A DataValue White Paper

DATA
VALUE

Bordeaux Str. 5
CH- 4053 Basel
+41 61 923 23 05
www.datavalue.ch

White Paper 'DV-TCD'
Managing Train Control Assets

Thomas Burmeister (DataValue)

January 19, 2016

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Introduction

DV-TCD has been conceptualized for covering Swiss and European railway-specific control requirements.

Since 2009 DataValue is developing the system DAZU (Datenbank für Zugsicherung) for the departments infrastructure of SBB AG.

DV-TCD as a further development allows the management of the train control inventory and serves as an exchange platform for all data between a railway provider and their industry partners. The system consists of inventory and planning components to modernise train control systems as well as controlling the lifecycle of train control system components.

A design tool enables the planning and configuration of train signaling systems on the base of P44 national parameters as well as ETCS L1 LS and ETCS L2 parameters.

DV-TCD is part of DataValue's ERTMS Toolbox

January 19, 2016

Problem Statement

In addition to the SBB AG different external companies are entrusted with the construction of the information platform ETCS in Switzerland.

The various participants in different roles require a common data platform for their assets and their information exchange.

The establishment of train control inventory (e.g. balsies) must be accompanied from the planning stage until commissioning.

An uninterrupted documentation of the rollout must be ensured by document management and workflows.

Compliance between Railway provider and industrie partners must be guaranteed.

Planning errors have to be identified in time. Differences between design and operation (target/actual comparisons) must be identified.

Previous Options

Various self tailored tools are used by the different stake holder

Different syntax, models and terms are used to explain TC assets.

No general overall planning for a rollout was managed or supported by tools.

No document management and workflow system accompanied the process.

Praxis Solution

DAZU is designed by SBB infrastructure engineers for infrastructure engineers and developed further in their various functions as DV-TCD.

Benefit 1/ Inventory

All assets (e.g.: Balises (beacon), Loops, LEU, Signum, Indusi, GKS, Crocodile, etc.) used to build up train controlled routes are stored in master data catalogs.

Benefit 2/ Rollout

Train control systems are passing a flexible life-cycle from planning to operation. Interfaces between industry partners and railway provider are supporting the rollout processes

Benefit 3/ DMS

A document management and work-flow system assures a fully docu-mentation at any phase of the life cycle.

Benefit 4/ Configuration management

The configuration management results in a confirmed datapacket for the programming of balises/ loops

Benefit 5/ Reporting

Various technical and management reports are integrated.

Benefit 6/ Interfaces

Data can be exported to csv, xls, pdf and xml.

History of the key data is kept

All events are logged and can be monitored

Implementation

DV TRV can be implemented in the customer's network or rented as ASP.

Platform (SW-System)

Terminal-Server Architecture
(.Net Framework)
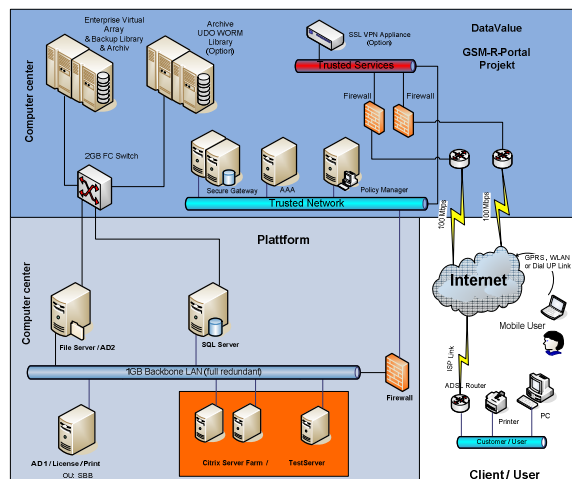MS-SQL-Server, Oracle Server
MS-Office (Excel)
Windows-Client, WinServer, IIS
DMS ECM LiveLink

Platform (HW-System)

Load Balancing
Duplicate Computer-center

(Possible configuration)

Summary

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About DataValue

DataValue develops tailor-made, top-notch IT solutions
DataValue is ISO-Spice certificated.

Our Know-how
It is our aim to maintain a high technological standard in our links with other development institutions.
We especially want to perform developments in accordance with proven standards.
We regard the development of structured and forward-looking customer solutions as fundamental.

Our Culture
We believe in direct inter-personal contact in a healthy atmosphere of discussion and debate, even in the Internet age. We consort with our customers in an honest, open and friendly fashion. We aim to consult independently and comprehensively, with long-term thinking helping us to establish new ties and to cultivate existing relationships.

Customer Value
We value close customer co-operation and the associated exchange of knowledge. Our developments should match customer requirements and should be implemented within schedule and agreed cost constraints.