

Specifications																								Total	
User Control Interfaces		Foldability		Weight		Turn Radius		Straight Line Deviation		Ease of Assembly/Dis		Ease on Re/main		Soft forces		Pinch Points		Comfort		Reproducibility		Style			
Specification Weight	0.7		0.7		0.4		1.0		1.0		0.4		0.6		0.8		0.8		0.7		0.4		0.3		
System	Rating	W-Rating	Rating	W-Rating	Rating	W-Rating	Rating	W-Rating	Rating	W-Rating	Rating	W-Rating	Rating	W-Rating	Rating	W-Rating	Rating	W-Rating	Rating	W-Rating	Rating	W-Rating	Rating	W-Rating	
Existing (Jack)	10.0	7.0	10.0	7.0	9.0	3.6	8.0	8.0	3.0	3.0	8.0	3.2	4.0	2.4	4.0	3.2	4.0	3.2	3.0	2.1	10.0	4.0	3.0	0.9	47.6
Monroe Wheelchair	8.0	5.6	9.0	6.3	8.0	3.2	4.0	4.0	5.0	5.0	8.0	3.2	3.0	1.8	4.0	3.2	3.0	2.4	5.0	3.5	9.0	3.6	6.0	1.8	43.6
Trackball System 1	8.0	5.6	7.0	4.9	9.0	3.6	7.0	7.0	3.0	3.0	8.0	3.2	5.0	3.0	5.0	4.0	4.0	3.2	5.0	3.5	6.0	2.4	5.0	1.5	44.9
Trackball System 2	10.0	7.0	7.0	4.9	8.0	3.2	7.0	7.0	5.0	5.0	8.0	3.2	5.0	3.0	6.0	4.8	3.0	2.4	5.0	3.5	6.0	2.4	5.0	1.5	47.9
Zip-Tie	10.0	7.0	8.0	5.6	7.0	2.8	4.0	4.0	10.0	10.0	8.0	3.2	6.0	3.6	6.0	4.8	7.0	5.6	8.0	5.6	8.0	3.2	7.0	2.1	57.5
Foot Ratchet 1	10.0	7.0	4.0	2.8	5.0	2.0	6.0	6.0	9.0	9.0	4.0	1.6	7.0	4.2	7.0	5.6	9.0	7.2	6.0	4.2	5.0	2.0	4.0	1.2	52.8
Foot Ratchet 2	6.0	4.2	3.0	2.1	4.0	1.6	9.0	9.0	10.0	10.0	4.0	1.6	8.0	4.8	7.0	5.6	9.0	7.2	6.0	4.2	4.0	1.6	4.0	1.2	53.1
Lever Differential	10.0	7.0	5.0	3.5	6.0	2.4	6.0	6.0	9.0	9.0	6.0	2.4	7.0	4.2	8.0	6.4	9.0	7.2	9.0	6.3	4.0	1.6	5.0	1.5	57.5
Push	10.0	7.0	4.0	2.8	5.0	2.0	6.0	6.0	9.0	9.0	4.0	1.6	7.0	4.2	6.0	4.8	9.0	7.2	6.0	4.2	4.0	1.6	4.0	1.2	51.6
Hand Crank	6.0	4.2	4.0	2.8	5.0	2.0	9.0	9.0	10.0	10.0	6.0	2.4	8.0	4.8	6.0	4.8	4.0	3.2	7.0	4.9	4.0	1.6	4.0	1.2	50.9

Highest Rated System **Zip-Tie** and **Lever Differential**

Assumptions:
 Rate each Design System by category on a rating scale of 1-10
 The sum of the Specification Weights should be 1.0
 All wheelchairs have capacity to meet 95th percentile male

Foldability Can fold to size in specifications
 Turn Radius Maneuverability
 Comfort Comfortable to use for long durations

Decision:
 Lever Differential

Reason:
 This system is rated higher in categories rated with a higher weight