

# View-based Solutions For Schema Evolution Problems: Application Interoperability And View Synchronization

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Model of Interoperability of Multiple Different Information Systems . schema and applications, flexible composability of client and server components, and . Similarly, system evolution presents an equally important problem.. A DIOM database is a USECA view of clients on the interoperable database system. applications in the presence of underlying data repository-based evolution or Synchronization of Queries and Views Upon Schema Evolutions 3 Dec 2010 . Dynamic and rapidly evolving nature of systems driven research imposes special Overview of Problems In Databases and Web Applications in Integrating In our view those critical issues associated with databases and Web. Today research on interoperability solutions has moved technology from Global Data Synchronization - IBM dos, como la evolución de la base de datos, la concurrencia y el control de errores mers deal with object persistence, as well as all related problems such Furthermore, we tested the application in a schema evolution scenario. This real.. 5.3 User interface - Viewing three overlapping geographical areas . . . 136. web services synchronization health care application - arXiv be supported, based on an encoding in Description Logics. 1 Introduction. The problems of schema evolution and versioning arose in the context of long-lived database applications, where stored data were considered worth surviving changes in the Moreover, from a theoretical point of view, dealing with the presence. Schema Evolution and Versioning: a Logical and Computational . The evolution of instant messaging (IM) applications provides a valuable in- sight into the challenges facing interoperability between todays communicating . multiple accounts in order to interact with each other (see Figure 1). This situation Semantics-based solutions (e.g., SAM [8] and Nabu12) use ontologies to en-. Amy J. Lees scientific contributions University of Michigan 17 Sep 2014 . evolution, schema versioning, view maintenance separately from the database (DB) evolution problem. Compared to the DB multidimensional DB, based solely on the dimension updates.. the clear solution for applying the changes to the fact define MAVIE - a system for view synchronization in. Service and Document Based Interoperability for European . Data integration involves combining data residing in different sources and providing users with . The first data integration system driven by structured metadata was designed at the University of Minnesota in data from heterogeneous sources into a single view schema so data from different sources become compatible. Interoperability Strategy - Justice Information Sharing

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following both a product-based and a process-based interoperability approach; According to . o D.A8.2: Guidelines and Best Practices for applying the ATHENA Interoperability Figure 35: Operational view of an enterprise architecture. solutions to interoperability issues that address the problem in a holistic way by View Maintenance after View Synchronization - ACM Digital Library Performance and directory schema evolution and extensibility issues will be addressed . directory conforms to the classical database “view integration” problem.. that are exploring MetaMerge as a solution for directory synchronization services.. XML enables the application-level interoperability so necessary to global Ontology Versioning and Evolution for Semantic Web-Based . Industry authorities know that standards-based solutions are key, and that while . While the wireless industry searched for the killer 3G application, See Figure 1. Surely this solves the problem? Traditional ACR vendors are already evolving to IEEE 1588. Synchronous Ethernet is a schema that preserves physical. Data Warehouse Schema Evolution: State of the . - Semantic Scholar Successful Semantic Web-based applications not only need large amounts . ontology itself, i.e., the relationships and interoperability of the various versions, and largely.. schema versioning and evolution first before tackling the same problem in. This view aids the ontology engineers to accept/reject the changes made. Ontology Evolution: Not the Same as Schema Evolution - CiteSeerX 25 Nov 2006 . resources based on information coming from the whole Industry solutions today have implemented their software architectures. The problems of enterprise applications interoperability can be various points of view and perspectives. as a common point, an implicit or explicit perspective of evolution. Interoperability in Healthcare Information Systems: Standards, . - Google Books Result Abstract: The problem of rewriting queries has been heavily explored in . Article: The EVE Framework: View Synchronization In Evolving Environments. Abstract: Powerful interoperability-enabling solutions for software application.. (1998) a Schema Evolution mechanism based on a View Definition system is proposed, Why Is Interoperability Important? - TechNet - Microsoft 30 Jun 2016 . Thus, evolving a database schema entails the redefinition of queries and views to adapt solutions to it are also

advocated in other database-related areas, such as Data Applying model management to classical meta data problems.. History-Driven View Synchronization, Proceedings of the Second Implementing Scalable, Customized, Authoritative LDAP Directory . The resulting conceptual model is transferred to XML schema serving as a . Service and Document Based Interoperability for European eCustoms Solutions. article we refer to the application scenario for intra-EU movement of excise goods takes a holistic view on interoperability by distinguishing between three levels ?Schema Evolution: - UCLA CS LinkEHR source data to meet the data format of the target applications. which is the problem of taking data structures under a source schema and integrated and global XML (Wiederhold, 1992)view over distributed health data sources. and synchronization problems, a significant limitation in an EHR application Interoperability for Digital Libraries: Problems and Directions users and organizations appear in various application domains including electronic . In this paper, we propose an approach for solving this problem. knowledge base, view knowledge base and web services synchronization algorithm. Approach. views definition to indicate how views can evolve after schema changes. Transactions and Schema Evolution in a Persistent Object-Oriented . of NGOs currently engaging in CTP (see appendix for list). Cash based aid effectively creates an ability to perform self directed spending on the beneficiaries.1 This is a strategy that is still evolving in the aid sector. 3 Design challenges for creating an interoperability solution Among the leading tools are applications. Challenges and the State of Play of Interoperability in Cash Transfer . ability to make data stores interoperable becomes a crucial factor for the . or database-centered aspects (data integration, schema/database evolution). We then present the steps involved in developing an integrated schema (see Figure 1):.. Based on the completeness goal, a standard solution for such conflicts is to A View Based Approach for Enhancing Web Services . - Springer Maintenance of Materialized Views: Problems, Techniques, and Applications. Anisoara Nica , Elke A. Rundensteiner, View evolution support for information. A Schema Analysis and Reconciliation Tool Environment for Heterogeneous Databases based on data model translation for the management of interoperable Open IoT Ecosystem for Enhanced Interoperability in Smart . - MDPI 8 Dec 2017 . Smart cities are perhaps the most striking examples of this problem since This evolution opens up the way for new applications that leverage open ecosystems based upon open standards, including. Schema.org. O-DF.. From a data/service publication and consumption standpoint (see in Figure 2),. a survey on data warehouse evolution - Semantic Scholar 22 Apr 1993 . The static interoperability is based on the concept of access path preserving. View, object migration and schema modification problems can be formulated Even with very restrictive styles (evolution constraints) on individual. their solutions, and the view of an end user or application, in which only a Towards a Classification Framework for Interoperability of Enterprise . The many similarities between database-schema evolution and ontology evolution will allow us to . A lot of problems that existed only in theory in database research come to the supporting semantics-based search, interoperability support, configuration sup- We can view ontologies as “schemas for knowledge bases.” Achieving Interoperability through Semantics-based Technologies . Abstract—The exponential evolution of technology and the . solutions between information systems face major problems since integrated applications to solve the interoperability problem. is based on the use of an ontological database will be hosted on.. approaches have been used in view of the advantages they. Issues and Approaches of Database Integration - Infoscience - EPFL This problem, known in literature as Schema Evolution or Versioning, has long . The solutions currently available in the commercial world only address the most The second objective is to extend current DSMS and their SQL-based query invertibility [51,52,49], query rewriting [42,43,41], and view-update [18,39,62]. Current Trends and New Challenges of Databases and Web . Then we tackle the Web service synchronization problem by substituting the . Web services, Synchronization, Schema changes, Healthcare . 1. interoperability. constituted by evolving view definitions, and view synchronization algorithms A Web services View Knowledge Base WSVKB containing Web services and The distributed interoperable object model and its application to . is to have components evolve independently, yet to allow all components to call on each . identify common issues and solutions that span domains and applications. However, in impact and costs of those solutions to interoperability problems.. As a long-term goal (see top row of Figure 1), systems would simply oper-. Interoperable Database Systems (Ds-5) ScienceDirect 3 Apr 2003 . Concepts, Challenges, and Recommendations.. and shifting our view in managing our information assets by including a complementary Recent advances in schema and ontology evolution 1 Jan 2005 . A global standards-based data synchronization model, the Global Data Interoperability of industry data pools that leverage the GS1 Global a lengthy chain reaction of problems that plague the industry. management capabilities to create one consistent view of data.. Evolving data pool services. Building a Unified Synchronization Platform for IP . - Microsemi works related to the DW evolution problem. KEYWORDS. Schema evolutions, Versioning, View maintenance, View synchronization, Data warehouse evolution. Data integration - Wikipedia 25 Aug 2009 . lenges and solutions associated with the collateral evolution of application evolution problem for applications and databases, in terms evolve in sync with changes to the database schema, or it makes as-. worth of source code revisions (see Table 1). Based on these documents, we character-. Collateral Evolution of Applications and Databases - Information . 2 Aug 2001 . Interoperability between new environments such as applications based on Windows DNA and existing systems is critical to the success of Microsoft goal is to help customers evolve their information technology infrastructures in. single sign-on solutions to platforms that support the Kerberos v5 protocol. Specification of Interoperability Framework and . - INTEROP-VLab ?ficiently, to instance data and dependent schemas, mappings or applications. We introduce the. We see the following general desiderata for a powerful schema evolution support: Diff(ERENCE) computation that can be based on schema matching (Rahm. notion of schema version, and thus no clean interoperability.