

Part One: StratML Toolkit & StratML Cloud

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Introduction

This report is a culmination of knowledge gained from managing the release of various software solutions to market over the last two decades. The main objective of this work is to expose a possible path and, or paths to promote wider adoption of Strategy Markup Language (StratML), which is an open, machine-readable standard. While the perceptions may differ, the bottom line is that if a technology is to exist, then it must be used, and for it to be used, it must be properly assembled and promoted.

Data - Metadata - Big Data

At an organic level Data (e.g., words, images, numbers, etc.) = Information, Metadata = Data about Data, and Big Data = Collection of Large & Complex Amounts of Data. Forget the marketing hyperbole, the ability to access and retrieve, and in some instances store data is the bedrock that most applications are built on. Case in point: Customer Relationship Management (CRM) and Content Management solutions. The former leverages data to better service customers, while the latter is meant to better organize and present content. Regarding the ability to retrieve and store data, private offerings from IBM, Microsoft, Oracle, and Sybase cater to a specific relational database management system (RDBMS) market, while various open-source offerings focus on another niche. Bottom line, it is all about the data.

Built to Open-Standards

In a nutshell, building to open-standards (e.g., OASIS, W3C, ANSI, etc.) helps to promote an agnostic IT landscape. While a long and arduous process the open-standards route seems to be the logical path in deploying large-scale IT solutions. For example, StratML Parts 1 and 2 are American (ANSI) national standards and Part 1 has been approved as an international (ISO) standard. The premise is that supporting the open-standards route will make it easier for people to access strategic plans from any part of the globe. Thus, promoting a true agnostic environment for interested parties and leverage the numerous strategic planning capabilities of StratML.

How the Toolkit Plays into Adoption

The ability to “pull” data from various sources such as widely used RDBMS will be of paramount importance regarding wide-spread adoption of StratML. However, to better understand StratML deployment, we must pause here to explain what is done with the accumulated data. Open-standards expert Ranjeeth K. Thunga does a fantastic job in articulating the process in the StratML: Private & Public Sector Uses white paper, and below are two important quotes.

“A StratML document is editable with any text-editor. However, it is helpful to enter the data through a standard form. There are a variety of tools and applications to help create XML documents.”

“On the other side of the coin, when viewing a StratML document, we are easily able to display the StratML file using XSL, CSS, or a variety of rendering tools.”

The next step is for the StratML Toolkit to visually generate a map of the internal and external entities that are involved. The main goal of this capability is to support graphics that display who these entities are and expose the salient points regarding the agreed upon strategic plans. For example, in the event waterlines are broken as a result of an earthquake, which vendor or vendors are responsible for supplying bottled water to the public. Hence, having adaptors to IBM, Microsoft, Oracle, Sybase, along with open-source database offerings will enable an organization to create a repository, while a rich graphic interface enables users to create a holistic view of interested parties. From the 100,000’ view, the StratML Toolkit provides the framework for StratML adoption for internal as well as external use.

The Data Issue

The ability to have strategic agreements in place during a manmade (e.g., terrorist attack, oil spill, nuclear accident, etc.) or natural (e.g., earthquake, hurricane, tornado, etc.) event could help to minimize loss of life, and decrease injury or property damage. The StratML Toolkit is really a platform to deploy StratML within an organization and, or to defined interested parties. As a result, a StratML framework must have the ability to not only work with internal systems, but external ecosystems as well. *Please Note: Most large-scale public & private entities currently use RDBMS from IBM, Microsoft, Oracle, and Sybase because of their inherent security, scalability, and fault tolerance characteristics. Accordingly, a StratML framework would logically have adaptors that would allow bi-directional information flow between these widely used RDBMS to better integrate with the aforementioned internal systems and external systems.*

The Master Repository Cylinder Concept

Let us for a moment view the StratML Master Repository as a cylinder from one angle and a circle from another. We must also view it as dynamic and organism like in nature. Every time an entity is added, the circle gets a little bigger, and every time data is added, the particular sliver of the cylinder becomes longer. Because it is pliable, this concept allows for adding entities such as the Department of Homeland Security (DHS) and Department of Defense (DOD) to the Master Repository, which is a somewhat painless undertaking. We should clarify to properly manage expectations. It is not only the data presented, but also creating the proper incoming and outgoing “pipes” that need to be created, so bi-directional information flow can be achieved. Access control lists, biometrics and other important security factors must also be addressed, so the word “somewhat” really means that it would require a great deal of time and effort to properly host all the strategic plans for the DHS. It stands to reason that any type of Enterprise deployment would require significant manpower to implement. However, reducing loss of life, along with minimizing injury and property damage seem to outweigh the negatives.

The StratML Cloud

While it irks me to see so many applications being moved to the Cloud, there could be a number of interesting options. A repository of strategic plans could be hosted in the Cloud and accessed by Government Agencies/Government Agencies & Interested Parties. Below are two viable options.

Scenario One (Repository Maintained Internally)

A Government Agency could be using IBM DB2 & Oracle Database 12c for most of its mission critical data. The StratML Toolkit could access this data via supplied adaptors to help build a repository that resides within the Agency. Accordingly, this repository would be hosted by Government Agency deploying the StratML solution.

Scenario Two (Repository Maintained Externally)

A Government Agency could be using Microsoft SQL Server 2012 and Sybase Adaptive Server Enterprise for most of its mission critical data. The StratML Toolkit could access this data via supplied adaptors to help build a repository. Subsequently, the repository could then be sent to a Cloud provider for hosting.

Both scenarios have their value, and application. Adding a bit of a twist, if the StratML Master Repository is held in the Cloud then all that is really needed to view a specific strategic plan is an http request and XML response. Changes could be made in one location to ease maintenance and allow for various interested parties to “hit” the pivot point (StratML Cloud) for StratML related data. In a nutshell, it is always better to have multiple options when planning to deploy large-scale IT solutions.

EPA Example (Oil Spill)

Since the foundation of StratML revolves around strategic planning a simple case study will better demonstrate how it could be leveraged in the Enterprise. To reiterate, the vision of the StratML standard is a worldwide web of intentions, stakeholders, and results. The hypothetical oil spill off the coast of Southern California showcases some of the capabilities of this technology. A medium size tanker (Panamax Class) is hit off the coast of Newport Beach, California by large fishing vessel and leaks out approximately 40,000 of crude oil into the water. The EPA is notified and gets its response infrastructure in motion and below are some key pieces that are likely to be involved in the clean-up.

EPA Office 9 (Pacific Southwest)

<http://www2.epa.gov/aboutepa/epa-region-9-pacific-southwest>

EPA Emergencies & Spills

<http://www.epa.gov/region9/cleanup/emergency/>

EPA Region 9 Oil Program Contacts

<http://www.epa.gov/region9/disaster/oilpp/index.html>

EPA Oil Spills

<http://www.epa.gov/oilspill/>

Regarding the oil spill, StraML's various capabilities could be leveraged to augment other technologies and protocols already in place to improve "alignment" between potential partners who share common goals and objectives. The twin goals in this case would be reduce injury to wildlife, while minimizing environmental damage.

This is where we have to take a step back before we can move forward in regards to dealing with the oil spill scenario. Let us for a moment assume that a StratML was in effect at the EPA, then the agreed upon strategic plans could then be put into motion to better deal with the situation. Agreements may exist with the Coast Guard, Army Corps of Engineers in respect to the public sector and also private vendors to help better align the overall clean-up effort. Volunteer groups may also want to be involved in the process to reduce injury to wildlife and minimize environmental damage.

On a micro level, strategic agreements could be in place with numerous retail vendors to supply dishwashing liquid, paper towels, and rubber gloves to deal with cleaning wildlife such as birds. It would also make sense to have strategic agreements in place with suppliers of portable toilets because if people are sent to the shoreline to help clean-up the oil spill, then human waste is to be expected. In addition, strategic agreements with food vendors would also seem to make a great deal of sense because these people will need nourishment throughout the day to perform their designated tasks. This is where StratML may be leveraged in the sharing, indexing, referencing, discovery, reuse, and analysis of embedded elements within these plans, along with the names and descriptions of stakeholder groups. Again, it must be made clear that StratML is not to replace technologies and protocols already in place, but is meant to augment them to create improved alignment between all parties involved. Creating a sense of harmony may better explain the theme of StratML's capability to help organizations and individuals find prospective partners, which share common goal and objectives. Working alongside other technologies that an entity such as the EPA may already have to reduce the loss of wildlife, and minimize damage to the environment look to be important and logical goals, and support a very strong business case for deploying StratML.

Postscript

As with any new technology growing pains are part of the process. In this respect, StratML is no different. However, the StratML story itself is pretty compelling in regards to increasing efficiency, along with improved data transparency (a.k.a. accountability). It is also expected that open, machine readable standards like StratML will be the harbinger in deploying large-scale solutions in heterogeneous environments. Adoption is key, and a solid StratML Toolkit, along with leveraging other technologies will help this effort gain critical mass. It is about finding solutions such as a toolkit that is pliable enough to pull data from the leading private and open-source databases to create repositories, and having a visual display to know the key players involved. It is also about the ability to host these repositories internally and possibly in the Cloud. StratML has come a long way since its inception and expect this technology to continue to move forward in the open-standards space. Part Two of this document will deal with the visual aspects relating to agreements, partners, and hosting.

References

AIIM

<http://www.aiim.org/>

DHS

<http://www.dhs.gov/>

DOD

<http://www.defense.gov/>

EPA

<http://www.epa.gov/>

EPA Office 9 (Pacific Southwest)

<http://www2.epa.gov/aboutepa/epa-region-9-pacific-southwest>

EPA Emergencies & Spills

<http://www.epa.gov/region9/cleanup/emergency/>

EPA Region 9 Oil Program Contacts

<http://www.epa.gov/region9/disaster/oilpp/index.html>

EPA Oil Spills

<http://www.epa.gov/oilspill/>

IBM DB2

<http://www-01.ibm.com/software/data/db2/>

Microsoft SQL Server 2012

<https://www.microsoft.com/en-us/sqlserver/default.aspx>

OASIS

<https://www.oasis-open.org/>

Oracle Database 12c

<http://www.oracle.com/us/corporate/features/database-12c/index.html>

StratML

<http://xml.fido.gov/stratml/>

StratML: Private & Public Sector Uses report by Ranjeeth K. Thunga & R. Russell Ruggiero

<http://xml.fido.gov/stratml/references/StratML-PrivatePublicSectorUses.pdf>

Sybase Adaptive Server Enterprise

<http://www.sybase.com/products/databasemanagement/adaptiveserverenterprise>

W3C

<http://www.w3.org/>

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