Mapping

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Mapping Quantitative Values

- Position
- Length
- Angle/Slope
- Area
- Volume
- Color/Density

CLEVELAND, W. S., AND MCGILL, R. Graphical perception: Theory, experimentation and application to the development of graphical methods. Journal of the American Statistical Association, 79(387) 1984

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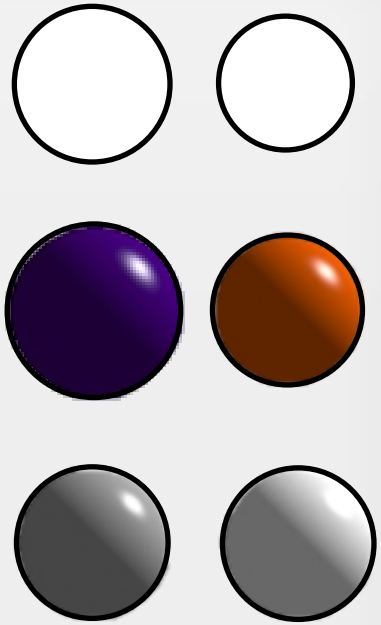

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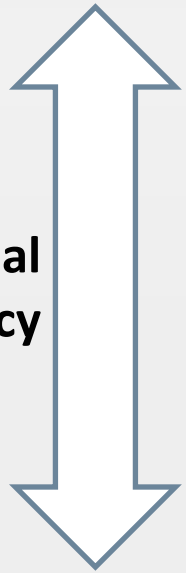

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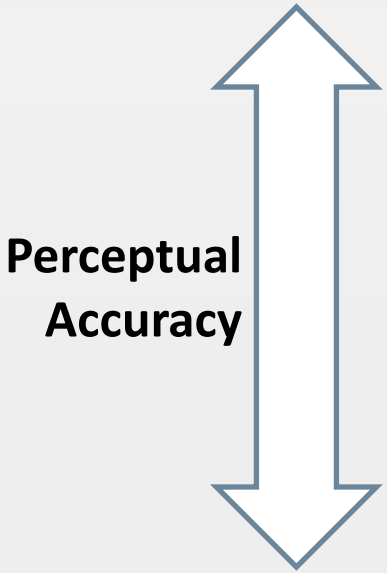

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1-D

2-D

3-D

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Quantitative

Position

Length

Angle

Slope

Area

Volume

Density

Saturation

Hue

J. Mackinlay, Automating the Design of Graphical Presentations of Relational Information, ACM Transactions on Graphics 5(2), 1986

Quantitative	Ordinal
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Length	
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Slope	
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Saturation	Length
Hue	Angle
	Slope
	Area
	Volume

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Quantitative

Position

Length

Angle

Slope

Area

Volume

Density

Saturation

Hue

Ordinal

Position

Density

Saturation

Hue

Texture

Connection

Containment

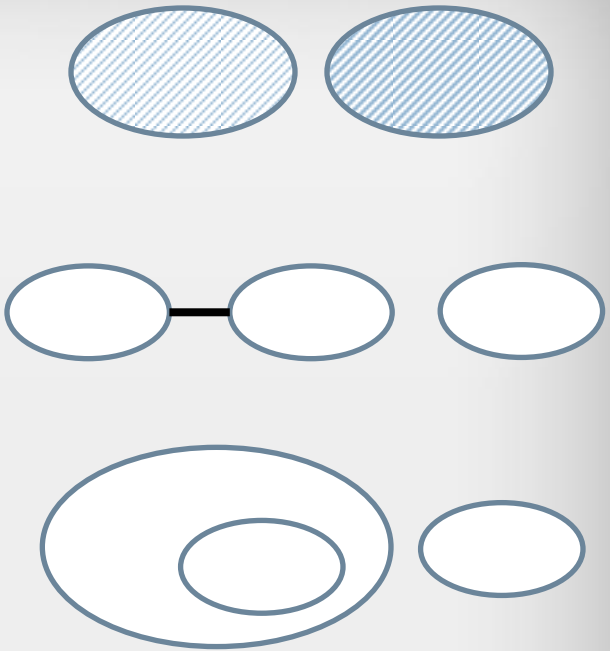
Length

Angle

Slope

Area

Volume



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Position	Position	
Length	Density	
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Area	Texture	
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Density	Containment	
Saturation	Length	
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	Volume	

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Slope	Hue	Connection
Area	Texture	Containment
Volume	Connection	Density
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Saturation	Length	
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Slope	Hue	Connection
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Volume	Connection	Density
Density	Containment	Saturation
Saturation	Length	
Hue	Angle	
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Position	Position	Position
Length	Density	Hue
Angle	Saturation	Texture
Slope	Hue	Connection
Area	Texture	Containment
Volume	Connection	Density
Density	Containment	Saturation
Saturation	Length	
Hue	Angle	Length
	Slope	Angle
	Area	Slope
	Volume	Area
		Volume

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Position	Position	Position
Length	Density	Hue
Angle	Saturation	Texture
Slope	Hue	Connection
Area	Texture	Containment
Volume	Connection	Density
Density	Containment	Saturation
Saturation	Length	Shape
Hue	Angle	Length
	Slope	Angle
	Area	Slope
	Volume	Area
		Volume

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