

## IDES@Web

### Overview

Internet Application Components (IACs) are all-in-one solutions that connect the R/3 System to the Internet and allow you to execute the business functions in R/3 using a standard web browser.

The Internet Transaction Server (ITS) represents the technological basis of the Internet Application Components and forms the interface between an Internet server and the R/3 System. The software is available as of R/3 Release 3.1 G and runs on a server with Windows NT® 4.0.

The Internet Transaction Server uses two different methods to communicate with the R/3 System:

- ☐ Internet Application Components based on web transactions.
- ☐ Internet Application Components based on the WebRFC Gateway Interface.

The R/3 System features a wide range of Internet application scenarios that are based on web transactions. These scenarios cover the core business functions in Accounting, Human Resources and Logistics.

The Internet Application Components support the following areas:

- ☐ Consumer-to-business
- ☐ Business-to-business
- ☐ Intranet

The most important functions from each area are implemented in the IDES system.

### Consumer-to-Business

The IDES system contains examples of the following consumer-to-business scenarios:

- ☐ Product catalog
- ☐ Online store
- ☐ Sales order entry
- ☐ Sales order status
- ☐ Available-to-promise

The R/3 product catalog component is a particularly efficient way to present your products effectively on the Internet. You can use the product catalog component in two ways: as a simple product catalog (to present your products on the Internet) or as an online store (to present your products and allow customers to order them directly over the Internet).

Product catalog and  
online store

A product catalog defined in the IDES system is used in both scenarios. The catalog, which has a hierarchical structure (layout areas), contains both hardware and software products. Various multimedia objects (images, audio files) are assigned to the products via the document management system.

- ☐ Simple product catalog  
Potential customers can call up information on certain IDES products on the Internet.
- ☐ Online store  
Purchase orders are sent to the IDES system via the Internet. The customer chooses several products and requests a quotation. He then generates an order which is created in the IDES system automatically. An email is sent in the R/3 System to the sales person responsible for the customer in the IDES system to notify him or her of the new order. The received Internet order is checked and released for delivery.

Sales order entry for configurable products

As part of entry process for sales orders, the IDES system maps the product configuration on the Internet with the subsequent purchase order. The customer chooses an IDES product and defines the configuration as required. Once the price and delivery date have been confirmed in the form of a quotation, the customer generates an order in the IDES system via the Internet.

Sales order status

The customer order status IAC allows customers to query the status of orders in the R/3 System that were placed by via the Internet. In this way, customers can access information on the delivery progress of the ordered goods. Examples of these R/3 Application Components are provided as part of the *Online store* and *Customer order entry* scenarios in the IDES system.

Available-to-promise

The *Available-to-promise* IAC enables the availability of a material managed in the R/3 System to be interrogated via the Internet.

In the IDES system, an employee of a sales partner company can check via the Internet whether certain hardware products will be available at a certain date and in sufficient quantities.

## Business-to-Business

At present, the following business-to-business scenarios are implemented in the IDES system:

- ☐ Measured value and counter readings
- ☐ Account balance queries
- ☐ Quality certificates
- ☐ Quality notifications
- ☐ Service notifications
- ☐ Kanban
- ☐ Consignment stock queries
- ☐ Employment opportunities and application statuses

As a service provider, you can allow your customers to read measured values or counter readings for service objects and enter them on the Internet.

Measured value and counter readings

The IDES system supports several different measuring points. The counter readings for these measuring points can be entered and updated via the Internet. When a reading is updated in the service provider's R/3 System, a measurement document is created which can be processed further by plant maintenance.

Authorized customers can access the vendor's R/3 System directly and call up a certificate for a certain batch. A model customer and various batches are available in the IDES system for this scenario.

Quality certificates

Quality notifications are the medium by which complaints are handled in the R/3 System. Quality notifications received via the Internet are processed in the R/3 Application Component "Quality Management" (QM). A contact person and a sample device are available for processing complaints in the IDES system.

Quality notifications

Service notifications can be used to request services and form the basis of service orders for planning individual services in detail before they are provided.

Service notifications

In the IDES system, service customers can choose the defective item of equipment from an inventory list and assign a number to the service order. A service notification is then generated in the R/3 System.

The KANBAN IAC allows vendors to monitor the kanban with the control cycles supplied by them in the customer's R/3 System. Empty kanbans should be supplied. The kanbans, whose delivery is confirmed, are set to "in process" in the customer system - in this case, the IDES system. This ensures that the customer is informed about the delivery and that these kanbans are no longer displayed as "empty" the next time this function is called.

Kanban

Both customer and master data is stored in the IDES system for this functionality.

Once the user has logged on with the correct vendor or customer number and password, the system generates a list of his consignment stocks automatically. In this way, users can easily retrieve information on their stocks at business partners via the Internet and do not have to call the relevant department at the partner company.

Consignment stock queries

Job applications can be submitted for opportunities that have been advertised and on a spontaneous basis. These applications can be sent via the Internet by specifying useful data, such as personal information, professional experience, qualifications and training. Personal data must be specified. Apart from this, it is left up to each applicant to decide just how much information he or she wants to submit. The data is then stored in the R/3 Recruitment component. IDES contains a range of vacant positions which you can use to simulate a job application.

Employment opportunities and application status

The system provides each applicant with a temporary user ID and a password so that they can check the status of their application. This functionality is provided by the *Application status* IAC.

## Intranet

The IDES system contains examples of the following Intranet scenarios:

- ☐ Requirement coverage requests and status queries
- ☐ Collective release of purchase orders and purchase requisitions
- ☐ Complete procurement chain
- ☐ Integrated inbox
- ☐ Project data confirmation
- ☐ Asset information
- ☐ Internal activity allocation
- ☐ Internal price list
- ☐ Who is who
- ☐ Training and event management

### Requirement coverage requests

With the *Requirement coverage requests* Application Component, employees can choose a material grouping from a material catalog and then a material from this grouping. The IDES system provides several material groupings that are commonly used in offices. Employees can enter the required quantity and date, start an availability check and then save the request. Depending on the availability of the requested material, either a reservation or purchase requisition is then generated in the R/3 System.

If a purchase requisition is created, the requirement coverage status can be interrogated via the Internet.

### Collective release of purchase orders and purchase requisitions

If an item in a purchase requisition fulfills certain conditions (for example, the order value exceeds \$ 10,000), the item must be approved before it can be converted to a purchase order or a request for quotation. This approval process takes the form of a release procedure.

### Complete procurement chain

Purchase requisitions are released in a two-stage release procedure. This scenario involves interaction between both Internet and R/3 transactions and essentially comprises the following steps:

- ☐ An employee enters the requirement coverage request for the production material.
- ☐ An employee in work scheduling releases the requirement coverage request by means of a collective release.
- ☐ The cost center manager - in this case the plant manager - releases the requirement coverage request from a work item located in his or her Internet office inbox.
- ☐ The ordering employee checks the status of the purchase requisition by means of a special workflow query component.
- ☐ The purchase order is created and the goods receipt posted in the R/3 System.
- ☐ The ordering employee checks the status of the purchase requisition again via the Internet.

The integrated inbox is identical to the SAPoffice inbox in R/3. Employees can read the messages in their inbox and display information stored in the shared folders from any Internet connection. By processing user decisions, employees can participate in the decision processes within the company.

Integrated inbox

Project data can be confirmed to employees or authorized third parties via the Intranet. Employees who perform activities can create reports quickly and effectively and project managers can monitor the activities in the project.

Project data confirmation

Using the R/3 project system, IDES provides a wide range of projects for confirming the corresponding data.

The Internet Application Component for internal activity allocation allows you to enter activities that are performed and consumed within the company. Examples of these internal activities include:

Internal activity allocation

- ☐ Repair activities
- ☐ Assets produced in-house
- ☐ Tools
- ☐ Consultancy services

The IDES system also contains sample repair services. The counterpart to this is the internal price list.

'Who is who' is an employee information system that allows users to locate data on employees in the company. By entering various search criteria, for example, users can locate the work center, complete name, telephone number, cost center, and so on of a certain person. Photographs of staff can also be stored on the web server or in the R/3 Archive. The IDES system contains a complete personnel organization model with approximately 500 personnel masters which you can evaluate with 'who is who', for example.

Who is who

The R/3 Training and Event Management Component is implemented in the IDES system and contains an event calendar, for example.

Training and event management

IDES contains examples of the following Internet applications.

- ☐ Event calendar  
An event calendar organized according to subjects is available to both internal and external users via the intranet or Internet. The calendar provides users with information on the dates, content, available places and attendance fees of events and training courses.
- ☐ Book business events  
Users can book attendance on a business event directly via the Internet.
- ☐ Booked events (web users and R/3 users)  
Both web and R/3 users have access to an information system containing booked business events. Web users only require a web user master record and not necessarily a user master record in R/3.

## Web RFC

The WEB Remote Function Call (RFC) allows you to call up reports, lists, and function modules directly from the web browser and display them in the browser window. Two examples of this are provided in the IDES system:

- ☐ Time statement form
- ☐ Web Reporting Browser

### Time statement form

You can display an overview of the personal time events of an employee (for example, clock-in/clock-out times, overtime hours, absence times). In order to do so, however, time recording must be configured for the employee in question. Time events are implemented for several employees in the IDES system.

### Web Reporting Browser

With the Web Reporting Browser, you can start reports directly from the Internet via a report tree. In the IDES system, you can display statistics on the sales activities of persons responsible for sales and distribution.

# Workflow (WF)

## Overview

SAP Business Workflow is a complete solution integrated in R/3 that is used to coordinate customer-specific business processes across applications and work centers. As a supplement to the transaction-based work procedures in the R/3 System, the SAP Business Workflow tools support process-oriented processing of business transactions. In Workflow, the flow structures of the application transactions are not replaced but rather complemented by a flexible integration mechanism that resides above the application functions.

With SAP Business Workflow, you can combine transactions, business APIs, reports, function modules, and so on, to form customer-specific business processes and control how these are then executed. The control options include

- ☐ automatic start or termination of business processes or work steps when certain events occur, for example, when an invoice is created or a deadline exceeded
- ☐ determination and activation of the next step in a process, depending on the result of a completed activity or the status of the processed business objects
- ☐ determination and notification of the person or agent (group) responsible
- ☐ calculation and monitoring of important deadlines
- ☐ information on the current status of and history of the business process.

With workflow-supported administration, the positions involved are notified of the necessary work steps (so-called work items) by the workflow system via the electronic inbox in SAPoffice. This electronic inbox features a wide range of user-friendly functions that support individual work organization, office communication and team work. When the user chooses a work item in his or her inbox, the workflow system starts the associated application function automatically and supplies the transaction with the available data. The person responsible, therefore, does not need to specify a menu path, transaction code or any other parameters. A powerful Workflow Information System, which can be linked to the Logistics Information System (LIS) as of release 4.0, is also provided for evaluation purposes.

In addition to the workflow tools, the R/3 System features a range of predefined process modules and model processes. A variety of R/3 components already support workflow management with SAP Business Workflow as standard. All in all, an ever increasing number of preconfigured workflow scenarios are available, which you can use either directly or with slight modifications to cater for your company-specific processes.

The IDES system contains complete application examples for most of the model workflows supplied with the system. These examples map processes within the IDES model company. The workflow examples help you to become familiar each model workflow quickly and simplify its use or adaptation to company-specific requirements. The system also features a demonstration program that explains how the workflow tool is used and thus helps you to develop your own workflows.

Functionality of SAP Business Workflow

Workflow inbox

Model workflows

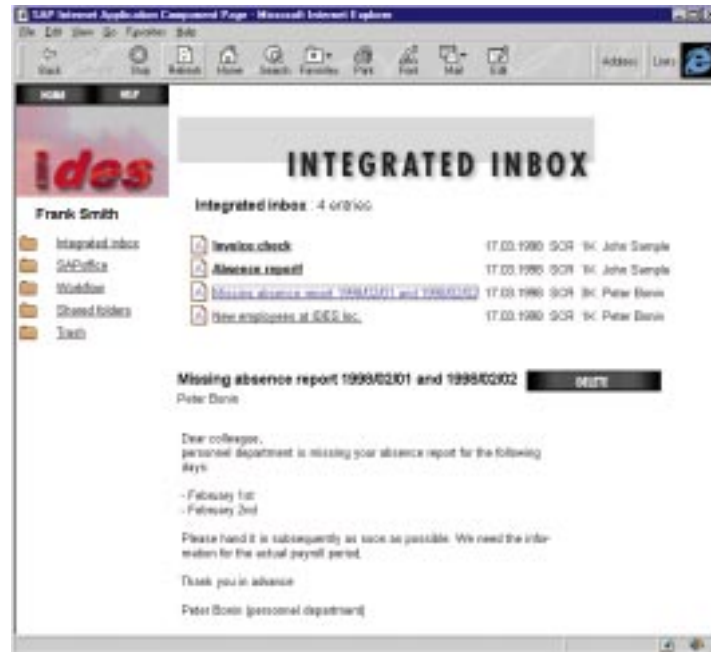


Fig. 5-1: Inbox

## Settings and Special Features

### Workflow users

Unlike the IDES examples in the various components, several defined users usually participate in the workflow examples. These users have different roles or jobs in the IDES group. For reasons of clarity, these user names start with "WF-" followed by the code of the R/3 Component and a counter value. For further information, please refer to the chapter on users in the appendix of this brochure. Examples of these include the users WF-MM-1 (requester in the examples from Materials Management/Purchasing) and WF-MM-3 (cost center manager at the Dresden plant).

### Organization model Human Resources

In order to benefit from the organizational flexibility of using workflows, a company must first describe the part of its organizational plan that is relevant for the workflow in the Human Resources component (HR-Org). The IDES system contains an example of an organization model and shows how it can be used to control workflows in the R/3 System.

The IDES plant in Dresden contains the following positions that participate in workflow scenarios:

- ☐ Employee in PC production
- ☐ Employee in work scheduling
- ☐ Quality controller
- ☐ Employee in purchasing
- ☐ Plant manager



Each of the positions is occupied by a person for whom an HR master record is stored in HR and who is assigned a user of the type WF-MM-xx. The work items (tasks) for which the owner is responsible are listed for each position in a so-called activity profile. The workflow system uses this link between the organizational plan and process organization to determine the users responsible for a work step. When the user WF-MM-3 logs onto R/3, for example, he sees all of the work items in his inbox for which he is responsible as the plant manager in Dresden. In the workflow examples for Materials Management and Purchasing, these items include release of purchase requisitions from his division.

The figure below shows this section of the organizational plan for the IDES group right down to the user level.

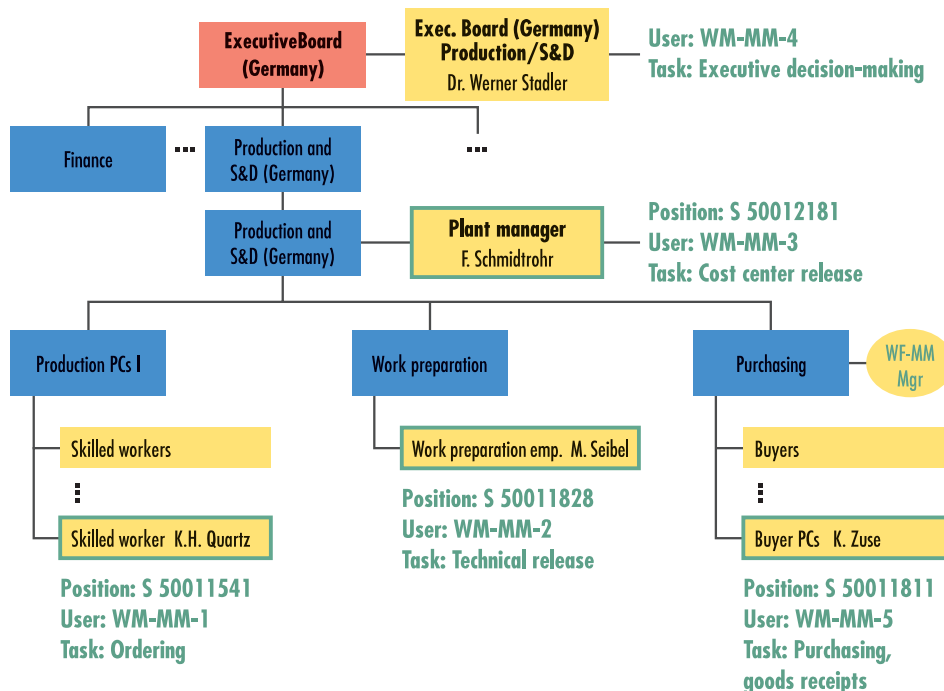


Fig. 5-2: Organizational plan for the workflow example “Release purchase requisitions”

The entire recruitment process – from the application stage to hiring new employees – is mapped in the IDES system. The workflow system ensures that incoming applications are assigned to the vacant job and are forwarded to the person in charge. It also ensures that the decision to invite applicants for an interview is made on time, that the appointments are scheduled between the parties involved, and that the invitation is sent. If the application is rejected, the applicant is notified and the application documents returned. If the applicant is accepted, the employment contract is drawn up and sent. The HR department is then supported when the new employee is hired so that all of the steps are carried out in the right order and at the right time. In addition to these activities, the workflow system can respond immediately to certain events, for example, if the applicant is rejected, it can initiate corresponding measures or cancel others that have already been initiated and are now due. As a result, the HR department is relieved of these routine tasks and can concentrate on its actual task of choosing and looking after personnel.

Recruitment

### Checking and releasing parked invoices

In the IDES system, a workflow is triggered to classify and park an accounting document from an invoice that has been scanned into the system. Depending on the amount involved, this document is presented to several clerks or managers for verification and approval before it is completed and released for payment. The following business rules are implemented for this workflow in the IDES system:

- ☐ less than \$ 500  
no approval required; invoice is released and posted by the same employee after it has been completed.
- ☐ \$ 500 to \$ 1000  
one approval level required
- ☐ \$ 1000 to \$ 10,000  
two approval levels required (2 persons, double verification principle)
- ☐ in excess of \$ 10,000  
three approval levels required (3 persons, triple verification principle)

The amount ranges, approval procedures, and the jobs responsible in the accounting department are set in Financial Accounting. The workflow system reliably controls how a certain invoice is processed in accordance with these settings. The IDES system contains several scanned and archived invoices so that you can try out different amount ranges and approval procedures.

### Office and workflow inbox on the Internet

As of release 3.1, field service staff, for example, can read and process their SAP-office inbox via the Internet without accessing R/3 directly. After users have entered their ID and logged onto R/3 via a web browser, they can display, create, and delete messages in their inbox or in the shared folders. Simple work items that only require one user decision can also be executed from the web browser. The associated process then continues in the connected R/3 System. Similarly, employees can interrogate the status of a workflow in their own R/3 System from the Internet.

The “Office and workflow inbox on the Internet” example focuses on the use of the SAPoffice functionality over the Internet. The workflow functions mentioned here are demonstrated in the Internet scenario “Entering and releasing requirement coverage requests on the Internet”.

**Note:** the functionality of the office and workflow inbox on the Internet has been extended considerably in release 4.0.

### Entering and releasing requirement coverage requests on the Internet using workflow

In the “Releasing requirement coverage requests” example, the processed business objects and processes are managed consistently and reliably in R/3 (release workflow). In this example, however, all of the user actions (except for those performed by the employee in purchasing) are handled via a web browser. As a result, the requesters and employees responsible for the technical check and release can work on the business process at the same time from any location. Direct access to the R/3 System via SAGUI is not necessary.



Fig. 5-3: Integrated procurement chain on the Internet

## Application Link Enabling (ALE)

### Overview

Application Link Enabling (ALE) allows business processes and functions to be distributed among several, loosely linked R/3 Systems. The primary objective of ALE, which refers to the establishment and operation of distributed components, is to ensure a distributed, yet integrated R/3 installation. ALE comprises three layers: application services, distribution services, and communication services.

In order to explain the ALE concept, three linked R/3 Systems with three different clients are simulated in the IDES system: a central financial system (client 800) for purchasing, planning and information, and two local logistics systems (client 811 for production and client 801 for sales and distribution).

### Organizational Structures

The central system also serves as a reference for the master data and control data. The central purchasing system negotiates contracts which are distributed to the local production system which, in turn, can then post contract release orders.

Central SOP plans are sent to the local system. Local plans are visible centrally. The sales and distribution system places an order with the production system via ALE messages. The production system also issues invoices to the central financial system via an ALE message.

You can also perform local profitability analyses in the sales and distribution system. The results are then transferred to the central controlling system. Stock, sales, and purchasing information is sent from the logistics systems to the central information system.

Client	Description
800	Central Financial Accounting system for purchasing, planning, and information systems (IDES Head Office in Frankfurt)
810	Local Logistics systems with the Spanish sales company in Barcelona
811	Local Logistics system with production plant 2100 (Porto) in Portugal

## Settings and Special Features

In release 3.1H, the IDES system contains the following four scenarios:

☐ Material master

A material master is used in the IDES system to map the central creation and distribution of master data to the local logistics systems.

☐ Distributed purchase contracts

A purchase contract is negotiated centrally, created in client 800, and distributed to the local logistics systems. In the logistics systems, you can enter purchase orders for this contract and send the released values and quantities to the central inventory management and valuation department via ALE messages.

☐ Purchasing Information System

The central purchasing information and inventory management systems are automatically notified of a goods receipt in a local logistics system by ALE.

☐ Accounting documents

The central financial system is also notified by ALE of invoices received in the local system so that it has an overview of all vendor balances.