

TO: James L. App, City Manager  
FROM: Mike Compton, Director of Administrative Services  
SUBJECT: Utility Billing Software Replacement  
DATE: November 16, 2004

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Needs:

For the City Council to consider a \$90,000 appropriation to upgrade the utility billing (sewer and water) software.

Facts:

1. The current software was last upgraded in 1994 and was developed on a “proprietary” (custom) data base.
2. Typically, software should be upgraded or replaced every three to five years.
3. It became readily apparent after the Golden Hill Water Tank was damaged that the data extraction capabilities of our current software was severely lacking. Staff must manually extract and manage critical data relating to customer consumption.
4. Given its age and proprietary nature, software support will likely terminate in the near future as only one other customer beside Paso uses the software.
5. Consistent with the City’s adopted Information Systems Strategic Plan, the upgrade would offer improved service to customers, greatly enhance statistical and data reporting, and “e” commerce capabilities.
6. The upgrade would also ease the City’s conversion to and management of a monthly billing cycle.

Analysis  
and  
Conclusion:

The City’s current software was developed and installed by Creative Computer Solutions in 1994 (was actually an upgrade from 1988). CCS supported the software until July 2000 at which time they were acquired by Harris Computer Systems. HCS has supported the software but has made no improvements or changes to the CCS utility billing software as they only acquired CCS solely to get their general ledger and other non-billing software; i.e. accounts payable, payroll and business licensing, etc. HCS had their own utility billing software which they continue to support and improve. Their most recent release is called NorthStar and represents current “state of the art” in utility billing software.

The NorthStar system is fully compatible with the City’s current general ledger/accounting/financial reporting software. Should the City replace its current general ledger/accounting/financial reporting software in the future, the NorthStar is fully compatible with available systems on the market today.

In addition to the increased billing flexibility and statistical/data gathering and reporting capabilities, and “e” commerce wherein a customer may review and pay their bill on-line.

Lastly, as noted above, the flexibility of the NorthStar software would ease the transition to monthly utility billing cycle.

Fiscal  
Impact:

The cost of the NorthStar upgrade is \$90,000 (rounded up for contingencies). Its cost components are identified as follows:

Training, Data Conversion, Cognos Report Writer (Water/Sewer Enterprise Fund)	\$60,000
Migrate Business Licenses, Miscellaneous Accounts Receivable, Central Cashiering, Fixed Assets and Equipment Maintenance (General Fund)	9,000
eCare Internet connectivity (software) (Water/Sewer Enterprise Fund)	11,000
eCare Internet connectivity (hardware) (Water/Sewer Enterprise Fund)	<u>6,000</u>
Total	<u>\$86,000</u>

It is estimated that the cost to purchase utility billing software from a different vendor would range from \$150,000 to \$175,000.

The upgrade, if approved, represents a fixed asset investment (except for the migration of central cashiering, fixed assets and equipment maintenance). This initial upgrade cost would be paid from fixed asset reserves and would not impact operating expenses nor user fees. However, depreciation expense, estimated at \$15,400 annually and split \$8,200 Water and \$7,200 Sewer would be an operating expense but given the amount, would not require a user fee adjustment.

Options:

- a. Adopt Resolution No. 04-xxx approving a budget appropriation in the amount of \$90,000 from the General Fund, Sewer Operations Fund and the Water Operations Fund for the upgrade of utility billing system software; or
- b. Amend, modify, or reject the above option.



## Memorandum

To: Jim App, City Manager

Cc: Jennifer Sorenson, Finance Manager  
Dave McCue, IS Manager

From: Mike Compton, Director of Administrative Services 

Subject: Utility Billing Software Upgrade/Replacement

Date: October 12, 2004

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The Utility Billing (UB) software used to manage customer account information, create invoices and process payments is old technology. The current system provides for basic needs but its statistical and data capabilities are considerably deficient. This was recently illustrated by Administrative Services' inability to provide accurate customer account and usage data in a timely, efficient manner. The software vendor Harris Computer Systems has continued to support this product in a "keep it working" mode even though they stopped selling and stopped adding features in 1994. It is anticipated that they will terminate support of this software. Under our maintenance agreement with Harris Computer Systems, we have license to the newest version of their utility Billing software - NorthStar. This is an entirely new product designed from the ground up with the latest components and concepts. NorthStar is designed to be compatible with all major governmental fund accounting systems currently available and this migration separates the connection between the UB and financial management software.

The current UB software package, and some modules of our financial software, was built on a proprietary database structure as was often done in the 1980's. At the time, Internet access was rarely used and the graphical World Wide Web was not available. Enterprise software of this type has a typical useful life of 3-5 years without enhancements. At 10 years, we have expended its useful life and received all the possible benefits from this asset.

In keeping with the City's adopted Information Systems Strategic Plan, the NorthStar system offers improved delivery of service to customers. NorthStar provides a great deal of increased billing flexibility and more importantly, improved statistical analysis and data reporting. An example of billing flexibility is illustrated by NorthStar's capability to look at historical "period" consumption in order to estimate current period consumption to generate a bill. It then adjusts the following period billing for the last periods' actual. It can compare current consumption with prior period consumption to assess consumption based penalties in the current period, if desired.

NorthStar also features electronic commerce, the "eCare" module which allows customers the ability to view account information, consumption history, and review and pay their account on-line. Migration to NorthStar would be coordinated so there would be no interruption in service to customers. The new software would be installed and thoroughly tested with actual UB customers

before going "live". All prior customer account information, consumption data and meter reads would be exported to the NorthStar system. NorthStar is a complete system, and as such, will not require custom programming to install.

While the license for NorthStar with our current features is included in our maintenance agreement, the data conversion from our current system, the training on the new system, and the additional options like eCare are not included. The eCare component may be purchased as an "add-on" at any time. Thus, if there was a desire to lower the initial investment cost, this component could be postponed. The annual maintenance cost will not increase as maintenance for the old product will be eliminated. Given this is a capital investment, it would not impact Water/Sewer operating expenses and no rate increase would be required as the funding source would be retained earnings.

• Training, Data Conversion, Cognos Report Writer (Water/Sewer Enterprise Fund)	\$60,000
• Migrate Business Licenses, Miscellaneous Accounts Receivable, Central Cashiering, Fixed Assets and Equipment Maintenance (General Fund)	9,000
• eCare Internet connectivity (software) (Water/Sewer Enterprise Fund)	11,000
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Total	\$86,000

In conclusion, staff recommends the purchase of the NorthStar system. The state of the art technology and features that NorthStar has to offer are in line with the Information Systems Strategic Plan and the goal of the City to deliver distinctive customer service. The support for the current UB software is expected to be terminated in the near future, the last upgrade to the current software was in 1994, and the cost of moving to a different vendor is estimated to be \$150,000 - \$175,000.



## Harris NorthStar CIS

**H**arris is committed to providing long term solutions for long term customers. We have a program of continuous product development, technology leadership, proven execution on deployments and a demonstrable track record. We have an unparalleled knowledge base of electric, gas, water, and sewer service requirements in both regulated and deregulated markets.

Harris offers a full J2EE Customer Information System – NorthStar. Unparalleled in the mid-market, NorthStar is a true n-tier solution with a robust Java client and full operating system and database independence.

### Features

- Multi Service (Electric, Gas, Water, Sewer, Cable, Refuse)
- Complete Customer Care:
  - cashiering
  - service orders
  - call tracking
- Rate Flexibility:
  - block rates
  - time of use billing
  - retailer billing
- Extend to:
  - web with eCARE
  - phone with eIVR
  - document management with eDOC
  - remote service with mCARE



**HARRIS**

NorthStar v6.0 enhances the established and proven functionality of the Harris CIS through the adoption of Java technology for the user interface. The following series of screen shots illustrates a small example of how Harris has leveraged new technology to provide a robust and easy to use interface suitable for the wide variation in user profiles.

## Gateways

Most customer service requests initiate with a customer inquiry either by telephone or in person. Harris has engineered NorthStar v6.0

such that once a customer is located in the system navigating to all other information has been optimized. However, this is not the only method of navigating NorthStar. Harris has also engineered Gateways for CARE (our CRM module), Cashiering, Billing, Journal Entry, Reports, Program Utilities, System Setups, Meter Reading and Credit Control. Each Gateway is a full Multi-Document Interface (MDI) workspace allowing multiple windows to be open in each Gateway simultaneously. The figure below illustrates the NorthStar Account Gateway and highlights the general navigational features.

**NorthStar Gateways:**  
Access MDI workspaces  
specific to each function

### Header Information:

Find, Advance Find, Add, Edit, Delete, Record Navigation, Undo, Print, Accept and hot keys are common on all form headers. Detailed info nested with tabs to optimize screen real estate. Each field in the header is searchable with the general find (alone or in combination with other fields). Advance find allows you to build more complex query statements.

**Current Account:**  
Allows users to always understand the critical customer information for the current account. This feature is extremely useful in multitasking environments when multiple account screens are open simultaneously. The window is customizable allowing each utility to specify the critical information that sets the account context.

**At-A-Glance:**  
A customizable summary of critical and common account information to provide fast answers. Color codes on specific criteria to highlight information to reflect business processes. Drill through on to detail screens to make changes or provide further information.

The screenshot displays the NorthStar Account Gateway interface. It features a main window titled 'Account Management View (BROWSE) BUDGET' with a sub-window 'Service Summary (BROWSE)'. On the left, there is a 'Current Account' window showing account details for 'BARBER, DAWN' and a table of account metrics. A 'Quick Launch' dialog box is open in the foreground, listing options like 'Tax', 'Tax Exempt Report', 'Tax Exceptions', and 'Tax Listing'. The interface includes various buttons, tabs, and a search bar. Callouts A, B, C, and D point to specific features: A points to the 'Current Account' window, B points to the main header area, C points to the 'At-A-Glance' summary table, and D points to the 'Quick Launch' dialog box.

Balance	\$126.07
Overdue	\$126.07
Due Date	09/02/2003
Last Bill Date	02/27/2003
Call	
Last Call	4/14/2004
Orders	2
Last Order	4/14/2004
E Meters	1
W Meters	0
G Meters	0
Scrt Lights	0
Ticklers	
Letters	3
Plan Type	F
Next Read Date	
Disconnect Date	09/02/2003
Access	N/A
Active Accounts	1
Finalized Accounts	0
Customer Balance	\$126.07
Max Billing	
Pat. Codes	0
Deposit Amount	
Management	
Overall Rating	Z

**Quick Launch:** A fast and effective method of navigating to the form, report, or program that is required. A key ahead feature matches the available choices based on the user input. The second half of the dialogue indicates the type of module (account level, set-up level, report, etc.) to further assist users in navigating to the correct function.

# Proven Functionality

The following features are out-of-the-box with NorthStar v6.0

- unique and permanent account numbers
- unbundled rates, taxes and service charges
- distributed billing for sub metering
- landlord – tenant continuous service agreements
- unique bill messaging
- complete meter inventory management
- backflow device management
- degree days and rebate programs
- Pre-Authorized Payment, Budget Billing

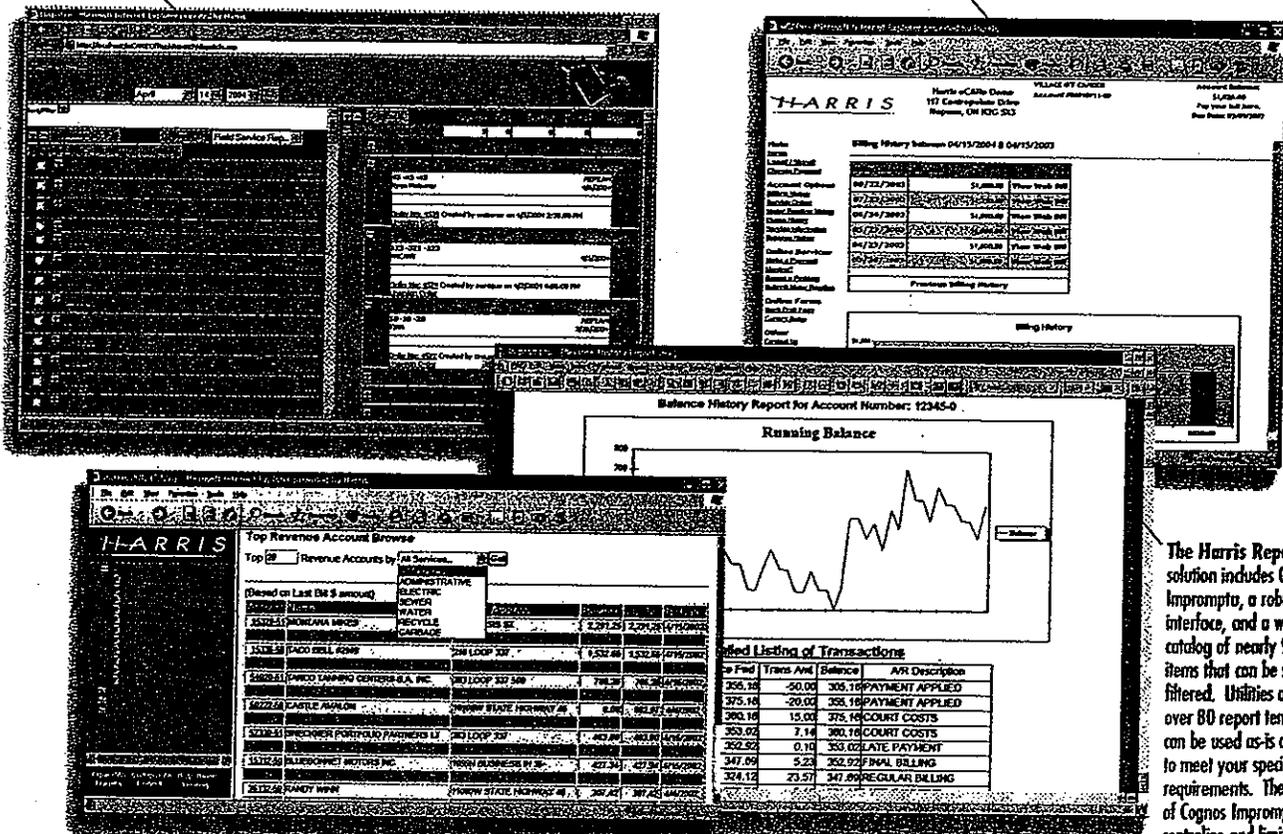
# Extended Functionality

The Harris enhances the functionality of NorthStar with a suite of web based extensions that increase the total solution value. The following

illustrates a sample of our extensions that enable utilities to increase the efficiency of their customer service processes.

**mCARE** is a complete workforce automation application that leverages mobile and wireless technologies to optimize service order processes. Through an easy to use web-based dispatch application, service orders, generated by customer service representatives or account managers, form a task list to be assigned to available field personnel. Service orders are assigned complete with electronic forms, surveys, or questionnaires specific to the service order nature. Field personnel "pick up" their orders right from their mobile device. Upon completion of the work, field personnel record the results on their mobile device and upload the information back to the NorthStar CIS. In a wireless environment, further efficiencies are achieved through real-time data transmission between the office and the field personnel.

**eCARE** is a complete Internet solution for two-way communication with your customers. It creates a whole new level of customer care by putting the power of your organization and your Customer Service department on your web site. With eCARE customers can get real-time information on their account 24 hours a day, seven days a week. They can easily look up consumption history, log service calls, review and pay their account, print up to eighteen months of bill history, and submit meters readings whenever it is convenient for them.



The Harris Report Writer solution includes Cognos Impromptu, a robust reporting interface, and a well-organized catalog of nearly 900 data items that can be selected and filtered. Utilities also receive over 80 report templates that can be used as-is or modified to meet your specific reporting requirements. The deployment of Cognos Impromptu will centralize and limit the amount of technical training required while providing our customers with the most advanced report writing capabilities on the market today.

**EIS** is a new and exciting tool that allows decision makers to access critical management information, quickly and easily. Whether it's how much cash is in every fill, or how many service calls are outstanding, or how this week compares with last week or last month, or the same period last year - all of this information is just a click away through the Harris Executive Information System (EIS).

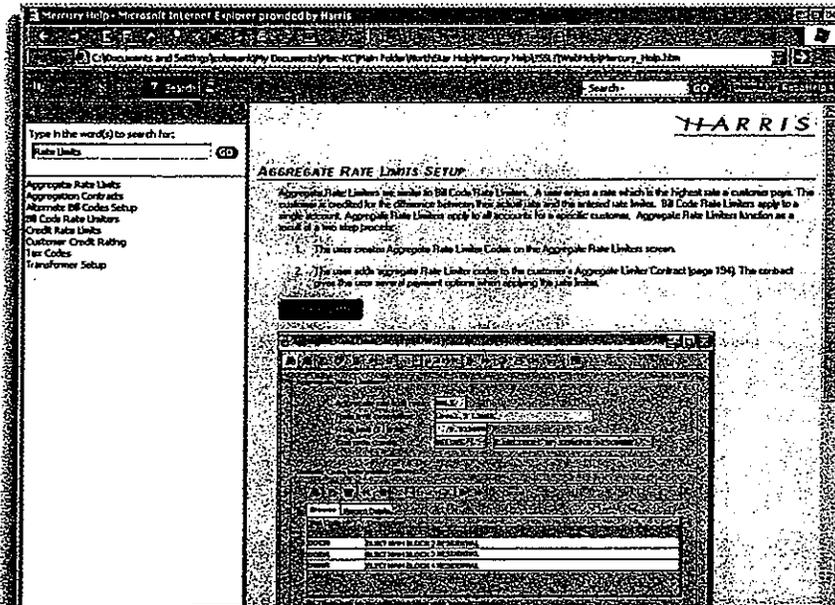
Developed with managers for managers, EIS is designed to allow access to information without having to know how to navigate through the Harris Billing and CIS systems. The EIS guides you through the information - starting at the highest level and drilling down to the actual transaction level - all at the click of your mouse.



# NorthStar Online Help

Harris has implemented a new and complete online help system with NorthStar v6.0. The help system is extremely comprehensive, providing not only user reference but details on how to complete forms, how to complete specific processes that span several forms, and the implications of

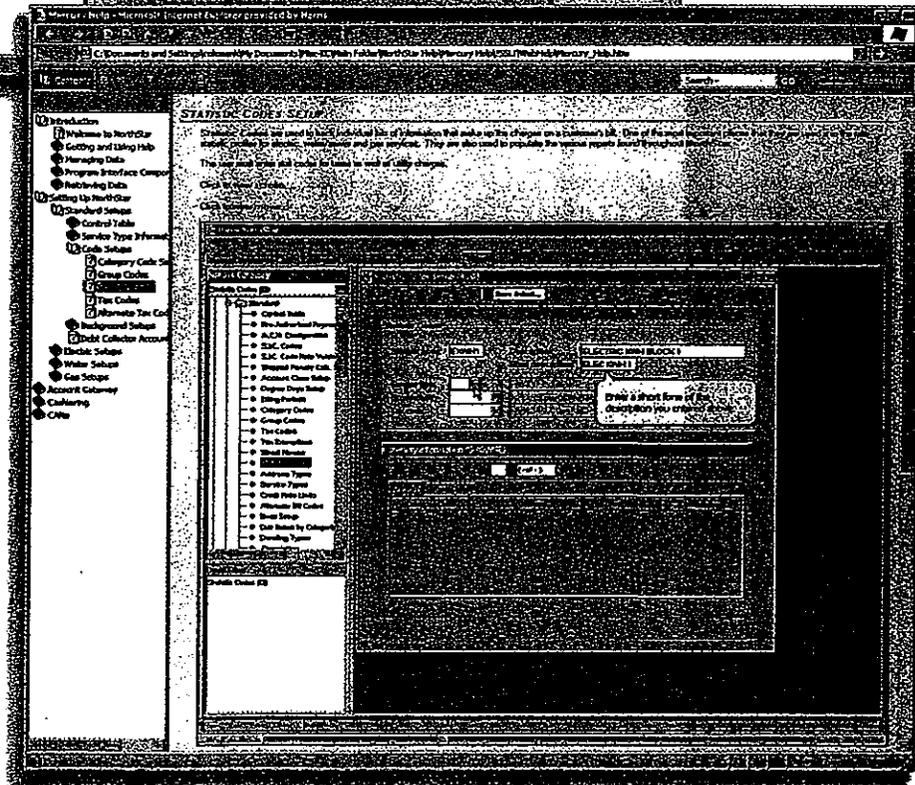
specific field settings. The NorthStar online help system is fully HTML and utilizes interactive screen shots, movies, and other teaching aides to reduce application training and provide a real support resource.



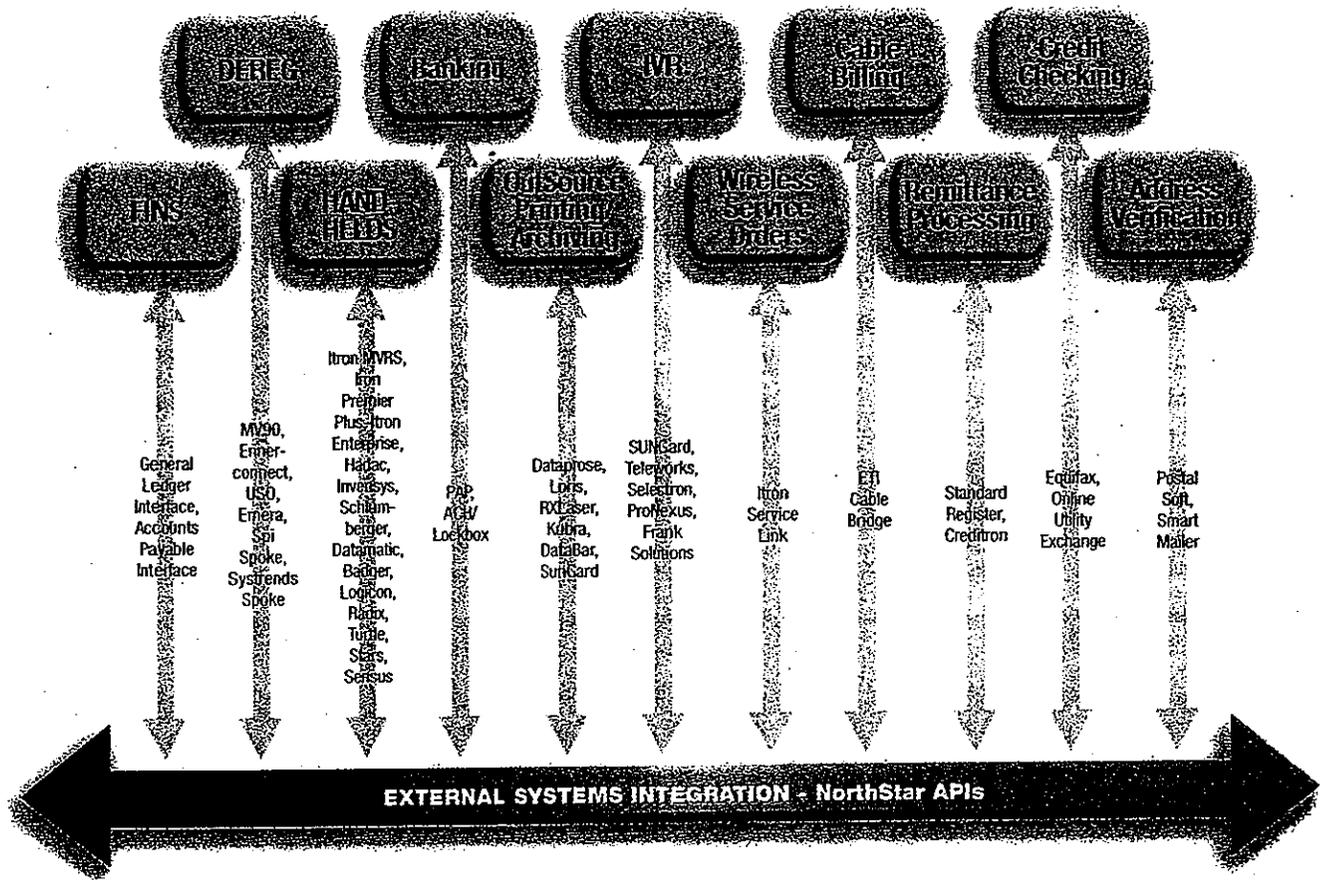
**Easy to Use:** Browse sequences link related topics in logical order to describe complicated processes like setups, account creation, and billing. Browse sequences are designed to allow users to navigate forward and backward through topics to focus on individual aspects of the process.

**Related Topics buttons** cross-reference Help topics with other topics containing related concepts. When clicked, a list of related topics appears that users can go to.

**How-to Movies:** In the NorthStar application, tabs are used to display underlying user interfaces. In many instances, a Help topic that focuses on one tab may also reference other tabs. JavaScript is used to create clickable hotspots and animated movies to illustrate how to complete screen forms. This allows the Help documentation to more closely mimic the application environment that the user is working in.



# System Interfaces



## Infrastructure Requirements

### Hardware & Operating System Layer

NorthStar v6.0 offers the value of operating natively in a Windows™ 200X Server, Linux, or Unix environment, allowing our customers full choice in selecting hardware components.

### Database Layer

NorthStar v6.0 supports all leading relational database systems. Currently these include:

- Oracle™
- Microsoft SQL Server™
- IBM Informix™

### Application Layer

The NorthStar v6.0 and Select applications operate in this configuration in exactly the same manner as they would on a single stand-alone server. Each of the desktop clients point to the virtual IP address of the cluster and the operating system manages the load between the two servers. The RAID configuration ensures uptime of both applications and the underlying data in the event of disk failure.

### Client Layer

NorthStar utilizes a low footprint Java Swing client. This client can run on virtually any desktop device. Please contact Harris for minimum and recommended specifications.

RESOLUTION NO. 04-

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF PASO ROBLES  
APPROVING A BUDGET APPROPRIATION FOR THE UPGRADE OF  
UTILITY BILLING SYSTEM SOFTWARE

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WHEREAS, the City's the last upgrade was ten years ago; and

WHEREAS, the software has out lived its usefulness; and

WHEREAS, Harris Computer Systems has offered to upgrade the software mostly for the cost of training and data conversion; and

WHEREAS, the Harris Computer Systems "NorthStar" utility billing software represents the current "state of the art."

THEREFORE BE IT HEREBY RESOLVED by the City Council of the City of El Paso de Robles approves one time budget appropriations as follows:

General Fund Reserves	100-140-5224-125	\$ 9,000
Sewer Operations Fund Reserves	601-140-5454-163	19,000
	601-140-5454-164	19,000
Water Operations Fund Reserves	600-140-5454-127	43,000

PASSED AND ADOPTED by the City Council of the City of Paso Robles this 16<sup>th</sup> day of November 2004 by the following vote:

AYES:

NOES:

ABSTAIN:

ABSENT:

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Frank R. Mecham, Mayor

ATTEST:

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Sharilyn M. Ryan, Deputy City Clerk