Whitepaper: Emerson Process Management's Migration of TCA to Best Practice April, 2008

Overview:
Oracle makes a compelling case in their January 2004 white paper to model customers and prospect data in Best Practice (see appendix for excerpts from Oracle Trading Community Architecture – Modeling Customer and Prospect Data – TCA Best Practices – January 2004). Although this is excellent guidance for new "green field" implementations, what about those customers that had Oracle instances before TCA was even introduced? Is it possible to migrate from the old "account centric" approach to the new "party centric" approach without having to re-implement Oracle? This white paper will summarize Emerson Process Management's;

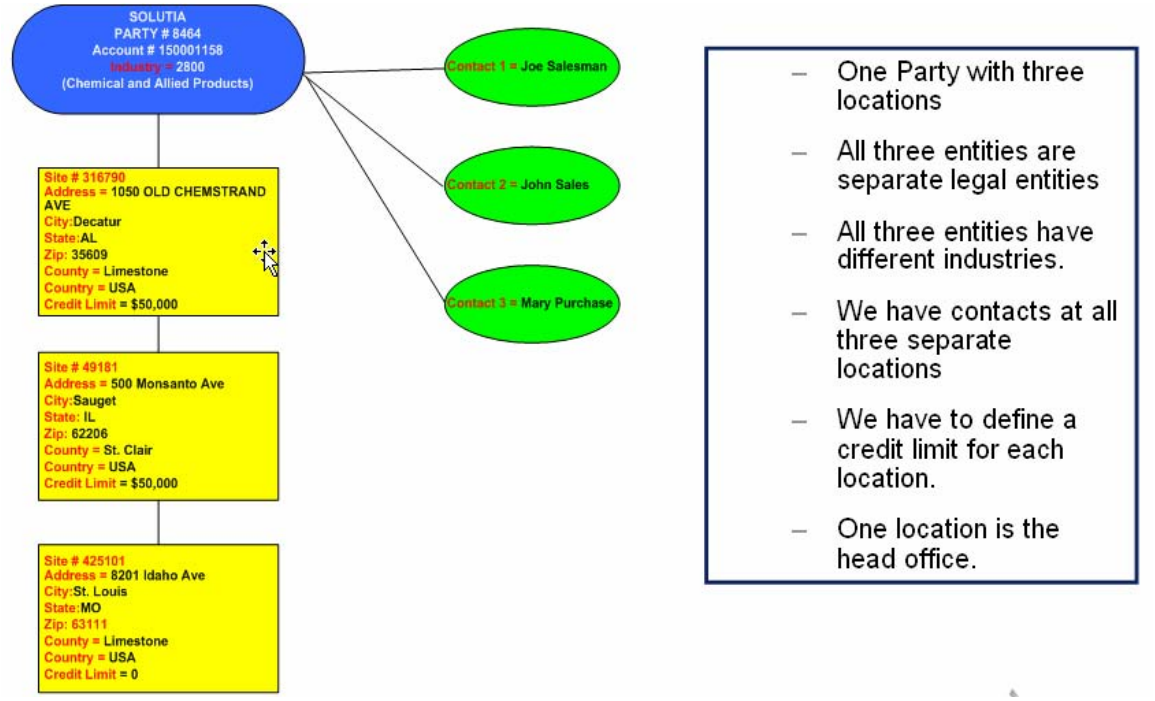
- Reasons for migrating their TCA to Best Practice
- The challenges that were encountered in migrating to Best Practice.
- Known outstanding issues as part of migration to Best Practice.

Background:
Emerson Process Management (Emerson) is a diversified global manufacturing and technology company serving industrial & commercial markets around the world. Emerson has multiple Oracle instances but the instance that is being used as part of it Single Global Instance initiative went live in 1995 on Oracle 10.5.

Problem:
The way Emerson had defined customers in the TCA model was not optimal and was causing issues;

i. Only one industry classification for customers with multiple sites.
Impact: Sales analysis and business intelligence was sub-optimal
ii. Contacts could only be tied to a customer (party), not to a specific site
Impact: Direct marketing campaigns, install base and business intelligence.
iii. Credit could not be managed at the correct corporate hierarchy level.
Impact: Inefficient data management and increased exposure to bad debts

Illustration 1: Existing "As Is" Account Centric Approach



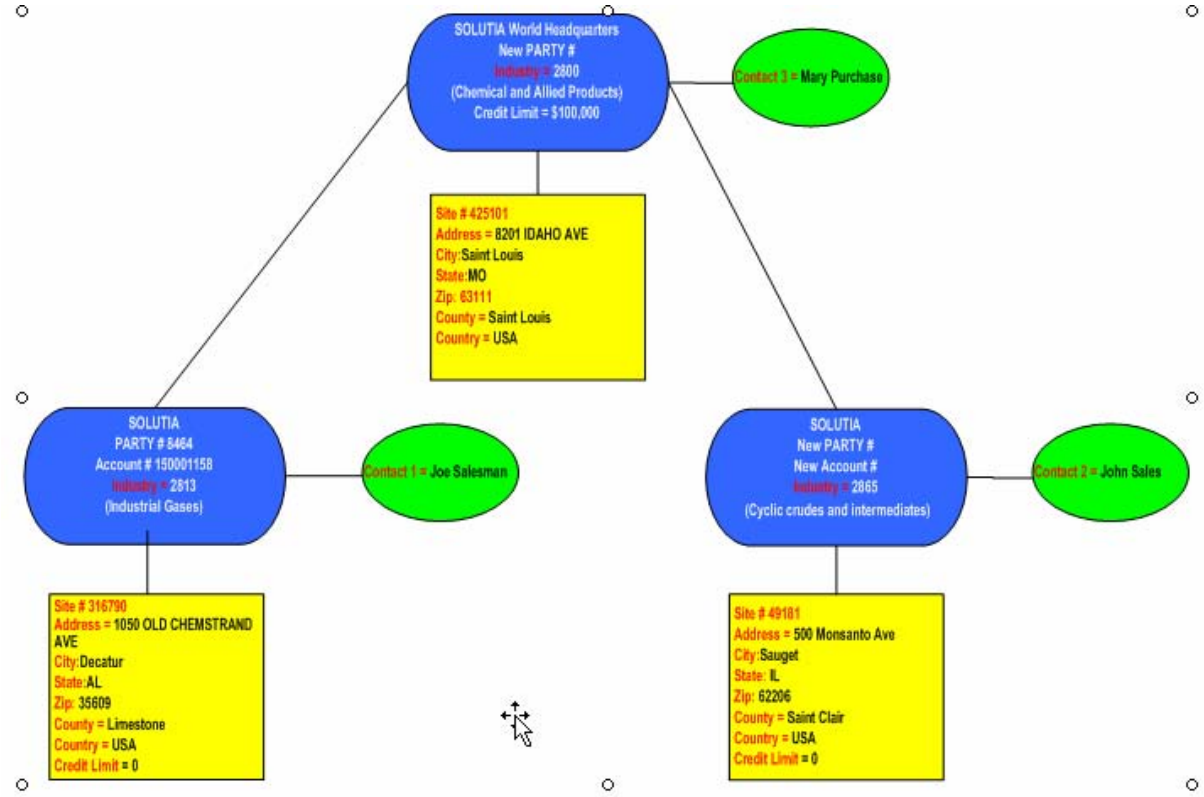
Proposed Solution:
After exhaustive consultations with Oracle and review of their white paper, the proposed solution was to model Emerson's TCA in a Party Centric Approach. In summary, the principle tenets of the solution included;

i. Setting up each legal entity/location as a separate party.
   - Contacts and industry codes are at party level.
   - Can capture the legal entities actual name.

ii. Tie each Party to its Party Parent
   - Called a party relationship.

iii. Apply Credit Limits at the Party Parent Level
   - Applied per currency per Set of Books.

Illustration 2: Proposed To Be Solution - Party Centric Approach



Implementation Approach

Emerson developed an automated TCA migration tool to create a party centric customer model built from combining the customer records in the current operational TCA with the customer records in a "master" customer schema in its Global Data Warehouse (GDW). Although the GDW is proprietary to Emerson, it is very similar to Oracle's Customer Data Hub in identifying a record as a single source of truth.

The automated tool developed by Emerson;

i. Inactivated old party sites in the operational TCA that were either duplicates or candidates to become a party in themselves
ii. Cleansed customer names/addresses for new parties created based upon "clean" data in the GDW
iii. Linked companies based upon D&B hierarchy

The benefits of developing the automated tool were;

i. Automated tool is more consistent and faster than manual effort to migrate customers
ii. Automated tool linked parties together and built customer hierarchy based upon D&B information in the GDW
    a. Hierarchy viewable by sales, customer service, and others via Customers Online module
    b. Hierarchy available for business strategy purposes like credit limit management and CRM activity reporting
iii. Higher customer data quality
    a. Many duplicates eliminated
    b. New addresses have complete information and are postal certified
iv. Enriched customer data
    a. SIC Codes, plus D&B identifier assigned to customers in operational database

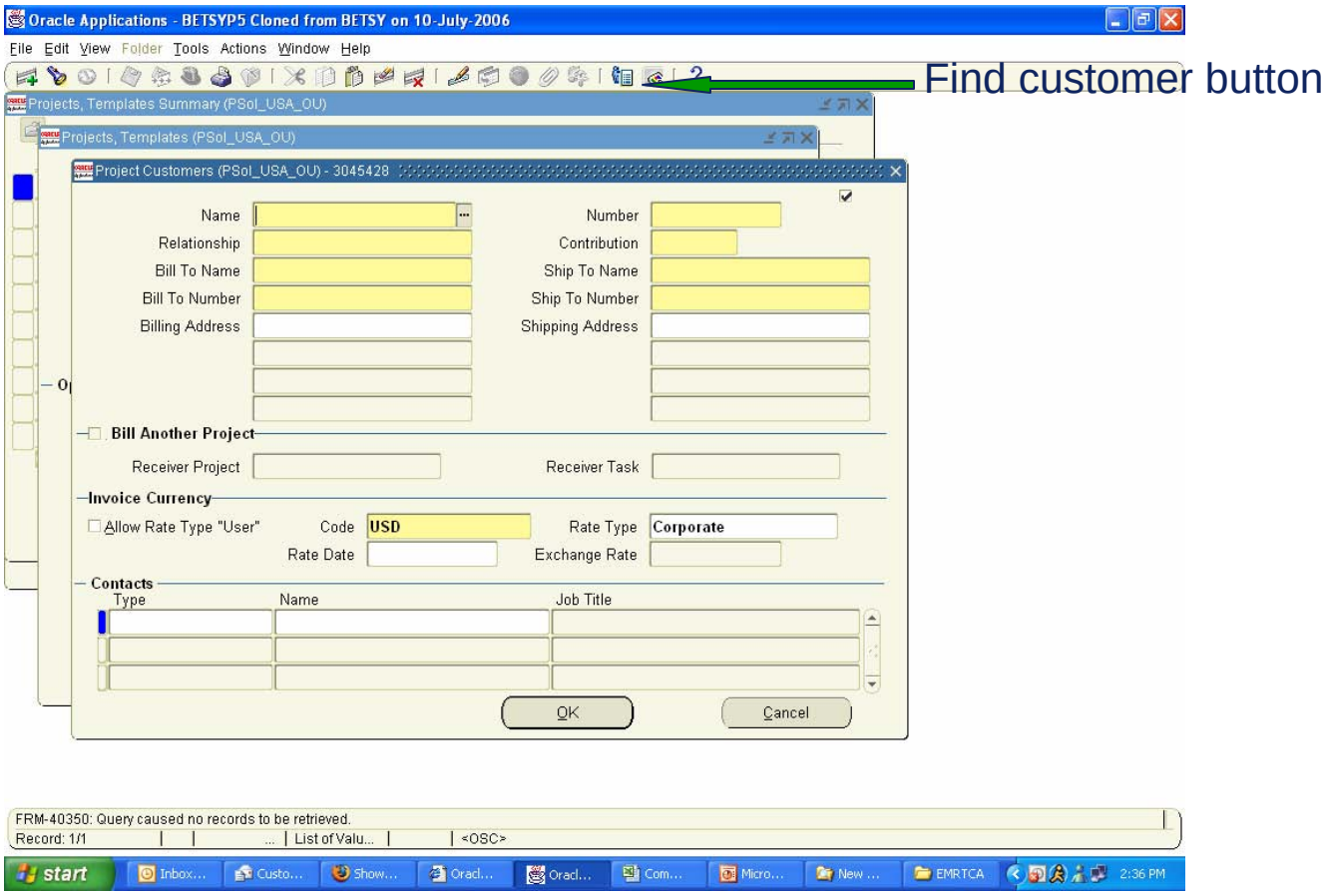
Challenges Encountered:

Emerson encountered 3 main challenges as part of migration of their TCA to Best Practice.

1. The migration to a Party Centric Approach exponentially increased the number of customers in the Customer Search forms. To make things worse, the data rendered in the results made it impossible for a user to select the correct customer. For example, Oracle Order Management Searches customer by party name only, not by location. Searches using only the party name take a long time and again, it is almost impossible to select the correct customer since no location details are present in the results

   Solution: Order management has a standard Find Customer search functionality that allows you to refine your search by location. The search form can be found by clicking Find Customer 'Blue Man' icon in Order Management. The 'Blue Man' search form renders the location details so the proper customer can be selected. This solved Emerson's problem with Order Management but the standard 'Blue Man' search functionality is not present for Projects or Service Request modules. The solution was to copy the functionality from the Blue Man search into Logical Apps and deploy a similar looking icon in Projects & Service Request modules.

Illustration 3: Deploying 'Blue Man' Customer Search in Projects



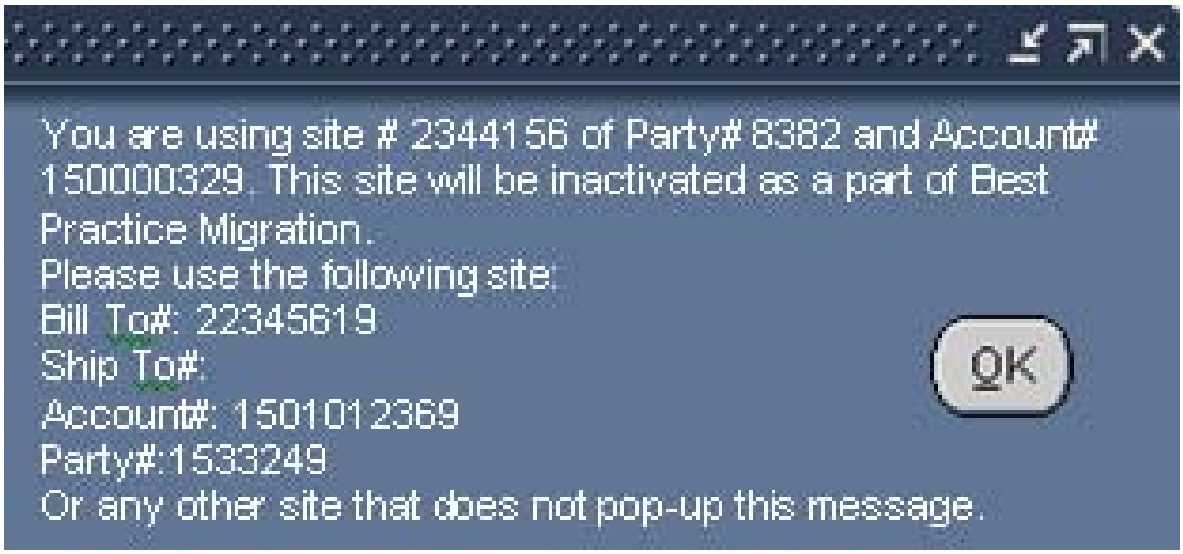
2. The inactivation of Party Sites stops many In-Flight Transactions. Of paramount concern to Emerson was to keep the business running. The migration to TCA Best Practice could not impact existing transactions nor could it hinder the ability to efficiently create new transactions. Through testing, it was determined that we should never inactivate a Party or Account as this had the most impact on in-flight transactions and corrective billing – i.e. transaction does not allow any further processing. Inactivation should only be done at the Party Site Use level but only when there were no in-flight transactions for that customer.

   This presented an additional problem. As new replacement customers were created, the old and duplicate customers needed to be inactivated. The business continued to select the old customers and many had open transactions (Sales Orders, Project Orders, Service Requests) that would not be complete for months if not years.

Solution:

The solution was to create new replacement customers in Best Practice with a cross reference to the obsolete site. Obsolete sites would only be inactivated when all transactions for a customer are closed. A program was written to determine if sites flagged for inactivation had any open transactions. The site would only be inactivated if the system determined there were no open transactions.

In the interim, when a user tried to use an obsolete/flagged customer, they would get a pop-up message like the following to suggest using the replacement customer:

- 

3. Tax localizations provided by Oracle for countries such as Mexico and Argentina are contrary to Best Practice. Tax Localizations done for these countries (and possibly Italy & Portugal) require that a customer have a unique taxpayer id (CUIT#) assigned by the government. The assignment by the government of the CUIT# is done at a legal entity level and covers multiple locations. The Oracle localization however requires that the CUIT# be assigned at the Party Level and the system will error if you try to add another customer with the same CUIT#.

Implementation of Best Practice would have caused a significant impact on existing tax engines & tax reports

Solution:

Emerson has decided for now to exclude Mexico & Argentina customers from the migration to Best Practice. Emerson is working with Oracle development on a solution to this issue.

Outstanding Issues

Emerson has made a significant investment to migrate its TCA to Best Practice and this has been done without making any modifications to Oracle (all of the solutions mentioned in this white paper have been done as extensions).

There are however three areas where we still need Oracle's assistance:

1. Solution – Tax Localizations for Argentina/Mexico (as detailed above).
2. Extend Similar Customer Search/Selection Functionality (Blueman) to Projects and Service Request Modules. Emerson has deployed the logical apps solution to search for customer in Projects and Service Requests but the search does not allow the user to populate the Service Request or Project Entry forms by selecting the customer. The user must manually enter the correct customer details into the form. Deploying the standard 'Blue Man' search functionality will make customer selection in Projects and Service Requests much more efficient.
3. Data Integrity Issue – Current CRM functionality is auto-creating Bill To customers under existing customer accounts. TAR changed to an enhancement request (3604428)
    - Impacts ability for us to invoice the customer & migrate customers to Best Practice

Appendix:

Below are excerpts from Oracle's white paper that assisted with Emerson's decision to migrate to TCA Best Practice. Readers are encouraged to read the entire white paper available on metalink.

Oracle ® Trading Community Architecture

Modeling Customer and Prospect Data – TCA Best Practices V.2

An Oracle White Paper
January 2004

"The first release of this paper in 2001, the number of E-Business Suite applications that expose elements of the Trading Community Model has increased significantly and the functionality provided by the Trading Community Architecture has grown exponentially. However, if you are still waiting for Oracle to provide a particular feature that would harness the power of the Trading Community Architecture, or if you simply have an affinity for the "way it was before," you may be tempted to model your data "the old way" with the R11 data model in mind. Understanding that functional needs of today often drive implementation decisions, the importance of positioning yourself for the future cannot be underestimated. As different applications develop new features, they will, by definition, be doing so in the context of the Trading Community Architecture because the model facilitated by this architecture is the single model for the entire E-Business Suite. Understanding this eventuality and trying to set up your data with the intentions and axioms of the new model in mind will better position you to take advantage of the new features and functionality in future E-Business Suite releases."

"The Trading Community Model was designed to complement the modeling approach of one of the most widely accepted third-party content providers for business data, Dun & Bradstreet ("D&B"). D&B assigns a unique identifier, the D-U-N-S Number, to an organization based on the organization's name, location, and line of business. Because this D-U-N-S number is an attribute in the Oracle Trading Community Architecture, you can easily model D&B entities throughout many applications in the E-Business Suite. Furthermore, D&B takes the customer and prospect modeling a step further, by supporting the Party level relationships housed in Oracle, that exist amongst organizations (e.g. global ultimate of, domestic ultimate of, branch of, etc.), thereby showing the linkage of the organizational hierarchies or "family trees.""

"Note: this is a significant departure from the modeling concepts commonly used in releases of the Oracle Customer Model prior to 11i when customers were modeled within Oracle Receivables. Based on previous experience, you might be inclined to use party sites to represent distinct business entities that you consider "sub-parties" of the actual party. In the customer model prior to TCA (e.g. "AR" Customer model and 3i Sales and Marketing model), as well as in other 3rd party applications, addresses were often used to represent various branches or divisions of the header

level customer. However, this usage is not consistent with the definition and intended usage of party sites in the new Oracle Trading Community Architecture. In addition, sometimes people want to model a company or business entity as an account. However, a business entity should not be modeled as an account because an account is simply the attributes that describe your financial relationship with a party."

"An account should not need an account name for the purposes of allowing the deploying organization to identify the organization or person. The name of the entity will be stored at the Party level. The assumption behind this axiom is that names are typically appropriate for identifying real things and an account represents a relationship with a real thing, not a real thing itself."

"Almost all CRM transactions are striped according to either the Party or the Party/Account combination. As such, if the deploying company were to implement iStore (or various other E-Business Suite applications) with a TCA model that reflects one Party with one Account and multiple bill-to sites, every time a transaction is placed against that account from the end customer, all other bill-to information will be exposed. As such, any user who has access to the iStore can book a transaction against any of the bill-to sites that are present under the Party/Account combination, or take advantage of any discount associated with the other bill-to sites. From a data integrity and security perspective, therefore, it is recommended that accounts typically have one active bill-to site."