Supplementary Material: Design Space

Disclaimer

The following table outlines our preliminary exploration of the design space to visually encode absolute and fractional values. We do not claim that the design space is described exhaustively already. Each cell of the table contains one of the three:

- **Visualization:** This visualization could be one of many eligible for that cell. We are not claiming it is the best among the candidate visualizations. Its presence simply indicates we know or can think of a visualization that fits that cell.
- **?:** Denotes that we are not sure if a visualization eligible to the particular cell exists.
- **N.A.:** It stands for "Not Applicable", indicating that no visualization fits the criteria for that particular cell. It is used when the cell requires alignment of implicitly encoded variables, which is not possible.

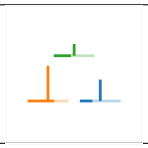
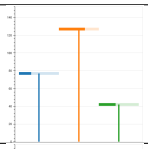
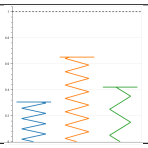
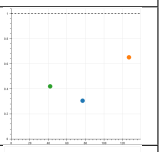
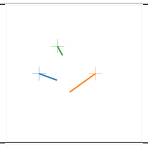
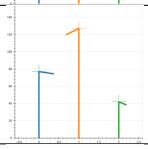
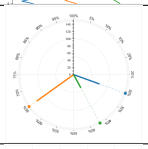
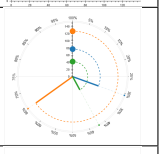
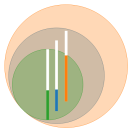
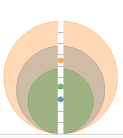
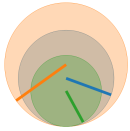
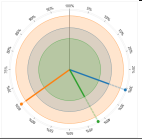
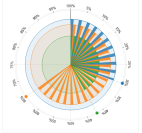
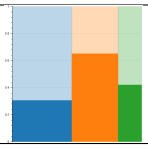
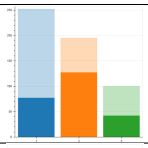
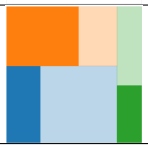
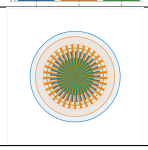
Encoding format \ Aligned	None	Absolute ($\mathbb{A}$)	Fractional ($\mathbb{F} = \frac{\mathbb{A}}{\mathbb{W}}$)	Both
$L_{\mathbb{A}}, L_{\mathbb{F}}$				
$L_{\mathbb{A}}, \theta_{\mathbb{F}}$				
$A_{\mathbb{A}}, L_{\mathbb{F}}$				
$A_{\mathbb{A}}, \theta_{\mathbb{F}}$				
$L_{\mathbb{A}} \propto \theta_{\mathbb{F}} \cdot L_{\mathbb{W}}$		?		?
$A_{\mathbb{A}} \propto \theta_{\mathbb{F}} \cdot A_{\mathbb{W}}$		?		?
$A_{\mathbb{A}} \propto L_{\mathbb{F}} \cdot L_{\mathbb{W}}$		?		?
$L_{\mathbb{A}} = f_{\mathbb{F}} \cdot L_{\mathbb{W}}$			N.A.	N.A.
$A_{\mathbb{A}} = f_{\mathbb{F}} \cdot A_{\mathbb{W}}$			N.A.	N.A.

Table 1: Visualization design space showing three data points with absolute values $\mathbb{A}$=[*77*, *127*, *42*], fractional values $\mathbb{F}$=[*0.31*, *0.65*, *0.42*], and respective whole values $\mathbb{W}$=[*252*, *195*, *100*].