

# Interoperability and Certification Global Data Synchronisation Network

## 1. Objectives

The objectives of this paper are:

- to define Interoperability
- to clarify what is and what is not covered by the GDSN Data Pool Certification, today and in the future

GDSN's fundamental role in supporting Global Data Synchronisation is to provide a framework to support interoperability among the Data Pools and the GDSN Global Registry so that they may support the local and global data models and validation requirements of their respective trading partner customers.

## 2. Definition of Interoperability

GDSN definition of Interoperability:

- Two or more Data Pools supporting the GS1 standards-compliant synchronisation processes in a production environment (live customers systems) through the facilitation of the Global Registry
- The use of the full set of available GS1 GDSN standards-based mandatory messages, validations, and functional processes available, successfully tested in the most recent certification event to support the ability for trading partners to transfer and use standards-based information in a uniform and efficient manner

## 3. Components of Interoperability

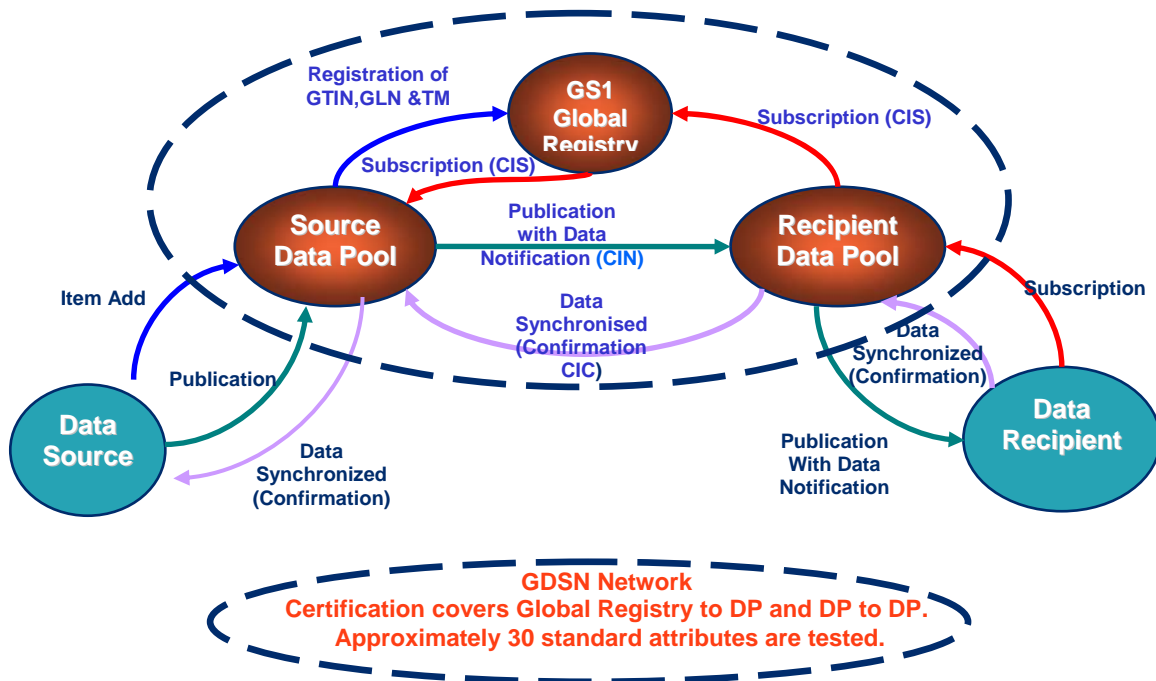
The following components of interoperability support end-to-end data synchronisation:

- 1) Technical:
  - a. Base system level connections
- 2) Functional / Standards (Data Pool-to-Data Pool and Data Pool-to-Global Registry):
  - a. Standard messages are exchanged consistently and accurately
  - b. Standards are performing as designed
- 3) Business Process (End-to-End, Trading Partner-to-Trading Partner)
  - a. Encompasses trading partners internal processes and systems and the connection from Data Pool to the Trading Partner

#### 4. GDSN Certification today

Objectives of GDSN Certification Testing:

- ensures a solid base level of interoperability exists within the network
- focuses on ensuring quality and thoroughness of testing all mandatory functionality
- strives to limit the impact to already certified and active Data Pools



GDSN Certification Testing encompasses the following:

- 1) Technical:
  - a. Communication (EDIINT AS2) and system connections properly implemented and functioning
  - b. Data Pool “certification-level” software certified with the commitment that the Data Pool will deploy this certification-level version into production
- 2) Functional / Standards addressed as follows:
  - a. Focused on Core GDSN functionality
    - i. Ensures a Data Pool can send and receive messages from every other Data Pool and the Global Registry
    - ii. Test mandatory attributes and generically test optional attributes. The mandatory GDSN functionality is tested with ~30 key attributes (based on DP input on what information is most commonly being communicated in the GDSN).
    - iii. Test that standards and processes are functioning as designed

- 3) Business Process (End-to-End, Trading Partner-to-Partner)
  - a. Piloting of functionality testing Trading Partner to Trading Partner interoperability, but focuses only on verification of the standard.
  - b. End-to-end, Trading Partner-to-Trading Partner testing is currently not a part of GDSN Certification
    - i. All GDSN Certified DP users synchronize data using the GDSN Model (the Global Registry and standards based connections, messaging, validations, and functionality)

GDSN was not intended to govern DP-to -Trading Partner activity. The breadth of attributes will vary from Trading Partner to Trading Partner and region to region, driving unique value and services of the DP's servicing those trading partners, industries, and/or markets. If an attempt was made to certify each of these types of implementations, the costs of such a certification would increase significantly over the current model. The level of complexity would also increase by an order of magnitude, by forcing all DP's to be accountable for all functionality and attributes used in the GDSN everywhere.

## 5. GDSN Certification in the future

GDSN, Inc. will take steps to adjust criteria for certification to encompass additional business processes, while continuing to ensure technical message exchange and the balancing of overall cost and benefits.

GDSN, Inc. was chartered to ensure a framework was in place to support and facilitate the Global Data Synchronisation Network. This basic foundation is currently implemented to support various processes between DP's and the Global Registry, but not to test or ensure all of the associated business processes between data pools and the trading partners.

The purpose and scope of this new certification process will meet the needs and support the strategic direction of GDSN's 3 year plan.

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## Addendum

GDSN Certification Testing encompasses testing all mandatory attributes with ~ 30 key optional attributes (based on DP input on what information is most commonly being communicated in the GDSN). Following is list of the additional attributes tested in the recently completed BMS Item 2.1 Certification Event.

### **GDSN Test Overview:** Item Extension and Expanded Attribute Data

#### **GS1 Use Cases Covered: Catalogue Sync: UC-37, UC-43**

**Purpose:** This test process confirms ability for SDP to generate CINs using attributes above only mandatory. Also, confirms ability for SDP to generate CIN with extension and RDP to accept CIN with extension.

#### **Testing Procedure:**

Description: SDP sends CINs on two items containing expanded list of GDSN Item Attributes. Item and list of assigned attributes are contained in spreadsheet provided by DGI.

The attributes used are:

tradeltemUnitDescriptor informationProvider  
isTradeltemABaseUnit isTradeltemAConsumerUnit  
isTradeltemADespatchUnit isTradeltemAnOrderableUnit  
isTradeltemAninvoiceUnit isTradeltemAVariableUnit  
orderQuantityMultiple orderQuantityMinimum  
orderQuantityMaximum orderingLeadTime  
brandOwner nameOfBrandOwner  
manufactor nameOfManufactor  
netContent height  
width depth  
grossWeight netWeight  
lastChangeDateTime publicationDate  
startAvailabilityDateTime endAvailabilityDateTime  
classOfDangerousGoods dangerousGoodsRegulationCode  
dangerousGoodsShippingName dangerousGoodsTechnicalName  
dangerousGoodsPackingGroup dangerousGoodsHazardousCode  
dangerousGoodsAMarginNumber  
unitedNationsDangerousGoodsNumber  
flashPointTemperature storageHandlingTemperatureMaximum  
storageHandlingTemperatureMinimum  
functionalName variant  
colorCodeValue colorDescription  
colorCodeListAgency suggestedRetailPrice  
retailPriceOnTradeltem isPackagingMarkedReturnable  
packagingMarkedRecyclableScheme  
minimumTradeltemLifespanFromTimeOfArrival  
effectiveStartDate brandName  
additionalClassificationCategoryCode  
additionalClassificationCategoryDescription  
barCodeType tradeltemDescription

additionalTradelItemDescription tradelItemFinishDescription  
importClassificationType importClassificationValue  
descriptionShort tradelItemCountryOfOrigin  
sizeCodeListAgency sizeCodeValue  
descriptiveSize