
OFFICE OF THE CITY AUDITOR

INFORMATION TECHNOLOGY AUDIT OF THE CITY'S USE OF COMMUNICATION DEVICES – Wireless Phones, Pagers, and PDAs

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**May 10, 2002
Report No. 359**

Memorandum



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Honorable Mayor and Members of the City Council
City of Dallas

We have conducted an information technology audit of the City's use of communication devices – wireless phones, pagers, and personal digital assistants.

As a result of our inquiries, examinations, and tests, we conclude that departments are not effectively monitoring billing reasonableness and accuracy for wireless phones. Significant savings could be obtained through more effective monitoring of wireless phone usage. Additionally, the City could save over \$350,000 by altering the strategy for repairing and replacing wireless communication devices. Related opportunities for improvement and recommendations are presented in this report.

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City Auditor

c: Teodoro J. Benavides, City Manager

**INFORMATION TECHNOLOGY AUDIT OF THE CITY'S USE OF
COMMUNICATION DEVICES – WIRELESS PHONES, PAGERS & PDAs**

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EXECUTIVE SUMMARY

We have conducted an Information Technology audit of the City's wireless communication devices.

As a result of our inquiries, examinations, and tests, we conclude that departments are not effectively monitoring billing reasonableness and accuracy for wireless phones. We have summarized our major findings below.

- The City could save over \$350,000 by altering the strategy for repairing and replacing wireless communication devices.
- Significant savings could be obtained through more effective monitoring of wireless phone usage.
- Personal phone calls made on the City's wireless phones are not in compliance with the required reimbursement of federal and state usage taxes for personal use.
- The City does not appear to benefit from a Citywide wireless phone communications contract.
- The City should research and consider partnering with a contracted vendor to benefit from a revenue-producing marketing program.

We commend Communication and Information Services for accepting our recommendations and independently taking action during the course of the audit to start resolving these issues.

INTRODUCTION

Authorization

We have completed an audit of the City's use of communication devices – wireless phones, pagers, and personal digital assistants (PDAs). We conducted this audit under the authority of Chapter IX, Section 2 of the Dallas City Charter and in accordance with the Annual Audit Plan approved by the City Council.

Scope and Methodology

We performed our audit in accordance with generally accepted government auditing standards and included tests of the accounting records and other audit procedures that we considered necessary in the circumstances.

The objectives of our audit were to determine whether the City is:

- Evaluating the efficiency and effectiveness of employing these types of devices for City operations.
- Evaluating the functional needs for wireless communication devices by department and wireless usage patterns.
- Auditing the billing integrity of wireless phones and pagers used Citywide.
- Determining that all applicable compliance requirements and administrative directives (ADs) relating to wireless communications are being followed.

Our review covered October 2001 through February 2002, although we examined certain events and transactions occurring before and after that date. We suffered impairments relating to data analysis of call detail record reports from Cingular. After three meetings with Cingular staff, they were unable to provide the billing information in electronic format. Because of the unavailability of call detail data, we had to rely on Cingular personnel to extract the information into an Excel spreadsheet. Data accuracy and reliability was compromised since we could not perform our own independent data analysis. According to the November 1999 contract, the data was to be provided in electronic format on a CD. However, this media report was not provided to the City.

INTRODUCTION

To develop an understanding of relevant control structure policies and procedures, we reviewed the following:

- AD 4-3, Telecommunication Services
- AD 4-8, Mobile Telephone Services
- Applicable vendor contracts
- Cingular billing statements (41 accounts)
- Cingular rate plan analysis
- Cingular-generated billing analysis of call detail record
- City inventory records

To determine the efficiency and effectiveness of wireless communication devices, we interviewed five City departments to determine their current usage of wireless communication devices.

Overall Conclusion

As a result of our inquiries, examinations, and tests, we conclude that departments are not effectively monitoring billing reasonableness and accuracy for wireless phones.

Background

The City contracted with H Com International, Inc. for pager leasing and pager services. Numeric and alphanumeric pagers are used Citywide. No airtime charges are incurred on the pagers. The cost associated with City pagers is the CIS replacement fee of \$5.00 per month for numeric and \$7.00 per month for alphanumeric pagers. Most of the pagers are under a 3-5 year warranty. A small number of older pagers are under a 10 year warranty.

The PDAs (in this case, Palm Pilots) were purchased through an office supply bid and are not considered a technology purchase. PDAs are primarily used as appointment schedulers. A few have the capability to dial in to the network and retrieve email messages.

OPPORTUNITIES FOR IMPROVEMENT

We identified issues with the billing practices by Cingular Wireless and areas of improvement for CIS and all other City departments to monitor and maintain more cost-effective and efficient wireless communication services for the City. Because we did not design or intend our audit to be a detailed study of every system, the opportunities for improvement presented in this report may not be all-inclusive of areas where improvements may be needed.

1. The City could save over \$350,000 by altering the strategy for repairing and replacing wireless communication devices.

The annual maintenance/replacement fees collected for 2,200 phones by CIS amounts to \$475,200. This figure is derived from an assessed monthly fee of \$18.00 per phone or \$216.00 annually per phone. An alternate strategy for repair and replacement phones is to purchase third-party phone insurance. Annual insurance costs for 2,200 phones at \$3.99 per month would amount to \$105,336. For each phone claim, a \$35.00 deductible is charged. With an estimated projection of 500 claims per year, the deductible costs would amount to \$17,500. The total annual wireless phone replacement costs would be \$122,836, or a cost savings of approximately \$352,364.

Under the Cingular contract (November 1999), the City agreed to operate as a Cingular certified service center. Wireless phones and accessories are stocked on consignment from Cingular. The City is billed for equipment after it is approved for distribution.

We conducted a site visit with the Radio and Telephone Group to determine the inventory, storage, distribution, maintenance, repair, and disposal procedures for wireless phones and pagers. We also reviewed the wireless contracts for phones and pagers to determine the replacement costs for wireless devices.

Two technicians are on staff to perform repair work on wireless phones. As phones go out of service, useable parts are salvaged for recycling. Pagers are under warranty and are sent out for repairs.

In reviewing the December 2001 repair/replacement requests, ten phones were turned in for repair or replacement. Additionally, new phones were provisioned because phones were damaged, lost, or stolen. CIS estimates that a technician spends an average of one hour per phone that is turned in for repair or replacement. At the December repair levels, it is not cost effective for the City to employ technicians to repair wireless phone equipment. Purchasing wireless phone insurance is more cost-efficient.

In addition, the City carries a liability risk for stocking consignment inventory from Cingular. The City is liable for phone, pager, and accessory inventory that is lost, stolen, or destroyed.

OPPORTUNITIES FOR IMPROVEMENT

We Recommend that the Chief Information Officer (CIO):

- Discontinue operating as a Cingular certified service center and handle wireless phones and accessories through an insurance replacement program.
- Research replacement costs for pagers using alternative purchasing plans and/or price agreements for analog and digital pager equipment.

Management's Response:

- CIS conducted a benefit analysis of the insurance replacement program, however our analysis does not substantiate the recommendation to discontinue this service. Taking a broader view of the business value added, intangible value, and other factors associated with this service, our analysis confirms that we should continue to provide this service.
 - We do stock cellular phone equipment on a consignment basis. We are billed for this equipment only after it is placed in service.
 - We do have customers. CIS customers provide Public Safety and other critical City services with dwindling personnel. Our services allow us to rapidly meet the needs of our customers, while minimizing staff and vehicle downtime (in the event of a malfunctioning, hard-mounted mobile device).

The Communications Division of CIS investigated and aggressively pursued the proposed insurance program with Cingular Wireless. CIS compared the insurance plan with the current services provided by CIS and found that the department delivers a more comprehensive and beneficial service to our customers. Due to the nature of the City's Public Safety users, many of our services are necessary. While the low price of an insurance program may look appealing on paper, our research shows that there are several other significant factors to consider:

- The insurance is sub-contracted out to an insurance carrier.
- Users must travel "off-site" to an insurance providers repair facility of the insurance carrier's choosing. CIS customers travel to 3131 Dawson Street for wireless phone repairs.
- At the insurance providers repair facility's discretion, the phone may be required to be left for repairs to be effected, leaving the user without a phone for up to 48 hours. Although CIS technicians may attempt to repair the phone first, CIS customers do not leave without a working phone or a replacement phone.
- In the case of lost or stolen equipment, a sworn police report must be furnished

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prior to a replacement phone being issued.

- Damage by animals is excluded from coverage.
- Cosmetic damage is not covered (scratched displays, cases).
- Damage from "pollutants" which has a very broad-based definition is not covered. This would include water damage, among other things.
- Batteries, except where the battery was lost or stolen along with the phone, are not covered.
- With the exception of a leather case OR battery charger, accessories are not covered.
- There is a maximum of two claims per twelve-month period allowed per "Subscriber."
- A "like" model of phone may be substituted as a replacement. Users would need to learn how to use the different model. CIS customers receive the same model phone that they bring in, unless the model has been discontinued.
- Tagged City equipment with serial numbers would be turned over to the carrier if a replacement were needed. There would be an increased burden in tracking the inventory of cellular phones as a result, based on the current CIS management practices.

Contracting with a third party for wireless phone insurance would result in a negative revenue stream. While Departments presently incur a charge for maintenance and replacement of wireless phones from CIS, these funds remain internal to the City since CIS is an internal service fund department. CIS will introduce a new charge-back system, to include cellular charges that will be implemented in FY 2002-03. This new charge-back system will examine and review all indirect charges associated with cellular phones.

There is no consignment stock of pagers. Spare phone equipment must be maintained for the purpose of changing out defective phones and accessories and to adequately address our users' needs to deploy new equipment quickly. The equipment must be on-hand, so whether it is consigned, or we owned it, we would still have financial exposure for any loss or damage due to our own negligence. Consigning equipment encumbers fewer funds.

CIS has two technicians with the SKILL SETS necessary to repair cellular telephones. However, the bulk of their time is spent repairing two-way radios.

- CIS agrees with this recommendation for an alternative purchasing plan and/or price agreement for pagers. In fact CIS currently maintains a price agreement established

OPPORTUNITIES FOR IMPROVEMENT

in September of 1999 for wireless equipment, including analog and digital pager equipment. This price agreement, established as a result of solicitation of competitive bids, typically lasts for thirty-six months and provides a selection of paging receivers.

The City owns and maintains a paging system that provides numeric and alphanumeric paging throughout Dallas County and into the surrounding counties. Departments needing paging service, have the option of using City-owned pagers through the City's paging network or using a third-party paging service provider.

Since job responsibilities require some City personnel to travel beyond the service area of the City's paging system, a contract is maintained with a third-party paging company to provide extended, statewide, and/or nationwide paging service. This paging service provided by H Com, International, Inc. serves approximately 120 of the City's paging service users.

There are some disadvantages to using a commercial paging carrier, especially to users who perform Public Safety functions.

- Commercial carriers are profit-driven. They are not concerned with mission critical functions or public safety functions that require the use of their system.
- On a commercial system, users must "compete" for airtime. Public Safety users would have no priority. Paging messages could remain in "cue" for extended periods before they were actually delivered.
- In the case of infrastructure malfunction, the City's system is completely under the City's control, with maintenance being a priority and available 24 hours a day, 7 days per week. Commercial carriers may not have the same impetus to provide that level of repair response.
- Commercial carriers route all (even local) paging traffic through satellite. Malfunction of the satellite, as occurred three years ago, results in loss of the service for an extended period. The City's system is terrestrial based, with redundant paths for paging traffic flow. It has no single point of failure.
- The City's system currently interfaces with batch application jobs to provide notification of critical program status and program completion. Other system notifications are also available thru the City's paging system to provide service request for City technicians and problem notifications for the mainframe and servers. For security reasons, you would not want some of this information broadcast via a commercial system.

Auditor's Comment:

OPPORTUNITIES FOR IMPROVEMENT

The principle that we believe should be applied is that service provided by the City should be under a cost recovery methodology. Our assessment shows that recoveries in the form of monthly maintenance costs for each phone far exceeds the cost of maintenance and replacement. Hence, the recommendation to use insurance as the more cost beneficial option.

2. Significant savings could be obtained through more effective monitoring of wireless phone usage.

There is no effective mechanism to control monthly wireless phone costs. The billing statements are not being adequately monitored by departments for reasonableness of business and personal charges, directory assistance, long distance usage, or out-of-network usage charges. Based on September 2001 service charges (excluding directory assistance), the City incurred \$6,500 for these services. Our review identified potential annual cost savings of \$78,000.

Additionally, the billing review policies outlined in AD 4-8 do not specifically address the guidelines for monitoring billing charges to ensure the reasonableness and accuracy of these charges.

The current procedure for reviewing wireless phone usage is that billing statements are distributed by CIS to each department's Telephone Billing Coordinator. The individual billing statements are given to employees for review and reimbursement of personal calls.

We reviewed the billing accounts for the time period July 2001 through January 2002. We looked for reasonableness and correctness of usage charges relating to added phone charges for business purposes. The results of our review revealed:

- *Significant charges are being incurred for directory assistance calls*

To illustrate the savings that could be realized by disabling directory assistance services, we selected the billing detail from account number 338600363 for the billing period December 15, 2001, to January 14, 2002. The chart on the following page reflects the methodology used to estimate the annualized costs for directory assistance charges.

% of Number	Phones	Total	Annualized Avg. Cost	DA Cost
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OPPORTUNITIES FOR IMPROVEMENT

<u>Of Phones</u>	<u>Using DA*</u>	<u>DA Costs</u>	<u>Per Phone</u>	<u>Savings**</u>
108	30%	\$265.64	\$8.31	\$65,815.20

* Based on 30% of 108 phones (32) that used directory assistance.

** Based on 30% of 2,200 phones (660) = (660 * \$8.31 * 12).

In addition to the added cost of airtime charges with directory assistance calls, the frequency of directory assistance usage has added excessive costs for a large number of phones. From the accounts we reviewed, the highest monthly directory assistance charge for one month was \$60.63. This particular billing statement reflected a total of 47 directory assistance calls. Another billing statement revealed eight directory assistance calls made in one day. In both occurrences, all of the calls were made from the home calling area.

- *Significant charges are being incurred for roaming*

Excessive roaming charges have occurred on a number of individual phones. On the Rate 3 Plan, which costs \$30.00 per month and includes 200 anytime minutes (\$0.30 cents per minute over 200), an individual caller talked for 3,984 minutes for a total monthly cost of \$1,135.20 (July 2001). Aside from the excessive monthly cost, this caller talked for 66.4 hours for that month, or 2.95 hours per day. In August 2001, the total monthly cost was \$514.47. A plan change was not initiated until September 2001.

On a Rate 5 Plan phone, which costs \$64.50 per month and includes unlimited local and 60 minutes of long distance, an individual user incurred \$686.20 in roaming charges, plus \$5.00 in roamer fees and \$67.44 in toll charges, for a total of \$831.31 (November 2001).

Each phone is also assessed a monthly roamer administration fee of \$5.00 each month when roaming is used. Actual minutes in roaming mode are also charged at \$0.65 cents per minute.

- *The City is being assessed taxes in roaming mode*

City wireless phones are being charged tax while in roaming mode. The taxes are detailed in the call detail log and then included in the total charge per call. In order to receive credit for roamer taxes, CIS must now review each statement. CIS then contacts Cingular for a credit for these taxes. Subsequent statements have to be monitored to ensure that the credits are applied to the appropriate account.

- *The City is being assessed toll charges for calls initiated in and out of the home calling area*

OPPORTUNITIES FOR IMPROVEMENT

Calls initiated from the home calling area are being assessed domestic toll charges. The Rate 5 Plan includes domestic and international toll charges in its monthly rate plan. The toll charges are occurring after the 60 minutes of long distance have been used. The additional monthly toll charges have ranged from \$0.60 cents to approximately \$686.80 per phone. On one individual phone, the toll charges of \$686.80 were placed with a \$64.50 rate plan. A total of 7,062 minutes were accrued with no other additional charges. The total bill was \$751.84, over 10 times greater than the monthly plan cost. Additionally, when a call is placed outside of the home calling area, roaming charges and toll charges are assessed for the call.

The following chart illustrates the charges added on to the monthly service plan charges for a six-month timeframe. The totals represent 4 out of 41 City wireless billing accounts.

Total Added Charges for July 15, 2001, to January 14, 2002

Account Number	Number Of Phones	Roam Charges	Monthly Roam Fee	Toll Charges	Directory Assistance
338601115	16	\$3,012.18	\$195.00	\$478.00	\$197.74
338600330	15	\$1,874.20	\$130.00	\$231.45	\$182.55
338600998	16	\$1,156.04	\$195.00	\$162.56	\$363.42
338600794	2	\$26.35	\$10.00	\$45.40	\$72.51

- *Airtime charges are incurred with directory assistance*

A number of calls had directory assistance charges that incurred airtime charges. Airtime charges occur when a caller initiates a directory assistance call while outside of the home calling area. Airtime charges ranged from \$0.60 to \$4.55 per call. Adding this charge to the directory assistance charge of \$1.29, the total directory assistance charge amounts to \$1.89 and \$5.84, respectively.

- *Call detail for directory assistance is not provided on some accounts*

In reviewing individual phone billing account detail, some of the accounts show a summary total of directory assistance charges, but do not have the detail on the same billing statement to support these charges. Without the detail of when this service was used and the number called, we feel that the charge is questionable.

We Recommend that the City Manager:

OPPORTUNITIES FOR IMPROVEMENT

- Require each department to perform a more thorough review of wireless phone usage to reduce or eliminate excessive service costs and prevent and correct billing errors.
- Require CIS to meet with Cingular representatives to remedy the billing of roaming taxes.
- Develop a procedure to inform employees of the services/limitations of their selected calling plan in order to maintain cost-efficient wireless communications.
- Update AD 4-8 for personal and business usage guidelines.
- Consider discontinuing or significantly restricting directory assistance and call completion services for City wireless phones. Consider management approval for directory assistance usage for individual users that have a valid business need.

Management's Response:

- CIS concurs with the finding that each department should perform a more thorough review of wireless phone usage. CIS will train Departmental Telephone Coordinators to review wireless phone bills to reduce or eliminate excessive service costs and prevent and correct billing errors.

CIS staff has reviewed all cellular telephone billing since execution of the contract in November of 1999 and disputed any unfounded charges. The bills referred to in the audit report were copies of bills received from Cingular prior to error adjustments or corrections as a result of CIS staff efforts. CIS does not pay for billing statement errors identified by CIS staff.

Efforts were undertaken in October 2001 to encourage departments to consider more cost effective rate plans. All departments received a list of phones and their respective usage with recommendations that they change their plans where appropriate. CIS was successful in obtaining an agreement from Cingular to analyze monthly cellular phone bills on a phone-by-phone basis and automatically apply a more cost-effective rate plan when warranted through the Cingular Right Rating Plan process. The Right Rating Plan process was first implemented for the City in January of 2002.

There is a past history of non-centralized communications procurement in the City (allowing departments to negotiate their own contracts). It was recognized that this philosophy was fraught with waste and inefficiencies. A study was commissioned from Earl Cullum, Jr. and Associates, Consulting Engineers, to determine a better way to procure communication services.

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Although we agree that continual improvements to the centralized process can and should be made, we also agree with the Cullum Study conclusion, that the problems inherent with decentralized communications procurement far outweigh any potential benefit. (See response on page 19.)

There are several benefits and economies of scale that are only available with a centralized contract. CIS has been able to obtain the following based on our current centralized contract.

- Flat Rate Pricing
 - Discounted Rate Plans (15%)
 - 60 minutes of free long distance per month on the flat rate phones
 - Direct access to their personnel for phone activations
 - On-site Cingular personnel
 - Billing in electronic format, to our specifications
 - Certification to do mobile installations and phone programming
 - Equipment delivery to our location
 - Right Rating Plan process
- CIS agrees that the billing of roaming taxes must be corrected. Although the City is being assessed taxes in roaming mode, the City does not pay these taxes. These charges are removed before the bill is processed. CIS has been meeting regularly with Cingular representatives since October 2001 to resolve this and other billing issues. In addition, the CIO and Auditor met with Cingular regarding this issue. These meetings will continue until the billing issues have been resolved by Cingular. August 1, 2002 the new Federal Mobile Telecommunications Sourcing Act becomes effective. After that date wireless carriers will apply "home taxes" to roaming calls. This will eliminate the issue of out collection taxation. Cingular billing systems are being enhanced to comply with the new act.

Since the inception of the agreement with Cingular in November of 1999, cellular telephone billing has always been scrutinized for errors by the CIS billing staff.

- CIS agrees that improvements can be made to the procedure to inform employees of the services/limitations of their selected calling plans. To this end, CIS has acquired and is in the process of implementing the Pinnacle Billing System, which will provide Departmental Telephone Coordinators with detailed telephone billing information. A Project Kick-Off Meeting will be held to instruct Department Telephone Coordinators of their responsibilities, provide information on the available Calling Plans, and to provide them with the tools needed to assist their department in

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maintaining cost-efficient wireless communications. Telephone Coordinators will be requested to share this information with their departments.

In addition, protection against rate plans, which may become undesirable or obsolete, has been provided to the City through paragraph 4.2 of the 1999 contract between the City and Southwestern Bell Wireless (now Cingular).

Specifically:

"So long as the City qualifies for the rates and prices depending on activation and usage levels, if Vendor's generally available price for any Cellular Telephone Equipment shall be lower than the price for such Cellular Telephone Equipment stated in Vendor's Proposal, the City shall have the benefit of such lower price or improved features. If additional Service features or functions are available or if the Service's performance has been enhanced, City shall receive, at the same cost and on the same terms as other Vendor customers, such features, functions and enhancements if they are available to other Vendor customers."

Beginning in October of 2001, a concerted effort was launched by the CIS Department with the goal of educating other departments of alternative wireless airtime plans that could potentially provide cost savings.

The cellular rate plans have been posted on the City's Intranet to provide up-to-date information about available plans. CIS staff is always available to answer questions regarding features or limitations of the rate plans. Additionally, Cingular has agreed to assist new wireless users in the selection of the most appropriate plans for their needs.

In October of 2001, the City's CIO requested an analysis of individual cellular phone usage to determine the best plan for each user. Beginning in January of 2002, Cingular began the analysis of individual cellular phone usage compared to the phone's rate plan. Those users who would benefit from a less expensive plan are now automatically switched to that plan. This "Right Rating Plan" process will occur three times each year.

Utilizing Cingular's Right Rating Plan process, the City has received a refund credit from Cingular in the amount of \$110,000 and has identified rate reductions that will result in cost savings of \$34,000 per month.

- AD 4-8 (Mobile Telephone Services) addresses the subject of wireless telephone service. This AD was updated as recently as July 2001. AD 4-8 (Mobile Telephone Services) currently contains language regarding personal usage: Specifically, paragraph 5.3.4 states:
"Personal calls are permitted from mobile phones, but must be kept to a minimum

OPPORTUNITIES FOR IMPROVEMENT

and must not detract from employees availability to complete their work. The user is responsible for reimbursing their Department for the cost of the call within 30 days of receipt of the billing unless the user is utilizing flat rate service. Flat rate phones that incur additional charges for personal calls (directory assistance, long distance, etc.) must also be reimbursed. Checks should be made payable to the City of Dallas and forwarded to the Departmental Telephone Coordinator, who will be responsible for depositing the funds."

The AD further states in paragraph 3.4.2:

"(The mobile telephone user is responsible for) Keeping personal calls to a minimum (minimum is defined as less than 10% of total talk time)."

We believe that this language adequately addresses the issue of personal cell phone use, and gives supervisory personnel the tools necessary to manage employee cell phone usage.

- CIS concurs that directory assistance and call completion services have the potential to be abused, and should be addressed and enforced at the departmental level. The report shows that in some cases the use of Directory Assistance has been abused. We will add language to AD 4-8 to clarify appropriate Directory Assistance usage. For instance, Directory Assistance must never be called from an office with a telephone directory, or Internet connection from which telephone numbers can be retrieved. We will also recommend that personnel away from the office should call department staff with access to the Internet or a directory, rather than place a call to Directory Assistance. In addition, Departmental Telephone Coordinators will be instructed to review and identify excessive bills for Directory Assistance charges.

Cingular has informed CIS, at this time, that Directory Assistance and Call Completion services cannot be restricted Citywide or on a case-by-case basis.

Rate plans should be selected based upon the defined business needs. Any personal usage that causes the City to incur additional cost beyond the cost of the defined rate plan should be the responsibility of the individual.

3. Personal phone calls made on the City's wireless phones are not in compliance with the required reimbursement of federal and state usage taxes for personal use.

Currently, there is not an AD outlining a reimbursement policy or procedure for collecting the required taxes for personal wireless phone usage by City employees. All telephone calls made for City business are only charged the Federal Universal Service tax of \$0.27 cents on each billing statement. Annually, there is a Federal Regulatory Charge of \$0.27 cents for tax-exempt government entities.

OPPORTUNITIES FOR IMPROVEMENT

We contacted the Public Utility Commission of Texas regarding the compliance of taxes relating to personal phone calls made with City of Dallas wireless phone equipment.

Upon gathering information regarding the tax liabilities on personal phone calls, the following taxes apply for personal calls made using City of Dallas wireless phones:

Taxes and Regulatory Charges*:

Federal Excise Tax	3.00%
Sales & User Tax	6.50%
Local Sales Tax	1.75%
Texas State 911 Equalization Surcharge	.3%
Texas State Poison Control Surcharge	.3%
Texas State Wireless 911 Emergency Service Fee	\$0.50
Telecommunications Infrastructure Fund (TIF)	1.25%
Texas Universal Service Fund Surcharge (TUSF)	3.6%
Federal Universal Service Fund Surcharge (FUSF)	.9%
Federal Regulatory Charge	.9%**

*Source- Public Utility Commission of Texas

**Annual fee

In reviewing the reimbursements made by employees for personal phone calls, we did not find that these taxes were assessed or collected. The City is noncompliant in collecting federal and state telecommunications taxes associated with personal calls placed with City telephone equipment.

We Recommend that the City Manager update AD 4-3 and AD 4-8 to reflect the policy for reimbursement of personal usage taxes for personal calls using City of Dallas wireless phones. In addition to the monthly Federal Universal Service and annual Federal Regulatory Charge taxes, the applicable state and local taxes need to be prorated and reimbursed by employees for their personal usage.

Management's Response:

CIS agrees with this finding to update AD 4-3 and AD 4-8. CIS agrees that taxes, mandated surcharges, and fees that are **assessed** against the City should be prorated based on personal usage of cellular telephones and reimbursements received from employees. Language to this effect will be added to AD 4-3 and AD 4-8, which will require standard reimbursement for personal calls plus 10% of assessed taxes.

4. The City does not appear to benefit from a Citywide wireless phone communications contract.

OPPORTUNITIES FOR IMPROVEMENT

The City awarded Cingular Wireless a contract in November of 1999. Cingular offered the City eleven rate plans. We reviewed the Cingular contract, which covers a five-year timeframe. Upon comparison of the contracted rates versus current market rates, the City's rates are noticeably higher and offer lesser services under the eleven rate plans. Rate plans have not been monitored on a periodic basis for reasonableness and cost avoidance/cost savings per user and/or department. Excessive charges that could have been avoided by periodic rate analyses and closer departmental monitoring have occurred on departmental billing statements. The City could have more effectively controlled wireless phone costs by switching to more cost-efficient City Cingular rate plans.

During the course of our audit work, new rate plans had been offered by Cingular. However, the new rates were not reflected on bills reviewed through the January 2002 billing statements. Our rate plan analysis reflects the eleven original published rate plans.

- *City departments could benefit by combining wireless phone and pager functionality*

During our interviews with several City departments, employees expressed interest in adding additional capabilities to their wireless phones and/or combining the functionality of pagers with wireless phones. While the unlimited local minute plan serves the needs of a high-usage wireless user, individual departments could benefit by having the flexibility of contracting their own calling plans and wireless phone equipment.

- *The contracted plans compared to current retail plans were higher or the same*

In the case of equipment repair or battery replacement, buying a new wireless phone would be more cost effective rather than charging a monthly maintenance/replacement fee to repair wireless devices. Current phone replacement costs through Cingular are higher than current market pricing for wireless phones.

Cingular Contracted Phone Prices

<u>Nokia</u>	<u>Cost</u>	<u>Motorola</u>	<u>Cost</u>	<u>Ericsson</u>	<u>Cost</u>
5120	\$9.00	StarTAC 3000	\$199.00	DH688	\$219.00
6120	\$269.00	StarTAC 6500	\$299.00	KF788	\$249.00
6161	\$299.00	V3620 Deluxe	\$549.00		

Current Retail Phone Prices

(Circuit City)

OPPORTUNITIES FOR IMPROVEMENT

<u>Nokia</u>	<u>Cost</u>	<u>Motorola</u>	<u>Cost</u>	<u>Ericsson</u>	<u>Cost</u>
8260	\$179.00	MOTV60T	\$249.00	R300LX	\$49.99
3360	\$ 99.00	V120	\$99.00		
5165	\$ 79.00	V2397	\$79.00		

Source: City Cingular wireless contract and Circuit City.

Pagers include a 3 to 5 year warranty at the time of purchase. Some of the older models have up to a 10 year warranty. Damaged or nonworking pagers are sent offsite for warranty repair. The annual CIS maintenance cost for an analog pager is \$84.00 and \$96.00 for a digital pager. It is not cost-effective for the City to maintain pager inventory. In most cases it would be more cost effective to purchase a new pager through an alternate source rather than to stock Cingular's inventory.

Contract Pager Prices

Analog	\$40.00	Alpha/Numeric	\$175.00
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Current Retail Prices

Motorola 850	\$39.99	Two-Way	\$159.99
		Talkabout T900	\$59.99

Source: H Com International, Inc. and Circuit City.

- *The City could have better control over wireless phone costs by offering phones with prepaid minutes for users that have a short-term or low-usage need for wireless phone services.*

We reviewed the September 2001 billing statements to find the number of low-usage phones. The following chart reflects the number of low-usage phones in each corresponding rate plan.

Low-Usage Phones Under Current Rate Plans

	<u>\$74.50</u>	<u>\$64.50</u>	<u>\$50.00</u>	<u>\$30.00</u>	<u>\$9.95</u>	<u>Total Phones</u>
Phones	12	270	24	31	5	342
% of Total	3.5%	79%	7%	9%	1.5%	
% of Total Inventory						16%

The annual cost for 342 phones amounts to \$319,737 or a monthly cost of \$77.91. The total amount consists of the rate plan amount and maintenance. Additional service fees have not been included.

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Pre-Paid Minute Plans

(Annualized Costs for 342 Phones)

<u>Phone & Minutes</u>	<u>Insurance</u>	<u>Replacement</u>	<u>Total Cost</u>
\$99.00 + 1,200 min. = \$482.87	\$399.99	\$47.88	\$35.00
\$99.00 + 2,400 min. = \$782.87	\$699.99	\$47.88	\$35.00

The first year annual cost for 342 phones with 1,200 minutes amounts to \$165,141.54. The annual cost for 342 phones with 2,400 minutes amounts to \$267,741.54. The 1,200 minute plan would cost \$40.24 per month, and the 2,400 minute plan would cost \$65.24 per month. The monthly cost includes nationwide coverage and roaming and toll charges. The first year annual total savings from these two plans compared to the contracted rates would be \$154,595.46 and \$51,995.46, respectively. The second year costs would be reduced by \$33,858 (phone purchase costs).

We Recommend that the City Manager:

- Consider offering all departments the flexibility to independently contract wireless services and phone and pager equipment suited to their department's user functionality needs.
- Offer low-usage phone users phones with prepaid minute plans to better control wireless communications costs.
- Require internal periodic rate analyses to ensure the City is receiving reasonable and cost-effective wireless phone services through Cingular's rate plans.

Management's Response:

The first large scale contract for cellular service was negotiated and then executed with Southwestern Bell (Bell) in 1988. At that time, the City was successful in obtaining an unlimited usage, flat rate airtime plan from Bell. The City of Dallas was the first wireless customer ever to obtain an unlimited usage, flat rate airtime plan.

Bell was the successful proposer again in 1993 and the City remained the only cellular user, nationwide, with an unlimited airtime plan.

In 1996, MetroCel (now AT&T) was the successful proposer. In order to get the City's business, they also agreed to a flat-rate unlimited usage rate plan, something they had never done before.

Bell (now Cingular) successfully won the City's business back in 1999, again offering a flat-rate plan, along with other plans. Prior to the procurement process in 1999, staff made contact with the five commercial wireless providers, Cingular, AT&T, Primeco

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(now Verizon), Sprint, and Nextel, with the express purpose of encouraging them to submit proposals for the upcoming request for wireless services.

Despite staff's efforts, proposals were received from only Cingular, AT&T, and Sprint. During negotiations, it became evident that Sprint did not have the flexibility to offer a flat-rate plan. Sprint ceased negotiations and never submitted a Best and Final Offer. The City negotiated with the two remaining vendors, Cingular and AT&T.

Since the present contract between the City and Cingular requires Cingular to provide any offering made to any other customer, at the same price, the City can avail itself of any rate plan Cingular offers, whether it is enumerated in the contract's exhibit or not. The published list of rate plans has grown from 11 to 19 and will increase again shortly.

- CIS does not concur with this audit finding.

There is a past history of non-centralized communications procurement in the City (allowing departments to negotiate their own contracts). It was recognized that this philosophy was fraught with waste and inefficiencies. A study was commissioned from Earl Cullum, Jr. and Associates, Consulting Engineers, to determine a better way to procure communication services.

The study, which recommended centralizing communications, is quite lengthy but to summarize:

- It provides much lower pricing due to economy of scale.
- Citywide, staff can be reduced since personnel with the necessary skill sets need only be employed by one department instead of all departments.
- Uniformity of equipment is more readily achieved.
- Equipment (assets) can be inventoried and tracked more reliably, less spares need to be stocked to change out malfunctioning equipment.
- Duplication of effort (from department to department) is eliminated.
- Contractors have one main point of contact (problems can be resolved more expeditiously).
- Departments are free to devote all their resources to achieving their core mission without the need to worry about obtaining ancillary services.
- Uniform, Citywide policy can be set.

Although we agree that continual improvements to the centralized process can and should be made, we also agree with the Cullum Study conclusion, that the problems inherent with decentralized communications procurement far outweigh any potential benefit.

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Please note that there are currently 19 rate plans offered to the City of Dallas by Cingular. It has been previously stated that the contract with Cingular requires Cingular to offer any plan to the City that is offered to any customer, at the same price. The plans available to the City are competitive with any other plans offered. CIS has a proven history of encouraging users to move to a different plan if that plan would save the user money. In addition, CIS works on Rate plan analysis through the Cingular Right Rating Plan process.

The prices listed as "Cingular Contracted Phone Prices" in the report are the prices of the phones available when the contract was executed. These phone prices are no longer current.

We presently buy the Nokia 5165 at a price of \$113.39 and the Motorola V60T at a price of \$274.99 **for replacement purposes**. The report lists these two phones available from Circuit City at considerably lower prices but fails to point out that these prices require that the purchaser commit to at least a one-year airtime plan with a substantial monetary penalty for early cancellation.

In October 2001, CIS began activities to identify ways to lower cellular costs via more flexible rate plans. The department's actions have resulted in a refund credit of \$110,000 and identified cost savings of \$34,000 per month. CIS has effectively administered and monitored the original 11 rate plans issued under the November 1999 contract. It should also be noted that there are currently 19 rate plans available to City of Dallas staff to choose from.

When the City activates a new phone, the City obtains the Nokia 5165 at **no cost**. The Nokia 5165 is the current low-end model. Activating a new phone number results in the City obtaining the Nokia 5165 at **no cost** (compared to \$79.00 from Circuit City as listed in the report).

The table on the following page contains the significantly discounted prices made available to the City from Cingular.

	<u>Base Price</u>	<u>Discount from Base Price</u>	<u>Net Price</u>
Nokia 3360	\$ 209.99	33%	\$ 140.69

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Nokia 5165	\$ 179.99	37%	\$ 113.39
Nokia 8260	\$ 289.99	30%	\$ 202.99
Ericsson R278D	\$ 169.99	51%	\$ 83.30
Ericsson T60D	\$ 219.99	32%	\$ 149.59
Motorola V60T	\$ 499.99	45%	\$ 274.99

As a point of clarification, all City-owned digital cellular telephones have one-way pager functionality. These phones have the capability of receiving numeric or text messages. These messages can be sent via email or through the Cingular website.

An effort was made in 2001 to encourage and convince employees who carried both a pager and a cell phone, to eliminate the pager and rely solely on their cell phone for text and numeric messaging. CIS efforts were met with limited success. Many of the employees who carried pagers rely on them for automatic notifications and/or data generated through the City's mainframe computer. Since this type of messaging cannot be easily converted to send over Internet protocol, those users continued to carry their pagers.

As previously stated, the benefits of a single, centralized wireless service contract, far outweigh any flexibility that might be gained by allowing departments to negotiate individual contracts.

- CIS would concur with this audit recommendation, however Cingular does not offer a prepaid business option under the current contract. A low cost rate plan is available. CIS will continue to control the cost of wireless communication utilizing the Cingular's Right Rating Plan process.
- CIS concurs with this audit recommendation for internal periodic rate analyses. Actions have already been undertaken and are ongoing to ensure that Cingular is offering the City the most current and cost-effective wireless phone services available. Internally CIS Telephone Billing personnel will monitor and conduct rate analyses to ensure contract compliance. Departmental Telephone Coordinators will be trained to review rate plans to ensure that the right plan has been established for personnel within their departments. The "Right Rating Plan" assessments and updates will also occur three times a year automatically.

5. The City should research and consider partnering with a contracted vendor to benefit from a revenue-producing marketing program.

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Average monthly wireless phone costs for the City's FY2001 inventory of wireless phones averaged \$144,000 monthly or \$1,728,000 annually for 2,200 wireless phones. In addition, approximately \$475,200 is accumulated annually in a CIS maintenance/replacement fund. The total annual expense for wireless phone communications roughly amounted to \$2,203,200 for FY2001.

With regard to the account size and revenue generated for the contracted vendor, the City could benefit from a revenue incentive program with Cingular. An agreement could be negotiated whereby Cingular would receive Citywide marketing exposure as the City's wireless provider and the City, in turn, would receive revenue incentives from this agreement. Last year Verizon Communications entered into an agreement with the City of San Diego whereby the City will be compensated \$1 million over the next five years. The vendor could benefit from a marketing standpoint by having their logo placed on City publications, City seminars/special events brochures/banners, and on the City's website.

We Recommend that the City Manager explore and research the option of developing a marketing relationship with a wireless communications provider. The City could benefit significantly from a revenue incentive offered by a vendor in exchange for the status of "official wireless partner" for the City of Dallas.

Management's Response:

CIS concurs with the audit finding that we should research options for developing a marketing relationship with a wireless communications provider. Methods to enhance revenue or decrease cost are always welcome. This suggestion could potentially enhance revenue while appearing to be relatively benign.

CIS CIO specifically asked Cingular about the "Official Wireless Partner" designation, however Cingular declined.