

**Oakland County
Department of Information Technology
Project Scope and Approach**

Project Name: Continuous Monitoring of Cash Register Transactions Project ID: DA7710CR

| | | | |
|---|---|----------------------------|-------------------------|
| Leadership Group: Finance / Admin | | | |
| Department: County Executive | | Division: Auditing | |
| Project Sponsor: Pam Weipert | Date Requested: 10/23/07 | PM Customer No. 710 | |
| Request Type: | <u>New Development</u> | Enhancement | Customer Support |
| | Planned System Maintenance or Upgrade | | |
| IT Team Name: Finance/Admin | | IT Team No: A | |
| Project Manager/Leader: Chithra Chakrapani | | | |
| Account Number: 44064 | Account Description: Tre-New Development | Customer Name: | TRE-NEW DEVELOPMENT |
| Grant Funded? Yes <u>No</u> | Mandate? Yes <u>No</u> | Mandate Source: | |

Project Goal

To create a system that provides the Auditing Division with back up copies of the electronic journal file for the cash registers supplied by Great Lakes Data Systems (GLDS), a program to view multiple journal files from Auditing Division computers, and a report to summarize cashier activity. These items will be used by the Auditing Division in its Continuous Auditing process.

Note: The majority of work is to be performed by Great Lakes Data Systems. Information Technology (IT) is to provide the FTP server and access to the server by the Auditing Division to remove the back-up files. The County does not currently back-up these transactions.

Business Objective

To create an environment that allows scheduled imports of electronic journal files by the Auditing Division to a CD. (Estimated time for GLDS to complete is 8 hours)

Major Deliverables

IT to identify central FTP server for receipt of electronic files.

GLDS to recode the journal file names

Deliver journal files to FTP server

Develop and document process to download the files to a CD

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Approach

- Coordinate the work done by Great Lakes Data System
- Work with IT Technical staff to set up appropriate directories and user IDs
- Set up process to move the cash register files to the appropriate location
- Monitor testing
- Receive customer approval of testing
- Complete Disaster Recovery tool kit.
- Perform production release

Business Objective

To develop an electronic journal file viewing and summary reporting process for use by the Auditing Division. (Estimated time for GLDS to complete is 40 hours for the viewer and 8 hours for the summary report.)

Major Deliverables

Develop a program to be installed on local computers in Auditing Division to view the electronic journals.

Summary report for selected journal file that includes the following:

1. For each active cashier:
 - The time spans the cashier was logged in
 - How many receipts were completed.
 - The transaction number ranges completed.
 - Number of line-item voids were done on cashier authority.
 - Number of no-sales done on cashier authority.
 - When the cash drawer was opened manually.
2. For each active manager:
 - Number of X-reports done under manager authority, and when.
 - Number of Z-reports done, and when.
 - Number of line-item voids that were authorized, and when.
 - Number of no-sale items that were authorized, and when.
 - Number of refunds (and post-voids) that were authorized, and when.
 - Number of times that the Open Drawer buttons were used.
3. The register's receipt total, refund total, deposit total, and the starting and ending transaction numbers for the journal.

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Approach

- Coordinate the work done by Great Lakes Data System
- Monitor testing
- Receive customer approval of testing
- Receive approval from change control panel for production deployment
- Complete Disaster Recovery tool kit.
- Perform production release

Benefits

See Return on Investment (ROI) Analysis Document

The project will allow the Auditing Division to capture cash register transaction data to use in its continuous auditing program. The summary reports will allow the Auditing Division to monitor and identify suspicious activities, track trends, and report on activities without impacting daily operations.

Impact

Number of Users 2-3 Auditing Division users

Divisions Auditing Division

Leadership Groups

Risk

Business Environment **Medium** – Project requires some changes to existing Business Process

Technical Environment **Low** - proven and previously implemented technologies

Assumptions

Staffing IT Staffing: resources will be available for the hours indicated per the attached project plan.

Other Staffing: additional staffing will be available as follows:

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| <u>Role:</u> | <u>Name</u> | <u>Hours per Day</u> |
|---------------------|--------------------|-----------------------------|
|---------------------|--------------------|-----------------------------|

Project Sponsor:

Facilities

-
-

Technical

-
-

Funding

- The Auditing Division requested that a 2006-2007 appropriation of \$10,000 be carried-forward to the 2007-2008 fiscal year budget to fund this project.
-

Other

- Much of the work will be completed by Great Lakes Data Systems, with minimal requirements from Oakland County Information Technology.
-

Priority

TBD

Constraints

-
-

Exclusions

-

**Oakland County
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PROJECT PHASE AUTHORIZATION

| | | |
|---|---------------|--------------|
| Phase(s): | | |
| Total Estimated Application Services | Hours: | Cost: |
| Total Estimated Technical Systems | Hours: | Cost: |
| Total Estimated eGovernment Services | Hours: | Cost: |
| Total Estimated CLEMIS | Hours: | Cost: |
| Total Estimated Internal Services | Hours: | Cost: |
| IT Application Services Division Manager Approval: | | Date: |
| IT Technical Systems Division Manager Approval: | | Date: |
| IT eGovernment Services Division Manager Approval: | | Date: |
| IT CLEMIS Division Manager Approval: | | Date: |
| IT Internal Services Division Manager Approval: | | Date: |
| IT Management Approval: | | |
| Approved: Yes No | | Date: |
| Reason: | | |
| Project Sponsor Approval: | | |
| Title: | | Date: |

PROJECT SUMMARY

| | | |
|--|---------------|--------------|
| Authorized Development (see above) | Hours: | Cost: |
| Preliminary Estimated Development for Future Phases | Hours: | Cost: |
| Grand Total Estimated Development | Hours: | Cost: |

**Oakland County
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PROJECT COMPLETION AUTHORIZATION

| | |
|--|-------|
| Customer Acceptance of Product: | |
| Title: | Date: |
| Project Office Review: | Date: |

Oakland County
Implement a Cash Register Monitoring System
 Return on Investment Analysis

| Project Summary | | | | | | | |
|---|-------------|--------|--------|--------|--------|--------|--------|
| Description | Year 1 | Year 2 | Year 3 | Year 4 | Year 5 | Year 6 | Total |
| Benefits/Savings: | | | | | | | |
| Tangible Benefits Subtotal: | 13,033 | 13,164 | 13,295 | 13,428 | 13,562 | 13,698 | 80,181 |
| Cost Avoidance Subtotal: | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Costs: | | | | | | | |
| Development Services Subtotal: | 9,920 | 0 | 0 | 0 | 0 | 0 | 9,920 |
| Hardware Subtotal: | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Software Subtotal: | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Infrastructure Subtotal: | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Training Subtotal: | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Subtotal: | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Annual Statistics: | | | | | | | |
| Annual Total Savings | 13,033 | 13,164 | 13,295 | 13,428 | 13,562 | 13,698 | 80,181 |
| Annual Total Costs | 9,920 | 0 | 0 | 0 | 0 | 0 | 9,920 |
| Annual Return on Investment | 3,113 | 13,164 | 13,295 | 13,428 | 13,562 | 13,698 | 70,261 |
| Annual Costs/Savings Ratio | 76.11% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | |
| Project Cumulative Statistics: | | | | | | | |
| Cumulative Total Savings | 13,033 | 26,197 | 39,492 | 52,920 | 66,483 | 80,181 | 80,181 |
| Cumulative Total Costs | 9,920 | 9,920 | 9,920 | 9,920 | 9,920 | 9,920 | 9,920 |
| Cumulative Return on Investment | 3,113 | 16,277 | 29,572 | 43,000 | 56,563 | 70,261 | 70,261 |
| Cumulative Cost/Savings Ratio | 76.11% | 37.87% | 25.12% | 18.75% | 14.92% | 12.37% | 12.37% |
| Year Positive Payback Achieved | Year 1 | | | | | | Year 1 |
| State or Federal Mandate? | | | | | | | |
| Signatures: | | | | | | | |
| Benefits Reviewed By Project Sponsor | Date: _____ | | | | | | |
| Costs (including IT Resources) Reviewed By Information Technology Project Manager | Date: _____ | | | | | | |
| Costs (including IT Resources) Reviewed By Technical Services Manager | Date: _____ | | | | | | |

Oakland County
Implement a Cash Register Monitoring System
 Return on Investment Analysis

| Cost Description | Project Cost Category | Cost Detail | | | Rate per Unit | Total Cost | Annual Multiplier |
|----------------------------------|-----------------------|--------------------------------|-----------|-------|---------------|------------|-------------------|
| | | Budget Category/Funding Source | Unit Desc | Units | | | |
| IT Hours - New Development | Development Svcs | | HR | 40 | 122 | 4,880 | |
| IT Hours - System Maintenance | Development Svcs | | | | 122 | 0 | |
| User Hours - New Development | Development Svcs | | | | | 0 | |
| User Hours - PTNE/OT | Development Svcs | | | | | 0 | |
| Contractor Professional Services | Development Svcs | 10100-1010201-181010-731458 | HR | 56 | 90 | 5,040 | |
| PC System - Acquisition | Hardware | | | | | 0 | |
| PC System - Maintenance | Hardware | | | | 2,304 | 0 | |
| Notebook - Acquisition | Hardware | | | | | 0 | |
| Notebook - Maintenance | Hardware | | | | 2,372 | 0 | |
| Mini Notebook - Acquisition | Hardware | | | | | 0 | |
| Mini Notebook - Maintenance | Hardware | | | | 2,196 | 0 | |
| Laserprinter 1 - Acquisition | Hardware | | | | | 0 | |
| Laserprinter 1 - Maintenance | Hardware | | | | 1,104 | 0 | |
| Laserprinter 2 - Acquisition | Hardware | | | | | 0 | |
| Laserprinter 2 - Maintenance | Hardware | | | | 1,208 | 0 | |
| Laserprinter 3 - Acquisition | Hardware | | | | | 0 | |
| Laserprinter 3 - Maintenance | Hardware | | | | 1,860 | 0 | |
| Image Workstations - Acquisition | Hardware | | | | | 0 | |
| Image Workstations - Maintenance | Hardware | | | | 3,496 | 0 | |
| Terminals - Acquisition | Hardware | | | | | 0 | |
| Terminals - Maintenance | Hardware | | | | 644 | 0 | |
| PRTR w/TERM ID - Acquisition | Hardware | | | | | 0 | |
| PRTR w/TERM ID - Maintenance | Hardware | | | | 1,072 | 0 | |
| PRTR w/o TERM ID - Acquisition | Hardware | | | | | 0 | |
| PRTR w/o TERM ID - Maintenance | Hardware | | | | 1,072 | 0 | |
| PC Maintenance User Owned | Hardware | | | | 2,304 | 0 | |
| Printer Maintenance User Owned | Hardware | | | | 1,072 | 0 | |
| Package Software - Acquisition | Software | | | | | 0 | |
| Package Software - Maintenance | Software | | | | | 0 | |
| Business Objects Access | Software | | | | | 0 | |
| Term Emulation SFTW-Acquisition | Software | | | | | 0 | |

Oakland County
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| Cost Description | Project Cost Category | Cost Detail | | | Rate per Unit | Total Cost | Annual Multiplier |
|-------------------------------------|-----------------------|--------------------------------|-----------|-------|---------------|------------|-------------------|
| | | Budget Category/Funding Source | Unit Desc | Units | | | |
| Term Emulation SFTW-Maintenance | Software | | | | | 0 | |
| Server - Acquisition/Upgrade | Infrastructure | | | | | 0 | |
| Server - Maintenance | Infrastructure | | | | | 0 | |
| Server Sftwre - Acquisition/Upgrade | Infrastructure | | | | | 0 | |
| Server Sftwre - Maintenance | Infrastructure | | | | | 0 | |
| TBD | Infrastructure | | | | | 0 | |
| TBD | Infrastructure | | | | | 0 | |
| TBD | Infrastructure | | | | | 0 | |
| TBD | Infrastructure | | | | | 0 | |
| Internet Access | Infrastructure | | | | 180 | 0 | |
| Project Staff Training | Training | | | | | 0 | |
| User Training | Training | | | | | 0 | |
| | | | | | | 0 | |
| | | | | | | 0 | |
| | | | | | | 0 | |
| | | | | | | 0 | |
| | | | | | | 0 | |

Oakland County
Implement a Cash Register Monitoring System
 Return on Investment Analysis

| Cost Description | Project Cost Category | Affects Project ROI | | | | | | Potential Cost Extensions | | | | | | |
|----------------------------------|-----------------------|---------------------|----|----|----|----|----|---------------------------|----|----|----|----|----|--|
| | | Y1 | Y2 | Y3 | Y4 | Y5 | Y6 | Y1 | Y2 | Y3 | Y4 | Y5 | Y6 | |
| IT Hours - New Development | Development Svcs | X | | | | | | 4,880 | | | | | | |
| IT Hours - System Maintenance | Development Svcs | | | | | | | | | | | | | |
| User Hours - New Development | Development Svcs | | | | | | | | | | | | | |
| User Hours - PTNE/OT | Development Svcs | | | | | | | | | | | | | |
| Contractor Professional Services | Development Svcs | X | | | | | | 5,040 | | | | | | |
| PC System - Acquisition | Hardware | | | | | | | | | | | | | |
| PC System - Maintenance | Hardware | | | | | | | | | | | | | |
| Notebook - Acquisition | Hardware | | | | | | | | | | | | | |
| Notebook - Maintenance | Hardware | | | | | | | | | | | | | |
| Mini Notebook - Acquisition | Hardware | | | | | | | | | | | | | |
| Mini Notebook - Maintenance | Hardware | | | | | | | | | | | | | |
| Laserprinter 1 - Acquisition | Hardware | | | | | | | | | | | | | |
| Laserprinter 1 - Maintenance | Hardware | | | | | | | | | | | | | |
| Laserprinter 2 - Acquisition | Hardware | | | | | | | | | | | | | |
| Laserprinter 2 - Maintenance | Hardware | | | | | | | | | | | | | |
| Laserprinter 3 - Acquisition | Hardware | | | | | | | | | | | | | |
| Laserprinter 3 - Maintenance | Hardware | | | | | | | | | | | | | |
| Image Workstations - Acquisition | Hardware | | | | | | | | | | | | | |
| Image Workstations - Maintenance | Hardware | | | | | | | | | | | | | |
| Terminals - Acquisition | Hardware | | | | | | | | | | | | | |
| Terminals - Maintenance | Hardware | | | | | | | | | | | | | |
| PRTR w/TERM ID - Acquisition | Hardware | | | | | | | | | | | | | |
| PRTR w/TERM ID - Maintenance | Hardware | | | | | | | | | | | | | |
| PRTR w/o TERM ID - Acquisition | Hardware | | | | | | | | | | | | | |
| PRTR w/o TERM ID - Maintenance | Hardware | | | | | | | | | | | | | |
| PC Maintenance User Owned | Hardware | | | | | | | | | | | | | |
| Printer Maintenance User Owned | Hardware | | | | | | | | | | | | | |
| Package Software - Acquisition | Software | | | | | | | | | | | | | |
| Package Software - Maintenance | Software | | | | | | | | | | | | | |
| Business Objects Access | Software | | | | | | | | | | | | | |
| Term Emulation SFTW-Acquisition | Software | | | | | | | | | | | | | |

Oakland County
Implement a Cash Register Monitoring System
 Return on Investment Analysis

| Cost Description | Project Cost Category | Affects Project ROI | | | | | | Potential Cost Extensions | | | | | |
|-------------------------------------|-----------------------|---------------------|----|----|----|----|----|---------------------------|----|----|----|----|----|
| | | Y1 | Y2 | Y3 | Y4 | Y5 | Y6 | Y1 | Y2 | Y3 | Y4 | Y5 | Y6 |
| Term Emulation SFTW-Maintenance | Software | | | | | | | | | | | | |
| Server - Acquisition/Upgrade | Infrastructure | | | | | | | | | | | | |
| Server - Maintenance | Infrastructure | | | | | | | | | | | | |
| Server Sftwre - Acquisition/Upgrade | Infrastructure | | | | | | | | | | | | |
| Server Sftwre - Maintenance | Infrastructure | | | | | | | | | | | | |
| TBD | Infrastructure | | | | | | | | | | | | |
| TBD | Infrastructure | | | | | | | | | | | | |
| TBD | Infrastructure | | | | | | | | | | | | |
| TBD | Infrastructure | | | | | | | | | | | | |
| Internet Access | Infrastructure | | | | | | | | | | | | |
| Project Staff Training | Training | | | | | | | | | | | | |
| User Training | Training | | | | | | | | | | | | |
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Oakland County
Implement a Cash Register Monitoring System
 Return on Investment Analysis

| Cost Summary | | | | | | | |
|---------------------------------------|--------------|--------|--------|--------|--------|--------|--------------|
| Cost Description | Year 1 | Year 2 | Year 3 | Year 4 | Year 5 | Year 6 | Total |
| Development Services: | | | | | | | |
| IT Hours - New Development | 4,880 | | | | | | 4,880 |
| IT Hours - System Maintenance | | | | | | | |
| User Hours - New Development | | | | | | | |
| User Hours - PTNE/OT | | | | | | | |
| Contractor Professional Services | 5,040 | | | | | | 5,040 |
| <i>Development Services Subtotal:</i> | 9,920 | | | | | | 9,920 |
| Hardware: | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| <i>Hardware Subtotal:</i> | | | | | | | |
| Software: | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| <i>Software Subtotal:</i> | | | | | | | |
| Infrastructure: | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| <i>Infrastructure Subtotal</i> | | | | | | | |
| Training: | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| <i>Training Subtotal:</i> | | | | | | | |
| Other: | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| <i>Other Subtotal:</i> | | | | | | | |
| Costs Total: | 9,920 | | | | | | 9,920 |

Oakland County
Implement a Cash Register Monitoring System
 Return on Investment Analysis

| Date | Assumption Description |
|-----------|---|
| 15-Oct-07 | Contractor Professional Services units and rates based on March 25, 2006 Proposal from Great Lakes Data Systems. |
| | |
| 15-Oct-07 | Great Lakes Data Systems cash registers are located at 8 locations - Clerk / Register of Deeds, Treasurer's Office, Probate Court, Health Division - Pontiac, One Stop Shop, Health Division - Walled Lake, Animal Control, and Health Division - Southfield. |
| | |
| | By allowing the Auditing Division to electronically download the transaction data, the Auditing Division will not have to travel to each site to pick up weekly transaction information. |
| | |
| | Round trip mileage to the three off-campus sites is 71 miles; yielding an annual mileage savings of 3,692 miles, or \$1,787 (at the current mileage reimbursement rate of \$.0485/mile). |
| | |
| | Round trip travel time is estimated to be 4.5 hours per week, or 234 hours per year. The estimated hourly cost (including salary and fringe benefits) for an Auditor II to pick up the transaction information is \$48.06 / hour in 2008. |
| | |
| | Time saved at departments to pull and copy transactional data for Auditing Division will be offset by additional time spent by Auditing Division staff to analyze transactions. |
| | |
| 15-Oct-07 | Additional benefits - |
| | Transaction backup file maintained by Oakland County (currently maintained by Great Lakes Data Systems). |
| | Ability to "continuously" monitor transactional activity to identify red flag transactions and patterns before cash shortage is detected. |
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