

## 2.4 Implementation Comparison

Layout space	$\mathbb{H}^3$		$\mathbb{H}^2$								
Projection	Beltrami-Klein		Poincaré disk								
	H3 Viewer	Walrus	Inight	HyperTree	Hypertree	HVS	Ontology4us	JIT	HyperProf	TreeBolic	d3-hypertree
Pan navigation	✓		✓	✓~		✓	×	×			✓
Click navigation	✓		✓			✓		✓			✓
Zoom		!	✓	✓~	!	✓	×	×	!	!	✓
Pinch Zoom	×					×	×	×			✓
Rotation compensation	✓		✓								✓
Layout	$m$	$m$	$l$			$b$					$b$
Cyclic links	✓						✓	✓	✓		×
Multi focus			✓								×
Selection				$N^k$		$1^s$	$1^s$	$1^s$		$1^s$	$N^t$
Editable				✓				✓			×
Scales up to ~	100k	500k	20k								70k
Scalable if $\lambda < .1$											✓ <sup>w</sup>
Webpage	→	→		→	→		→	→	→	→	→
PDF	9p	-	8p	2p	7p	-		-			
Aplication code	C++ \$	Java GPL2	\$	Java \$		Java			Java	Java \$	
Library code								JS \$		Java GPL3	JS MIT
First appeared	'97	'01	'95	'99	'02		'09			'08	'17
Last update	'03	'05	'09	'12		'05	'14	'13	'13	'17	'18

**Table 2.1:** Empty cells indicate unknown value      \$ commercial

<sup>!</sup> group not evaluated

~ strange behaviour in demo

<sup>b</sup> Bergé layout. Similar to  $\{\infty, \delta\}$

<sup>m</sup> Munzner  $\mathbb{H}^3$  layout

<sup>l</sup> Lamping and Rao layout

<sup>k</sup> multiselection with keyboard

<sup>s</sup> single selection only

<sup>t</sup> toggle multi selection

<sup>w</sup> with given weights, see 2.3.9