

Version 2.0 10/22/98



# ***R/3 Time Management: Plant Data Collection — Time & Attendance and Employee Expenditures (CC1)***

## **HR-PDC**

Interface Description  
for SAP R/3 Release 4.5A

SAP AG  
Neurottstrasse 16  
69190 Walldorf  
Germany

## Copyright

Copyright © 1998 by SAP AG. All rights reserved.

This document may not be distributed or reproduced in whole or in part for any purpose or in any form whatsoever without the express written permission of SAP AG.

SAP AG reserves the right to amend or supplement any or all of the information in this document without prior notice.

## Authors

*Dr. Thomas Hübner, Development, R/3 Time Management*

*Dr. Holger B. Rose, Development, R/3 Time Management*

## Information

More information on the certification process and a list of certified partners can be found on the Internet under <http://www.sap-ag.de> in the section on SAP's Complementary Software Program (CSP).

## History

### Specification

Version 1.3	completed	May 15, 1997
Version 1.4	completed	March 25, 1998
Version 1.5	completed	May 26, 1998

### Interface Description

Version 1.0	completed	June 26, 1998
Version 1.1	completed	July 6, 1998
Version 1.2	completed	July 27, 1998
Version 2.0	published	October 22, 1998



## CONTENTS

<b>1</b>	<b>OVERVIEW</b>	<b>5</b>
1.1	Summary	5
1.2	Content	5
1.3	Introduction	5
1.3.1	<i>Certification Process</i>	6
1.3.2	<i>Release Strategy</i>	6
1.4	Interface Description	7
1.4.1	<i>Interface Technology</i>	7
1.4.2	<i>Business-Related Functions of the Interface</i>	7
1.4.3	<i>Task Distribution Between SAP and Its Partners</i>	8
1.4.4	<i>Architecture of the Interface</i>	8
1.5	Restrictions	9
1.5.1	<i>Cost Assignment and Different Payment</i>	9
1.5.2	<i>Additional Time Management Interfaces</i>	10
1.5.3	<i>Relationship to R/3 Logistics</i>	10
1.6	Business Management Enhancements in Release 4.5A	10
1.6.1	<i>Different Payment and Cost Assignment</i>	11
1.6.2	<i>New Time Event Types</i>	11
1.6.3	<i>Customer Fields and SAP Enhancements</i>	11
1.6.4	<i>Balances Displayed at the Subsystem</i>	12
1.6.5	<i>Technology Changes</i>	12
<b>2</b>	<b>BUSINESS PROCESS FOR PERSONNEL TIME EVENTS</b>	<b>13</b>
2.1	Core Business Process: Personnel Time Events	13
2.1.1	<i>Clock-In, Clock-Out, and Breaks</i>	14
2.1.2	<i>Off-Site Work</i>	15
2.1.3	<i>Interim Entry and Info Entry</i>	16
2.2	Supplemental Business Processes	17
2.2.1	<i>Attendance/Absence Reasons</i>	17
2.2.2	<i>Different Payment and Cost Assignment</i>	17
2.2.3	<i>Customer Fields</i>	20
<b>3</b>	<b>BUSINESS PROCESS FOR EMPLOYEE EXPENDITURES</b>	<b>21</b>
3.1	Core Business Process: Employee Expenditures	21
3.2	Supplemental Business Process for Customer Fields	22
<b>4</b>	<b>ADDITIONAL FUNCTIONS</b>	<b>23</b>
4.1	Groupings and Filters Function	23
4.2	Multi-Client Capability Function	23
4.3	Tracking Changes Function	24
4.4	Multilingual Capability Function	24
4.5	Scheduling Batch Jobs Function	24
<b>5</b>	<b>TECHNICAL INTERFACES</b>	<b>25</b>
5.1	List of Interfaces	25



5.2	Description of the Interface Structures .....	25
5.2.1	<i>Download Reports</i> .....	26
5.2.2	<i>Upload Reports</i> .....	35
5.3	Checks Performed by the Subsystem .....	37
5.3.1	<i>General Conditions</i> .....	37
5.3.2	<i>Checking Time ID Numbers and Personnel Numbers</i> .....	37
5.3.3	<i>Checking Time Event Types</i> .....	38
5.3.4	<i>Checking Attendance/Absence Reasons</i> .....	38
5.3.5	<i>Checking Additional Data</i> .....	39
5.3.6	<i>Checking Permitted Employee Expenditures</i> .....	40
5.3.7	<i>Interim Entry</i> .....	40
5.3.8	<i>Info Entry</i> .....	41
5.3.9	<i>Customer Fields</i> .....	41
<b>6</b>	<b>GLOSSARY</b> .....	<b>42</b>
<b>7</b>	<b>APPENDIX (NOTES)</b> .....	<b>44</b>
7.1	Selecting Field Names .....	44
7.2	IDoc Size .....	44
7.3	Terminals with Numerical Keyboards .....	44
7.4	ISO Codes.....	44

# 1 Overview

## 1.1 Summary

The HR-PDC is a standardized *R/3 Time Management* interface for connecting subsystems used to enter and record personnel times and employee expenditures to the R/3 System. SAP certifies subsystems for this interface through its Complementary Software Program (CSP). The following document presents the basic requirements for interface certification. In contrast to the previous interface (available since 3.0A), the new interface includes enhanced business management functions. Furthermore, the new interface was constructed as an asynchronous SAP R/3 BAPI interface.

## 1.2 Content

The HR-PDC interface is available as of Release 4.5A. The previous interface, the Communication Channel 1 (CC1), has been available since Release 3.0A.

Unit 1 contains a general introduction to the new interface. In addition to basic organizational information, the business management role of this interface is explained, including its integral role in *R/3 Time Management*, as well as its unique functions. The business-related enhancements and changes connected with the new interface are also detailed for those already familiar with the previous interface.

The HR-PDC interface distinguishes between personnel time events and employee expenditures from a business management point of view. Therefore, the business processes related to personnel time events and employee expenditures are presented separately in Units 2 and 3 respectively. Additional functions applying to both personnel time events and employee expenditures are described in Unit 4. In this way, all of the essential business processes required for subsystem users of the interface are fully covered.

The technical details of the interface, as well as the requirements that the subsystem must fulfill for certification, are described in Unit 5. First, a list of the individual technical names of the interfaces is provided along with a detailed description of their structures. Then, a list of all checks performed by the subsystem to ensure the transfer of error-free data to *R/3 Time Management* is also included.

Unit 6 is a glossary containing essential terminology. Finally, the appendix provides some general notes relating to the interface.

## 1.3 Introduction

This interface description explains the HR-PDC interface from a business management (and in some places, technical) point of view, from a general introduction of the interface functions and structures up to the requirements for subsystem functions. The interface structures are described in detail. Fundamental SAP Basis technology is referenced only when necessary for understanding the requirements of the interface. For this reason, some of the terms related to key SAP Basis technology are also explained further in the glossary.

SAP offers regularly occurring training courses and seminars at which the technical side (BAPI, ALE, IDocs, and so on) of the R/3 System is explained. For more information on courses offered, see the SAP Home Page on the Internet under <http://www.sap-ag.de>.

SAP also offers classes specifically on *R/3 Time Management*. You will find an overview of this R/3 component in an informative "R/3 Time Management" brochure, copies of which may be ordered (Reference order number 50 024 486 (9807/03)).

### 1.3.1 Certification Process

A list of partners who were either certified for the previous interface and/or who will acquire certification for the new interface is located on the Internet under <http://www.sap-ag.de> in the section on SAP's Complementary Software Program (CSP). Here you will find more information on the certification process itself.

Certification for the new interface is planned.

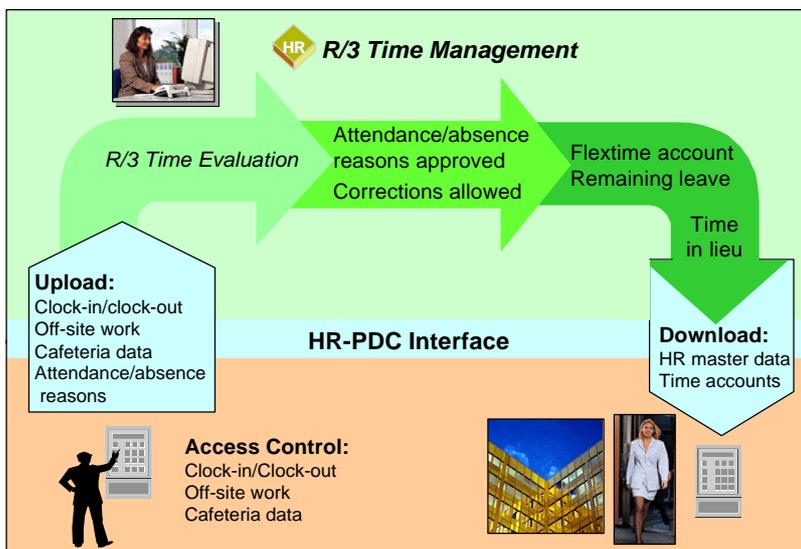
### 1.3.2 Release Strategy

The new interface is included in Release 4.5A.

In addition to supporting the new HR-PDC interface (available as of Release 4.5A), SAP will continue to support the functionality of CC1, the previous interface available since Release 3.0A, for the next two functional releases.

## 1.4 Interface Description

HR-PDC is a standardized interface for connecting subsystems used to enter and record personnel times and employee expenditures (cafeteria data, service station data, external wage types, and so on) to the SAP R/3 System. The previous interface (Communication Channel 1), available since Release 3.0A, has already established itself firmly on the market, with more than 40 certified partners. This previous interface was developed further for Release 4.5A. The new interface contains the enhanced business-oriented functions and technical structure provided by an asynchronous SAP R/3 BAPI interface.



© SAP AG 1998



### 1.4.1 Interface Technology

Technically speaking, this interface was conceived as a secure transactional interface for transferring mass data. Communication between subsystems and the R/3 System takes place via IDocs, using Application Link Enabling (ALE) technology. The entire data exchange between the systems involved is asynchronous. Synchronous access is neither expected, nor permitted.

### 1.4.2 Business-Related Functions of the Interface

The HR-PDC interface distinguishes between personnel time events and employee expenditures from a business management point of view. Personnel time events are essentially the time-based recordings of employee time. These personnel time events are augmented to include durations and time intervals in *R/3 Time Management*. Additional data on different payment (such as positions) and cost assignment (such as cost centers) can also be entered with time events. Furthermore, attendance or absence reasons can be entered along with time events, in addition to customer-specific fields provided for Customizing.



Personnel Time Events			
Employee	48733	Employee	48733
Date	07.03.98	Date	07.03.98
Time	07:57:03	Time	16:03:16
Function	<b>CLOCK-IN</b>	Function	<b>CLOCK-OUT</b>

Cost Assignment					
Employee	48733	Employee	48733	Employee	48733
Date	07.03.98	Date	07.03.98	Date	07.03.98
Time	07:57:03	Time	13:01:10	Time	16:03:16
Function	<b>CLOCK-IN</b>	Function	<b>CHANGE</b>	Function	<b>CLOCK-OUT</b>
Cost Center	<b>4711</b>	Cost Center	<b>4712</b>		



© SAP AG 1998

### 1.4.3 Task Distribution Between SAP and Its Partners

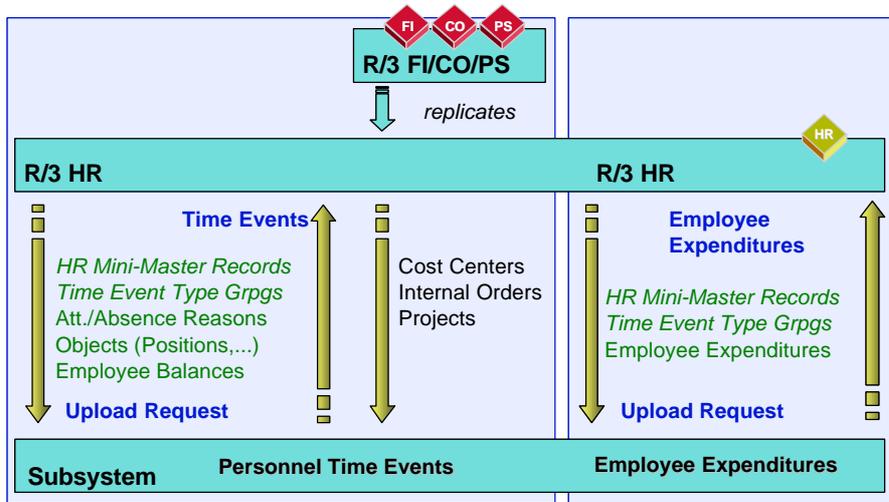
SAP provides its R/3 System software, defines the interface, and then permits certification of partner products for this interface. SAP partners provide subsystem software and any related subsystem hardware, if necessary.

On the one hand, the R/3 System provides data for performing checks and data to be displayed at the subsystem. On the other, the R/3 System also receives the raw data (unevaluated personnel time events and employee expenditures) from the subsystem, forms time pairs, and carries out valuation.

An essential function of the subsystem is its offline capability. First, data necessary for performing checks and for displaying balances, for example, is downloaded from the R/3 System to the subsystem. Employee-specific information can also be displayed at the subsystem. Then, the subsystem performs all checks on the data locally. There is no synchronous access to *R/3 Time Management*, which is the greatest advantage of offline capability. Finally, raw personnel time events and employee expenditures are transferred to the R/3 System where data is evaluated and then processed further. In this way, balances are updated and prepared for the next download.

### 1.4.4 Architecture of the Interface

The HR-PDC interface distinguishes between personnel time events and employee expenditures. For this reason, specific "upload" and "download" reports are provided. The R/3 System downloads data to the subsystem. The subsystem uses this data to check the entries made by employees at subsystem terminals. The data checked is then uploaded to the R/3 System by request to the subsystem and then further processed there.



© SAP AG 1998



## 1.5 Restrictions

### 1.5.1 Cost Assignment and Different Payment

Time events are maintained in a specific infotype, the *Time Events* infotype, in *R/3 Time Management*. There are also *Attendances*, *Absences*, and *Employee Remuneration Info* infotypes, for example, in addition to the *Time Events* infotype.

As with all of the infotypes listed above, the following information may also be entered with the personnel time events, along with pure time data:

- Cost assignment data
- Different payment data

Although the same data can be entered for cost assignment as well as for different payment in dialog mode, there are certain business-related restrictions in the subsystem for all supported infotypes.

The subsystem can only record one object type and one object for different payment, so that an employee, for example, can enter a position that differs from his or her usual one. The pay scale group required for determining payment is located in *R/3 Time Management*. The pay scale group cannot, however, be directly accessed by the subsystem.

The subsystem allows the following for cost assignment:

- Cost centers
- Internal orders
- Projects

## 1.5.2 Additional *Time Management* Interfaces

Time data can be supplied to *R/3 Time Management* by either:

- Installing a front-end time recording system that records time entries. The interface used to carry out this task is the subject of this document.
- Implementing an external interface for attendances and absences. Duration (hours) or time intervals (start/end times) are recorded.

In addition, several online methods for time recording exist, including:

- Personnel administrators who enter time data in the R/3 System
- Self-Service applications, which employees use to enter their own data via
  - Internet or intranet
  - Touch screen systems
  - Telephone (Interactive Voice Response (IVR) Systems)
  - Workflow forms
- Entering data using the *R/3 Time Sheet*. By using the *Time Sheet*, employees can enter information at a central location about working time performed. This information is then available for use by the *R/3 Time Management*, *R/3 Logistics*, and *R/3 Controlling* components.

## 1.5.3 Relationship to *R/3 Logistics*

The HR-PDC interface is specifically used for entering, recording, and processing personnel time events. Work time events and time tickets can also be entered at subsystems (in the form of confirmations); in fact, the *R/3 Logistics* interface PP-PDC (CC2) facilitates this process. After accumulating specifications and target values, confirmations relating to specific individuals are transferred from *R/3 Logistics* (PP) to *R/3 Time Management*. During pair formation and time evaluation, all time event types permitted for HR from both interfaces are processed together. Then, time tickets are generated for *R/3 Incentive Wages*. This integration with *R/3 Logistics* ensures that any payment-related employee working times only need to be entered and recorded once by the system, specifically in the *Logistics* component.

## 1.6 Business Management Enhancements in Release 4.5A

In addition to the previous interface, the new HR-PDC interface is available as of Release 4.5A.

The scope of functions for the time-based recording of personnel times was expanded considerably. Now, information regarding different employee payment (when an employee works for another position), as well as cost information (cost assignment to a specific cost center), can now be entered at time recording terminals. The data is then processed in the R/3 System by the *Time Management* component. In this way, the "different payment" and "cost assignment" functions, used for recording duration-based personnel times in the *Attendances* infotype (2002), are now valid for personnel time events.

Furthermore, the scope of the time event types was also enhanced.

### 1.6.1 Different Payment and Cost Assignment

A different payment and cost assignment can be entered directly at a time recording terminal. For example, employees can enter any activity performed for another position at the same time as their "clock-in" entry. In this way, compensation reflecting payment for this other position is also guaranteed. Moreover, employees can enter any information relevant to costs, including cost center, projects, or internal orders, along with their time entries.

### 1.6.2 New Time Event Types

The following time event types are now supported by the new interface as of Release 4.5A:

**Change (P11):** This time event type causes a different payment in *R/3 Payroll Accounting*, if the employee is already at work. By using this time event type, you can also carry out a change in cost assignment.

**Interim Entry (P05):** With this time event type, you can log the access controls through which an employee passes during a workday. The time event type does not change the "at work" status of the employee. This information can be queried during time evaluation.

**Info Entry (P60):** This time event type is used to enter information for evaluation in customer-specific reports. An info entry does not change the "at work" (attendance) status of employees. These entries are also not available for use in time evaluation and therefore cannot be referred to in time wage type selection. The information can be displayed, however, in the *Time Events* infotype.

The time event type recorded is determined for the following time event types depending on the existing "at work" (attendance) status at that particular moment in time.

- **Clock-in or clock-out (P01)**
- **Start or end of break (P02)**
- **Start or end of off-site work (P03)**
- **Start or end of off-site work at home (P04)**

For example, if an employee enters the time event type "clock-in or clock-out" (P01), and he or she previously had the status of "absent," then this entry is automatically interpreted by the system as a "clock-in" time. The remaining time event types are handled in the same way.

### 1.6.3 Customer Fields and SAP Enhancements

New customer fields are contained in the reports for uploading personnel time events and employee expenditures, as well as in the reports for downloading HR mini-master records and time balances. Customers can use these fields for their own purposes. Furthermore, additional fields for "different payment" and "cost assignment" were also developed.

Separate function exits exist for each upload and download report in the SAP enhancement **HRPTIM05**. These function exits provide assistance in reading and completing customer fields.

### 1.6.4 Balances Displayed at the Subsystem

Balances can now be displayed at the time recording terminal in both an hours/minutes format as well as in hours and industry minutes.

### 1.6.5 Technology Changes

As was its predecessor, the new interface for Release 4.5A is based on IDocs. However, a transceiver no longer exists for the new interface. The new interface is BAPI-based, constructed with business objects and interface types. To use the HR-PDC, a subsystem must be able to receive and send IDocs. This capability conforms to the SAP-wide interface philosophy provided by SAP Business Framework Architecture.



## 2 Business Process for Personnel Time Events

All time event types are processed by *R/3 Time Management*. The new interface supports the following time event types:

Time Event Type	Name
P10	Clock-in
P11	Change
P20	Clock-out
P15	Start of break
P25	End of break
P30	Start of off-site work
P40	End of off-site work
P35	Start of off-site work at home
P45	End of off-site work at home
P01	Clock-in or clock-out
P02	Start or end of break
P03	Start or end of off-site work
P04	Start or end of off-site work at home
P05	Interim entry
P60	Info entry

Status tracking occurs in the *Time Management* component. Possible status types, as well as permitted changes in status, are described below.

The core business processes have been separated from the supplemental business processes based on them.

### 2.1 Core Business Process: Personnel Time Events

The basic functions of the HR-PDC interface are comprised of three operational processes: "clock-in, clock-out, and breaks," "off-site work," and "info(rmation) and interim entries." These processes can be combined in any way.

The following upload and download reports are required for communicating between *R/3 Time Management* and the subsystem for the core business processes:

**Download HR Mini-Master Records**  
**Download Employee Balances**  
**Download Time Event Type Groupings**

**Download Upload Request for Personnel Time Events**

**Upload Personnel Time Events**

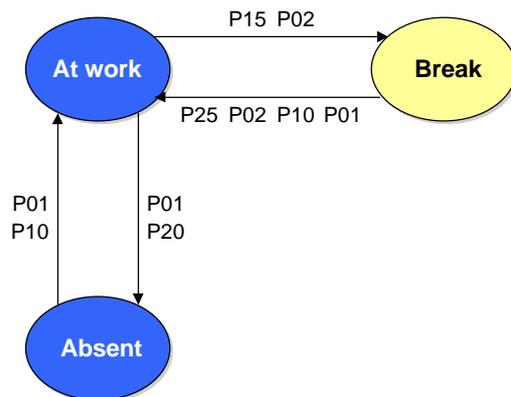
### 2.1.1 Clock-In, Clock-Out, and Breaks

Each of the time event types "clock-in" (P10), "clock-out" (P20), "clock-in or clock-out" (P01), "start of break" (P15), "end of break" (P25), and "start or end of break" (P02), changes the "at work" (attendance) status of the employee.

An employee starts with the status "absent." After a "clock-in" entry or after a "clock-in or clock-out" entry, the status changes to "at work." Then, when a "clock-out" or a new "clock-in or clock-out" is entered, the status reverts once again to "absent."

If the employee is at work, he or she can enter "start of break" or "start or end of break." A break is finished when "end of break" or "start or end of break" is entered. However, you can simply enter another "clock-in" or a "clock-in or clock-out" to achieve the same result.

### Clock-In, Clock-Out, and Breaks



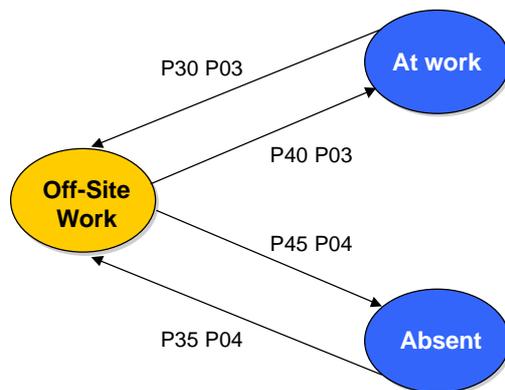
© SAP AG 1998



## 2.1.2 Off-Site Work

Off-site work can be recorded at the workplace (work center) as well as at an off-site location (such as at home). If the employee is absent, then he or she must make a "start of off-site work at home" (P35) entry; if at the workplace, then he or she may enter "start of off-site work" (P30). As a result, the status of the employee is then "off-site work" in both cases. Accordingly, the employee may make either a "end of off-site work" (P40) or "end of off-site work at home" (P45) entry. The employee then, in the first case, reflects the status "at work," and in the second, the employee status is "absent." Similarly, the "start or end of off-site work" (P03) and "start or end of off-site work at home" (P04) entries are treated in the same manner.

### Off-Site Work

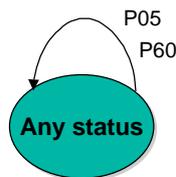


### 2.1.3 Interim Entry and Info Entry

The time event type "interim entry" (P05) does not change the "at work" (attendance) status of an employee. In this way, for example, you can log the access controls through which an employee passes during the workday. This information can be queried in time evaluation.

The time event type "info entry" (P60) also does not change the "at work" (attendance) status of the employee. Info entries are not used in time evaluation and therefore cannot be referred to when generating time wage types. Info entries can be displayed and changed in the maintenance transaction for time events and are primarily intended as a method for recording information to be used in customer-specific reports.

## Interim Entry and Info Entry



*Permitted with any status*

© SAP AG 1998



## 2.2 Supplemental Business Processes

Supplemental business processes, based on the above core business processes, are also available with the new interface. These processes enable additional data to be transferred to *R/3 Time Management* along with time events. These processes are not stand-alone functions; they cannot exist without the core processes in operation. As a result, they are basically intended to be enhancements to the existing core processes.

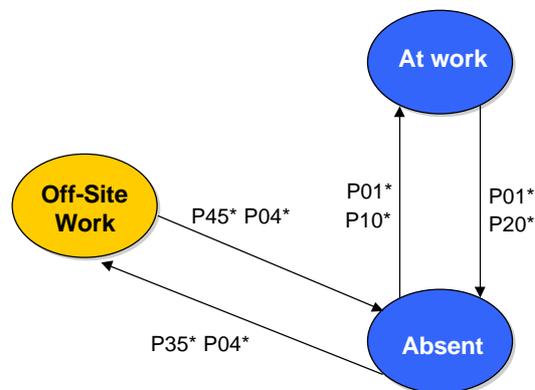
### 2.2.1 Attendance/Absence Reasons

The following download report is necessary for communicating between the *R/3 Time Management* and the subsystem to exchange attendance and absence reasons:

#### Download Attendance/Absence Reasons

This download report contains all of the possible attendance and absences reasons. The actual reasons are uploaded along with the time events.

### Attendance and Absence Reasons



\* = with attendance or absence reason

© SAP AG 1998



Attendance and absence reasons are processed during time evaluation. These reasons always refer to the transition *from* the status "absent" or *to* the status "absent" corresponding to the time period before or after the actual time event. For example, employees who leave work early for a doctor's appointment can enter this reason along with their P20 or P01 entry.

### 2.2.2 Different Payment and Cost Assignment

With the time event types "clock-in" (P10), "change" (P11), "clock-in or clock-out" (P01), "start of off-site work" (P30), "start or end of off-site work" (P03), "start of off-site work at home" (P35), "start or end of off-site work at home" (P04), additional data regarding different payment or cost

assignment can also be entered. This data is then taken into account in time evaluation and in payroll accounting.

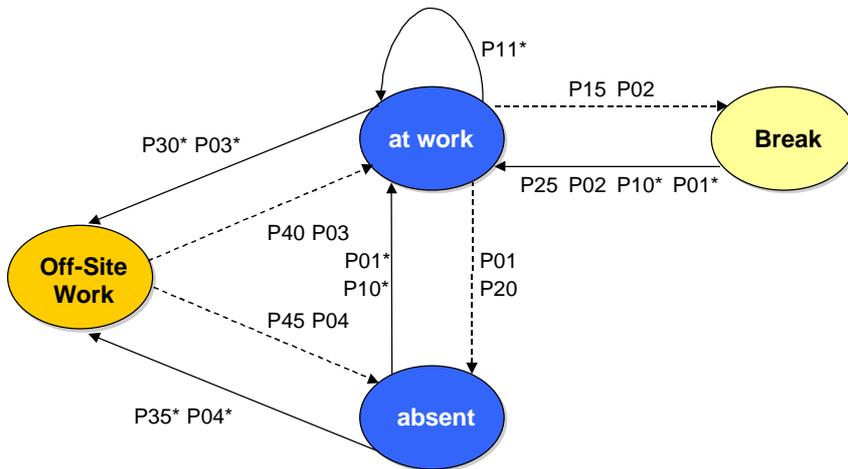
### 2.2.2.1 Different Payment

The following download report is required for communicating between *R/3 Time Management* and the subsystem to exchange additional data on different payment:

#### Download Objects (such as Positions)

This download report contains all of the possible objects (position, job, work center, and so on), for which different payments are stored in *R/3 Time Management*, and for which an employee is permitted to enter with a confirmation. The actual objects are uploaded along with the time events. For example, employees can enter the positions they worked during a particular day.

## Different Payment



\* = with data for different payment



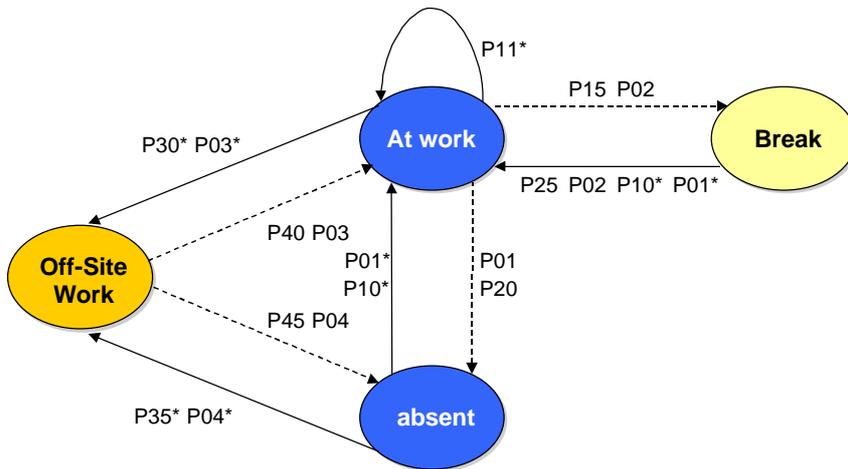
### 2.2.2.2 Cost Assignment

The following download reports are required for communicating between *R/3 Time Management* and the subsystem to exchange additional data on cost assignment:

- Download Cost Centers**
- Download Internal Orders**
- Download Projects**

These download reports contain all of the possible cost centers, internal orders, and projects that can be posted to accounting, and for which an employee is permitted to enter a confirmation. For example, the cost center for which the employee worked from the time of the entry is uploaded along with the time events.

## Cost Assignment



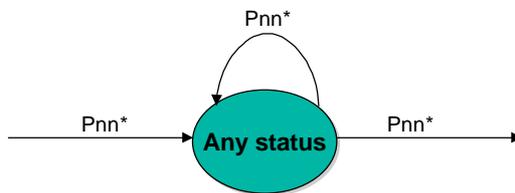
\* = with data for cost assignment



### 2.2.3 Customer Fields

Customer fields for user-defined purposes exist in both the download reports for HR mini-master records and employee balances, as well as in the upload report for time events. Customer enhancements in *R/3 Time Management* are provided for assistance in reading and completing these fields.

#### Customer Fields



\* = with completed customer fields  
(permitted with any status with each time event type)

© SAP AG 1998



### 3 Business Process for Employee Expenditures

The time event type "employee expenditures" is not actually a time event type in its most literal sense. It was specifically developed for recording employee expenditures (cafeteria data, service station data, and external wage types).

Time Event Type	Name
P50	Employee expenditures

#### 3.1 Core Business Process: Employee Expenditures

The following upload and download reports are required for communicating between *R/3 Time Management* and the subsystem:

**Download HR Mini-Master Records**  
**Download Time Event Type Groupings**  
**Download Permitted Employee Expenditures**

**Download Upload Request for Employee Expenditures**

**Upload Employee Expenditures**

#### Employee Expenditures

**Cafeteria Data**

**Service Station Data** → P50 →

**External Wage Types**

*Independent from the other personnel time events*

© SAP AG 1998



### 3.2 Supplemental Business Process for Customer Fields

Customer fields for user-defined purposes exist in both the download reports for HR mini-master records and employee balances, as well as in the upload report for employee expenditures. Customer enhancements in *R/3 Time Management* are provided for assistance in reading and completing these fields.

#### Customer Fields

————— P50\* —————>

*\* = with completed customer fields  
Independent from the other personnel time events*

© SAP AG 1998



## 4 Additional Functions

### 4.1 Groupings and Filters Function

There are several grouping options available for all data used to perform checks that could be downloaded to the subsystem. These groupings ensure that subsystems are supplied with specifically targeted data.

The Plant Data Collection (PDC) grouping can be entered as a filter in the ALE distribution model for the HR mini-master records.

No such filter is available for downloading cost centers, internal orders, and projects. However, suitable selection criteria are available in the corresponding download reports in *R/3 Time Management*.

No settings need to be made in the subsystem to support groupings and filters. Settings are only required in the R/3 System.

### 4.2 Multi-Client Capability Function

"Multi-client capability" is understood to be the ability to connect several R/3 Systems to one specific subsystem. It does not matter if the R/3 Systems are located in different clients or if they are installed in a separate system. What is essential is that each system is assigned explicitly to a "logical system." (See glossary)

Each data record that the interface downloads to the subsystem with an IDoc contains the name of its original system (the logical system). To fully support multi-client capability, the subsystem must identify all data received during the download from the R/3 System with the logical system. The structures described later include this information.

For example, if an employee posts a "clock-in" entry, then the logical system assigned to the employee is determined in the HR mini-master record. In this way, the target system for uploading the time events for this employee is also recognized.

The subsystem requires both the "logical system" and the "time ID number" to be unique. To simplify processing in the subsystem, the time ID numbers connected to all R/3 should be different. In this way, only the time ID number is necessary for determining the logical system in the HR mini-master record.

Alternatively, you can also work with the "logical system" and "personnel number," instead of a time ID number.

### 4.3 Tracking Changes Function

Tracking status, such as during the transition from the status "at work" to the status "absent," occurs in *R/3 Time Management*. Status types, as well as changes permitted in status, are described in the applicable sections in the business processes.

### 4.4 Multilingual Capability Function

Text can also be displayed at a subsystem terminal in an employee's native language. For example, a company with a production plant in Switzerland that employs both French and German native speakers can have its subsystem text displayed in either German or French, depending on employee. The individual employee must first identify himself or herself at the terminal.

This function is supported by the employee's native language in the download report for the HR mini-master records, as well as in the download reports for attendance and absence reasons, objects for different payment (such as positions), and employee expenditures (external wage types, cafeteria data, and service station data). However, this function does not apply to cost centers, internal orders, and WBS (work breakdown structure) elements as those texts are not language-dependent in the R/3 System.

### 4.5 Scheduling Batch Jobs Function

Upload requests for personnel time events and employee expenditures are sent from the R/3 System to the subsystem. The subsystem must then send all of the already recorded personnel time events or employee expenditures to the R/3 System. The subsystem should be prevented from transferring any data to the R/3 System without first receiving a request.

By using an upload request, the R/3 System can carry out the complete scheduling of all background jobs related to the interface. Otherwise, the upload reports have to be scheduled in the subsystem as background jobs.



## 5 Technical Interfaces

### 5.1 List of Interfaces

Download HR Mini-Master Records  
Download Employee Balances  
Download Time Event Type Groupings  
Download Attendance/Absence Reasons  
Download Objects (such as Positions)  
Download Cost Centers  
Download Internal Orders  
Download Projects  
Download External Wage Types

Upload Request for Time Events  
Upload Request for Employee Expenditures

Upload Personnel Time Events  
Upload Employee Expenditures

### 5.2 Description of the Interface Structures

The HR-PDC interface was developed as an asynchronous BAPI interface. A business object/interface type with a method, and a corresponding IDoc with message type and IDoc type, exist for each upload and download report. The subsystem must be able to receive and send IDocs. With the exception of the upload request IDocs, each IDoc contains a number of similar data records.

The IDoc structures contain only CHAR type fields. However, the data provided for these fields must be in the form of the data types entered in the comments.

Also listed here are the corresponding field names from the previous interface (since Release 3.0A). Note that the download reports of HR mini-master records and employee balances are separated.

Fields whose length has changed since the previous interface are highlighted in *italics*. The changes in length were made deliberately to reflect the maximum field lengths allowed in the R/3 System.

In the "K" (key) column, an "X" indicates the key fields.

## 5.2.1 Download Structures

### 5.2.1.1 Download HR-Mini Master Records

The structure of the HR mini-master records IDoc is identical for both personnel time events and employee expenditures.

Interface for Personnel Time Events and Employee Expenditures	
BOR Object	RCVPMINIMD
Method	receiveMiniMasterData
Message Type	HRCC1DNPERSO
IDoc Type	HRCC1DNPERSO01
Segment Structure Name	E1BPCC1DNPERSO
BAPI Structure Name	BAPICC1DNPERSO

The HR mini-master record is loaded as an IDoc.

Complete datasets are always transferred to the subsystem. For example, you cannot simply download the employee data that has changed in the HR master records for specific employees.

The IDoc has the following structure:

E1BPCC1DNPERSO		Previous Interface: PERSO1 (internal: DWN01)				
Field Name	K	Type	L	Meaning	Was	Comment
SOURCE_SYS	X	CHAR	10	Logical system		Original system
TIMEID_NO	X	CHAR	8	Time ID number	ZAUSW	NUMC
FROM_DATE	X	CHAR	8	Start date	BEGDA	DATS
TO_DATE	X	CHAR	8	End date	ENDDA	DATS
TIMEID_VERSION	X	CHAR	1	ID version	ZAUVE	
PERNO		CHAR	8	Personnel number	PERNR	NUMC
EDIT_NAME		CHAR	40	Formatted name of employee	ENAME	
<i>SORT_NAME</i>		<i>CHAR</i>	<i>30</i>	<i>Employee name (for sorting by NACHNAME VORNAME) (that is, last name/first name)</i>	<i>SNAME</i>	<i>Only 30 characters are permitted in Infotype 0001</i>
LANGU		CHAR	1	Language key		LANG New; supports multilingual subsystems
LANGU_ISO		CHAR	2	Language key ISO code 639		New; supports multilingual subsystems
PS_GRPG_ATT_ABS_TYPE		CHAR	2	Personnel subarea grouping for attendance/absence types	MOABW	NUMC
COUNTRY_GROUPING		CHAR	2	Country grouping	MOLGA	

## Function



SUBSYSTEM_GROUPING	CHAR	3	Grouping for subsystem connection	BDEGR	
ES_GRPG_WORK_SCHED	CHAR	1	Employee subgroup grouping for work schedules	ZEITY	
ACCESS_CONTROL_GROUP	CHAR	2	Access control group		
PERSONAL_CODE	CHAR	4	Personal code		
MAIL_INDICATOR	CHAR	1	Mail indicator	ZMAIL	Mail indicator
ATT_ABS_REASON_GRP	CHAR	3	Grouping for attendance/absence reasons		
EXT_WAGETYPE_GRP	CHAR	3	Grouping for connection with external wage types		
TIME_EVENT_TYPE_GROUP	CHAR	2	Time event type group		NUMC
COMP_CODE	CHAR	4	Company code		
COSTCENTER	CHAR	10	Cost center		
CUSTOMER_FIELD_1	CHAR	20	Customer field		New; customer-specific use; access via customer function
CUSTOMER_FIELD_2	CHAR	40	Customer field		New; customer-specific use; access via customer function
				INFO1	See E1BPCC1DNBALAN
				INFO2	See E1BPCC1DNBALAN
				INFO3	See E1BPCC1DNBALAN
				INFO4	See E1BPCC1DNBALAN
				INFO5	See E1BPCC1DNBALAN
				INFO6	See E1BPCC1DNBALAN
				INFO7	See E1BPCC1DNBALAN
				INFO8	See E1BPCC1DNBALAN
				INFO9	See E1BPCC1DNBALAN
				INFOA	See E1BPCC1DNBALAN
				ZDGBE	Use time event type groupings for checking off-site work authorization in the new interface
				IMAIL	See E1BPCC1DNBALAN

### 5.2.1.2 Download Employee Balances

Interface for Personnel Time Events	
BOR Object	RCVPEVTREC
Method	receivePTBalance
Message Type	HRCC1DNBALAN
IDoc Type	HRCC1DNBALAN01
Segment Structure Name	E1BPCC1DNBALAN
BAPI Structure Name	BAPICC1DNBALAN

Employee balances are loaded as an IDoc with the following structure:

E1BPCC1DNBALAN		Previous Interface: PERSO1 (internal: DWN01)				
Field Name	K	Type	L	Meaning	Was	Comment
SOURCE_SYS	X	CHAR	10	Logical system		Original system
TIMEID_NO	X	CHAR	8	Time ID number	ZAUSW	NUMC
PERNO		CHAR	8	Personnel number		NUMC
SUBSYSTEM_GROUPING		CHAR	3	Grouping for subsystem connection	BDEGR	
INFO_FIELD_1		CHAR	13	Variable infofield	INFO1	
INFO_FIELD_2		CHAR	13	Variable infofield	INFO2	
INFO_FIELD_3		CHAR	13	Variable infofield	INFO3	
INFO_FIELD_4		CHAR	13	Variable infofield	INFO4	
INFO_FIELD_5		CHAR	13	Variable infofield	INFO5	
INFO_FIELD_6		CHAR	13	Variable infofield	INFO6	
INFO_FIELD_7		CHAR	13	Variable infofield	INFO7	
INFO_FIELD_8		CHAR	13	Variable infofield	INFO8	
INFO_FIELD_9		CHAR	13	Variable infofield	INFO9	
INFO_FIELD_10		CHAR	13	Variable infofield	INFOA	
TIME_EVAL_MAIL_INDICATOR		CHAR	1	Mail indicator for errors in time evaluation	IMAIL	
CUSTOMER_FIELD_1		CHAR	20	Customer field		New; customer-specific use; access via customer function
CUSTOMER_FIELD_2		CHAR	40	Customer field		New; customer-specific use; access via customer function
					ZDGBE	See E1BPCC1DNPERSO
					BEGDA	See E1BPCC1DNPERSO
					ENDDA	See E1BPCC1DNPERSO
					ZAUVE	See E1BPCC1DNPERSO
					PERNR	See E1BPCC1DNPERSO
					ENAME	See E1BPCC1DNPERSO
					SNAME	See E1BPCC1DNPERSO
					MOABW	See E1BPCC1DNPERSO
					MOLGA	See E1BPCC1DNPERSO
					ZEITY	See E1BPCC1DNPERSO

### 5.2.1.3 Download Time Event Type Groups

The structure of the time event type grouping IDoc is the same as for personnel time events and employee expenditures.

Interface for Personnel Time Events and Employee Expenditures	
BOR Object	RCVPEVTTGR
Method	receiveTEventTypeGrp
Message Type	HRCC1DNTEVGR
IDoc Type	HRCC1DNTEVGR01
Segment Structure Name	E1BPCC1DNTEVGR
BAPI Structure Name	BAPICC1DNTEVGR

The time event types permitted are loaded as an IDoc with the following structure:

E1BPCC1DNTEVGR						New Download Structure for Time Event Type Groupings	
Field Name	K	Type	L	Meaning		Comment	
SOURCE_SYS	X	CHAR	10	Logical system		Original system	
TIME_EVENT_TYPE_GROUP	X	CHAR	2	Time event type group		NUMC	
TEVENTTYPE		CHAR	3	Time event type			

### 5.2.1.4 Download Attendance/Absence Reasons

Interface for Personnel Time Events	
BOR Object	RCVPEVTREC
Method	receiveAttAbsReason
Message Type	HRCC1DNATTAB
IDoc Type	HRCC1DNATTAB01
Segment Structure Name	E1BPCC1DNATTAB
BAPI Structure Name	BAPICC1DNATTAB

The attendance/absence reasons permitted are loaded as an IDoc with the following structure.

E1BPCC1DNATTAB		Previous Interface: ABSEN1 (internal: DWN02)				
Field Name	K	Type	L	Meaning	Was	Comment
SOURCE_SYS	X	CHAR	10	Logical system		Original system
ATT_ABS_REASON_GRP	X	CHAR	3	Grouping for attendance/absence reasons		
PS_GRP_ATT_ABS_TYPE	X	CHAR	2	Attendance/absence grouping	MOABW	NUMC
ES_GRP_WORK_SCHED	X	CHAR	1	Work schedule grouping	ZEITY	
ATT_ABS_REASON	X	CHAR	4	Attendance/absence reason	ABWGR	
FROM_DATE	X	CHAR	8	Start date	BEGDA	DATS
TO_DATE	X	CHAR	8	End date	ENDDA	DATS
LANGU	X	CHAR	1	Language key		LANG New; supports multilingual subsystems
LANGU_ISO	X	CHAR	2	Language key ISO code 639		New; supports multilingual subsystems
ATT_ABS_REASON_TEXT		CHAR	30	Attendance/absence text	ATEXT BDEGR	Field is 30 characters long in T705H Replaced by ATT_ABS_REASON_GRP

### 5.2.1.5 Download Objects (such as Positions)

Interface for Personnel Time Events	
BOR Object	RCVPEVTREC
Method	ReceivePObject
Message Type	HRCC1DNOBJID
IDoc Type	HRCC1DNOBJID01
Segment Structure Name	E1BPCC1DNOBJID
BAPI Structure Name	BAPICC1DNOBJID

The object permitted (such as positions) is loaded as an IDoc with the following structure:

E1BPCC1DNOBJID		New Download Structure for Different Payment				
Field Name	K	Type	L	Meaning		Comment
SOURCE_SYS	X	CHAR	10	Logical system		Original system
OBJECT_TYPE	X	CHAR	2	Object type		
OBJ_ID	X	CHAR	8	Object (such as position)		NUMC
OBJ_ID_GRP	X	CHAR	15	Grouping of objects		
FROM_DATE	X	CHAR	8	Start date		DATS
TO_DATE	X	CHAR	8	End date		DATS
LANGU	X	CHAR	1	Language key		LANG Supports multilingual subsystems
LANGU_ISO	X	CHAR	2	Language key ISO code 639		Supports multilingual subsystems
OBJ_ID_TXT		CHAR	40	Object text		

### 5.2.1.6 Download Cost Centers

Interface for Personnel Time Events	
BOR Object	RCVPEVTREC
Method	receiveCostCenter
Message Type	HRCC1DNCOSTC
IDoc Type	HRCC1DNCOSTC01
Segment Structure Name	E1BPCC1DNCOSTC
BAPI Structure Name	BAPICC1DNCOSTC

The cost centers permitted are loaded as an IDoc with the following structure:

E1BPCC1DNCOSTC		New Download Structure for Cost Assignment			
Field Name	K	Type	L	Meaning	Comment
SOURCE_SYS	X	CHAR	10	Logical system	Original system
COMP_CODE	X	CHAR	4	Company code	
COSTCENTER	X	CHAR	10	Cost center	
COSTCENTER_GRP	X	CHAR	15	Cost center group	
FROM_DATE	X	CHAR	8	Start date	DATS
TO_DATE	X	CHAR	8	End date	DATS
COCNTR_TXT		CHAR	20	Cost center text	

### 5.2.1.7 Download Internal Orders

Interface for Personnel Time Events	
BOR Object	RCVPEVTREC
Method	receiveInternalOrder
Message Type	HRCC1DNINORD
IDoc Type	HRCC1DNINORD01
Segment Structure Name	E1BPCC1DNINORD
BAPI Structure Name	BAPICC1DNINORD

The internal orders permitted are loaded as an IDoc with the following structure:

E1BPCC1DNINORD		New Download Structure for Cost Assignment			
Field Name	K	Type	L	Meaning	Comment
SOURCE_SYS	X	CHAR	10	Logical system	Original system
COMP_CODE	X	CHAR	4	Company code	
ORDER	X	CHAR	12	Internal order	
ORDER_GRP	X	CHAR	15	Internal order group	
ORDER_NAME		CHAR	40	Internal order text	

**5.2.1.8 Download Projects**

Interface for Personnel Time Events	
BOR Object	RCVPEVTREC
Method	receiveWBSElement
Message Type	HRCC1DNWBSEL
IDoc Type	HRCC1DNWBSEL01
Segment Structure Name	E1BPCC1DNWBSEL
BAPI Structure Name	BAPICC1DNWBSEL

The projects permitted are loaded as an IDoc with the following structure:

E1BPCC1DNWBSEL						New Download Structure for Cost Assignment	
Field Name	K	Type	L	Meaning		Comments	
SOURCE_SYS	X	CHAR	10	Logical system		Original system	
COMP_CODE	X	CHAR	4	Company code			
WBS_ELEMENT	X	CHAR	24	Project (work breakdown structure)			
WBS_ELEMENT_GRP	X	CHAR	15	WBS element group			
WBS_SHORTTEXT		CHAR	40	WBS element text			

### 5.2.1.9 Download Employee Expenditures

Employee expenditures can either be external wage types, cafeteria data, or service station data.

Interface for Employee Expenditures	
BOR Object	RCVPEXPRES
Method	receivePExpenses
Message Type	HRCC1DNEXTWT
IDoc Type	HRCC1DNEXTWT01
Segment Structure Name	E1BPCC1DNEXTWT
BAPI Structure Name	BAPICC1DNEXTWT

The employee expenditures permitted are loaded as an IDoc with the following structure:

E1BPCC1DNEXTWT		Previous Interface: EXTWA1 (internal: DWN03)				
Field Name	K	Type	L	Meaning	Was	Comment
SOURCE_SYS	X	CHAR	10	Logical system		Original system
EXT_WAGETYPE_GRP	X	CHAR	3	Grouping for employee expenditures		
COUNTRY_GROUPING	X	CHAR	2	Country grouping	MOLGA*	
EXTERNAL_WAGETYPE	X	CHAR	4	Employee expenditures (external wage types, cafeteria data, service station data)	EXLGA*	
FROM_DATE	X	CHAR	8	Start date	BEGDA*	DATS
TO_DATE	X	CHAR	8	End date	ENDDA*	DATS
WAGETYPE_UNIT		CHAR	3	Unit for employee expenditures	ZEINH	
WAGETYPE_UNIT_ISO		CHAR	3	Unit for employee expenditures (ISO code)		
LANGU		CHAR	1	Language key		LANG New; supports multilingual subsystems
LANGU_ISO		CHAR	2	Language key ISO code 639		New; supports multilingual subsystems
WAGELTEXT		CHAR	25	Text for employee expenditures	LGTXT	
UNIT_TEXT		CHAR	20	Unit text	ETEXT	Field in T538T is only 20 characters long
					BDEGR*	Replaced by EXT_WAGETYPE_GRP

### 5.2.1.10 Upload Request for Time Events

Interface for Personnel Time Events	
BOR Object	RCVPEVTREC
Method	requestPEvent
Message Type	HRCC1REQUPT EVEN
IDoc Type	HRCC1REQUPT EVEN01
Segment Structure Name	E1BPCC1DNRQTEV
BAPI Structure Name	BAPICC1DNRQTEV

The upload request occurs via an IDoc with the following structure:

E1BPDNRQEV		Previous Interface: (internal: E1REQU1)				
Field Name	K	Type	L	Meaning	Was	Comment
SOURCE_SYS	X	CHAR	10	Logical system		Original system

The subsystem must send the personnel time events to the subsystem after the IDoc requesting the data is received.

### 5.2.1.11 Upload Request for Employee Expenditures

Interface for Employee Expenditures	
BOR Object	RCVPEXP REC
Method	requestPExpenses
Message Type	HRCC1REQUPEXTWT
IDoc Type	HRCC1REQUPEXTWT01
Segment Structure Name	E1BPCC1DNRQEXT
BAPI Structure Name	BAPICC1DNRQEXT

The upload request occurs via an IDoc with the following structure:

E1BPDNRQEXT		Previous Interface: (internal: E1REQU1)				
Field Name	K	Type	L	Meaning	Was	Comment
SOURCE_SYS	X	CHAR	10	Logical system		Original system

The subsystem must send the personnel time events to the subsystem after the IDoc requesting the data is received.



## 5.2.2 Upload Structures

### 5.2.2.1 Upload Time Events

Interface for Personnel Time Events	
BOR Object Type	BUS7014
BOR Object Name	PTManagerExtPEvent
Method	Insert
Message Type	HRCC1UPTEVEN
IDoc Type	HRCC1UPTEVEN01
Segment Structure Name	E1BPCC1UPTEVEN
BAPI Structure Name	BAPICC1UPTEVEN

Time events are sent to the R/3 System as an IDoc with the following structure:

E1BPCC1UPTEVEN	Previous Interface: CONF11 (intern: E1CONF1)				
Field Name	Type	L	Meaning	Was	Comment
SOURCE_SYS	CHAR	10	Logical system		Original system
TEVENTTYPE	CHAR	3	Time event type	SATZA	
TERMINALID	CHAR	4	Terminal ID	TERID	
LOGDATE	CHAR	8	Logical date/ Actual conf. date	LDATE	DATS
LOGTIME	CHAR	6	Logical time/ Actual conf. time	LTIME	TIMS
PHYSDATE	CHAR	8	Date confirmation entered	ERDAT	DATS
PHYSTIME	CHAR	6	Time confirmation entered	ERTIM	TIMS
TIMEID_NO	CHAR	8	Time ID number	ZAUSW	NUMC
PERNO	CHAR	8	Personnel number		NUMC; new alternative to time ID number
ATT_ABS_REASON	CHAR	4	Attendance/ absence reason	ABWGR	
OBJECT_TYPE	CHAR	2	Object type		New for different payment
OBJ_ID	CHAR	8	Object		NUMC; new for different payment
COMP_CODE	CHAR	4	Company code		New for cost assignment
COSTCENTER	CHAR	10	Cost center		New for cost assignment
ORDER	CHAR	12	Order number		New for cost assignment
WBS_ELEMENT	CHAR	24	Work breakdown structure		New for cost assignment
CUSTOMER_FIELD_1	CHAR	20	Customer field		New for customer-specific use; access via customer function
CUSTOMER_FIELD_2	CHAR	40	Customer field		New for customer-specific use; access via customer function
				EXLGA	See BAPICC1UPEXTWT
				HRAZL	See BAPICC1UPEXTWT
				ZEINH	See BAPICC1UPEXTWT
				HRBET	See BAPICC1UPEXTWT

### 5.2.2.2 Upload Employee Expenditures

#### Interface for Employee Expenditures

## Function



BOR Object Type	BUS7015
BOR Object Name	PTMgrExtPExpenses
Method	Insert
Message Type	HRCC1UPEXTWT
IDoc Type	HRCC1UPEXTWT01
Segment Structure Name	E1BPCC1UPEXTWT
BAPI Structure Name	BAPICC1UPEXTWT

Employee expenditures are sent to the R/3 System as an IDoc with the following structure:

E1BPCC1UPEXTWT		Previous Interface: CONF11 (internal: E1CONF1)			
Field Name	Type	L	Meaning	Was	Comment
SOURCE_SYS	CHAR	10	Logical system		Original system
TEVENTTYPE	CHAR	3	Time event type	SATZA	
TERMINALID	CHAR	4	Terminal ID	TERID	
LOGDATE	CHAR	8	Logical date/ Actual conf. date	LDATE	DATS
LOGTIME	CHAR	6	Logical time/ Actual conf. time	LTIME	TIMS
PHYSDATE	CHAR	8	Date confirmation entered	ERDAT	DATS
PHYSTIME	CHAR	6	Time confirmation entered	ERTIM	TIMS
TIMEID_NO	CHAR	8	Time ID number	ZAUSW	NUMC
PERNO	CHAR	8	Personnel number		NUMC; new alternative to time ID number
EXTERNAL_WAGETYPE	CHAR	4	Ext. wage type	EXLGA	
NUMBER_EXT_WAGETYPE	CHAR	9	Number for employee expenditures	HRAZL	DEC 7.2 - In the IDoc: 5 spaces before decimal 1 decimal point 2 spaces after decimal 1 +/- sign
WAGETYPE_UNIT	CHAR	3	Unit for employee expenditures	ZEINH	
WAGETYPE_UNIT_ISO	CHAR	3	Unit for employee expenditures (ISO code)		New for ISO code
AMOUNT_EXT_WAGETYPE	CHAR	11	Amount for employee expenditures	HRBET	CURR 9.2 In the IDoc: 7 spaces before decimal 1 decimal point 2 spaces after decimal 1 +/- sign
CURRENCY	CHAR	5	Currency for employee expenditures		CUKY; new currency for amount
CURRENCY_ISO	CHAR	3	Currency for employee expenditures (ISO code)		New currency for amount (ISO)
CUSTOMER_FIELD_1	CHAR	20	Customer field		New for customer-specific use; access via customer function
CUSTOMER_FIELD_2	CHAR	40	Customer field		New for customer-specific use; access via customer function
				ABWGR	See BAPICC1UPT EVEN



## 5.3 Checks Performed by the Subsystem

### 5.3.1 General Conditions

The following fields should be completed for each record; you can, however, simply enter either the time ID number or the personnel number.

Field Name	Meaning
SOURCE_SYS	Logical system
TEVENTTYPE	Time event type
TERMINALID	Terminal ID
LOGDATE	Logical date/Actual confirmation date
LOGTIME	Logical time/Actual confirmation time
PHYSDATE	Date confirmation entered
PHYSTIME	Time confirmation entered
TIMEID_NO	Time ID number
PERNO	Personnel number

The additional fields that either must or may be completed are listed below in detail.

### 5.3.2 Checking Time ID Numbers and Personnel Numbers

The values in the fields

TIMEID_NO	(Time ID number)
PERNO	(Personnel number)

must be checked from the LOGDATE (actual confirmation date) against the HR mini-master record. Only one of the two fields may be used. The FROM\_DATE (start date) and TO\_DATE (end date) determine the start date for the HR mini-master record.



### 5.3.3 Checking Time Event Types

The following values and their meanings are permitted for the TEVENTTYPE field (time event type):

Time Event Type	Name
P10	Clock-in
P11	Change
P20	Clock-out
P15	Start of break
P25	End of break
P30	Start of off-site work
P40	End of off-site work
P35	Start of off-site work at home
P45	End of off-site work at home
P01	Clock-in or clock-out
P02	Start or end of break
P03	Start or end of off-site work
P04	Start or end of off-site work at home
P05	Interim entry
P60	Info entry
P50	Employee expenditures

The value in the TEVENTTYPE field (time event type) must be checked against the table for time event type groupings. The value in the TIME\_EVENT\_TYPE\_GROUP field (time event type grouping) is read to the exact date from the HR mini-master record.

#### 5.3.3.1 Checking Off-Site Work Authorization

In the previous interface (available since Release 3.0A), an indicator in the HR mini-master record could determine an employee's off-site work authorization. This indicator is no longer part of the new interface (as of Release 4.5A). The time event type grouping has taken its place in the new interface. As a result, an employee has the applicable authorization to enter an off-site time event type, if the time event type is already included in the grouping assigned to him or her in the HR mini-master record.

### 5.3.4 Checking Attendance/Absence Reasons

An attendance/absence reason may be entered along with the time event types "clock-in" (P10), "clock-out" (P20), "clock-in or clock-out" (P01), "start of off-site work at home" (P35), "end of off-site work at home" (P45), and "start or end of off-site work at home" (P04).

The value of the field

ATT\_ABS\_REASON (Attendance/absence reasons)

must be checked against the table for attendance/absence reasons.

The values of the fields

ATT\_ABS\_REASON\_GRP (Grouping for attendance/absence reasons)

PS\_GRP\_ATT\_ABS\_TYPE (Grouping for attendance/absence types)

ES\_GRP\_WORK\_SCHED (Grouping for work schedules)

are read to the exact date from the HR mini-master record.



### 5.3.5 Checking Additional Data

Additional data for different payment and for cost assignment may be entered along with the following time event types:

Time Event Type	Name
P10	Clock-in
P11	Change
P30	Start of off-site work
P35	Start of off-site work at home
P01	Clock-in or clock-out
P03	Start or end of off-site work
P04	Start or end of off-site work at home

This additional data is to be checked as follows against the applicable tables. All fields used for different payment and cost assignment may be completed at the same time.

#### 5.3.5.1 Different Payment

##### 5.3.5.1.1 Checking Objects (such as Positions)

The values in the fields

OBJECT\_TYPE (Object type)  
OBJ\_ID (Object, such as position)

must be checked to the exact date against the table of objects.

#### 5.3.5.2 Cost Assignment

Postings that include more than one company code are not permitted. Therefore, when data is entered for cost assignment, the cost center is always checked against the HR mini-master record for that employee.

However, several account assignment objects can be entered at the same time. *R/3 Controlling (CO)* determines the primary account assignment object to be debited. The other account assignment objects are only posted statistically.

##### 5.3.5.2.1 Checking Cost Centers

The values in the fields

COMP\_CODE (Company code)  
COSTCENTER (Cost center)

must be checked to the exact date against the table for cost centers. The company code COMPANY\_CODE is read to the exact date from the HR mini-master record.

##### 5.3.5.2.2 Checking Internal Orders

The value in the fields

COMP\_CODE (Company code)  
ORDER (Internal order)

must be checked against the table for internal orders. The company code COMP\_CODE is read to the exact date from the HR mini-master record.

### 5.3.5.2.3 Checking Projects (WBS Elements)

The values in the fields

COMP_CODE	(Company code)
WBS_ELEMENT	(Project)

must be checked against the table for projects. The company code COMP\_CODE is read to the exact date from the HR mini-master record.

### 5.3.6 Checking Permitted Employee Expenditures

In addition to the WAGETYPE\_UNIT and CURRENCY fields, related WAGETYPE\_UNIT\_ISO and CURRENCY\_ISO fields are also provided. The former are to be used for SAP codes, the latter are intended for appropriate ISO codes. The R/3 System only evaluates an ISO code if no SAP code is entered. If an ISO code is entered, it is converted automatically to the SAP code. In other words, it suffices to enter a SAP code.

A value must be entered in the EXTERNAL\_WAGETYPE fields (employee expenditures, external wage types, cafeteria data, and service station data). The value in the EXTERNAL\_WAGETYPE field is checked to the exact date against the table for external wage types. The values of the EXT\_WAGETYPE\_GRP field (grouping for external wage types) and COUNTRY\_GROUPING field (country grouping) are then read to the exact date from the HR mini-master record.

If a value is entered in the NUMBER\_EXT\_WAGETYPE field (number for employee expenditures), then either the WAGETYPE\_UNIT field (unit for employee expenditures) or the WAGETYPE\_UNIT\_ISO field (unit for employee expenditures ISO code) must also contain a value. The (only) valid value for the current employee expenditures is to be entered in the table for permitted employee expenditures. If no unit is specified, then the NUMBER\_EXT\_WAGETYPE field must not be used; instead, the value must be entered in the AMOUNT\_EXT\_WAGETYPE field.

If a value is entered in the AMOUNT\_EXT\_WAGETYPE field (amount for employee expenditures), then either the CURRENCY field (currency for employee expenditures) or the CURRENCY\_ISO field (currency for employee expenditures - ISO code) must also contain a value completed. Valid values here are the existing ISO codes for currencies. The permitted ISO codes are stored in the subsystem (see appendix) and must be checked against this dataset when used.

The amount must be entered in the form \_\_\_\_\_.\_\_\_V, with at least one place (and no more than seven places) before the decimal point. Places may exist after the comma, however, then a decimal point "." must be used. In addition, the "+" or "-" sign must be included. Leading blank places are allowed. The actual number of places after the comma transferred to the R/3 System is determined by the currency being used.

### 5.3.7 Interim Entry

Data may only be entered in the customer fields (in addition to the fields that always contain values) in the "interim entry" (P05) time event type.



### 5.3.8 Info Entry

Data may only be entered in the customer fields (in addition to the fields that always contain values) in the "info entry" (P60) time event type.

### 5.3.9 Customer Fields

Any data may be entered in the CUSTOMER\_FIELD\_1 and CUSTOMER\_FIELD\_2 fields (customer fields) for each time event.

## 6 Glossary

### *Different Payment*

A temporary payment differing from the employee's current master data record. An employee can also enter additional data along with his or her personnel time events relating to different payment. Those wage types generated in *R/3 Time Evaluation* inherit this additional data and pass it on to *R/3 Payroll Accounting*.

### *Cost Assignment*

A temporary cost assignment differing from the employee's current master data record. An employee can also enter additional data along with his or her personnel time events relating to different cost assignment. Those wage types generated in *R/3 Time Evaluation* inherit this additional data and pass it on to *R/3 Payroll Accounting*.

### *Time Event*

Entry or posting, such as "clock-in" or "clock-out," carried out by employees at a time recording terminal.

### *Personnel Time Event*

A time event particular to *R/3 Time Management*. The term personnel time event is used to eliminate any other working time event types, such as a start of order or an order interruption.

### *Employee Expenditures*

The terms "cafeteria data," "service station data," and "external wage types" have been grouped together under the main term "employee expenditures."

### *Logical System*

The system where applications running on shared data are integrated. In the R/3 System, a client is a logical system. In the definition for a client, you can specify the logical system of each client. External systems, especially subsystems, can also be defined in the R/3 System as logical systems.

### *ALE*

Abbreviation für Application Link Enabling. ALE is basically a means of creating and operating distributed applications.

The reason for using ALE is to guarantee a distributed, yet integrated, R/3 System installation. This involves business-related message exchange with consistent data retention across loosely coupled applications.

The integration of applications is achieved via synchronous and asynchronous communication and not by a central database.

### *IDoc*

Abbreviation for Intermediate Document (interim document). IDocs are used for asynchronous exchange of data between two systems.

### *BAPI*

Abbreviation for Business Application Programming Interface. A BAPI is a standardized programming interface providing external access to the business processes and data in the R/3 System.

BAPIs (also called Business APIs) are defined in the Business Object Repository (BOR) as methods used by SAP Business Objects and SAP Interface Types to execute certain operational tasks.

### *Interface Type*

Represents a central business-related object in the real world. An interface type is basically a summary of attributes, methods, and event definitions used in the same context. BAPIs are methods by which SAP Interface Types enable the R/3 System to access the functions of external systems.

### *Business Object*

Represents a central business-related object in the real world. A business object is basically a summary of attributes, methods, and event definitions used in the same context. BAPIs are the methods by which SAP Business Objects enable external systems to access R/3 System functions from the Internet, DCOM or CORBA.

## 7 Appendix (Notes)

### 7.1 Selecting Field Names

If the subsystem implemented uses any of the field names stated in this description, problems may occur during programming. For example, the name “ORDER” can apply to an internal order and could also be a key word in the database language SQL. In such cases, an alternative name must be found when implementing a subsystem.

### 7.2 IDoc Size

The size of the IDocs received from the R/3 System is basically limited by the amount of main memory available on the corresponding application server. If the size of an IDoc exceeds this limit (which does not need to be detailed here), block processing is required. A Customizing parameter in the subsystem is useful as it specifies the maximum number of data records to be transferred per IDoc. Thus, the transfer of confirmations is spread out over several IDocs. This precautionary measure must (at the moment) be taken in the subsystem. In the R/3 System, the data can be entered either in one IDoc or in several. However, this may lead to conflicts during the posting process in *R/3 Time Management*. Therefore, an additional Customizing parameter in the subsystem can be used to regulate the time delay between the transfer of the separate IDocs.

### 7.3 Terminals with Numerical Keyboards

The names of cost centers, internal orders, and projects are generally alphanumeric. To allocate the costs for these objects on a terminal with a numerical keyboard, the customer enhancements outlined in the interface can be used. The alphanumeric objects can then be converted into numerical objects at the terminal by a customer-defined table. As a result, customer enhancements are required in both the download and upload processes.

### 7.4 ISO Codes

The LANGU\_ISO, WAGETYPE\_UNIT\_ISO and CURRENCY\_ISO fields are to be used in accordance with international ISO Codes. Since checks do not need to be carried out for the LANGU\_ISO field in the subsystem, and the WAGETYPE\_UNIT\_ISO field constitutes part of the data downloaded to the subsystem, separate datasets for these ISO codes are not required in the subsystem. However, this is not true for the CURRENCY\_ISO field. The authorized ISO codes for this field must be included in the subsystem for checking purposes.

A copy of the current list of international ISO codes can be ordered from the applicable UN Commission (WP.4 Trade Facilitation Recommendations, Recommendation 20):

UN Economic Commission for Europe  
Information Office  
Palais des Nations  
1211 Geneva  
Switzerland

## Function

---

Phone: +4122/917-2893  
Fax: +4122/917-0036  
E-mail: [info.ece@unece.org](mailto:info.ece@unece.org)

or alternatively, you can access the list directly on the Internet at:

[http://www.unicc.org/unece/trade/facil/tf\\_home.htm](http://www.unicc.org/unece/trade/facil/tf_home.htm)