April 1, 1999 was the date of incorporation of the Code Management Association and the creation of the Electronic Commerce Code Management Association or ECCMA. While UCC/EAN (now GS1) had focused on creating globally unique part numbers to improve supply chain management, our purpose was to improve the descriptions and classifications of goods and services for spend analysis and competitive sourcing. GS1 is funded by manufacturers and suppliers to whom they license prefixes to be used in creating a globally unique part number the GTIN. ECCMA is funded by buyers and their service providers through membership and payments for certification and consulting services.

ECCMA’s first development was the UNSPSC classification. The UNSPSC was developed at the request of the credit card companies (Amex, Visa, Master Card) so they could provide their customers with spend analysis reports. The theory was that the suppliers would add the UNSPSC to the line item of their invoices and the credit card companies developed an enhanced credit card processing format (Level III) that captured not only the credit card number, the merchant number, the date and the total amount (Level I) but also the line item detail including the item description, the item number and the UNSPSC. Large companies could now expand the list of permitted acceptors of corporate purchasing cards from airlines, car hire, hotels and restaurants to include office supply retailers such as Staples and Office Depot safe in the knowledge that computers, printers and cell phones would not end up in office supplies. It worked and buyers realized that their suppliers could be persuaded to "standardize" their

(Continued on page 2)
invoices at least to the extent of adding a standard commodity classification. Suppliers also realized that the best place to add the UNSPSC was to their catalog so why not make it a part of the search?

The one thing we teach in the ECCMA master class on Classifications is that classifications are use specific. In engineering, we know that using anything outside its “design parameters” is courting disaster; this also applies to classifications. Companies that use the UNSPSC as their internal classification are using it outside its design parameters. Using the UNSPSC or any other externally controlled spend classification as the SAP material group code is what has become known as the million dollar mistake, basically because it will cost this much to fix. The reasons are partly legal and partly technical but they have everything to do with identifiers which is why May 1st, 2015 is another significant date.

This newsletter includes the full text of ECCMA 2, the first publication of a new standard that holds the promise of delivering on the promise of faster, better and cheaper cataloging and data quality management.

Identifiers are the key to solving data quality but in order to be able to use an identifier you need to know who issued the identifier. You do this by prefixing the identifier with the name of the issuer and if the issuer controls many identifiers, the name of the identifier. ECCMA has a Contractor and Government Entity (CAGE) identifier 1U6M8 issued by the Defense Logistic Information Service (DLIS). According to ECCMA 2 this identifier should be represented as DLIS.CAGE:1U6M8. We also have a DUNS number D&B.DUNS:107684529. It is pretty obvious why this is a good idea but there are also not so obvious reasons as well. The first is legal- identifiers are copyright, they belong to the issuer and you are “permitted” (or licensed) to use them so now may be a good time to know whose identifiers you are using and if you are using them in accordance with their permitted use. Using the ECCMA CAGE identifier to exchange (or sell) information about ECCMA is a permitted use but if you tried to do the same with a DUNS® number you would be facing a hefty legal bill.

If you are a user of identifiers (every company is), implementing ECCMA 2 is very straightforward. From an IT perspective it is actually good practice so don’t delay. If you issue identifiers for use outside your organization then there are a couple of additional steps. You should clearly name your identifier if you have more than one and you should always format your identifiers in accordance with ECCMA 2; your name followed by the identifier name (separated by a period character), followed by a colon character, then your identifier.
Pretty easy, but you are not done. You need to publish the license associated with the identifier. These first two steps are very straightforward and can be implemented very quickly at minimal cost. The final step may involve some technical challenges but they are well within the capabilities of most organizations. This final step is to provide ISO 22745 identifier resolution. This consists in responding to an identifier resolution request with data formatted in XML in accordance with ISO 22745-40. This turns your identifier into an ISO 8000 Quality Identifier.

ECCMA is setting up an ISO 8000 quality identifier registry where you can register your organization and the identifiers it issues. You can provide information about your identifiers to help users understand what data is associated with your identifier and how the identifier and the data it represents should be used. You will be asked to provide a link to your identifier license which should detail the permitted uses (we will be providing examples of licenses that you can modify). Finally when you are ready to offer ISO 22745 resolution services you will be able to register the email address to which requests for resolution should be sent or the address of the server where you have implemented ISO 29002 web services. Registration of your organization and the names of the identifiers you issue will be free during the month of May and will remain free for ECCMA full members. For associate members and non-members there will be a small annual fee to register an issuing organization and identifier name.

During the next few months, we will be working on bringing our own registries and identifiers into compliance with ECCMA 2 so you will start to see references to ECCMA.eOTD, ECCMA.eDRR, ECCMA.eGOR, ECCMA.eSNR, ECCMA.eNLI and ECCMA.eCPI, not forgetting of course ECCMA.eQIR which is the ISO 8000 Quality Identifier Registry itself. We will be working on the implementation of automated identifier resolution and we will be happy to assist any of our members who are looking to implement ECCMA 2.

Best Regards,

Peter R. Benson, Executive Director, ECCMA
linking the knowledge of today, with the power of tomorrow

Standards for Digital Manufacturing

ISO 10303-242
Computer Aided Design

ISO 10303-238
Technical Data Package

ISO 13399
Cutting Tool Database

Machine Tool Database

Computer Aided Manufacturing

Intelligent Control

Problem – Fragmented Data

- Part + Tolerances
- Drawings
  - Some 3D
- One design file
  - Spawns 100 manufacturing files
    - (Ford Study)
- Made in shop
  - for one CNC
- Paper-tape
  - Codes (without the paper)

Solution – Model Based

- Cutting Tools
  - Chosen from experience, variable results
  - Machine Tools
- 1M+ STEP CAD
  - Seats for Part + Tolerances
- Model Driven
  - Manufacturing & Assembly
- Rich STEP-NC
  - Process
- 3D Cutting Tool Models
- Machine Tool Kinematics

Fragmentation is wasteful

- Visiting sites to explain data
- Maintaining old, unnecessary machines
- Repetitive, error prone data entry
- Misunderstandings of drawing symbols
- Incomplete simulations from poor data

Models can enable

- Robot machining
- On-Machine acceptance
- Resource and performance optimization
- Last minute tooling selections
- Faster and better cost estimates

Find out how to get started at the TC184/SC4 Industry day on October 21st, Pier 5 Hotel, Baltimore, Maryland

Registration (required) at http://www.sfasi.org/

Registration for the ISO TC/184 SC 4 along with full meeting details will be available soon!
Europe’s only co-located conferences on Enterprise Architecture and BPM provide a unique opportunity to discover the latest approaches and innovative ideas to both BPM and EA and benefit from the synergies between them. The conferences are designed by practitioners for practitioners. They are neither analyst nor vendor-led and provide diverse and wide-ranging perspectives on BPM and EA, informed by practical experience.

**Focus on End-User Case Studies.** Choose from over 40 case studies and take an inside look at the successes and challenges behind real-world BPM and Enterprise Architecture implementations. Case studies and contributors include HSBC, United Utilities, British Gas, Swiss Re, Shell, Bayer AG, Lloyd's Register, Danfoss A/S, European Commission, National Bank of Abu Dhabi, Zurich Insurance, Statoil, TNT Express, The UK Ministry of Justice, John Lewis, Heathrow Airport, Danish National Police, Association of Enterprise Architects, Swedish Board of Agriculture, Air Liquide, State Revenue Office of Victoria Australia, Worcestershire County Council, Henley Business School, Rexall/Pharma Plus, JLT Group, BHP Billiton, CSC, Capgemini and many more.

**Choose from 70 sessions.** Delegates can choose from five conference tracks, 40 case studies, 14 pre-conference workshops and three full-day post-conference workshops. Whether you are just getting started or looking for more advanced knowledge you will find sessions that address issues you are facing and people who can advise you.

**Pre and Post Conference workshops.** Choose from an unparalleled range of tutorials and workshops on specific topics to get quickly up-to-speed or fine tune your performance.

View the [full conference program](#) or email [customerservice@irmuk.co.uk](mailto:customerservice@irmuk.co.uk) or call IRM UK on +44 (0)20 8866 8366.
Natural identifiers enable straightforward resolution in the public domain and can assist in a number of use cases where information about property including its physical location is needed. In the first of a three-part series, this article will discuss what Standard 1 is, what it is presently being used for and what the goals for the future are.

Historically the description of a property was made through the use of natural markers, and while this is still in use today, a lot boundary is most commonly described by the coordinates of a polygon in a local coordinate system which is itself, at some point, referenced to the Earth’s coordinate system.

In most countries, the existence of a physical property is recorded through the registration of the legal description in a public registry—the land registry—maintained by the local legal jurisdiction. The index to the land registry is often used as an abbreviation of, or replacement for, a parcel’s legal description.

ECCMA Standard 1 provides a formula for creating unique identifiers for a specific locational point on the Earth—Property Natural Identifier Unit (PNIU) or a collection of points that represent a contiguous area of land, typically referred to as a “lot” – Property Natural Identifier Lot (PNIL). These identifiers are defined as natural as they are self-described from their parts: latitudinal and longitudinal coordinates.

These identifiers have been developed to support the wide-spread use of global-positioning technology in everything from smart phone applications for driving directions to the use of drones.

PNIU - This part of ECCMA 1 specifies requirements for identifying a unit space. The identifier is an encoding of the latitude, longitude, and floor (elevation) of the front door or egress of the unit space. It can also be used for marking any component’s location such as utility box, a well, etc.

PNIL - This part of ECCMA-1 specifies a method for generating a PNIL from such a boundary representation. It also specifies the format for a controlled identifier (identifier that is arbitrarily assigned and is not based on intrinsic characteristics of a lot) and requirements for organizations that issue controlled identifiers.

The PNIL will be unique to a single property—the property fingerprint. Any change in the property boundaries would create a different PNIL. Beyond its value as a natural identifier the PNIL is intended to be used to display the boundaries of a property in any geospatial-enabled system.

The PNIL is not intended to replace any of the existing property identifiers but represents an opportunity to add a standard geospatially interpretable identifier that will make it easy to visualize the boundaries of a property in commonly available geospatial systems.

SUBMITTED BY: Liz Green
Chair, ePROP

ECCMA Standard 1 Property Identification Vision or Version
The 2015 Information and Data Quality Summit (IDQSummit) is the premier international event for exchanging data quality and data governance solutions, offering professional development and networking opportunities, along with new cutting-edge tutorials, presentations and keynotes from a variety of highly experienced speakers.

**Dates: Monday, October 12th to Wednesday, October 14th, 2015**

**Tutorials:** Monday, October 12th  
**Conference sessions:** Tuesday, October 13th – Wednesday, October 14th  
**Conference dinner and reception:** Wednesday, October 14th

**Location:** Pier 5 Hotel, Baltimore MD, USA

**Sponsorship Opportunities**
There are plenty of sponsorship opportunities available for small to large companies! Please contact Alex Doyle (alex.doyle@idqsummit.org) or Debbie Megna (debbie.megna@idqsummit.org) for a copy of the sponsorship prospectus and to discuss how you can get involved.
GET INVOLVED

Master Classes

These classes are designed for individuals from any industry interested in learning more about improving data and information quality. We will cover techniques and standards and best practices for data collection, data validation, data security and much more. From design and engineering to procurement and sales -- knowing how to properly name and describe goods and services is essential to an organization’s bottom line!

Classes are 1 hour in duration, beginning at 1:00PM EST.

- Master Data (May 27)
- ISO 8000 Quality Data (June 3)
- Cataloging (June 10)
- Classifications (June 17)
- Corporate Dictionary (June 24)

Fee
Member (per hourly class) - $25
Non-Member (per hourly class) - $50

For complete details and registration information, please visit: www.eccma.org/class/.

SPECIAL! 5 classes for the price of 4
Member - $99
Non-Member - $199

ISO 8000 Certification

With all the talk and headlines on “Big Data”, Data as an Asset, and Data Security and Privacy, now is the time to be educating yourself and taking the lead in the data discussion about data quality and data governance. Data is the new hot topic in every company, and the ECCMA MDQM certification will give you an overview of the concepts of Data Quality and Data Governance, and most importantly, the knowledge and insight of how to start meaningful dialog and initiatives within your company.

NEW BENEFIT!

Any previously certified Master Data Quality Manager will now be able to renew their certificate at a flat rate of $25! Your discount will automatically be activated once your email address is entered into the registration form: www.eccma.org/iso8000/iso8000renew.php.
ECCMA case studies display the work accomplished by utilizing one of ECCMA’s many different services, whether it be the eOTD, Scoping Studies, ISO 8000, eNLI and so forth. These case studies showcase which services are most valuable to our members. We encourage anyone who has utilized ECCMA’s services to submit a case study! It will be featured on the ECCMA website.

If you are interested in submitting, please contact victoria.kondravy@eccma.org.

The ECCMA Data Cleansing Project Scoping Study is designed to provide ECCMA members with an independent and authoritative assessment of the quality of their data prior to contracting for data cleansing services. The objective is to define the quantity and quality of the source data and provide a framework for measuring the quality of the data to be delivered by the contractor. The ECCMA Scoping Study helps companies focus on those items which matter most, saving precious time and money in the MDM improvement efforts.

As a Full member of ECCMA, you will receive complimentary scoping studies after your first study.

For more information, or a Statement of Work, please contact Peter Benson at peter.benson@eccma.org.

If you are interested in becoming a media partner with ECCMA, please contact, victoria.kondravy@eccma.org.

As a member of ECCMA, you have access to resources and support that can help you measure and improve the quality of your data. Check out our new brochure to see all of what ECCMA has to offer! Already a member and need to renew? Renewing is fast and easy, visit: www.eccma.org/Renewindex.php.
On March 25-26, ECCMA held an on-site ISO 8000 Master Data Quality Manager Certification Workshop in Mexico City for the company Mitsui & Co. Power Development and Management Americas. The course was instructed by Gerardo Leal. **We would like to congratulate all the attendees of the course on becoming certified as Master Data Quality Managers.**

### WHY SHOULD YOU BECOME ISO 8000 CERTIFIED?

1. Stand out from all the rest by showing your knowledge in this topic and be officially recognized and certified by ECCMA as a Master Data Quality Manager and boost your LinkedIn profile and professional ranking.
2. Learn how to ask for the right things from vendors and contractors when writing contracts or engaging resources for quality data software or services.
3. Make yourself more valuable in your company by showing others how you can help save the company (or your client) money. Know how to manage a corporate dictionary, a wanted skill.
4. Be a leader in your company/industry
5. How to start and effectively contribute to the Data Quality and Data Governance dialog within your organization or customer base.

If you are interested in learning more about becoming certified as a Master Data Quality Manager whether it is via an independent study, webinar or workshop please contact training@eccma.org and check out: [www.eccma.org/iso8000/](http://www.eccma.org/iso8000/)iso8000home.php.
linking the knowledge of today, with the power of tomorrow

ABOUT ECCMA

ECCMA is a not-for-profit International Association of Master Data Quality Managers set up in 1999, to develop and maintain open solutions for Faster – Better – Cheaper access to authoritative master data.

ECCMA is the original developer of the UNSPSC, the project leader for ISO 22745 (open technical dictionaries and their application to the exchange of characteristic data) and ISO 8000 (information and data quality), as well as, the administrator of U.S. TAG to ISO TC 184 (Automation systems and integration), TC 184 SC 4 (Industrial data) and TC 184 SC 5 (Interoperability, integration, and architectures for enterprise systems and automation applications) and the international secretariat for ISO TC 184 SC 5.

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Quality Identifier — Formatting and Resolution of Quality Identifiers

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Foreword

ECCMA is a nonprofit organization whose mission is to help organizations improve the quality of data while lowering the cost of data acquisition and data maintenance. ECCMA participates in standards development activities and, in some cases, publishes standards, in order to help organizations achieve data quality, avoid vendor lock-in, ensure their data is portable, maintain ownership and control of their data, and protect their investment in their data.

This document is an ECCMA draft standard for trial use (DSTU).

This document was prepared in accordance with the Guidelines for Preparing ECCMA Standards, which are adapted from the ISO/IEC Directives, Part 2.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ECCMA shall not be held responsible for identifying any or all such patent rights.

ECCMA 2 was prepared by the ECCMA Standards Committee.

Note:

The key words "MUST", "MUST NOT", "REQUIRED", "SHALL", "SHALL NOT", "SHOULD", "SHOULD NOT", "RECOMMENDED", "MAY", and "OPTIONAL" in this document are to be interpreted as described in RFC 2119 [RFC2119]. The terms "UTF-8 string" or "UTF-8 character" are used to refer to Unicode characters, which may or may not be members of the ASCII subset, in UTF-8 [RFC3629], a standard Unicode Encoding Form.
Introduction

In a relational database a primary key is used to uniquely identify each record in a table. These primary keys are designed to be used internally within a system that belongs to an organization. Frequently these primary keys are exchanged with external trading partners where they become “identifiers”, aliases for data that is controlled and managed by the owner of the identifier. Identifiers are widely used by governments and commercial companies as an essential part of the identification of individuals, organizations, locations, goods, services, processes, procedures, laws, rules and regulations. Identifiers are also used as references for common concepts as well as to identify specific transactions.

Identifiers are copyright, they are the legal intellectual property of the organization that authors (creates) them. Note: identifiers created automatically by an application are subject to the terms of the application license.

Identifiers are pointers to a specific data set managed by the owner of the identifier. Copyright, if it exists, in the data set or in the individual data elements is not necessarily the property of the owner of the identifier.

EXAMPLE: Vehicle registration number (license plate), vehicle Identification number (VIN), driver’s permit number, social security number, national identity card number, student number, employee number, passport number, tax identification number, IP address, telephone number, email address, domain name, part number, batch number, serial number, customer number, supplier number.
ECCMA 2

Quality Identifier — Formatting and Resolution of Quality Identifiers

1. Scope
The following are within the scope of ECCMA 2:
- terms related to quality identifiers and the resolution of quality identifiers
- the registration of quality identifiers
- the formatting of quality identifiers
- the request for resolution of a quality identifier
- the reply to a request for the resolution of a quality identifier

The following is excluded from the scope of ECCMA 2:
- the methods used for the creation of identifiers

2. Terms and definitions relating to identifiers
2.1 identifier
proprietary string of characters created by an organization to reference a data set

2.2 data set
collection of related data elements

2.3 data specification
data requirement statement
cataloging template
rules for describing items belonging to a particular class using entries from a data dictionary
[ISO 22745-2]

2.4 quality identifier
identifier that can be resolved to the minimum ISO 8000 quality data set required to validate the identifier

2.5 logical identifier
identifier created through the application of an algorithm to a data set

2.6 natural identifier
identifier created through the application of an algorithm to a natural occurring data set

[ECCMA 1-2 para 4.1]

Example: measurements and representations of longitude, time or distance are natural occurring data sets

2.7 Algorithm
process or set of rules that when applied to a data set creates a repeatable result

[ECCMA 1-2 para 3.1]

2.8
system generated identifier

sequential identifier

identifier generated by a computer application without reference to a data set
3. Fundamental concepts and assumptions

Identifiers are designed to be unambiguous pointers to a specific data set within a specific domain.

By explicitly associating the domain and the owner of the domain with the identifier, it is possible to create a globally unique identifier.

In order to validate an identifier it must be possible to resolve the identifier to characteristic data that can be used for the purpose of validation.

EXAMPLE: Resolving a registration number (license plate) to the make and model of a vehicle provides a visual validation, adding the Vehicle Identification Number (VIN) to the data set would provide a higher level of validation. Resolving the VIN to the make and model of the vehicle would allow both the identifiers to be positively validated (validation does not mean the data is true however relationships between data sets can be used to evaluate the probability of truth).

Data owners may have considerably more data associated with an identifier than that required to provide validation of the identifier. The data specification that identifies the minimum data set required to validate an identifier shall be referenced as the Validation Data Specification (VDS). Validation Data Specifications shall be registered in the ECCMA Data Requirement Registry (eDRR) where they shall be assigned a unique identifier.

For a data set to be considered to be ISO 8000 quality data it must be portable and it must comply with a stated data specification.

Data portability is achieved when data is formatted using a known syntax and when the semantic encoding of the content is explicit. ISO 22745-40 is the international standard for the representation of a data set in XML using an open technical dictionary for concept encoding.

ISO 22745-30 is the international standard for the representation of data specifications in XML using an open technical dictionary for concept encoding.

An ISO 22745-40 data set that complies with an ISO 22745-30 data specification would be ISO 8000 quality data.

4. Quality Identifier Registry

A Quality Identifier Registry shall contain the following data for each identifier registered:

4.1 Mandatory
Legal owner identifier
Organization identifier from the ECCMA Global Organization Registry (eGOR).

4.2 Mandatory
Registry assigned legal owner short name
UTF-8 string excluding the full stop character ‘.’ (2E) and the colon character ‘:’(3A) not to exceed a total of 16 characters

4.3 Mandatory
Owner assigned identifier short name
UTF-8 string excluding the full stop character ‘.’ (2E) and the colon character ‘:’(3A) not to exceed a total of 16 characters

4.4 Optional
Identifier input mask
String expression or set format that entered data must conform
4.5  
Optional  
Identifier validation rule  
Criterion or constraint used in the process of data validation

4.6  
Mandatory  
Validation Data Specification Identifier (VDSI)  
ECCMA Data Requirement Registry (eDRR) assigned identifier of the data specification that identifies the minimum data set required to validate an identifier

4.7  
Mandatory  
Email resolution server address (ERSA)  
Email address to which an email request for resolution should be sent

4.8  
Optional  
Standard resolution server address (SRSA)  
Address of the resolution server that responds to a standard ISO 22745-35 request for data with data formatted according to ISO 22745-40

4.9  
Mandatory  
Administrative point of contact  
Name, postal address, telephone number and email address of the administrative point of contact

4.10  
Mandatory  
Technical point of contact  
Name, postal address, telephone number and email address of the technical point of contact

## 5. Formatting Quality Identifiers

The Format of a Quality Identifier shall be the identifier legal owner short name followed by the full stop character ‘.’ (2E) optionally followed by the identifier short name followed by the colon character ‘:’(3A) followed by the identifier not to exceed a total length of 254 characters

Example

<table>
<thead>
<tr>
<th>Legal owner short name</th>
<th>ECCMA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Identifier short name</td>
<td>eOTD</td>
</tr>
<tr>
<td>Identifier</td>
<td>0161-1#01-068756#1</td>
</tr>
<tr>
<td>Quality identifier</td>
<td>ECCMA.eOTD:0161-1#01-068756#1</td>
</tr>
</tbody>
</table>
6. Request for resolution of a quality identifier

A request for the resolution of a quality identifier shall be as follows:

1. email request:
The email address shall be the address specified in the Quality Identifier Registry as the ERSA
The subject of the email shall contain the term “Resolve” followed by a space followed by the quality identifier
EXAMPLE: Resolve ECCMA.eOTD:0161-1#01-068756#1
The email reply shall be sent to the from address and shall contain a clear text message containing the data set specified in the to the Validation Data Specification that identifies the minimum data set required to validate an identifier

2. web services request
The address shall be the address specified in the Quality Identifier Registry as the SRSA

A 3rd party application can make a request to the ECCMA Quality Identifier Servers Registry (QIS Server) through a web service (sample of a web service definition is provided in Annex A). The web service will be provided the "legal owner short name" and "identifier short name" as input parameters and if a server matching the input parameters is available, the web service will respond with a Quality Identifier Server URI which hosts the web service for resolving the identifier.

The 3rd party application as the next step will make a request to the web service (sample of the web service definition is provided in Annex A) at the above mentioned URI, hosted at an external party's Quality Identifier Resolution Server (QIR Server) with the "legal owner short name", "identifier short name" and "identifier" as the input parameters and the web service will respond with data in ISO 22745-40 compliant format.
7. Reply to a request for the resolution of a quality identifier
The reply to a request for the resolution of a quality identifier shall consist of a message formatted in accordance with ISO 22745-40 (see example in Annex A).

ANNEX A
WSDL at QIS Server

```xml
<wsdl:definitions xmlns:qi_svr_res="urn:x-eotd:web-service:qi-server-resolution-service"
    xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/"
    xmlns:xsd="http://www.w3.org/2001/XMLSchema"
    xmlns:soap="http://schemas.xmlsoap.org/wsdl/soap/">
    <wsdl:types>
        <xsd:schema targetNamespace="urn:x-eotd:web-service:qi-server-resolution-service">
            <!-- Wrappers -->
            <xsd:element name="GetQIServerRequestData">
                <xsd:complexType>
                    <xsd:sequence>
                        <xsd:element name="legalownershortname" type="xsd:string"/>
                        <xsd:element name="identifiershortname" type="xsd:string"/>
                    </xsd:sequence>
                </xsd:complexType>
            </xsd:element>
            <xsd:element name="GetQIServerResponseData">
                <xsd:complexType>
                    <xsd:sequence>
                        <xsd:element name="qiresolutionserver" type="xsd:anyURI"/>
                    </xsd:sequence>
                </xsd:complexType>
            </xsd:element>
        </xsd:schema>
    </wsdl:types>
    <wsdl:message name="GetQIServerRequest">
        <wsdl:part name="parameters" element="qi_svr_res:GetQIServerRequestData"/>
    </wsdl:message>
    <wsdl:message name="GetQIServerResponse">
        <wsdl:part name="parameters" element="qi_svr_res:GetQIServerResponseData"/>
    </wsdl:message>
    <wsdl:portType name="qi_server_resolution_service">
        <wsdl:operation name="GetQIServer">
            <wsdl:input message="qi_svr_res:GetQIServerRequest"/>
            <wsdl:output message="qi_svr_res:GetQIServerResponse"/>
        </wsdl:operation>
        <wsdl:binding name="qi_server_resolution_service_SOAP_binding" type="qi_svr_res:qi_server_resolution_service">
            <soap:binding style="document" transport="http://schemas.xmlsoap.org/soap/http"/>
            <wsdl:operation name="GetQIServer">
                <wsdl:input>
                    <soap:body use="literal"/>
                </wsdl:input>
                <wsdl:output>
                    <soap:body use="literal"/>
                </wsdl:output>
            </wsdl:operation>
        </wsdl:binding>
    </wsdl:portType>
    <wsdl:service name="qi_resolution_service">
        <wsdl:port name="qi_server_resolution_service_port" binding="qi_svr_res:qi_server_resolution_service_SOAP_binding">
            <soap:address location="http://xxx.xxx.xxx/xyz.php"/>
        </wsdl:port>
    </wsdl:service>
</wsdl:definitions>
```
xml:soap.href="http://schemas.xmlsoap.org/wsdl/soap/"

<wSDL:port>
  <wSDL:service>
    <wSDL:definitions>
      <!-- WSDL at QIR Server -->
      <?xml version="1.0" encoding="UTF-8"?>
        <![--
Get_QI_Resolution - Web Services definition
Version 0.1
-->]
                      xmlns:soap="http://schemas.xmlsoap.org/wsdl/soap/"
                      targetNamespace="urn:x-eotd:web-service:qi-resolution-service">
          <wSDL:types>
            <xsd:schema targetNamespace="urn:x-eotd:web-service:qi-resolution-service">
              <xsd:complexType>
                <xsd:sequence>
                  <xsd:element name="GetQIRequestData">
                    <xsd:complexType>
                      <xsd:sequence>
                        <xsd:element name="legalOwnershortname" type="xsd:string"/>
                        <xsd:element name="identifiershortname" type="xsd:string"/>
                        <xsd:element name="identifier" type="xsd:string"/>
                      </xsd:sequence>
                    </xsd:complexType>
                  </xsd:element>
                  <xsd:element name="GetQIResponseData">
                    <xsd:complexType>
                      <xsd:sequence>
                        <xsd:element name="qiresolutionserver" type="cat:catalogue_Type"/>
                      </xsd:sequence>
                    </xsd:complexType>
                  </xsd:element>
                </xsd:sequence>
              </xsd:complexType>
            </xsd:schema>
          </wSDL:types>
        </wSDL:definitions>
      </?xml version="1.0" encoding="UTF-8"?>
      <!-- Wrappers -->
      <xsd:element name="GetQIData">
        <xsd:complexType>
          <xsd:sequence>
            <xsd:element name="qi_res:GetQIRequestData"/>
            <xsd:element name="qi_res:GetQIResponseData"/>
          </xsd:sequence>
        </xsd:complexType>
      </xsd:element>
    </wSDL:service>
    <wSDL:port>
      <wSDL:package name="qi_res:qi_resolution_service_SOAP_binding" type="qi_res:qi_resolution_service_type">
        <soap:binding style="document" transport="http://schemas.xmlsoap.org/soap/http"/>
      </wSDL:package>
    </wSDL:port>
    <wSDL:portType>
      <wSDL:binding name="qi_res:qi_resolution_service_SOAP_binding" type="qi_res:qi_resolution_service_type">
        <soap:operation name="GetQIData" soapAction="qi_res:qi_resolution_service"/>
      </wSDL:binding>
    </wSDL:portType>
    <wSDL:binding>
      <wSDL:operation>
        <wSDL:service name="qi_res:qi_resolution_service">
          <wSDL:port name="qi_res:qi_resolution_service_port" binding="qi_res:qi_resolution_service_SOAP_binding">
            <soap:address location="http://xxx.xxx.xxx.xxx/xyz.php"/>
          </wSDL:port>
        </wSDL:service>
      </wSDL:operation>
    </wSDL:binding>
  </wSDL:service>
</wSDL:port>
</wSDL:definitions>
</wSDL:service>
</wSDL:definitions>
Example of ISO 22745-40 Format Data

<?xml version="1.0" encoding="UTF-8"?>
  <cat:item class_ref="0161-1#01-068756#1" data_specification_ref="0161-1#IG-035362#1">
    <!-- APGF: MACHINE -->
    <cat:property_value property_ref="0161-1#02-025669#1">
      <val:string_value>MACHINE</val:string_value>
    </cat:property_value>
    <!-- ABUJ: M16 -->
    <cat:property_value property_ref="0161-1#02-024177#1">
      <val:string_value>M16</val:string_value>
    </cat:property_value>
    <!-- CMLP: 2 -->
    <cat:property_value property_ref="0161-1#02-024165#1">
      <val:string_value>2</val:string_value>
    </cat:property_value>
    <!-- ABRY: 90MM -->
    <cat:property_value property_ref="0161-1#02-005808#1">
      <val:string_value>90MM</val:string_value>
    </cat:property_value>
    <!-- AASK: HEX HD -->
    <cat:property_value property_ref="0161-1#02-024700#1">
      <val:string_value>HEX HD</val:string_value>
    </cat:property_value>
    <!-- MATT: STL -->
    <cat:property_value property_ref="0161-1#02-015084#1">
      <val:string_value>STL</val:string_value>
    </cat:property_value>
    <!-- AGYE: PLN -->
    <cat:property_value property_ref="0161-1#02-021337#1">
      <val:string_value>PLN</val:string_value>
    </cat:property_value>
    <!-- : CL 10.9 -->
    <cat:property_value property_ref="0161-1#02-092674#1">
      <val:string_value>CL 10.9</val:string_value>
    </cat:property_value>
    <!-- FEAT: DIN 931 -->
    <cat:property_value property_ref="0161-1#02-024499#1">
      <val:string_value>DIN 931</val:string_value>
    </cat:property_value>
  </cat:item>
</cat:catalogue>

References:
ISO 6523
IETF RFC 1034
Domain names - concepts and facilities