Data Tables and Types

Primitive Data Types

.0034

455,600

true, false

Scales of Measurement

- Nominal
- Ordinal
- Interval
- Ratio

Stevens,1946. On the Theory of Scales in Measurement.

Scales of Measurement

- **Nominal**: data are classified with no inherent order or ranking

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Scales of Measurement

- **Nominal**: data are classified with no inherent order or ranking
- **Ordinal:** data are ranked
- **Interval:** meaningful difference between values (temp.)
- **Ratio:** meaningful 0 point and ratio between values

Stevens, 1946. On the Theory of Scales in Measurement.

Data Type Taxonomy for Info Vis

- 1-Dimensional (sequences, lists)
- 2-Dimensional (map, planar)
- 3-Dimensional (real world objects)
- N-Dimensional (relational data)
- Trees (hierarchies)
- Networks (graphs)
- Temporal (time series)

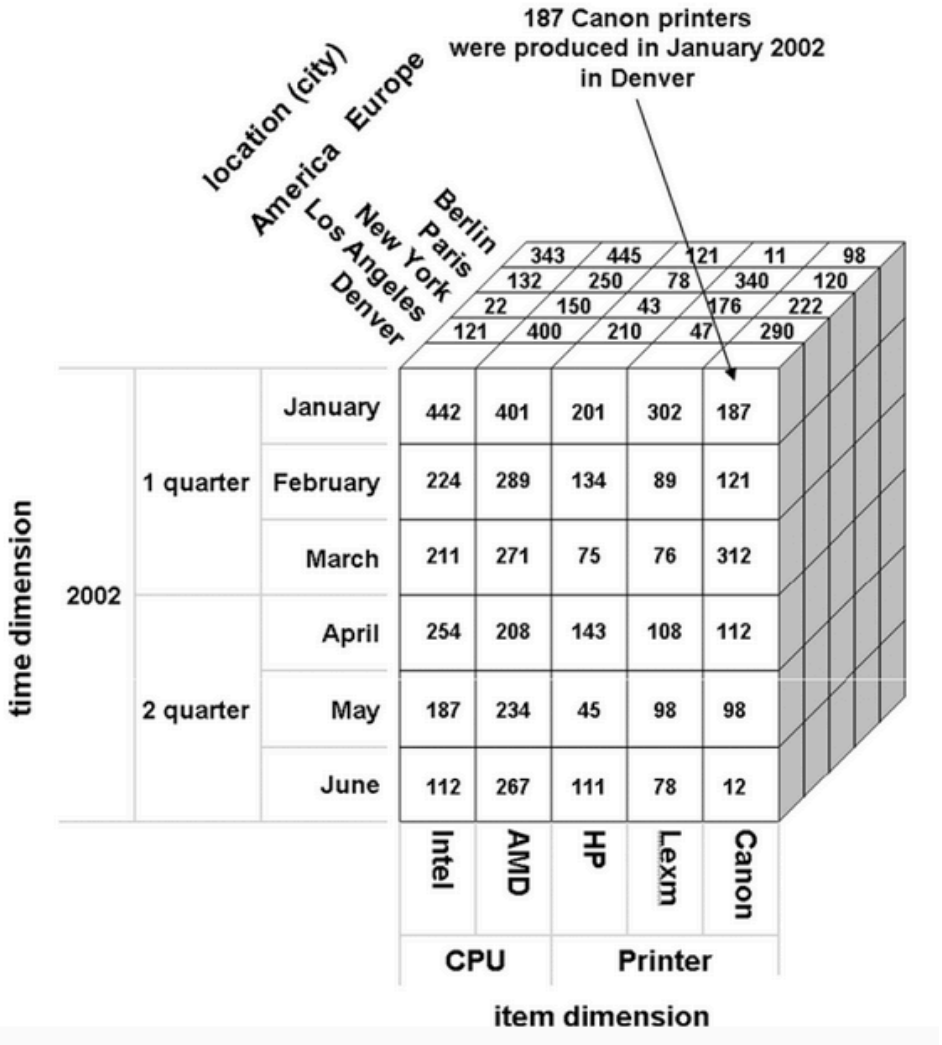
[Shneiderman, 1996]

Dimension and Measures

Dimension: discrete variables such as dates and categories

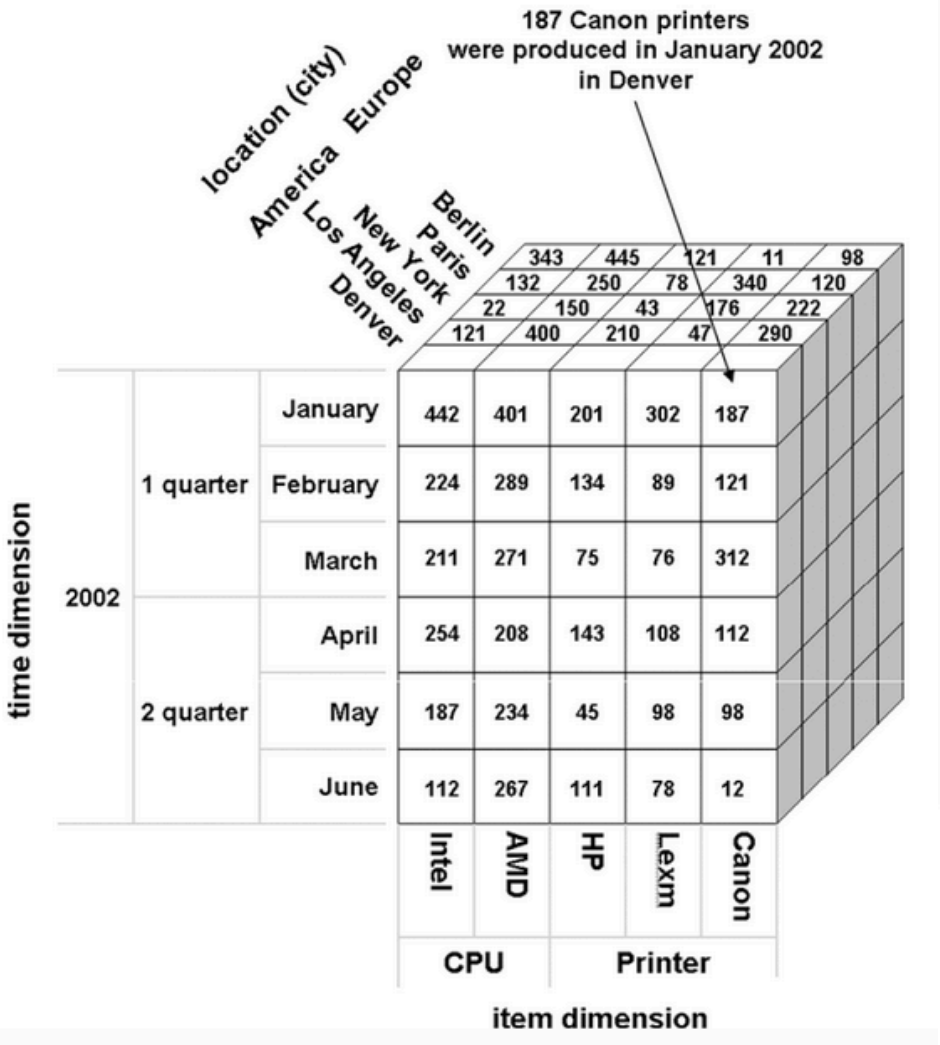
Measure: data values that can be aggregated (average, sum, count, standard deviation, etc.)

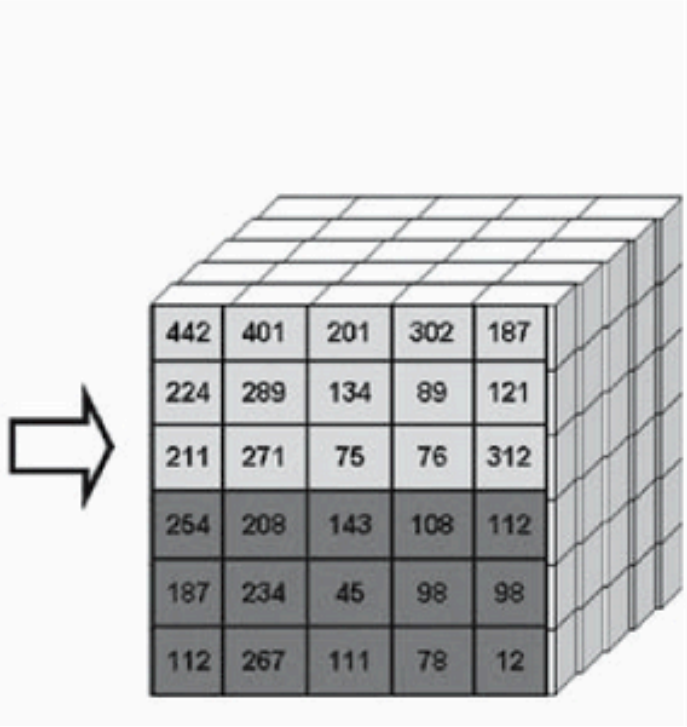
The Data Cube



Source: Krzysztof et al., 2010. Data Mining: A Knowledge Discovery Approach.

Roll Up





# sold units		2002	
		Quarter 1	Quarter 2
CPU	Intel	877	553
	AMD	961	709

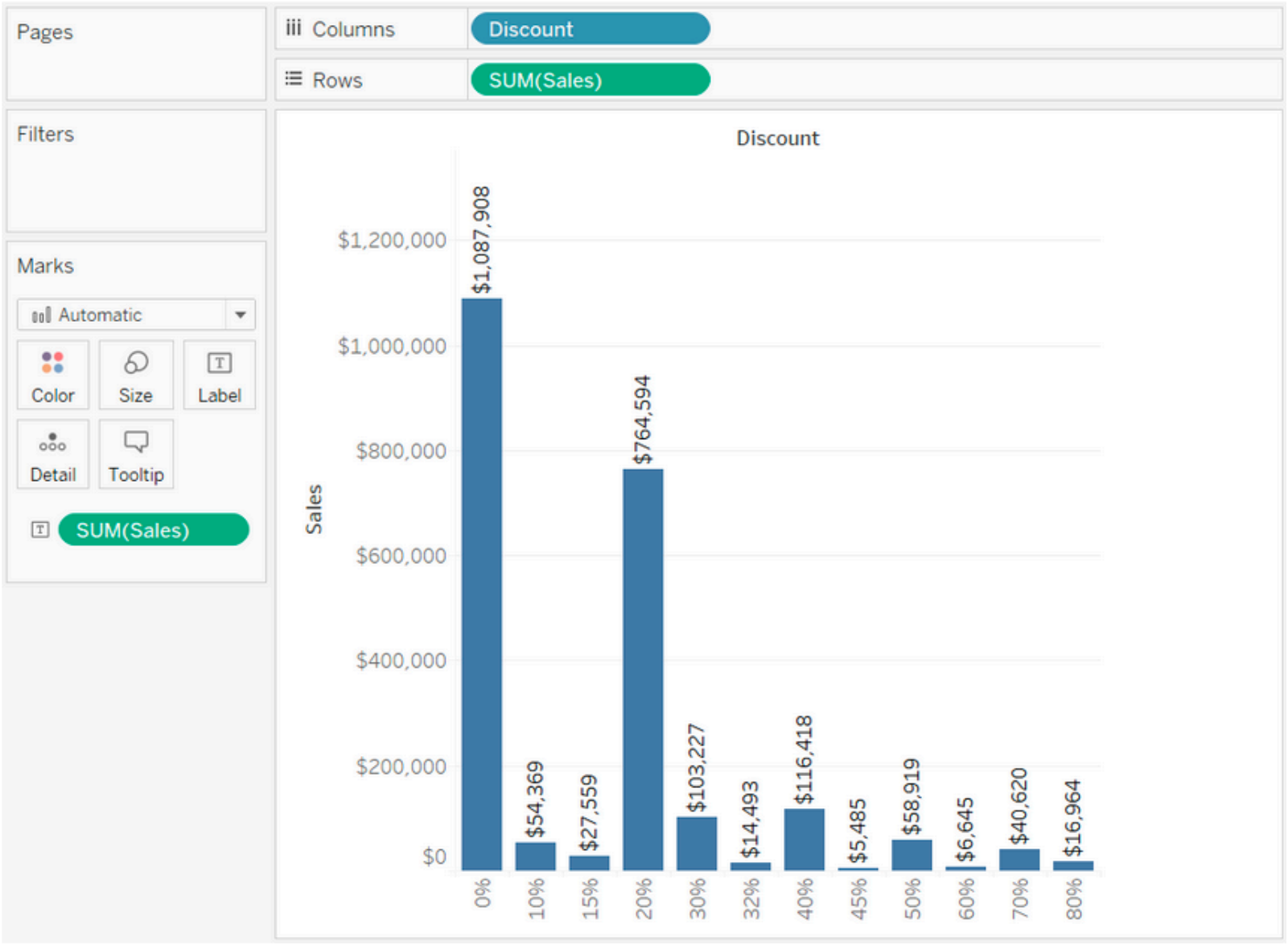
Source: Krzysztof et al., 2010. Data Mining: A Knowledge Discovery Approach.

Drill Down

# sold units		CPU		Printer		
		Intel	AMD	HP	Lexm	Canon
All	USA	2231	2134	1801	1560	1129
	Europe	1981	2001	1432	1431	1876

# sold units		CPU		Printer		
		Intel	AMD	HP	Lexm	Canon
All	Denver	877	961	410	467	620
	LA	833	574	621	443	213
	NY	521	599	770	650	296

Source: Krzysztof et al., 2010. Data Mining: A Knowledge Discovery Approach.


Pages
Columns
Discount
Rows
SUM(Sales)
Filters
Marks
Automatic
Color
Size
Label
Detail
Tooltip
SUM(Sales)
Discount
Sales
$1,200,000
$1,000,000
$800,000
$600,000
$400,000
$200,000
$0
$1,087,908
$54,369
$27,559
$764,594
$103,227
$14,493
$116,418
$5,485
$58,919
$6,645
$40,620
$16,964
0%
10%
15%
20%
30%
32%
40%
45%
50%
60%
70%
80%

Categorical

d3.**schemeAccent** <>

An array of eight categorical colors represented as RGB hexadecimal strings.

d3.**schemeDark2** <>

An array of eight categorical colors represented as RGB hexadecimal strings.

d3.**schemePaired** <>

An array of twelve categorical colors represented as RGB hexadecimal strings.

https://github.com/d3/d3-scale-chromatic

Berkeley SCHOOL OF INFORMATION