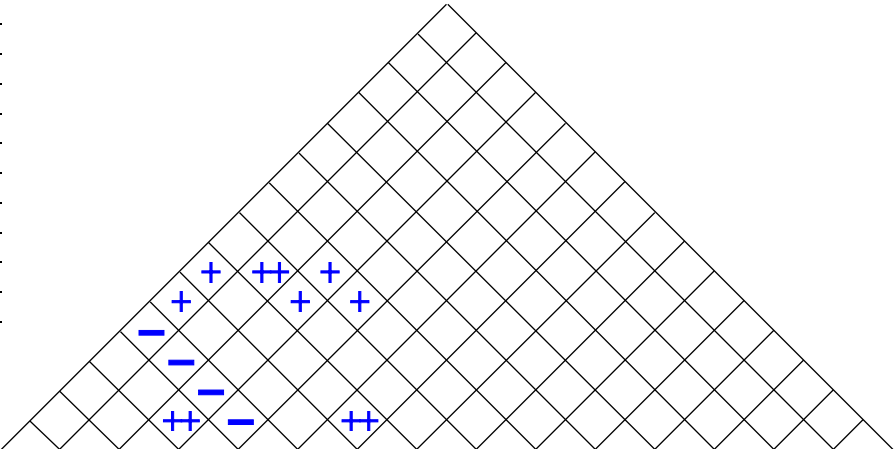


Title: Virtual Percussive Studio

Author: Group 1

Date: 2/8/2016

Notes: Group Members:
Anastasia Shuler, Kevin Komer, Huajian Huang, Alex Osborne



Legend		
⊖	Strong Relationship	9
○	Moderate Relationship	3
▲	Weak Relationship	1
++	Strong Positive Correlation	
+	Positive Correlation	
-	Negative Correlation	
▼	Strong Negative Correlation	
▼	Objective Is To Minimize	
▲	Objective Is To Maximize	
X	Objective Is To Hit Target	

Row #	Max Relationship Value in Row	Relative Weight	Weight / Importance	Quality Characteristics (a.k.a. "Functional Requirements" or "Hows")	Column #															Competitive Analysis (0=Worst, 5=Best)					
					1	2	3	4	5	6	7	8	9	10	11	12	13	14	15						
				Direction of Improvement: Minimize (▼), Maximize (▲), or Target (X)			X	X	X	X															
				Demanded Quality (a.k.a. "Customer Requirements" or "Whats")	Does not increase volume of drumstick by more than 10%	Utilizes the LEAP motion sensor to do position tracking	Controller must run at >100 Hz to capture all drum strokes	Response time of the system must be less than 0.02 seconds	Keep overall costs below \$400	Keep mass distribution similar to traditional drum sticks	Entire system must weight less than five pounds	Operate in different lighting conditions	Use the MIDI format to produce sound												
1	9	15.9	10.0	Make drum sound when used		⊖	⊖	⊖					⊖												
2	9	14.3	9.0	Make many diffent drums (ie: snare, tom) based on location		⊖							⊖												
3	9	9.5	6.0	Interactive: training feature (ie: Guitar Hero)	▲	⊖			⊖			⊖													
4	3	7.9	5.0	Haptic feedback	○				○		○	○													
5	9	14.3	9.0	Portable - only need a laptop		⊖	○		▲		⊖	⊖													
6	9	12.7	8.0	Comfortable to use - lightweight	⊖			⊖		⊖	○														
7	9	9.5	6.0	Attractive design	⊖				○	▲	▲														
8	9	15.9	10.0	Affordable				○	⊖				▲												
9																									
10																									
				Target or Limit Value	8%	Y	>80 Hz	<0.02 s	<\$350	COM should not move more than 1"	5 lbs	Y	Y												
				Difficulty (0=Easy to Accomplish, 10=Extremely Difficult)																					
				Max Relationship Value in Column	9	9	9	9	9	9	9	9	9												
				Weight / Importance	233.3	485.7	185.7	304.8	295.2	123.8	200.0	157.1	287.3												
				Relative Weight	10.3	21.4	8.2	13.4	13.0	5.4	8.8	6.9	12.6												