



Explanation of the Proposed Design Project

Motivation

This design was motivated for personal reasons due to sleeplessness in extreme weather temperatures.

- To increase my quality of sleep dramatically in the extremes of nature's seasons.
- This is also designed for members of the community who have trouble controlling their body temperature.
- The design was also motivated by people complaining about inadequate sleep due to temperature related issues.

Purpose of the Major Design Project

- To heat and cool bedding so the sleeper has a greater chance to get a "good nights sleep."
- There is no device on the market that does both functions effectively, safely or reliably, electric blankets impose a risk to young children who are prone to bed wetting.
- The purpose of this MDP is to improve the, quality of sleep to the recommended nightly dose.

Target Market

The target market would include:

- Members of the community who have trouble getting to sleep in the extreme weather conditions.
- Members of the community who are not getting the minimum recommended sleeping hours because of temperature discomfort.
- The item is likely to be costly to purchase off the shelf so the buyer would need to have a good income to afford this luxury purchase.
- This can be expanded to people who have medical conditions that prevent or slow the dispersion of body heat or make the person experience body temperature fluctuations, preventing a comfortable, good night's rest.
- Export to communities also having sleeping difficulties, this would be made possible by using media such as the internet.

Parameters of the Design

The device must be:

- Able to cool and/or heat bedding to provide a good night's sleep to the occupant.
- Easy and simple to use.
- Ergonomically sound, meaning comfortable to sleep in/on.
- Constructed using minimal energy so as to keep costs low and reduce the amount of investment needed to get the project off the ground.
- Constructed without much waste so resources are not wasted and physical materials are kept under budget, again reducing the investment capital.
- Durable to withstand members of the community who toss and turn or are "violent sleepers" during the night.
- Low cost to produce so it is easier to find investors in the project, but also the more cost effective it is the larger the profits will be able to be gained in the long run.
- Easily adaptable for different sized mattress/bed bases. ie king, queen, double, king single, single and the many sub divisions of bedding sizes.



<http://www.imagine.com/iz069/iz069028-photo>