DLPC Working Group
of the
Innovation Council

BAFT DLPC

Distributed Ledger Payment Commitment

Technical Best Practices

Initial Release

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Foreword

For centuries, the process of international trade and trade finance has been heavily paper based, staff intensive and cumbersome. Recognizing that recent advances in digital technology can simplify, accelerate and improve the reliability of this process, the BAFT Innovation Council established the BAFT Distributed Ledger Payment Commitment Working Group (DLPC Working Group) in 2016. The task of this Working Group was to design a legally binding and enforceable payment commitment (a promise to pay) within the context of trade instruments in digital form that could be used interoperably in, or in conjunction with, any digital trade instrument on any distributed ledger network, if the parties so chose.

Accordingly, the DLPC Working Group has created best practice specifications for such a payment commitment embodied in, or arising from, electronic trade instruments on distributed ledgers that we refer to as the BAFT DLPC. This DLPC component of digital trade transactions aims to be an interoperable industry payment standard and a legally binding and enforceable means to realize electronic negotiable instruments.

The specifications, consisting of these Technical Best Practices and accompanying Business Best Practices, were first published in April 2019 for "Trial Use" and, taking into account industry feedback since then, the DLPC Working Group is pleased to publish this "Initial Release" of the specifications in the expectation that these will become industry standards for digital payments on distributed ledgers. The Working Group recognizes that, as an industry, we are at an early stage in the implementation of trade instruments on distributed ledgers and therefore further revisions of the specifications may be necessary in the future to reflect further feedback from early implementers of these specifications as they become industry standards.

BAFT would like to express its gratitude to the captains and other members of the DLPC Working Group who generously contributed their expertise, time, and effort to develop these DLPC Technical Best Practices. These contributors and their affiliations are listed below.

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Definitions

Any term that is not defined in this document shall have the meaning given to that term in the Uniform Commercial Code as adopted by the US State of Delaware or in the Uniform Electronic Transactions Act of the US State of Delaware and the terms below shall have the following meanings:

Committee: The party to the DLPC who is proposed to become or is an actual obligee/beneficiary, to which effect the DLPC carries the required attestations.

Committer: The party to the DLPC who is proposed to become or is an actual obligor, whose attestation to that effect is carried in the DLPC.

DL: Distributed Ledger

DLT: Distributed Ledger Technology

DLPC: A record of a Payment Commitment on a Distributed Ledger that conforms to the DLPC Business and Technical Best Practices (see here). A DLPC has a lifecycle comprising the following states: (1) Pre-DLPC (2) DLPC Initiated (3) DLPC Contingent (4) DLPC Effective and (5) DLPC Discharged. This lifecycle is described in more detail in Section 2.

Distributed Ledger Business Network: A group of parties that use a Distributed Ledger to conduct business transactions among themselves. As a precondition to joining the network, these parties must all agree to conduct such business on the Distributed Ledger compliant to the network rules and governance.

1. Introduction

Several industry initiatives are underway to establish Distributed Ledger Business Networks to enable many different types of trade transactions to be recorded in digital form on distributed ledgers. Maximizing the utility of these Networks requires that standards be developed to support interoperability across business networks, independent of the underlying DL technology used or the financial instruments or participants in those networks.

An essential component of any trade instrument is a legally binding and enforceable payment commitment (a promise to pay). Past practice has been to embody such payment commitments in signed, written documents. The BAFT DLPC has been designed as an instrument in **digital form** that can be incorporated in, or added to, a digitalized trade instrument to ensure that payment commitments **in digital form on any platform or network** are legally binding and enforceable in accordance with their terms, irrespective of the platform/network, or the trade finance instrument, out of which the payment commitment arises. The DLPC therefore offers two key advantages: (a) it provides an interoperable, technology neutral solution to allow companies to record digital representations of payment commitments on a distributed ledger that can operate across different digital platforms and blockchains; and (b) it is supported by a legal framework that seeks to provide the same degree of business utility and protections for banks and corporations as is provided under existing paper-based payment obligations. Accordingly, it is intended that the DLPC will encourage banks and companies to interact electronically with respect to trade obligations in digital form.

This document specifies how the DLPC itself is to be implemented on a distributed ledger.

2. DLPC Lifecycle
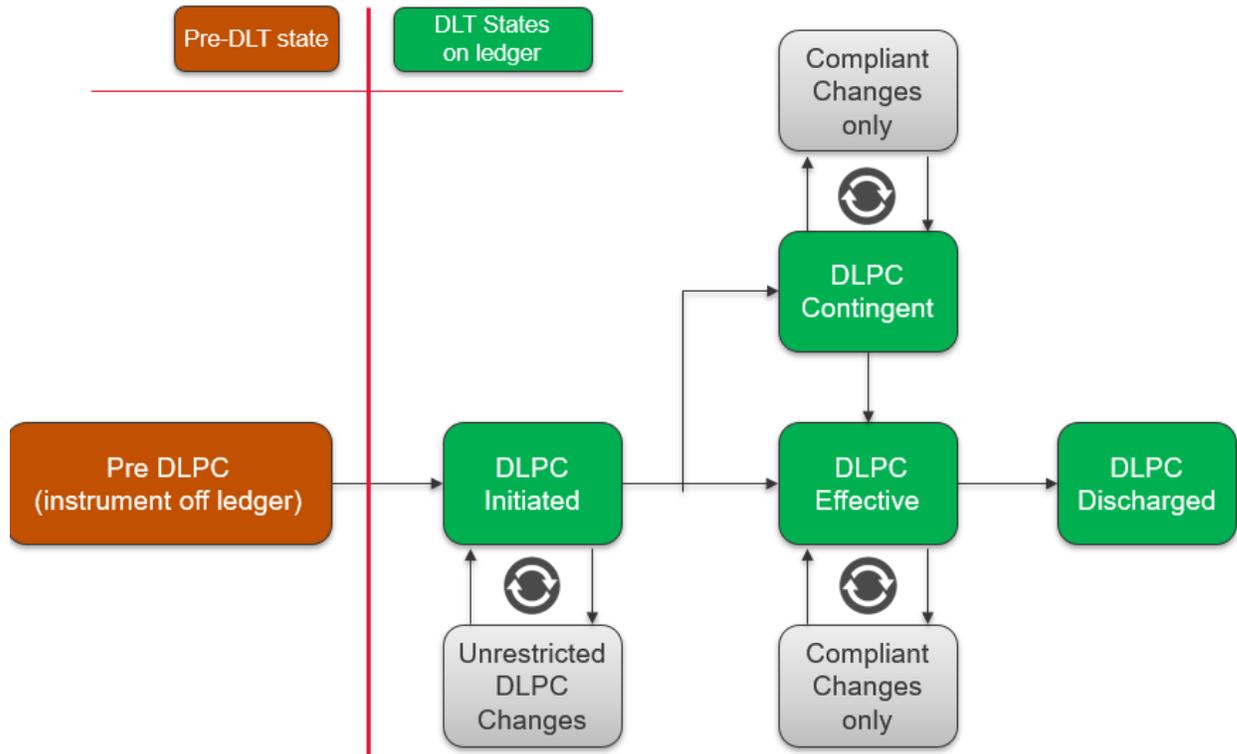
Figure 1: Lifecycle of a DLPC

A DLPC goes through the lifecycle shown in Figure 1 and the changes associated with its state will be recorded in the Data Fields described in Section 2.1 below.   Thus:

- While the terms of the DLPC are being discussed (i.e. "Pre DLPC" in Figure 1), the parties to the trade transaction will formulate the required information to "Initiate" the new DLPC record on the distributed ledger. Section 4.0 below defines the minimum required information to initiate a DLPC on a ledger. This includes establishing a globally unique "DLPC ID" Field 1 and the originator of a proposed trade transaction, or payment obligation, will identify themselves and the origination date and time in the "Originator ID" Data Field 2. During this period the parties to a trade transaction on a distributed ledger will enter and store on the ledger whatever preparatory data they might like, depending on the type of trade instrument that they hope to agree upon.

- When the terms of the trade transaction have been agreed upon and the DLPC state is recorded as either "**Contingent**" or "**Effective"** in Data Field 10, the **Commitment State.** When this state is achieved the DLPC becomes a legal instrument that, when Effective, is in the form of a digital note (an unconditional promise to pay). A DLPC is "**Contingent**" while it, or the trade transaction to which it is linked, is subject to any conditions. When those conditions have been fully met, the DLPC is to be recorded in Data Field 10 as "**Effective**". The associated paper or electronic trade transaction, if one exists, itself will also be identified by a specific description recorded in Data Field 3, the **Reference ID**). The DLPC recorded on the distributed ledger will then refer to, and thereafter be linked with, that Reference ID. Both the Reference ID and the

DLPC ID should be designed to be unique across networks and ledgers so that payment commitments and their underlying transactions may be readily identified in an interoperable manner.

- The initiation of the DLPC also enables Data Fields 4 through 9 (i.e., the "**Committer**", the "**Committee**", the "**Currency**", the "**Amount**", the "**Initiation Date**" and the "**Due Date**") to be recorded on the distributed ledger. These fields can continue to be updated without restriction, until the minimum requirements are met and the **Commitment State** is recorded as "**Contingent**" or "**Effective**". Contingent DLPCs and Effective DLPCs can only have Compliant Changes as specified in Section 3 of this document. One such Compliant Change is the transfer (negotiation) of an Effective DLPC upon the requisite attestations being made, which could result in a new person being designated as the Committee. The transition of a Contingent DLPC to an Effective DLPC is another example of a Compliant Change.

- An Effective DLPC is recorded as "**Discharged"** in Data Fields 11 and 12 when the Committee indicates that it has received the promised Amount, or the Committer is otherwise relieved of its promise to pay, e.g. if the trade transaction is terminated (cancelled).

Data Field 13 provides for the choice of a law and forum to settle any disputes relating to the DLPC, as described in Section 4.2 of the Business Best Practices (see here).

Each Data Field in a DLPC carries attestations from the involved parties. The Data Fields described in Section 2.1 indicate the attestations required to record or change a field. For a DLPC to record a legally binding commitment, all fields must be populated with the required information and attestations.

2.1   Data Fields and Their Requirements

A DLPC is recorded in 13 simple data fields on a distributed ledger. All data fields must be present and populated as described in this Section and in Section 4. It is, however, not mandatory that all distributed ledgers should represent or record those fields in the same way, so long as the ledger contains a record of all 13 fields meeting the requirements defined in Section 4. Accordingly, different distributed ledgers may record or show these fields, and the sequences or changes in those fields during the lifecycle of the DLPC, in different ways. **This flexibility ensures that the DLPC may be used on any distributed ledger for any digital trade transaction.**

Whether a field needs to be attested (i.e. agreed) to by the Committer [Cr], and/or the Committee [Ce], is shown. The inclusion of [Cr,Ce] means both the Committer and Committee must attest to the field. If only one of Cr or Ce is shown, it means that only the Committer or the Committee, as indicated, must attest to the field. Either may attest if [Cr or Ce] is shown.

The 13 Data Fields of a DLPC are as follows, and requirements relating to changes in the state of a DLPC are described in Section 3 below:

Field 1. **DLPC ID** [Cr or Ce]: A unique identifier for the payment commitment i.e. the DLPC record.

EXPLANATION: This is a globally unique identifier or reference allowing all state changes of a specific DLPC to be tied together. The population of this Field initiates the DLPC, and should occur when the terms of the payment commitment have been agreed upon. If a trade transaction has more than one payment commitment, each payment commitment shall be recorded in separate DLPCs with unique DLPC IDs. For the data formats, see paragraph 4.1 below.

Field 2. **Originator ID** [Cr or Ce]: An identification of the originator of the proposed DLPC. This field must be populated at the Pre DLPC state in the DLPC Lifecycle as described in paragraph 2 above.

EXPLANATION: If the Originator of the proposed DLPC has a Legal Entity Identifier (LEI), this should be used together with the origination date and time. Otherwise, the Originator shall use its Legal Name, Registered Address and origination date and time. For the data formats see paragraph 4.2 below.

Field 3. **Reference ID** [Cr or Ce]: Identification of the trade instrument to which the DLPC is linked, if it exists.

EXPLANATION: This is a unique identifier or reference information referring to the written or digital document (or its link to a storage location) of the trade transaction (e.g. an LC, a draft, bill of exchange, trade acceptance, open account transaction, BPO, etc.) to which the payment commitment (i.e. the DLPC) is linked. Until the DLPC is initiated, (i.e. becomes Contingent or Effective) this field should be shown as NULL. If there is more than one payment commitment in a trade transaction, there will be multiple DLPCs (each with a unique DLPC ID), all of which will refer to the same Reference ID field description. Until the DLPC is Contingent or Effective and no external reference information is needed, this field shall have the same value as the DLPC ID field. For the data formats, see paragraph 4.3 below.

Field 4. **Committer** [Cr or Ce]: Identifier of the party making the commitment – the obligor.

EXPLANATION: This field shall be NULL until the obligor is known. If the obligor of the proposed DLPC has a Legal Entity Identifier (LEI), this should be used and, optionally, other identifiers as needed. Otherwise, the originator shall use their Legal Name and Registered Address and, optionally, other identifiers as needed. This field shall be populated with one of these valid formats when the DLPC record is initiated and becomes Contingent or Effective. If an additional party becomes a payment obligor (e.g. if a bank adds its confirmation to an LC), that payment commitment should be recorded in a separate DLPC record, with a new DLPC ID and all 13 fields. For the data formats, see paragraph 4.4 below.

Field 5. **Committee** [Ce or Cr]: Identifier of the party benefiting from the commitment – the beneficiary.

EXPLANATION: This field should be NULL until the beneficiary is known. If the beneficiary of the proposed DLPC has a Legal Entity Identifier (LEI), this should be used and, optionally, other identifiers as needed. Otherwise, the beneficiary shall use their Legal Name and Registered Address and, optionally, other identifiers as needed. This field shall be populated with one of these valid formats when the DLPC record is initiated and becomes Contingent or Effective. The Committee may change, for example on a transfer or assignment of the DLPC and, in this case, the current DLPC record and DLPC ID is retained and only the Committee Field 5 is updated. For the data formats, see paragraph 4.5 below.

Field 6. **Currency** [Cr, Ce]: The currency unit in which the commitment is denominated.

EXPLANATION: This field should be NULL until the currency is known and must be populated when Data Field 7 contains an amount value other than NULL. For the data format, see paragraph 4.6 below.

Field 7. **Amount** [Cr, Ce]: The amount committed to be paid.

EXPLANATION: This field should be NULL until the amount is known and must be populated with a valid amount value when Data Field 10 becomes CONTINGENT or EFFECTIVE. For the data format, see paragraph 4.7 below.

Field 8. **Initiation Date** [Cr or Ce]: The date on which the terms of the DLPC are set.

EXPLANATION: This Data Field shall be NULL until the DLPC is initiated. When the DLPC is initiated (agreed to), its state will be recorded in Data Field 10 below as CONTINGENT or EFFECTIVE and this field shall be populated with a valid initiation date. For the data format, see paragraph 4.8 below.

Field 9. **Due Date** [Cr, Ce]: On demand, or the date specified or determinable on which the committed amount must be paid.

EXPLANATION: This field should be NULL until the due date is known and must be populated when Data Field 10 has a value of EFFECTIVE. For the data format, see paragraph 4.9 below.

Field 10. **Commitment State** [Cr or Ce]: The current state of the DLPC: either Initiated, Contingent, Effective, Discharged.

EXPLANATION: During its lifecycle, the DLPC will move through various states, and this Field specifies the DLPC's precise current state (for the data formats, see paragraph 4.10 below) as:

INITIATED: Refers to the time when the terms of the trade transaction, including the payment terms, have been set and agreed upon. At that time, the DLPC will be initiated by being recorded on the DL as either CONTINGENT or EFFECTIVE. While the terms of the trade transaction, including the payment terms, are being negotiated (i.e. the **Pre DLPC** period), records of the proposed transaction may be recorded on or off the DL as the parties wish; or

CONTINGENT: If (as will be usual in trade transactions) the obligation to make a payment is subject to the satisfaction of conditions which are agreed (including e.g. the presentation of conforming documents or delivery of conforming goods or services), the state of the DLPC is to be shown as "Contingent"; or

EFFECTIVE: This state is reached when all conditions of the trade transaction have been satisfied, whereupon the DLPC becomes an "unconditional promise to pay" the Amount to the Committee; or

DISCHARGED: The "unconditional promise to pay" of the DLPC will normally be discharged by such acts as: (a) due payment of the Amount in full, or (b) the discharge of the obligation to pay (e.g. by the cancellation or renunciation of the right to payment of the DLPC by the Committee, or the termination of the trade transaction to which the DLPC is linked by agreement of the parties or by operation of law). The "Discharged" state is to be recorded in Data Field 11 below.

Field 11. **Discharge State** [Ce]: Open, Paid, Past Due, or Cancelled.

EXPLANATION: This Field will initially be recorded as OPEN, and then it will show one of the following states (for the data formats, see paragraph 4.11 below), as and when appropriate:

OPEN: the state remains "OPEN" until the commitment is past due, cancelled or paid

PAID: When the Amount has been paid by the Due Date; or

PAST DUE: When the Due Date of a DLPC is past, and the commitment type is EFFECTIVE and the amount is greater than zero, and the commitment has not been discharged, the DLPC is considered Past Due; or

CANCELLED: If and when the Commitment is cancelled or terminated. When the Due Date of a DLPC is past, and the commitment type is CONTINGENT and the amount is greater than zero, the DLPC is considered cancelled and the Committer is no longer obligated for that residual amount.

Field 12. **Discharge Date** [Ce]: The date upon which the DLPC has been paid or cancelled.

EXPLANATION: This Field will initially be recorded as NULL and is to be populated when Data Field 11 has a value of PAID or CANCELLED. For the data format, see paragraph 4.12 below.

Field 13. **Applicable Rules** [Cr, Ce]: A description and version of the rules governing the DLPC with an optional pointer (URL) that indicates the location of the rules governing the DLPC.

EXPLANATION: This Field will initially be recorded as NULL until the rules are agreed to. This field must be populated (for the data format, see paragraph 4.13 below) when the commitment state of the DLPC is CONTINGENT or EFFECTIVE. For recommendations on the choice of law and the forum to govern the DLPC, see Section 4 of the accompanying Business Best Practices (see here). This choice of law and forum to govern the DLPC may be identical to the law and forum chosen to govern the trade transaction to which the DLPC is linked, or it may be a different law and forum, if the parties so decide.

2.2   Logical DLPC State

Different distributed ledgers will represent the DLPC data fields and the transactions that change them through different mechanisms. They may also choose different schemes and methods as well as different digital signature algorithms and cryptography to record the attestations by parties to the DLPC state changes. For this reason, the mechanism for recording the attestation time stamp and identification of the party making the attestation is left up to the distributed network governance and operation. While implementations compliant to this specification have such freedom, they shall on demand provide the logical state of the thirteen data fields associated with a DLPC and the network representation of the attestation (time and party) recording that state change. The DLPC logical state shall have the data fields in the format specified in Section 4.0.

3. Compliant changes to a DLPC

While either party can initiate data into any of the fields, changes or additions must meet the requirements of this Section. A field in the DLPC can be changed, or added if it is not present, without restriction until the DLPC meets the requirements to be a binding legal commitment (i.e. Contingent or Effective state). Once the DLPC becomes legally binding, only compliant changes that meet the requirements below are allowed. These requirements have been set so that any changes in the DLPC will accommodate different types of trade transactions. They specify the attestations that are required in each data field. It is assumed for the discussion below that only one field changes at a time, and receives the required new attestations, while all other fields retain their prior values and attestations:

1. **DLPC ID**: Change not allowed

2. **Originator ID**: Optional elements: can only be changed by the party that initiated the data

3. **Reference ID**: Optional elements: can only be changed by the party that initiated the data

4. **Committer**:   Change not allowed

5. **Committee:** Change allowed by current or new Committee

6. **Currency**: Change allowed by Committer or Committee and must be confirmed by the other party

7. **Amount**: Change allowed by Committer or Committee and must be confirmed by the other party

8. **Initiation Date**: Initiated by either Committer or Committee and confirmed by the other party. Change not allowed once field 10 becomes Contingent or Effective

9. **Due Date**: Change allowed by Committer or Committee and must be confirmed by the other party

10. **Commitment State**: Confirmation of commitment state changes by either party are optional

11. **Discharge State**: Confirmation of discharge state changes by either party are optional

12. **Discharge Date**: Change not allowed

13. **Applicable Rules**: No changes allowed once field 10 becomes Effective.

4. Data Format/Representation

For each of the fields in the DLPC, the data format that should be used is specified below. The rules and definitions governing the use of the fields are specified in Section 2 and 3 above. All fields are required; however, some fields have conditions as well as sub elements with specified tag names. Some of the sub elements are required, conditional or optional. These requirements, conditions and options are defined in the individual field definition.

A DLPC is recorded in 13 simple data fields on a distributed ledger. It is again emphasized, however, that it is not mandatory that all distributed ledgers should represent or show those fields in the same way, so long as the ledger contains a record of all 13 fields along with their name and sub element tag names. Accordingly, different distributed ledgers may represent or show these fields, and the sequences or changes in those fields during the lifecycle of the DLPC, in different ways. This structure and flexibility ensures that the DLPC can be used on different distributed ledgers while maintaining the interoperability of the data within the 13 fields.

The technical references to industry specifications sited in this section can be found on the following sites:

ITU Telecommunications Standards

ISO Standards

Internet Engineering Task Force (IETF)

4.1 DLPC ID (Field 1)

The structure of the DLPC ID as described here, provides for a globally unique ID that would not be duplicated by any party creating a new DLPC. The DLPC ID is required.

The DLPC ID is constructed by generating a **UUID**. See Section 4.1.1.

4.1.1 UUID Definition and Description

A UUID (Universally Unique Identifier) can be used for multiple purposes, from tagging objects with an extremely short lifetime, to reliably identifying very persistent objects across a network, particularly (but not necessarily) as part of an ASN.1 object identifier (OID) value, or in a Uniform Resource Name (URN). UUIDs are also known as Globally Unique Identifiers (GUIDs), but this term is not used in Rec. ITU-TX.667|ISO/IEC9834-8.

UUIDs are an octet string of 16 octets (128 bits). The 16 octets can be interpreted as an unsigned integer encoding, and the resulting integer value can be used as a subsequent arc of {joint-iso-itu-t uuid(25)} (or 2.25) in the OID tree. This enables users to generate OIDs without any registration procedure.

If generated according to one of the mechanisms defined in Rec. ITU-T X.667 | ISO/IEC 9834-8, a UUID is either guaranteed to be different from all other UUIDs generated before 3603 A.D., or is extremely likely to be different (depending on the mechanism chosen). The UUID generation algorithm specified in this standard supports very high allocation rates: 10 million per second per machine if necessary, so UUIDs can also be used as transaction IDs.

No centralized authority is required to administer UUIDs but automatic generation of UUIDS (using the algorithm defined in Rec. ITU-T X.667 | ISO/IEC 9834-8) is provided at Get a new UUID. An example was requested at 4:45 ET on 8/29/2018 with the result:

Online UUID Generator

Your Version 4 UUID:

300dfa9b-1b33-4798-badc-4cd9e1cff8e4

Refresh page to generate another.

UUIDs forming a component of an OID are represented in ASN.1 value notation as the decimal representation of their integer value, but for all other display purposes it is more usual to represent them with hexadecimal digits with a hyphen separating the different fields within the 16-octet UUID. This representation is defined in Rec. ITU-T X.667 | ISO/IEC 9834-8.

Example:

f81d4fae-7dec-11d0-a765-00a0c91e6bf6 is the hexadecimal notation that denotes the same UUID as 329800735698586629295641978511506172918 in decimal notation.

As an alternative, the Internet Engineering Task Force (IETF), published a UUID URN Namespace specification RFC 4122. This is also an acceptable means of generating the UUID. Information on RFC 4122 can be found at https://www.ietf.org/rfc/rfc4122.txt .

4.2 Originator ID (Field 2)

The Originator ID field is made up of either the originators assigned Legal Entity Identifier (**LEI)** with the origination date and time (**SysTime) OR** the originators legal name (**Name**) and registered address (**Address**) with the origination date and time (**SysTime)**. The preferred implementation is to use a LEI. If the originator cannot get a LEI, they shall use their legal name and registered address. Only one of the two formats shall be used. See section 2.1 for the rules governing this field.

The elements for this field and their tag names are defined below. Tags shall be separated with the "pipe" character (|) as shown in the examples below.

Example: The originator has an issued LEI.

Originator ID: LEI=84UKLVMY22DS**|SYSTIME=**2020-04-13T14:19:35+00:00

Example: The originator does not have an issued LEI.

Originator ID:
Name=ANY_COMPANY_NAME**|Address**=ANY_STREET,ANY_CITY,STATE_OR_COUNTRY**|SysTime=**2020-04-13T14:19:35+00:00

The Originator ID field elements are defined below:

LEI= A 20-character alphanumeric string defined by ISO 17442 that is issued to the originator (See 5.2.1 for an explanation of a LEI and its format)

Name= an arbitrary ASCII string of up to 64 characters

Address= an arbitrary ASCII string of up to 64 characters

SysTime= System time shall follow ISO 8601 (See 5.2.2 for an explanation of System Time and its format)

How these elements are encoded into the Originator ID field is left up to the implementer of the DLPC specification. However, the tag names and requirements shall be followed.

4.2.1 LEI Definition and Description

A **Legal Entity Identifier** (or **LEI**) is a 20-character alphanumeric string that identifies distinct legal entities that engage in financial transactions. It is defined by **ISO 17442**. Natural persons may obtain a LEI only if they act in an independent business capacity. The LEI is a global standard, designed to be non-proprietary data that is freely accessible to all. A LEI consists of a 20-character alphanumeric string, with the first 4 characters identifying the Local Operating Unit (LOU) that issued the LEI. Characters 5 and 6 are reserved as '00'. Characters 7-18 are the unique alphanumeric string assigned to the organization by the LOU. The final 2 characters are checksum digits. Examples of LEI codes are shown in Table 1 below:

Structure of LEI codes

1	2	3	4	5	6	7	8	9	...	18	19	20
LOU-Code				Reserved		Entity-Identification					Check-sum	
G.E. Financing GmbH												
5493				00		84UKLVMY22DS					16	
Jaguar Land Rover Ltd												
2138				00		WSGIIZCXF1P5					72	
British Broadcasting Corporation												
5493				00		0IBP32UQZ0KL					24	

Table1: Structure of LEI codes

The Global Legal Entity Identifier Foundation (GLEIF) does not directly issue Legal Entity Identifiers, but instead it delegates this responsibility to Local Operating Units (LOUs). These LEI issuers supply different services. LOUs can have different prices for the registration services they offer. GLEIF is responsible for monitoring LEI data quality.

4.2.2 System Time Definition and Description

System time shall follow ISO 8601 and the implementation shall be as follows. The components shown here must be present, with exactly the punctuation shown. Note that the "T" appears literally in the string, to indicate the beginning of the time element, as specified in ISO 8601.

Format-Complete date plus hours, minutes and seconds:

    YYYY-MM-DDThh:mm:ssTZD (eg 1997-07-16T19:20:30+01:00)

Where:

    YYYY = four-digit year

    MM = two-digit month (01=January, etc.)

    DD = two-digit day of month (01 through 31)

    hh = two digits of hour (00 through 23) (am/pm NOT allowed)

    mm = two digits of minute (00 through 59)

    ss = two digits of second (00 through 59)

    TZD = time zone designator (Z or +hh:mm or -hh:mm)

Two ways of handling time zone offsets are allowed:

1. Times are expressed in UTC (Coordinated Universal Time), with a special UTC designator ("Z").

2. Times are expressed in local time, together with a time zone offset in hours and minutes. A time zone offset of "+hh:mm" indicates that the date/time uses a local time zone which is "hh" hours and "mm"minutes ahead of UTC. A time zone offset of "-hh:mm" indicates that the date/time uses a local time zone which is "hh" hours and "mm"minutes behind UTC.

Note: If seconds are not used, record ss as (00)

Examples:

1994-11-05T08:15:30-05:00 corresponds to November 5, 1994, 8:15:30 am, US Eastern Standard Time.

Or

1994-11-05T13:15:30Z (corresponds to the same instant above).

4.3 Reference ID (Field 3)

The Reference ID field may be initialized as **NULL**. It must utilize one of the formats below when Field 10 becomes **CONTINGENT** or **EFFECTIVE**. The **RefID** element shall always be included as a minimum requirement. Additionally, this field may optionally contain an instrument description (**InstDesc**), a reference link to the digital copy of the instrument (**URL**) and a Hash value of the digital reference instrument (**Hash**). See section 2.1 for the rules governing this field.

If there is no separate reference documentation, the Reference ID field shall contain the value of the DLPC ID (Field 1). In this case, only the RefID element shall be used.

The Reference ID field can contain the following elements. The elements for this field and their tag names are defined below. Tags shall be separated with the "pipe" character (|) as shown in the examples below:

Example: where there is no separate reference documentation and the DLPC ID (Field 1) value is used with no other elements.

Reference ID**: RefID=**300dfa9b-1b33-4798-badc-4cd9e1cff8e4

Example: where optional elements are included and the Reference ID has a different value from the DLPC ID.

ReferenceID**: RefID=**Z123456789**|InstDesc=**GE_CAPITAL_INSTRUMENT_DATED_APRIL
2020|**URL**=https://www.gecapital.com/dlpc/Z123456789|**Hash**=592FA743889FC7F92AC2A
37BB1F5BA1DAF2A5C84741CA0E0061D243A2E6707BA

The Reference ID field elements are defined below:

RefID= External reference ID to original instrument. This element can contain an arbitrary ASCII string of up to 64 characters describing the original referenced instrument. If there is no external reference ID, this field shall be populated with the same value as the DLPC ID (Field 1).

InstDesc= an arbitrary ASCII string of up to 64 characters describing the instrument.

URL= External reference pointer (Uniform Resource Locator) to the location of the documentation in IETF RFC 3986 format. All URLs must be properly encoded (URL Encoding).

Hash= Hash of the actual referenced document. Hash must use SHA-3, 256-bit or higher. Number of bits agreed upon during network formation.

How these elements are encoded into the Reference ID field is left up to the implementer of the DLPC specification. However, the tag names and requirements shall be followed.

4.4 Committer (Field 4)

The Committer field may be initialized as **NULL**. It must utilize one of the formats below when Field 10 becomes **CONTINGENT** or **EFFECTIVE**. The Committer field may contain the following elements; the company assigned LEI number (**LEI**), the company legal name (**Name**), the company registered address (**Address**) and optional identification data about the Committer (**Opt**).

Preferred Format:

If the Committer has an assigned and valid (registered) LEI, the Committer's valid LEI shall be used. When the element (**LEI**) is used only the optional element (Opt) is allowed. The element (Opt) may be used to add identity information such as a Tax ID or other national/regional IDs. The LEI element is defined in 4.2.1.

Optional Format:

If a LEI is not available, the legal name of the Committer (**Name**), together with their registered address (**Address**) shall be used. The element (**Opt**) may be included with the legal name/address to add additional identity information about the Committer. See section 2.1 for the rules governing this field.

The elements for this field and their tag names are defined below. Tags shall be separated with the "pipe" character (|) as shown in the examples below:

Example: The Committer has a LEI number and no optional data is needed.

Committer: **LEI**=84UKLVMY22DS

Example: The Committer does not contain an assigned LEI number and optional identity is being included. Note if no optional data is being added the "**Opt**" element would be omitted.

Committer:
Name=ACME_INDUSTRIAL,INC|**Address**=ANY_STREET,ANY_CITY,STATE_OR_COUNTRY|**Opt**=TAX_ID_1234567890

The Committer field elements are defined below:

LEI= A 20-character alphanumeric string defined by ISO 17442 that is issued to the originator (See 5.2.1 for an explanation of a LEI and its format)

Name= an arbitrary ASCII string of up to 64 characters

Address= an arbitrary ASCII string of up to 64 characters

Opt= an arbitrary ASCII string of up to 64 characters

How these elements are encoded into the Committer field is left up to the implementer of the DLPC specification. However, the tag names and requirements shall be followed.

4.5 Committee (Field 5)

The Committee field may be initialized as **NULL**. It must utilize one of the formats below when Field 10 becomes **CONTINGENT** or **EFFECTIVE**. The Committee field may contain the following elements; the company assigned LEI number (**LEI**), the company legal name (**Name**), the company registered address (Address) and optional identification data about the Committee (**Opt**).

Preferred Format:

If the Committee has an assigned and valid (registered) LEI, the Committee's valid LEI shall be used. When the element (**LEI**) is used only the optional element (Opt) is allowed. The element (Opt) may be used to add identity information such as a Tax ID or other national/regional IDs. The LEI element is defined in 4.2.1.

Optional Format:

If a LEI is not available, the legal name of the Committee (**Name**), together with their registered address (**Address**) shall be used. The element (**Opt**) may be included with the legal name/address to add additional identity information about the Committee. See section 2.1 for the rules governing this field.

The elements for this field and their tag names are defined below. Tags shall be separated with the "pipe" character (|) as shown in the examples below:

Example: The Committee has a LEI number and no optional data is needed.

Committee: **LEI**=`84UKLVMY22DS`

Example: The Committee does not contain an assigned LEI number and optional identity is being included. Note if no optional data is being added the "**Opt**" element would be omitted.

Committee: **Name**=`ACME_INDUSTRIAL,INC`|**Address**=`ANY_STREET,ANY_CITY,STATE_OR_COUNTRY`|**Opt**=`TAX_ID_1234567890`

The Committee field elements are defined below:

LEI= A 20-character alphanumeric string defined by ISO 17442 that is issued to the originator (See 4.2.1 for an explanation of a LEI and its format)

Name= an arbitrary ASCII string of up to 64 characters

Address= an arbitrary ASCII string of up to 64 characters

Opt= an arbitrary ASCII string of up to 64 characters

How these elements are encoded into the Committee field is left up to the implementer of the DLPC specification. However, the tag names and requirements shall be followed.

4.6 Currency (Field 6)

The Currency field shall identify the currency of Amount Field 7 using its **ISO 4217** code. This field may be initialized as **NULL**. It must be populated when 4.7 Amount Field 7 contains an amount value other than **NULL**. See section 2.1 for the rules governing this field.

4.7 Amount (Field 7)

The Amount field shall contain a decimal number. The integer part can have up to 24 numerals. The fractional part can have up to 7 numerals. The amount cannot be negative. This field may be initialized as **NULL**. It must be populated with a positive decimal number when 4.10 Commitment State Field 10 has a value of **CONTINGENT** or **EFFECTIVE**. See section 2.1 for the rules governing this field.

4.8 Initiation Date (Field 8)

The Initiation Date field shall follow ISO 8601 and the implementation shall be as follows. The components shown here must be present, with exactly the punctuation shown. Note that the "T" appears literally in the string, to indicate the beginning of the time element, as specified in ISO 8601.

This field may be initialized as **NULL**. It must be populated when 4.10 Commitment State Field 10 has a value of **CONTINGENT** or **EFFECTIVE**. See section 2.1 for the rules governing this field.

Format-Complete date plus hours, minutes and seconds:

   YYYY-MM-DDThh:mm:ssTZD (eg 1997-07-16T19:20:30+01:00)

See Section 4.2.2 for the complete definition and description of System Time as defined in ISO 8601.

4.9 Due Date (Field 9)

The Due Date field shall follow ISO 8601 and the implementation shall be as follows. The components shown here must be present, with exactly the punctuation shown. Note that the "T" appears literally in the string, to indicate the beginning of the time element, as specified in ISO 8601.

This field may be initialized as **NULL**. It must be populated when 4.10 Commitment State Field 10 has a value of **EFFECTIVE**. See section 2.1 for the rules governing this field.

Format-Complete date plus hours, minutes and seconds:

   YYYY-MM-DDThh:mm:ssTZD (eg 1997-07-16T19:20:30+01:00)

See Section 4.2.2 for the complete definition and description of System Time as defined in ISO 8601.

4.10 Commitment State (Field 10)

The Commitment State field shall contain an ASCII string with one of the following values: "**INITIATED**", "**CONTINGENT**", "**EFFECTIVE**" or "**DISCHARGED**".

See section 2.1 for the rules governing this field.

4.11 Discharge State (Field 11)

The Discharged State field shall contain an ASCII string with one of the following values: "**OPEN**", "**PAID**", "**PAST_DUE**" or "**CANCELLED**"

This field shall be initialized with "**OPEN**". See section 2.1 for the rules governing this field.

4.12 Discharge Date (Field 12)

The Discharge Date field shall follow ISO 8601 and the implementation shall be as follows. The components shown here must be present, with exactly the punctuation shown. Note that the "T" appears literally in the string, to indicate the beginning of the time element, as specified in ISO 8601.

This field shall be initialized as **NULL**. It must be populated when 4.11 Discharge State Field 11 has a value of **PAID** or **CANCELLED**. See section 2.1 for the rules governing this field.

Format-Complete date plus hours, minutes and seconds:

   YYYY-MM-DDThh:mm:ssTZD (eg 1997-07-16T19:20:30+01:00)

See Section 4.2.2 for the complete definition and description of System Time as defined in ISO 8601.

4.13 Applicable Rules (Field 13)

Applicable Rules field may be initialized as **NULL**. It must utilize the format below when Field 10 becomes **CONTINGENT** or **EFFECTIVE**. The Applicable Rules field shall contain a name (**Name**) describing the applicable documentation describing the governing rules of the transaction along with the version of those rules (**Version**). This field can optionally contain an external reference pointer to a location hosting the posting or storage of those rules (**URL**). See Section 2.1 for the rules governing this field.

The elements for this field and their tag names are defined below. Tags shall be separated with the "pipe" character (|) as shown in the examples below:

Example: Applicable Rules listing a name and version only.

Applicable Rules: **Name**=BAFT_BEST_Practices|**Version**=VERSION_2.1_DATED_APRIL_2020

Example: Applicable Rules listing a name and version with an optional external reference pointer.

Applicable Rules: **Name**=BAFT_BEST_PRACTICES|**Version**=VERSION_2.1_DATED_APRIL _2020|**URL**=https://www.baft.com/dlpc/1234567890

The Application Rules field elements are defined below:

Name= an arbitrary ASCII string of up to 64 characters designating the name of the rule set

Version= an arbitrary ASCII string of up to 64 characters designating the version of the rule set

URL= External reference pointer (Uniform Resource Locator) to the location of the documentation in IETF RFC 3986 format. All URLs must be properly encoded (URL Encoding).

How these elements are encoded into the Applicable Rules field is left up to the implementer of the DLPC specification. However, the tag names and requirements shall be followed.