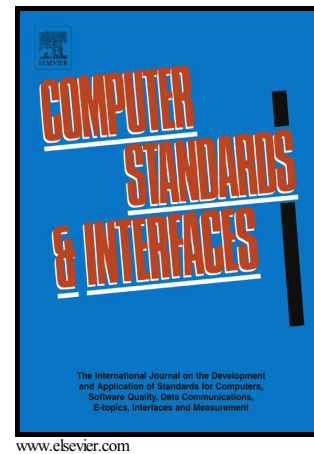


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Abstract.

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.

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