



OpenBiz Tutorial

Open Business software framework

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(Cover Openbiz 2.0 and above)

Rocky Swen

Agenda

- ◆ Openbiz Overview
 - Architecture Stack
- ◆ Build your applications
 - Design BizDataObj
 - Design BizForm
 - Design BizView
 - Design HTML Template
- ◆ Resource

OpenBiz Overview

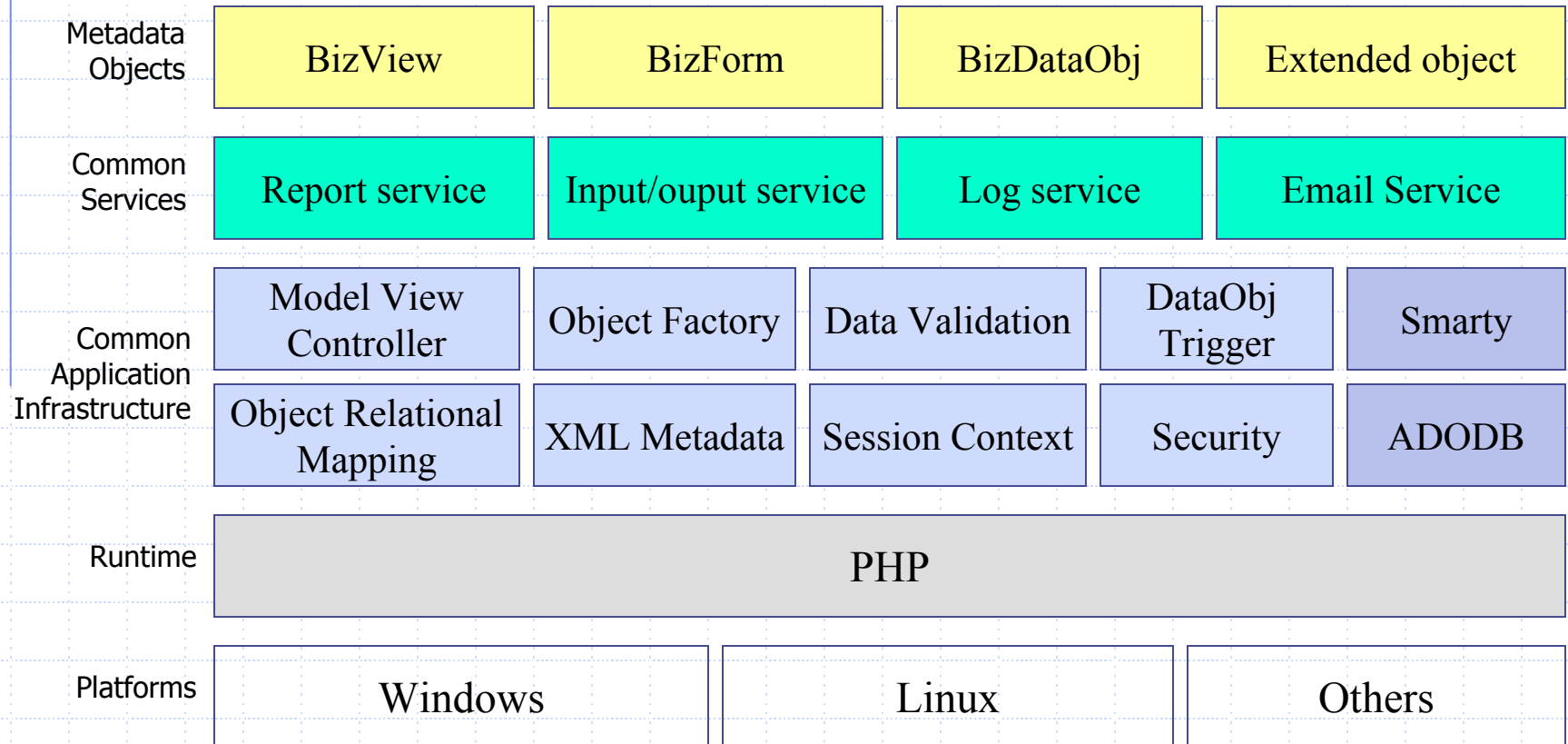
◆ What is OpenBiz?

- OpenBiz is an open php business software framework

◆ How can OpenBiz help?

- Build data-oriented complicated web application in an easy way
- Build your application by constructing metadata file, not by coding
- Easily extending for special requirements

Architecture Stack



Build your application

- ◆ Data model design
 - Database schema
- ◆ BizDataObj design – business data unit
 - What properties in the BizDataObj
 - What functions provided by the BizDataObj
 - What relationship between BizDataObjs
- ◆ BizForm design – presentation unit
 - Map BizDataObj properties and functions on UI
- ◆ BizView design – presentation container
 - Contain multiple BizForms
- ◆ HTML Template design – GUI

Data model design

◆ Entity Relationship Graph

- Modeling business data into database table schema
- Please refer to database design book for details

◆ Create tables in database

- Create tables/indexes using GUI tools or scripts
- Specify "Prefix" in id_table for each table so that SYSID of new record will be auto-generated as "Prefix"+sequence format. i.e. PLY_101
- Add your database connection information to config.xml. i.e. replace the "Default" database

Data model design (example)

event
{SYSID,
NAME,
HOST,
LOCATION
... }

regist
{SYSID,
PLAYER_ID,
EVENT_ID,
FEE}

attendee
{SYSID,
NAME,
EMAIL,
PHONE
... }

A registration system modeling

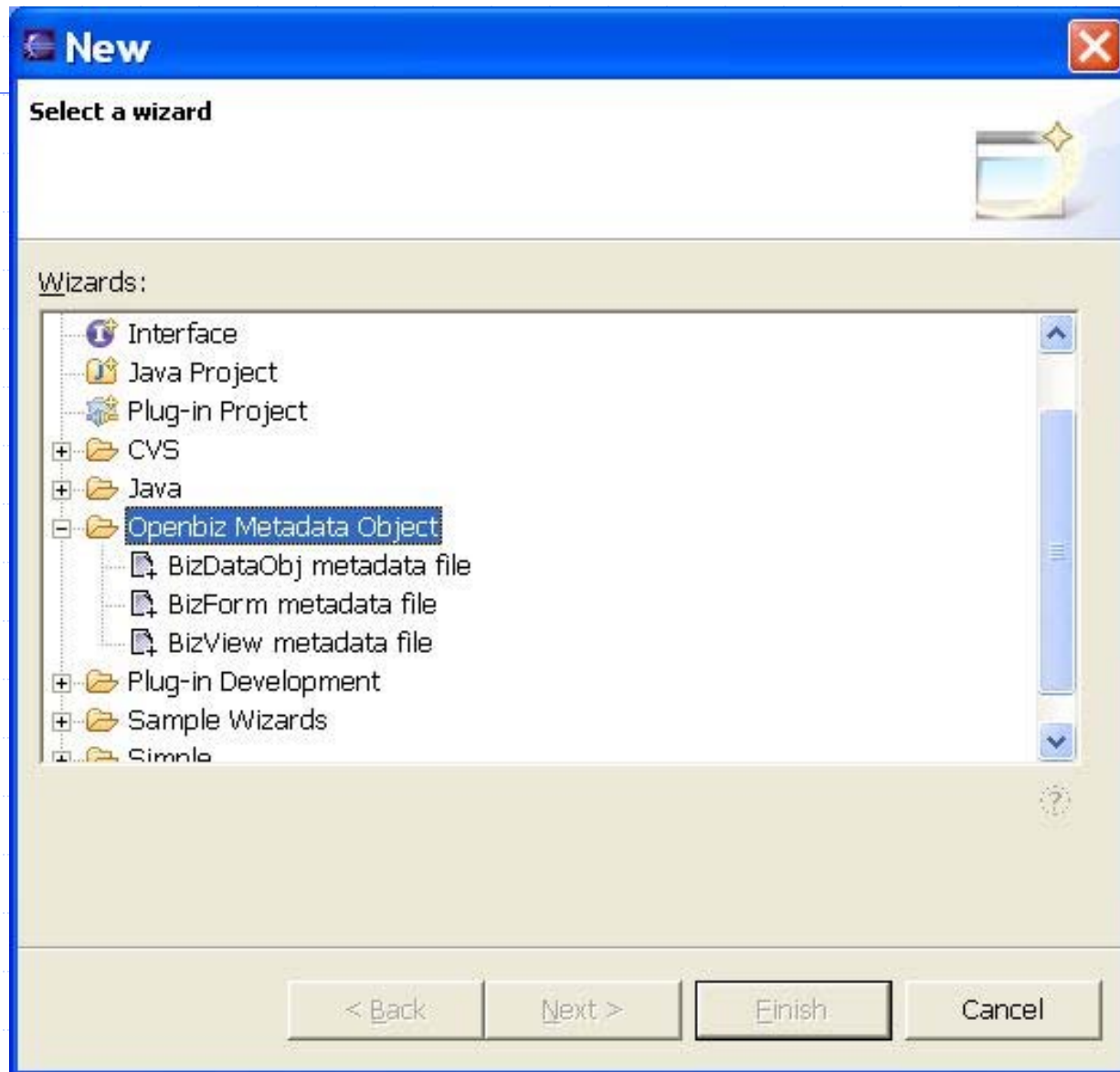
BizDataObj design

- ◆ Each BizDataObj is based on a database table – base table
- ◆ Properties in the BizDataObj
 - Map a field from a base table column
 - Join a field from a foreign table column
 - Define table relationship by referencing other BizDataObj
- ◆ Functions provided by the BizDataObj
 - Basic functions are provided by OpenBiz
 - Implement special functions by extending BizDataObj

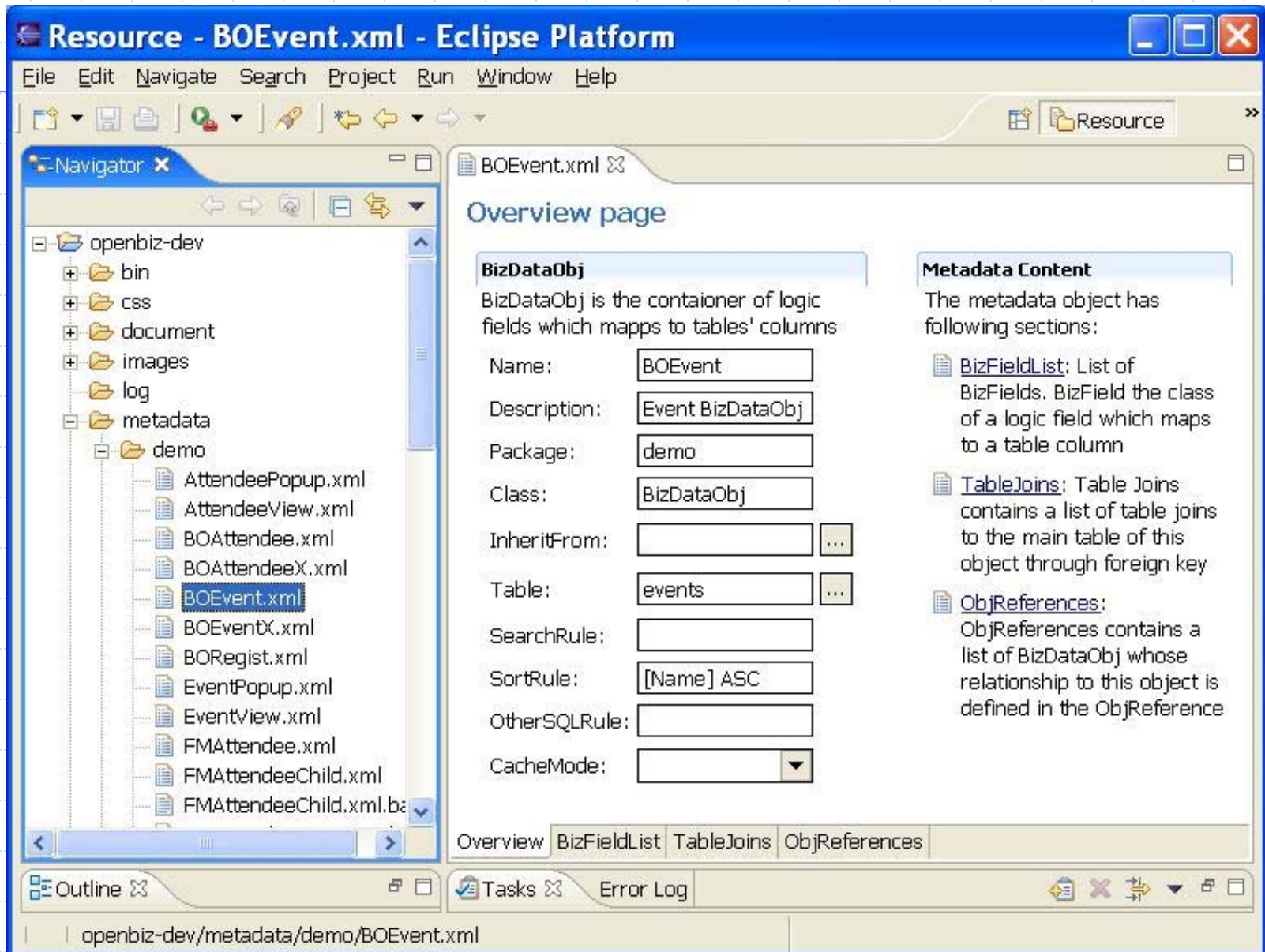
BizDataObj design (example)

- ◆ BOREgist - base table = regist
- ◆ Properties
 - Id ← regist.SYSID
 - Attendee Id ← regist.ATTENDEE_ID
 - Attendee Name ← attendee.NAME (by join)
 - Event Id ← regist.EVENT_ID
 - Event Name ← event.NAME (by join)
 - Fee ← regist.FEE
- ◆ Functions – BizDataObj provides enough functions, no special requirement

New object wizard in Eclipse



BizDataObj design in Eclipse



The screenshot displays the Eclipse IDE interface for editing the `BOEvent.xml` file. The window title is "Resource - BOEvent.xml - Eclipse Platform". The menu bar includes File, Edit, Navigate, Search, Project, Run, Window, and Help. The toolbar contains various icons for file operations and navigation.

The **Navigator** on the left shows a project structure with folders: `openbiz-dev`, `bin`, `css`, `document`, `images`, `log`, and `metadata`. The `demo` folder under `metadata` contains several XML files, with `BOEvent.xml` selected.

The main editor area shows the **Overview page** for `BizDataObj`. The description states: "BizDataObj is the container of logic fields which maps to tables' columns". The configuration fields are as follows:

- Name:
- Description:
- Package:
- Class:
- InheritFrom: ...
- Table: ...
- SearchRule:
- SortRule:
- OtherSQLRule:
- CacheMode:

The **Metadata Content** section provides details on the object's structure:

- BizFieldList:** List of BizFields. BizField the class of a logic field which maps to a table column
- TableJoins:** Table Joins contains a list of table joins to the main table of this object through foreign key
- ObjReferences:** ObjReferences contains a list of BizDataObj whose relationship to this object is defined in the ObjReference

The bottom of the IDE shows the **Outline**, **Tasks**, and **Error Log** views. The status bar at the bottom indicates the current file path: `openbiz-dev/metadata/demo/BOEvent.xml`.

BizForm design

- ◆ BizForm is the UI proxy of BizDataObj
 - A BizForm can have difference presentation mode (default, edit, query) associated with templates
- ◆ Map a field control from BizObj field
 - Map a field control from base BizObj field
 - Does a field need pick data from other BizForm?
 - Is the field editable, visible?
- ◆ Add functions on BizForm
 - Map functions provided by BizForm class to buttons.
 - Implement special functions by extending BizForm

BizForm design (example)

◆ FMRegist - base BizDataObj = BOREgist

- Default mode uses table Template (list.tpl)
- Edit, query mode uses form Template (edit.tpl)

◆ Map BizObj fields to UI

- Registration Id ← [Id]
- Attendee Id ← [Attendee Id] Noneditable
- Attendee Name ← [Player Name] Noneditable, Need select field data from AttendeePopup
- Event Id ← [Event Id] Noneditable
- Fee ← [Fee] Need select field from 2 values \$15, \$20.

BizForm design (example cont.)

◆ Add function buttons on UI toolbar

- Search button ← SearchRecord()
- Go button ← RunSearch()
- New button ← NewRecord()
- Edit button ← EditRecord()
- Copy button ← CopyRecord()
- Delete button ← DeleteRecord()
- Save button ← SaveRecord()
- Cancel button ← CancelRecord()

◆ Add Navigation button on UI Navbar

- Go Previous Button ← MovePrev()
- Go Next Button ← MoveNext()

◆ Add ValuePicker to show popup form

BizForm design in Eclipse

The screenshot displays the Eclipse IDE interface for editing a BizForm XML file named `FMRegist.xml`. The main window title is "Resource - FMRegist.xml - Eclipse Platform". The menu bar includes File, Edit, Navigate, Search, Project, Run, Window, and Help. The toolbar contains various icons for file operations and editing.

The Navigator view on the left shows a project structure with several XML files, including `AttendeeView.xml`, `BOAttendee.xml`, `BOAttendeeX.xml`, `BOEvent.xml`, `BOEventX.xml`, `BORegist.xml`, `EventPopup.xml`, `EventView.xml`, `FMAAttendee.xml`, `FMAAttendeeChild.xml`, `FMAAttendeeChild.xml.bak`, `FMAAttendeePopup.xml`, `FMEvent.xml`, `FMEventChild.xml`, `FMRegist.xml` (selected), `RegistView.xml`, `RegistView.xml.bak`, `Selection.xml`, and a `shared` folder containing `BOAuth.xml`.

The main editor area shows the "Overview page" for the `BizForm`. The description states: "BizForm is the container of UI controls mapping to BizDataObj's BizFields". The form fields are as follows:

- Name: `FMRegist`
- Description: `Add description of BizForm`
- Package: `demo`
- Class: `BizForm`
- InheritFrom: (empty)
- jsClass: `jbForm`
- Title: `Registration`
- BizObj: `BORegist`
- PageSize: `10`
- SearchRule: (empty)

The "Metadata Content" section on the right provides details for the metadata object, listing the following sections:

- BizCtrlList:** List of BizCtrls. BizCtrl the class of an UI control which maps to a BizField
- Toolbar:** Toolbar contains a list of html controls that map to user commands
- Navbar:** Navbar - navigation bar contains a list of html controls that control the page navigation
- DisplayModes:** DisplayModes declare the modes of BizForm

The bottom of the editor shows a tabbed interface with "Overview", "BizCtrlList", "Toolbar", "Navbar", and "DisplayModes". The "Tasks" and "Error Log" views are also visible at the bottom.

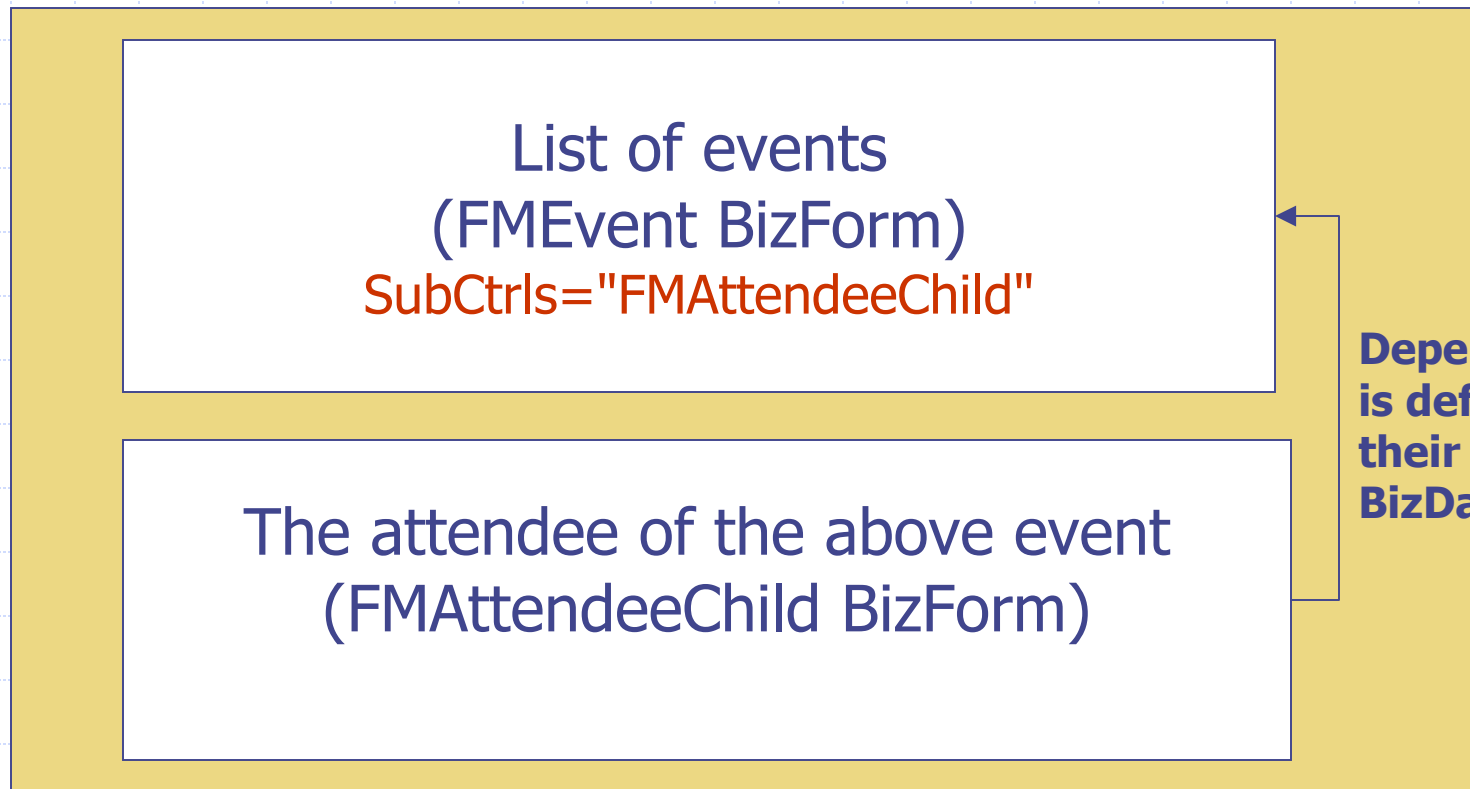
BizView design

- ◆ BizView is the container of BizForms and other HTML controls
 - Page layout is defined in templates
- ◆ Define the relationship between BizForms
 - A BizForm can help subforms that depend on its current data
 - A BizForm can depend on the current data of other BizForm

BizView design (example)

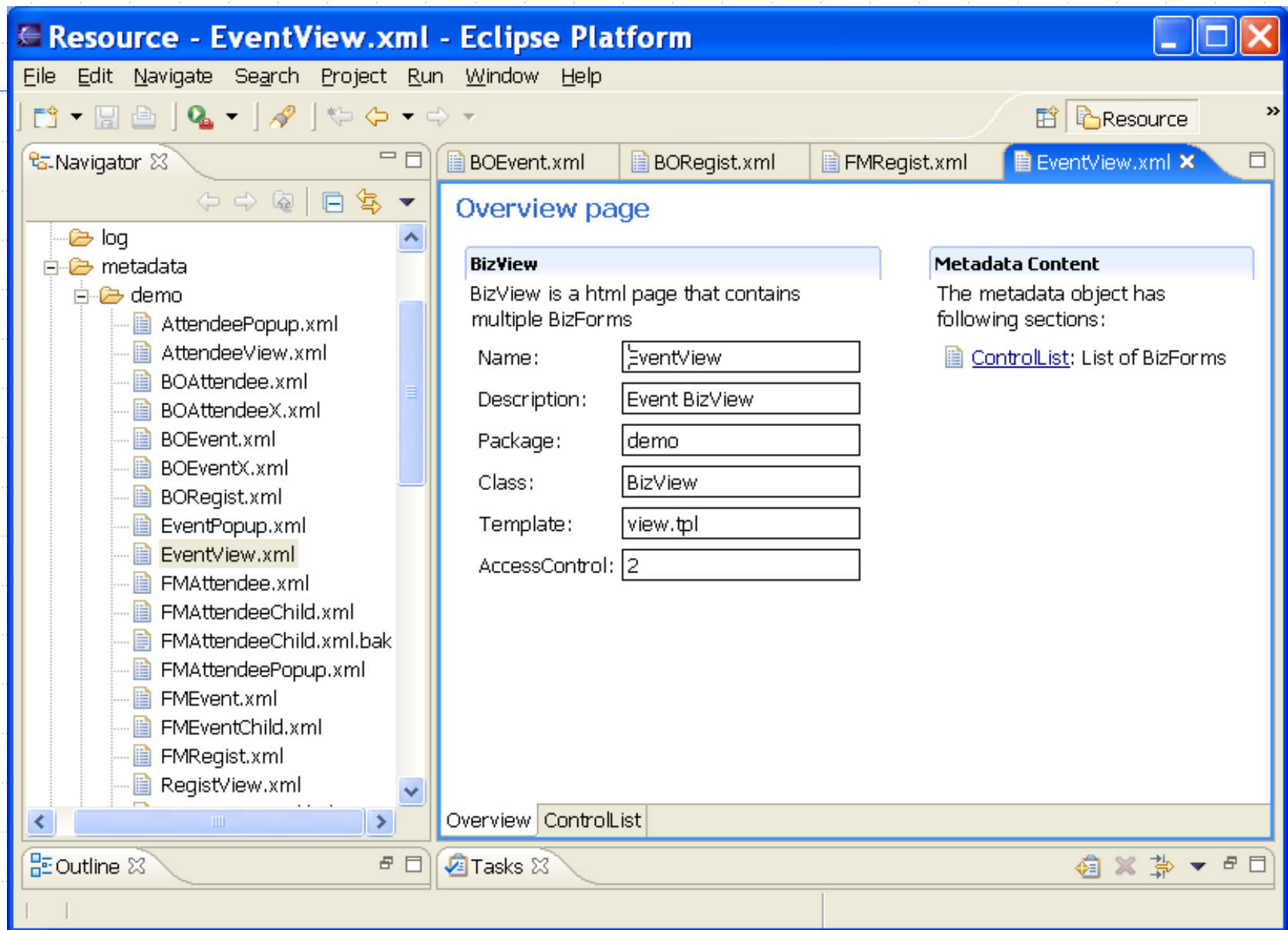
- ◆ What can a user do on the Event view?
 - Add/edit a new event
 - Add/edit attendee for the event
- ◆ What should a user see on the view?
 - An event BizForm
 - An attendee BizForm
- ◆ What the relationship between Forms
 - The attendee form depends on the current data of the event form

BizView design (example cont.)



**Dependency
is defined in
their
BizDataObjs**

BizView design in Eclipse



The screenshot displays the Eclipse IDE interface for editing a BizView XML file. The title bar reads "Resource - EventView.xml - Eclipse Platform". The menu bar includes File, Edit, Navigate, Search, Project, Run, Window, and Help. The toolbar contains icons for file operations and navigation. The Navigator view on the left shows a project structure with folders "log" and "metadata", and a sub-folder "demo" containing various XML files, with "EventView.xml" selected. The main editor area shows the "Overview page" for "EventView.xml". The "BizView" section provides a description and fields for Name, Description, Package, Class, Template, and AccessControl. The "Metadata Content" section indicates the metadata object has sections, with "ControlList" being a list of BizForms. The bottom of the editor shows tabs for "Overview" and "ControlList", and a Tasks view is visible at the bottom right.

Resource - EventView.xml - Eclipse Platform

File Edit Navigate Search Project Run Window Help

log
metadata
demo
AttendeePopup.xml
AttendeeView.xml
BOAttendee.xml
BOAttendeeX.xml
BOEvent.xml
BOEventX.xml
BORegist.xml
EventPopup.xml
EventView.xml
FMAttendee.xml
FMAttendeeChild.xml
FMAttendeeChild.xml.bak
FMAttendeePopup.xml
FMEvent.xml
FMEventChild.xml
FMRegist.xml
RegistView.xml

BOEvent.xml BORegist.xml FMRegist.xml EventView.xml

Overview page

BizView
BizView is a html page that contains multiple BizForms

Name:

Description:

Package:

Class:

Template:

AccessControl:

Metadata Content
The metadata object has following sections:

- [ControlList](#): List of BizForms

Overview ControlList

Outline Tasks

HTML Template design

◆ Typical templates

- Table template – a HTML table contains multiple BizForm records
- Edit template – a HTML form contains single BizForm record

◆ Other templates

- Special templates, such as calendar

◆ All templates must has format `<form id={$name} name={$name}>...</form>`

HTML Template design (cont.)

◆ Data output from BizForm.Render

- `{ $title }`, `{ $name }` as value
- `{ $toolbar }`, `{ $navbar }` as array
- `{ $columns }` as array – field labels/headers
- In table format
 - ◆ `{ $fmttable }` as HTML table as a whole
- In array format
 - ◆ `{ $fields }` as array, for each item in the array `item.label` and `item.control` can be used

◆ These output variables can be used in your template files

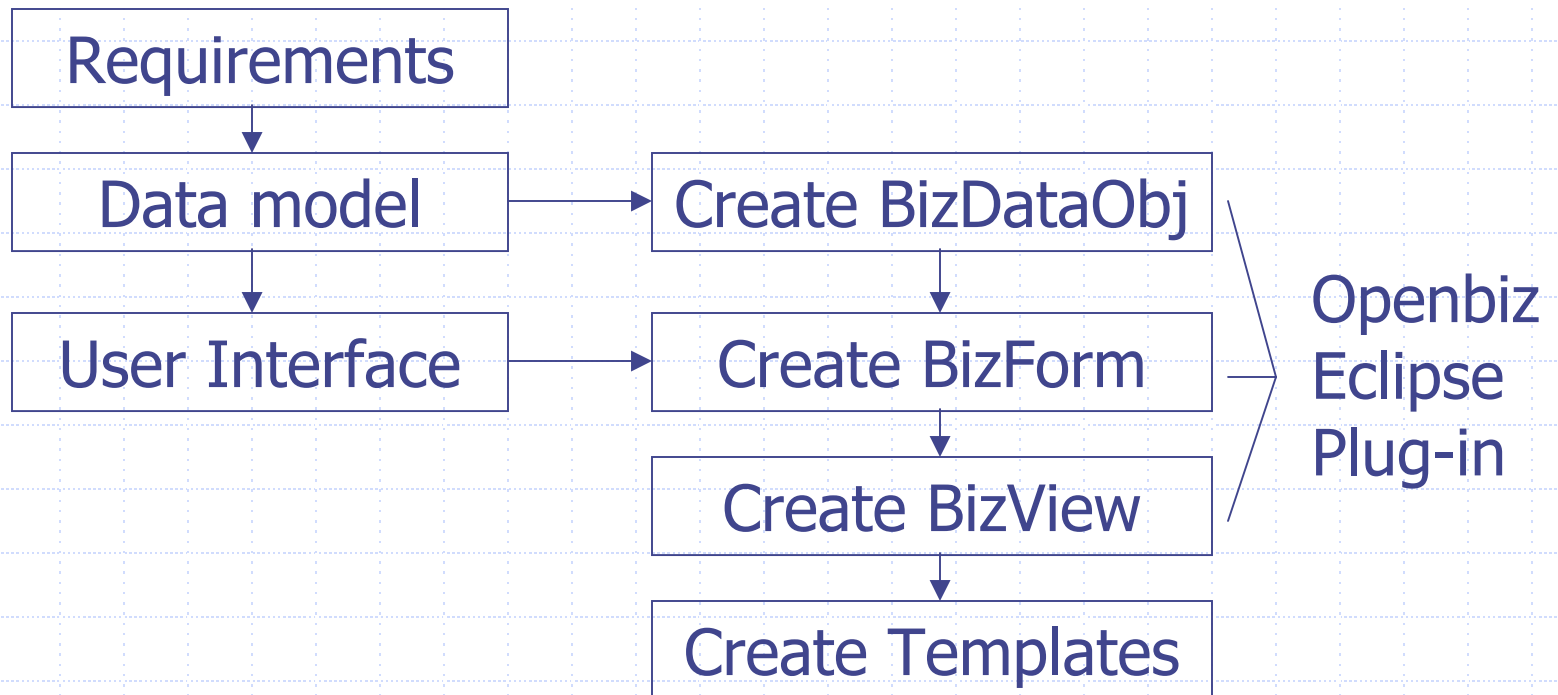
- Please refer to <http://smarty.php.net/> for details

HTML Template design (cont.)

- ◆ Design UI theme of your application
 - Build color theme using CSS
 - CSS file is referred in BizView template
 - Build button theme

Summary

◆ Development steps with OpenBiz



Resource

- ◆ Openbiz home at www.phpopenbiz.org
- ◆ Support email is changed to support@phpopenbiz.org
- ◆ Openbiz Forum at <http://p2.forumforfree.com/obhelp.html>