



Simple Engineering Solutions Senior Proposal

Week 4 June 01-June 07



Goals for the week

- Meet with Professor to discuss project approval
- Survey people regarding demand for features
- Begin research proposal paper
- Update webpage and add backlogged progress information



Meeting with Professor

After our week 3 meeting we were given feedback on our proposal and met with Professor Notash later in the week on Sat June 5th. After speaking with the Professor we discussed possible functions to be integrated into the cooler design.

Possible Functions

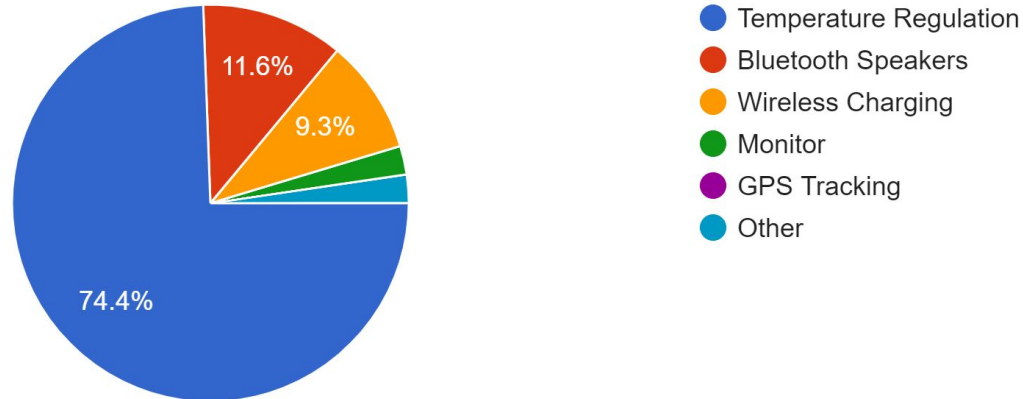
- Automating the door
- Adding monitor for Entertainment Support
- Charging for Devices Wireless and Wired
- Locking Mechanism
- Temperature control
- Multiple Compartments
- GPS

The Survey

We started a survey to help give us decide the features that would be in the most demand and which to focus on. Based on survey we were able to see a very large trend towards the temperature regulation/control.

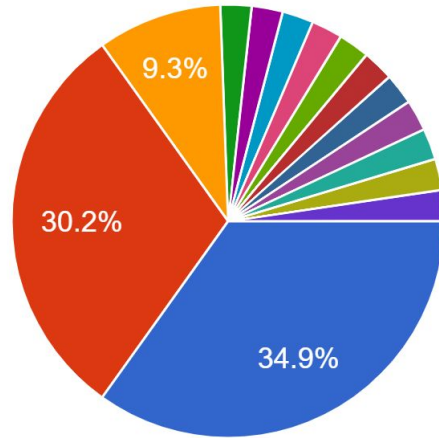
What feature would you be most excited to have?

43 responses



Where would you use the cooler most often?

43 responses



- Beach
- Camping
- Work
- what is a cooler?
- picnic
- house party
- car
- Grocery shopping to transport frozen...



Suggested Features

- Separate small freezer compartment
- App support (Temp monitoring, alarm if below temp or ice is melted)
- Wheels that work on asphalt and sand
- Removable freezer blocks that can be placed on top of cooler to cool from top
- GPS tracking and a way to contact emergency services
- Animalproof
- Removable bluetooth speakers

Desired Temps

Precision temperature control

30.2°F ~ 33.8°F
(-1°C ~ 1°C)



Fruit and Vegetables

37.4°F
(3°C)



Comestic

41°F
(5°C)



Beers

6.8°F ~ -0.4°F
(-14°C ~ -18°C)



Ice Cream



Refrigeration Options



DV1910-12V Direct Refrigeration

\$360.00

Model Name: DV1910 (12V)

Product: Direct Refrigeration Unit
Compressor: QX1901VDL
Voltage: DC 12V
Capacity: 130W (LBP)
Refrigerant: R134A
Size: 190*160*138mm (7.48x6.3x5.43 inch)
Weight: 2.5kgs (5.51lbs)

Applications:
Use variable speed inverter compressors, with adjustable speed at 2000 ~ 6500 rpm, is suitable for miniature freezer, refrigerator and small mobile refrigeration applications.

Features: Compact Size, Low Noise and Portability.

Quantity



1/7

US\$28.99 ~~US\$34.99~~ -17%



999+

Geekcreit® 12V 6A DIY Electronic Semiconductor Refrigerator Radiator Cooling Equipment

★★★★★ (361) | 4788 Sold

Most successful Kickstarter of 2014



COOLEST COOLER: 21st Century Cooler that's Actually Cooler

\$13,285,226

pledged of \$50,000 goal

62,642

backers



Project We Love



Portland, OR



Product Design



Goals for next week

Here are the priorities for next week:

- Get Web page current and completely filled in
- Block diagram of approved project
- Discuss and Finalize major parts
- Start developing power budget
- Begin Proposal paper and organizing materials and references