

Trade Analysis for decision of robot								
Priority	Factor	Weight	Lego Mindstorms	ERSP 3.0	Description	Assumptions	Desc on Lego Mindstorms	Desc on ERSP 3.0
	Easy to assemble	10	10	7	Because developers are beginners, so the robot should be easy to construct	we can construct the hardware by just put components together	It has a capability for being built in several kinds of robots	It is an end product for H/W but its software architecture is very flexible
	Supporting SW programming	10	8	10	Our main objective is to build software in the robot, so the robot kit provides the environment for programming	we assume Java or C language to implement	it supports the environment of java programming	It supports a sophisticated development environment
	Flexibility about H/W	15	9	8	For experiment, robot's h/w should be able to change its physical structure.		Because its origin is lego toy, it has powerful changability	
	supporting Java Environment	15	10	0	We are already familiar with java environment		A embedded java environment is provided by open source community	it supports only C++ environment
	Capability of communicating with a computer	5	7	9	we control the robot using a laptop computer	If the robot could communicate with a normal computer, we could connect it to a internet user.	A communication with a computer is a mandatory process	it supports both stand alone and communication mode with a computer.
	Capability of detecting a moving objects	5	5	9	The robot should detect an invader in the limited area		It provides a simple detecting function by using a ccd camera	It basically provide vision functionality with a camera facility.
	Capability of moving	5	7	10	The system should detect an invader in the limited area	if the robot has a touch sensor, the robot could sense the surrounded walls, and can change its direction	a number of wheels is up to us	it has 2 wheels and a castor for moving around
	Possibility to control it through internet	10	7	8	Our requirements include that a distance control and notification	We should use the embedded java environment	Lego itself do not support it	It may have communication facility
	under \$2000	25	10	5	our total cost should be under \$2000		it's cheap, so we may have no problem of buying that	it is expensive and exceeds \$10000

	TOTALS	100	8.8	6.35				
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