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INTERNAL AUDIT DEPARTMENT

Report Number 2014-001

***Final Letter Report - Survey
of Landline Telecommunication Billing***

January 17, 2014

***Latona Thomas, CPA, Director
Steven Harper, Staff Auditor I
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COBB COUNTY INTERNAL AUDIT

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Director

January 17, 2014

MEMORANDUM

TO: David Hankerson, County Manager

FROM: Latona Thomas, CPA, Director

SUBJECT: **Final Letter Report** - Survey of Landline Telecommunication Billing

As part of our survey of the County's telecommunications costs, we reviewed the billing for landline services. We reported our survey results for the Centrex phone lines in a separate report. This report conveys the results of survey for other landline services — VOIP¹ phone system, business phone lines and circuitry used for networking/internet, and costs for other services (i.e. 311, cable, Satellite TV, Ethernet).

We downloaded from the Advantage Financial System, telecommunication related payments paid in the month of June 2013. We analyzed the invoices related to these payments and identified all costs that were related to landline services. There was one large billing statement for VOIP-related charges and one large billing statement for business lines and circuits. We identified other landline costs on 19 invoices from various vendors. We identified these costs by their object code designation or by vendor name for expenditures that might be telecommunication related. The tables and discussions on the subsequent pages outline the estimated \$137,004 in monthly costs related to these landline services.

Results of Survey

Our objective was to identify all landline telecommunication services for which the County was paying and perform an analysis to determine if there was a basis for auditing this area. We determined that issues with billing allocations and our inability to confirm services paid for on a monthly basis, justifies an audit of this area.

¹ Voice Over Internet Protocol

Voice Over Internet Protocol (VOIP) Billing

The VOIP charges are listed on a Regional Summary Bill that compiles six CLUB² invoices allocating costs to the Sheriff, Public Safety, Water, Fire, Information Services (I.S.) and CCT³ offices. Most charges are related to the circuitry and services needed for the VOIP system, but charges for business lines and alarm circuit costs were also included. Approximately 62% of the VOIP charges are allocated to I.S.; however, our analysis showed that some of these charges could be allocated to specific departments. In addition, charges for business lines and alarm circuits may require inclusion on other billing statements. The table below shows the monthly cost allocations.

Regional Billing VOIP 404 R13-3661

	VOIP Lines	Charges	Bus Lines	Charges	Alarm Circuits	Charges	Circuits & Equipment	Misc charges	Total
Sheriff	630	\$63.00	2	\$182.66	4	\$2,204.40	\$3,423.80	\$272.79	\$6,146.65
Public Safety	651	\$66.30					\$9,611.80	\$395.85	\$10,073.95
Water	327	\$32.70					\$5,817.79	\$259.91	\$6,110.40
Fire	124	\$12.40					\$3,239.30	\$156.62	\$3,408.32
Information Services	3,124	\$389.50					\$42,661.12	\$1,810.75	\$44,861.37
CCT			1	\$135.90			\$585.00	\$47.77	\$768.67
Total	<u>4,856</u>	<u>\$563.90</u>	<u>3</u>	<u>\$318.56</u>	<u>4</u>	<u>\$2,204.40</u>	<u>\$65,338.81</u>	<u>\$2,943.69</u>	<u>\$71,369.36</u>

Table 1 – Regional Billing VOIP 404 R13-3661

Source: Accounts Payable Files, Check #470567, dated 6/7/2013

I.S. personnel informed us that our VOIP network requires some basic components supplied by a vendor to operate:

- **PRI⁴ service** to interface with the traditional circuits of the public switched telephone network (VOIP to Public network calls) and,
- A circuit (i.e. Metro E⁵) between County locations to communicate via the internet.

These services are reflected under Circuits and Equipment in the table above. VOIP requires other devices to operate (i.e. routers, gateways, switches), but monthly service fees are not required. Miscellaneous charges include taxes, late charges, interest, directory assistance, etc.

² The CLUB®, or Customized Large User Bill, is a service offered by AT&T that provides large business users with a customized telephone bill. This service provides the customer bill in a predefined format chosen by the customer.

³ Cobb Community Transit.

⁴ See Appendix I.

⁵ See Appendix I.

Our review of the billing statement showed these basic components along with other equipment and subscriber line charges are listed at each VOIP location. To effectively reconcile this billing, we would have to gain extensive knowledge about the circuitry and other equipment needed for the VOIP system. In addition, coordination with the vendor is essential to verify the need for the service charges. Significant cost savings could be achieved if circuits, equipment or services are identified that are not being utilized in the VOIP network. Except for a few exceptions, any unused VOIP line identified would only result in a \$.10 a month savings. See Conclusions on page 4 for additional discussion.

Business Lines and Circuits Billing

Other landline charges are listed on a separate Regional Summary Billing and is comprised of four invoices for business lines (1FB) ⁶ and data/voice circuits. These charges are allocated to the Water, I.S., CCT and Public Safety offices. The table below shows the cost allocation and services paid for in this summary billing.

Regional Bill 404 R13 0795 795

Departments/Offices	Cost Allocations	Business Lines	Data Circuits	Voice Circuits	Other Equipment
Water	\$8,176.72	17	11		1
I. S.	\$1,300.91	2	1	5	1
CCT	\$4,378.69	7	3	5	
Public Safety	\$10,092.10	20	16		
Subtotal	<u>\$23,948.42</u>	<u>46</u>	<u>31</u>	<u>10</u>	<u>2</u>

Table 2 – Regional Billing 404 R13 0795 795

Source: Accounts Payable Files, Check #470567, dated 6/7/2013

The business lines cost an average of \$64.26 per line for the Water System, \$79.74 for CCT, and \$70.72 for Public Safety. I.S. personnel were unable to explain the variation in the costs or why the business lines are necessary when less costly Centrex and VOIP services are available.

Per I.S. personnel, the circuits are part of a VISIO diagram of circuits and are listed on a spreadsheet on a local I.S. network drive. While discussing some the costs on the invoice, I.S. employees researched a couple of circuits on the spreadsheet for additional information but were unable to determine the use of the circuit or justification for the costs.

A reconciliation of this invoice would include not only verifying whether the phone numbers are active and in use, but whether the circuits are in use. In addition, some justification of the circuits used in lieu of other alternatives would be required.

⁶ AT&T Local Exchange Services provide a Customer with an analog, voice-grade telephonic communications channel that can be used to originate or terminate one call at a time. **Business lines** (main or additional) are provided for connection of Customer-provided key system or single-line terminal equipment such as station sets or facsimile machines to the Company's network.

Other Telecommunication Costs

The charges in the table below are additional landline/circuit/internet/cable costs noted during our analysis of June 2013 payments. They are not included in the CLUB and Regional Billing invoices described on previous pages.

Other Telecommunication Costs

Vendor	Service	Unit	Cost
Qwest	Long Distance	Various	\$1,994.88
AT&T	911 Service	E911	\$17,005.31
AT&T	1 Business Line	Fleet	\$77.08
AT&T	311 Service	I.S.	\$1,233.03
Zayo	Internet Service -27 sites	Library	\$11,622.19
Zayo	Cobb TV23	Communications	\$531.35
AT&T	2 Fax Lines	NCGLEA	\$40.07
AT&T	2 Business Lines	Sheriff	\$165.33
AT&T	2 Mega Link Circuits ⁷	Sheriff	\$478.74
Ga. Tech. Authority	Internet Service	Sheriff	\$1,368.28
Zayo	Ethernet Service ⁸	Sheriff	\$607.62
Direct TV	Satellite TV	Fire & Police	\$564.28
Comcast	Internet Service	Parks, Communications, DOT	\$445.08
Ga. Tech. Authority	VPN & WAN Service ⁹	I.S.	\$711.73
Zayo	Ethernet Service	I.S.	\$2,081.44
AT&T	MIS Service ¹⁰	I.S.	\$2,759.59
Total			\$41,686.00

Table 3 – Other Telecommunication Costs

Source: 19 invoices with landline telecommunication costs identified from Advantage Financial download

Conclusions

Although we have a basis for auditing the landline telecommunication costs, the amount of resources needed to conduct the audit within a reasonable time frame exceeds our limited resources. Therefore, we recommend the County utilize an outside Telecommunication Consulting firm to conduct an audit of the landline components of telecommunication costs.

⁷ See Appendix

⁸ See Appendix

⁹ See Appendix

¹⁰ MIS lets users set up dedicated internet access connections to AT&T's backbone at speeds from 10M to 1G bi/sec.

An external firm will have the needed resources and expertise to evaluate what services we have in place and recommend where we can save money by identifying dead services¹¹ and overcharges. They may be able to recommend alternative cost saving ways to meet our voice and data communication needs. It is our understanding that County management is in discussions regarding the options of securing the services of an external firm to analyze this and other utility costs.

In addition to the landline audit, we believe the billing invoices should be customized and reorganized where the costs are grouped by the respective department or office for ease of allocation. Currently, I.S. personnel use a separate EXCEL worksheet to analyze the billing and allocate the costs to the respective departments. Once the audit is conducted and costs are confirmed and appropriated to the proper department, the CLUB account invoices should be modified, eliminating the need for the spreadsheet.

Recommendation

The Acting Information Services Director should:

Recommendation 1: Coordinate with the County Manager's office in its acquisition of a telecommunication consulting company to analyze our landline costs. Also, participate in the planning and execution of the analysis.

Response: Concur. Information Services staff will coordinate with the County Manager's office and participate in the planning and execution of the analysis. However, we are concerned about the amount of time that would be required from our staff. Some of the costs reviewed in the draft report are controlled by departments other than Information Services. Those departments should also be involved in the analysis. The timeframe for completion of the analysis is dependent upon the procurement process and the consultant selected to perform the audit.

Recommendation 2: Upon completion of the analysis, direct the Administrative Division Manager to ensure telecommunication costs are properly charged to the correct object code and the CLUB account invoices are reorganized to facilitate the timely and appropriate billing of telecommunication costs.

Response: Concur. Telecommunication costs for General Fund departments are budgeted in the Information Services operating budget with few exceptions. The Public Safety Agency, Sheriff's Office, and the Library System have budgets for their telecommunication costs. Information Services reviews the invoices and charges back to their funding lines. Costs for funds other than the General Fund are charged directly to those budgets. Information Services staff have worked with other departments, including OMB, to make sure that expenses are being budgeted and charged correctly. If the analysis reveals shared telecommunication costs can be distributed to other funds more equitably, we will make those adjustments. Hopefully, the consultant's report will be completed in time to ensure that any changes to the way costs are allocated can be incorporated in the FY 15/16 budget.

¹¹ Service you are paying for that are not in use.

As part of your report, you suggested that after the audit is conducted and costs are confirmed and appropriated to the proper departments, the CLUB account invoices should be customized and reorganized for ease of allocation. We will work with AT&T to determine what can be done to customize their invoices to meet Cobb County needs. If the invoices can be customized to reduce the amount of time needed to review them, we will work with AT&T to meet that goal within three months of completion of the consultant audit.

The complete response to the draft report is included as Appendix III. Copies of this report will be sent to the Managers affected by the report recommendations. Please contact me at (770) 528-2559 if you have questions or Barry Huff, Auditor-in-Charge, at (770) 528-2558.

Abbreviations and Glossary

CLUB	The CLUB®, or Customized Large User Bill, is a service offered by AT&T that provides large business users with a customized telephone bill. This service provides the customer bill in a predefined format chosen by the customer.
DS1	Digital Signal 1 is a circuit widely used standard signaling scheme to transmit voice and data between devices.
Ethernet	Ethernet is a standard communications protocol embedded in software and hardware devices, intended for building a local area network (LAN). Ethernet became the standard model for LANs worldwide.
Mega Link Service©	DS1dedicated digital transport service designed to offer high speed, high-volume-ultra-reliable communication between the end office and cell site or the end office and mobile switching center.
Metro E©	Metropolitan Ethernet is a general term used to describe an Ethernet technology network in a metropolitan area. Metro Ethernet is used for connectivity to the public Internet, and is used for connectivity between corporate sites that are separated geographically.
MIS	Managed Internet Services provides high-speed dedicated internet access with a variety of access speeds and management options. Provides scalability and performance to support business applications and transactions.
Primary Rate Interface (PRI)	The PRI is a standardized telecommunications service level within the Integrated Services Digital Network (ISDN) specification for carrying multiple digital voice and data transmissions between a network and a user. PRI is the standard for providing telecommunication services to offices. It is based on the T-carrier (T1) line. Integrated Services for Digital Network (ISDN) is a set of communication standards for simultaneous digital transmission of voice, video, data, and other network services over the traditional circuits of the public switched telephone network.

T-1/T Carrier	A hardware specification for telecommunication trunking used to connect major telephone exchanges The T1 line consists of 24 channels, 23 B channels with clear 64 kb for voice and data and one 64 kb 'D' channel for signaling and messaging.
VOIP	Voice Over Internet is a technology for communicating using “Internet protocol” instead of traditional analog systems. Some VoIP services need only a regular phone connection, while others allow you to make telephone calls using an Internet connection instead. VoIP converts the voice signal from your telephone into a digital signal that can travel over the Internet.
VPN	Virtual Private Network uses a public telecommunication infrastructure, such as the Internet, to provide remote offices or individual users with secure access to their organization's network.
WAN	A wide area network is a network that covers a broad area using private or public network transports. Business and government entities utilize WANs to relay data among employees, clients, buyers, and suppliers from various geographical locations. In essence, this mode of telecommunication allows a business to effectively carry out its daily function regardless of location.

Final Report Distribution

Willie Hopkins, Support Services Agency Director

James A. Decker, Acting Information Services Director

James E. Biggs, Information Services, Technical Support Division Manager

Judy Sheppard, Information Services, Administrative Division Manager

Steve Hewett, Information Services, Communication Division, Technical Services Manager

Cobb County Audit Committee

Auditee Response



INFORMATION SERVICES

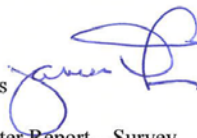
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James A. Decker
Acting Director

MEMORANDUM

DATE: January 15, 2014

TO: Latona Thomas, CPA, Director, Internal Audit

FROM: James Decker, Acting Director, Information Services 

SUBJECT: Response to the Internal Audit Division's Draft Letter Report – Survey of Landline Telecommunication Billing

This memo is in response to the subject report dated January 10, 2014. The review determined that there is a basis for auditing the landline telecommunications costs. However, the resources needed to conduct the audit within a reasonable time frame exceeds the limited resources of the Internal Audit Department and an outside consulting firm is recommended to conduct the audit. We believe an audit of the telecommunications costs requires an in-depth knowledge of telecommunications billing that can best be made by an outside firm with the resources to devote to the audit. You made two recommendations and our response to those recommendations is provided below.

The Acting Information Services Director should:

Recommendation 1: Coordinate with the County Manager's office in its acquisition of a telecommunication consulting company to analyze our landline costs. Also, participate in the planning and execution of the analysis.

Response: Concur

Information Services staff will coordinate with the County Manager's office and participate in the planning and execution of the analysis. However, we are concerned about the amount of time that would be required from our staff. Some of the costs reviewed in the draft report are controlled by departments other than Information Services. Those departments should also be involved in the analysis. The timeframe for completion of the analysis is dependent upon the procurement process and the consultant selected to perform the audit.

Recommendation 2: Upon completion of the analysis, direct the Administrative Division Manager to ensure telecommunication costs are properly charged to the appropriate funding line and the CLUB account invoices are reorganized to facilitate the timely and appropriate billing of telecommunication costs.

Response: Concur

Telecommunication costs for General Fund departments are budgeted in the Information Services operating budget with few exceptions. The Public Safety Agency, Sheriff's Office, and the Library System have budgets for their telecommunication costs. Information Services reviews the invoices

and charges back to their funding lines. Costs for funds other than the General Fund are charged directly to those budgets. Information Services staff have worked with other departments, including OMB, to make sure that expenses are being budgeted and charged correctly. If the analysis reveals shared telecommunication costs can be distributed to other funds more equitably, we will make those adjustments. Hopefully, the consultant's report will be completed in time to ensure that any changes to the way costs are allocated can be incorporated in the FY 15/16 budget.

As part of your report, you suggested that after the audit is conducted and costs are confirmed and appropriated to the proper departments, the CLUB account invoices should be customized and reorganized for ease of allocation. We will work with AT&T to determine what can be done to customize their invoices to meet Cobb County's needs. If the invoices can be customized to reduce the amount of time needed to review them, we will work with AT&T to meet that goal within three months of completion of the consultant's audit.