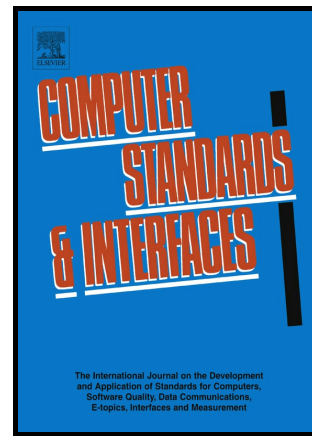


Author's Accepted Manuscript

Towards a Service Architecture for Master Data Exchange based on ISO 8000 with support to process large datasets

Bibiano Rivas, Jorge Merino, Ismael Caballero, Manuel Serrano, Mario Piattini



www.elsevier.com

PII: S0920-5489(16)30119-2
DOI: <http://dx.doi.org/10.1016/j.csi.2016.10.004>
Reference: CSI3150

To appear in: *Computer Standards & Interfaces*

Received date: 31 March 2016
Revised date: 30 September 2016
Accepted date: 6 October 2016

Cite this article as: Bibiano Rivas, Jorge Merino, Ismael Caballero, Manuel Serrano and Mario Piattini, Towards a Service Architecture for Master Data Exchange based on ISO 8000 with support to process large datasets, *Computer Standards & Interfaces*, <http://dx.doi.org/10.1016/j.csi.2016.10.004>

This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting galley proof before it is published in its final citable form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.

Towards a Service Architecture for Master Data Exchange based on ISO 8000 with support to process large datasets

Bibiano Rivas, Jorge Merino, Ismael Caballero, Manuel Serrano, Mario Piattini

Instituto de Tecnologías y Sistemas de Información, Universidad de Castilla–La Mancha. Camino de Moledores s/n, 13071, Ciudad Real

Bibiano.Rivas@uclm.es
Jorge.Merino@uclm.es
Ismael.Caballero@uclm.es
Manuel.Serrano@uclm.es
Mario.Piattini@uclm.es

Abstract.

During the execution of business processes involving various organizations, Master Data is usually shared and exchanged. It is necessary to keep appropriate levels of quality in these Master Data in order to prevent problems in the business processes. Organizations can be benefitted from having information about the level of quality of master data along with the master data to support decision about the usage of data in business processes is to include information about the level of quality alongside the Master Data. ISO 8000-1x0 specifies how to add this information to the master data messages. From the clauses stated in the various part of standard we developed a reference architecture, enhanced with big data technologies to better support the management of large datasets

The main contribution of this paper is a service architecture for Master Data Exchange supporting the requirements stated by the different parts of the standard like the development of a data dictionary with master data terms; a communication protocol; an API to manage the master data messages; and the algorithms in MapReduce to measure the data quality.

Keywords: Master Data – Data Quality – ISO 8000 – Big Data.

1 Introduction

We can state that “*data is the new natural resource*” [1]. Companies are generating data at an increasing rate, and several business opportunities arise related to different ways of making use of data. Some companies are taking the role of data generators and providers, meanwhile other companies have to acquire data from these producer companies and put them into their organizational repositories.

متن کامل مقاله

دریافت فوری ←

ISIArticles

مرجع مقالات تخصصی ایران

- ✓ امکان دانلود نسخه تمام متن مقالات انگلیسی
- ✓ امکان دانلود نسخه ترجمه شده مقالات
- ✓ پذیرش سفارش ترجمه تخصصی
- ✓ امکان جستجو در آرشیو جامعی از صدها موضوع و هزاران مقاله
- ✓ امکان دانلود رایگان ۲ صفحه اول هر مقاله
- ✓ امکان پرداخت اینترنتی با کلیه کارت های عضو شتاب
- ✓ دانلود فوری مقاله پس از پرداخت آنلاین
- ✓ پشتیبانی کامل خرید با بهره مندی از سیستم هوشمند رهگیری سفارشات