Edmonds Community College

Computer Information Systems

Research Project 2

SYSTEM REQUIREMENTS REPORT

Authors:

Team B.L.A.M
Brandon Phoenix
Lucas Whittall
Arnulfo Julio
Mark Coyle

Supervisor:

Peter Farrar

February 25, 2015

Date: February 19th, 2015
To: Patrick Jay, Vice President & Manager
From: Team B.L.A.M.
Subject: Systems Requirement Report

Attached is the Systems Requirement Report for you to look over. We can discuss the report on our meeting set for Feb. 26th 2015 at 6:00PM. As you will see, we have broken down all the processes and have come up with a proposal that we believe automates all your current Processes. We also believe that the banks current computer system and software are suitable to accomplish the task you have asked us to complete. After our meeting we will go back and revise this document. Once this is complete we can start working on designing and implementing your new system. We look forward to discussing this with you.

Regards,
Team B.L.A.M.

XANADU BANK
SYSTEM REQUIREMENTS REPORT

Team B.L.A.M

Brandon Phoenix
Lucas Whittall
Arnulfo Julio
Mark Coyle

February 25, 2015

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*Need Management Summary

Current Situation Analysis

Introduction

The Current Process section of this document contains all the current processes that are being followed now. It is important to understand these processes in order be able to identify and evaluate the main business issues with the process. We can verify detailed requirements for the system. Functional requirements must be identified and documented. These are then verified by the client for accuracy and completeness, then they are compared to their needs.

Analysis Approach

Functional Decomposition Diagram (FDD)

For the FDD*, we analyzed the current process and found the top-down steps. We split the process up by Contract steps, Invoice steps, and Reporting steps. From this, we found that the majority of the processing occurs within Invoice processing by the accountants. We also found that Contract processing has similar steps to Invoice processing, though there are half as many required steps. Reporting has the fewest processing steps. Within the Contract processing steps, the accountant receives the necessary information from the Buyer, whereas in the Invoice processing steps, the accountant works with the Contractor, Buyer, and Vendor. This diagram gives a clear description of the work flow, and will help in determining which and what steps to automate.

*See Appendix PG 63

Data Flow Diagram (DFD)

In this diagram we followed all ~~current processes and broke them down to the minimal steps. As you can see just by looking at this diagram, a lot goes into the process.~~ The accountant is responsible for about 70% of this process, ~~which is a lot of steps to take to get to an end result~~. We used this diagram to ~~plan how the system should function in the automated database. We believe that the processes can flow the same in the new database, with the exception of a few steps to eliminate~~. This diagram aided

us in ~~how the bank wants the system to function~~ and ~~understand all the processes need to be completed~~. By understanding the process, we feel confident we can deliver you a system that will meet all your requests and needs.

Problem

The nature of the problem lies in the processing of programming expenses within The Accounting department. The accounting department, headed by Patrick Jay, process the programming expenses. They process the invoices through manual entries in Excel spreadsheet. This process takes numerous hours, and extra days. This process is also prone to create error reports, numerous re-verifications of data entries, many reversal transactions, and erroneous financial reporting.

Add into above statement

The current system is all done by a manual process that requires an exorbitant amount of time that accounts for greater risk of invalid information resulting in inaccurate contracts and invoice processing.

People

- Project Managers
- Accounting Group
- Contractors
- Accounts Payable Group
- IT department
- Buyers
- Accounting – Main user the system

Current Processes

1. Delivery of Appendix A to the accounting department.
2. Accounting verifies Appendix A to make sure it is complete with all needed information
3. Enter Appendix A into the Excel spreadsheet.
4. File copies of Appendix A for future reference.

5. Create exception memo if Appendix A is incomplete and return to buyer.
6. Accounting receives corrected Appendix A from buyer
7. Verify revision to Appendix A, and enter into the Excel spreadsheet.
8. File Appendix A
9. Invoice and timesheet is received from vendors
10. Verify invoice for completed information.
11. Enter invoice into Excel spreadsheet if it is complete.
12. If invoice is not complete, create exception memo. Return Invoices and timesheet to buyer.
13. Buyer resolves issue and returns payable invoice to Accounting.
14. Verify payable, valid invoice manually against contract to ensure pay ability.
15. When invoice is determined to be payable (Check Cut), a data entry sheet is generated and attach to original with the timesheet.
16. Deliver invoice and data entry sheet to accounts payable.
17. If vender did not receive payment in reasonable time frame, they call the accounting to find out why.
18. Accounting researches vendor inquiry.
19. Accounting replies to vendors.
20. Accounting determines if accrual needed for invoice at month end.
21. If so, accrual process begins.
22. Next month, accrual reverses.
23. At months end, accounting generates 5 monthly reports for accounting and bank management.
24. Accounting audits report for accuracy.
25. Accounting sends out audited report.

Information Needed for Process

A separate Excel workbook is kept with the information for that is vital for the bank of Xanadu to processing contractual payments. Those documents include Vendor Information, Contact Information, and Charge Information relating to Xanadu's respective ~~clients~~. ~~Samples of the documents have been provided by Xanadu and are available in the Appendix section~~.

Inputs

Contract Requirements- This document is used to process contracts and contains all the necessary for the buyer to submit to the accountant.
~~Programmer Name~~

- ~~Vendor name~~
- ~~Project Manager~~
- ~~Charge unit (cost center)~~
- ~~Bank Division~~
- ~~Contract Start Date~~
- ~~Contract end date~~
- ~~Programmer Hourly Rate~~

Invoice Requirements- This document is required for the accountant to enter the required invoice information.

- ~~Invoice number~~
- ~~Date of the invoice~~
- ~~Vendor name and address~~
- ~~Charge unit (cost center)~~
- ~~Bank Division~~
- ~~Programmer Hourly Rate~~
- ~~Hours covered~~
- ~~Project descriptions~~

Outputs

System Reports

- Exception Memo
- Contract Fee Maximum
- Invoices
- Accruals
- Contract Programmers Monthly Recap Expense
- Contract Programmer
- Monthly Contract

Technology Used

The Bank of Xanadu is well versed in the technology they use for their banking system. This technology is currently used to operate daily business functions that is installed over 550 branches worldwide. Each branch location is Supplied with 20 computers including servers to handle communication and process documents between departments and other the banking divisions. The technology breakdown can be seen from the following:

Client Installation

- IBM compatible PC
- Pentium 4, 1.8 GHz processor or higher
- 1 GB Ram or higher
- CD-ROM or DVD-ROM
- SVGA Monitor with a resolution 1024 x 768 or higher
- 1 GB Free Hard Drive Space

Database Installation

- IBM Compatible PC
- Pentium 4, 3.0 GHZ processor or higher
- 2 GB RAm or higher
- CD-ROM or DVD-ROM
- SVGA Monitor with a resolution 1024 x 768 or higher
- 2GB Free Hard Space

Software Installed

- Microsoft.Net Framework 2.0
- Windows 7 Family (Service Pack 2 or higher)
- Windows 2013 Server Family
- *Apple (Mac OS X) are currently not supported
- Microsoft Office suite

Strengths of Current System

- The accountant are familiar with Excel spreadsheet, a tool that is universal for any banking system.

- .
- They have a system to process payment to the contractor, vendor, and system that is easy to use.

Problems with Current System

- The Bank does not have database such as Access to validate contract information.
- The system does not provide accurate report to the management.
- The system lacks flexibility. The system does not allow error checking of inputs before submitting documents.
- The accountants are taking too much time to process invoices for payment, causing low moral to the organization.

To-Be Model - Overview of the proposed system

The scope of this proposed solution is to design an automated contract payment system for the Bank of Xanadu. This automated system will solve the issues of contract programming expenses. This will reduce the number of invoices to manually process, and eliminate duplicate invoices. It should validate that invoices can be paid against the contract and fee limitations.

The reporting of financial status will be in compliance with the management requirement and standard bank practices. The covered date of contract agreement will be validated and process automatically to avoid delay of payment. All of the automation process will enable the bank to perform processes more efficiently, manage data with greater visibility and as a result, improve stakeholders' satisfaction and bottom-line profitability.

Objective and Benefit of the new system

The overall objective of the new system is to eliminate manual processing contract payment by creating an automated system. The accountant will be able to track the hours charged by the vendors and the management will be able to predict available funding for the contract. Some of the benefit of the new system as follow:

- Reduce manual data entries and potentially avoid errors.
- Reduce Payroll costs.
- Less work for accountant.
- Greater visibility and control account payable processes and statuses
- Eliminate duplicate invoices
- Management of contact expenses are manage more accurately.
- Reduce costs and possibility of space required for paper storage.
- Minimal amount of training and set-up required.
- Enables visibility of the entire request-and-approval workflow
- Better financial compliance management.
- Improved reporting on volume processed.
- Productive performance from the users due less stress and extra work.

Functional Requirements

A functional requirement is a requirement that describe what a system must do. For the contract payment processing, ~~these requirements will help the users, manager and other stakeholders to visualize and understand the process of the new design system.~~

Analysis approach

The use case scenarios (see appendix F) demonstrate the interaction of the users to the system. It demonstrate steps by steps a actor will take to process a required task. One important benefit of use case scenario is that it helps manage complexity, since it focuses on one specific usage aspect at a time. Another benefit is to provide basic groundwork for the requirements document, user manual and test cases so that when the system is implemented, it's fully tested system.

~~Other method for our analysis is the use of Data Flow Diagrams. We use this model to show how easy it is for technical and nontechnical users to understand the system. This DFD show and provides a high level system overview, complete with boundaries and connections to other systems. This will provide a detailed representation of system components and how raw data transform into a usable data.~~

Alternatives Analysis

Software Alternatives

ReadSoft solution:

They uses different application including SAP, Microsoft Dynamics and other applications. They focus on simplifying business, large or small with applications for *Business Process Automatio*n that will enable them to perform processes more efficiently, manage data with greater visibility and agility, and as a result, improve customer satisfaction and bottom-line profitability.

How they process invoices:

ReadSoft's invoice processing software automates the processes of scanning, interpreting, and filing of invoice data. Their software intelligently extracts the important information and validates it according to a pre-defined set of rules. Their out of the box application, they process the invoice data regardless of invoice source or format. They extract the data from invoices and verify it again the information in Microsoft Dynamics. The application matched invoices and then send directly to AP for processing.

Financial reporting procedures:

Their software resides and operates inside of SAP, so system integration is seamless. Employing this universal, transparent financial posting process organization-wide facilitates compliance measures and improves reporting for accounting and finance departments.

ReadSoft's SAP financial posting software allows users throughout the organization to submit requests for general ledger financial postings through a simple form, accessible in a web browser or SAP user interface. This easy-to-use communication tool provides a central location for entering requests and an automated approval process via ReadSoft's workflow.

Key benefit to the company:

- Reduce manual data entry by 75%–90%
- Reduce AP costs by up to 80%
- Fast and simple access to invoices—available anywhere, anytime
- Quicker invoice processing to take advantage of early payment discounts
- Greater visibility and control account payable processes and statuses
- Eliminate duplicate invoices
- Assess cash flow more accurately
- Reduce costs and space required for paper storage
- Minimal amount of training and set-up required
- Simple-to-use web form for easy, centralized collection of all financial posting requests
- Creates a variety of postings, including amending incorrect postings, creating accrual and deferral postings, and designating posting amounts between general ledger accounts and controlling objects
- Enables visibility of the entire request-and-approval workflow
- Easy archiving of process-related activity and data
- Enforcement of authorization rules through consistent approach
- Better financial compliance management
- Improved reporting on volume processed
- Paperless process

Cost:

Although there is no exact figures as to how much is the ReadSoft charges, consultation is required to get the exact figures.

Reference: http://globenewswire.com/news-release/2013/04/22/539953/0/en/New-ReadSoft-technology-promises-to-save-companies-millions-in-the-increasing-cost-and-complexity-of-XML-invoicing.html
http://www.readsoft.com/solutions

ABBYY's solution:

ABBYY's solution includes automating payment system. They focus on the needs of accountants and their financial reporting. Their goal is to address the challenges they face in AP automation and optimization initiatives. They aimed to reduce the amount of manual operations and administrative efforts involved in the processing of invoices and allow accounting staff to focus on strategic activities such as analysis, planning and forecasting.

How they process:

- They Convert Paper, Images, PDFs to Editable Documents, so that invoices can be verified, edited, and corrected.
- They Process High-Volumes of Documents, Forms and Invoices, eliminating manual entries, pre-sorting, classifying, extracting data, and batch processing.
- With their Pre-installed invoice capture and validation rule-set, they ensure legal conformity and compliance.
- They configured Multi-channel input supporting AP processes that rely on electronic PDF invoice delivery
- They Support industry-standard ERP backend systems for matching and posting.
- They process PO and supplier master data to match invoices to every the line-items.

Benefits:

Reporting and forecasting:

- Capture invoices directly at points of their entry into the organization, making the AP department early aware of their arrival
- Improve the quality of data in the ERP system by introducing structured processes for entering new vendors and validating existing vendors
- Attain better visibility into invoice statuses, due dates and payment liabilities to simplify audit and improve forecasting

Higher operational efficiency:

- Eliminate extra administrative work by making each invoice visible throughout the organization's approval cycle
- Reduce the time spent on recurring invoices by processing all the correct ones automatically. Allow operators to focus on exceptions only and resolve them fast by zooming on highlighted issues
- Reduce purchase costs by avoiding late charges and leveraging dynamic discounting.

Cost:

The total cost of invoice processing solution includes several items, such as cost of software, time to install and configure the software, training of users, configure data export of the previous system, and other functional requirement of the banking system. Although the actual amount was not mention, they require prior consultation to provide an accurate estimates.

Ref: ABBYY.COM

Concentric solution:

Concentric financial automation solution can automate payment system. Their solution help companies remove paperwork and streamline companies account payable to automation process. Their best in class invoice imaging and OCR data capture will eliminates the error prone invoices processing. Their deep knowledge of account payable and electronic invoicing eliminates the processing of invoices, such as removing bottlenecks, reducing the cost, decreasing time spent in the invoice entries and processing payment as they received.

How they process:

The supplier portal allows vendors to access information online 24/7, without taking up valuable AP staff time. The supplier invoicing portal presents only the relevant information AP Departments choose to display.

Their OCR tools and data validation eliminates the concern of wrong entries such difficult to read, image quality issues, format issues including conversion to different format to usable format.

Concentric approach eliminates these OCR concerns because the OCR and validation are offered together as a comprehensive invoice data capture service, eliminating the need for clients to do their own OCR and validations. Concentric offer Invoice Virtual center personnel to validate low impacted OCR, eliminating client processing.

Reporting:

Using their ERP Connector, allow data to be transmitted electronically to COR360 ensuring important information such as vendor account, cost center, contract number, and other pertinent data in the invoices are interface with ERP system, AP financial system.

Automated clearing house (ACH) payment processing, allow significant bottom-line advantages than printing and mailing checks.

Cost:

A study by The Aberdeen Group states the average cost of processing an invoice today can be upwards of $25.83 (Aberdeen Group, May 2011). The fastest way to lower that cost is by implementing a complete purchase to pay and invoice management software solution.

Corcentric's purchase to pay solution includes: PO requisition, electronic invoicing, invoice virtualization, approval workflow, ERP integration, and payment solutions.
http://www.corcentric.com/

Alternatives Outsourcing

~~Although there some concern about outsourcing payment system to offshore due numerous reasons. One reason is the disaster recovery. Disaster recovery sometime is taken for granted. But for company like Xanadu, with their motto, a company that is too big to fail, they will need disaster recovery. According to some statistics, companies end up using 80 percent of their budget to protect 20 percent of their servers (novell.com). If this figure is taken into consideration, Xanadu bank will be spending additional 80 percent of their budget just to implement disaster recovery.~~

~~If this program is outsource offshore, disaster recovery will take some consideration to implement. Primarily the added cost of implementing them, secondly, the sense of ownership of the program. The in house personnel who are using the program are much more protective to the assets of company than offshore outsource. Due to the fact that in house IT are more familiar than other, they know the system well enough to restore any possible disaster happen. Time is also a factor. When there is an emergency, you can wait until offshore IT to get to it because of the distance of where the IT are located and possibly controlling factor of the situation. But with the inhouse IT, they can act on the recovery plan when it happened.~~

~~Other outsourcing concern includes security, confidentiality, and communication, business stability, culture, licensing information, and~~

~~warranties. BLAM recognize that outsourcing is not feasible for Xanadu point at this point. Xanadu have enough assets to support the implementation of a new system here in the USA. Xanadu needs of automated system to streamline their payment system is mainly the concern for the company.~~

Manual alternatives

There are some manual alternatives that could be implemented within Xanadu Banking system. The existing excel spreadsheet that banking system is currently using to document reports, ~~the MS access database program to store contact information including vendor information, charges report, are valuable tools that can enhance to the automation of invoices.~~ Most of the functions of Excel can be incorporated and enhance the processing of contracts, invoices, and reporting. While this time consuming program, and error prone method when entering figures, it can be enhanced with another software and hardware to provide a better results and eliminates mistakes. OCR (Optical Character Recognition) system, can be incorporated with excel spreadsheet. When an invoice is scanned by this OCR, it will create excel data and it will be display so that correction can be made as if necessary.

A customized MS Access database can be created so that when there is discrepancies on vendor's information or other data, it can queried and verify and corrected. All contract information, charge unit (cost center), contract payment period, and rate of charges are created and saved into these database. This options will eliminate wrong entries and ease the processing of contractual invoices. MS outlook can be incorporated with approval of invoices, payment, and confirmation of report. When AP needs approval of the invoice from the Accounting department, an automatic notification pop up in the inbox for approval. When payment is in process, an automatic notification to the AP will be received via their inbox. This process will ease processing, approval, and ease the burden of manual entries.

Recommendation

With all the alternatives that we have research, the 3 solutions company, outsourcing, built in house, manual alternatives, we recommend built in house development. This alternative is the most feasible, cost effective, scalable, flexible and usable options for Xanadu Payment system.

The solution companies have lucrative offer to the payment system of Xanadu bank. It offers to reduce manual entries in their invoices, eliminates duplicate of invoices, it requires minimal amount of training and setup, it enables visibility of request and approval flow, and it claims to automate invoice with minimal intervention. But these solutions are lacking other important factors. Question like what other factors affect the implementation of these system. Does it satisfy the business requirement of Xanadu banking? Does it meets constraints of the existing system and technology of the company, or does it develops internal resources and capabilities within the company? These question are tied in with company core of business, when implementing new system.

Outsourcing is another alternative, and based on what we research, it cost only up to $15 dollars per hours to process invoices in India. This is really cheap price, but what other hidden cost can we get from this services. Not to mention, security issues, disaster recovery cost as mention in the outsourcing alternative above, communication issues and culture issues are all going to cost extra when outsourcing the company payment system. What can we get from this services to satisfy the Xanadu banking requirements? These are questions that can be predicted until actual implementation is in place.

In addition, what other related outsourcing cost are there. Are there travel expenses for the bank representative to go to different location overseas and to make sure business policies procedures are according to the bank standard? Are the network infrastructure, including WAN, telecommunications, landline, satellite connections, or other medium to support the bank technology need. These are extra expense for the bank? Are these outsourcer provides other alternative incase, telecommunication fails at their end. All of this are taken into consideration when outsourcing the bank payment system.

When Build in house development, on the other hand, is considered, all the requirement of business requirements are satisfied because the development is based on the existing system. No changes in the internal resources and capabilities but may be just few enhancement. Here is the analysis we can come up with using in house development. With further analysis, all is needed are software, such as Access, some coding, hardware such as server, OCR (Optical Character Recognition), and workstations. Some of these equipment are already in place, the bank just needs some additional hardware, and enhance the software applications. With skills and ability of BLAM team, the bank application can be built from the existing system. BLAM is capable executing the requirement of Xanadu banking system.

For the contract issues, we can start using MS access. This is database that can be built ~~from ground up~~. This is inexpensive alternative because it is already part of the Microsoft Office suite that came together with Excel program. We can build and customize the contract account from this program. When all data and information are entered into this database, we can configure it to reside in existing server, and all the accountant and other stakeholder will have access to modify, changes or add contract numbers base on their privileges. This application is easy to build and easy to use. Since, the bank is ready using the MS office suite, the transition from using the access is easy and transparent.

There some addition to hardware that can be purchase to vendor, but this will be minimal cost compared to getting the whole packages from the solution companies. The Optical Character Recognition (OCR) is hardware that can scan an invoice and display it in a computer screen. When this hardware is customize, it can work with the Access program, to process invoices, query an account, plugin the necessary data, and it can process the invoice data with little or no user intervention.

When we look at the development program, the cost of owning this payment system is very minimal. Most of the needed resources are in house, the cost of updates to the program, if any, can be done in house. All the enhancement will be done in house with help of BLAM team.

Time Estimates

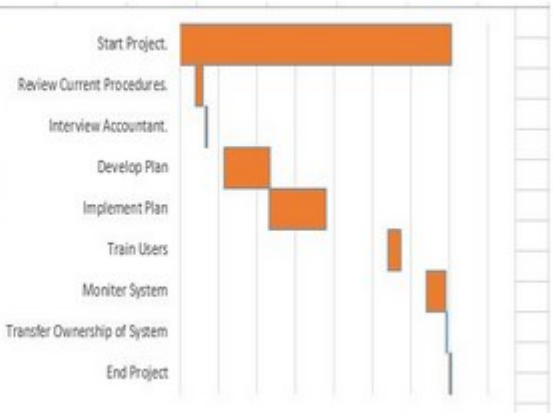
Project Deliverables

*Need to update schedule to include next quarter details

Task List	Start Date	Duration	End Date
Start Project.	2-Feb	141	22-Jun
Review Current Procedures.	10-Feb	4	14-Feb
Interview Accountant.	15-Feb	1	15-Feb
Develop Plan	25-Feb	24	20-Mar
Implement Plan	20-Mar	30	20-May
Train Users	21-May	7	28-May
Moniter System	10-Jun	10	20-Jun
Transfer Ownership of System	20-Jun	1	20-Jun
End Project	22-Jun	1	22-Jun

Projected Timeline

Start Project.	2-Feb	141	22-Jun
Review Current Procedures.	10-Feb	4	14-Feb
Interview Accountant.	15-Feb	1	15-Feb
Develop Plan	25-Feb	24	20-Mar
Implement Plan	20-Mar	30	20-May
Train Users	21-May	7	28-May
Moniter System	10-Jun	10	20-Jun
Transfer Ownership of System	20-Jun	1	20-Jun
End Project	22-Jun	1	22-Jun



Appendices

Edmonds Community College
Computer Information Systems
Research Project 1

PRELIMINARY INVESTIGATION REPORT

Authors:
Team B.L.A.M
Brandon Phoenix
Lucas Whittall
Arnulfo Julio
Mark Coyle

Supervisor:
Peter Farrar

February 5, 2015

Date: February 5, 2015
To: Patrick Jay, Vice President/Manager
From: Team BLAM
Subject: Preliminary Investigation Report

Enclosed please find our Preliminary Investigation of Bank of Xanadu's need for a new automated system to streamline the processing of contract invoices. We found that a new that new system is worth pursuing. Based on our findings, the bank will benefit with a new system. The system will save time in processing, save money in the long run, create fewer steps and procedures in processing of invoices, and will result in accurate financial reporting.

We have scheduled to meet again at your Bellevue branch on February 5, 2015. We would appreciate your review of this Preliminary investigation. Please if you have any questions or concern, please contact the BLAM Team at Edmonds Community College. We look forward for your comments and approval.

XANADU BANK
PRELIMINARY INVESTIGATION REPORT

Team B.L.A.M
Brandon Phoenix
Lucas Whittall
Arnulfo Julio
Mark Coyle

February 5, 2015

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INTRODUCTION:

This is a preliminary investigation conducted [P1] by our BLAM TEAM. BLAM is derived from our first initials, where B stand for Brandon, L for Lucas, A for Arnulfo, and M for Mark[P2] . We initiated investigation concerning the situation of Bank of Xanadu, and their accounting department, specifically their Accounts Payable system. The goal of our investigation is to satisfy Mr. Patrick Jay's request for a new accounting system to automate the procedures of their accounts payable department.

SYSTEMS REQUEST SUMMARY:

The Bank of Xanadu is under-going a transition from in-house programming to outsourced contractors, in an effort to remain profitable, bring their business focus back to core competencies, and save money. In doing so, the bank needs a new method or system to handle processing of outsourced contracts.

Currently, the Accounting department handles processing of these contracts and invoices. They process the invoices through manual entries in a Microsoft Excel spreadsheet. This process takes them numerous hours and extra days to complete, and is prone to creating report errors, numerous re-verifications of data entries, many reversal transactions, and erroneous financial reports.

Mr. Jay requests an automated system to track down these invoices or expenses, so that they are accountable based on the programing contract. He wants the system to correctly verify all information and data entered into the system. Specifically, he wants the new system to process invoices based on contract date range, and to verify the hourly rate billed in the invoices matches the hourly rate stipulated within the contract. The system needs to consolidate all contract expenses, so that Accounting will be able to tell whether there is enough funding left for the contract to pay for the invoices.

BACKGROUND:

Bank of Xanadu is a large global enterprise that offers a variety of products and services to a customer base of over 10 million people worldwide. They have over 100,000 employees worldwide. The bank originally started in Bellevue, Washington, and is now has headquarters in George Town, Cayman Islands. With 22 major banking centers worldwide,

there are currently over 2000 additional branch offices located in both the United States and 15 countries across the globe.

Major banking centers located in the U.S. include Bellevue, Los Angeles, Dallas, Atlanta, and New York. Overseas banking centers are located in The Netherlands, Germany, Australia, South Africa, Singapore, China, Great Britain, India, France, Canada, Chile, Brazil, Switzerland, Japan, and New Zealand. The corporate headquarters employs about 500 people and each of the major banking centers has between 500 and 1000 employees apiece. In addition to the major banking centers, smaller satellite branches employ anywhere from 25 to 50 employees each.

Three young entrepreneurs, who previously worked for large banking conglomerates, founded the original company in 1978. They believed that by combining their successes and their expertise in the banking industry, they could eventually grow their little thrift into an internationally recognized banking enterprise. Originally, there were just three small branches in the Puget Sound area of Washington State. It was one of the first to implement a policy of putting the customer first, no matter what. The company slogan, "No Boundaries", truly describes the personality of the company and its founders.

Currently, the bank is shifting its focus to improving its core competencies. This move entails outsourcing its programming needs, which will save the bank millions each year.

PRELIMINARY INVESTIGATION FINDINGS

The Problem

Currently, the bank does not have an automated system to handle contractual payments to outsourced programmers, and has delegated the task of managing such payments to the accounting group at each major U.S. banking center.

The main focus of the problem, according to Mr. Patrick Jay, the vice president and manager of the accounting group, is the processing of invoices for the outsourced programmers. The accounting department has set up a stop-gap to fix the issue with invoices that uses a Microsoft Excel spreadsheet to record the invoices and other data related to the contractual expenses.

This process is time consuming, prone to errors, and affects vendor inquires and financial reports. Senior management has decided that the bank needs a new system to handle these invoices.

Project Stakeholders

This system change affects the following stakeholders:

- Patrick Jay – project sponsor and the person who initiated the project
- Dave spencer – the chief accountant
- Rob Watt – issues contracts
- Accounting Group – processes invoices and timesheets
- Contractors – Provide invoices & time sheets for contractual services.
- Accounts Payable Group – pays out invoices
- IT department – maintains the system

Project Scope:

In Scope: Design a system that will help the bank be cost efficient, handle contract payments faster and save time. It will be a trial system, set up in the Bellevue office only at this time. The system will handle all contracts, tracking hours, payments, and balances.

Out of Scope:

- Updating computer systems.
- Designing this company wide.
- Handling any other accounting issues.

Current Procedures:

Invoice processing is as follows:

1. Delivery of Appendix A to the accounting department.
2. Accounting verifies Appendix A to make sure it is complete with all needed information
3. Enter Appendix A into the Excel spreadsheet.
4. File copies of Appendix A for future reference.
5. Create exception memo if Appendix A is incomplete and return to buyer.
6. Accounting receives corrected Appendix A from buyer
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10. Verify invoice for completed information.
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12. If invoice is not complete, create exception memo. Return Invoices and timesheet to buyer.
13. Buyer resolves issue and returns payable invoice to Accounting
14. Verify payable, valid invoice manually against contract to ensure pay ability.
15. When invoice is determined to be payable (Check Cut), a data entry sheet is generated and attach to original with the timesheet.
16. Deliver invoice and data entry sheet to accounts payable.
17. If vender did not receive payment in reasonable time frame, they call the accounting to find out why?
18. Accounting researches vendor inquiry.
19. Accounting replies to vendors.
20. Accounting determines if accrual needed for invoice at month end.
21. If so, accrual process begins.
22. Next month, accrual reverses.
23. At months end, accounting generates 5 monthly reports [P11] for accounting and bank management.
24. Accounting audits report for accuracy.
25. Accounting sends out audited report.

Current Strengths and Weaknesses

The current strengths are minimal, with the main positive is that Excel is not an expensive program, and it does the job.

Most of the current processes are time consuming, and take many steps in the process to accomplish the job. Another weakness is wasted expenses because of the man hours needed. Since the process does not integrate with current systems, there is a delay and breakdown in communication between departments, and corrections take time to get back and forth between departments. There are accuracy issues due to manually entering data in by hand. This, coupled with extensive hours, create mistakes at times. The system has no way of catching accounting, accounts payable, and contract issues, so finding a mistake can be a painstaking endeavor.

System Requested Features

The most important functions the new system must perform are to determine whether each billable invoice falls within the contract time limitations, and that the start and end dates of the work performed and billed on the invoice falls within the valid contract date range. Secondly, the system must also verify the hourly rate billed on the invoice matches the hourly rate set on the contract. Finally, it must calculate whether there is enough funding left on the contract to pay the invoice.

Other features requested include the ability to run on existing PC-based, UNIX hardware, be scalable, adhere to standard Accounting - GAAP regulations, keep data secure, and reject contracts if there is no funding. The system should also be able to generate and deliver five reports used by the bank: an expense report, an accruals report, a monthly report for each bank division listing expenses for contract programming for each unit, a unit report detailing the expenses, and a report for each project manager detailing costs, fees, and remaining balance for contractors.

Constraints

- Automated Database System.
- Completion date of June 18nd of 2015.
- Pilot program to start at Bellevue location.
- A training plan for the accounting department.
- Must use current systems to design project.
- Transfer all current information over to new system.

Project Feasibility

Operational: The new system will cut costs, take less time and be more accurate, which will save the bank money, use less man hours and give faster turnaround time. This benefits the accounting, accounts payable and the IT department by making it easier to use, fewer returned contracts and less maintenance. The risks to the bank are minimal, if not non-existent.

Technical: The bank's current system is more than capable of handling this new system. The only issue is training the accounting and IT departments.

Financial: The bank looks to profit from a new system in place, with a high ROI and decent NPV. According to our calculations, the system should pay for itself in the third year of operation.

Here are the Return on Investment and Net Present Value reports for the project.

Bank of Xanadu

Project Feasibility Report - ROI

Team BLAM

Year	Costs	Cumulative Costs	Benefits	Cumulative Benefits
0	$ 2,000,000.00	$ 2,000,000.00	$ 1,500,000.00	$ 1,500,000.00
1	$ 400,000.00	$ 2,400,000.00	$ 1,425,000.00	$ 2,925,000.00
2	$ 420,000.00	$ 2,820,000.00	$ 1,353,750.00	$ 4,278,750.00
3	$ 441,000.00	$ 3,261,000.00	$ 1,286,062.50	$ 5,564,812.50
4	$ 463,050.00	$ 3,724,050.00	$ 1,221,759.38	$ 6,786,571.88
5	$ 486,202.50	$ 4,210,252.50	$ 1,160,671.41	$ 7,947,243.28
6	$ 510,512.63	$ 4,720,765.13	$ 1,102,637.84	$ 9,049,881.12
7	$ 536,038.26	$ 5,256,803.38	$ 1,047,505.94	$ 10,097,387.06
		Return on Investment:		92%

Bank of Xanadu

Project Feasibility Report - NPV

Team BLAM

	Benefits	Factor	PV of Benefits	Costs	Factor	PV of Costs
Year 0	$ 1,500,000.00	1.000	$ 1,500,000.00	$ 2,000,000.00	1.000	$ 2,000,000.00
Year 1	$ 1,425,000.00	0.926	$ 1,319,550.00	$ 400,000.00	0.926	$ 370,400.00
Year 2	$ 1,353,750.00	0.857	$ 1,160,163.75	$ 420,000.00	0.857	$ 359,940.00
Year 3	$ 1,286,062.50	0.794	$ 1,021,133.63	$ 441,000.00	0.794	$ 350,154.00
Year 4	$ 1,221,759.38	0.735	$ 897,993.14	$ 463,050.00	0.735	$ 340,341.75
Year 5	$ 1,160,671.41	0.681	$ 790,417.23	$ 486,202.50	0.681	$ 331,103.90
Year 6	$ 1,102,637.84	0.630	$ 694,661.84	$ 510,512.63	0.630	$ 321,622.95
Year 7	$ 1,047,505.94	0.583	$ 610,695.97	$ 536,038.26	0.583	$ 312,510.30
Total	$ 10,097,387.06		$ 7,994,615.55	$ 5,256,803.38		$ 4,386,072.91
		Net Present Value:	$ 3,608,542.64			

Expected Benefits

Tangible:

- Save time on processing.
- Save money in the long run.
- Uses fewer resources.
- Will be more accurate.
- Improved Employee satisfaction.
- Improved Vendor relations due to faster and accurate payments.

Intangible:

- Easier process.
- Easy to learn through training.
- Profitable future, once implemented company wide[.

Time and Cost Estimates:

Name	Hourly Rate	Monthly Hours	Total Monthly
Brandon	40	160	6,400
Lucas	30	160	4,800
Arnulfo	25	160	4,000
Mark	40	160	6,400
		Total:	21,600
Miscellaneous Expenses		Travel	1,000
		Computer	4,000
		Supplies	1,000
		Per Diem	4,000
		Monthly Total	31,600

Project Timeline:

Date	Milestone
February 2, 2015	Start Project
February 10, 2015	Review Current Procedures
February 15, 2015	Interview the accountant
February 25, 2015	Develop a Plan
March 20, 2015	Implement Plan
May 1, 2015	Train the users
June 10, 2015	Monitor system
June 20, 2015	Transfer ownership of system
June 22, 2015	End project

Recommendations for Action

Based on the findings of this investigation, our team believes this project will be a worthwhile endeavor for the Bank of Xanadu, and we recommend moving forward with the project. The feasibility of the project is positive, with operational and technical feasibility painting a nice picture for the project.

Financial feasibility is profitable as well, with a Return on Investment of 92%, well above the standard minimum used on most markets. The Net Present Value is also positive, putting the project at $3,608,542.64- above the cost of the project. This project will save time and money for the Bank of Xanadu, and give the bank a better opportunity to focus on its core competencies.

The next step will shift our team into the systems analysis phase, and we will begin gathering and processing system requirements. This starts with the requirements modeling stage, and will lead into data and process modeling, then object modeling, and finally strategy development. Through these stages, we will be collecting data, processing how to perform current tasks, and assess how the new system could solve current problems. We believe in using an agile method in our analysis so that we can tailor our

steps to the current project, and come up with a best-fit scenario for the bank. This will then take us into the design phase of the project, which we will later discuss with a System Proposal.

Interview Questions:

This interview is for Patrick Jay, the VP and manager of the accounting Group and Dave Spencer, the chief accounting officer. Mr. Jay is the person who sponsor project and he is responsible for the creation of the project. Mr. Spencer is the person who knows the details of the project and he knows the requirement for a new system.

1. How much is your budget for this new project?
2. What kind of documentation are you looking for in terms of milestones?
3. Will you be needing us to give informational seminars and training?
4. What are the missing information or data in the financial reports that can be corrected with the new system?
5. Is there any reports that the system needs to generate? (Monthly expenses, client expenses? Overall?)
6. What are some of the information or data needed to enter into the new system?
7. What are some of the system limitations?
8. How do you monitor the contract programing expenses if they are being disbursed according to the stipulated contract?
9. How long, in terms of months and years, are contracts typically?
10. What will be the user privileges be? Will there be different access levels for management? (Any passwords?)
11. Does the system need to be accessibility in every location or just the main branch hub centers?
12. Is there any system "safety" parameters that need to be implemented? (Preventing a user from submitting a contract without filling out all the required fields)
13. What system do you have in place besides spreadsheet to track down or monitor the programming expenses or invoices?
14. What risks do you foresee and are you comfortable taking them?
15. What are some of the features that you would like to see in the new system that will help and make the processing of invoices easy to use.
16. What system are in place to help, direct, or to resolve vendor inquiries and issues concerning their transaction with company?
17. What is the timeframe for the project?
18. How does the programmer/business analyst report their actual expenses to the corporate center?
19. What type of information will be required to enter in the system for contract and payment details?
20. If there is no funding left on a contract to pay an invoice, what needs to happen to that contract?

INTERVIEW QUESTIONS ON JANUARY 29TH, 2015

Q: What is the business doing to alleviate problems. Keep up and manage this?
A: Dave spencer- Created workbook with various sheets to record contracts and the invoices that come in. Rarely gets out of the office at 9pm, sometimes working on Saturdays. Has to report to all the project managers and departments that are getting expenses charges for these invoices in the contract program. Currently manual input.

Q: What type of system?
A: Stand alone system, start with pilot program in the Bellevue Office

Q: When an invoice has an error?
A: Fills out an exception memo and returns the invoice to the buyer Rob Watt. It his responsibility to fix the problem. Has to correct it and send the new revised one. Each invoice takes about 20-30 minutes.

Q: All the entry fields and spreadsheet method, new fields?
A: Don't necessarily know what fields are needed and if we need to replicate the one's in place. Not putting anything in the workbook that he doesn't have to. Look at the information and see how it will work

Q: Will you provide input and output forms?
A: Don't really have any forms. We get a contract, enter the information, get invoice, enter the informations on the invoice.

Q: What are the differences between the available contact funding for contract and the invoice?
A: The contract will have a cap and the invoice may come in at the full amount. Maybe some come in a couple weeks at time.

Q: Are there company policies that would affect the system?
A: The system would have to adhere to GAAP rules. There are ways for accounting to be handled.

Q: What are the expectations for hiring?
A: Expect to be hiring contract programmers because we bought another bank. WIll take some programming to merge system together. Could be several hundred employees

Q:. What tangible benefits and intangible that we need to take effect?

A: Wants an automated system that reduces the time it takes to reduce to process invoices. Easily trainable to others. Not something that I wanted, just something that my boss gave me. I want a system that can be done for an accountable. Funding will cover training.

Q:. Will be provided with figures for NPV and ROI?
A: eventually
"10 day period at the beginning of every month where the system will be open or limbo where we get expenses and things we receive. We can actually do a paper transaction and charge it to the general ledger account, charging unit. On the 10th of the month, we would reverse the figure, going to pay the invoice, the minus figure and the + figure wash.

Q: Any weakness or time consuming?
A: Manually entering everything gets to be pain. Might "double-finger" and some things could end up in a mistake and Excel doesn't catch that thing. A system that would minimize errors.

Q. Risk to the projects?
A: I don't see any risks, cant think of any, besides the information on the contracts and the invoices is proprietary bank information. We would want this information to remain secure. Possible data breach?

Q: Is there a deadline?
A: June 18 is the absolute last day. Boss says it has to be done, otherwise Patrick J says I will be in "trouble"

Q: What kind of validation rules to apply for invoice coming in?
A: When he gets an invoice, he has to find the contract that it pertains to. The invoice has hrs work and rate. Has to manually calculate it. Most automated systems will do this and eliminate erros. Currently have WORD template. Should do math by itself.

Q: What is the strength of the spreadsheet?
A: No strengths, and doesn't want to have it carry over.

Q: What System reports should it need?
A: Expense report- general accounting department. General ledger expense contract programming
Accruals report- need a report to see how much it is.
Send out report to each division in the bank of every month. It lists, the expenses the contract programming for each of the units located within that department. There is a report that we send out to each unit that gives the detail for what the expense is for. Last report send out to each project

manager, detailing the cost associated with the fee with the contractor. This is how they will know how much is left on the contract.

Q. What are the fee limitations?
A: the fee is on the contract, already stipulated. That is where its tracked

Q: Hardware and Software constraints?
A: Nothing that he knows of, Uses UNIX mainframe, has network in the bank. Servers are capable to handle this.

Q. What type of OS will be needed?
A:System must run on existing hardware. Windows

Q: Do you require an NDA?
A: Yes we do.

Q. Who enters the information in the system?
A: Some vendors are large, they have the ability to submit invoices electronically. Some programmers are sole proprietors. They will attach an invoice to an email or use the snail mail. Allow extranet for partners to enter their own.

Q. Same contractors?
A: Each contractor has its own rate. Use some people/clients over and over again. A lot of these people use to work at the bank.

Q. Who is the end user, and what support will they have?
A: The end user of the system is the accounting department. We still have IT in house to manage the network. Need a system that will eventually be maintained by them

Q. Who is not allowed to use?
A: The contract people should not have access to this system. I have had many mistakes.

Q. How do you measure success?
A: Completed by the date of June 18, 2015/ Must follow three things as discussed..

Q. If it gets over the amount?
A: The system must reject it. Any problem, returned to the contractor and must be resolved by them. Back to the buyer Rob. Responsible contacting Vendor and the program manager outside of the accounting department..

Q. How does the department benefit?
A: Should relieve problems and just overall minimizes errors.

Q. List of people affected?
A: write the list that we talked about last class 01-26-15

Q: Is the project team including training as scope:?
A: Come up with training plan, train people, design, implement, as part of the scope. Turn-key system

Q. Is this system expected to run independently, or centralized for the company?
A: As of right now, he has 5 different accounting centers. They process regional invoices. Down the road, consolidate them more. We like the idea of having them regional processing their own. Bellevue process all corporate . IF it deploys all regional center, it will be single enterprise accessible all over

Q. Any terminologies that are being used inconsistently?
A: There is no confusion, they have different terms,
Dave- Reports that I print out manually, get put in a cheese envelope and goes into the mail system, and goes where it needs to be. Sometimes I will print scrn and email it to a manager if he needs it right away. Thats how the reports get sent out. Ideally, it will be cool if the system could automatically send from the system through email to whoever. Allow certain management people limited access and request copy

Q How do you see the department benefiting from the system- Lyle Newhart
A: Dave brings out a packet, with the original invoice that he paid for it. Has a data entry sheet. Gives it to data entry people.

Q: If needed, how would you access it the files- contracts?
A: Not sure if Analysts would need access it to. HR and payables group. Payables group has to have 1099 setup contractual life events. Issue the checks to them. Its expense and reported to IRS, that check is considered income.

Q: Is there any colors or specialization?
A: You can design the system and choose any colors that you would want.

Q: Is there any ID code to track the payments?
A: The appendix A of the contract, lengthy contract. It is what gives you the specific details of each contract. Its where you specify, rates, people, projects.

Q. Job-shadowing the end user

A: Next week, and probably want Dave

Q. How long do contracts last?
A: Generally not more than 12 months

Q: Do you have current system documentation that we could currently use?
A: Copies of reports that was said earlier
vendor invoice, copy of contracts, appendix A, data entry sheet, excel workbook, and exception memo , timesheets.

Q: Is there any approval for the amount?
A: Signed by the project manager, and its attached to the time sheet.

Q: How many people will be associated to the contract?
A: One contractor per contract

Q Current process on timesheet?
A: not getting paid until a signature is on the time sheet. Dave knows almost all of the project managers.

Q: Does the system need to be scalable?
A: Yes, please factor that in and its also audited every 3 three years.

Announcement Memo

Bank of Xanadu

Corporate Headquarters: **George Town, Cayman Islands**
Major Banking Centers: **Amsterdam • Atlanta • Auckland • Bellevue • Berlin • Dallas • Hong Kong • Johannesburg • Kuala Lumpur • London • Los Angeles • Mumbai • New York • Paris • Toronto • Santiago • Sao Paulo • Shanghai • Singapore • Sydney •Tokyo • Zurich**

Date: Friday, 11/30/14
To: Bank of Xanadu Bellevue Employees
From: Anne Casey, Sr. Vice President
Subject: MAJOR ANNOUNCEMENT

This will give you advance notice of a story that will be reported in tomorrow's newspapers. At a press conference today, the Bank of Xanadu board of directors announced that the company would immediately acquire Utopia National Bank, including their corporate headquarters and all 550 of their branch offices, for a sum of $20.1 billion dollars. This acquisition will greatly increase our global influence in Europe, Africa, and the Asian marketplace. This opportunity will expand our operations into eight new international cities, including Madrid, Copenhagen, Rome, Cairo, Bangkok, Taipei, Manila, and Seoul, and add over 400 domestic branches – primarily in America's heartland. We are excited about this acquisition, and welcome Utopia into the Xanadu fold.

During our recent strategic planning meetings, we examined external opportunities and internal constraints of our business. We identified several fast-growing areas of banking that might represent new opportunities for Xanadu. We found that bringing Utopia into our business model would present the best opportunity for us to expand not only our global exposure, but also to expand our customer base and increase the available services that we can offer our customers. While Utopia will provide us a wider array of banking opportunities, we will need to streamline both business process models into one seamless operation in order to maintain economic profitability.

As a result, we decided to consolidate operating and networking systems into one global system. We have successfully recovered from the sub-prime mortgage fiasco that resulted in damaging losses for Xanadu, and particularly disastrous losses for Utopia. With losses in the billions of dollars, Utopia has continued to struggle unsuccessfully to operate as a financially profitable organization. This has allowed Xanadu to execute a quick-and-dirty hostile takeover of their organization. With this said, we must now focus on our core competencies in order to maintain financial profitability. After much strategic planning, we have decided to outsource all computer system programming and consulting duties that we once held in-house to outside contractors. We project that this will result in substantial annual cost savings in employee administrative and benefit expenses.

To address this constraint, we have decided to temporarily reorganize our IT resources and assign higher priority to internal projects that will streamline our procedures. As Xanadu employees, you know that our company always has looked ahead to the challenges and opportunities of the future. Our long-term mission is to grow ourselves into the largest and most profitable banking organization in the world – one that is essentially "too-big-to-fail". Our corporate values and the high-quality services we provide are the cornerstone of our success. In a market where many banks and thrifts have failed, we have been able to stave off serious financial distress and with the acquisition of Utopia, believe we have positioned ourselves to sustain our recovery, and continue to grow our product and services worldwide. Our financial analysts and advisors have much work to do to complete the acquisition of Utopia. We will scrutinize all internal procedures and external market opportunities. If all goes as planned, we expect to see increased profits within the next two to three operating quarters. Thank you all for your hard work and dedication.

Corporate Organization Chart

Bank of Xanadu
Corporate Headquarters: **George Town, Cayman Islands**
Major Banking Centers: **Amsterdam • Atlanta • Auckland • Bellevue • Berlin • Dallas • Hong Kong • Johannesburg • Kuala Lumpur • London • Los Angeles • Mumbai • New York • Paris • Toronto • Santiago • Sao Paulo • Shanghai • Singapore • Sydney •Tokyo • Zurich**

CORPORATE HEADQUARTERS: ***George Town, Grand Cayman***

Chief Executive Officer (CEO)
Patrick Dollarene
Chief Financial Officer (CFO)
Sanjay Rupeedaal
Chief Information Officer (CIO)
Isabella Realney
Chief Operations Officer (COO)
Hyacinth Randall

Executive Vice President (EVP)
Carmelita Pesolera
Senior Vice President (SVP)
Richard Poundstone
Vice President (VP)
Dieter Markstein
Assistant Vice President (AVP)
Keiko Yennokai

(Sample)
BRANCH OFFICES

Bellevue, WA
Sr. Vice President
Anne Casey
Executive Secretary:
Beth Rice

Contract Group
Manager: Scott Sorenson
Rob Watt
Sam Esposito
Mark Martin
David Hart
Jagreet Kaur
Anthony Lewis

Accounting Group
Vice President/Manager:
Patrick Jay
Dave Spencer
Kyle Watts
Tamisha Spencer
Misty Barber

Payables Group
Manager: Lyle Newhart
Dawn Hill
Mark Martin
Ho Lee
Bill Loos
Lane Conway
John Wallace

Pine Valley, NY
Sr. Vice President
Leonard Chou
Executive Secretary:
Jan Lawrence

Contract Group
Manager: Cara DeSoto
Annie D'Ogie
Joyce Donahue
Ray Ortiz
John Ackerman
S. Nelson-Leang
Tuan Tran

Accounting Group
Manager: Roy Brown
Shelly Grant
Tom Leman
Pilita Basto
E Osei-Shearman

Payables Group
Manager: Robert Stacy
Amy Hawkins
Leslie Hall
Waylon White
Susan Cooper
Ed Eowpun'
Tereasa Skelly

Berlin, Germany
Sr. Vice President
Louisa Gartner
Executive Secretary:
Darth Weitmeier

Contract Group
Manager: Joachim Mohr
Karl Meister
Steffi Freund
Paula Grossman
Gerhard Arnott
Tobias Stein
D Voigtsberger

Accounting Group
Manager: Franz Neuman
Karin Kratz
Stephan Niebur
Dieter Janssen
Astrid Gutentag

Payables Group
Manager: Astrid Dorftier
Gunther Merckel
Hans Meistersohn
Rudi Schertz
Walter Lehmann
Martin Edelmann
Gert Fromme

Information System Work Request

Bank of Xanadu

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Information Systems Work Request

Date	**1/25/15**	**Department**	**Accounting**
Contact	**Patrick Jay**	**Location**	**Bellevue, WA**
Title	**Vice President, & Manager**	**Email**	**pjammer@box.bank**

Project Description (in brief):

The strategic direction and growth of the bank has put new emphasis on streamlining our internal procedures. Xanadu Bank is in the business of banking, and to remain profitable and competitive, focus has shifted toward concentration on our core competencies, outsourcing any functions and processes that are not part of these core business operations. Since this process began late last year, we have redeployed all in-house programming positions, resulting in the need to use outside contractors to provide the necessary programming services. This move will save our company over one 1 million dollars annually in employee administrative and benefit costs.

The major problem we face now is finding a suitable way to track these new programming expenses to the scope of service stipulated in their official contracts. While the accounting department has hastily thrown together a stop-gap solution using a spreadsheet application, it is taking an incredibly large amount of time to manually enter all the contractual information, receive and process the incoming programming invoices, prepare accurate accruals, respond to vendor inquiries, and generate accurate monthly financial reports.

The THREE most important functions the new system must perform are to determine whether each billable invoice falls within the contract time limitations (start & end dates), specifically if the work performed and billed on the invoice falls within the valid contract date range. It must also verify the hourly rate billed on the invoice matches the hourly rate stipulated on the contract. Finally, it must calculate whether there is enough funding left on the contract to pay the invoice.

In recent strategic planning sessions, the senior management has determined that there is a desperate need for a new, more automated process for managing contract payables. The *objective* of this project is to investigate and recommend a solution to control payments in accordance to contractual time and fee limitations throughout the company. Once approved, the winning team will design and implement the chosen solution for use within the Bank's various accounting departments.

Submitted by: _____ **Date** _____

Approved by: _____ **Date** _____

Sample Contract

APPENDIX A

AGREEMENT TO PROVIDE PERSONNEL BETWEEN
Bank of Xanadu (BANK) and:

DAN VAN RITZ, INC. (CONTRACTOR)

I. All work and/or services provided under this Appendix shall be performed in accordance with the provisions of this Appendix and Master Agreement: #90-3167

Project/Services Number 16358.000 Charge Unit #: 3620

Bank Project Manager/Phone: Peter Townsend 206-675-2696

II. Scope of Services:

A. PROVIDE AN OVERVIEW OF THE PROJECT:
Support product development projects, as well as acquisition preparation for Demand Deposit Systems.

(See attached sheet for continuation of Scope of Services) RITZ0415

III. Fee Schedule: Total fee shall not exceed $ 52,000.00

Name of Individual	Generic Job Level	Hourly Rate	Start Date	End Date
Dan Van Ritz	CSE	$65.00	12/16/14	4/15/15

A NEW APPENDIX A MUST BE EXECUTED TO AUTHORIZE PAYMENT BEYOND THE AMOUNT NOTED ABOVE IN III. FEE SCHEDULE, OR TO AUTHORIZE WORK BEYOND THE COMPLETION DATE NOTED ABOVE

Agreed and Accepted:
DAN VAN RITZ, INC (Contractor)

Signature: Dan Van Ritz

Vendor Officer: DAN VAN RITZ

Title: President

Date: 12/15/14

Send Invoices to:
Bank of Xanadu
General Accounting #3707
P.O. Box 37000
Bellevue, WA 98002
Attn: Dave Spencer

Agreed and Accepted:
BANK OF XANADU (Bank)

Signature: Maryanne Kerrigan

Name: Maryanne Kerrigan

Title: Vice President

Date: 12/14/14

Countersigned: Charles Skeateas

Name: Charles Skeateas

Title: Vice President

Date: 12/15/14

Bryce Hazen
Bryce Hazen, Senior Vice President

Page 1 of 2

AGREEMENT TO PROVIDE PERSONNEL BETWEEN
Bank of Xanadu (BANK) and:

_____DAN VAN RITZ, INC._____(CONTRACTOR)

II. Scope of Services Continued:

B. LIST THE SPECIFIC TASKS TO BE PERFORMED:

Complete systems design specification
Analyze and code in C# (C sharp)
Perform unit, system, and integration testing
Provide installation support

C. LIST THE DELIVERABLES EXPECTED TO BE PRODUCED:

Detailed design specifications
Code
Test specifications
Unit testing, system testing
Conversion specifications
Installation specifications

D. LIST THE SPECIFIC TECHNICAL EXPERTISE REQUIRED (HARDWARE, OPERATING SYSTEMS, PROGRAMMING LANGUAGES, ETC.)

IBM 30XX, TSO/ISPF, OS JCL, VSAM
Ability to analyze and code in C# (C sharp)
Design, coding, and testing skills
Accounting systems background required, banking preferred.
Deposit systems/prior acquisition experience a plus
Prior Bank of Xanadu experience a plus
Strong communications and documentation skills
Team player with good interpersonal skills

E. LIST THE PERFORMANCE STANDARDS THAT WILL BE USED TO DETERMINE QUALITY OF WORK (E.G. SDP, DOCUMENTATION STANDARDS, TESTING STANDARDS, ETC.)

Adherence to project standards
Code reviews
SDP
Test plans and test result reviews

Sample Contract Extension

MEMO TO: Rob Watt
TAM #3411

MEMO FROM: Maryanne Kerrigan
Vice President
Consumer Banking Division – Demand Deposit Services
Project Management & Technology Support #3620
Xnet 666-1464

COPY TO: Peter Townsend #3620
Jim Herrington #3620
Frank Smolski #3620

DATE: April 15, 2015

SUBJECT: Van Ritz Contract Extension – Demand Deposit Project

The ***Completion Date*** ("End Date") on the Van Ritz Programming Service Agreement, master Agreement #90-3167, has been extended to May 15, 2015. The ***Total Fees*** ("Fee Schedule") do NOT change; they will not exceed $52,000.

Please make not of this change in your files.

Thanks for your help and call me if any questions. RITZ0415

Maryanne Kerrigan

Sample Contract/Exception Memo

Bank of Xanadu

Date: January 11, 2015

From: Dave Spencer, Accountant
Financial Controller's Division
Corporate General Accounting #3707

To: Rob Watt, Buyer
Technology Acquisition Management #3411

Classification: Internal

Subject: CONTRACTOR INVOICE PROBLEMS

Vendor:

I am unable to process the attached invoice(s) for the following reason(s):

( )	No Contract on File
( )	Dollar Amount Exceeds Contract Fee by $
( )	Invoice Period Outside of Contract Dates
( )	No Time Sheet
( )	No Invoice/Time Sheet Approval
( )	Time Sheet & Invoice Discrepancy
( )	Billed Rate Different from Contract Rate
( )	Other:

Please provide the necessary information and return to me in unit #3707. Thanks you for your assistance in resolving these problems. If you have any questions, please call me at XanaduNet 785-1223.

Attachment included.

DATE	ACTION

Sample Invoice

Dan Van Ritz Consulting, Inc
5820 Stoneridge Road Suite 100
Issaquah, WA 98506
425-555-1212

INVOICE

INVOICE #100154

DATE: JANUARY 16, 2015

TO:
Bank of Xanadu
General Accounting #3707
P.O. Box 37000
Bellevue, WA 98002

FOR:
Master Agreement #90-3167
Charge Unit #3620

PERIOD:	**1/1/15 – 1/15/15**	**TERMS:**	**ON RECEIPT**
HOURS	**DESCRIPTION**	**RATE**	**AMOUNT**
88	Computer Programming/Consulting Services	$65.00	$5,720.00
	RITZ0415		
		TOTAL	$5,720.00

Make all checks payable to Dan Van Ritz Consulting, Inc

Thank you for your business!

Sample Time Sheet

TIME SHEET

PERIOD OF: 1/1/2015 – 1/15/2015

DAN VAN RITZ CONSULTING, INC.
5820 Stoneridge Road Suite 100
ISSAQUAH, WA 98506
425-555-1212

CONTRACTOR NAME: Dan Van Ritz	**TITLE**: Programmer/Consultant
CLIENT COMPANY: Bank Of Xanadu	**SUPERVISOR**: Peter Townsend

CALENDAR DAY	HOURS WORKED	CALENDAR DAY	HOURS WORKED
1	8	16	
2	8	17	
3		18	
4		19	
5	8	20	
6	8	21	
7	8	22	
8	8	23	
9	8	24	
10		25	
11		26	
12	8	27	
13	8	28	
14	8	29	
15	8	30	
		31	
TOTAL HOURS:	88		

EMPLOYEE SIGNATURE: *Dan Van Ritz*	**DATE**: 1/15/2015
SUPERVISOR SIGNATURE: *Peter Townsend*	**DATE**: 1/16/2015

Sample Data Entry Sheet

DATA ENTRY SHEET

Vendor Name:	Donny Wicks Associates
Vendor Number:	ZZ0002
Invoice Number:	329
Description:	A. Peckham 12/16/14 to 12/31/14
Invoice Date:	01/02/15
Due Date:	01/17/15
Invoice Total:	3,600.00
G/L Account:	507613
P.O. Number:	A. Peckham
Charge Unit:	9408

Processed by Dave Spencer 1/11/15

Excel Workbook - Current Process

Vendor Information

	A	B
1	**Vendor Information**	
2		
3	**Company Name**	**Vendor Number**
4	Accelerated Information System	ZZ0015
5	APEX	ZZ0014
6	Beltam Systems Inc	ZZ0003
7	Computer Helpers	ZZ0018
8	Computing Experience	ZZ0021
9	Dan Van Ritz Consulting	ZZ0001
10	David Monroe Consulting	ZZ0011
11	Donny Wicks Associates	ZZ0002
12	EDS Temps Inc	ZZ0006
13	Electric Enterprises Inc	ZZ0005
14	Euro Systems International	ZZ0008
15	Fix-em Right Inc	ZZ0019
16	GE Consulting Consortium	ZZ0010
17	Integrated Info Systems	ZZ0012
18	International Consultants	ZZ0013
19	Neo Computing	ZZ0020
20	NW Consulting	ZZ0009
21	PN Associates	ZZ0007
22	Programmers are US	ZZ0023
23	Quality Computer Pros	ZZ0022
24	R N Andersen & Associates	ZZ0016
25	Redford Group	ZZ0017
26	Varjaraj Consulting	ZZ0004
27	Western States Consulting	ZZ0024
28		ZZ0025
29		ZZ0026
30		ZZ0027
31		ZZ0028
32		ZZ0029
33		ZZ0030

Contact Information

	A	B	C	D
1	**Contact Information**			
2				
3	**Project Manager**	**Contact Unit**	**Phone**	**Division**
4	Aporte, Manny	3426	785-2569	BAS
5	Beaverton, Andy	3686	785-2931	BAS
6	Bohner, Sheri	3738	785-4993	KXM
7	Chin, Lowell	3611	241-3099	MOM
8	Christian, John	7369	602-4680	PNW
9	Clark, Rudy	3479	622-2375	WDB
10	Crocker, Mark	5554	953-3316	NAB
11	DaLanda, Luis	5446	785-3133	BTR
12	Denbert, James	3627	785-5162	SST
13	Donaldson, Ryan	5852	785-3977	BTR
14	Gilbert, Steve	5054	785-2699	BAS
15	Hawkins, Dana	3594	624-3120	CBL
16	Jenkins, Ronald	3354	241-5050	MOM
17	Malaspina, George	3073	953-3860	NAB
18	Mondo, Gert	5863	785-5982	TPN
19	Omigawa, Joe	3498	622-9053	WDB
20	Peary, Alan	5852	485-4913	KXM
21	Putnam, Jed	3793	785-5129	TPN
22	Saunders, Rocky	5515	785-4351	KXM
23	Schaffer, John	3473	953-5912	NAB
24	Schrader, Kathy	3553	241-7645	MOM
25	Scott, Randy	3580	622-6047	WDB
26	Stromberg, Dieter	3858	785-2516	BAS
27	Tripple, Peter	3620	785-2696	BAS
28	Westmore, Alex	7365	602-4551	PNW

Charge Information

	A	B	C	D	E	F
1	Charge Information					
2						
3	**Charge Unit**	**Division**			**Division**	**Charge Unit**
4	3072	NAB			AMB	3117
5	3073	NAB			BAS	3410
6	3117	AMB			BAS	3426
7	3354	MOM			BAS	3620
8	3410	BAS			BAS	3667
9	3426	BAS			BAS	3686
10	3473	NAB			BAS	3858
11	3479	WDB			BAS	5054
12	3498	WDB			BTR	5446
13	3553	MOM			BTR	5852
14	3580	WDB			CBL	3594
15	3594	CBL			CCR	9408
16	3611	MOM			KXM	3738
17	3620	BAS			KXM	5515
18	3627	SST			KXM	5852
19	3667	BAS			MOM	3354
20	3686	BAS			MOM	3553
21	3738	KXM			MOM	3611
22	3793	TPN			NAB	3072
23	3858	BAS			NAB	3073
24	4508	RBD			NAB	3473
25	5054	BAS			NAB	5543
26	5446	BTR			NAB	5554
27	5515	KXM			PNW	7365
28	5543	NAB			PNW	7369
29	5554	NAB			RBD	4508
30	5844	TPN			SST	3627
31	5845	TPN			TPN	3793
32	5852	BTR			TPN	5844
33	5852	KXM			TPN	5845
34	5863	TPN			TPN	5863
35	7365	PNW			WDB	3479
36	7369	PNW			WDB	3498
37	9408	CCR			WDB	3580

Contract & Programmer Information

	A	B	C	D	E	F	G	H	I	J	K	L	M
1				Contract & Programmer Information									
2													
3	Contract ID	Programmer	Vendor	Begin Date	End Date	Charge	Division	$/Hour	Fee Max	Contact Person	Unit	Phone	Project Description
4	alvar0715	Alvarado, Julio	GE Consulting Consortium	12/08/14	07/31/15	5054	BAS	30.00	50,000.00	Gilbert, Steve	5054	785-2699	
5	Antho0315	Anthony, Don	Electric Enterprises Inc	03/01/15	03/08/15	3667	BAS	78.00	8,000.00	Denbert, James	3627	785-5162	
6	Brown0315	Brown, Lou	EDS Temps Inc	12/17/14	06/17/15	3072	NAB	25.00	29,000.00	Clark, Rudy	3479	622-2375	Tax System Assistance
7	Crock0515	Crockett, Davy	Donny Wicks Associates	12/11/14	05/19/15	5554	NAB	50.00	24,000.00	Crocker, Mark	5554	953-3316	
8	Ritz0415	Dan Van Ritz	Dan Van Ritz Consulting	12/16/14	04/15/15	3620	BAS	65.00	26,000.00	Townsend, Peter	3620	785-2696	Demand Deposit Systems
9	Rotz0715	Dan Van Ritz	Dan Van Ritz Consulting	04/16/15	07/31/15	3620	BAS	65.00	50,700.00	Tripple, Peter	3621	785-2697	
10	Devar1215	Devaraj, Sanjay	Varjaraj Consulting	01/02/15	12/30/15	5844	TPN	57.00	120,000.00	Aporte, Manny	3426	785-2569	
11	Fletch1215	Fletcher, Carla	Euro Systems International	02/08/15	10/31/15	3793	TPN	30.00	50,000.00	Putnam, Jed	3793	785-5129	
12	forti0615	Fortier, Brian	EDS Temps Inc	12/02/14	06/30/15	3072	NAB	25.00	29,000.00	Clark, Rudy	3479	622-2375	
13	Ckauf0915	Kaufman, Chris	EDS Temps Inc	03/02/15	09/30/15	3498	WDB	25.00	30,000.00	Omigawa, Joe	3498	622-9053	
14	Kelle0715	Keller, Michael	EDS Temps Inc	12/15/14	06/15/15	3073	NAB	25.00	28,000.00	Clark, Rudy	3480	622-2376	
15	Lehre1215	Lehrer, Philip	Beltam Systems Inc	01/02/15	12/31/15	3117	AMB	52.00	70,000.00	Schaffer, John	3473	953-5912	
16	Mann0615	Mann, john	Neo Computing	01/01/15	06/30/15	5543	NAB	90.00	125,000.00	Saunders, Rocky	5515	785-4351	
17	Micha0615	Michael, Troy	Fix-em Right Inc	01/31/15	06/28/15	3594	CBL	55.00	6,000.00	Hawkins, Dana	3594	624-3120	
18	Peckh0915	Peckham, Art	Donny Wicks Associates	12/16/14	09/30/15	9408	CCR	60.00	88,600.00	Scott, Randy	3580	622-6047	
19	Quinn12/15	Quinn, Perry	Electric Enterprises Inc	12/02/13	12/31/15	3738	KXM	65.00	135,720.00	Bohner, Sheri	3738	785-4993	
20	Scott0116	Scott, Ronald	Western States Consulting	02/01/15	01/31/16	5845	TPN	63.00	134,912.00	Peary, Alan	5852	485-4913	
21	Wilki0515	Wilkins, Peter	Donny Wicks Associates	12/01/14	05/30/15	9408	CCR	59.00	48,000.00	Scott, Randy	3580	622-6047	
22	Wolth0415	Wolthausen, JP	Fix-em Right Inc	02/11/15	04/12/15	3410	BAS	55.00	21,300.00	Mondo, Gert	5863	785-5982	
23	Wolth1215	Wolthausen, JP	Fix-em Right Inc	04/15/15	12/31/15	3411	BAS	55.00	21,300.00	Mondo, Gert	5864	785-5983	

Problem Invoices

	B	C	D	E	F	G	H	I	J	K
1	Problem Invoices to TAM									
2										
3	**ID Number**	**Programmer**	**Company**	**Start Date**	**End Date**	**Invoice #**	**Invoice $**	**Reason**	**Response**	**Remarks**
4	Wilki0515	Wilkins, Peter	Donny Wicks Associates	01/02/15	01/15/15	2364	600.00	Over AA Dollars	01/29/15	rec'd extension memo
5										

	A	B	F	G	H	I	J	K	L	M	N	O
1	Contract Fee Maximum											
2												
3	**ID Number**	**Programmer**	**Invoice #**	**Date Paid**	**Begin Date**	**End Date**	**Rate**	**Total Hours**	**Total Invoice**	**Total to Date**	**Fee Max**	**Available $**
4	Brown0315	Brown, Lou	509	01/11/15	12/17/14	12/31/14	25.00	70.0	1,750.00			
5	Brown0315	Brown, Lou	510	01/25/15	01/02/15	01/15/15	25.00	68.0	1,700.00			
6	Brown0315	Brown, Lou	511	02/08/15	01/16/15	01/31/15	25.00	70.0	1,750.00			
7												
8									**Total:**	**5,200.00**	*29,000.00*	**23,800.00**
9	forti0615	Fortier, Brian	3723	02/08/15	01/02/15	01/31/15	25.00	176.5	4,412.50			
10									**Total:**	**4,412.50**	*29,000.00*	**24,587.50**
11	Lehre1215	Lehrer, Philip	101	02/08/15	01/02/15	01/31/15	52.00	165.0	8,580.00			
12									**Total:**	**8,580.00**	*70,000.00*	**61,420.00**
13	Peckh0915	Peckham, Art	329	01/11/15	12/16/14	12/31/14	60.00	60.0	3,600.00			
14	Peckh0915	Peckham, Art	330	02/08/15	01/02/15	01/31/15	60.00	177.0	10,620.00			
15									**Total:**	**14,220.00**	*88,600.00*	**74,380.00**
16	Wilki0515	Wilkins, Peter	1001	12/21/14	12/01/14	12/15/14	59.00	64.0	3,776.00			
17	Wilki0515	Wilkins, Peter	1002	01/11/15	12/16/14	12/31/14	59.00	66.0	3,894.00			
18	Wilki0515	Wilkins, Peter	1003	01/25/15	01/02/15	01/15/15	59.00	85.0	5,015.00			
19	Wilki0515	Wilkins, Peter	1004	02/08/15	01/16/15	01/31/15	59.00	82.0	4,838.00			
20									**Total:**	**17,523.00**	*48,000.00*	**30,477.00**

	A	B	C	D	F	G	H	I	J	K	L	M	N	O
1	Invoices													
2														
3	**ID Number**	**Programmer**	**Vendor**	**Charge**	**Invoice #**	**Date Paid**	**Begin Date**	**End Date**	**Rate**	**Total Hours**	**Total Invoice**	**Accrued**	**Memo**	
4	Wilki0515	Wilkins, Peter	Donny Wicks Associates	9408	1001	12/21/14	12/01/14	12/15/14	59.00	64.0	3,776.00			
5										**Total:**	**3,776.00**			
6										**Total for December:**	**3,776.00**			
7														
8	Peckh0915	Peckham, Art	Donny Wicks Associates	9408	329	01/11/15	12/16/14	12/31/14	60.00	60.0	3,600.00	12/14		
9	Wilki0515	Wilkins, Peter	Donny Wicks Associates	9408	1002	01/11/15	12/16/14	12/31/14	59.00	66.0	3,894.00	12/14		
10	Brown0315	Brown, Lou	EDS Temps Inc	3072	509	01/11/15	12/17/14	12/31/14	25.00	70.0	1,750.00	12/14		**Dec Exp**
11										**Total:**	**9,244.00**			**13,020.00**
12														
13	Wilki0515	Wilkins, Peter	Donny Wicks Associates	9408	1003	01/25/15	01/02/15	01/15/15	59.00	85.0	5,015.00			
14	Brown0315	Brown, Lou	EDS Temps Inc	3072	510	01/25/15	01/02/15	01/15/15	25.00	68.0	1,700.00			
15										**Total:**	**6,715.00**			
16										**Total for January:**	**15,959.00**			
17														
18	Lehre1215	Lehrer, Philip	Beltam Systems Inc	3117	101	02/08/15	01/02/15	01/31/15	52.00	165.0	8,580.00	01/15		
19	Peckh0915	Peckham, Art	Donny Wicks Associates	9408	330	02/08/15	01/02/15	01/31/15	60.00	177.0	10,620.00	01/15		
20	Wilki0515	Wilkins, Peter	Donny Wicks Associates	9408	1004	02/08/15	01/16/15	01/31/15	59.00	82.0	4,838.00	01/15		
21	Brown0315	Brown, Lou	EDS Temps Inc	3072	511	02/08/15	01/16/15	01/31/15	25.00	70.0	1,750.00	01/15		
22	forti0615	Fortier, Brian	EDS Temps Inc	3072	3723	02/08/15	01/02/15	01/31/15	25.00	176.5	4,412.50	01/15		**Jan Exp**
23										**Total:**	**30,200.50**			**36,915.50**
24														
25	Brown0315	Brown, Lou	EDS Temps Inc	3072	512	02/22/15	02/01/15	02/15/15	25.00	68.0	1,700.00			
26	*(start)*													
27										**Total:**	**1,700.00**			
28										**Total for February:**	**31,900.50**			
29														
30														
31										**Grand Total:**	**51,635.50**			

Accruals

	B	C	D	F	L	M	O
1	Accruals						
2							
3	**Programmer**	**Vendor**	**Charge**	**Invoice #**	**Total Invoice**	**Accrued**	**Reversed**
4	Brown, Lou	EDS Temps Inc	3072	509	1,750.00	12/14	
5			**3072**	**Total:**	**1,750.00**		**01/10/15**
6	Peckham, Art	Donny Wicks Associates	9408	329	3,600.00	12/14	
7	Wilkins, Peter	Donny Wicks Associates	9408	1002	3,894.00	12/14	
8			**9408**	**Total:**	**7,494.00**		**01/10/15**
9			**December 2014**		**9,244.00**		
10							
11	Brown, Lou	EDS Temps Inc	3072	511	1,750.00	01/15	
12	Fortier, Brian	EDS Temps Inc	3072	3723	4,412.50	01/15	
13			**3072**	**Total:**	**6,162.50**		**02/10/15**
14	Lehrer, Philip	Beltam Systems Inc	3117	101	8,580.00	01/15	
15			**3117**	**Total:**	**8,580.00**		**02/10/15**
16	Peckham, Art	Donny Wicks Associates	9408	330	10,620.00	01/15	
17	Wilkins, Peter	Donny Wicks Associates	9408	1004	4,838.00	01/15	
18			**9408**	**Total:**	**15,458.00**		**02/10/15**
19			**January 2015**		**30,200.50**		
20							
21							
22			**February 2015**				
23							
24			**Grand Total:**		**39,444.50**		

Contract Programmers Monthly Expense Recap Report

	B	C	D	E	F	H	I	K	L	M
2				By Division and Unit						
3				January 2015						
4										
5	Programmer	Vendor	Division	Charge	Invoice #	Begin Date	End Date	Total Hours	Total Invoice	Accrued
6		Division:	AMB				Total for Division:		8,580.00	
7	Lehrer, Philip	Beltam Systems Inc	AMB	3117	101	01/02/15	01/31/15	165.0	8,580.00	01/15
8				3117			Total for Charge Unit:		8,580.00	
9										
10		Division:	CCR				Total for Division:		20,473.00	
11	Peckham, Art	Donny Wicks Associates	CCR	9408	330	01/02/15	01/31/15	177.0	10,620.00	01/15
12	Wilkins, Peter	Donny Wicks Associates	CCR	9408	1003	01/02/15	01/15/15	85.0	5,015.00	
13	Wilkins, Peter	Donny Wicks Associates	CCR	9408	1004	01/16/15	01/31/15	82.0	4,838.00	01/15
14				9408			Total for Charge Unit:		20,473.00	
15										
16		Division:	NAB				Total for Division:		7,862.50	
17	Brown, Lou	EDS Temps Inc	NAB	3072	510	01/02/15	01/15/15	68.0	1,700.00	
18	Brown, Lou	EDS Temps Inc	NAB	3072	511	01/16/15	01/31/15	70.0	1,750.00	01/15
19	Fortier, Brian	EDS Temps Inc	NAB	3072	3723	01/02/15	01/31/15	176.5	4,412.50	01/15
20				3072			Total for Charge Unit:		7,862.50	
21										
22							Grand Total for January:		36,915.50	
23										
24	Contract Programmers Monthly Expense Recap Report									
25	By Division and Unit									
26	February 2015									

Contract Programmer Report
Fee Maximum vs. Acutals
December 2014

Programmer	Begin Date	End Date	$/Hour	Contact Person	Phone	Appendix A Fee Max	Total Charged to Appendix A	Percent Used	Date Unit Last Charged	Under/Over Appendix A Max
DIVISION:	**NAB**									
	Unit Number:	3072								
Brown, Lou	12/17/14	06/17/15	25.00	Clark, Rudy	622-2375	29,000.00	1,750.00	6%	01/11/15	27,250.00
DIVISION:	**CCR**									
	Unit Number:	9408								
Wilkins, Peter	12/01/14	05/30/15	59.00	Scott, Randy	622-6047	48,000.00	7,670.00	16%	01/11/15	40,330.00
Peckham, Art	12/16/14	09/30/15	60.00	Scott, Randy	622-6047	88,600.00	3,600.00	4%	01/11/15	85,000.00

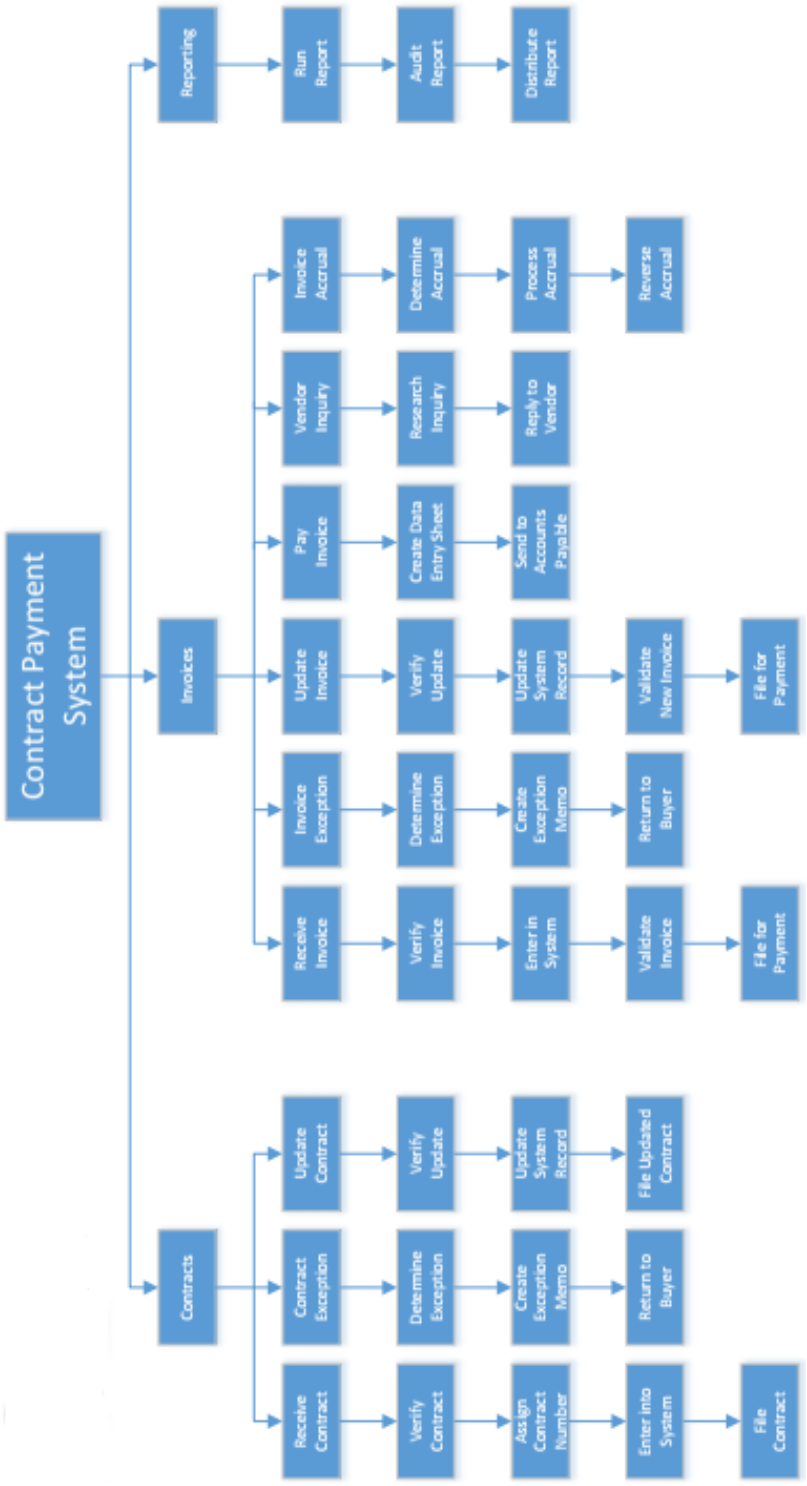
Monthly Contract Recap
As of December 31, 2014

Project Manager:	Clark, Rudy		**Unit:**	3072					
Programmer:	Brown, Lou			**Company:**	EDS Temps Inc		**Project:**	Tax System Assistance	
Start Date:	12/17/14	**End Date:**	06/17/14	**Rate/Hour:**	25.00	**Fee Max:**	29,000.00	**Charge To:**	3072

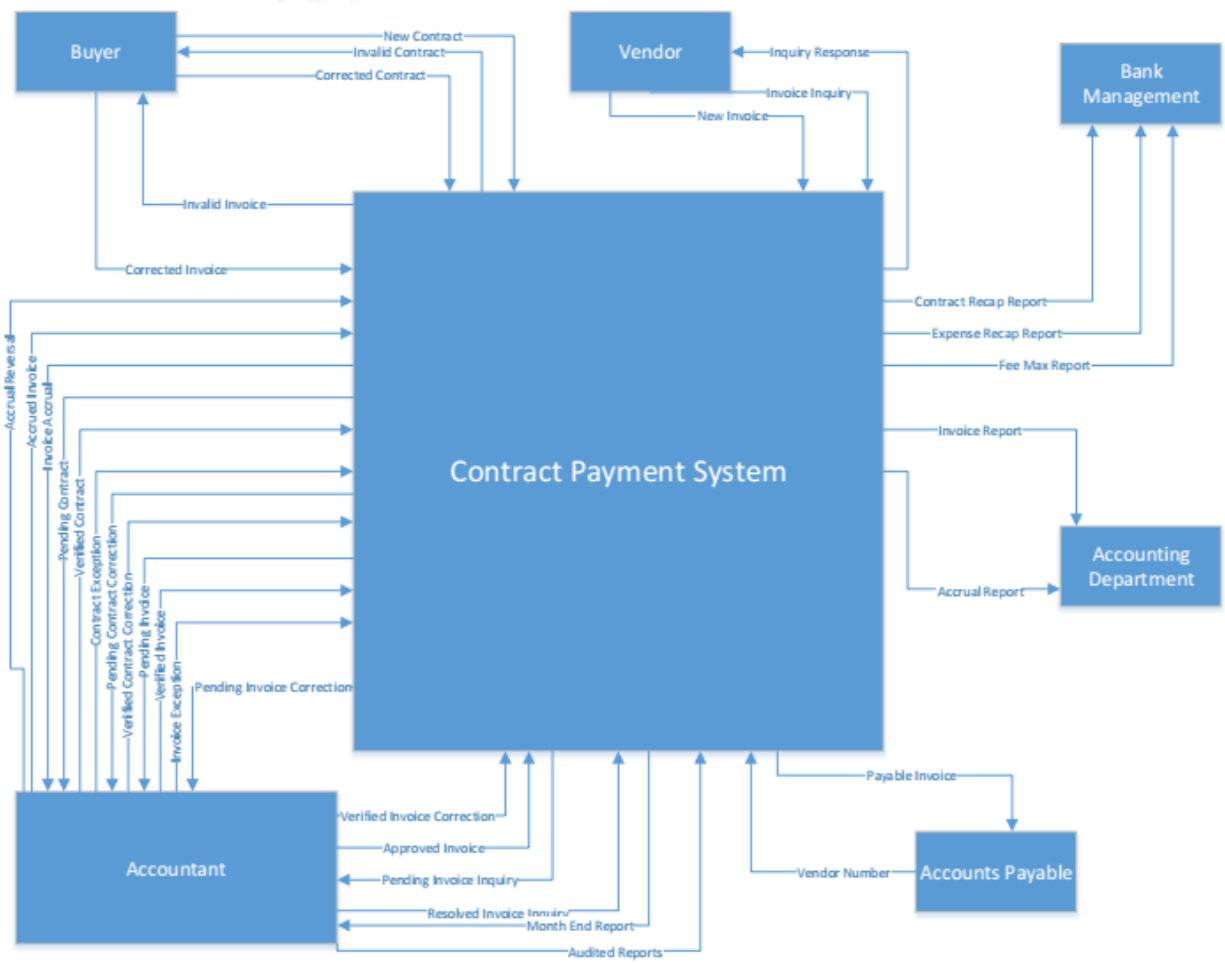
Invoice Number	Date Paid	Periods Paid			Hours	Dollar Total
509	01/11/15	12/17/14	to	12/31/14	70	1,750.00
		Total of Hours & Invoice Dollars:			70	$1,750.00

Total Charged to Contract:	$1,750.00
Percent Used:	6%
Remaining Contract Dollars:	$27,250.00

To-Be Functional Decomposition Diagram (FDD)



To-Be Data Flow Diagram (DFD)



Use Case Scenarios

USE CASE NAME:	**RECEIVE CONTRACT**	**ID: UC001**
Primary Actor:	Accountant	
Brief Description:	This use case describe the steps from the time the account receive a new contract until the contract validated and entered into the system and filed	
Trigger:	A new contract is received by the accountant	
Related Use Cases:	Contract exception(Extends), Update Contract (uses)	
Normal Flow of Events:	This use case begins when the accountant receives a new contract from the buyer. 1. The accountant visually verifies that the contact has all required information. 2. The accountant logs onto the system and navigates to the screen where new contract information is entered. 3. The accountant then assigns the contract number. 4. The accountant then selects the vendor number, charge unit (cost center), and bank division. 5. The accountant then enter the contract info, including programmer name, project start and end dates, hourly pay rate, fee maximum amount, and project description. 6. The accountant save the new contract record into the system. 7. The account then files the original contract away for future reference. This use case ends when a valid contract has been successfully been entered into the system.	
Exceptions:	1. If the contract is missing any information, the accountant will flag it as invalid 4. If the vendor doesn't exist in the system, the accountant will navigates to the appropriate screen and create a new vendor record. The same applies to project manager, charge unit, and division.	

	5. If any of the required information is missing, a default value is selected.
Pre-condition(s):	A new contract has been received and is ready to be entered into the system.
Post-condition(s):	A new contract has successfully been entered into the system.
Information Requirements:	Programmer Name Vendor name Project Manager Charge unit (cost center) Bank Division Contract Start Date Contract end date Programmer Hourly Rate Fee Maximum(contract budget) Project Description Contract number
Assumptions:	1. The buyer will deliver a valid and complete contract. 2. The contract is executed before any programming work is done.
Business Rules:	1. The buyer must submit a complete and valid contract the accounting department. 2. Contract are to be executed prior to the star of any programming work. 3. Only one programmer is allowed to be on a single contract. 4. Every program must have a separate contract issued. 5. Each contract must

USE CASE NAME:	RECEIVE INVOICE	ID: UC004
Primary Actor:	Accountant	
Brief Description:	This use case describe the steps from the time the accountant receive an invoice until this invoice is file for payment.	
Trigger:	A new invoice is received by the accountant.	
Related Use Cases:	Invoice exception(extend), invoice update(extend)	
Normal Flow of Events:	This use case begins when the accountant receive a new invoice from the vendor. 1. The accountant visually verifies the invoice has all required information. 2. The accountant logs onto the system and navigates to the screen where the new invoice is displayed. 3. The accountant verifies the invoice has date of transaction, period covered, number of hours, rate per hour, total amount, contract number, charge unit, and invoice number. 4. The accountant enter any missing information to the system. 5. The accountant then validates the information with contract number. 6. The accountant save change of invoice into the system. 7. The accountant sends the verified and completed invoice to AP for payment. 8. The accountant file the invoice for future reference. This use case ends when a valid invoice has been successfully been sent to AP for payment.	
Exceptions:	1. If the invoice is missing any information, the accountant will flag it as invalid. 2. If the period covered in the invoice pass the checking printing date, accrual is initiated. 3. If any of the required information is missing, a default value is selected.	

Pre-condition(s):	A new invoice has been received and is ready to be entered into the system.
Post-condition(s):	A new invoice has successfully been entered into the system.
Information Requirements:	Invoice number Date of the invoice Vendor name and address Charge unit (cost center) Bank Division Programmer Hourly Rate Hours covered Project descriptions Contract number Total amount of the invoice
Assumptions:	1. The vendor will deliver a valid and complete invoice. 2. The vendor fax copies or mail copies of the invoice
Business Rules:	1. The vendor must submit a complete and valid invoice to the accounting department. 2. Every invoice have valid invoice number and contract number. 3. Invoices must be received only by the accounting department. 4. Vendor invoices should have a valid purchase order number and a unique invoice number.