

MICHIGAN STATE
UNIVERSITY

Project Plan

Modern Online Analytical Processing Cube

The Capstone Experience

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Fall 2010



*From Students...
...to Professionals*

Project Overview

- Create a tool to quickly and efficiently query specific data amongst large databases to provide detailed and aggregated statistics
- Implement an OLAP cube as analysis object
- Create powerful, but easy to use GUI to display and manipulate OLAP cube

Functional Specifications

- Use SQL database to create OLAP cube
- Interface must be easy and intuitive to casual user
- Data retrieval needs to be quick
- Ability to export and save in different formats
- Ability to manipulate how data is shown, including hierarchies, totals and averages, sorting, graphing, etc

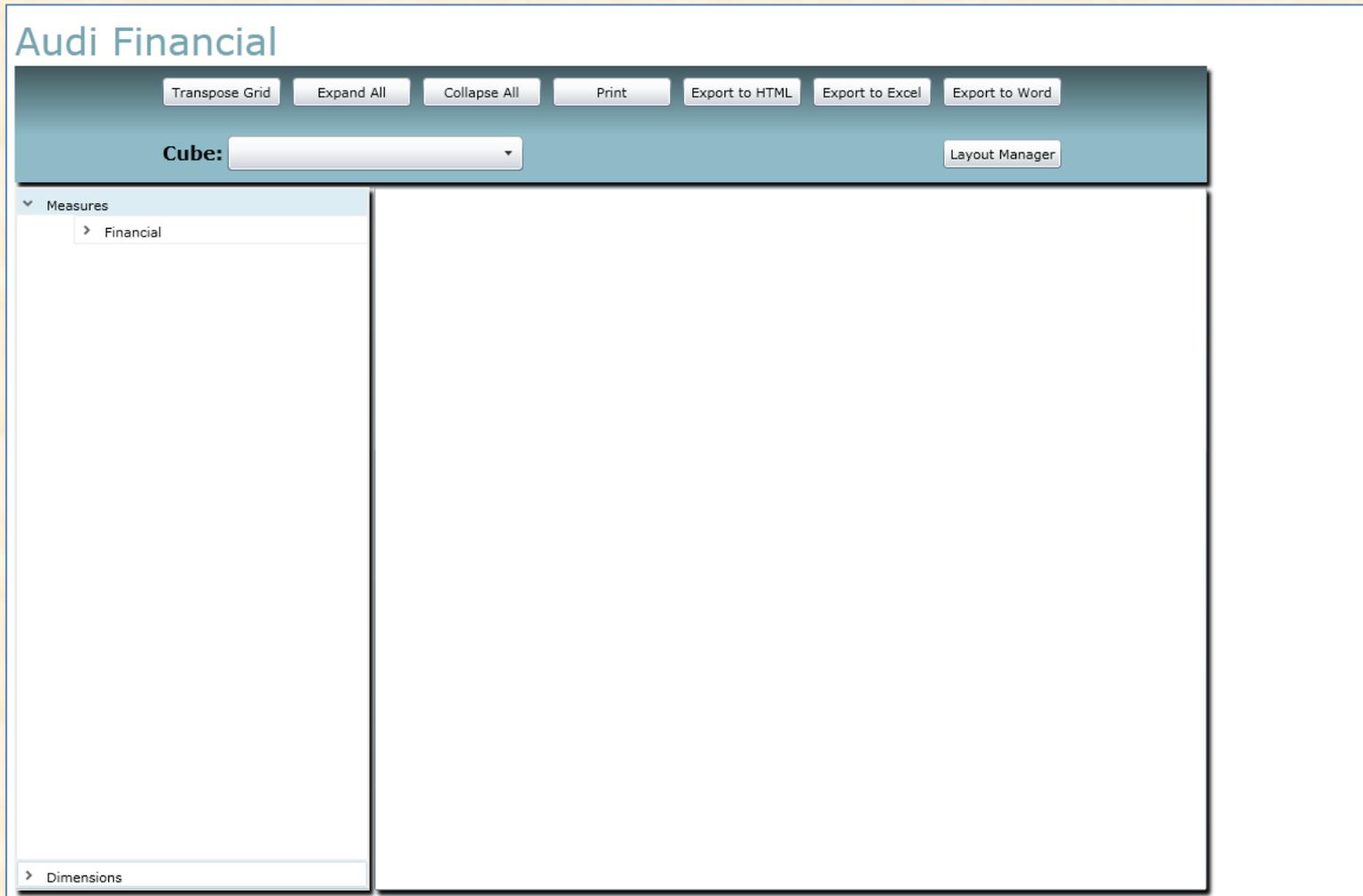


Design Specifications

- Microsoft Silverlight
- Main menu for manipulation, export and layout saving functionality
- Sidebar for easily switching in and out different measures and dimensions
- Spreadsheet representation of data into columns and rows
- Silverlight built in functionalities (ex. Sorting)



Screen Mockups

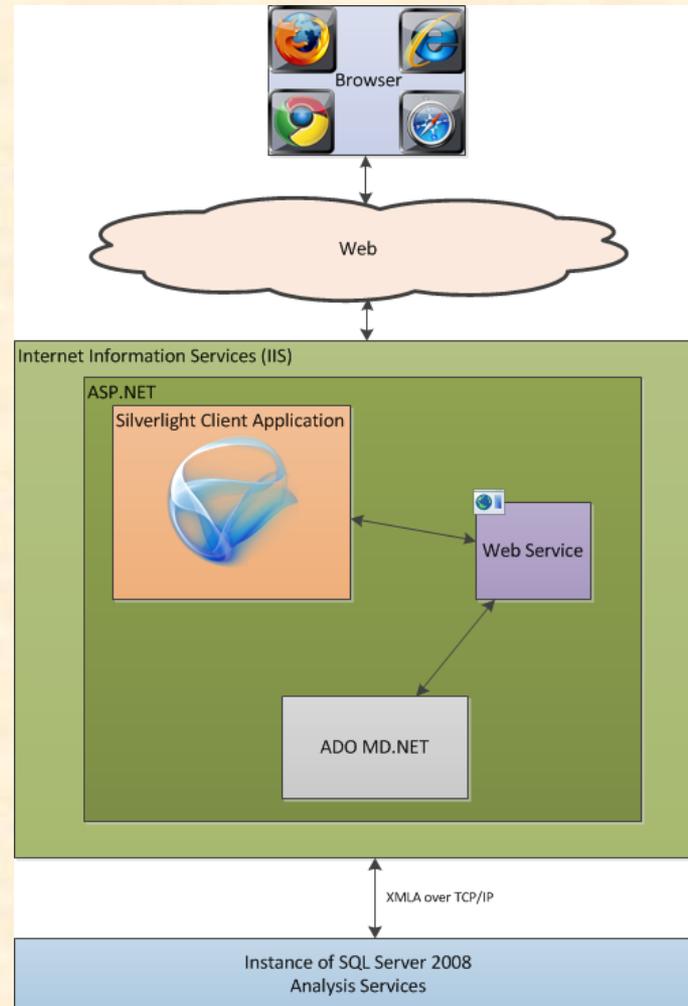


Technical Specifications

- C# and ASP.NET 4.0
- Functionalities include exporting, saving, loading, deleting, talking to database
- Silverlight code behind files control event handling
- Using SQL Server Analysis Services to create an OLAP cube from a relational schema database



System Architecture



System Components

- Hardware Platforms
 - Server
- Software Platforms / Technologies
 - ASP.NET 4.0, C#
 - SQL Server 2008
 - Microsoft Silverlight
 - Expression Blend 4



Testing

- Does the OLAP cube give correct data in a timely manner?
- When exporting, is the spreadsheet accurately represented?
- Can layouts be saved, loaded and deleted?
- Manipulation of spreadsheet works
- GUI testing



Risks

- Hooking up Silverlight to an OLAP cube
- Learning Silverlight
- Ability to export to html, excel and word
- Timeframe to implement all features

