Appendix A	4									
Equipment Pied	<u>ce</u>	Cost	<u>Quantity</u>	Description						
aser										
5V 650nm Laser	Diode	\$6.50		1 13.5mm diameter	er					
Nount		\$0.10		1 0.75" x 1.25" x 3	3" plywood with 2	" deep, 0.5" diamete	er hole drilled dov	vn through center		
MTO-laser Meta	I Aperture and Support Comp	onent \$17.79		1 2" high vertical r	metal rod equipe	d with black metal sl	nell at top of rod f	it to hold and stabil	ize laser diode, inn	er diameter of 13.5mm
Transistor		\$0.50		1 amplifies voltage	e from 3.3V on R	aspberry Pi to requi	red 5V of laser			
Polarization										
BOWER Digital	Linear Polarizer	\$7.99		2						
-	Step-Down Ring Adapter	\$3.99		2 once alued to m	ount/gear allows	screwing of polarize	er on or off the m	ount		
55mm to 58mm Step-Up Ring Adapter		\$3.99			-	for screwing second				
Laser Cut Plastic Gear		\$0.50		1						
Vount		\$0.15			5" plywood with '	.5" diameter apertu	res drilled in cent	er to allow laser be	am to pass throug	h mounts
lount		\$ 0.10		2 0.20 × 0.0 × 0.	e pijneed mar				an to pade throug	
Servo										
	5328A Digital Servo	\$21.32		1						
Pin to DC Power		\$0.95		1						
DC to 12V Outle		\$0.95		1 provides higher	voltage to serve					
	c Gear (Replica)	\$0.50		1 provides higher	vollage to servo					
aser out PidSti	u Geal (Replica)	\$U.5U		1						
	nt Resistor (LDR)	<u> </u>		4		14				
.DR		\$1.99 \$8.99				d to mount as referm				
	alog to Digital Converter				-	signal input only and	a converter was	thus needed		
Mount		\$0.15		1 1.5" x 3.25" x 1.	75" plywood					
Computation										
Raspberry Pi		\$34.98		1						
JSB Wall Adapter		\$3.39		1						
JSB Male-to-Male Cord		\$5.00		1						
Vireless Internet Connection		\$0.00		1						
Digital Ocean (D	O) Server	\$10.00		1 we utilize a DO	server to connec	the Raspberry Pite	the QUERB pla	tform through a we	bsocket command	tunnel
Additional Item	S									
27" x 12" Woode	en Base	\$1.75		2 both bases are a	attached to each	other through screv	s to allow a thick	er mounting suppo	rt	
Breadboard		\$5.69		1						
Male-To-Male Pi	ins (total price)	\$2.33		12						
	ale Pins (total price)	\$2.33		2						
	Pins (total price)	\$2.33		2						
" Bolt	(···· F ··· /	\$0.18			pole of the MTC	-laser metal mount	n place in our dr	lled hole in the wor	den laser mount	
?" Bolt		\$0.32				ide of the second po				
/4" Nut		\$0.07				on second polarize				
" Wood Screw		\$0.07		2 used to tighter a			ount			
.5" Wood Screw	N					to the wooden bloc	mount			
/8" Wood Screv		\$0.05					Thount			
		\$0.17		4 used to secure t	•					
.25" Machine S	crew	\$0.05				rvo and LDR to the	LDK COVEL			
		\$6.39		1 for gluing ring adapters and additional items						
ogitech HD Webcamera		\$18.99		3 bird's eye, LDR, and servo-gear system						
ogitech Webcam Mount		\$19.98		used to mount a webcamera for a bird's eye view perspective of the apparatus used to mount webcameras on the second polarizer mount for views of servo and LDR						
Iexible Logitech	n Webcam Clip	\$15.99		2 used to mount w	vebcameras on tl	ne second polarizer	mount for views	of servo and LDR		
	Total	Cost: \$281.78								