GLEIF applies this validation to all the LEI and relationship data that LEI Issuers submit to GLEIF, so that a basic level of data quality is enforced across all the data.

Although this validation is automated, GLEIF monitors the LEI Issuers’ data uploads and data quality reports on a daily basis. In addition, the data formats are flexible enough for LEI Issuers to include additional value-added information in a reliable way, and changes or corrections to the data structures can be proposed to GLEIF at any time.

Please address any further questions or feedback on the LEI- and RR-CDF formats to **leidata@gleif.org**.

2. LEI-CDF Topics

2.1. What is an LEI data file?

LEI data files, such as those produced by the LEI Issuers, or the GLEIF Concatenated File, are text files containing LEI data records, structured using XML. They cannot be directly opened with a spreadsheet or database application, e.g. Excel or Access, although LEI data in these formats is available through GLEIF's LEI Search tool, available at www.gleif.org.

The XML files can be viewed with any simple text editor, but for large numbers of LEI records this is impractical and a specialized tool is needed. GLEIF does not provide tool support; instead we recommend consulting your IT team for any complex tasks.

The XML format defines a container that holds a file header and a series of LEI data records.

2.2. What is the structure of the LEI-CDF?

Please see the tables below for an overview of the LEI-CDF elements.

Some "Type" column values refer to later tables; these refer to data elements that are contained within the referring element.

Further details can be found in the **LEI Common Data File Format specification PDF document** and corresponding **XML Schema Definition (XSD)** available at www.gleif.org.

2.2.1. LEIHeaderType

Name	Type	Cardinality	Description
ContentDate	lei:LEIDateTimeProfile	{1,1}	The date and time as of which the data contained in the file is valid.
Originator	lei:LEIType	{0,1}	The LEI of the entity that created the content of this file.
FileContent	lei:FileContentEnum	{1,1}	A code describing the content of this LEI data file.
DeltaStart	lei:LEIDateTimeProfile	{0,1}	The date and time of the baseline relative to which this file contains new or changed LEI data records.
RecordCount	xs:nonNegativeInteger	{1,1}	The number of LEI data records in the file. Can be a positive whole (integer) number, or zero (0).
NextVersion	lei:HeaderNextVersionType	{0,1}	A structure for adding further elements in to the LEI data file header in anticipation of a new version, by nesting a series of XML elements with this content model within the NextVersion element, one for each new minor version of the schema, postpending a serial number (1,2,3...) to the element name upon each iteration.

Name	Type	Cardinality	Description
Extension	lei:ExtensionType	{0,1}	This lei:Extension element may contain any additional elements required to extend the LEIHeader.

2.2.2. LEIRecordsType

Name	Type	Cardinality	Description
LEIRecord	lei:LEIRecordType	{0,unbounded}	Contains all LEI reference data including details of the LEI's registration with the ManagingLOU.
Extension	lei:ExtensionType	{0,1}	This lei:Extension element may contain any additional elements required to extend the LEIRecords container.

2.2.3. LEIRecordType

Name	Type	Cardinality	Description
LEI	lei:LEIType	{1,1}	The ISO 17442 compatible identifier for the legal entity described in the Entity section.
Entity	lei:EntityType	{1,1}	The Entity container element contains the legal entity's reference data, enabling identification.

Name	Type	Cardinality	Description
Registration	lei:RegistrationType	{1,1}	The Registration container element contains all information on the legal entity's LEI registration with the ManagingLOU.
NextVersion	lei:LEIRecordNextVersionType	{0,1}	A structure for adding further elements in to the LEI Data Record in anticipation of a new version, by nesting a series of XML elements with this content model within the NextVersion element, one for each new minor version of the schema, postpending a serial number (1,2,3...) to the element name upon each iteration.
Extension	lei:ExtensionType	{0,1}	This lei:Extension element may contain any additional elements required to extend the LEIRecord.

2.2.4. EntityType

Name	Type	Cardinality	Description
LegalName	lei:NameType	{1,1}	The legal name of the entity.
OtherEntityNames	lei:OtherEntityNamesType	{0,1}	An optional list of other names (excluding transliterations) for the legal entity.
TransliteratedOtherEntityNames	lei:TransliteratedOtherEntityNamesType	{0,1}	An optional list of ASCII-transliterated (i.e. Latin- or Romanized) representations of names for the legal entity.

Name	Type	Cardinality	Description
LegalAddress	lei:AddressType	{1,1}	The address of the entity as recorded in the registration of the entity in its legal jurisdiction.
HeadquartersAddress	lei:AddressType	{1,1}	The address of the headquarters of the Entity.
OtherAddresses	lei:OtherAddressesType	{0,1}	An optional list of other addresses for the legal entity, excluding transliterations.
TransliteratedOtherAddresses	lei:TransliteratedOtherAddressesType	{0,1}	An optional list of transliterated addresses for the legal entity.
RegistrationAuthority	lei:RegistrationAuthorityType	{0,1}	An identifier for the legal entity in a business registry in the jurisdiction of legal registration, or in the appropriate registration authority.
LegalJurisdiction	lei:JurisdictionCodeType	{0,1}	The jurisdiction of legal formation and registration of the entity (and upon which the LegalForm data element is also dependent). Please note that the XML schema validates the format of LegalJurisdiction codes but not the specific codes conforming to the ISO standards it reequires.

Name	Type	Cardinality	Description
EntityCategory	lei:EntityCategoryTypeEnum	{0,1}	Indicates (where applicable) the category of entity identified by this LEI data record, as a more specific category within the broad definition given in ISO 17442. These categories are based on use cases specified in LEI-ROC policies, found at http://www.leiroc.org/list/leiroc_gls/index.htm
LegalForm	lei:LegalFormType	{0,1}	The legal form of the entity, taken from the ISO Entity Legal Form (ELF) code list maintained by GLEIF. Please note that the XML schema validates the format of LegalForm codes but not the specific codes conforming to the ISO standard it reequires.
AssociatedEntity	lei:AssociatedEntityType	{0,1}	Another entity associated with this entity if needed to fully identify this entity or to place it in an appropriate context.
EntityStatus	lei:EntityStatusEnum	{1,1}	The operational and/or legal registration status of the entity (may be ACTIVE or INACTIVE).
EntityExpirationDate	lei:LEIDateTimeProfile	{0,1}	The date that the legal entity ceased to operate, whether due to dissolution, merger or acquisition.
EntityExpirationReason	lei:EntityExpirationReasonEnum	{0,1}	The reason that a legal entity ceased to exist and/or operate.

Name	Type	Cardinality	Description
SuccessorEntity	lei:SuccessorEntityType	{0,1}	The surviving/new legal entity which continues/replaces this registration.
NextVersion	lei:EntityNextVersionType	{0,1}	A structure for adding further elements in to the Entity section of the LEI data record in anticipation of a new version, by nesting a series of XML elements with this content model within the NextVersion element, one for each new minor version of the schema, postpending a serial number (1,2,3...) to the element name upon each iteration.

2.2.5. RegistrationType

Name	Type	Cardinality	Description
InitialRegistrationDate	lei:LEIDateTimeProfile	{1,1}	Date/time the LEI record was created.
LastUpdateDate	lei:LEIDateTimeProfile	{1,1}	Date/time the LEI record was most recently updated.
RegistrationStatus	lei:RegistrationStatusEnum	{1,1}	The status of the legal entity's LEI registration with the ManagingLOU.
NextRenewalDate	lei:LEIDateTimeProfile	{1,1}	The next date by which the LEI registration should be renewed and re-certified by the legal entity.

Name	Type	Cardinality	Description
ManagingLOU	lei:LEIType	{1,1}	The LEI of the LOU that is responsible for administering this LEI registration.
ValidationSources	lei:ValidationSourcesEnum	{0,1}	The level of validation of the reference data provided by the registrant.
ValidationAuthority	lei:ValidationAuthorityType	{0,1}	The (primary) registration authority used by the LOU to validate the entity data.
OtherValidationAuthorities	lei:OtherValidationAuthoritiesType	{0,1}	An optional list of additional registration authorities used by the LEI Issuer to validate the entity data.
NextVersion	lei:RegistrationNextVersionType	{0,1}	A structure for adding further elements in to the Registration section of the LEI Data Record in anticipation of a new version, by nesting a series of XML elements with this content model within the NextVersion element, one for each new minor version of the schema, postpending a serial number (1,2,3...) to the element name upon each iteration.

2.3. What information is found in the LEI data file header?

The header contains the file upload information for an LEI data file. The GLEIF Concatenated File header contains additional `Extension` fields supplying information on the LEI Issuers that supplied the LEI data records the file contains.

2.4. What are LEI data records?

An LEI data record contains all LEI reference data for one legal entity including the essential minimum reference data needed to tell one legal entity apart from another, supplemental information, and details of the LEI's registration with the LEI Issuer who manages the legal entity's LEI registration.

Through the LEI code, they can be referred to relationships between legal entities, reported using the RR-CDF format.

2.5. What is a valid LEI code?

All LEI codes must contain only combinations of the digits 0 to 9 and the upper-case letters A to Z. Lower case letters are not allowed. The final 2 digits (the check digits) must be numeric only.

This is required by the LEI standard, ISO 17442, and the rule is enforced by the LEI Common Data File format.

A valid LEI code must also have correct check digits.

2.6. What is the LEI code prefix?

The first 4 digits of an LEI (its "prefix") are reserved to an LEI Issuer to ensure that LEI codes are unique at the point of issuance; this is an additional operational principle which is not explicitly required by ISO 17442. This is not checked automatically by the LEI-CDF XML schema.

Please note that the prefix of any LEI code is added at the initial registration of a legal entity, solely to prevent duplication of codes across two or more LEI Issuers. It has no intrinsic meaning and no other use.

Some LEI codes were issued before the LEI ROC's operational standards came into effect. These codes may have prefixes that do not match any LEI Issuer.

2.7. How is the LEI code generated?

Characters 5-18 of the LEI code are the entity-specific section, generated and assigned by LOUs according to transparent, sound and robust allocation policies. As required by ISO 17442, it contains no embedded intelligence.

2.8. How are the LEI code's check digits calculated and checked?

The 2 check digits of an LEI are calculated from the first 18 characters of the LEI, according to the ISO Standard 17442, which itself refers to ISO Standard 7064. Both standards are available from www.iso.org at a cost.

Please note that the check digits are only a technical, statistical protection against manual transcription errors (e.g. character transposition during data entry or automated character recognition).

Incorrect check digits indicate the probable presence of an error in the other 18 characters. Correct digits indicate the absence of such errors. The check digits are no indication of any other type of defect beyond this probability, and they do not relate in any way to the LEI reference data.

2.9. What information about a legal entity is required by the LEI-CDF?

The minimum reference data for an LEI data record as defined by ISO 17442 and enforced by the LEI-CDF is as follows:

- The official name of the legal entity as recorded in the business registry, or with the fund manager for collective investment vehicles, or otherwise in the entity's constituting documents.
- Where applicable:
  - The name of the business registry in which the entity was formed.
  - The identifier of the entity in the business registry.
- The address of the headquarters of the legal entity or the address of the fund manager.
- The address and the country of legal formation as represented in ISO 3166.
- The date of the first LEI assignment.
- The date of last update of the LEI set of information.
- The date of expiry, where applicable.
- The reason for expiry, if applicable.
- For entities with a date of expiry, where applicable, the LEI of the entity or entities that acquired the expired entity.

In addition to LEI-CDF information, a legal entity must report its relationship information, per current LEI-ROC policy, to keep its LEI in good standing (issued). This is reported to GLEIF by the LEI Issuer, using the RR-CDF format (and the Reporting Exceptions format, where applicable).

2.10. What additional information can be provided in LEI data records?

- The legal form of the entity.
- Other names or representations of names for the legal entity.
- A legal or headquarters address in different languages.

Custom fields may (optionally) also be added.

2.11. Which status fields are used in an LEI data record?

The Legal Entity Reference Data (LE-RD) provided with each LEI code, contains two status fields:

- `EntityStatus` - The status of the legal entity (active or inactive).
- `RegistrationStatus` - The status of the LEI registration with the LEI Issuer.

For a full list of `EntityStatus` and `RegistrationStatus` values, including descriptions, please see the detailed specification of the LEI Common Data File format specification PDF.

An overview of the current LEI data pool, broken down by `RegistrationStatus` and `EntityStatus`, can be found at GLEIF's **Statistics** page.

2.12. Which other codes and standards are included in the LEI-CDF?

The following code lists are managed by GLEIF:

LEI-CDF Element	Code List	Description
`LegalForm`	Entity Legal Form (ELF) Code; ISO Standard 20275	Resolves variant names for each valid legal form within a jurisdiction to a single code per legal form, per jurisdiction.
`RegistrationAuthority`	Registration Authority List (RAL)	Identifies a business registry in the jurisdiction of legal registration, or appropriate registration authority (e.g. one of the varieties of funds registered instead with financial regulators).

Other codes managed by third parties included in the LEI-CDF are used to ensure data quality:

LEI-CDF Element	Description
`Country`	The 2-character ISO 3166-1 country code of the country.
`Region`	The 4- to 6-character ISO 3166-2 region code of the region.
`Legal Jurisdiction`	Either an ISO 3166-1 country code or an ISO 3166-2 region code.
`xml:lang`	An IETF Language Code conforming to RFC 4646.
`ContentDate, DeltaStart, EntityExpirationDate, InitialRegistrationDate, LastUpdateDate, NextRenewalDate`	A subset of the ISO 8601-compliant XML Schema dateTime format.

IETF standards can be found on the World Wide Web for free. ISO standards can be obtained from www.iso.org at a cost.

2.13. How does the LEI-CDF handle international languages and scripts?

An LEI data record can contain:

- Other names or representations of names for the legal entity.
- A legal or headquarters address in different languages.

The `OtherEntityName` and `OtherAddress` fields, may have `xml:lang` language codes:

"Each `OtherEntityName` element includes an optional language code, permitting `OtherEntityName` to be repeated as many times as necessary to express the same name type in multiple languages.

When the `type` attribute's value is `PREFERRED_ASCII_TRANSLITERATED_LEGAL` or `AUTO_ASCII_TRANSLITERATED_LEGAL`, the language code specifies the language of the name prior to transliteration."

2.14. Which special characters, string lengths and character encoding can be expected when working with LEI-CDF formatted data?

Any UTF-8 character can be found in an LEI data file.

However, for transliterated name and address elements, the value of the free text fields must consist only of non-control characters drawn from the “invariant subset” of ISO 646 (ASCII).

Most free-text fields are limited to a maximum of 500 characters.

For full technical details please refer to the **LEI-CDF XML schema** available at www.gleif.org.

2.15. What kind of database structure is suitable for importing LEI-CDF data?

The daily GLEIF Concatenated File download is not a database and so there is no documentation detailing tables, relationships between tables or database validation rules.

The GLEIF Concatenated File and the LEI CDF format are also not intended as database design guidance, though they could be used to inform such a process.

A secure, scheduled GLEIF Concatenated File transfer can be set up using HTTPS, as described in the **GLEIF Concatenated File Specification and User Manual** available at www.gleif.org.

Another option is to download a complete or partial set of records in Excel, CSV or JSON format from the **LEI Search** tool.

2.16. Can custom fields be included in LEI-CDF files?

LEI Issuers are able to add any extra data they consider appropriate using the `lei:Extension` fields, but the extra data themselves are not explicitly defined by the standard.

2.17. How do LEI Issuers deal with changes, corrections and updates to the LEI-CDF data they deliver to GLEIF?

LEI Issuers are responsible for the contents of their LEI data records. GLEIF simply passes on the LEI data records we receive from the LEI Issuer, without changes.

Please address any specific queries about the LEI Issuers' data to the LEI Issuers themselves. GLEIF provides contact details for all LEI Issuers at www.gleif.org.

An LEI data record may also be challenged directly:

Go to the page for your LEI using the URL pattern below.

```
https://www.gleif.org/lei/<your LEI>
```

Example:
`https://www.gleif.org/lei/549300Q82NZ9NYNMZT63`

Click the “Challenge This Record” button at the foot of the page to send a proposed update directly to the LEI Issuer through GLEIF’s central Challenge Service.

2.18. How does GLEIF process the LEI-CDF data it receives?

GLEIF recieves one daily data file per format, per LEI Issuer (also known as a Local Operating Unit or LOU), directly from the LEI Issuer.

If an invalid LEI Issuer file is found, i.e. one that does not meet technical validation criteria against the relevant Common Data File (CDF) format, then the most recent valid data file from that LEI Issuer is substituted for it in that day's Concatenated File.

However, information about the original LEI Issuer file will still be available, even if the file is not CDF valid.

3. RR-CDF Topics

3.1. What are RR-CDF Files?

Relationship data files, such as those produced by the LEI Issuers, or the GLEIF Concatenated File, are text files containing relationship data records, structured using XML. They cannot be directly opened with a spreadsheet or database application, e.g. Excel or Access.

The XML files can be viewed with any simple text editor, but for large numbers of relationship records this is impractical and a specialized tool is needed. GLEIF does not provide tool support; instead we recommend consulting your IT team for any complex tasks.

The XML format defines a container that holds a file header and a series of relationship data records.

3.2. What is the structure of the RR-CDF?

Please see the tables below for an overview of the RR-CDF elements.

Some "Type" column values refer to later tables; these refer to data elements that are contained within the referring element.

Further details can be found in the **technical specification document PDF** and corresponding **XML Schema Definition (XSD)**, available at www.gleif.org.

3.2.1. RelationshipDataType

Name	Type	Cardinality	Description
Header	rr:RRHeaderType	{1,1}	Contains the file upload information for this RelationshipData file.
RelationshipRecords	rr:RelationshipRecordsType	{1,1}	Container for all of the RelationshipRecord container elements submitted with this file.

3.2.2. RRHeaderType

Name	Type	Cardinality	Description
ContentDate	rr:LEIDateTimeProfile	{1,1}	The date and time as of which the data contained in the file is valid.
Originator	rr:LEIType	{0,1}	The LEI of the entity that created the content of this file.
FileContent	rr:FileContentEnum	{1,1}	A code describing the content of this relationship record file.
DeltaStart	rr:LEIDateTimeProfile	{0,1}	The date and time of the baseline relative to which this file contains new or changed Relationship Records.
RecordCount	xs:nonNegativeInteger	{1,1}	The number of relationship records in the file.
NextVersion	rr:HeaderNextVersionType	{0,1}	A structure for adding further elements in to the LEI data file header in anticipation of a new version, by nesting a series of XML elements with this content model within the NextVersion element, one for each new minor version of the schema, postpending a serial number (1,2,3...) to the element name upon each iteration.
Extension	rr:ExtensionType	{0,1}	This Extension element may contain any additional elements required to extend the Header container element.

3.2.3. RelationshipRecordsType

Name	Type	Cardinality	Description
RelationshipRecord	rr:RelationshipRecordType	{0,unbounded}	Contains all relationship information including identifiers referring to the related entities, the specific type and other attributes of the relationship itself, and details of the relationship's registration with the ManagingLOU.

3.2.4. RelationshipRecordType

Name	Type	Cardinality	Description
Relationship	rr:RelationshipContainerType	{1,1}	The Relationship container element contains the identifiers of the two entities related by the reported relationship, as well as the type of relationship, dates related to the relationship and other relationship quantifiers and qualifiers.
Registration	rr:RegistrationContainerType	{1,1}	The Registration container element contains information specifying the LOU's administration of the relationship report.
NextVersion	rr:RelationshipRecordNextVersionType	{0,1}	A structure for adding further elements in to the Registration section of the Relationship Record in anticipation of a new version, by nesting a series of XML elements with this content model within the NextVersion element, one for each new minor version of the schema, postpending a serial number (1,2,3...) to the element name upon each iteration.
Extension	rr:ExtensionType	{0,1}	This Extension element may contain any additional elements required to extend the RelationshipRecord.

3.2.5. RelationshipContainerType

Name	Type	Cardinality	Description
StartNode	rr:NodeType	{1,1}	An LEI or ISO 17442-compatible ID for the entity at the "start" of a directional relationship.
EndNode	rr:NodeType	{1,1}	An LEI or ISO 17442-compatible ID for the entity at the "end" of a directional relationship.
RelationshipType	rr:RelationshipTypeEnum	{1,1}	A unique code designating the specific category of a directional relationship between two legal entities.
RelationshipPeriods	rr:RelationshipPeriodsType	{0,1}	A collection of paired beginning and end dates relating to: the relationship itself, periods (e.g. accounting cycles) covered by documents demonstrating the relationship, or the filing date(s) of those documents.
RelationshipStatus	rr:RelationshipStatusEnum	{1,1}	The status of the legal entities' relationship itself: ACTIVE or INACTIVE.
RelationshipQualifiers	rr:RelationshipQualifiersType	{0,unbounded}	Any additional qualitative attributes that help to categorize the relationship.
RelationshipQuantifiers	rr:RelationshipQuantifiersType	{0,unbounded}	Any additional quantitative attributes that help to categorize the relationship.

Name	Type	Cardinality	Description
NextVersion	rr:RelationshipNextVersionType	{0,1}	A structure for adding further elements in to the Registration section of the Relationship Record in anticipation of a new version, by nesting a series of XML elements with this content model within the NextVersion element, one for each new minor version of the schema, postpending a serial number (1,2,3...) to the element name upon each iteration.
Extension	rr:ExtensionType	{0,1}	This Extension element may contain any additional elements required to extend the Relationship container element.

3.2.6. NodeType

Name	Type	Cardinality	Description
NodeID	rr:LEIType	{1,1}	The identifier for the entity designated by this node.
NodeIDType	rr:NodeIDTypeEnum	{1,1}	The type of identifier used to designate this node's entity.

3.2.7. RelationshipPeriodsType

Name	Type	Cardinality	Description
RelationshipPeriod	rr:RelationshipPeriodType	{1,unbounded}	Contains one set of start and end dates for a particular type of period, for example, the duration of the relationship itself, the filing or validity period of any documents demonstrating the relationship, or the accounting period they refer to.

3.2.8. RelationshipPeriodType

Name	Type	Cardinality	Description
StartDate	rr:LEIDateTimeProfile	{0,1}	The start date for a particular period relevant to the relationship.
EndDate	rr:LEIDateTimeProfile	{0,1}	The end date for a particular period relevant to the relationship.
PeriodType	rr:PeriodTypeEnum	{1,1}	The particular type of period, for example, the duration of the relationship itself, the filing or validity period of any documents demonstrating the relationship, or the accounting period they refer to.

3.2.9. RelationshipQualifiersType

Name	Type	Cardinality	Description
RelationshipQualifier	rr:RelationshipQualifierType	{0,unbounded}	Container for all sets of relationship qualifier information.

3.2.10. RelationshipQualifierType

Name	Type	Cardinality	Description
QualifierDimension	rr:QualifierDimensionEnum	{1,1}	Designates the optional list of additional qualitative attributes that help to categorize the relationship.
QualifierCategory	rr:QualifierCategoryTypeEnum	{0,1}	Specifies the additional qualitative attributes that help to categorize the relationship.

3.2.11. RelationshipQuantifiersType

Name	Type	Cardinality	Description
RelationshipQuantifier	rr:RelationshipQuantifierType	{0,unbounded}	Specifies one additional quantitative attribute of the relationship, according to a particular measurement method.

3.2.12. RelationshipQuantifierType

Name	Type	Cardinality	Description
MeasurementMethod	rr:MeasurementMethodTypeEnum	{1,1}	Specifies the method of measurement (or set of rules) used to quantitatively categorize the relationship.
QuantifierAmount	xs:decimal	{1,1}	Specifies the quantity measured as a decimal (positive or negative) number, using a . as the decimal point, with no spaces, and without thousand delimiters (e.g. ,).
QuantifierUnits	rr:QuantifierUnitsTypeEnum	{0,1}	Specifies the units, where applicable, of a measurement made on a relationship.

3.2.13. RegistrationContainerType

Name	Type	Cardinality	Description
InitialRegistrationDate	rr:LEIDateTimeProfile	{1,1}	The date at which the relationship information was first collected by the ManagingLOU.
LastUpdateDate	rr:LEIDateTimeProfile	{1,1}	The date at which the information was most recently updated by the ManagingLOU.
RegistrationStatus	rr:RegistrationStatusEnum	{1,1}	The status of the legal entity's relationship record registration with the ManagingLOU.

Name	Type	Cardinality	Description
NextRenewalDate	rr:LEIDateTimeProfile	{0,1}	The next date by which the relationship information must be renewed and re-certified by the legal entity.
ManagingLOU	rr:LEIType	{1,1}	The LEI of the LOU that is responsible for administering this relationship record.
ValidationSources	rr:ValidationSourcesTypeEnum	{1,1}	Level of relationship validation.
ValidationDocuments	rr:ValidationDocumentsTypeEnum	{1,1}	Type of source document(s) used for validating the relationship.
ValidationReference	rr:Tokenized500Type	{0,1}	A reference to a specfic document or other source used as the basis of relationship validation for this relationship record.
NextVersion	rr:RegistrationNextVersionType	{0,1}	A structure for adding further elements in to the Registration section of the Relationship Record in anticipation of a new version, by nesting a series of XML elements with this content model within the NextVersion element, one for each new minor version of the schema, postpending a serial number (1,2,3...) to the element name upon each iteration.
Extension	rr:ExtensionType	{0,1}	This Extension element may contain any additional elements required to extend the Registration container element.

3.3. What is a relationship data file?

Relationship data files, such as those produced by the LEI Issuers, or the GLEIF relationship Concatenated File, are text files containing relationship records, structured using XML. They cannot be directly opened with a spreadsheet or database application, e.g. Excel or Access.

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The XML format defines a container that holds a file header and a series of relationship records.

3.4. What information is found in the relationship data file header?

The header contains the file upload information for a relationship data file.

3.5. What are relationship records?

A relationship record contains all mandatory and additional information on **one** relationship between **two** legal entities.

3.6. Do relationship records have a unique ID?

Relationship records themselves do not have an ID code, as, although they are reported in a technically separate way from LEI-CDF files, they function as part of the LEI reference data and always contain at least one LEI. Some types of relationship, such as ultimate accounting consolidation, may be unique, while others may be repeatable for a given legal entity.

3.7. What information about a relationship is required by the RR-CDF?

All mandatory relationship types must be reported by entities with an LEI. Each relationship type has its own set of requirements for valid reporting. Please see the **State Transition Rules and Validation Rules** documents for further details, available at www.gleif.org.

3.8. What if relationship information is not available for a legal entity?

To receive and keep an LEI in good standing, legal entities must provide and update all the relationship information required by LEI-ROC policy. The latest LEI-ROC requirements can be found at www.leiroc.org.

Any acceptable reasons, per LEI-ROC policy, for non-reporting of relationship information are supplied to GLEIF using the **Reporting Exceptions format**. These might include, for example:

- No relationship – the legal entity does not possess the required type of relationship (e.g. for ownership relationships, the legal entity is not owned in the way that must be reported).
- No LEI – all published relationships must be reported using LEI-to-LEI assertions. For some relationship types internal relationship data will be collected where the 2nd legal entity has no LEI. The second entity is described internally to the GLEIS using the **Parent Reference Data format**.
- Other reasons as determined by LEI-ROC policy.

Details of the **Reporting Exceptions format** and **Parent Reference Data format** can be found at www.gleif.org, although the reported data in these formats is shared only with the LEI-ROC for evaluation purposes.

3.9. What are the status fields used in a relationship record?

The relationship data provided in a relationship record contains two status fields:

`RelationshipStatus` - The status of the relationship itself (active or inactive).

`RegistrationStatus` - The status of the relationship reporting data record maintained by the LEI Issuer.

For a full list of `RelationshipStatus` and `RegistrationStatus` values, including descriptions, please see the detailed specification of the **Relationship Record Common Data File format**, found at www.gleif.org.

3.10. Which special characters, string lengths and character encoding can be expected when working with RR-CDF formatted data?

For full technical details please refer to the **RR-CDF XML schema**.

3.11. What kind of database structure is suitable for importing LEI-CDF data?

The RR-CDF format are also not intended as database design guidance, though it could be used to inform such a process.

4. Where can I find further information?

4.1. Technical support

4.1.1. GLEIF Files

For a description of the GLEIF Concatenated Files and instructions on how to obtain and use them, please see the **GLEIF Concatenated File Specification and User Manual**, available from www.gleif.org.

4.1.2. LEI Issuer files

If you have any questions regarding the original source files, please contact the respective LEI Issuer via its website.

Contact details for all LEI Issuers can be found at www.gleif.org.

4.1.3. Whom should I contact for further questions?

Please address any further questions or feedback on the LEI- and RR-CDF formats to **leidata@gleif.org**.