

# MusicBook

## Creative Technology Project Plan

by Yulia Shilova



CTCH110  
Rebecca Caines  
March 10th, 2014

- ▶ Introduction \_\_\_\_\_ Page 3
- ▶ Main Idea \_\_\_\_\_ Page 3
- ▶ Why Do I Want To Do This \_\_\_\_\_ Page 4
- ▶ Artists/Topics That Influenced This Project \_\_\_\_\_ Page 4
- ▶ Specific Technologies \_\_\_\_\_ Page 5
- ▶ Where Would I Display This Work \_\_\_\_\_ Page 6
- ▶ Ethical Or Cultural Questions/Concerns The Work Might Raise \_\_\_\_\_ Page 6

## Introduction

For many people reading is a necessary thing to do, like eating and breathing. A book takes away our time and space limitations. We can visit the past or future, travel to an exotic locale, or imagine what it is to be an athlete or a soldier or a monk. When an author writes a book, he or she does it because they want to say that there is something meaningful about how people live in the world. They want us to learn from that. A good way to “learn” or to feel the book is imagine the story that book is carrying. Many people imagine themselves to be main character of the story. That made me think of the project makes them go beyond their imagination...to feelings.

## Main Idea

This project is called “MusicBook”. It will help people to feel the book even more. The main idea of it is to create a book that plays corresponding sound effects depending on what part of the story you are reading (romantic, sad, exciting, etc). Music helps you not only imagine well, but feel every moment that is described in the book.

How is it possible, you ask? Well, it is not an ebook if you thought of it. It is a regular print book that many people still prefer over ebooks (Bury, 2013). Many people prefer print books because “they like to hold it” or because “they can easily share it” (Bury, 2013).



There are some chips inside a book cover that can track what part of the book is being read, and play music through tiny build-in speakers. Now the interesting part - how does the chip know what part of the book you are reading? Are book’s page numbers hard-coded and sensors rely on what page is open at the moment? No. There are two small heart rate sensors built in book’s cover as well, in the place where you mostly touch the book while holding it. It reads your heart beat and it knows if you are experiencing happy, sad, or worrying moments of the book. Today these sensors are used in new smartphone Samsung Galaxy S5. You just place your finger on the sensor and it detects your heart beat rate (Dolcourt, 2014).

## Why Do I Want To Do This

I personally do not like silence at all. Since I remember myself I always listen to music, even when I sleep. Music became a big part of my life. And I am pretty sure there are many other people on the planet who can't do anything without music. I did some research to find out if people listen to music while reading a book like I do (<http://www.goodreads.com>). I found that quite a lot of them play music as a background while they read a book or even study.

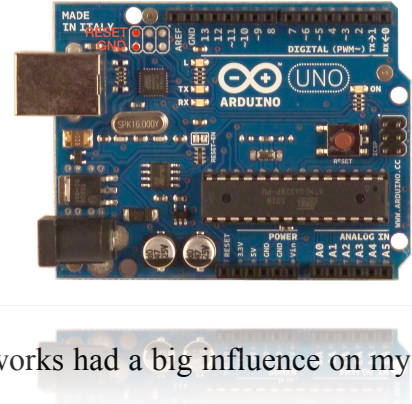
During one of CTCH110 classes we had guest speaker Dr. Charity Marsh. She is a Tier II Canada Research Chair in Interactive Media and Popular Music in the Faculty of Fine Arts at the University of Regina in Regina, Saskatchewan ([www.interactivemediaandperformance.com](http://www.interactivemediaandperformance.com)). She was talking about Hip Hop and Hip Hop culture, and identified the importance of it. Her presentation and music she played reminded me of some book I've read a while ago. More research showed me that music-memory connection exists ([www.livescience.com](http://www.livescience.com)). Your brain connects some music or a song with specific situation in your life. And next time you hear this song you will remember and feel (!) same emotions that happened to you before. This way after reading one of MusicBooks people will remember the book and the story for a lot longer than from a regular book.

## Artists/Topics From The Course And Their Specific Works That Influenced This Project

The idea for this project came to me during one of my CTCH110 classes when we went to DJ lab. That was a class after when Dr. Marsh had a presentation about Hip Hop music and culture. Me along with other students in the lab were making beats in the lab on Trigger Finger machine or MPD24. Me and other girl were playing with this machine and made quite funny beats. The girl said: "This makes me think of some kind of situation when somebody is chasing another person". "And I think of some very old movie from like 1960's about spaceship and laser shooting", I replied. A second after that I started thinking of MusicBook. Same music can make people think and imagine absolutely differently!

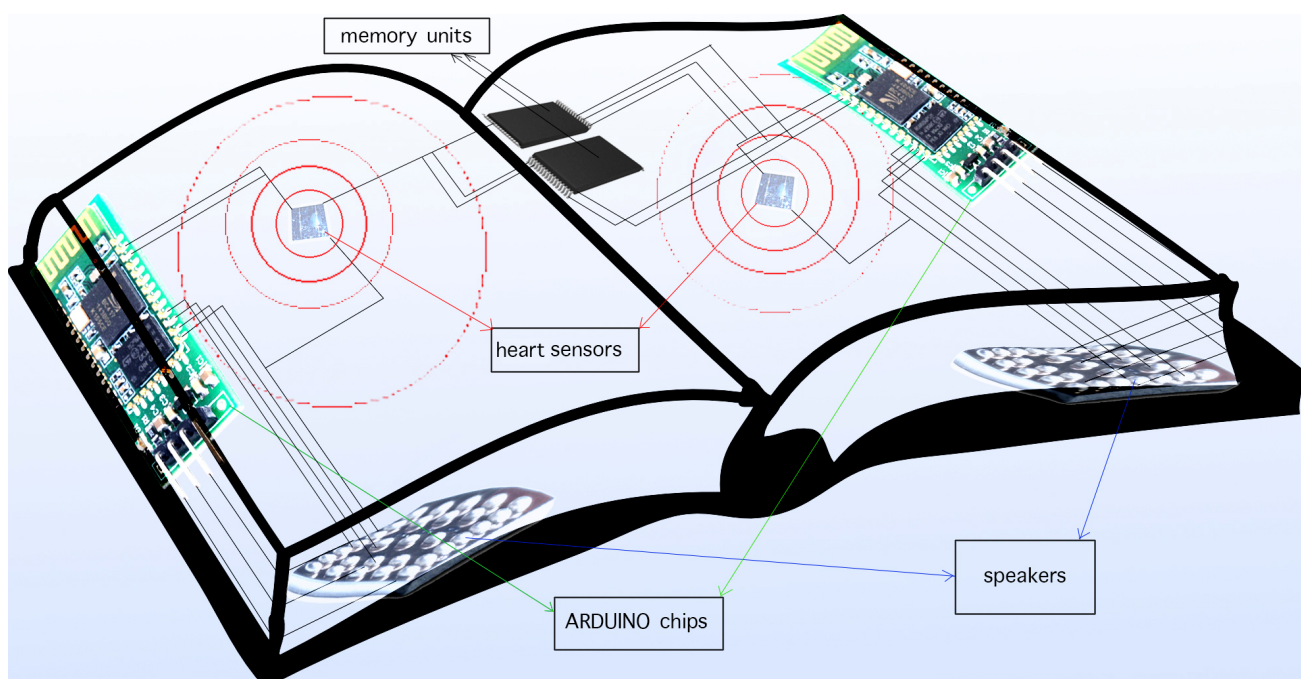


Then I was thinking about technology that might make such book. I thought of ARDUINO chip that Dr. Gerhard showed us during his presentation “Evil Robots”. One of his hand-made robots was the helicopter that can fly without intense controlling. That helicopter had ARDUINO chip whose sensors could keep the robot straight and steady in the air. It could “see” the barriers and sometimes it could avoid them (again, without much of controlling). So you can code ARDUINO to do anything you want. It is like a mini computer. I could program it to recognize heart beats and get right music and transfer it to speakers in the book. Combination these two artists’ topics and works had a big influence on my project.



### Specific Technologies

I was thinking of specific technologies that could be used in this project. I found a logical solution for this “puzzle”. I could use two heart beat rate sensors on each half of the book that will “read” your heart beat. These sensors will transfer information to mini computer chips (ARDUINO in this case) that will process that information and recognize emotions of the reader. After that ARDUINO has access to memory slots (that are hidden in the book cover as well) where all the music is stored, and pick corresponding music. Then this information goes to mini speakers that are located on the back of MusicBook. These speakers are used in smartphones as well as per they are very small and can produce good quality of sound. (scheme is made by Yulia Shilova)



### Where Would I Display This Work

I would display this work mostly in libraries, where people go to read. They also could purchase MusicBook and enjoy reading it at home, share with friends, sell it after it is used, etc. Another place to display this work might be University of Regina, where students can try new MusicBook and give a feedback. I might also do a little presentation of this book, try to get to radio and talk about it, or a TV commercial (let's say I have a lot of money for that). As it was mention in class, social media is a great source to communicate and promote new creative technology. For example, Jeremy, or Tackyshack, mostly has social network (<http://www.tackyshack.net>) to show and promote his work. So I could post MusicBook presentation on Facebook ([www.facebook.com](http://www.facebook.com)) or YouTube ([www.youtube.com](http://www.youtube.com)) or any other popular social network. After taking some computer science classes I could create a web page, all about just this project.

### Ethical Or Cultural Questions/Concerns The Work Might Raise

Unfortunately, this work might raise some ethical questions or concerns such as “Will this be a good reading experience for children?”, or “Many people get very distracted by any sound while reading. And will this distract people around the reader?”. Such books indeed might distract small kids as they are very sensitive to sounds. Also teenagers might be distractive by music during their homework (<http://www.beachpsych.com>).

Some cultural questions/concerns might appear as well. For example, people in Canada and U.S. will hear “sad moment” music and this will make them feel pain or sadness of main character of the book. Same music in Japan will make people laugh and feel positive (because of their different culture) and it will not suit the “sad moment” that they are reading. This might cause some confusion.

## References:

- Liz Bury (2013) article from <http://www.theguardian.com>
- *36 Book Reading Music Playlists* from <http://8tracks.com>
- Jessica Dolcourt (2014) CNET article *See The Samsung Galaxy S5's Heart Rate Monitor in Action* from <http://reviews.cnet.com>
- Book discussion *Do you listen to music while you read?* from <http://www.goodreads.com> forum
- (2013) *Reading While Listening To Music* from <http://lifeofafemalebibliophile.wordpress.com> by lifeofafemalebibliophile
- Dr. Charity Marsh web site <http://www.interactivemediaandperformance.com>
- Dr. David Gerhard web site <http://davidgerhard.ca>
- Jeremy Hsu (2009) article *Music-Memory Connection Found In Brain* from [www.livescience.com](http://www.livescience.com)
- Chris Gaither, article *Distractions During Homework* from [www.beachpsych.com](http://www.beachpsych.com)