

# Module 2 Multidimensional data representation and manipulation

Lesson 4: Microsoft MDX Statements



# Lesson Objectives

- Explain simple MDX statements
- Compare and contrast MDX and SQL
- Gain insight into MDX complexity



### SQL Versus MDX

- Table result for SQL SELECT statement
- Data cube result for MDX SELECT statement
- Different mathematical approaches for manipulating tables and data cubes



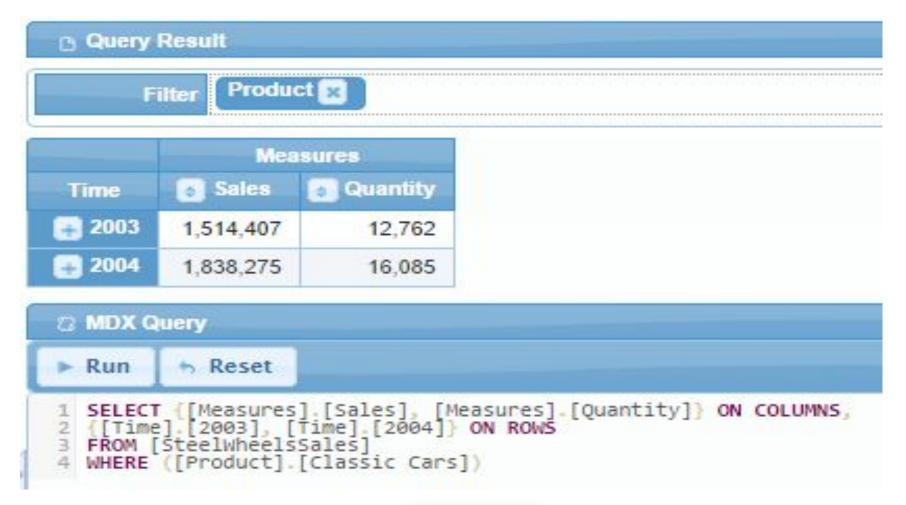
# Comparison of Clauses

	La	anguage
	SQL	MDX
Clause		
SELECT	List of columns	List of axis dimensions (source cube cells)
FROM	List of tables	Cube name
WHERE	Conditions restricting rows	Restriction to a combination of dimension members (result cube cells)





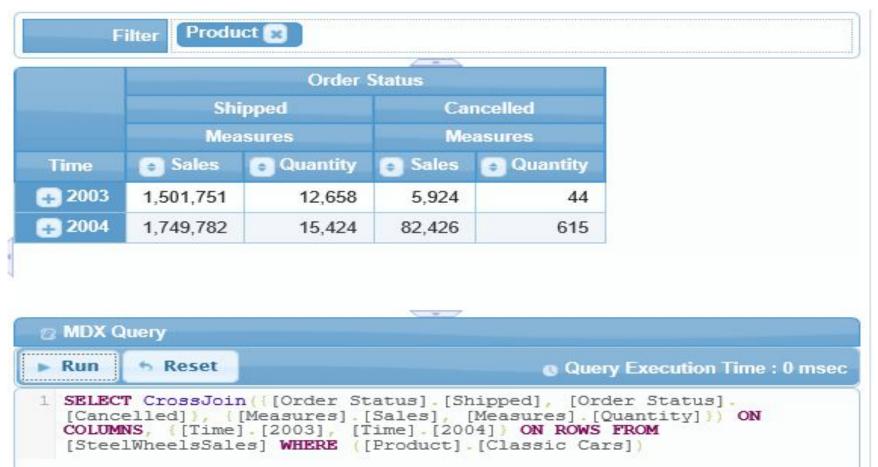
# Example MDX Statement and Result







### **CrossJoin Operation**

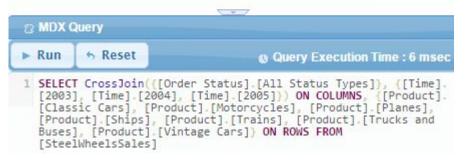




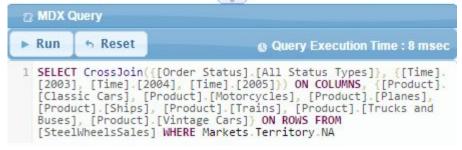


### Slicer Comparison Examples

	Order Status  All Status Types					
	Time					
Product	<b>2003</b>	2004	2005			
+ Classic Cars	12,762	16,085	6,705			
→ Motorcycles	4,031	5,906	2,771			
→ Planes	3,833	5,820	2,207			
Ships	2,844	4,309	1,346			
+ Trains	1,000	1,409	409			
Trucks and Buses	4,056	5,024	1,921			
F Vintage Cars	7,913	10,864	4,116			



	Order Status  All Status Types  Time		
Product	2003	<b>+</b> 2004	<b>2005</b>
Classic Cars	4,959	5,017	2,105
Motorcycles	1,744	2,809	568
Planes	977	2,224	592
Ships	702	1,642	537
- Trains	409	326	177
Trucks and Buses	1,289	2,563	597
- Vintage Cars	3,268	3,576	1,871







# Summary

- Similar syntax as SQL SELECT statement
- Axes specified in SELECT clause
- Crossjoin operator to combine dimensions on axis
- Slicer conditions specified in the WHERE clause
- Tedious and complex language



