

Can Your HR Reporting Tool Do This? NRECA's Answer to HR

Custom Reporting Needs

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About NRECA

The National Rural Electric Cooperative Association (NRECA) represents the national interests of consumer-owned cooperative electric utilities and the customers they serve. NRECA provides national leadership and member assistance through legislative representation; offers education and training programs for cooperative directors, managers and employees; and provides collaborative research to enhance cooperatives' use of technology. NRECA's central human resource department keeps track of information pertaining to the association's 750 employees located around the United States, including its major offices in Arlington, VA., and Lincoln, NE. NRECA was live on Oracle 11.0.3 for two years prior to upgrading to 11.5.7 in February 2003, and 11.5.10 in August 2005, and has been using Discoverer with NoetixViews since January 1, 2001. In 2007, NRECA upgraded Discoverer and is currently running a combination of BI Discoverer 10g Plus, Viewer and Desktop.

The Problem

NRECA's HR staff is responsible for tracking comprehensive applicant, employee — both current and past — including assignment and headcount histories, accrued and used time off, salaries, payroll information, health and welfare, other insurance benefits, and employee contact information. In order to assemble such disparate types of information into reports, we often had to access data from various databases through the association's various locations. The HR department used several different software programs for different tasks, including Lawson and Spectrum, making it problematic — and often impossible — for us to share information efficiently. As a result, the same data would have to be manually entered into multiple systems, duplicating efforts and increasing the likelihood of error.

To cut operating costs and boost data-sharing efficiency, the NRECA purchased Oracle Applications Version 11.0.3 in November 1999 and began implementation in April 2000, with the goal of going live on January 1, 2001. We installed General Ledger, Purchasing, Assets, Accounts Receivable, Accounts Payable, Project Accounting, Human Resources and Payroll, as well as Self-Service Time Entry, Web Expenses, Employee Direct Access, and Oracle's ad hoc reporting tool Discoverer. For HR, installation of Oracle applications solved the problem of data integration and data integrity. However, we found that we were unable to generate key HR management reports required to run our business using Oracle's standard reports. Oracle standard reports provide more generic views of the data rather than the specific combinations the NRECA required. These required reports include such things as comprehensive employee listings, monthly turnover by division and length of service. As we've continued to grow our Oracle HR modules with the addition of Advanced Benefits, our reporting challenges have also grown and become more complex.

Flexibility vs. Complexity

Given these limitations, we began to look for ways to extract data through ad hoc reporting tools. To simplify accessing information, businesses often install client/server query tools that retrieve data from Oracle tables. In theory, these query tools provide an easier way to access data on an Oracle database server and let developers view the data or quickly develop PC applications to view data directly. Specifically, ad hoc query tools like Oracle Discoverer allow users to look at data on-line through an easy-to-use spreadsheet-like interface. However, we quickly found a key problem with an application as complex as Oracle's e-business suite: the very flexibility of the application that allows users to configure the application to meet specific business requirements relies on an underlying database structure that is quite complex and difficult to understand for the end user.

There are three key problems for end users trying to build ad hoc reports using Oracle tables and views. First, it can be difficult to know how tables and views are related to one another. While one can identify a view that supports a given form, it can be difficult to find or link related information for the purpose of generating a report. End users have to turn to IT staff or consultants to generate these objects, negating some of the benefit of having an end user reporting tool like Discoverer.

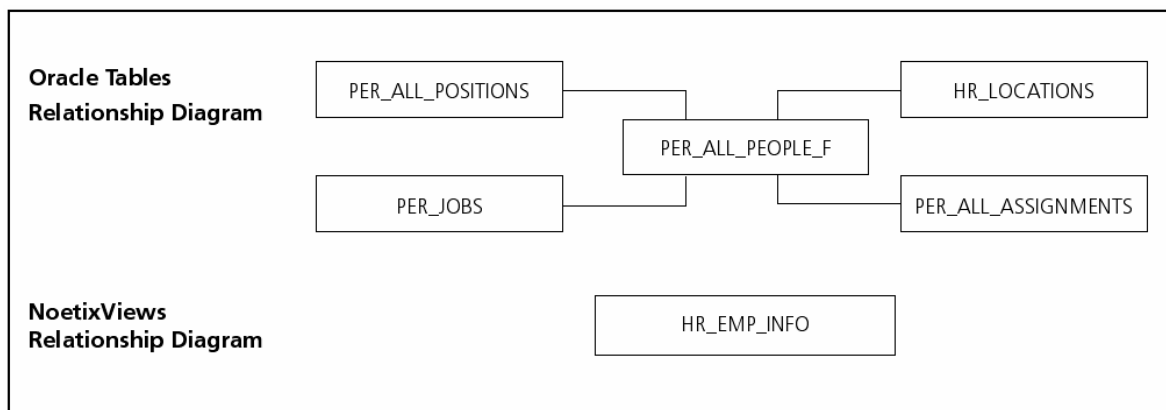


Figure 1: Oracle Table relationship diagram vs. NoetixViews relationship diagram

Second, the definition or role of any given column in an Oracle table or view is not always clear. While the Technical Reference Manuals for each module provide brief descriptions for fields, these are not generally accessible to end users. It is also worth noting that tables and columns may change during upgrades or patching, and these changes may not be obvious until an end-user attempts to run a report and the report does not work. Again, the end user has to rely on IT support in these instances. Finally, key information is often maintained in key and descriptive flexfields. Since Oracle's naming convention for these fields is Attribute1 to Attribute(n) depending on the number of flexfields supported by a given form, it is similarly not always clear what information is contained in any given flexfield. The result is continued dependence on IT or contractor support even though the end user oriented "window" into the database is available through your desktop.

NRECA's Solution

In August 2000, NRECA purchased NoetixViews for GL, AR, AP, PO, FA, Projects, and HR. In 2007, NRECA expanded our views to include Payroll and Benefits. NoetixViews are pre-built views organized into Business Areas. For Version 5.7, the HR, Payroll and Benefits Business Areas are as follows:

- Human Resources – All HR views
- HR Manager – Same views as the Human Resources Business Area with the exception of Special Info Types and Extra Info Types
- HR Special Info Types – Views of HR key flexfields
- HR User – Views of descriptive flexfields, Lookups, and select work structures
- HR Extra Info Types – Views of HR person and assignment Extra information flexfields
- HR Salary Manager – Salary, tax and total compensation views
- Benefits – Standard and Advanced benefit views including compensation objects, life events and participation/enrollment plus basic person and organization views
- Payroll – Datamart, v. 5.0, and views of payroll data, including earnings, deductions, taxes, balances, and select person and element views; allows for reporting "as of" a specific date.

Consider working with your IT department to determine which folders in each Business Area should be made available to people in your department. We haven't been comfortable giving unfettered access to staff members to the Human Resources Business Area due to the confidential nature of some of the data. Your DBA can limit access to specific folders you wish to restrict. In our case, we originally built new business areas and granted access through these. As part of our BI Discoverer upgrade in 2007, we restructured our security model and access rights to the NoetixViews Business Areas to take advantage of applications security and user roles. This means that the security profiles we have applied to certain responsibilities within the core Oracle applications can be utilized again for the report user role, allowing us to limit the data retrieval capabilities. One application of this security model at NRECA was to limit the data that was accessible to our Lincoln, NE HR staff. They now have access only to those employees physically located in Lincoln, rather than to the whole company. Prior to our upgrade, we had to "secure" their reports by adding conditions to include only their own employees. We expect our new security model to continue to address our needs while keeping our ongoing maintenance low as individuals change roles or responsibilities within the organization.

During installation, the Noetix installation procedures "read" the Oracle database and collect information that is used for view creation. The installation program automatically identifies indexed columns and generates columns based on both Oracle Key Flexfields and your Descriptive Flexfields. This helps to resolve some of the bigger complexity issue when developing new reports, as the views will reflect the user-defined names rather than Oracle's Attribute(n) naming convention. Within Discoverer, the end user can bring up the desired Business Area depending on access levels granted by the database administrator and browse the folders or views Noetix provides. Views are typically related to corresponding Oracle core forms thus again helping the end user to find data more quickly and reducing the complexity of creating a report. The figure below shows a partial list of folders in the Human Resources Business Area through the Discoverer Desktop item selection window.

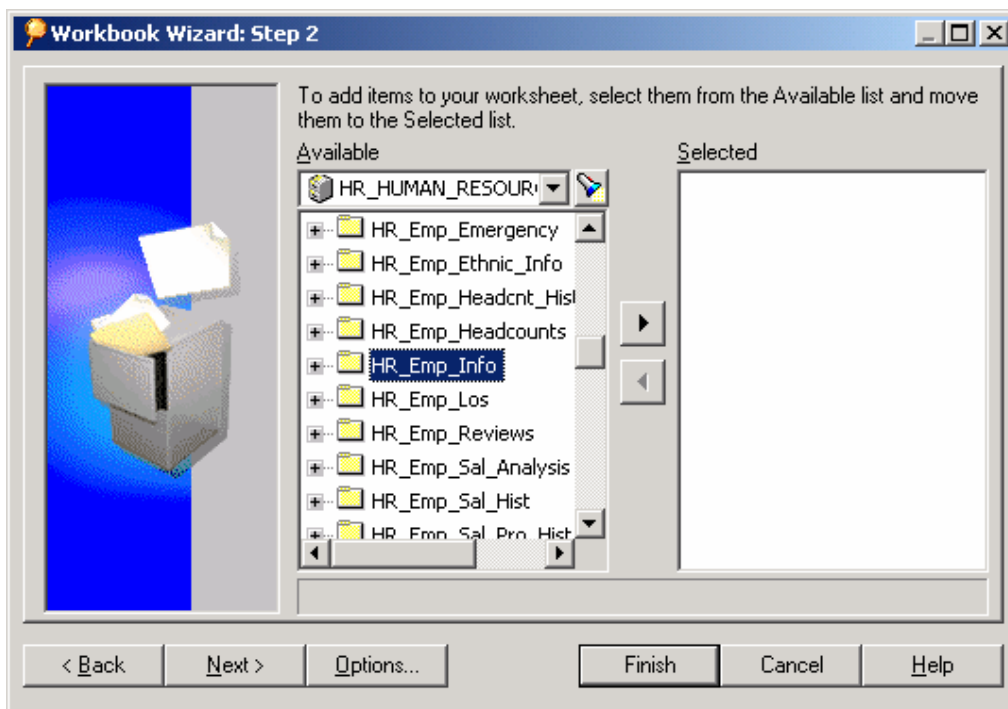


Figure 2

Having selected a folder, the end user can then browse for columns to be selected for the desired report. Column names are meaningful although the end user does need to learn Noetix naming conventions such as the use of the "A\$" to signify an indexed field, which is preferable for writing conditions and data retrieval. Noetix's naming convention for flexfields includes "\$". These views also include history tables, where the end user can find and incorporate date-tracked history into reports. They are noted by the "_Hist" suffix on the view name. The figure below shows a partial list of columns that are available from Noetix's Employee Info Details folder. We would then drag the columns to the window on the right to build the columns for a new report.

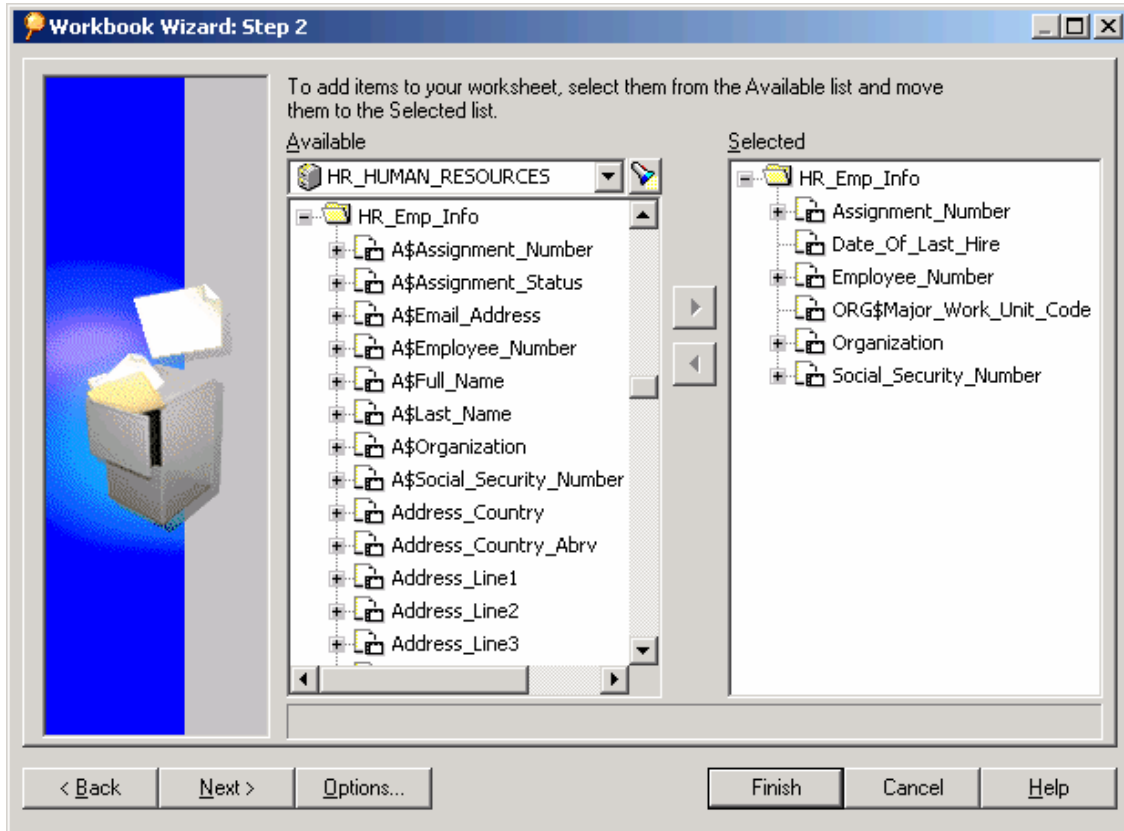


Figure 3

Contrast this against a custom user defined view, and the difference in user-friendliness is evident. Indexing and flexfields are indicated in the figure below, however the calculated field names are unclear to the average end-user, and joins to other views are not available. Though there are certain instances in which it is necessary to create a custom view, this figure illustrates some of the difficulties.

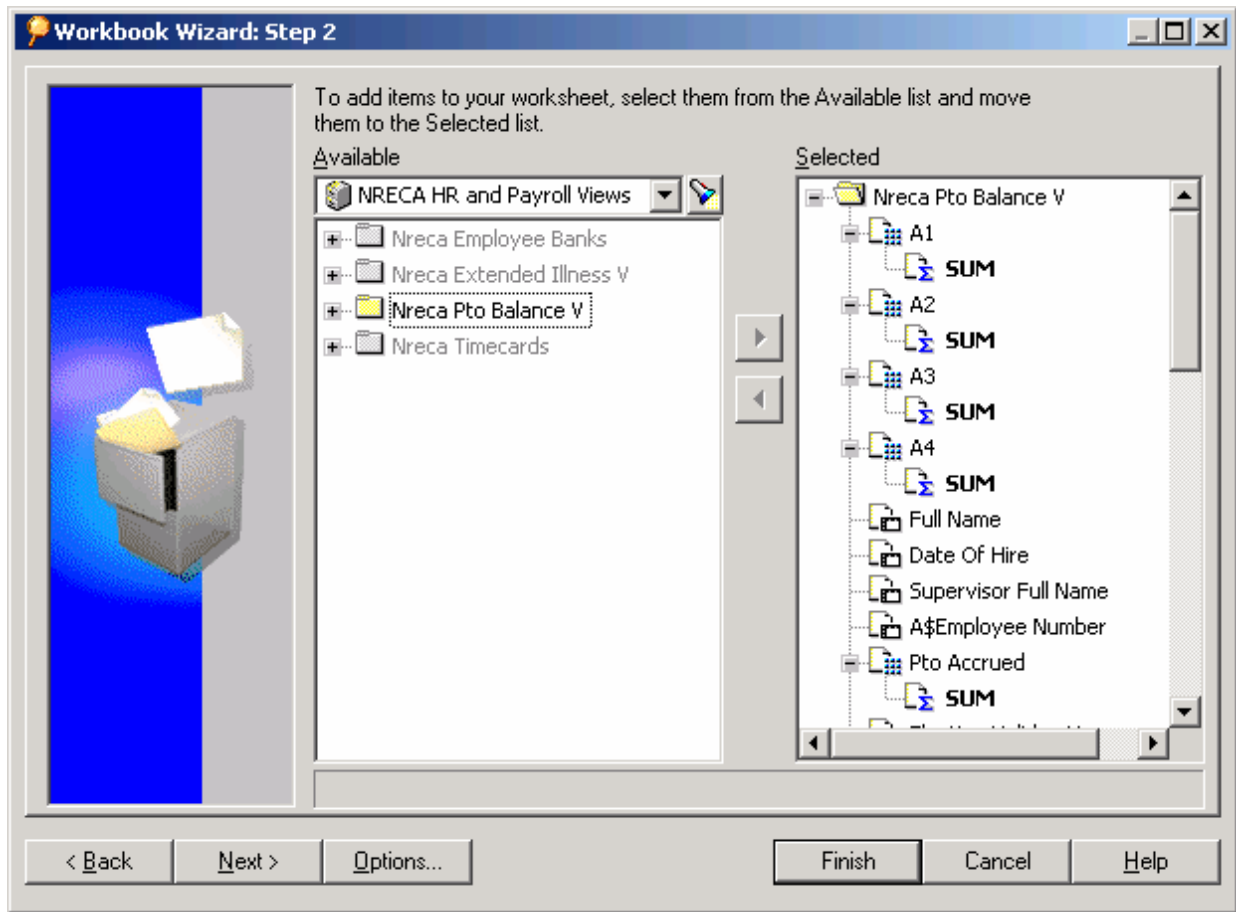


Figure 4

Also produced during installation, is a comprehensive modifiable collection of Help screens for each of the business areas you purchase. These Help screens are available through a standard browser. The system provides basic information about each of the folders and then allows you to drill into each folder to get descriptions for each of the columns found in the folder. The figure below shows the seeded documentation for Noetix's Employee Info Detail folder.

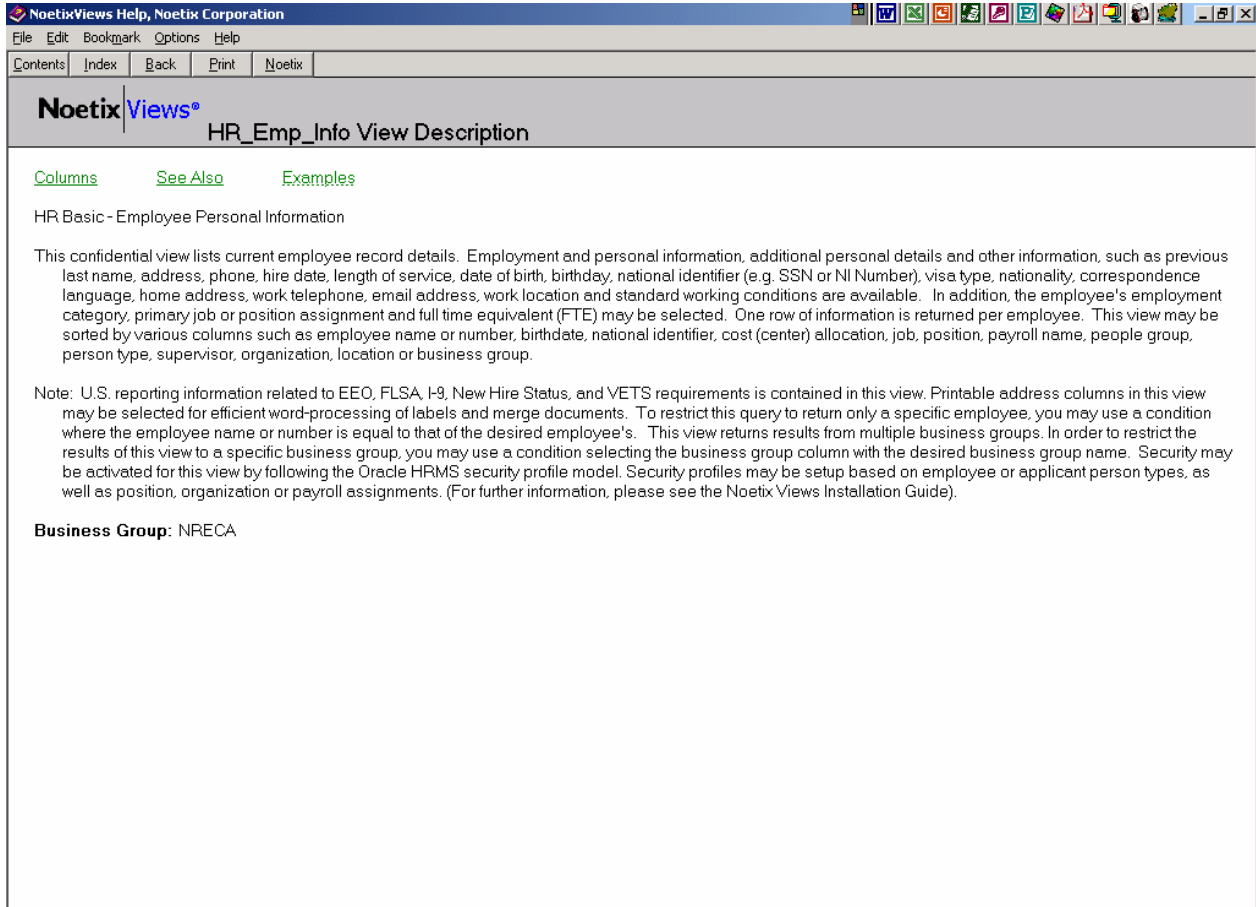


Figure 5

The figure below shows descriptions for the columns in this folder. The Index button provides a typical content search /find window to also help find your data/column more quickly.

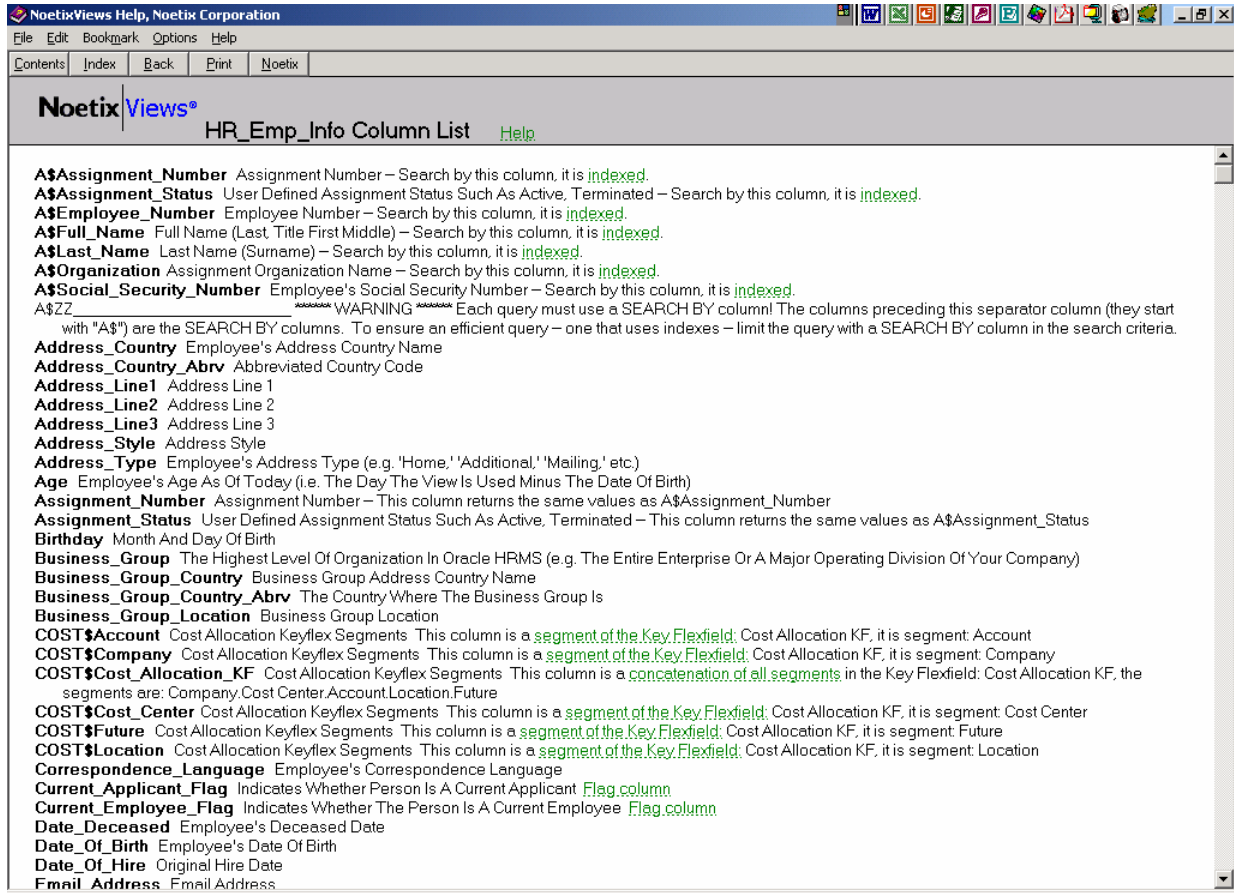


Figure 6

The documentation also identifies related folders and describes these as shown in the figure below.

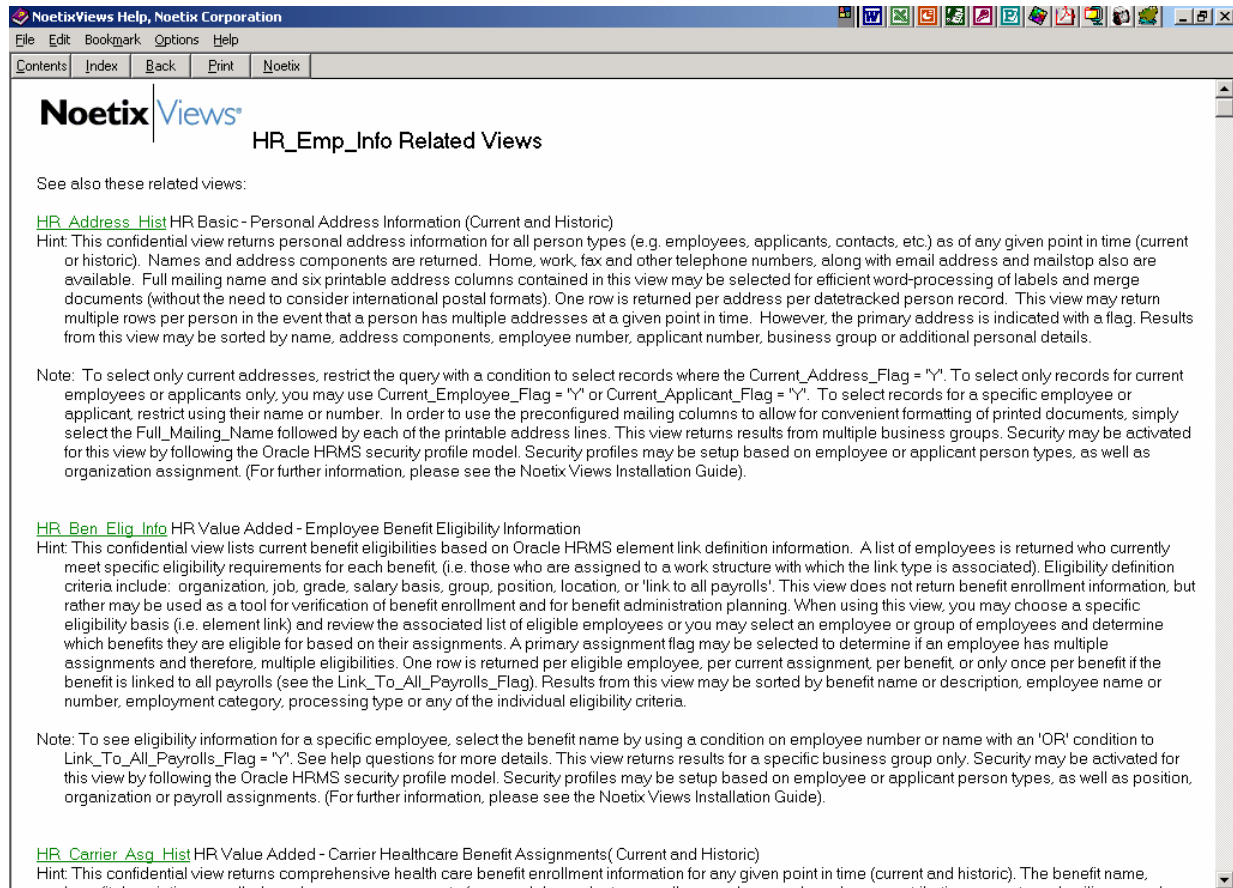


Figure 7

Finally, the Help screen provides an example of the kinds of questions you might be able to answer given the subject view as shown below.

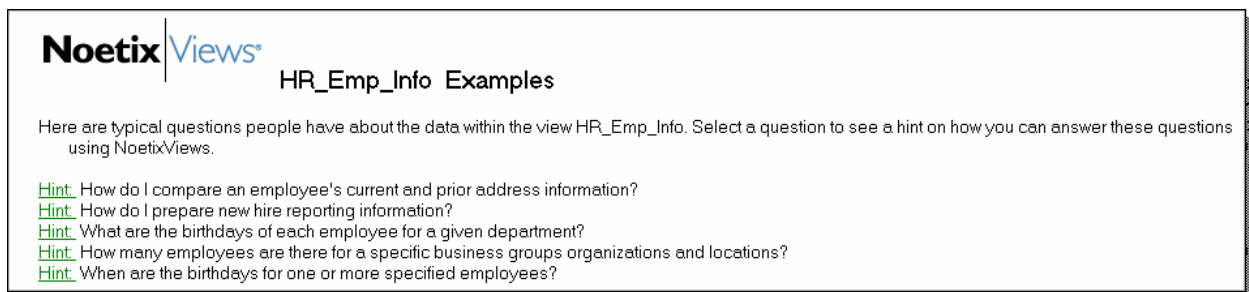


Figure 8

Overall, the help documentation is very useful and easy to understand. New end-users will find it useful in initially navigating through the views and designing reports.

Benefits

There are two key areas of benefit we receive from use of NoetixViews with BI Discoverer: functional and economic. From a functional standpoint, the views enable us to extend our reporting capabilities beyond the limitations of seeded Oracle reports, for example, by reporting on values contained in descriptive flexfields. Functionally, one example is how the views have helped us deliver better analysis on the Federal Equal Employment Opportunity Reports (EEO-1). Although Oracle delivered a straightforward and standard EEO-1 report on 11.0.3, it provided us only with the numbers of employees by EEO category, which was difficult to analyze. Using the views through Discoverer, we could create a similar report that enabled us to see the numbers broken down by category or department, down to the individual employees making up a category. By providing all of the information in an easy-to-read and easy-to-use format, we could analyze discrepancies among EEO-1 categories, make data edits to Oracle and place the corrected data directly into the Federal report. Since upgrading to 11.5.7, and then to 11.5.10, this Discoverer report has become our only source of data for the EEO-1, as the Oracle set-up for EEO reporting changed significantly and we have not determined that we have a need to do so with our alternate solution working so well. This saved considerable time and effort during our 11.5.7 upgrade process, and has allowed us to use our time on other initiatives.

The second key functional benefit involves general ad hoc reporting, such as determining the list of our Internal Services new hires to invite to an orientation and training session. Using the views, we can easily query up employees that were hired after a specific date. To differentiate the employees, we created a descriptive flexfield in Oracle for what we call "Major Work Unit," which then allows us to separate Internal Services employees from employees reporting into other Major Work Units. Now, by entering our Major Work Unit value "IS" into our query, we can receive a report of all the Internal Services employees that need to attend the next orientation session. We can essentially design ad hoc reports or lists in minutes, and meet most customer requested specifications, which was not always the case with our previous solutions or with the Oracle standard reports.

From an economic standpoint, our contract with our implementation partner included relatively limited level of effort for generation of custom reports through the Discoverer tool. It became clear that the deliverables discussed in the original statement of work would not come close to meeting our basic reporting requirements. After discussions with our partner and another provider of implementation services, it became clear that generation of our key reports would cost us at least \$50,000, not to mention the many additional reports that would simply make our lives easier. Our initial investment in the NoetixViews for HR was less than 20% of that amount. While we have put a lot of time and effort into building the reports that support our business, we are clearly way ahead due to our selection of this package. Since the majority of the report design work can be done by the functional end-user, this also saves us from expending out internal IT resources on low-value-add report design and delivery.

Lessons Learned

We have learned several lessons along the way that are worth sharing. The first has to do with the manner in which lists of values for key fields are updated. In most cases, the views automatically refresh lists of values as they are updated in Oracle HRMS. The end user gets the benefit of updated values instantly once the insert or modification is done in the core application. However, in one case, we found the views were unable to reflect changes made to the core application. Modifications we had made to the Application Lookup values for Job Group were not updated as the list of values was not extensive enough to "trigger" automatic refreshing. Noetix has made a design choice to keep value sets of a certain size static. A re-installation of the views will, of course, pick up the fresh values and is a trivial exercise providing you have not customized any of the views in an unsupported way. If the views have been extensively customized in a manner that is not supported, you may have to manually update the values for certain views. We've also found that for end-user ease of use, having a list of values available as data fields are selected makes condition building much simpler, since the condition is built by the data selection.

The second lesson learned is that simply having the views is an excellent starting point for extending your reporting even further. The views, as delivered, provide fairly complex views of the data, which are tuned

for good performance. During installation, Noetix creates a file on the Noetix Administrator's desktop called mkview.sql, which contains the SQL statements that create each of the views you own. Using this SQL, your IT staff can create new views that are essentially the seeded Noetix views plus needed columns and other joins that don't exist in the original seeded views. Be sure to save these views outside the seeded Business Areas so your customizations are not lost if you need to regenerate the views for any reason. Also, as said, the views are tuned to give good performance as delivered. Adding a single column that adds a full table scan can sometimes render a customized view useless. However, we have had good success making changes by adding new columns or including joins not otherwise provided. We ended up having several of our IT staff become certified on customizing NoetixViews so that we are able to take full advantage of the seeded and supported views and also allow ourselves the best flexibility to customize when we identify a need.

Our 2007 BI Discoverer upgrade provided us with additional lessons learned, as we moved the casual HR users from the Desktop version to BI Discoverer Plus. What we thought would be a simple transition proved to be more challenging. We found that most of our users had been saving their own report versions outside of the database and that our previous Discoverer 4i database of reports would no longer be accessible. We had a report conversion process that involved our power-users, and then shared reports, by newly defined Discoverer roles, with the casual users post-conversion. We found that we lost updated report versions and some of our "launch and run" users couldn't provide them, despite that they may have been the sole report user. The look and feel of the Discoverer Plus tool is also much different and for our casual users that prefer not to change, they found it a somewhat difficult transition from that aspect as well. Some of these issues would probably have been mitigated by offering more formal training to our end users as we were transitioning.

Future Direction?

With our newly upgraded Discoverer tools and easy to use NoetixViews, NRECA is considering the possibilities now open to us for expanding the use of "self service" reports for managers, non-HR staff, and others that have a need to access certain employee data on a regular basis. While we briefly considered using Oracle's DBI tools for some of this reporting, most of those reports and views don't truly fit our business (not-for-profit, non-global, etc.) and are more difficult to tailor. The Discoverer/Noetix solution will likely end up being our tool should we open reporting and data access to an audience outside of the HR department.

Conclusion

Given our improved access to data, we now provide ad hoc reports to other departments throughout the organization relatively quickly. For example, Finance needs regular updates on employee budget changes to keep its budget up to date with our current employment picture. By using Discoverer and NoetixViews, we can run reports on salary grades, employee numbers, or positions that have changed in the past week in a matter of minutes. Without NoetixViews, we would be less able to sort the changes from the rest of the employee information, a task that would take up precious time for Finance.

The views also helped us meet our go-live date for Oracle, as it permitted our implementation team to run extensive reports during the implementation process and export them to a common file format for comprehensive information review. We used the views to create audit reports on everything from the set-up of our payroll elements to our Application Lookup value sets to our employee assignments.

Eight years after our original implementation, HR users continue to be self-reliant with respect to design and generation of new standard and ad hoc reports. IT staff can focus on more complex issues besides reporting. NRECA's use of the views with Discoverer as our primary reporting tool evolved from a model where we planned to have many casual end users to one where we have a few knowledgeable "super" users that write most of the report queries and set up the basic report frameworks that are then utilized by our more casual end users. Once these basic reports are defined, our casual end users can make modifications, change sort orders, or introduce new query parameters to meet their more specific needs. The output can then be viewed through Discoverer or exported to Excel or HTML for distribution. Since we have been utilizing these tools for several years, we are continually renewing our efforts to get all the

casual HR users up to speed on writing and running basic reports. This solution provides us with great convenience – our HR staff has access to the most frequently utilized data and we can define almost any report we need without IT programming support.

Overall, we have found NoetixViews with BI Discoverer 10g to be a flexible and comprehensive solution to our reporting needs. NoetixViews' user-friendly report designing structure lets us access the exact information we need quickly and allows our staff to return to its core business area: our people.

About the Author

Rosanna Stankavage serves as Director of Compensation, Benefits and Human Resource Systems at the National Rural Electric Cooperative Association (NRECA). She was team lead for the organization's Oracle implementation and continues to serve as the Oracle lead for the HR and Payroll departments.