

eMotion Project Plan  
Spring 2009

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## I. Mission

eMotion creates and offers devices that connect those who are physically separated but emotionally connected in a simple and safe manner.

## II. Background

### a. Project History

As social creatures, human beings are inclined to express thoughts and feelings to those whom we care for. Over the years communication has become more advanced, changing both the level of interaction and emotion attached to the communication. From writing letters to hearing someone's voice over the phone to watching and hearing the person using webcams, the natural progression is to be able to communicate a pure emotion at a distance by having a physical and psychological reference. When it comes to showing affection towards another individual, oftentimes it is the fact that someone is thinking about him or her that makes the gesture appreciated. This is the fundamental basis of eMotion.

One of the strongest emotions is the caring that is shared between friends and loved ones, and it is very important to express these feelings. The Best Friend Forever Necklace targets a younger audience because they are the group that is more likely to enjoy and need a product that will convey emotions. It was decided that by designing the product for a younger audience, it will help them reinforce their friendships and also serve as a stepping stone to launching other products using similar technology to different target markets in equal need.

eMotion as a concept, originally developed by Avelo Roy and Ed Suda, initially dealt with the issue of being able to touch over the internet as a means of connecting people who are not physically there but are emotionally together, a crucial element to maintaining healthy relationships. Also, it was found that the National University of Singapore's Mixed Reality Labs was currently working on a technology that allows simulated touch to be transmitted over the internet. The project, called "Poultry Internet," made the project seem much more attainable. The system was designed as a jacket worn by a receiver. The sender would stroke a doll of the object and the sensation would be transmitted. Utilizing this research and its business potential, eMotion was submitted for the Fall 2006 Business Idea Challenge, placing third overall.

Following this early success, Avelo Roy and Ed Suda continued to research and explore possibilities of touching over the internet, eventually communicating with Adrien Cheok and James Teh of Mixed Reality Labs regarding collaborative efforts. The offer for collaboration was met favorably, and preliminary exchanges

began. The project faced a major revision in its application when several issues were brought up: technical feasibility of such a jacket in a semester and also considering what it really means to be emotionally connected.

Fall 2007 semester witnessed a slew of modifications and developments to the original concept. A preliminary business plan, two functioning prototypes, a small focus group, and a website framework were created. Also, much support was found in outside resources like Nik Rokop of the Knapp Center, providing invaluable insight into the opportunities of the BFF <3 Necklace. All of these elements resulted in strong success for the team, winning five awards including the Best EnPRO, 3<sup>rd</sup>-best presentation, 5<sup>th</sup>-best booth, and 1<sup>st</sup> place in the initial stage of the Idea to Product competition at IIT.

In Spring 2008, eMotion won the first place in the regional competition of Idea to Product challenge, 3<sup>rd</sup> place in Nascent 500 national business plan competition and also presented at the Midwest venture summit attracting the interest of several potential investors. On IPRO day eMotion won the best EnPRO out of two tracks, best business plan, best team leaders, 3<sup>rd</sup> best exhibit, 2<sup>nd</sup> best in project management, etc.

In Fall 2008, eMotion competed in several regional, national, and international competitions including StartIt Up at Fresno CA, I2P Global at Austin TX, Chicagoland fast pitch competition and Entrepreneur Idol at the North Western University winning over \$26,500. This was also our third time winning the best EnPRO award on IPRO day. We had a working prototype to demo on IPRO day and we also had samples of BFF Notes which is going to be our first product out in the market.

## b. Opportunity

**Lack of online security for tweens:** Current online social networking sites do not allow children under the age of 14 to become members of their web communities. Our market research found that over 27% of these girls hide their age to sign up anyway, even though these sites do not contain age-appropriate content. In addition, parents are not comfortable with their children posting personal information on these existing sites like Facebook and Myspace, where tweens are three times more vulnerable to online predators and cyber bullies.

**Lack of physical proximity:** Market research shows that 55% of tween girls use the internet to communicate with friends, leading to relationships that are distant, virtual, and impersonal<sup>1</sup>. To introduce the human touch to the virtual world, eMotion offers its first product, the BFF<3 Necklace, which connects to a complementary secure online social networking website.

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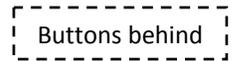
<sup>1</sup> The U.S. Tweens and Young Teens Market, Packaged Facts. 2008

### c. Solutions and Technology

The BFF<3 Necklace is a customizable fashion accessory, wireless communication device, and gateway to a secure social networking website for tweens. This device uses radio frequency to communicate with other BFF<3



Necklaces via patterns of lighting and vibration, allowing groups of friends to send secret, coded messages.



To gain a better understanding of the BFF<3 Necklace offering, let's meet Jessica, a typical 11 year old tween. Jessica is sitting in the cafeteria eating her lunch when she feels a slight vibration from her BFF<3 Necklace. She looks down and notices the LED on the left is shining blue. This means the message is from her friend Sara. The LED to the right is shining the pattern of blue-yellow-blue, which Jessica knows means "I miss you." She then hits the reply button so that her friend Sara knows Jessica misses her too.

All of these elements of the BFF<3 Necklace can be customized at our social networking website, [bfflessthan3.com](http://bfflessthan3.com). Here Jessica and her friends can read about the latest fashions, chat, create and update their BFF coded messages, and customize their own unique face plates for their necklaces. All of these activities take place in a secure, monitored environment. On the social network, tweens can only interact with friends who have synced their necklaces **face to face**. This security feature eliminates interactions with random and unwanted friends, a significant problem with current leading online social networks.

### d. Path Ahead

The Spring 2009 semester will focus on further developing the Necklace so that it can be ready for beta testing. The financials need to be revised in order to take into account new developments and added features. In addition, a series of business plan competitions will be entered to obtain necessary capital to help launch the company and gain valuable feedback. Prototyping, revising, and continual consumer-use feedback through focus groups will ensure that this venture is heading in the right path toward business viability in upcoming semesters. The website has been completed and will be tested by users this semester. The BFF Notes are also going to be launched in late February and we intend to distribute as well as sell them to our market. The intention is also to engage the market with the website so that they can use the social networking features and give us feedback. We also intend to submit the provisional patent on the entire system and every facet of the BFF offering.

### III. Objectives

#### a. Business

##### i. Business Model updates

1. Business plan
2. Distribution model for BFF Notes and BFF Necklace
3. Product finalization
4. Develop promotion strategy
5. Develop marketing strategy
6. Investigate financial projections and cash flow
7. Develop formal ownership rights
8. Prepare for outside investment
9. Prepare operations plan
10. Develop post-graduation support network

##### ii. Market Research

1. Conduct Focus Group of parents and tweens
2. Understand purchasing habits and who pays
3. Keep up on secondary research
4. Investigate how BFF Notes are used in trials
5. Use BFF Notes to create brand recognition
6. Plan and monitor BFF<3 Beta Phase I

##### iii. Ethical Considerations

1. Determine relevant ethical issues
2. Intellectual property
3. Submission of provisional patent
4. Determine how ethical implications relate to legal issues
5. Website disclaimer
6. Contracts to outsourced services

##### iv. Finances

1. Research concrete numbers for market, industry, and eMotion venture
2. Determine conclusive adoption rate based on precedent
3. Revision of pricing strategy
4. Write financial statements
5. Recruit an MBA in finance
6. Develop investment plan

#### b. Technology

##### i. Develop necklace prototype

1. Reduce sizing of necklace prototype
2. Increase transmission range

3. Integrate with fashion casing
4. Integrate rechargeable power source with USB cable
5. Determine faceplate system and design

ii. Features

1. Allow for multi-syncing and receiver control
2. Develop desktop software integrated with BFF <3 unit
3. Lightweight and low power usage

iii. Website

1. Update website to reflect product modifications
2. Create full set of templates for game and BFF <3 Necklace casing components
3. Integrate website with BFF Notes
4. Map out long-term website strategy

iv. Software

1. Develop software to act as intermediary between necklace and website
2. Engage in user testing to be done in conjunction with Beta Test Phase I

## IV. Methodology

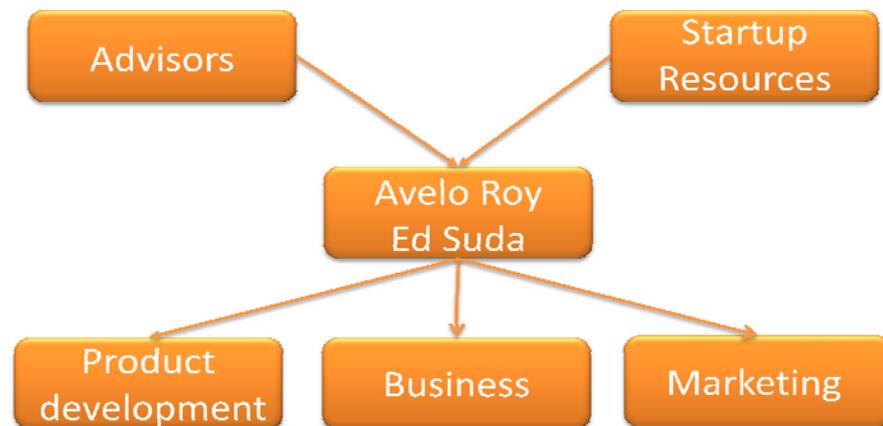
### a. Sub-team Hierarchy

The tasks consist of those aimed at creating and forwarding the eMotion product technology and those aimed at formulating the eMotion business strategy. Consequently, the team of eMotion is divided to three sub-teams generally defined as the product development sub-team, marketing sub-team and the Technology Sub-team.

Each of the teams work closely with each other to ensure that proper communication is facilitated and that there is minimal wasted effort toward an idea that another group might find unreasonable to pursue. Additionally, this close communication facilitates better-quality ideas that work toward creating a successful BFF Necklace.

Sub-team leaders are responsible for managing the progress of their sub-teams. Additionally, the sub-team leaders are responsible for making sure the close, constant communication is ongoing between sub-teams, the team leader, and the

project advisors. If inadequate progress is noted, the entire team works together to create a resolution to the issue.



## b. Meeting Times

EnPRO 354 is scheduled to meet every Monday and Wednesday morning. The schedule was modified after the division into sub-teams, reducing the entire-team meetings to only once a week on Wednesday mornings. The sub-teams are each required to meet at least twice a week, where issues specific to the sub-team are discussed and explored. Members of the sub-teams are strongly encouraged to attend meetings of the sub-team the individual is not officially a part of to keep abreast with current issues and developments.

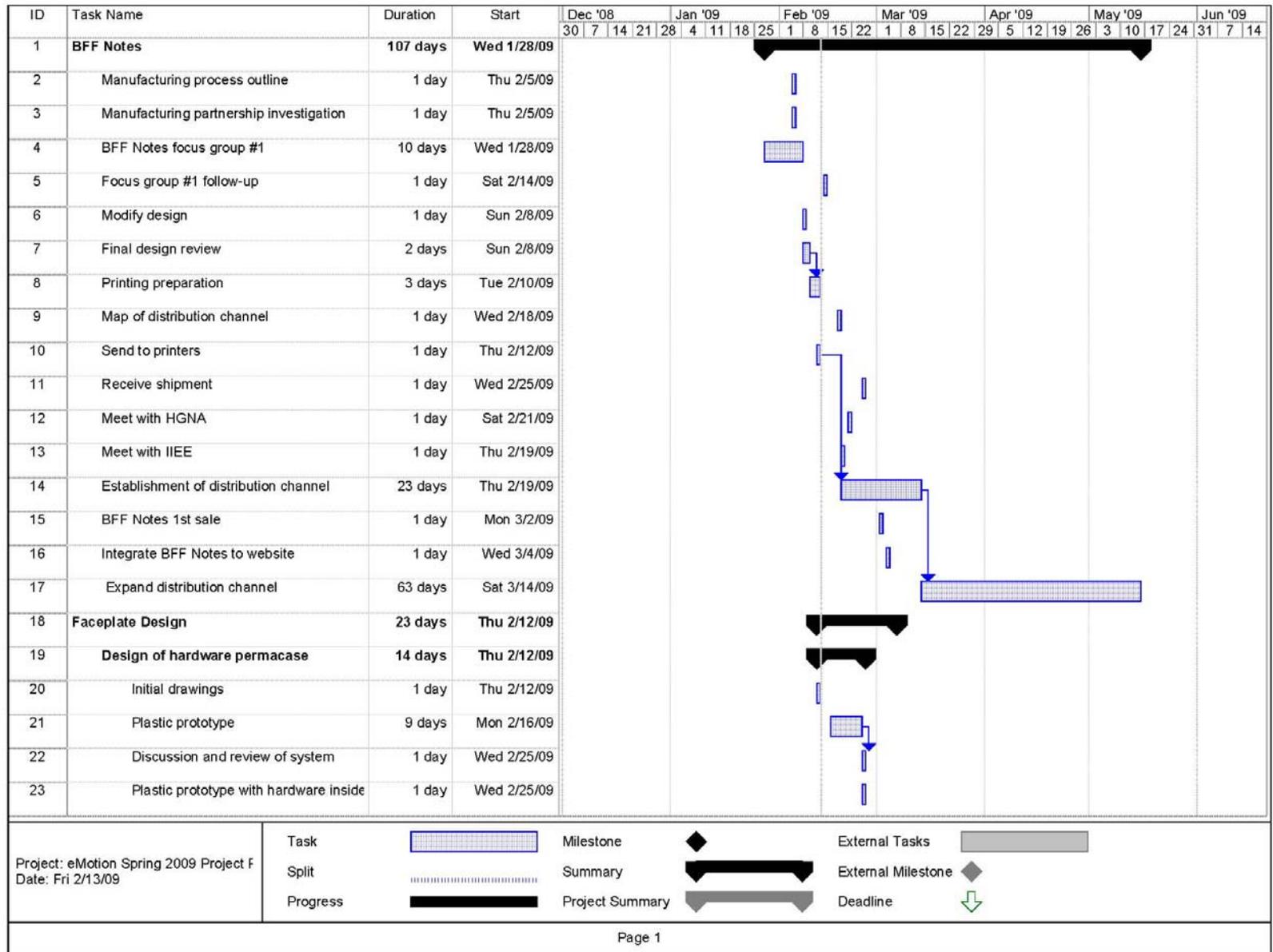
Entire-team meetings are utilized as a forum for members of the eMotion project to present reports on recent developments and obstacles faced within the sub-team and what it means for the entire group. Solutions are then brainstormed and the process repeats. Additionally, time in class is spent reviewing and revising the set schedule of events to make sure the issues outlined are relevant and realistic based on current progress directions.

## V. Schedule of Tasks and Milestones

### a. Schedule of Tasks

A schedule of tasks and goals is created as a set of guidelines for the team to adhere to as closely as possible. This is only preliminary, since all conditions which may arise during the research and development processes cannot be foreseen and accounted for. Individual member assignments are also flexible, as some tasks may be greater or lesser than initially anticipated. The constantly-modified project schedule will be posted on iGroups so everybody is well-informed of where the team needs to be. The Sub-team leaders are responsible for the individual weekly allocation of tasks, while the Team Leader and Internal Coordinator support and guide these tasks.

	2008	2009	2010	2011	2012	2013
<b>Technology Focus</b>		Patents →Product Development →BFF Version II	Patents →Develop Alt. Use	Patents →Develop Alt. Use		
<b>Sales Strategy</b>		Sell BFF Notes	Sell BFF<3 & accessories	Sell Girl's Night Out		
<b>Marketing Focus</b>		End Users, Tween Parent Groups→ Tween and parent publications	Internet Child Safety firms and groups			
<b>Manufacturing Strategy</b>		Contract Manufacturing				















## VI. Expected Results

### a. Business

#### i. Objective – Marketing strategy

##### Results –

Partner with tween-focused organizations to initially distribute and sell BFF Notes, allowing us to gain valuable insight and a foot in the door to assist in distributing BFF Necklaces  
Come up with a strategy to sell the product to first 10,000 tweens.

#### ii. Objective – Business Plan Competitions

##### Results –

Gain feedback on improving the project from diverse sources and experienced entrepreneurs to solidify the project and gain insight into the target market and launching process.

#### iii. Objective – Update financial statement

##### Results –

Create an accurate financial analysis and statement based on a complete breakdown of our company objectives, funding needs, product needs, and operational needs

#### iv. Objective – Focus groups and product testing

##### Results –

The focus groups are a crucial element to tailoring the product to customer needs, as well as gaining insight into how parents and children influence each other's buying decisions. The feedback will be incorporated in the designing of the product and then sent out for testing to selected girls who are identified as trend setters and influencers.

### b. Technical

#### i. Objective - Develop a necklace prototype

##### Results –

Create a lightweight necklace with minimal power consumption that has wireless capability, and a multicolor light with a force sensation. Integrate with the replaceable casings.

#### ii. Objective - Final, production ready necklace implementation

##### Results -

Minimize cost, size, weight, power consumption on original prototype. Integrate PCB with selected hardware

- iii. Objective – Design and testing of permacase and faceplate  
Results-  
Develop initial prototypes of permacases and faceplates to experiment with various strategies of creating a customizable fashion accessory that is durable and fulfills our product needs
- iv. Objective - Develop website and desktop software  
Results -  
The website and desktop software provide the necessary support for the BFF <3 Necklace an interactive website that enhances the user experience and extends the lifespan of the product. It also supports a recurring revenue stream and provides barriers to entry through the sophisticated user interface.

## VII. Team Member Roles

- a. Avelo Roy (Co-founder, Team Leader, Agenda Creator)
  - i. Major: Computer Engineering
  - ii. Certificate in Leadership studies
  - iii. Year: 4<sup>th</sup>
  - iv. Skills related to eMotion
    - 1. 3 semester eMotion experience as Team Leader
    - 2. Extensive experience in leadership and team management
    - 3. Experience with circuit analysis and circuit design
    - 4. Presentation skills and pitching to investors
- b. Edward Suda (Co-founder, Team leader, Minute Taker)
  - i. Major: Architecture
  - ii. Minors: Architectural Engineering, Entrepreneurship
  - iii. Year: 5<sup>th</sup>
  - iv. Skills related to eMotion
    - 1. 2 semester eMotion experience as Internal Coordinator
    - 2. Extensive leadership and managerial skills
    - 3. Microsoft Office – Word, Excel, PowerPoint, Project
    - 4. Knowledge of metal and woodshop machinery
- c. Alessandro Segre (Technical Sub-team Leader, Hardware developer)
  - i. Major: Computer Engineering
  - ii. Year: 3<sup>rd</sup>
  - iii. Skills related to eMotion
    - 1. Electrical and Electronic:
      - a. Basic electronic digital systems design and implementation
      - b. Moderate electronic knowledge and experience
      - c. Basic low-power electrical power-systems knowledge and experience
      - d. Extensive non-SMD soldering & circuit assembly experience

- e. Basic surface mount (SMD) PCB soldering
- 2. Mechanical
  - a. Design and implementation of precise mechanical systems for optical use via computer aided drafting (CAD) software
  - b. Precision operation of metal and wood shop machinery for the creation and modification of standard and custom designed components
- d. Haojie Luan (Software developer)
  - i. Major: Computer Science
  - ii. Graduate Student
  - iii. Skills related to eMotion
    - 1. Software design experience
    - 2. Hardware development experience
- e. John Graziano (Circuit designer and programmer)
  - i. Major: Computer Engineer
  - ii. 3<sup>rd</sup> year
  - iii. Skills related to eMotion
    - 1. Software design experience
    - 2. Hardware development experience
- f. Daniel Votipka (Software Architect)
  - i. Major: Computer Science
  - ii. Minor: Entrepreneurship
  - iii. 3<sup>rd</sup> year
  - iv. Skills related to eMotion
    - 1. Software design experience
    - 2. Php programming
- g. Zachary Estrada
  - i. Major: Computer Engineering
  - ii. 3<sup>rd</sup> year
  - iii. Skills related to eMotion
    - 1. Software design experience
    - 2. Hardware design
    - 3. Web programming
- h. Nirali Patel
  - i. Major: Information Technology Management
  - ii. 2<sup>nd</sup> year
  - iii. Skills related to eMotion
    - 1. Web design experience
    - 2. Photoshop skills
    - 3. Database management

- i. Johannes Morath
  - i. Major: Business
  - ii. 3<sup>rd</sup> year
  - iii. Skills related to eMotion
    - 1. Marketing
    - 2. Finance
  
- j. Alexis Laurence
  - i. Major: Business Administration
  - ii. 3<sup>rd</sup> year
  - iii. Skills related to eMotion
    - 1. Marketing
    - 2. Strategy
  
- k. Shanon Ludden
  - i. Major: Electrical Engineering
  - ii. 3<sup>rd</sup> year
  - iii. Skills related to eMotion
    - 1. Circuit Analysis
    - 2. Circuit designing
  
- l. Whitney Horn
  - i. Major: Chemical and Biological Engineering
  - ii. 3<sup>rd</sup> year
  - iii. Skills related to eMotion
    - 1. Entrepreneurial mindset
    - 2. Public Speaker
    - 3. Focus group specialist