

R/3® System

SAP Standard modifications are carried out and checked using the Modifications Assistant.

In the result there is a detailed modification overview and the upgrade is simplified.

The Modification Assistant

The Modification Assistant is a tool within the ABAP/4® Development Workbench with which you can implement and maintain modifications in your R/3 System. Because the Modification Assistant logs all modifications, you can display an overview at any time. The tool also allows you to cancel modifications.

Change Levels

Within the R/3 System there are various means by which you can adapt the standard system to meet the requirements of a specific operational environment:

- Customizing
- Customer exits (enhancements within a framework provided by SAP)
- Modifications to the SAP standard system
- Customer developments

Customizing, the use of customer exits and customer developments are already supported

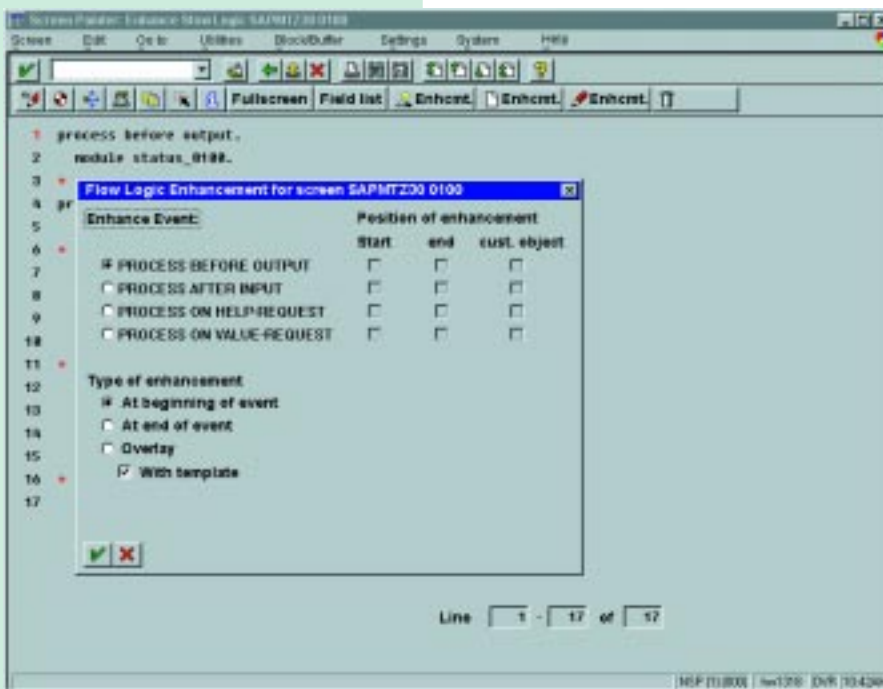
by tools such as the IMG, transaction CMOD and the ABAP/4 Development Workbench. The introduction of the Modification Assistant now sees a tool to support modifications to the standard system as well.

A Practical Modification Tool

In order to make upgrades easier to carry out, you can branch to a modification mode in the ABAP/4 Development Workbench. Changes are made within the individual tools. The Editors in the ABAP/4 Development Workbench have additional pushbuttons in modification mode. If, for example, you wish to change the flow logic of a screen, you would see the dialog box below after choosing *Create enhancement*. You can choose whether to add your modification to the beginning or end of the module, or whether you wish to overlay object.

Any coding you add is assigned to an include in the customer name range. A call from the standard program to the new module is generated by the Modification Assistant. The interface between the customer module and the SAP standard is kept as small as possible. You can implement the following kinds of modification in the various ABAP/4 Development Workbench tools:

- **ABAP/4 Editor**
 - Enhancement of modularization units (modules, subroutines and events) at the beginning and/or end
 - Replace sections of programs with a customer-specific object
- **Screen Painter**
 - Add a call to a module at the start or end of an event



- Move an event to a customer object
- Use new fields and texts
- Add a new subscreen
- Hide or move fields
- Change field lengths

■ Menu Painter

- Insert or delete menu entries, pushbuttons, icons and other elements

■ Function Library

- Add new function module to standard function groups
- Add parameters for passing data to SAP function modules
- Enhance the logic

■ ABAP/4 Dictionary

- Extend a table using an append structure
- Change texts and the parameter ID of a data element

■ Documentation

- Enhance or use customer objects for particular documentation classes (general texts, data elements, data element supplements, messages and so on)

What has been modified?

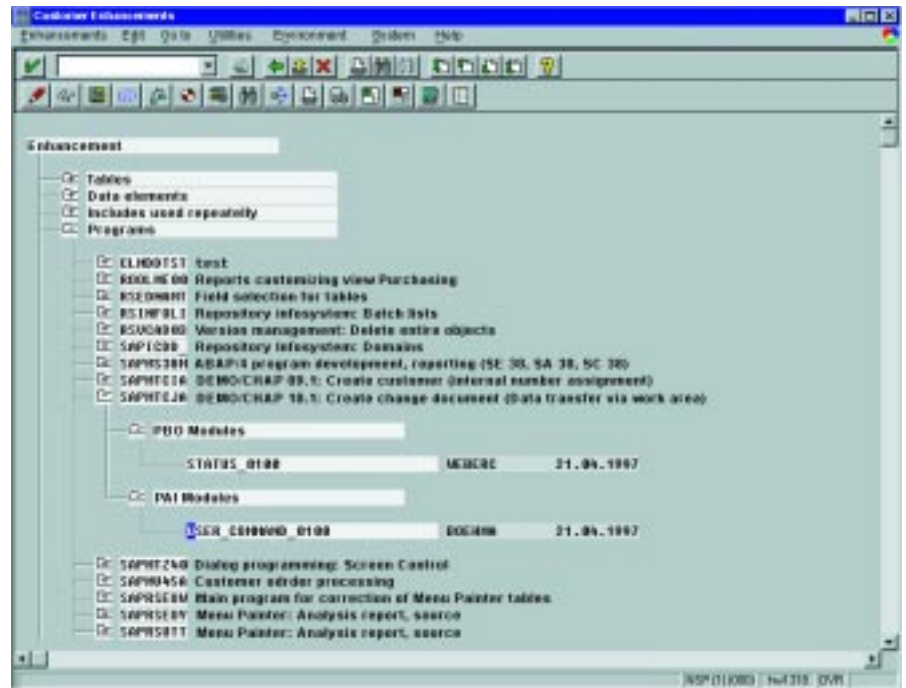
This question is answered by the Modification Assistant administration transaction, which displays an overview of the standard objects which have been modified (s.o.).

Undoing Modifications

Whenever modifications are made, the original object is merged with the modification. The standard program is overwritten with the merged version, and the original is saved.

This technique ensures that you can easily choose whether to use the SAP standard or the modified version of an object.

The Modification Assistant administers two software layers in each system - the original



layer and the modification layer. If, for example, a software company carries out modifications and then delivers the changed software to a customer, the SAP standard, including the modifications carried out by the software company, forms the original layer. The customer can also make modifications, which are then stored in the modification layer, and it is only these modifications which can be undone. Naming conventions and standard comments distinguish between the software layers.

Upgrade Procedure

Many more program changes can now be accepted automatically, since the basic unit in a source comparison is no longer the transport object, but the modularization unit.

Modified objects are selected during the upgrade. If objects have been modified using the Modification Assistant, they can be adjusted at the click of a button. If standard objects have been changed by SAP as well as by the customer, there can be conflicts during the upgrade. In this case, the system carries out a semi-automatic adjustment. In other words, the system offers support in making the adjustment.

Technology and Service

R/3 software is based on client/server architecture. R/3 is designed as an open system for use on operating systems from a variety of vendors. Along with the software, SAP offers you a complete spectrum of services along the R/3 product life cycle: preventive system checks, professional consulting in organizational and technical issues ranging from project planning to system implementation, qualified staff training, and 24-hour support.

SAP's quality management system for software development meets the international ISO 9001 standards.

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