```
Hide(JOB.COMP_FREQUENCY);
      Hide(JOB.COMPRATE);
      Hide(JOB.CHANGE_PCT);
      Hide(JOB.CHANGE_AMT);
      Hide(JOB.ANNUAL_RT);
      Hide(JOB.MONTHLY_RT);
      Hide(JOB.HOURLY_RT);
      Hide(JOB.ANNL_BENEF_BASE_RT);
      Hide(JOB.SAL_ADMIN_PLAN);
      Hide(JOB.GRADE);
      Hide (JOB. STEP);
      Hide(JOB.CURRENCY_CD);
   Else
      UnHide (JOB.COMP_FREQUENCY);
      UnHide(JOB.CHANGE_PCT);
      UnHide(JOB.CHANGE_AMT);
      UnHide(JOB.ANNUAL_RT);
      UnHide (JOB.MONTHLY_RT);
      UnHide (JOB. HOURLY_RT);
      UnHide(JOB.ANNL_BENEF_BASE_RT);
      UnHide (JOB.SAL ADMIN PLAN);
      UnHide (JOB.GRADE);
      UnHide (JOB.STEP);
      UnHide (JOB. CURRENCY CD);
   End-If;
End-Function;
```

You can see the EMPLID FieldFormula function here. Testing PeopleCode programs within the PeopleSoft system is relatively easy. As we discussed in part 3 of this book, the PeopleCode editor catches your syntax and compilation errors while saving your program, or you can use the Validate Syntax option of the Application Designer menu. You can also use the Application Reviewer, which is a powerful PeopleCode online debugging tool.

Let's take a close look at our PeopleCode program. The function name is placed in the beginning after the Function keyword. Any function in PeopleCode has to start with the word Function and end with End-Function. Our function accepts two parameters: &SETID_DEPT and &DEPTID. These two variables hold the values of the corresponding JOB record SETID_DEPT and DEPTID fields. These parameters along with the operator ID are used as bind variables in our SQLExec Select statement. As we have seen earlier, the SQLExec returns the 'X' as the result of its execution if the operator has access to the particular department. If the operator has no access, the SQLExec returns nothing. The next statement checks the selected variable and either hides or unhides the salary-related fields, based on the result of SQLExec.

Usually, you don't have to fully design your PeopleCode program in order to test it. It is always a good idea to test it by pieces or blocks. In our case, however, we can't test this particular PeopleCode program because we just created a function, and we

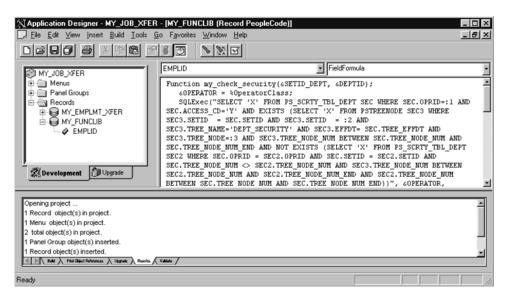


Figure 24.41 Creating a function and placing it in the EMPLID, FieldFormula event

need to write a code to call this function. Let's do this. As we have already discussed, we are going to place our function call in the PeopleSoft-delivered JOB record, EMPLID RowInit event. In PeopleCode, an external function must be declared in the event where the call is coded. Figure 24.42 illustrates how to code a custom function declaration.

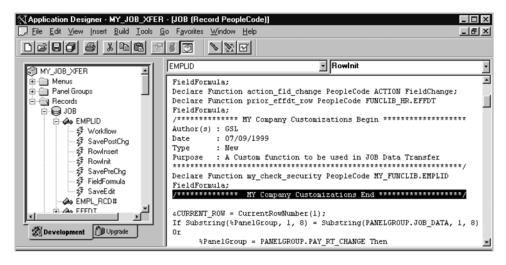


Figure 24.42 The function declaration is added to the JOB.EMPLID Rowlnit PeopleCode.

When we declared our function, we specified the following relative declaration parameters:

- The function name my check security
- *Record_name.field_name* MY_FUNCLIB.EMPLID (this is the place where our function resides)
- Event Type FieldFormula

We also specified that this external function is a PeopleCode function, to distinguish it from other types of external non-PeopleCode (for example, "C") functions.

After the function is declared, we want to add simple code to execute the function. Remember, we need to pass two parameters: SETID_DEPT and DEPTID to our function. These are the actual JOB record field values. Since the RowInit event will be triggered for each JOB record fetched from the database, our function will be called for every fetched row. Figure 24.43 shows the function call.

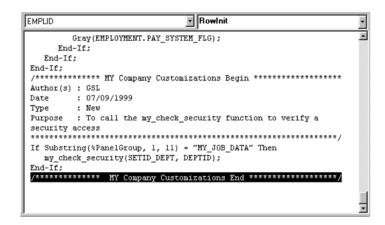


Figure 24.43 Calling our custom MY_CHECK_SECURITY function

Our PeopleCode script is done, a function is created, and a function call is placed to the RowInit event of JOB.EMPLID. Let's test our PeopleCode programs.

24.8 Testing PeopleCode modifications

Let's repeat some of the steps that we've performed during our first round of testing, but this time with our PeopleCode modifications at work.

Let's select the same employee, "Smith, Douglas." We'll display the most current record and its department number first.

Navigation: Go →Administer Workforce (U.S.) →Use →Job Data Transfer → Work Location →Update Display All

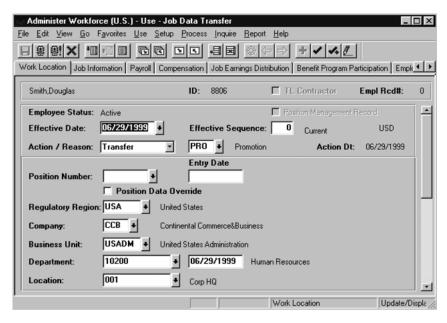


Figure 24.44 Testing the PeopleCode modifications. The record belongs to department 10200

If we switch to the Compensation panel, all salary-related information must be hidden. Let's select the Compensation tab (see figure 24.45).

As you can see from figure 24.45, our PeopleCode program did its job. All salary-related fields that we identified before are hidden. The panel may look a little awkward. Usually, the final look of any customized panel is discussed between the end users and developers. From the programming point of view, however, our code worked perfectly. To make sure that our users can still see the information for the departments to which they have access, we go back to the Work Location panel and click on the scroll bar to see the previous record for this employee (figure 24.46).

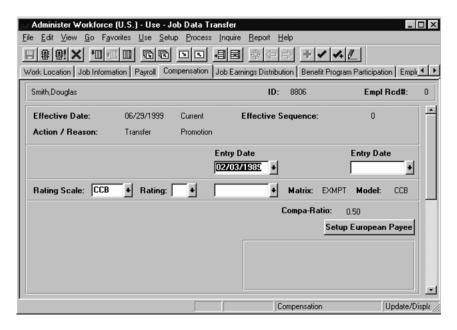


Figure 24.45 All salary-related fields on the Compensation panel are hidden

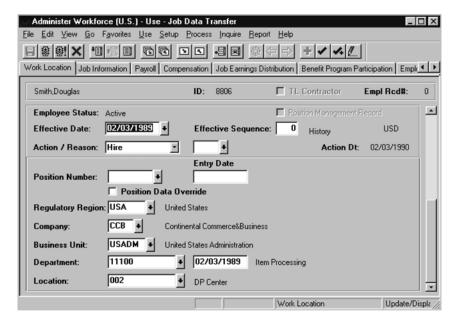


Figure 24.46 Examining the previous record of transferred Employee

This record belongs to Department 11100, to which our ALLPANLS operator class currently has access. Let's switch to the Compensation panel to be certain that none of the salary-related fields are hidden (figure 24.47).

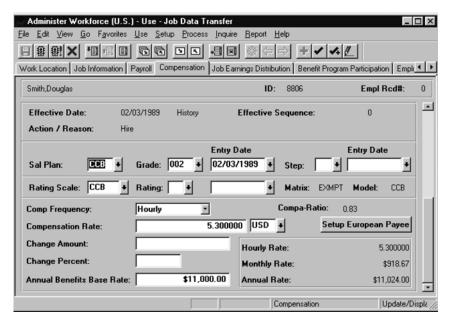


Figure 24.47 The salary-related information is available for ALLPANLS operator for the previous employee record

Our basic testing is done. Of course, we need to do more testing to ensure that our code did not cause any problems in the delivered application. For example, we need to test the non-customized Job Data panels, since we implemented our PeopleCode in the JOB record. We also have to test it for the operators that do not belong to the ALLPANLS operator class with different department security access. You should develop a test plan for all possible situations and execute it before moving these modifications to the production database.

24.9 Possible impact on future upgrades

As in our previous chapters, in order to fully understand the possible impact of our customizations on future application release upgrades, we want to summarize all the modifications we performed in this project. This time we will use our project MY_JOB_XFER, which we have been updating all along during our development. It will help us not to miss any modifications. Let's open the project. We know that the

project panel has two tabs: the Development tab and the Upgrade tab. During our development, we used the Development tab only.

Take a look at the Development tab of our project in figure 24.48. It includes all the objects that we modified—and even more. If you click, for example, on the plus sign next to the Job record, you can see all the fields with their respective PeopleCode events (figure 24.49).

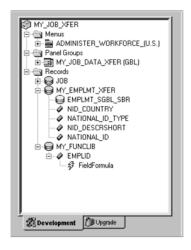


Figure 24.48 The Development tab of our project

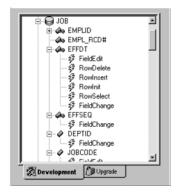


Figure 24.49 The Development tab shows all fields with their respective PeopleCode events

Does this mean that we modified all these PeopleCode programs? As you may guess, the answer is "No." The Development tab displays all related objects for your convenience in case you need to modify or review them.



Figure 24.50 The Upgrade tab

When migrating your changes to another database or preparing for an Application Upgrade, the best way is to switch to the Upgrade tab (figure 24.50).

Our Upgrade project tab consists of all the objects that we have modified. Let's double-click on each of the folders that represent our modified objects one by one. Please keep in mind that the Upgrade projects are used for two purposes: an

upgrade to the next release level and a simple migration to any target database. Even though our goal in this section is to discuss possible future upgrade implications, we first need to migrate the modifications to our test and production databases. Therefore, we'll look at the project from the migration point of view first and examine all the objects that must be migrated. Then we can discuss the possible implications on future release upgrades.

Take a look at the Menu Upgrade shown in figure 24.51.

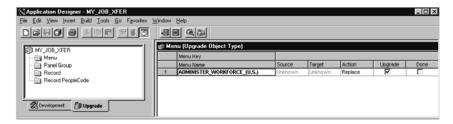


Figure 24.51 The Menu upgrade panel

NOTE

Please remember that during the upgrade to a new release level, your Target database is actually a copy of your production database. The Source database is your new release database. Therefore, you can do one of the following with your modifications in the Target database: preserve them, delete them or replace your modified objects with the new release objects.

As you can see, on the right side of our project in figure 24.51, the ADMINISTER_WORKFORCE_(U.S.) menu is prepared for migration to the target database. Action = Replace is specified, and the Upgrade flag is turned on. As we already discussed in chapter 20, these are the default options. After execution of the Upgrade Compare and Report process, the real options replace the default ones. When copying the menu object, be careful. The project, as we have already mentioned before, copies, not just the menu item that you added or modified, but the entire ADMINISTER_WORKFORCE_(U.S.) menu. Make sure that this object (Menu) is upto-date in your development environment before you make any changes to it. The alternative is to turn off the Upgrade flag and modify the menu in the target environment manually. You can use the "copy and paste" technique successfully on the menus in this case.

How will this object change affect our future upgrades? This is a delivered object, and there is a good chance that in the future you will have to merge the modifications with the new release menu if some of the items in this menu are changed by PeopleSoft. If PeopleSoft's menu stays the same in the next release, we could safely leave the modified menu in the target database.

Let's move on to our next object, the panel group. Figure 24.52 shows the panel group upgrade.

Unlike the menu upgrade where we modified an existing object, the MY_JOB_DATA_XFER object was created by us. You can easily see it by its prefix "MY." Even though the default action is specified as Replace, this object is added to the target database. The Replace action is changed to Add after the Upgrade

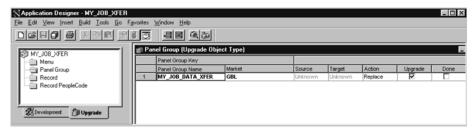


Figure 24.52 A panel group upgrade

Compare and Report process runs and identifies that the object is missing from the target database.

During the new application release upgrade it is safe to preserve this custom object in the target database.

Our next object is Record (figure 24.53).

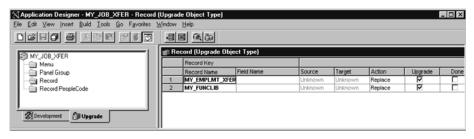


Figure 24.53 A record upgrade

As you can see from figure 24.53, we have two new custom records: MY_EMPLMT_XFER and MY_FUNCLIB. During the upgrade to a new application release, these records should be preserved in your target database. Note that, even though the JOB record was listed in our Development tab, it is not listed in the Upgrade tab since we did not modify this record.

Similar to the panel group, these two objects are just additions to the system, and, therefore, we should not have any problems when the new release comes.

The Record PeopleCode Upgrade (figure 24.54) shows only those PeopleCode Events that were customized or added. In our example, the JOB.EMPLID RowInit event PeopleCode program will be replaced (if we choose to) in the target database during our migration to the Production database. The MY_FUNCLIB.EMPLID FieldFormula event PeopleCode program will be added to the target database.

Here we have a combination of the two previously discussed cases of future upgrade implications. The MY_FUNCLIB.EMPLID FieldFormula event PeopleCode program

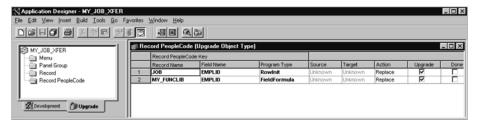


Figure 24.54 The Record PeopleCode Upgrade

can be preserved in the target database. The PeopleCode program from the JOB.EMPLID RowInit event must be compared to the new release RowInit event PeopleCode. If the changes are only ours, it's safe to have our customized object in the new release target database. Otherwise, the old and the new PeopleCode programs have to be manually merged.

In addition, always consider a case when a similar change is delivered in the new release. Our recommendation then would be to replace your customizations with the PeopleSoft version.

KEY POINTS

- 1 Many panels in PeopleSoft are accessed with the help of special search views that provide row-level security.
- **2** The Trace utility helps to understand how the Panel Processor works behind the scenes.
- **3** When modifying an SQL view definition, it is a good idea to test SQL statements by using your database manipulation tools outside PeopleSoft.
- 4 All PeopleCode programs from the FieldDefault, RowInit, and RowSelect events are fired for every record behind the panels in the panel group.
- 5 The RowInit event PeopleCode programs are responsible for setting up the initial display of data.
- **6** Always add all your modified objects to the project. It will greatly help you during the upgrade and migration to your Test and Production databases.



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Essential Guide to PEOPLESOFT Development and Customization

Tony DeLia ◆ Galina Landres ◆ Isidor Rivera ◆ Prakash Sankaran

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