



## Business Intelligence Portfolio

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# PROJECT OVERVIEW

**Introduction:** This portfolio contains examples of my development skills in the Business Intelligence arena. It is a result of my project work during the 12-week SetFocus Master's Program.

**SetFocus utilizes Microsoft Official Curriculum in conjunction with its own materials. Core technologies covered:**

- Microsoft SQL Server 2008 T-SQL
- Data Warehousing Concepts
- Microsoft SQL Server 2008 Integration Services (SSIS)
- Microsoft SQL Server 2008 Analysis Services (SSAS)
- MDX Queries
- Microsoft SQL Server 2008 Reporting Services (SSRS)
- Business Intelligence with SharePoint and Performance Point Server

**Project Goals:**

## **Integration Services**

- Create packages to transfer data from different raw data sources (XLS, CSV, and XML) into a SQL Server 2008 database.
- Schedule packages nightly to import/update any additional information.
- Perform validation to detect errors (e.g. child records with invalid parent records).
- Generate emails with results including number of rows inserted and updated.
- Create a separate package to re-index and shrink the database, as well as perform nightly backups of the database.

## **Analysis Services**

- Using BIDS, create an Analysis Services solution using the newly created SQL Server 2008 database for AllWorks.
- Create a custom data view, build a cube with fact tables and dimensions, create attributes and hierarchies.
- Create calculated measures and set up key point indicators (KPIs) to analyze and measure AllWorks profitability and costs.
- Write a series of MDX queries to provide data for business decisions and display the results in Excel.

## **Reporting Services**

- Use SSRS to create user-requested reports based on data from the previously created OLAP database. Publish the reports to SharePoint.

## **Performance Point Server/Excel Services/SharePoint**

- Create a PPS dashboard with 5 pages, publish to SharePoint
- Create a PPS dashboard with 3 spreadsheets, publish to SharePoint

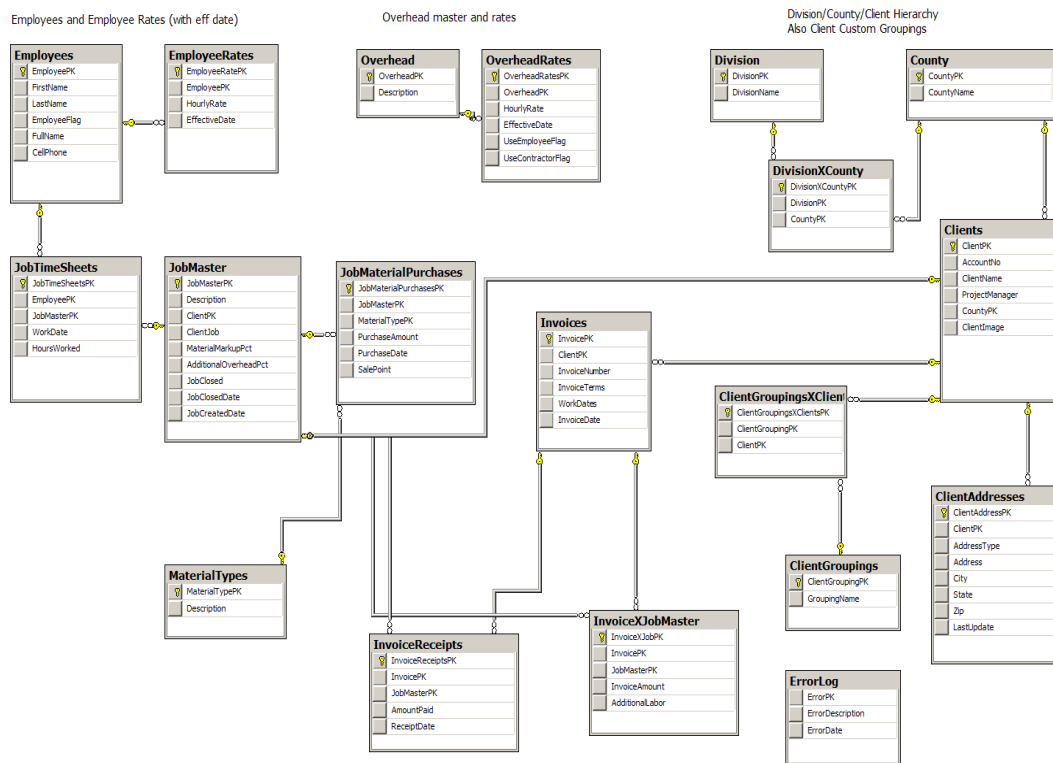
# SSIS PROJECT

**Introduction:** Design and build a SQL Server 2008 database to track employee and customer information, timesheet and labor rates data, as well as job information, job materials, and customer invoices for a fictitious construction company called AllWorks. All Works currently stores this information in Excel Spreadsheets, XML files, and CSV files. They need enhancements made to their existing process in order to support more flexible business practices for customer invoicing.

## SSIS Project Goals:

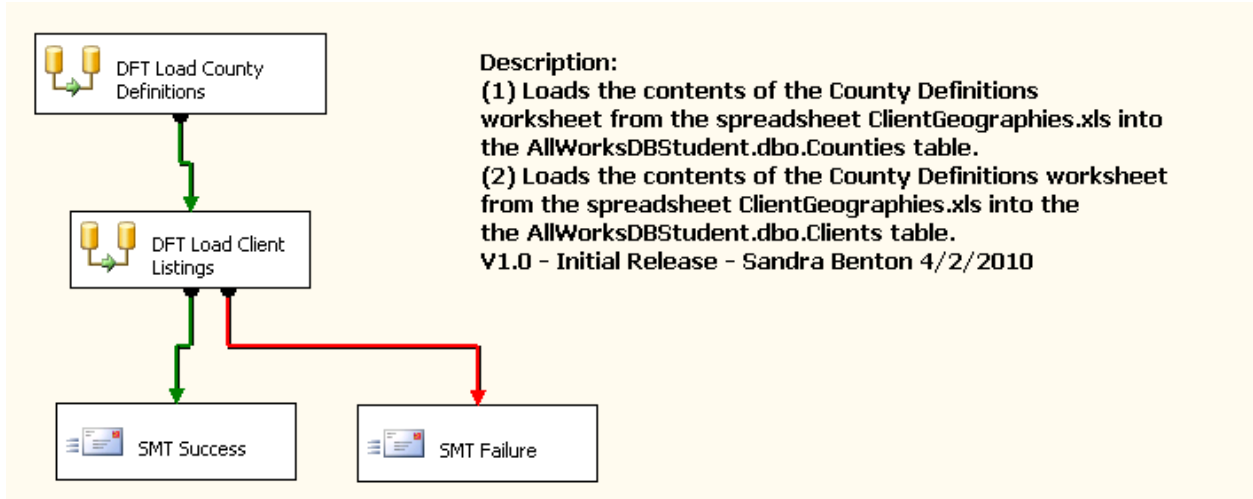
- Create packages to transfer data from different raw data sources (XLS, CSV, and XML) into a SQL Server 2008 database.
- Schedule packages nightly to import/update any additional information.
- Perform validation to detect errors (e.g. child records with invalid parent records).
- Generate emails with results including number of rows inserted and updated.
- Create a separate package to re-index and shrink the database, as well as perform nightly backups of the database.

The completed project will integrate the spreadsheet data into the AllWorks database which is structured according to the following diagram:

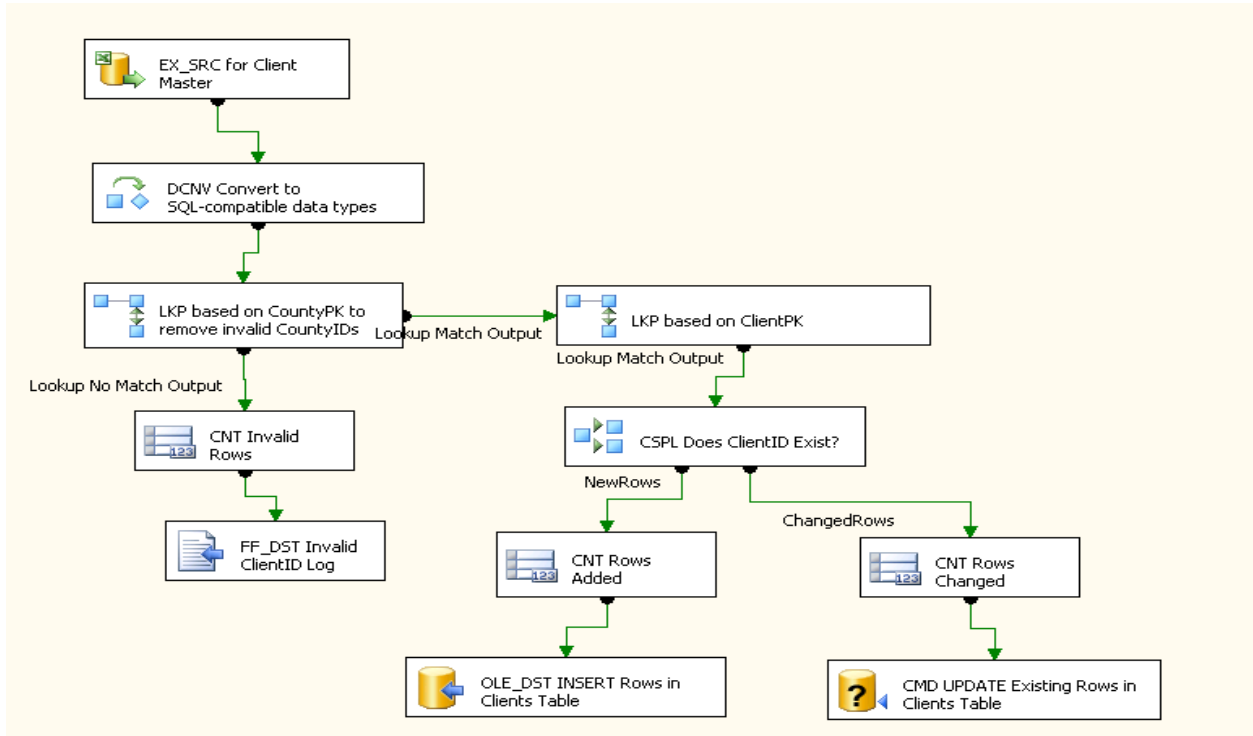


# SSIS PROJECT SAMPLE

Control Flow task for the package that loads data from the Client spreadsheet to the staging database. An email will be sent depending on success or failure of the package. Success emails will include the count of rows inserted, rows changed, and invalid rows.

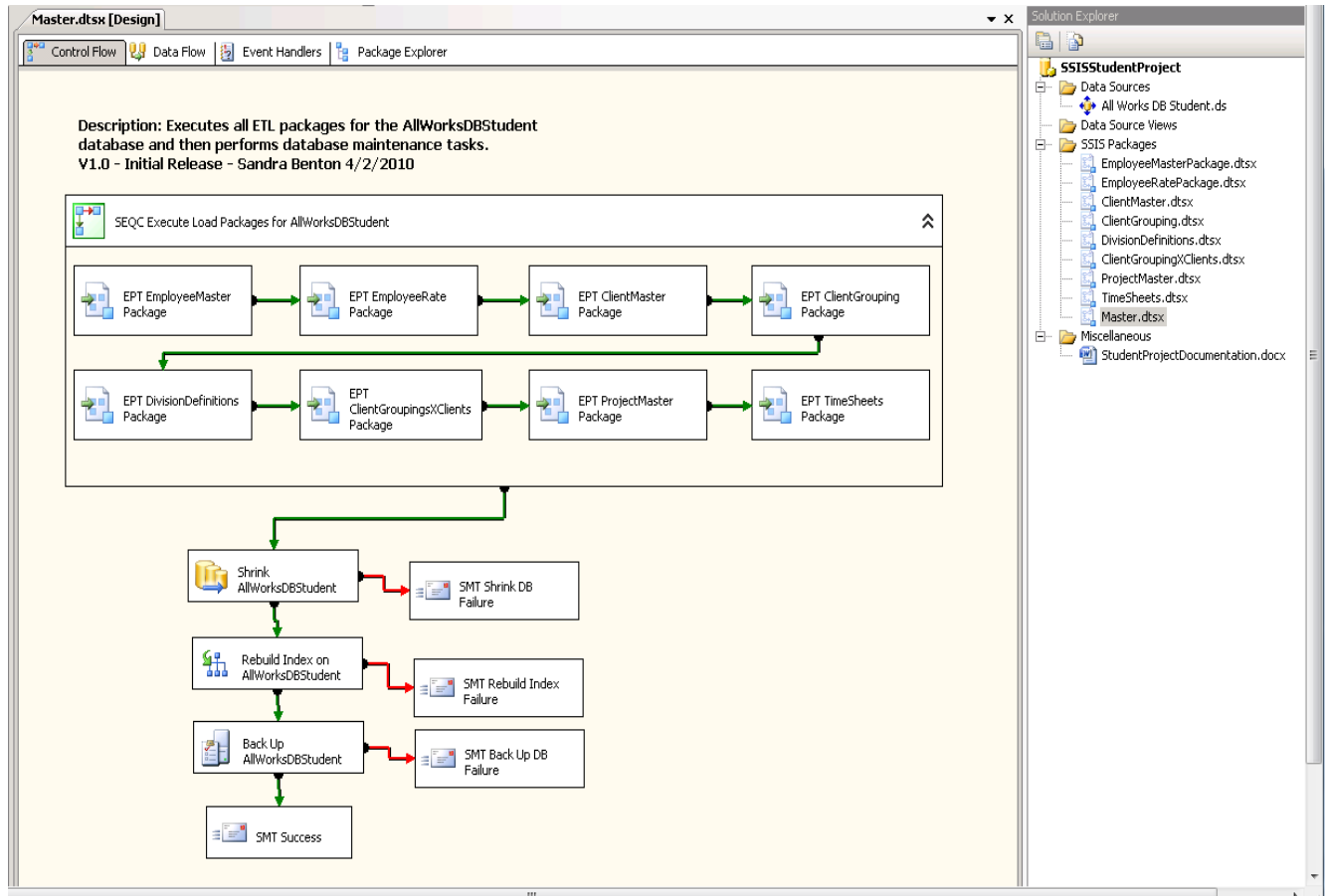


Data Flow task to import the data from the Excel worksheets, convert the columns to conform to the AllWorks database, validate the CountyIDs (invalids will be sent to a flat file), and insert new records into the Client table:



# SSIS PROJECT SAMPLE

Master Package that executes all eight ETL packages. Includes database maintenance tasks to re-index and shrink the database, as well as perform nightly backups of the database. Email notification will be sent based on success or failure.



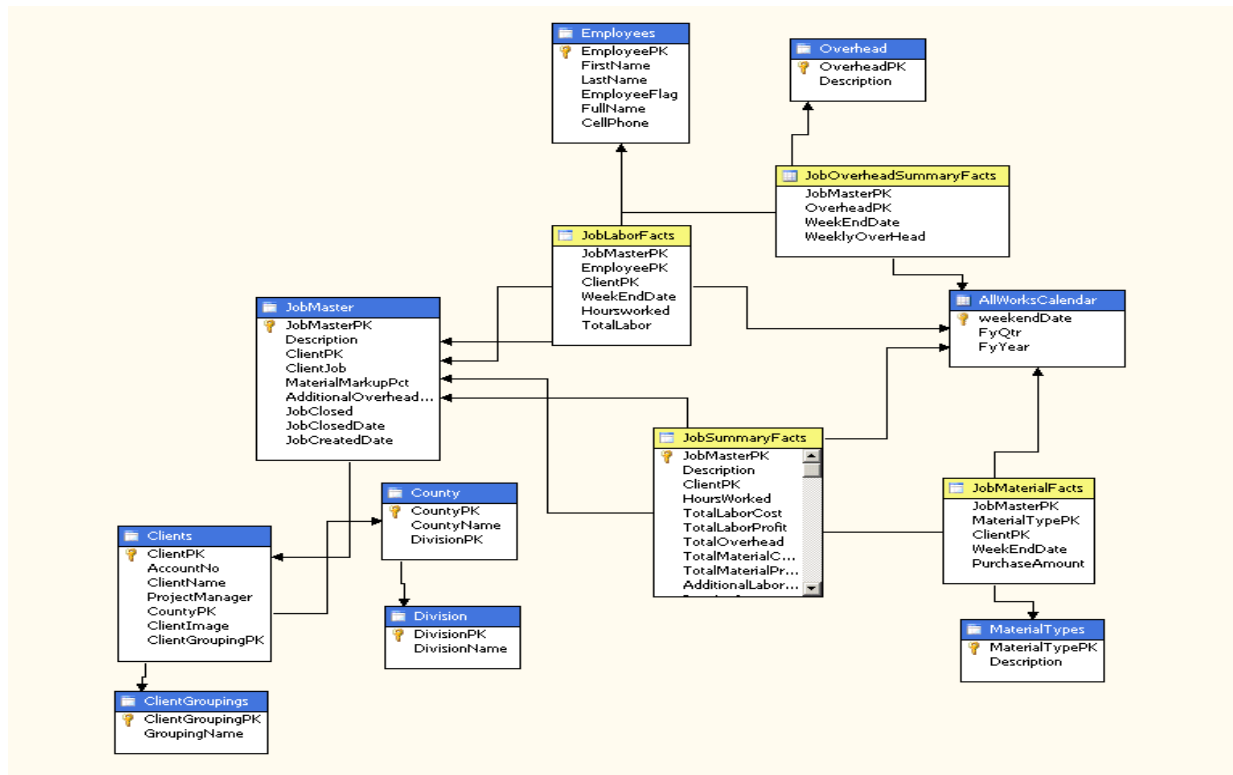
# SSAS PROJECT

**Introduction:** Build an analysis package solution using Analysis Services, setting the SQL database as the datasource. From the SQL Server database, build several custom views into the database, set up a series of cubes, dimensions, and key point indicators (KPIs). Write MDX queries and display the results in Excel.

## SSAS Project Goals:

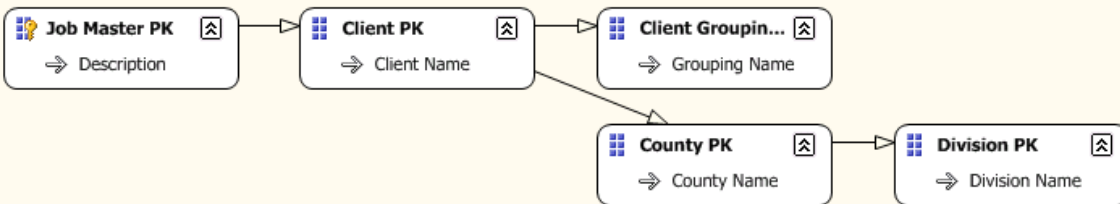
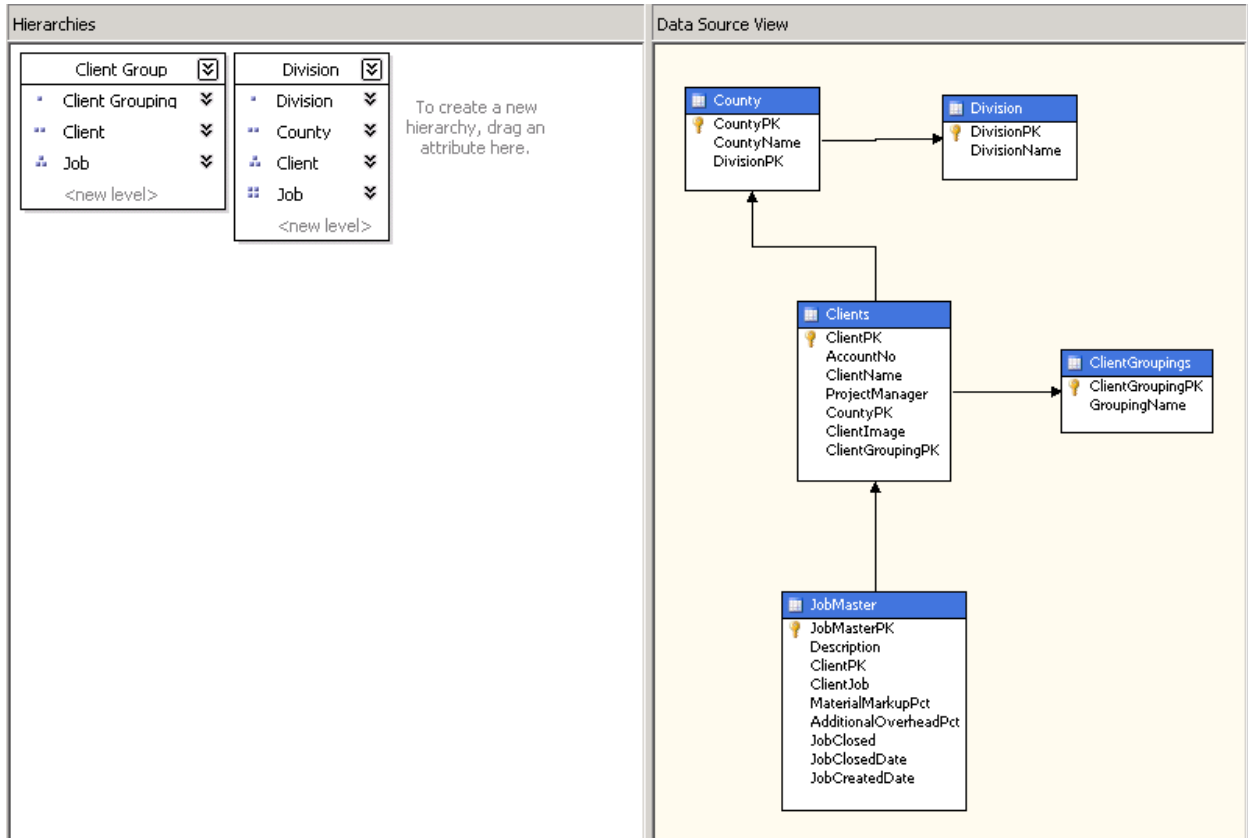
- Create an SSAS solution in BIDS from the previously created AllWorks staging database and create a custom data view, build a cube with fact tables and dimensions, define attributes and hierarchies.
- Create two partitions for each fact table – one for data up to and including 2005 and one for data 2006 and later.
- Create four perspectives, each having one measure group and the dimensions related to the measure group in the Dimension Usage.
- Create calculated measures and set up five key point indicators (KPIs) to analyze and measure AllWorks profitability and costs.
- Write a series of MDX queries to provide data for business decisions and display the results in Excel.

**Data source view for the cube constructed from the AllWorks staging database:**



# SSAS PROJECT SAMPLE

Define attributes and hierarchies. Example for the Job Master dimension:



# SSAS PROJECT SAMPLE

**Partitioning the cube. Two partitions for each fact table were created – one partition for data up to and including 2005 and one partition for data 2006 and later:**

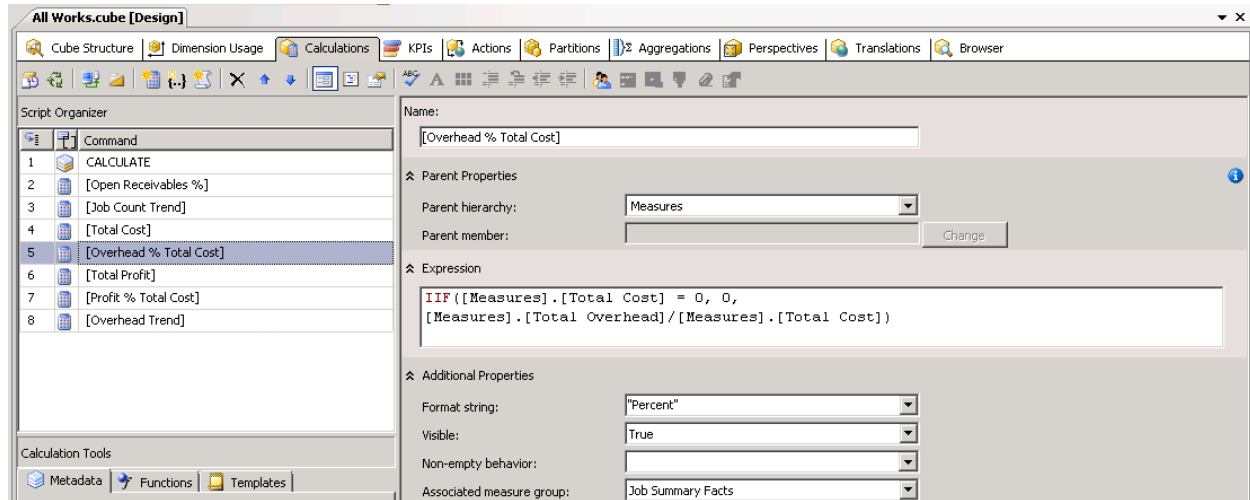
Partition Name	Source	Estimated Rows	Storage Mode	Aggregation Design
1 Job_Summary_Facts_post2005	SELECT [dbo].[JobSummaryFacts].[JobMasterPK],[dbo].[JobSum...	62	MOLAP	AggDesign_Job_Summary_Fa...
2 Job_Summary_Facts_pre2006	SELECT [dbo].[JobSummaryFacts].[JobMasterPK],[dbo].[JobSum...	108	MOLAP	AggDesign_Job_Summary_Fa...

**Adding perspectives. Four perspectives were created, each having one measure group and the dimensions related to the measure group in the Dimension Usage:**

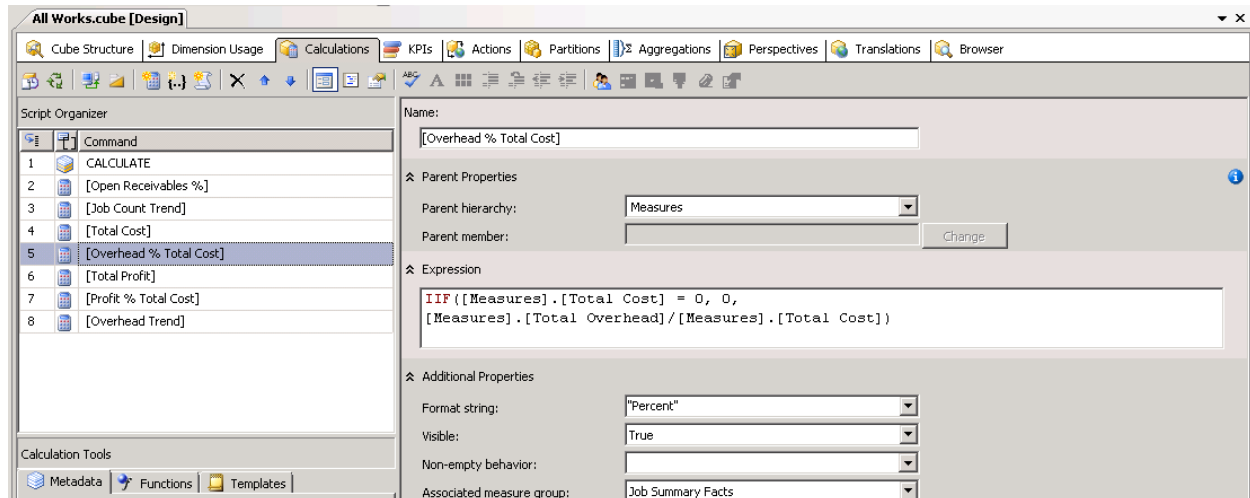
Cube Objects	Object Type	Perspective Name	Perspective Name	Perspective Name	Perspective Name
All Works	Name	JobSummary	JobOverhead	JobMaterial	JobLabor
	DefaultMeasure				
<b>Measure Groups</b>					
Job Summary Facts	MeasureGroup	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Client PK	Measure	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Hours Worked	Measure	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Total Labor Cost	Measure	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Total Labor Profit	Measure	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Total Overhead	Measure	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Total Material Cost	Measure	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Total Material Profit	Measure	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Additional Labor Profit	Measure	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Invoice Amount	Measure	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Amount Received	Measure	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Job Summary Facts Count	Measure	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Job Overhead Summary Facts	MeasureGroup	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Weekly Over Head	Measure	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Job Overhead Summary Facts Co...	Measure	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Job Material Facts	MeasureGroup	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Client PK - Job Material Facts	Measure	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Purchase Amount	Measure	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Job Material Facts Count	Measure	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Job Labor Facts	MeasureGroup	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Client PK - Job Labor Facts	Measure	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Hoursworked	Measure	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Total Labor	Measure	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Job Labor Facts Count	Measure	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<b>Dimensions</b>					
Job Master	CubeDimension	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Overhead	CubeDimension	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Material Types	CubeDimension	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Employees	CubeDimension	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

# SSAS PROJECT SAMPLE

Example of a Calculated Member in the cube to compute the overhead costs as a percent of total costs:



The Calculated Members [Total Cost] and [Overhead % Total Cost] are then used in the KPI:



# SSAS PROJECT SAMPLE/ KPI

## KPI in Excel:

Row Labels	OverheadPercentage	OverheadPercentage Status
	0.00%	🟢
#224 KSM	34.39%	🔴
04-32MJ	19.98%	🔴
0501DMM/BRICK MAILBOX	19.21%	🔴
0501HH /ALTHOS	10.24%	🟡
0501KUNG/FILERJOB	9.44%	🟢
0502DMM/04/28H	15.67%	🔴
0502MI/BELLTOWER	3.74%	🟢
0503DMM 04-31H	17.11%	🟢
05-03RAK/PICKETT	8.77%	🟢
0504DWM/05-02H	20.41%	🔴
0504RAK/GRAHAM	0.00%	🟢
05-04RAK/GRAHAM	6.09%	🟢
0505DWM/05-01H	19.13%	🔴
0505RAK	6.37%	🟢
05-05RAK/LENTZ R. WALL	0.00%	🟢
0506DMM/0427H	20.46%	🔴
05-06RAK-SCHMIDT	2.29%	🟢
0507DMM/SUMMIT STONE	8.38%	🟢
0508/ MISC: DMM	18.67%	🔴
0509SUMM BRICK SPEC	15.92%	🔴
0510SUMMIT SIGN	8.75%	🟢
0512DMM/HUBBARD	15.25%	🔴
0513DMM/CHARTER H.	15.25%	🔴
0514DMM/HUBBARD HOMES/B.HILL	15.25%	🔴
05-15DMM/SUMMIT STEPS	9.30%	🟢
05-16DMM/STRATMYER	9.24%	🟢
0517/DMM/FORGE	11.46%	🟢
0518DMM/REGENTS GLEN	14.98%	🟡
0519DMM/0504H	16.28%	🔴
0520DMM/PIERS	10.86%	🟢
0521DMMMARTIN/GLENROCK	14.12%	🟡
0522DMM	8.78%	🟢
0523DMM/POFF	12.47%	🟡
0524DMM/ROSENSTEEL	0.00%	🟢
0525DMM/ 13CH	15.39%	🔴
162/GARY MOYER	6.30%	🟢
163/RIDGE/SPEC HOME	8.09%	🟢

# SSAS PROJECT SAMPLE/ MDX QUERY

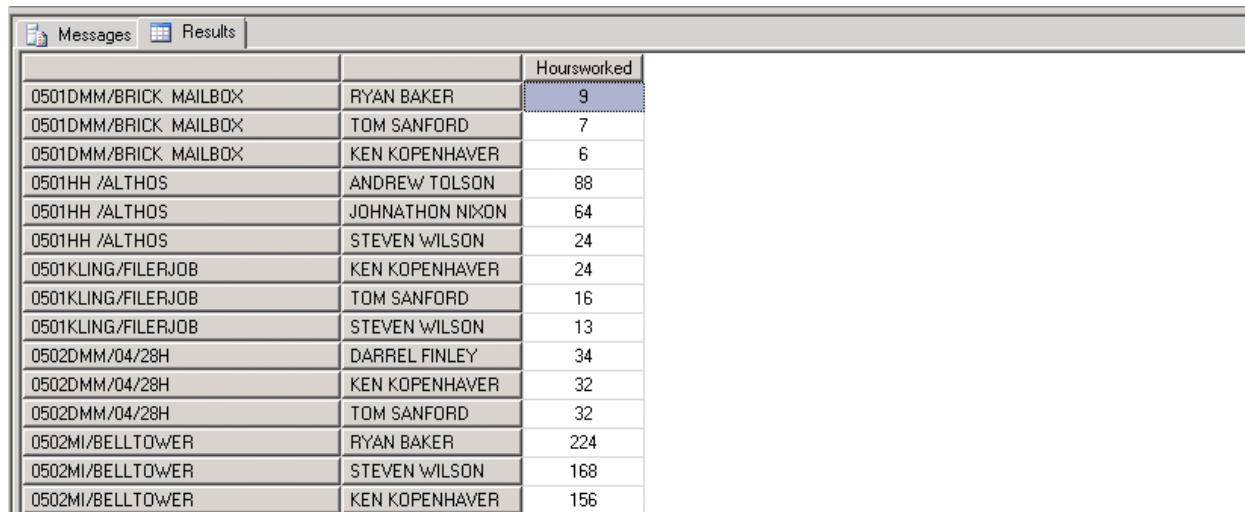
## Query the cube using mdx queries

```
/*
SetFocus, LLC
4/23/2010

JobLabor04.mdx: For 2005, show the job and the top three employees who
worked the most hours on that job.
Show the jobs in alphabetical order and for each job show the employees in
hours worked order.

*/

SELECT [Measures].[Hoursworked] ON COLUMNS,
NON EMPTY
GENERATE (
    [Job Master].[Description].Children,
    [Job Master].[Description].CurrentMember *
    TOPCOUNT (
--Get Top 3 employees for the current job
        [Employees].[Full Name].Children,
        3,
        Measures].[Hoursworked]
    )
) ON ROWS
FROM [All Works]
WHERE [All Works Calendar].[Fy Year].&[2005]
```



		Hoursworked
0501DMM/BRICK MAILBOX	RYAN BAKER	9
0501DMM/BRICK MAILBOX	TOM SANFORD	7
0501DMM/BRICK MAILBOX	KEN KOPENHAVER	6
0501HH /ALTHOS	ANDREW TOLSON	88
0501HH /ALTHOS	JOHNATHON NIXON	64
0501HH /ALTHOS	STEVEN WILSON	24
0501KLING/FILERJOB	KEN KOPENHAVER	24
0501KLING/FILERJOB	TOM SANFORD	16
0501KLING/FILERJOB	STEVEN WILSON	13
0502DMM/04/28H	DARREL FINLEY	34
0502DMM/04/28H	KEN KOPENHAVER	32
0502DMM/04/28H	TOM SANFORD	32
0502MI/BELLTOWER	RYAN BAKER	224
0502MI/BELLTOWER	STEVEN WILSON	168
0502MI/BELLTOWER	KEN KOPENHAVER	156

# SSRS PROJECT

**Introduction:** Use SSRS to create user-requested reports based on data from the previously created OLAP database. Publish the reports to SharePoint.

## SSRS Project Goals:

- Create an Overhead Category report and set up a shared schedule in SharePoint, so that every day at 8 AM, the report is run (for the most recent quarter) as a web page in the Subscriptions Library.
- Create an Employee Jobs in Date Range labor report.

## Overhead Category Report

Report preview from my SharePoint site. User can request any quarter with data from the drop-down list and the report displays data for that quarter and the previous quarter. Report defaults to the most recent quarter that has data.

The screenshot shows a web browser window displaying a report titled "Overhead Category" from a SharePoint site. The report is for the year 2010G1SSRS. The browser address bar shows the URL: http://vm170:4826/sites/2010G1SB/\_layouts/ReportServer/RSViewerPage.aspx?rv:Relat. The report content includes the AllWorks logo, the title "Overhead Category", and a table comparing 2007 Q1 and 2007 Q2 data. The table has columns for Description, Prev Qtr, Current Qtr, and Pct change. The data shows a general increase in costs from Q1 to Q2. A "Parameters" panel on the right shows "FY Qtr" set to "2007 Q2". At the bottom of the report, it says "Run by SFDOMAIN\sandra.benton on 5/31/2010 8:05:21 PM. Page 1 of 1." The browser status bar at the bottom indicates "Local intranet | Protected Mode: Off" and "100%" zoom.

Description	Prev Qtr	Current Qtr	Pct change
TOTAL	\$16,048.46	\$19,475.50	21.35 %
HEALTH INSURANCE	\$3,655.85	\$4,541.98	24.24 %
LIABILITY INSURANCE	\$853.27	\$970.18	13.70 %
MOBIL PHONES	\$1,959.36	\$2,227.82	13.70 %
SOCIAL SECURITY	\$1,580.13	\$1,796.63	13.70 %
TRUCKS	\$4,128.96	\$5,129.76	24.24 %
WORKMANS COMP	\$3,870.90	\$4,809.15	24.24 %

# SSRS PROJECT SAMPLE

## Dataset layout view of Overhead Category report with Calculated Member:

**Dimension**

Dimension	Hierarchy	Operator	Filter Expression	Parameters
Project Overhead View	FY Qtr	Equal	{ 2005 Q4 }	<input checked="" type="checkbox"/>
<Select dimension>				

Description	Weekly Over Head	OverheadPrevQtr
ACCOUNTANTS FEES	140	(null)
ADVERTISING	44	(null)
ESTIMATED TAX/QTRLY235	216	(null)
EXTRA: FUEL	528.705	537.12
HEALTH INSURANCE	3577.77	4163.4
LIABILITY INSURANCE	38	(null)
MISC EQUIPMENT	44	(null)
MOBIL PHONES	86	(null)
RENT	104	(null)
TRUCKS	3712.23	3222.72
WORKMANS COMP	216	(null)

**Calculated Members**

- OverheadPrevQtr

## Layout view of report:

**Overhead Category**

«Expr» tOverheadViewFYC

Description	Prev Qtr	Current Qtr	Pct change
TOTAL:	[Sum(OverheadPrevC	[Sum(Weekly_Over_H	«Expr»
[Description]	«Expr»	«Expr»	«Expr»

«Expr» «Expr»

# SSRS PROJECT SAMPLE

## Employee Jobs in Date Range Report

Report preview from my SharePoint site. Uses cascading parameters based on the employee to show labor data for the date range selected. Drop-down will only show the week ending dates that the employee worked.

The screenshot shows a web browser window displaying an SSRS report. The report title is "Employee Jobs in Date Range" and the date range is "6/11/2005 to 6/25/2005". The report is for employee Andrew Tolson. The data is presented in a table with columns for ID, Full Name, Week End Date, Job Description, Hours Worked, and Total Labor. The table shows three weeks of data, with a total of 80 hours and \$840.00 in labor for Andrew Tolson. The report is run by SFDOMAIN\sandra.benton on 5/31/2010 at 8:42:27 PM. The browser window shows the URL and various navigation controls.

ID	Full Name	Week End Date	Job Description	Hours Worked	Total Labor
17	ANDREW TOLSON	6/11/2005			
			05-04RAK/GRAHAM	8	\$84.00
			0517/DMM/FORGE	8	\$84.00
<b>Total Hours/Cost for Week Ending 6/11/2005</b>				16	\$168.00
		6/18/2005			
			0501HH /ALTHOS	16	\$168.00
			0502MI/BELLTOWER	8	\$84.00
<b>Total Hours/Cost for Week Ending 6/18/2005</b>				24	\$252.00
		6/25/2005			
			0501HH /ALTHOS	32	\$336.00
			JONES 0503MI	8	\$84.00
<b>Total Hours/Cost for Week Ending 6/25/2005</b>				40	\$420.00
<b>Total Hours/Cost for ANDREW TOLSON</b>				80	\$840.00

Run by SFDOMAIN\sandra.benton on 5/31/2010 8:42:27 PM Page 1 of 1.

# SSRS PROJECT SAMPLE

## Dataset layout view of Employee Jobs in Date Range report:

The screenshot shows the Query Designer interface for a report. The left pane displays the 'Project Labor Cube' metadata, including a 'Measure Group' and 'Calculated Members'. The main area shows a table with columns: Dimension, Hierarchy, Operator, Filter Expression, and Parameters. Below this is a data table with columns: Employees, Full Name, Description, Week End Date, Hoursworked, and Total Labor. The data table contains 14 rows of employee job records.

Dimension	Hierarchy	Operator	Filter Expression	Parameters
Employees	Full Name	Equal		<input checked="" type="checkbox"/>
Project Labor View	Week End Date	Range (Inclusive)	:	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/>
<Select dimension>				

Employees	Full Name	Description	Week End Date	Hoursworked	Total Labor
1	RYAN BAKER	0501DMM/BRICK MAIL...	2005-01-15 00:00:...	6	108
1	RYAN BAKER	0501DMM/BRICK MAIL...	2005-02-05 00:00:...	3	54
1	RYAN BAKER	0501HH /ALTHOS	2005-07-02 00:00:...	16	304
1	RYAN BAKER	0502DMM/04/28H	2005-02-12 00:00:...	4	72
1	RYAN BAKER	0502MI/BELLTOWER	2005-05-14 00:00:...	40	760
1	RYAN BAKER	0502MI/BELLTOWER	2005-05-21 00:00:...	32	608
1	RYAN BAKER	0502MI/BELLTOWER	2005-06-04 00:00:...	24	456
1	RYAN BAKER	0502MI/BELLTOWER	2005-06-11 00:00:...	40	760
1	RYAN BAKER	0502MI/BELLTOWER	2005-06-18 00:00:...	40	760
1	RYAN BAKER	0502MI/BELLTOWER	2005-06-25 00:00:...	40	760
1	RYAN BAKER	0502MI/BELLTOWER	2005-07-02 00:00:...	8	152
1	RYAN BAKER	0503DMM 04-31H	2005-02-19 00:00:...	8	144
1	RYAN BAKER	05-03RAK/PICKETT	2005-01-15 00:00:...	6	108
1	RYAN BAKER	05-03RAK/PICKETT	2005-01-22 00:00:...	15	360

## Layout view of report:

The screenshot shows the Report Designer interface. The left pane displays the 'Report Data' tree with fields like 'EmployeesFull Name', 'Full Name', 'ParameterCaption', 'ParameterCaptionIndented', 'ParameterValue', 'ParameterLevel', 'dsEmplLabor', 'Employees', 'Full Name', 'Description', 'Week\_End\_Date', 'Hoursworked', 'Total\_Labor', 'FromProjectLaborViewWeekEndDate', 'Week\_End\_Date', 'ParameterCaption', 'ParameterCaptionIndented', 'ParameterValue', 'ParameterLevel', 'ToProjectLaborViewWeekEndDate', 'Week\_End\_Date', 'ParameterCaption', 'ParameterCaptionIndented', 'ParameterValue', and 'ParameterLevel'. The main area shows the report layout with a title 'Employee Jobs in Date Range' and a table with columns: ID, Full Name, Week End Date, Job Description, Hours, and Total Labor. The table contains data rows and summary rows. The bottom pane shows 'Row Groups' and 'Column Groups'.

ID	Full Name	Week End Date	Job Description	Hours	Total Labor
[Empl [Full_Name]]					
			[Description]	[Hoursworke	[Total_Labor]
				[Sum(Hours)	[Sum(Total_Lab
	[Full_Name]			[Sum(Hours)	[Sum(Total_Lab

# PPS/EXCEL SERVICES/SHAREPOINT PROJECT

**Introduction:** Create a series of dashboards and scorecards using Performance Point Server (PPS) and Excel Services based on data from the previously created OLAP database. Publish the reports to SharePoint.

## PPS/Excel Services/SharePoint Project Goals:

- Create a PPS dashboard with 5 pages and publish to SharePoint
- Create a PPS dashboard with 3 spreadsheets from Excel Services and publish to SharePoint

**ScoreCard dashboard from my SharePoint site.** Created in PPS, scorecard on left uses the Overhead Trend KPI from the cube. It displays the Overhead Trend % for all clients based on the selected quarter. Scorecard on right uses the Open Receivables KPI, Profit % KPI, and Overhead % of Total Costs KPI to display Client Financials and Construction Job Financials values.

The screenshot displays a SharePoint dashboard titled 'ScoreCards' for 'Sandra's BI Site'. The dashboard is viewed in Internet Explorer and shows two main scorecard sections. The left section, 'Overhead Scorecard', displays a table of overhead trends for '2006 Q3'. The right section, 'Client and Construction Job Financials', displays two tables: 'Client Financials' and 'Construction Job Financials'.

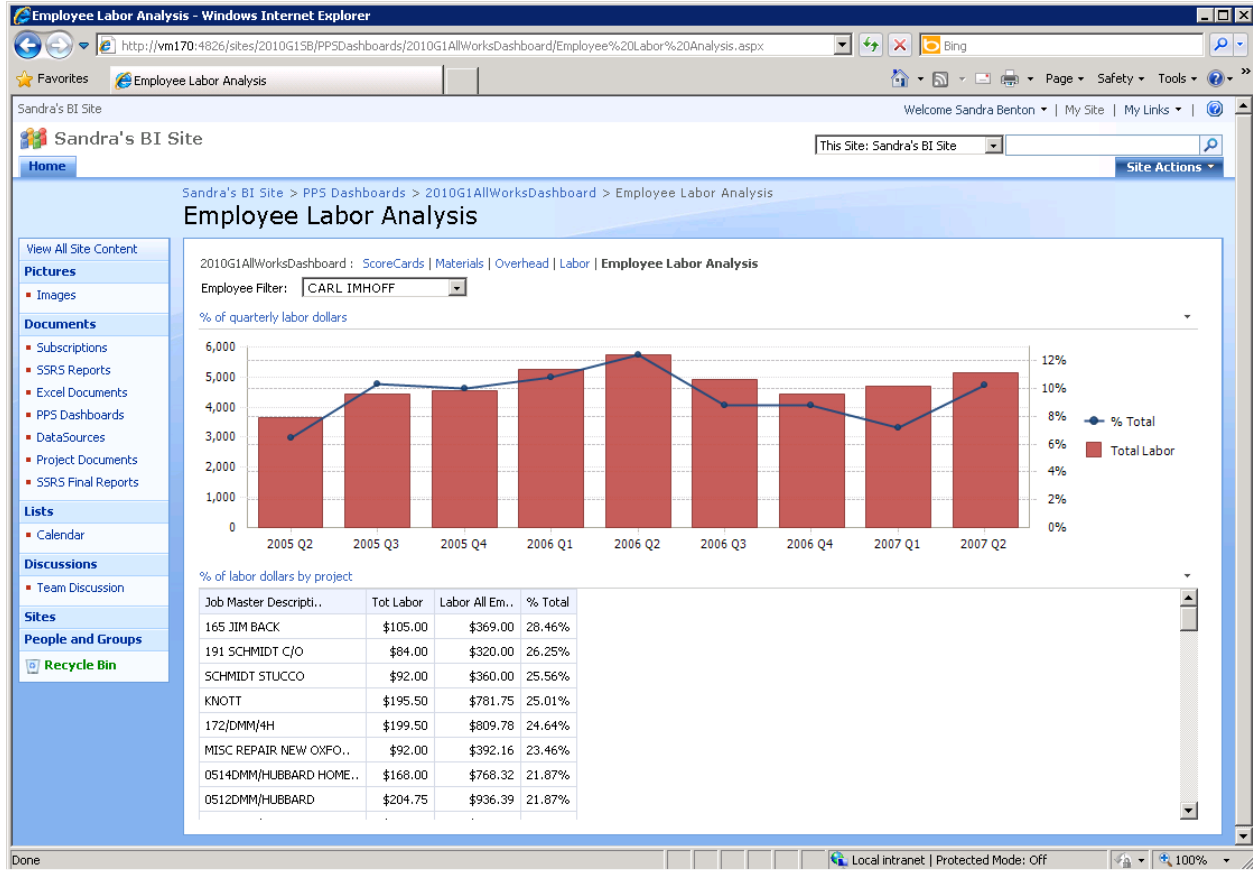
Category	Value	Goal and Status
Overhead Trend	-16.80%	Green
ACCOUNTANTS FEES	-20.69%	Green
ADVERTISING	-20.69%	Green
ESTIMATED TAX/QTRLY235	-24.25%	Green
EXTRA: FUEL	-20.69%	Green
HEALTH INSURANCE		Green
LIABILITY INSURANCE	-20.69%	Green
MISC EQUIPMENT	-20.69%	Green
MOBIL PHONES	-21.55%	Green
RENT	-24.25%	Green
SKID LOADER		Green
SOCIAL SECURITY		Green
TRUCK INSURANCE		Green
TRUCKS	-20.69%	Green
UTILITIES		Green
WORKMANS COMP	19.15%	Red

Category	Value	Goal and Status
Client Financials		
Open Receivables as a % of Invoiced		
All	0.39%	Green
EDWARD FOGGLE, INC	100.00%	Red
STEPHEN ROLLINS, INC	1.93%	Green
WILLIAM ANDERSON, INC	2.30%	Green
Profit %		
All	14.59%	Yellow
Construction Job Financials		
Overhead as % of Total Costs		
All	11.56%	Yellow

# PPS/SHAREPOINT SAMPLE

**Employee Labor Analysis dashboard.** Created in PPS and published to SharePoint, the chart displays the selected employee's labor dollars by quarter, along with the percentage of labor for the jobs the employee worked on. The analytic grid displays the job the selected employee worked on, the employee's labor contribution, the total labor contribution for the job, and the employee % of total.



# PPS DESIGN SAMPLE

PPS Dashboard Design Page for Employee Labor Analysis dashboard.

Query tab with custom MDX for chart:

Design Query Properties

% of quarterly labor dollars

```
MDX
WITH MEMBER [Labor All Employees] AS SUM([Employees].[Full Name].[All] *
    FILTER([Job Master].[Description].[Description].ALLMEMBERS,
        [Measures].[Total Labor] <> 0), [Measures].[Total Labor])

MEMBER [% Total] AS ([Measures].[Total Labor]/[Labor All Employees], format_string = "percent"

SELECT
NON EMPTY ( [LaborQuarters] )
ON COLUMNS,
{[% Total], [Measures].[Total Labor]}
ON ROWS
FROM [Project Labor Cube]
WHERE ( <<EmployeeFilter>> )
```

Parameters

Name	Default
EmployeeFilter	[Employees].[Full Name].CurrentMember

Parameter Insert

Query tab with custom MDX for analytic grid:

Design Query Properties

% of labor dollars by project

```
MDX
WITH MEMBER [Tot Labor] AS ([Measures].[Total Labor], <<EmployeeFilter>>), format_string = "currency"
MEMBER [Labor All Employees] AS [Measures].[Total Labor], format_string = "currency"
MEMBER [% Total] AS [Tot Labor]/[Labor All Employees], format_string = "percent"

SELECT
{ [Tot Labor], [Labor All Employees], [% Total] }
ON COLUMNS,
ORDER(
    FILTER([Job Master].[Description].[Description].ALLMEMBERS, [Tot Labor] <> 0),
    [% Total], DESC)
ON ROWS
FROM [Project Labor Cube]
```

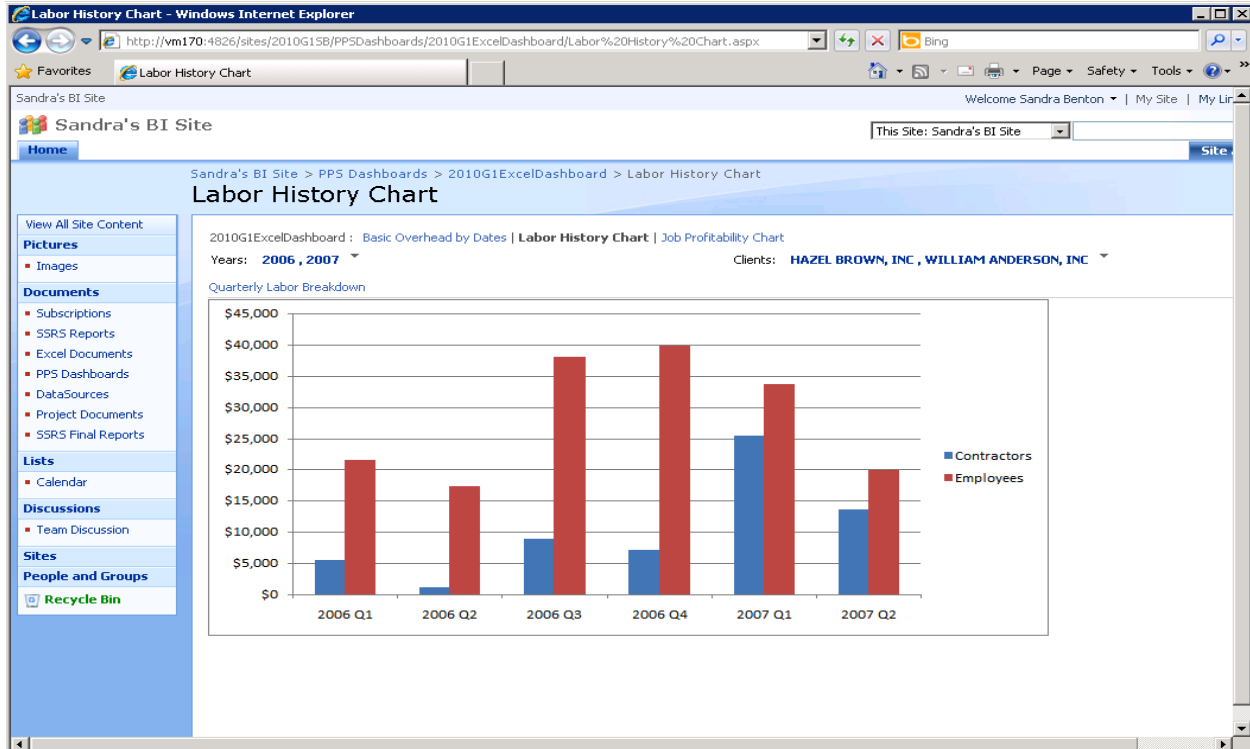
Parameters

Name	Default
EmployeeFilter	[Employees].[Full Name].CurrentMember

Parameter Insert

# PPS/EXCEL SERVICES/SHAREPOINT SAMPLE

Excel Services Chart deployed through PPS, then published to SharePoint. Multiple selection filters for both Years and Clients:



Excel Services Pivot table deployed through PPS, then published to SharePoint.

The screenshot shows a web browser displaying a SharePoint site titled 'Sandra's BI Site'. The main content area is titled 'Basic Overhead by Dates' and includes a pivot table. The pivot table is titled 'Basic Overhead by Quarter/Year' and is filtered for the year 2006. The table lists various overhead categories and their values for 2006 Q3, 2006 Q2, 2006 Q1, and a Grand Total.

Row Labels	2006 Q3	2006 Q2	2006 Q1	Grand Total
ACCOUNTANTS FEES	\$1,646.40	\$2,075.85	\$1,876.53	\$5,598.78
ADVERTISING	\$517.44	\$652.41	\$589.77	\$1,759.62
ESTIMATED TAX/QTRLY235	\$2,256.39	\$2,978.64	\$2,478.60	\$7,713.63
EXTRA: FUEL	\$635.04	\$800.69	\$723.80	\$2,159.53
HEALTH INSURANCE	\$1,014.90			\$1,014.90
LIABILITY INSURANCE	\$185.36	\$446.88	\$509.34	\$1,141.58
MISC EQUIPMENT		\$517.44	\$652.41	\$1,169.85
MOBIL PHONES	\$425.63	\$982.46	\$1,110.29	\$2,518.38
RENT	\$1,086.41	\$1,434.16	\$1,193.40	\$3,713.97
SOCIAL SECURITY	\$343.25			\$343.25
TRUCKS	\$1,146.24	\$10,160.64	\$12,810.96	\$24,117.84
WORKMANS COMP	\$3,772.33	\$3,549.07	\$2,978.64	\$10,299.04
<b>Grand Total</b>	<b>\$6,887.70</b>	<b>\$21,798.16</b>	<b>\$26,199.54</b>	<b>\$78,016.33</b>