Convert Oracle Reports, Crystal and Actuate to Oracle BI Publisher
Agenda

• Why convert to BI Publisher?
• Conversion Plan
• Convert Oracle Reports
• Convert Crystal Reports
• Convert Actuate
Why Convert to BI Publisher?
Simplified Report Maintenance

- Separate data logic, layout & translation benefits
  - greater flexibility and reuse
  - fewer reports are easier to maintain
  - optimize data extraction and document generation process
Gallup

Better Managed

Challenge
- 200+ Crystal Reports
- Duplicate reports
- Hard to use & manage

Results
- 30 Publisher reports (85% reduction)
- 3 months w/ one f/t report developer
Why Convert to BI Publisher?
Faster Development

- User creates layout with desktop tools
- IT builds data model

Report Outputs
Report Templates

Multiple Data Sources
MasterCard Worldwide

Faster, Easier Development

Challenge

• 90 days and 3 people (incl. 3rd party vendor) to implement POs

• 50 Operating Units

Result

• 3 days and 1 person to implement POs

• 12x faster w/ 1 person
Why Convert to BI Publisher?
Single Solution for All Documents

- Invoices
- Correspondence
- Purchase Orders
- Shipping Labels
- Government Forms
- EFT & EDI
- Checks
- Operational Reports
- Financial Statements
- Interactive Reports
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**W-2 Wage and Tax Statement**

For Printing Act and Paperwork Reduction.

Do Not Cut, Fold, or Staple Forms on This Page — Do Not Cut, Fold, or Staple Forms on This Page

Department of the Treasury—Internal Revenue Service

Copy A For Social Security Administration — Send this entire page with Form W-2 to the Social Security Administration; photocopies are not acceptable.

[Image of W-2 form]
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• Why convert to BI Publisher?
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Conversion Plan

- Analyze reports
  - Categorize reports by Data
  - Categorize reports by Complexity
  - Evaluate the report size
  - Reduce number of reports

- Create Data Model to handle Data design
- Create RTF Template to handle Layout design
- Convert data handling functions into database functions
- Convert layout formatting functions into XSL/java functions
Agenda

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Convert Oracle Reports

Prerequisites

• Oracle Reports 9i
  – Source reports must eventually be in Oracle Reports XML format. Oracle Reports XML format is supported in Oracle Reports 9i and above
  – If your source reports are not in Oracle Reports XML format, the conversion utility will do this conversion automatically. However, this requires Oracle Reports Designer 9i or later on the same machine where you will do the conversion.

• Setting classpath
  – collections.jar
  – xmlparserv2-904.jar or xmlparserv2.jar
  – xdocore.jar
  – aolj.jar
  – Versioninfo.jar

• JDK 1.5 or higher
Convert Oracle Reports

Conversion Steps

Steps

• Configure data source in BI Publisher Server
• Run the Conversion Assistant with option to upload report to BI Publisher Server
• Compile the PL/SQL package manually into Database
• View Report
• Check Log file for any unhandled features
Convert Oracle Reports
Conversion Assistant

1. Source Paths:
   - RTF files or PDF links are not supported.
   - Oracle Reports Home Path:
     - Required to access RPT files and PDF library.
   - Target Paths:
     - File or database report file, ESQL, Postgresql and Log files.
   - Data Source Name:
     - If using components or dataviews.
   - Debug:
     - Yes or No.
   - Uploaded to Catalog:
     - Yes or No.

2. Database Information:
   - "BI Publisher Source URL:" (SQL Server, ODBC, or JDBC)
   - "Password:" (if required)
   - "Schematrons" (if required)
   - "Report Name:" (if required)

3. Conversion Summary:
   - Converted reports can be viewed on the BI Publisher server.
   - View converted reports on the BI Publisher server: [URL]
   - Conversion Summary:
     - Source Path: [Details]
     - Target Path: [Details]

4. Report uploaded log file: [Details]
Agenda

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Convert Crystal Reports
Conversion Steps

Connection and Data Model Conversion

1. Data Connection
   - Data definition
     - SQL, Function, Stored Procedure
   - Parameters
   - Functions & Formulae

2. Data Source
   - Data Model
     - SQL, Data Template
   - Parameters
   - Functions & Formulae

Layout Conversion

XML Data + Blank or Crystal RTF output

3. Template Builder
   - RTF Template

Crystal Reports | BI Publisher
Convert Crystal Reports
Handling Sub Reports

Crystal Reports with Sub Reports

BI Publisher

- Data Model with Concatenated Data Sets
- Data Model with Data Sets linked by Group or Element Link
- Data Model
- Data Model

- Sub Report with Parent – Child Relationship
- Sub Report
- Sub Report displaying layout conditionally or based on Parameter
- Sub Report
- Sub Report

- Use Hyperlink in RTF
- Sub Template
### Convert Crystal Reports

**Step-by-step conversion of a sample Crystal report**

#### Crystal Report at a glance

- **Banded Report**
- **Group by Department and Manager**
- **Subtotal Salary by group**
- **Data does not break across page**

---

**Employee Salary Report**

<table>
<thead>
<tr>
<th>EmployeeID</th>
<th>Name</th>
<th>Hire Date</th>
<th>Title</th>
<th>Annual Salary</th>
</tr>
</thead>
<tbody>
<tr>
<td>6</td>
<td>Ruth Elenbrook</td>
<td>02/06/1996</td>
<td>Production Technician - WC10</td>
<td>$32,646.00</td>
</tr>
<tr>
<td>10</td>
<td>Darry Johnson</td>
<td>02/07/1996</td>
<td>Production Technician - WC10</td>
<td>$32,646.00</td>
</tr>
<tr>
<td>13</td>
<td>Sonny Higgo</td>
<td>02/08/1996</td>
<td>Production Technician - WC10</td>
<td>$32,646.00</td>
</tr>
<tr>
<td>15</td>
<td>Jeffrey Higgie</td>
<td>03/02/1996</td>
<td>Production Technician - WC10</td>
<td>$32,646.00</td>
</tr>
<tr>
<td>17</td>
<td>Dams Hargay</td>
<td>04/11/1996</td>
<td>Production Technician - WC10</td>
<td>$32,646.00</td>
</tr>
<tr>
<td>19</td>
<td>Daine Orpina</td>
<td>04/29/1996</td>
<td>Production Technician - WC10</td>
<td>$32,646.00</td>
</tr>
<tr>
<td>20</td>
<td>Dianne Marbey</td>
<td>02/02/2000</td>
<td>Production Technician - WC10</td>
<td>$32,646.00</td>
</tr>
</tbody>
</table>

**Total: $227,775.76**
Sample Report Conversion
Convert Connection and Data Model
Convert Connection
Sample Report Conversion
Convert Connection and Data Model

Convert Connection
Sample Report Conversion
Convert Connection and Data Model
Convert Crystal SQL to BI Publisher Data Model
Sample Report Conversion
Convert Connection and Data Model
Convert Crystal SQL to BI Publisher Data Model
Sample Report Conversion
Convert Connection and Data Model
Convert Parameters
Sample Report Conversion
Convert Connection and Data Model

Convert Parameters
Sample Report Conversion
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Sample Report Conversion
Convert Connection and Data Model
Convert Parameters
Sample Report Conversion
Convert Connection and Data Model
Convert Parameters
SELECT "Employee"."ManagerID", "Department"."Name" as DepartmentName, "Employee"."EmployeeID", "Contact"."FirstName", "Contact"."LastName", "Employee"."Title", "Employee"."Hiredate", "EmployeePayHistory"."Rate", "Contact_1"."FirstName" MgrFirstName, "Contact_1"."LastName" MgrLastName
FROM ((("AdventureWorks"."HumanResources"."EmployeePayHistory" "EmployeePayHistory" INNER JOIN (("AdventureWorks"."HumanResources"."Department" "Department" INNER JOIN "AdventureWorks"."HumanResources"."EmployeeDepartmentHistory" "EmployeeDepartmentHistory" ON "Department"."DepartmentID"="EmployeeDepartmentHistory"."DepartmentID") INNER JOIN "AdventureWorks"."HumanResources"."Employee" "Employee" ON "Employee"."EmployeeID"="EmployeeDepartmentHistory"."EmployeeID") ON "EmployeePayHistory"."EmployeeID"="Employee"."EmployeeID") INNER JOIN "AdventureWorks"."Person"."Contact" "Contact" ON "Employee"."ContactID"="Contact"."ContactID") INNER JOIN "AdventureWorks"."HumanResources"."Employee" "Employee_1" ON "Employee"."ManagerID"="Employee_1"."EmployeeID") INNER JOIN "AdventureWorks"."Person"."Contact" "Contact_1" ON "Employee_1"."ContactID"="Contact_1"."ContactID"

WHERE "EmployeePayHistory"."ModifiedDate" = (SELECT max("EmployeePayHistory"."ModifiedDate") FROM "EmployeePayHistory" WHERE "EmployeePayHistory"."EmployeeID"="Employee"."EmployeeID")

AND "Department"."Name" = IsNull("Department"."Department"."Name")

ORDER BY "Department"."Name", "Employee"."EmployeeID"
Sample Report Conversion
Convert Connection and Data Model

Convert formulas
CREATE FUNCTION f_AnnualSalary
( @Val1 float, @Val2 varchar(50))
RETURNS float
AS
BEGIN
    declare @sal float
    if datepart(yyyy,@Val2) < 2000
        (select @sal= @Val1 * 8 * 300 + @Val1 * 20)
    else
        if datepart(yyyy,@Val2) >= 2000 and datepart(yyyy,@Val2) < 2005
            (select @sal=@Val1 * 8 * 300 + @Val1 * 15)
        else
            (select @sal=@Val1 * 8 * 300 + @Val1 * 10)
    RETURN (@sal)
END
Sample Report Conversion
Convert Connection and Data Model

Convert formulas

```sql
CREATE FUNCTION f_AnnualSalary (@Val1 float, @Val2 varchar(50)) RETURNS float AS BEGIN
    declare @sal float
    if datepart(yyyy,@Val2) < 2000
        (select @sal= @Val1 * 8 * 300 + @Val1 * 20)
    else
        if datepart(yyyy,@Val2) >= 2000 and datepart(yyyy,@Val2) < 2005
            (select @sal=@Val1 * 8 * 300 + @Val1 * 15)
        else
            (select @sal=@Val1 * 8 * 300 + @Val1 * 10)
    RETURN (@sal)
END

SELECT "Employee"."ManagerID", "Department"."Name" as DepartmentName, "Employee"."EmployeeID", "Contact"."FirstName" + ' ' + "Contact"."LastName" EmpName, "Employee"."Title", "Employee"."Hiredate" as EmpHireDate, "EmployeePayHistory"."Rate" Rate, "Contact_1"."FirstName" + ' ' + "Contact_1"."LastName" Manager, "AdventureWorks"."dbo".f_annualsalary("EmployeePayHistory"."Rate", "Employee"."Hiredate") as AnnualSalary FROM ((("AdventureWorks"."HumanResources"."EmployeePayHistory" "EmployeePayHistory" INNER JOIN (("AdventureWorks"."HumanResources"."Department" "Department" INNER JOIN "AdventureWorks"."EmployeeDepartmentHistory" "EmployeeDepartmentHistory" ON "Department"."DepartmentID"="EmployeeDepartmentHistory"."DepartmentID") INNER JOIN "AdventureWorks"."HumanResources"."Employee" "Employee" ON "EmployeeDepartmentHistory"."EmployeeID"="Employee"."EmployeeID") ON "EmployeePayHistory"."EmployeeID"="Employee"."EmployeeID") ON "EmployeePayHistory"."EmployeeID"="Employee"."EmployeeID") ON "EmployeePayHistory"."EmployeeID"="Employee"."EmployeeID") INNER JOIN "AdventureWorks"."HumanResources"."Employee" "Employee_1" ON "Employee"."ManagerID"="Employee_1"."EmployeeID") INNER JOIN "AdventureWorks"."Person"."Contact" "Contact" ON "Employee"."ContactID"="Contact"."ContactID") INNER JOIN "AdventureWorks"."HumanResources"."Employee" "Employee_1" ON "Employee"."ManagerID"="Employee_1"."EmployeeID") INNER JOIN "AdventureWorks"."Person"."Contact" "Contact_1" ON "Employee_1"."ContactID"="Contact_1"."ContactID"
WHERE "EmployeePayHistory"."ModifiedDate" = (select max("EmployeePayHistory"."ModifiedDate") from "EmployeePayHistory" where "EmployeePayHistory"."EmployeeID"="Employee"."EmployeeID") and "Department"."Name" = IsNull(:department, "Department"."Name")
ORDER BY "Department"."Name", "Employee"."ManagerID", "Employee"."EmployeeID"
```

```sql
SELECT "Employee"."ManagerID", "Department"."Name" as DepartmentName, "Employee"."EmployeeID", "Contact"."FirstName" + ' ' + "Contact"."LastName" EmpName,
"Employee"."Title", "Employee"."Hiredate" as EmpHireDate, "EmployeePayHistory"."Rate" Rate,
"Contact_1"."FirstName" + ' ' + "Contact_1"."LastName" Manager,"AdventureWorks"."dbo".f_annualsalary("EmployeePayHistory"."Rate", "Employee"."Hiredate") as AnnualSalary
FROM ((("AdventureWorks"."HumanResources"."EmployeePayHistory" "EmployeePayHistory" INNER JOIN (("AdventureWorks"."HumanResources"."Department" "Department" INNER JOIN "AdventureWorks"."EmployeeDepartmentHistory" "EmployeeDepartmentHistory" ON "Department"."DepartmentID"="EmployeeDepartmentHistory"."DepartmentID") INNER JOIN "AdventureWorks"."HumanResources"."Employee" "Employee" ON "EmployeeDepartmentHistory"."EmployeeID"="Employee"."EmployeeID") ON "EmployeePayHistory"."EmployeeID"="Employee"."EmployeeID") ON "EmployeePayHistory"."EmployeeID"="Employee"."EmployeeID") ON "EmployeePayHistory"."EmployeeID"="Employee"."EmployeeID") INNER JOIN "AdventureWorks"."HumanResources"."Employee" "Employee_1" ON "Employee"."ManagerID"="Employee_1"."EmployeeID") INNER JOIN "AdventureWorks"."Person"."Contact" "Contact" ON "Employee"."ContactID"="Contact"."ContactID") INNER JOIN "AdventureWorks"."HumanResources"."Employee" "Employee_1" ON "Employee"."ManagerID"="Employee_1"."EmployeeID") INNER JOIN "AdventureWorks"."Person"."Contact" "Contact_1" ON "Employee_1"."ContactID"="Contact_1"."ContactID"
WHERE "EmployeePayHistory"."ModifiedDate" = (select max("EmployeePayHistory"."ModifiedDate") from "EmployeePayHistory" where "EmployeePayHistory"."EmployeeID"="Employee"."EmployeeID") and "Department"."Name" = IsNull(:department, "Department"."Name")
ORDER BY "Department"."Name", "Employee"."ManagerID", "Employee"."EmployeeID"
```
Sample Report Conversion
Convert Layout
Sample Report Conversion

Convert Layout

Add Group Total for AnnualSalary
Sample Report Conversion

Convert Layout

Sample Report Conversion
Convert Layout

Use Microsoft Word Native formatting features to match table column width, height, shade, font etc.

Use Microsoft Word Header and Footer for Report Page Headers and Footers
## Sample Report Conversion

### Side by side comparison

### Crystal Report Output

#### EMPLOYEE SALARY REPORT

<table>
<thead>
<tr>
<th>Employee ID</th>
<th>Name</th>
<th>Hire Date</th>
<th>Title</th>
<th>Manager</th>
<th>Department</th>
<th>Hourly Rate</th>
<th>Total Earnings</th>
</tr>
</thead>
<tbody>
<tr>
<td>100</td>
<td>John Smith</td>
<td>01/01/1990</td>
<td>Production Technician</td>
<td>Andrew</td>
<td>IT</td>
<td>$20.00/hr</td>
<td>$40,000.00</td>
</tr>
<tr>
<td>101</td>
<td>Jane Doe</td>
<td>02/01/1990</td>
<td>Production Technician</td>
<td>Andrew</td>
<td>IT</td>
<td>$20.00/hr</td>
<td>$40,000.00</td>
</tr>
<tr>
<td>102</td>
<td>Richard Roe</td>
<td>03/01/1990</td>
<td>Production Technician</td>
<td>Andrew</td>
<td>IT</td>
<td>$20.00/hr</td>
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</tr>
<tr>
<td>103</td>
<td>Susan Brown</td>
<td>04/01/1990</td>
<td>Production Technician</td>
<td>Andrew</td>
<td>IT</td>
<td>$20.00/hr</td>
<td>$40,000.00</td>
</tr>
<tr>
<td>104</td>
<td>Michael Green</td>
<td>05/01/1990</td>
<td>Production Technician</td>
<td>Andrew</td>
<td>IT</td>
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</table>

Total: $200,000.00

### BI Publisher Report Output

#### EMPLOYEE SALARY REPORT

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Convert Actuate Report

Layout Conversion

Actuate Design File (ROD)
Actuate Output File (BAS)

Layout Conversion Tool

RTF Template

Data Conversion

Siebel Tools Objects
- Business Objects
  - Views
  - View Reports
  - Reports Sub Reports
  - Fields

IO Creator Tool
- Integration Object
  - Integration Components
  - Integration Fields

XML Data

Actuate Report Conversion Assistant
Stay Connected with BI Publisher

http://www.youtube.com/bipublisher

http://twitter.com/oracleEPMBI

http://www.linkedin.com/groups?mostPopular=&gid=49643

http://www.facebook.com/OracleEPMBI?v=wall
Appendix


• Siebel Reports 8.1.1 Bookshelf - [http://download.oracle.com/docs/cd/E14004_01/books/Reports/ReportsTOC.html](http://download.oracle.com/docs/cd/E14004_01/books/Reports/ReportsTOC.html)

• Actuate Conversion Assistant Download - [https://metalink3.oracle.com/od/faces/index.jspx patch # 8288024](https://metalink3.oracle.com/od/faces/index.jspx patch # 8288024)

• “Converting reports from Business Objects Crystal Reports to Oracle BI Publisher” [http://download.oracle.com/otndocs/xmlp/CrystaltoBIP.pdf](http://download.oracle.com/otndocs/xmlp/CrystaltoBIP.pdf)

• “Reports6i to BIP GUI Conversion Utilities” – Ike Wiggins’ Blog [http://bipublisher.blogspot.com/2009/05/bi-publisher-reports6i-to-bip.html](http://bipublisher.blogspot.com/2009/05/bi-publisher-reports6i-to-bip.html)
More Information

search.oracle.com

BI Publisher

or

http://www.oracle.com/technology/products/xml-publisher
Hardware and Software

Engineered to Work Together
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