in our design, as shown in Figure **??**. Although the differences in both error and area can be compensated by using more digits with traditional arithmetic, this will result in longer delay and an even larger gap in frequency between two designs.

Table 1: Area Comparison between Two Designs.

Metric	Arithmetic Type		Overhead
	Traditional	Online	
LUTs	912	1896	2.08
Slices	324	525	1.62