# Technical
# Report

**TR-38-4:2009**

**Identical to ISO/TS 20022-4**

**Financial services — UNIversal Financial Industry message scheme —**

**Technical Report – Part 4:**

ISO 20022 XML design rules



Accredited Standards Committee X9, Inc.

Financial Standards Industry

Registered with American National Standards Institute

Date Registered: January 16, 2009

## Contents

**Foreword**

## Foreword

Publication of this *Technical Report* that has been registered with ANSI has been approved by the Accredited Standards Committee X9, Incorporated, 1212 West Street, Suite 200, Annapolis, MD 21401. This document is registered as a Technical Report according to the "Procedures for the Registration of Technical Reports with ANSI." This document is not an American National Standard and the material contained herein is not normative in nature. Comments on the content of this document should be sent to: Attn: Executive Director, Accredited Standards Committee X9, Inc., 1212 West Street, Suite 200, Annapolis, MD 21401.

Published by

Accredited Standards Committee X9, Incorporated
Financial Industry Standards
1212 West Street, Suite 200
Annapolis, MD 21401 USA
X9 Online http://www.x9.org

Copyright © 2009 ASC X9, Inc.

All rights reserved.

# 1 Introduction

XML is a technical standard defined by W3C (the World Wide Web Consortium) that can be used for the physical representation (i.e. the syntax) of standardized ISO 20022 Messages. XML leaves a lot of freedom for the exact way it is used in a particular application. Therefore, merely stating that XML is used is not sufficient to guarantee predictability; one must also explain HOW it will be used.

This Technical Specification contains a set of XML design rules, called ISO 20022 XML. These design rules define how a standardized Message – described by a Message Definition in UML[1] according to the Modelling Guidelines of ISO/TS 20022-3 must be represented as a valid ISO 20022 compliant XML document.

A **valid XML document** (referred to hereafter as 'XML instance' or 'instance') as defined by W3C is any XML document that has an associated description and that complies with the constraints expressed in that description. The associated description in this case is derived from the Message Definition, which is originally described in UML.

This Technical Specification also describes how (a part of) the UML Message Definition can be converted into a W3C XML Schema. This XML schema will then make it possible to use a validating XML schema parser to automatically verify that a given XML instance complies with (a subset of) the constraints described in the Message Definition.

DTDs (Document Type Definitions) could also be used to validate partial compliance of an XML instance to its corresponding Message Definition. However, because of the limited validation functionality DTDs offer, this document does NOT cover XML DTDs.

Note that this document merely explains how a given Message Definition Diagram will be mapped into XML. It doesn't explain how to create a Message Definition Diagram. This information can be found in ISO/TS 20022-3 Modelling guidelines.

# 2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 20022-1, *Financial services — UNIversal Financial Industry message scheme — Part 1: Overall methodology and format specifications for inputs to and outputs from the ISO 20022 Repository*

URN namespace for ISO documents.

---

[1] More information about UML (Unified Modelling Language) is available on the Object Management Group website at: http://www.omg.org/uml