

The dynamic Cube Viewer

The Dynamic Cube Viewer is a bespoke browser-based application that offers an intuitive interface for business users to query OLAP cubes, without the need to have an understanding of OLAP cubes.

The application reads only OLAP cube metadata and uses this to build the user interface. An example is shown below:

The screenshot shows the OCS cube viewer application in a Firefox browser window. The title bar says "OCS cube viewer". The main content area is titled "View data in cube: Orion Sales".

The interface is divided into several sections:

- Dimensions:** A list of dimensions including "Product Line" and "Product Category".
- Compare with:** A section with a checkbox "All product groups" and icons for different output formats (HTML, Excel, PDF, RTF).
- Columns:** A list of columns including "Product Group".
- Rows:** A list of rows including "Year" and "Quarter".
- Measures:** A list of measures including "Total Retail Price", "Profit", and "Quantity".
- Show measures in:** A section with radio buttons for "Columns" and "Rows".

Below these sections is a large table (labeled 6) showing the results of the query. The table has columns for "Year", "Quarter", "All product groups", and "Badminton". The data is organized by year (1999, 2000, 2001, 2002) and quarter (Q1, Q2, Q3, Q4).

		Total Retail Price	
		All product groups	Badminton
1999	1999Q1	4825072.51	18203.80
	1999Q2	7463957.09	12360.10
	1999Q3	6881995.06	17102.50
	1999Q4	5854399.32	30234.50
2000	2000Q1	5758640.42	25382.10
	2000Q2	8857843.56	17076.50
	2000Q3	8690722.13	25360.80
	2000Q4	7166970.35	37390.20
2001	2001Q1	4848709.81	17447.90
	2001Q2	7681910.78	15037.50
	2001Q3	7276656.94	16688.30
	2001Q4	6104915.30	36130.60
2002	2002Q1	5026353.06	18493.30
	2002Q2	8359585.28	16947.40
	2002Q3	8526526.15	22909.30
	2002Q4	8022446.14	39778.90

- ① Dimensions: Contains the list of available dimensions. Hierarchical dimensions are handled as a bundle (see ② Year Quarter as an example).
- ② Rows: Dimensions dropped here by the user will be presented in the table row.
- ③ Columns: Dimensions dropped here by the user will be presented in the table column.
- ④ Measures: The user can select which measures will be included in the requested table.
- ⑤ Output selection: The requested output type (HTML, Excel, PDF or RTF). The "Compare with" checkbox will allow benchmarking (In this case an individual shop is compared against the total of all shops).
- ⑥ HTML table: The requested table in case HTML has been selected as the requested output type.

The dimension values can be filtered by clicking on the filter icon, available on each dimension. When for instance the year dimension is clicked, a filter screen is displayed allowing the user to filter on the years to be displayed in the results table.

Next to these basic functionalities more functionality is available which can be controlled using the extended metadata properties of an OLAP cube.

The application has been developed using

- OLAP Cube metadata
- SAS stored processes
- SAS Base code
- HTML, JavaScript (AJAX) and CSS