

Stow-Away Pool Table

Beyond Innovation, LLC



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Travis Jarboe, Joel Manahan, Matthew McHugh, Thomas Silva

Background

- Successful proof of concept
- Redundant sensors
- Developed without structural analysis
- Not designed to meet tournament specs



Image credit: Team 6.

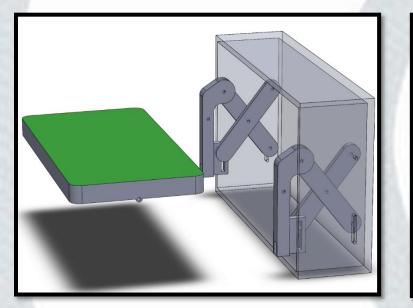
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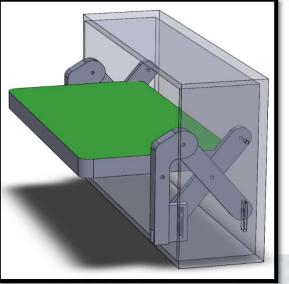
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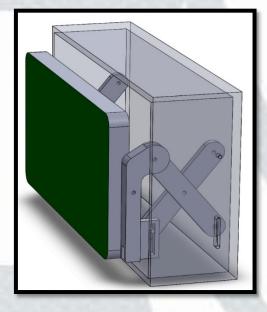
Scope

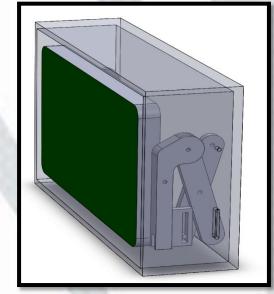
- High emphasis on marketability of product. Quality, supply chain.
- Improvement of leveling systems performance.
- Verification of compliance with structural/safety requirements.
- Table must meet expectations of tournament players.

Design 1



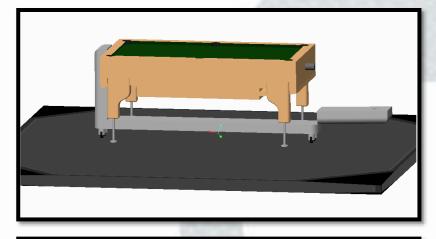


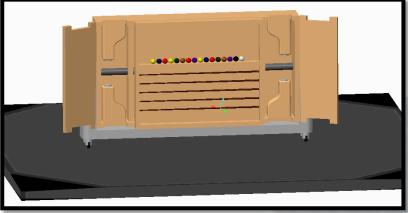


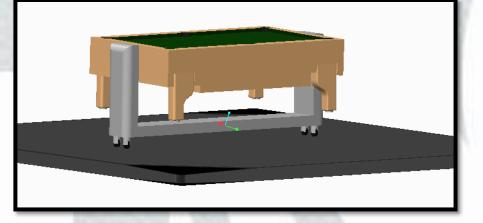


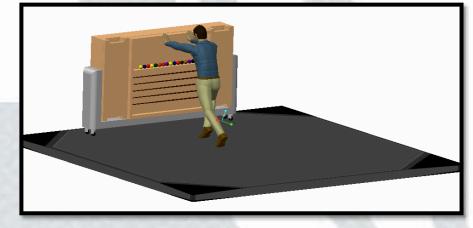
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Design 2









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Design 3





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Design Decision Matrix

TEAM AVERAGE												
			Criteria									
		Safety	Low Cost	Ease of Manufacturing	Visual Appeal	Familiarity	Low complexity	Total				
	Weights	3	1	2	3	2	1	12				
	Design 1	2.75	1.75	1.75	2.5	3	1.5	28.5				
	Design 2	1.5	2.75	2.75	1.5	2.5	2.75	25				
	Design 3	2	2.5	1.75	2.25	2.25	2	25.25				

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What's ahead

- We will receive the slate earlier than anticipated.
- Fabricate a scaled down version of the chosen design.
- Structural analysis of stow away mechanism.
- Computer modeling and simulation.
- Analysis and redesign of leveling algorithm.

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Planning for success

- Take full advantage of mentors experience
- "Measure twice, cut once."
- We will peer-review our drawings.
- Whenever possible, hardware will be tested separately before implementing it into the system.

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Gantt Chart

-				Aug 31, '14 Sep 14, '14 Sep 28, '14 Oct 12, '14 Oct 26, '14 Nov 9, '14 Nov 23, '14 Dec 7, '14
0	Task Name	Start 🗸	Finish 👻	S F W M S T T S F W M S T T S F W M S T T S
	Stow-Away Pool Table Project	Wed 9/10/14	Fri 12/5/14	
>	▲ Initiating	Wed 9/10/14	Fri 9/26/14	
< -	Develop Team Relationship	Wed 9/10/14	Fri 9/12/14	
< -	Needs Assessment Report	Wed 9/17/14	Fri 9/26/14	
< ₹	A Planning	Mon 9/29/14	Fri 10/10/14	
>	Set Up Project Environment	Mon 9/29/14	Wed 10/8/14	
>	Project Plans & Project Specs	Mon 10/6/14	Fri 10/10/14	
۹.	▲ Executing	Mon 10/6/14	Fri 12/5/14	
۹.	Midterm Presentation	Mon 10/6/14	Tue 10/14/14	
	Concept Generation	Mon 10/6/14	Tue 10/14/14	
۹.	Initial Web Page Design	Tue 10/14/14	Fri 10/17/14	
7	Midterm Report	Fri 10/17/14	Fri 10/24/14	Γ τ−η
	Peer Evaluations	Mon 10/27/14	Tue 10/28/14	
-	Aquisation of Parts	Mon 10/27/14	Fri 12/5/14	
	Midterm Presentation II	Fri 10/31/14	Tue 11/11/14	
-	Final Web Page Design	Mon 11/17/14	Tue 11/25/14	
	Peer Evaluations	Mon 11/24/14	Tue 11/25/14	
	Final Design Presentation	Tue 11/25/14	Tue 12/2/14	
-	Final Report	Thu 11/27/14	Fri 12/5/14	· •

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A Brief Recap

- Change of Original Design Idea
- Brainstormed Possible Designs
- Design 1 Selected
- Revision of Plans & Gantt Chart Updated

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