ITS Implementation Models

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SAP ™

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ITS Implementation Models

There are several implementation models available for developing Internet applications driven by SAP's Internet Transaction Server (ITS):

- Internet application development with flow files

- SAP GUI for HTML

- Web transactions

- WebRFC

- Web Reporting

The model you use depends on the type of application you want to develop, but users can run the finished applications from any standard Web browser.

Internet Application Development With Flow Files

This model allows you to develop Internet applications that consist of linked HTML pages, which you can populate with data retrieved from the R/3 System (or any other external system). The pages can offer a range of application functions, and are generated by following hyperlinks or processing HTML forms. The dialog flow is determined on the client side by the user, who can navigate freely between pages.

Since the dialog flow is not fixed in advance, much depends on what the user decides to do. This contrasts with the dialog flow in other business scenarios, where the business application can put restrictions on how users can navigate.

Like all other implementation models, there is a clear separation between business logic and presentation aspects. In this case, defining the dialog flow is also a separate task.

For further information about developing Internet applications with flow files, see:

Internet Application Development With Flow Files: Reference [Ext.]

Internet Application Development With Flow Files: Tutorial [Ext.]

SAP GUI for HTML

The SAP GUI for HTML dynamically emulates the screens of R/3 dialog transactions in a Web browser by automatically mapping screen elements on the R/3 side to HTML. This mapping is implemented by HTML^{Business} functions (one for each screen element), which either reside within the ITS or are called from those functions.

Since HTML pages are generated automatically (one HTML^{Business} template for each R/3 screen), you need little knowledge of HTML, HTML^{Business}, or scripting languages such as JavaScript. Also, you do not have to be familiar with the SAP@Web Studio, which is the development environment for ITS services, HTML^{Business} templates, and other ITS files.

For further information about the SAP GUI for HTML implementation model, see:

SAP GUI for HTML [Ext.]

Web Transactions

Web transactions are Internet-enabled R/3 dialog transactions that can be called from a Web browser.

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To support Web transactions, the ITS communicates with the R/3 System through the SAP GUI interface via the DIAG protocol.

To implement Web transactions, you must:

- Create an Internet-enabled dialog transaction in R/3, using the ABAP Workbench.

- Create the files required by the ITS to run the transaction from a Web browser, using the SAP@Web Studio.

   These files include an ITS service description, and HTML^{Business} templates (one for each screen in the R/3 transaction).

   To enhance the performance and appearance of your Web transaction, you may also include language resource files, and Multipurpose Internet Mail Extension (MIME) files, which contain graphic, image, and video elements.

At runtime, the ITS merges the data on each R/3 transaction screen into a corresponding HTML^{Business} template, and passes the result to the user's Web browser for display.

For further information about the Web transactions implementation model, see:

Web Transaction Programming [Ext.]

Web Transaction API [Ext.]

Web Transaction Tutorial [Ext.]

An important aspect of Web Transaction programming is synchronization, which is the means by which the ITS keeps R/3 transaction screens in step with their corresponding HTML pages.

For further information about ITS synchronization, see:

ITS Synchronization [Ext.]

WebRFC

WebRFC-based Internet applications are R/3 function modules that can be called from a Web browser.

To support WebRFC calls, the ITS communicates with the R/3 System via the RFC protocol.

To implement WebRFC calls, you must:

- Develop an Internet-enabled function module with a standardized interface in R/3.

- Create HTML pages that pack function parameters into internal tables and pass them to the function module as part of a URL.

At runtime, the called function module evaluates the parameters, retrieves and processes the data, and returns the result as an HTML page (or binary data) to the user's Web browser.

For further information about the WebRFC implementation model, see:

WebRFC Programming [Ext.]

Web Reporting

Web Reporting enables standard R/3 reports to be called directly from a Web browser.

By clicking on URLs, Internet and intranet users can:

- Start reports

- Display pregenerated lists

- Browse report trees

Web Reporting is based on WebRFC technology.

For further information about the Web Reporting implementation model, see:

Web Reporting [Ext.]