Interactive Forms in Workflows and Guided Procedures
(not including Internet Service Requests)
## Business Task Management in SAP NetWeaver

### IT Practices

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<td>Master-Data Consolidation</td>
<td>Enterprise Knowledge Management</td>
<td>Enterprise Data Warehousing</td>
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<td>Enterprise Reporting</td>
<td>Storytelling</td>
<td>Business Task Management</td>
<td>Enterprise Data Warehousing</td>
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<td>Software Life-Cycle Management</td>
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### On the concept of IT Practices and IT Scenarios...
Business Task Management is Evolutionary

Business Workflow
Universal Worklist
BPM
+ Collaboration Tasks
+ Guided Procedures

1995
EP 5.0
2003
SAP NetWeaver ‘04
SAP NetWeaver 2004s

Duet
Third Party UWL integration

...
## Business Task Management Components

### Universal Worklist
- Single point of access for managing your work
- Can be personalized to suit each user’s working style
- Process-specific views can be customized for expert users

### Collaboration Tasks
- Enables end-users to create their own ad hoc processes and drive collaboration
- Includes various types of collaboration tasks including actions, approvals, and feedback
- Users track progress of their delegated task

### Guided Procedures
- Designed to implement process flows with greater ease and speed across multiple applications
- Integrates backend system transactions and interactive forms
- Includes process templates that can be easily re-used or copied and easily changed

### Interactive Forms
- Generate forms that contain data extracted from core systems
- Use dynamic or static forms
- Accelerate forms-based business processes

### SAP Business Workflow
- Structured, repeatable, simple to complex business process
- Manages the tasks that need to be performed and who should perform the tasks
- Ensures business process deadlines and service agreements are appropriately monitored and enforced

### Alerts
- Exception-triggered notifications
- Define follow-on activities
- Inter-System alerting

### Duet
- Processes in Microsoft Outlook
Business Task Management – Definition

Business Task Management is the automation, execution and monitoring of tasks

- Coordinate and execute tasks arising from automated process flows and spontaneous events
- Track the progress of tasks

Tasks include a wide variety of activities

- Business Transaction
- Alert
- Form
- Desktop Document
- Impromptu Request
Business Task Management in SAP NetWeaver

SAP Interactive Forms by Adobe

Guided Procedures and SAP Business Workflow
Understanding Forms

- Forms typically offer a service, share knowledge, or collect and provide answers.
- A form is the document that an end user views or interacts with.
- The form *design* specifies the layout, data capture, and final presentation rules for the form.
- No complex navigation or business rules.
### Interactive Forms Based on Adobe Software

#### Key Capabilities

1. Integrate interactive PDF documents into business processes driven by SAP applications
2. Allow forms-based input combined with workflow to start automated follow-up steps
3. Generate forms that contain data extracted from SAP systems
4. Use dynamic or static forms
5. Complete forms online or offline
6. Submit data from the form back to SAP systems
7. Allow users to print forms
Form Scenarios

Scenarios for capturing or displaying data in a Form

1. Interactive forms
   - Users complete the form (online/offline)
   - Select options online to submit the form data to a predefined process
   - Optional Support for data validations

2. Non-interactive forms
   - Designed to present information to end users
   - Pre-populated with data
   - Data can not be added or modified

3. Print and fill forms
   - End user opens and prints the form
   - Fills it out manually
   - Returns it by fax or mail
SAP/Adobe Strategic Partnership

- Solution first available with SAP NetWeaver ‘04

Adobe provides

- Open technology, de-facto standard for forms
- Benefits of combination of PDF with XML

Benefits of SAP/Adobe collaboration

- Adobe Reader installed on virtually all desktops
- “Natural” look and feel of forms
- User-friendly forms design tool lowers cost of operations
- Integration of Adobe’s PDF technology into SAP solutions
- Interactive Forms based on Adobe Software (Java - ABAP)
- Generation of forms to mass print, email or archive (ABAP)
- Linking of processes and Interactive Forms (Java – ABAP)
Where Our Integration Starts?

Interactive PDF

Paper-like layout
- Self-explanatory
- Natural look and feel

User Handling
- Save locally
- Distribute via email / Portal
- Apply digital signature
- Print locally

Background Services
- Structured data in XML
- Pre-filled application values
- Pre-filled list boxes, help values, ...
- Automatic data extraction and integration in application
Interactive Forms – Run-Time Architecture

SAP NetWeaver Application Server

J2EE Stack
- Application Code (Java)
- PDF Object (Java)
- Web Services
- SOAP
- Document Service EJB
- Adobe Document Services Core Components

ABAP Stack
- Application Code (ABAP)
- PDF Object (ABAP)
- Web Services
- SOAP
Adobe LiveCycle Designer

You are able to create the design of your form with the Adobe LiveCycle Designer.

- The context elements that were bound to your form can be dragged and dropped onto the form layout.
Business Task Management in SAP NetWeaver

SAP Interactive Forms by Adobe

Guided Procedures and SAP Business Workflow
Execution of Business Task Management

**TASK MANAGEMENT UI** (Universal Worklist)

- Task 1
- Task 2
- Task x

**Events trigger tasks**
(workitems, notifications)

**User Interaction**
with BPM Runtime

**Integration Process**

**Application Process**

**BPM RUNTIME**

- Interfaces for Data Integration
- Process Integration
- Process Communication

**Business workflows**

- Collaboration tasks
- Guided Procedures

Human Interaction

Collaborative Processes

Ad Hoc Processes

Dynamic Processes

Stable Processes
Business Department

“We need to supplement the company’s core processes with our own departmental procedures.”

Central IT

“We need to create flexible, robust and highly scalable standardized processes.”

Individual

“I want to delegate some of my tasks to colleagues, and track their progress.”
"We need to supplement the company's core processes with our own departmental procedures."

"We need to create flexible, robust, and highly scalable standardized processes."

"I want to delegate some of my tasks to colleagues and track their progress."

Centralized vs. Decentralized Process Control

SAP NetWeaver™
- Unbounded Processes
- Embedded Processes
- Programmed Processes

Central IT

SAP NetWeaver™
- Guided Procedures
- Collaboration Room

Business Department

SAP NetWeaver™
- Collaboration Tasks

Individual
## Guidelines for Interactive Forms and Processes – When to Use What Tool...

<table>
<thead>
<tr>
<th>Use GP for interactive forms when…</th>
<th>Use BWF for interactive forms when…</th>
</tr>
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<tbody>
<tr>
<td>You want a simple offline scenario and you have no development resources available to you.</td>
<td>Users normally work online and want to process the forms via their Universal Worklist.</td>
</tr>
<tr>
<td>Your users normally will process the forms without connection to the system.</td>
<td>You are already familiar with Business Workflow.</td>
</tr>
<tr>
<td>When the process should email forms and wait for a reply, or when a form filled in offline should initiate a process.</td>
<td>You want to take existing workflow functions and render them in a form rather than in the current UI.</td>
</tr>
<tr>
<td>When the form is involved in a process that accesses several backend systems. For example, the form is used in CRM and ERP and SRM and various people will interact with the various systems throughout the process.</td>
<td>You have developer resources to assist with emailing out forms for offline usage and creating Web Dynpros for form rendering online.</td>
</tr>
<tr>
<td>The process requires has strict reporting requirements on form approval.</td>
<td></td>
</tr>
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Use BWF for interactive forms when users need to process forms online, when there are strict reporting requirements on form approval, and when there are no development resources available.
Overview of SAP Business Workflow

Universal Worklist Basics

SAP Interactive Forms Integration
Workflow Definition

**Automation and Monitoring** of business processes

**Providing appropriate business knowledge** of how to perform business processes

**Active flow** of information
- Bring the right information at the right time to the right people
- Distribution of work according to business rules
- Exception handling and deadline monitoring

**Providing metrics** on business processes
- E.g. for benchmarking and continuous process improvement
**Fast-Path Implementation**

**Workflow in SAP NetWeaver**

**SAP Workflows**
- Standard workflows (more than 500)
- Shrink-wrapped / ‘Best Practice’
- Customizable

**Customer Workflows**
- Custom workflows workflow modeller
- Customizable business triggers.
- Workflow-Wizards

**Comfortable workbench**
- AccelerateSAP
- Literature
- Training
- User Groups
- Consulting Partners
Many Systems, Many Inboxes

MySAP CRM

R/3

mySAP ERP
Universal Worklist in Central SAP Enterprise Portal

**MySAP CRM**

**ISV/Third Party**

**R/3**

**mySAP ERP**

UWL items can include:
- Business Workflow
- Collaboration Tasks
- Guided Procedure Actions
- Alerts
- KM Notifications
Universal Worklist and External Task

MySAP CRM

R/3

mySAP ERP

NetWeaver Web Application Server

Task

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First Look at the Universal Worklist

UWL is part of the standard user end role, accessed via Home - Work

Hint: To Refresh your lists of tasks, use the drop down menu near the Hide Preview link.

Process-specific views to display context-related columns or details
Universal Worklist and External Task

1. Workflow
   - Process Control
   - Deadlines
   - Invoke Services
   - Task Dispatching

2. Universal Worklist
   - Display Tasks
   - Invoke Tasks
   - Generic Task Control

3. Task Definitions
   - User Interface
   - Context access

R/3

MySAP CRM

NetWeaver Web Application Server

THE BEST-RUN BUSINESSES RUN SAP™

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Launch Work Transaction

Parameterized launching for
- BSP
- iView
- URL
- Web Dynpro (Java or ABAP)
- SAP GUI (for HTML)
Launch Customization: ABAP Web Dynpro

XML Example
<Action name="launchWebDynProABAP" handler="SAPWebDynproABAPLauncher">
Overview of SAP Business Workflow
Universal Worklist Basics
SAP Interactive Forms Integration
Adobe LiveCycle Designer

You are able to create the design of your form with the Adobe LiveCycle Designer.

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Inbound: Web Dynpro Plugs and Navigation

Workflow

Work item

WI_ID

UWL

Launch Handler

WI_ID

Inbound Plug

Web Dynpro Application with Parameter WI_ID

Window

View

Approve or Reject Notification of Absence

Application Data

Form number

Status

View Controller

Web Dynpro Component with Parameter WI_ID

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Composite Applications make use of data and functions provided as services by platforms and applications, combining these into user-centric processes and views, supported by own business logic and specific user interfaces.

**Technical characteristics**

- Usage- and process-centric
- Based on services
- Loosely coupled to backend systems
- Abstracting from backend systems
- Dependent on service enabling
Guided Procedures and Composite Applications

Business Processes (Composites)

UI Building Blocks

Services

Guided Procedures

Role 1

<<Step>> Request Appointment

<<Step>> Find Patient

<<Step>> Notify

Role 2

<<Step>> Create Appointment

<<Step>> Create Patient

Composite Process

Workcenter

Actions

User Interface

Service Development

Service Composition

Business Logic

Services

mySAP CRM

SAP NW BI

mySAP ERP

Service Enablement
Process Building Blocks

Reusable Components

- Process Instance
  - Process Template

  - Phase
    - Block
  - Phase
    - Block
  - Phase
    - Block
  - ... (repeated)

  - Step
    - Action
  - Step
    - Action
  - n-Steps
    - Block
  - ... (repeated)

Callable Objects

- VC UIs
- Adobe Forms
- Web Services
- CAF Services
- ... (repeated)
Designing a Process

GPProcess

Phase 1 — Phase 2 — Phase 3

Step 1 — Step 2

SEQUENTIAL

Step 3

PARALLEL

Step 4

Step 5

Step 6

AD-HOC

Step 7 — Step 8

ALTERNATIVES

Legend:
- Process template
- Block
- Action
Guided Procedures provides a set of callable object implementations that you can use by simply configuring them in the GP design time. These predefined callable objects are of two main types:

- Web Dynpro Component (GP Interface)
- Java Callable Object for Background Execution

The predefined callable objects are available in the list of callable object categories that is displayed in the first step of the procedure for creating callable objects. To use a predefined object, you just select it as a type from the relevant category.
Click on the square next to an object to select it and work with it.

To insert either a new or existing object, select the correct place in the flow, make sure the appropriate object type shows in the Item drop-down, and click either the Insert or the Create New icon.
Adobe LifeCycle Designer

Palettes

Layout Editor
Button Properties in the Submit Tab

Control Type – type Submit
Submit Format – format XML Data (XML)
Submit to URL %com.sap.caf gp.if.PostProcessorUrl%
1. Open PDF form
2. Fill in data field
3. Validation
   - Business Partner format
   - Required Fields Entered
4. Click Submit
5. Success Message
Overview

Forms in SAP Business Workflow

Forms in Guided Procedures

Summary and Appendices
Further Information

Public Web:

www.sap.com
SAP Developer Network: www.sdn.sap.com
In order for appearance:

https://www.sdn.sap.com/irj/sdn/developerareas/itpractices
https://www.sdn.sap.com/irj/sdn/interactiveforms
https://www.sdn.sap.com/irj/sdn/developerareas/caf

SAP Customer Services Network:  www.sap.com/services/

Related SAP Education Training Opportunities

http://www.sap.com/education/
Book: Practical Workflow for SAP
Book: SAP xApps and the Composite Application Framework
THANK YOU FOR YOUR ATTENTION!

QUESTIONS – SUGGESTIONS – DISCUSSION