Utilizing the Oracle Project Accounting Suite in an Oracle Federal Environment

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Introduction — Federal agencies continue to utilized the Oracle COTS software and many of the agencies also utilized the Project account suite. Some of the users of Oracle Project Accounting suite actually find that it is very beneficial to track costs for cost accounting purposes and reimbursable accounting. This paper will introduce you to Oracle's project accounting suite in a Federal installation and introduce you to some challenges with the suite while working in a federal environment. First, we will define what the project accounting suite is. We will define federal cost accounting and discuss how project costing is used in federal accounting. We will then look at using the project billing product in the federal environment. One of the first issues with federal clients using the project billing suite is the fact that Project Accounting is not "Federalized". We will show a solution to this challenge by a project accounting federal "extension" to automatically create the required budgetary journal entries. We will then touch on Grants Accounting and how Grants are used in the federal space. We will complete the paper with the direction in which the project accounting suite is headed in future releases. Release 12 is coming and it will eventually be FISO compliant and it will have the functionality to where project accounting is "federalized".

Definition of Oracle Project Accounting Modules— Project accounting is a suite of products that are provided by Oracle. The core project accounting module is Project Costing and if you are using project accounting in any capacity, you will have Project Costing installed and configured. Many people call this initial configuration the "footprint" of the project accounting configuration. Project Costing is the heart of the suite and is used to setup your project, the projects' tasks, expenditure types, and give the ability for your agency to link the projects and their cost and outputs to other modules in the Oracle Applications Suite. This project costing module allows you to track incoming cost per project, allocate those cost to other projects, burden those costs, cross charge costs to other projects, and capitalize asset cost to Fixed Assets once the asset is placed in service or when required.

 The second core module in the project accounting suite is Project Billing, which can be used to track reimbursables, or revolving funds in the federal environment. Oracle Project Billing provides you with the ability to define revenue and invoicing rules for your projects, generate revenue, create invoices, and integrate with the Oracle General Ledger to process revenue and process invoices. Oracle Project Billing also integrates with Oracle Receivables to track the invoice / receivables generate by bills that are created in Oracle Project Billing. The majority of the discussion will revolve around these two core module; Oracle Project Costing and Oracle Project Billing. There are additional modules that exist in the project accounting suite that are worth mentioning.

<u>Grants Accounting</u> extends the functionality of Oracle Projects to provide an integrated award and project management solution for grant receiving agencies. More detailed explanation of Oracle Grants is included in this paper in a later section.

<u>Oracle Project Resource Management</u> provides you tools to manage the deployment and capacity of your resources in a global environment. You use Oracle Project Resource Management in conjunction with the basic project team definition to track your resources and on the projects. The functionality in Oracle Projects uses task staffing and forecasting functionality to manage your project resource needs, projects' profitability, and organization utilization, by locating and deploying qualified and available resources. Oracle Project Resource Management enables project managers, resource managers, and staffing managers throughout the enterprise to manage their resources and more Effectively and communicate their needs to one another at the same time.

<u>Oracle Project Collaboration</u> enables team members to collaborate and communicate more easily in their efforts to review and complete project work. With the visibility and ability to assigned tasks, issues, and deliverables, team members can work together more efficiently to make more efficient and effective decisions. Each team member has the access to information to give answers to critical project-based questions.

Oracle Project Contracts supports the contract management needs of project driven organizations, including commercial and government contractors, agencies, and subcontractors. These organizations could operate in a project centric environment characterized by contract specifications, demand and lead-times. They can track contractual requirements for billing and maintain compliance of government regulations. Project contracts addresses budgetary constraints, contract margins, the communication of contract information to subcontractors, and help with the prioritization of deliverables. In using Oracle Project Contracts, the contract organizer can access different functional regions including authoring, deliverable tracking, funding, hold management, contract revisions, and other contract related activities.

Oracle Project Management provides project managers a solution for maintaining control and visibility of many aspects of their specific project. As a project manager, you can view project information at a single source point enabling you to track and manage a project through the project lifecycle, from creating and planning, through to completion. Using Oracle Project Management, a user can create, manage, version, view, and track the progress of your work plans for a given project. Microsoft Project is also linked with Oracle Projects to enable you to work with a project using both applications. Project Management allows for the tracking and monitoring of the performance of a project. It can also assist in the analysis of financial information by task, by resource, and even by timeframe specified. The user can view exceptions for key financial and schedule metrics, and send automated status report notifications to key project stakeholders. Finally, the user can search and review the current financial status of projects and review detailed financial performance for projects and tasks.

Cost Accounting in Federal Environment- Cost accounting in the federal space is not new, but I have found that many agencies that I have been working with do not utilize cost accounting currently. I wanted to detail some current federal guidance with regards to cost accounting in hopes of assisting federal customers with the utilization of proper cost accounting in their future endeavors. The authoritative source is the Federal Accounting Standards Advisory Board (FASAB) for the managerial cost accounting. The FASAB produced standards that were approved by the Department of Treasury, Office of Management and Budget and the Government Accounting Office. The FASAB issued the Statement of Federal Financial Accounting Standards (SFFAS) Number 4, which is the pronouncement that will assist us with our discussion.

To start with, Section 32. gives us the purpose for using cost accounting. Is says, "In managing federal government programs, cost information is essential in the following five areas: (1) budgeting and cost control, (2) performance measurement, (3) determining reimbursements and setting fees and prices, (4) program evaluations, and (5) making economic choice decisions." The Oracle Project Accounting Suite can and will assist you in these efforts.

SFFAS 4 also describes four applied methodologies. SFFAS 4 states: "This standard does not require the use of a particular type of costing system or costing methodology. Federal entities are engaged in a broad range of diverse operations. A costing system appropriate for one type of operation may not be appropriate for other operations. At many federal agencies, cost accounting practices are either relatively new or experimental. It is too early to tell which cost systems are best for specific types of operations. As experience and research in cost accounting progress, reporting entities and responsibility segments may find a preferred costing methodology for their operations."

These uses of the referenced methodologies are not mutually exclusive and all can be accomplished in Oracle Projects. The methodologies described by SFFAS 4 are:

Activity Based Costing (ABC) – Traditional costing systems manage the dollars or the resources while the ABC costing measures the cost of work via the cost of activities and or processes. SFFAS 4 states in section 148 "ABC focuses on the activities of a production cycle, based on the premises that (a) an output requires activities to produce, and (b) activities consume resources. ABC systems use cost drivers to assign costs through activities to outputs. The ABC cost assignment is a two-stage procedure. The first stage assigns the costs of resources to activities and the second stage assigns activity costs to outputs." ABC is broken down by SFFAS 4 into four steps. SFFAS 4, Section : 149 states, "Implementing an ABC system requires four major steps: (1) identify activities performed in a responsibility segment to produce outputs, (2) assign or map resources to the activities, (3) identify outputs for which the activities are performed, and (4) assign activity costs to the outputs.

Using the above definition, we could create the example of Federal ABC costing. The example is the development of a computer system. You could create a project that tracks that computer system. The agency could then create the project's tasks for each of the activities that are performed to create that computer system. Each of the activities increases the value of the cost of the computer system that you are building. First you start with the activity of buying a server, and then you finish the activity of installing some software on that server. The next activity is the configuration of the software, and the last activity is the deployment and production support of the computer system. Each activity increases the cost and when each activity is completed, the value of the system increases.

Job order Costing is described in SFFAS 4 as, "Job order costing is a costing methodology that accumulates and assigns costs to discrete jobs. The word "jobs" refers to products, projects, assignments, or a group of similar outputs." A federal example of job order costing is the publication of a specific user's manual. The job has specific direct costs and can accept indirect cost that will be allocated from indirect projects. The best example of project costs is used in non federal example for military purposes, which is airplane production. Lockheed would use job order costing with it produces a C-130.

Process Costing is described in SFFAS 4 as, "Process costing is a method that accumulates costs by individual processing divisions (organization divisions that perform production processes). These processing divisions are involved in a continuous production flow, with each division contributing towards the completion of the end products. The output of a processing division either becomes the input of the next processing division or becomes a part of the end product". An oil and gas production is done in a process costing environment. Tracking fuel at an airbase or airport would use process costing.

Standard Costing is probably the most common form of costing. SFFAS 4 describes standard costing as "Standard costs are carefully predetermined or expected costs that can be applied to activities, services, or products on a per unit basis." Standard costing assigns costs to products based on expected costs of resources used, which may differ from both normal and actual costs. Under a standard-costing system, standard costs are used for product-costing purposes as well as for control purposes. These standard cost are based on historical costs. You have your standard costs, you then have actual costs, and you address your variances appropriately.

The above costing methodologies can be used in conjunction with one another and does not have to be used in a one or the other fashion. Since you can use multiple costing methodologies in one installation and the cost methodology will precede your project structure, we wanted to discuss the ability to link the fund to a specific project.

After the costing methodology decision is made, the second larges decision in the project structure is assignment of a fund to the project. This assignment can accomplished in multiple ways and if required, an agency can have multiple funds on a single project. There are several ways that this can be accomplished. During the account generation process you can place the fund value on the task or subtask and the account generator will have the ability to generate your line of accounting using that fund. Another option is to place the fund on the work type. Then your work types could be structured to have one work type per fund.

Direct Cost. Direct costs are collected in Oracle Projects and are assigned to specific projects at the point of entry. When a cost is entered into Oracle, the source module asks the user to enter the Project, Organization, Expenditure type, and Task (POET) for the direct cost to be identified, so the costs are associated directly to a project. SFFAS 4 states that "Direct costs are costs that can be specifically identified with an output. All direct costs should be included in the full cost of outputs. Typical direct costs in the production of an output include:
(a) Salaries and other benefits for employees who work directly on the output; which is entered into Oracle OTL
(b) Materials and supplies used in the work; which is entered into Oracle Purchasing and Oracle AP
(c) Various costs associated with office space, equipment, facilities, and utilities that are used exclusively to produce the output; (which is entered into Oracle Purchasing and Oracle AP)
(d) Costs of goods or services received from other segments or entities that are used to produce the output"; which is entered into Oracle Purchasing and Oracle AP or Oracle Inventory.

Indirect cost, as noted by SFFAS 4, "Are costs of resources that are jointly or commonly used to produce two or more types of outputs but are not specifically identifiable with any of the outputs. Indirect costs include general

administrative services, general research and technical support, rent, health insurance, operating costs, like utilities and equipment for buildings and employees."

These indirect costs are also collect by project accounting. When these indirect costs are pooled into indirect projects, they can then be allocated to other projects. The allocation functionality has the ability to move cost from one project to another project. This functionality uses several data points (source, destination, basis and offset) to accomplish the allocation of costs.

Project allocation source is the first element of a project allocation. Project allocation source is the source of the cost that is to be allocation. The allocation's source can be either a source project or a source General Ledger account that has collected the costs of what is to be allocated. In the federal space, a good example of the general ledger account used as the source of the allocation is the asset depreciation expense. Typically, the source of the project allocation functionality is a project and a project's task that was used to collect the indirect cost.

The Project Basis is the second element of an allocation. The basis is just what it sounds like; it is the basis for the allocation. It can be spread evenly, pro-rated, target percentage and spread evenly, target percentage and prorate and it also gives you the ability to use a client extension if one of the previously mentioned bases is not sufficient. This "client extension" availability is available to plug in an exotic basis of the extension with out the "customization" of the product.

The project allocation destination is the third element of an allocation. The allocation destination is the project and task that will accept the cost allocation. The cost destination can be one project task combination or multiple project and multiple tasks.

The project allocation offset is the fourth and final element of the allocation. The offset is the offset of the cost that were transferred out of the allocation's source. In Federal installations that use the allocation functionality, the offset is typically placed into the source project. We separate out the offset by placing the cost into a ZZ task so that the integrity of the original indirect cost can be traced in the original tasks. If all the cost were fully allocated in an indirect project, the total project cost would equal zero. The total ZZ task cost would be negative of the total non ZZ tasks.

Capital Projects are also captured in Project Costing via the project class of capital. Capital projects can be used as Construction in Progress and capture capital cost until the asset is placed into service. The system also gives you the ability to capitalize cost when the requirement is met. An agency can capitalize cost at a certain point in time like when the asset is placed into service and add to that cost if and when more cost is collected. Project accounting will move the capital cost into Oracle Fixed Assets where those cost will be capitalized and depreciated.

"Funds Checking" is currently performed in the federal accounting general ledger. Oracle sales has stated that funds control can be accomplished via the Oracle cost budgets, but at the time of this whitepaper completion, testing has proved that this functionality does not exist concurrently with Federal Accounting as it requires encumbrance accounting to be run concurrently. If this functionality exists, I will define this in my OAUG presentation as my current client does want this promised functionality to exist.

Project Billing in Federal Environment – Oracle Project Billing can assist tracking and billing the Reimbursable or revolving fund in the federal environment. We all are probably aware that Release 11i of the PA module is not "federalized", meaning that the federal budgetary entries are not made inherently by the module. We will explain how we "Federalized" the module to adhere to federal requirements in an R11.10.2 patchset M environment.

In this discussion, an agreement is an agreement with the customer. In the DOD space that agreement can come in the form of a MIPR or AF-Form9. Other agencies surely have different names for the order, but for the basis of this discussion it is simply a customer order. Revolving Funds and Reimbursable funds are the main uses of this functionality in Oracle Project Billing. When we say that we are entering an agreement, we are entering the customer's order into the Oracle Project Billing module. There are prerequisites to entering the Agreement into the

application. The first step in entering orders received by an agency is to make sure that the Customer is setup in the AR module. The second step is to make sure that you have a project that is setup in Oracle Projects, tied to the project class of "Contract", with the customer assigned to that specific project. In Oracle Project's Patchset M, users now have the additional functionality to assign the project's customer down to the Top level task. Users have the ability to now have multiple customers on a project.

Agreements are entered as the order is received by the agency and it is entered into the application per customer. The second step is to distribute the order to a specific Project and top task. After the project is distributed to the project and top task, we used the functionality to automatically create a baselined revenue budget on the funding inquiry screen. This functionality automatically uses the agreement's amounts allocated to the project and task to create those amounts into the revenue budget and baselines that amount at the same time.

Once the revenue budget is baselined, we run an extension that creates the federal budgetary entries for anticipated revenue. We call this extension the Oracle Agreements Federal Extension. The order received in our instance means that the anticipated revenue was allowed to be recognized and this extension created that entry for us. The second entry that was made was for the sub-allotment of funds. The entry automatically created the entry to move funds from the Apportionment Available into the sub-allotment account of (4610). The sub-allotment of fund allowed for the native functionality of Oracle federal accounting to over for funds checking. In summary, performance on an order would not be allowed, unless the order was received, and recorded into Oracle as an agreement. If we attempted to perform against and order that is not in Oracle, the native functionality would cause the commitment or obligation to "Fail Funds Checking".

When an order is received without an advance, the project is created to as a Work/Work project. If the reimbursable order is received with an advance the project is created as a work/event project. The Order is now in the system and the agency can then start performing against the order. Commitments and Obligations could come in the form of transaction entered into iProcurement, Purchasing OTL, Inventory or Accounts Payable and are associated to a project.

At a point in time, either weekly or monthly, the agency can generate revenue runs, and bill against the reimbursable orders received. The performance that takes place and associated to the order, is now ready for the revenue and billing creation. If the project is work / event, the revenue is booked against on the basis of the work performed.

Revenue proprietary entries are created. In order to book the revenue, the project application requires a creation of the proprietary entries by the generation of 'draft revenue". The draft revenue is subsequently released. The revenue entries are then transferred to the General Ledger, imported and posted.

Revenue budgetary entries are created. There is a second extension that was created to book the budgetary entries related to decreasing the anticipated revenue booked when the order was received and move it to actual revenue. This extension is the second extension that was created to "federalize" the Oracle project accounting module for Reimbursable orders.   We call this extension the Oracle Revenue Federal Extension.

Reimbursable orders accepted without an advance generates invoicing for the amount of revenue that is generated. Reimbursable Orders with advance creates invoices by the entry of an event in the amount of the advance. Typically bills are created either on a weekly monthly basis. Both advance and non advance invoicing are created in the same manner. The process for creating the invoices in Project Accounting is to run the process of "generate draft invoices", then individually approve the invoices and release them. After the invoices are released, a process interfaces them to the AR module import table. Another process named Auto-Invoice is generated in the AR module that retrieves the invoice from the AR interface tables and posts them to receivables. Once the invoice is imported into AR, that receivable is aged and collection activities can now take place. If the invoice was created for an advance, that invoice is not mailed to the customer, if the invoice was created by a non-advance order, that invoice should be mailed or transmitted to the customer.

Grants Accounting in the Federal Environment - Grants Accounting is common and is used in the Federal Environment. Grants Accounting extends the functionality of Oracle Projects to provide an integrated

Award solution for grant receiving agencies. Grants Accounting tracks multi-funded projects and the required compliance terms and conditions by the award of the grant itself. Oracle Grants Accounting supports the validation of allowable costs by effective dates, as well as budgetary control, to ensure compliance with the grant's amounts.

The Project Grants Accounting module keep track of award attributes such as the award name, award references, the proposal number, CFDA number, and budget rules. Data entry of award information is simplified by using user-defined award templates or by copying a previously existing award. Users can store attachments on awards to record extraneous information and enter other attributes in descriptive flexfields. Grants Accounting provides users with the ability to keep track the award's installments, the award's supplements, and any amendments to the award. Functionality exists to track any future commitments, which enables the production of future funding forecasts for future planning. Grants Accounting allows for the entry of the start date, end date, and the close out dates for each installment related to the award. Grants accounting also gives you the ability to enter and track the compliance parameters that come with the grant.

There is one word of caution that I will relay to you if your agency is considering the use of Grants accounting and Project Billing at the same time in an Oracle federal environment. These two uses of the product conflict with one another and should not be used if you are want to use standard COTS functionality. When an environment uses Grants accounting, the reimbursable fund extension that I've used in the past does not work concurrently. The issue is actually that the agreement and the fund are entered in the same manner and the billing / revenue processing would want to pickup the grant just as an order from a customer.

The Future of Oracle Project in a Federal Environment – Currently, at the time that this whitepaper was written, 11.5.10 is the current version of the product that is FSIO Certified. This Oracle version is being used and installed at several agencies. The current 11.5.10 patch set for Oracle Project Accounting is patchset M. There could be additional patchsets in the R11 version of the software to fix known global product issues, but no new functionality in the product is expected on Release 11. New functionality enhancements are believed to now be developed in release 12. To write this white paper, I gathered information regarding the new features of the future releases of the Oracle software. I specifically researched the future of the Project Accounting functionality in the Federal environment. My sources were associates or Oracle Corporation and the following is what is expected.

Release 12.0.4 is currently available and being installed in commercial environments. The issue with federal installations is the fact that it is not yet FSIO Certified. Oracle is currently working in attaining the certification of this product with the 12.0.3 version. FSIO certification is expected to be attained soon, 1st half of calendar year 2008.

Oracle is planning on including no "Project Federalization" in the 12.0.X versions, which again, is now in the FSIO certification process. So, the first FSIO compliant version of Oracle R-12 will not have new federal project accounting functionality in it; i.e. it won't be "federalized".

12.1 - Oracle is planning on including some of the Federalization in their 12.1 product release. Oracle is calling this the "first set: of Federal specific features in their 12.1 release, previously know as "Oracle Project 12.B". This is the first and limited release of project federalization functionality. Some, but not a total project "federalization" are believed to be included by this release. The R12.1 is planned to be released in late calendar year 2008.

Release 12.1 is expected to assist recording the reimbursable order in the application and have the following Federal functionality. Specific expectations of the product are listed below.

The user should be able to pre-defined SLA accounting definitions that create budgetary and proprietary accounting entries as appropriate for all transactions that Projects generates accounting for.

Project budgets should be interfaced to the Federal Financials Budget Execution module, or a client extension will be available to interface them to a 3rd party system. Also, actual journal entries (as opposed to budget journal entries) can be generated based on project budgets. (The agreement federalization extension)

Reimbursable orders with advances, or receipt of the prepayment of cash, which are entered in Oracle Receivables can be applied and tracked against reimbursable agreements in Projects.

There should be new funds consumption controls for billing -- billing sequences, expiration date, and funds remaining on the agreement will be available.

There should be new data elements that can be entered on the agreements. The customer order number, the customer's line of accounting, and 15 descriptive flexfields on the agreement, advances required flag, and billing sequence are supposed to be part of the product. Users should be able to manually indicate on the agreement when advances are required, or a client extension should available to define conditions for when cash advances are required.

Agreement numbers should be entered on revenue/billing events.

12.2 – This release is believed to be released in 2009. This version is schedule to have even more project federal features in it. Additionally, this release will be used for the next FSIO incremental test. When this version of the product is released, federal customers are supposed to have access to a FSIO compliant, federal project accounting suit. The new features of the 12.2 release should include:

There should be multiple documents and accounting lines available on the agreement definition. Multiple document control and multiple document tracking

Automated cash advances functionality. Not just the ability to record the cash advance but the ability to track requests for advances, automatic application to reimbursable agreements, IPAC integration, and billing in excess of cash advances.

Reimbursable agreement query enhancements

The ability to close out the reimbursable agreement after the agreement is completed.

Conclusion —

Federal agencies continue to utilized the Oracle COTS software and many of the agencies have utilized the Project account suite. I hope that this paper introduced you to Oracle's project accounting suite in a Federal installation and introduced you to the challenges with the module working in a federal environment. I found that some agencies do not utilize cost accounting today and the discussion regarding SFFAS 4's cost accounting should have been a good introduction to Federal Cost Accounting. I hope that this paper also gave you enough detail about the first issue with federal clients utilizing the native project billing suite is the fact that Project Accounting is not "Federalized". If you want to use the R-11 version of the software, you should now be exposed to the challenges you will have to overcome and what the product promises in the near future.

In Conclusion, federal agencies will continue to use the product and the software is going to have more features for our Federal agencies to utilize. Our current extensions to the software should become obsolete processes in the Release 12.2. I am looking forward to all the new functionality with regards to Project Accounting in the Federal Environment.