

Project Deliverable L: Intellectual property Search
GNG 2101 – Intro. to Product Dev. and Mgmt. for Engineers
Faculty of Engineering – University of Ottawa

Date : December 5th 2019

Group number: Group A10

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Introduction

Intellectual property (IP) refers to the creations of the mind, such as inventions; literary and artistic works; designs; and symbols, names and images used. Laws concerning intellectual property are important as they set businesses apart from competitors, provide an important revenue stream through sales and licensing of creations and promote innovation. Without these protection laws, businesses and individuals would not fully benefit from their inventions, focusing less on research and development, thus negatively impacting the progression of humankind.

In this deliverable we will investigate the various intellectual properties related to our project and explain the importance they have on maintaining the integrity of our product. We will do so by making use of a variety of intellectual property databases such as the *Canadian Intellectual Property Office*, the *United States Patent and Trademark Office*, *Google Patents* and *freepatentsonline.com*.

- 1 - Explore intellectual property databases to identify at least three intellectual properties related to your product.**
 - 2 - Describe the relationship that exists between these intellectual properties and your product.**
 - 3 - Explain the importance of these intellectual properties with regard to your product and the impact they could have on your success.**
 - 4 - Discuss the way in which your team intends to manage intellectual property created with your product, assuming you decide to market your product.**
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Our device can be broken down into various streams of innovative assets by which work synergistically to provide desired functions to our clients. Upon exploring the various aforementioned databases, our group was able to identify varying types of intellectual property rights related to our product. These intellectual properties included: “trademarks, patents including industrial design rights and utility rights and open-source licensing”.

Trademark

Trademarks are a type of intellectual property consisting of a recognizable sign, design, or expression legally registered to identify products of a particular source from those of others. During the development of our device, our team decided to brand our product naming it “Ergobrush” as a means to more effectively market ourselves and stand out amongst the competition. Among other things, we also decided on creating a slogan for our device to give potential users a quick rundown of the device’s utility, our slogan is “*The Leading Adaptive Toothbrush For Your Accessibility Needs*”. We also intend to create a logo to accompany our brand.

Trademarking our product name, logo and slogan will offer protection to our brand and deter others from infringing upon our efforts. It will also carry its own benefits to the general public by encouraging us to uphold quality product and service standards and provide a sense of reassurance to consumers through consistency in a brand they can trust. This will build an ongoing relationship between our company and the public as well as prevent other companies from misleading customers through the use of a similar name or slogan.

We will register a trade-mark for our brand name, logo and slogan. This will be achieved by filing an application through the *Canadian Intellectual Property Office (CIPO)*. As we intend to market and distribute our product globally, we will also file for trademark

registrations internationally. This will be done by referring to the *International Trademarks under the Madrid Protocol*. Once completed, we will maintain our trademark registrations by ensuring each renewal fee is paid in full prior to its expiration date.

Patent

Patents are a form of intellectual property that legally provides its owner the right to exclude others from manufacturing, using, distributing or importing an invention for a given period of time. A patent is a temporary limited legal right granted to an inventor by a government body averaging a period of 20 years. Patents are a valuable business asset as they credit the innovators work and generate the ability to claim royalties from anyone who infringes on the patent.

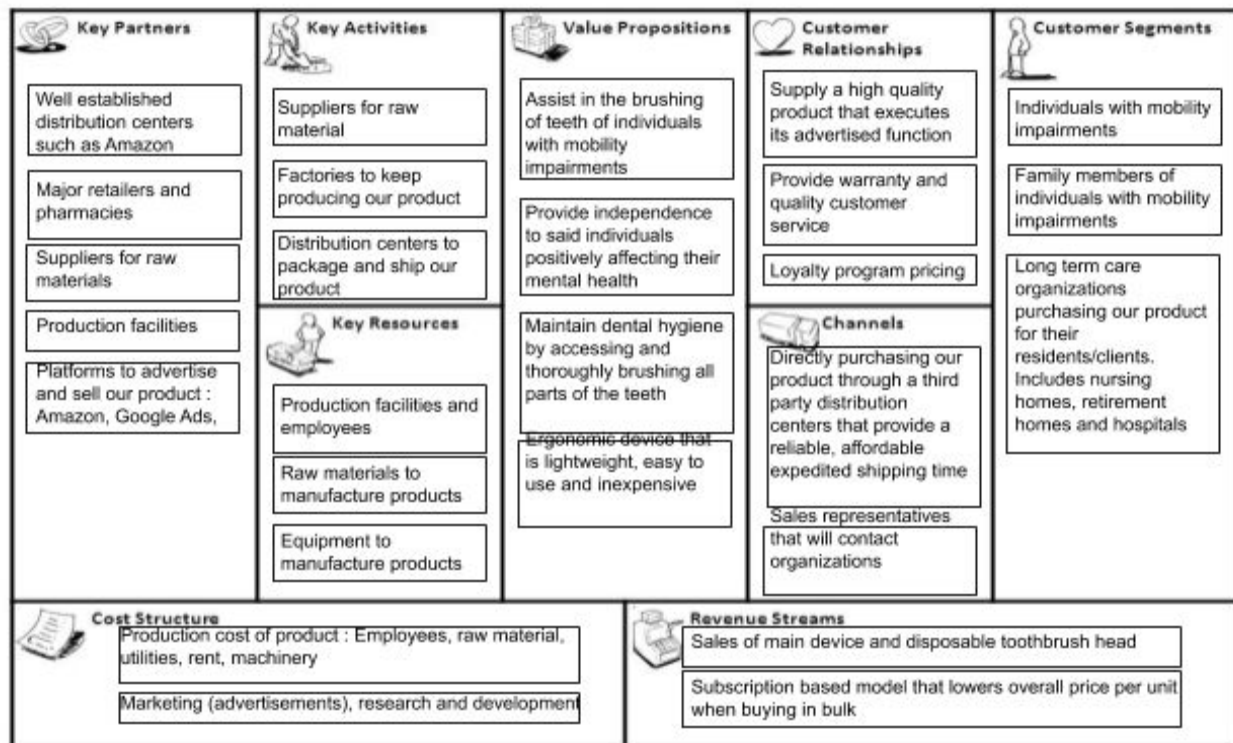
We plan on patenting the utility of our device which includes but is not limited to the three degrees of freedom it provides, the hand held design that extends to the toothbrush, the disposable toothbrush bristles and electrical design that powers the device.

We also plan on filing a Design Patent which will serve to protect the visual design of our product. This will consist of visual features of shape, configuration, pattern or ornament used in the production of our finished product created by hand, tool or machine.

It is of great importance to file these patents with regard to Ergobrush for the inevitable impact it will have on our products success. A patent will give us the ability to prevent competitors from reverse engineering our manufacturing process and copying our design. Without necessitating the same investments in research in development (R&D) as we have, these competitors could easily maintain strong profit margins while distributing our product at a lower price.

As our patent will protect our technology for 20 years, we established a long-term business model suitable for this criteria. Using a razor-blade business model will provide the required time to fully optimize our design and competitively market our product come the patents expiry. For this model, our “bait” product will be the main device component while the “hook” will consist of the patented disposable toothbrush heads. Conducting extensive R&D throughout the 20 years will allow us to greatly diminish the cost of our “bait” device ensuring competitiveness. This time period will also allow us to

establish key partners, customer relationships and key activities and resources further giving us the required advantage to dominate our competitors.



The Design and Utility Patent will be filed by writing an Invention Disclosure which will describe the invention, list unique features, list all inventors, relevant literature/patents, dates and records including any data documenting the invention. We will also conduct preliminary patent research to find related patents. This will be done by searching for keywords from Invention Disclosures, using a guide for patent scope and descriptions that will include all relevant patents in list of relevant background to invention.

Open-source Licensing

Open-source and Free Software licenses consist of free software legally permitting the user four essential freedoms. These freedoms including running the program for any desired purpose, study the functionality of the program by modifying it and accessing the source code, redistributing copies of the original program and of the modified version.

Open-source licensing relates to our product as we currently utilize Arduino Software to control and operate our device. Arduino software and hardware is registered under a Creative Commons license which permits anyone to produce copies of the boards,

redesign and sell the boards that copy the design. Using technology under this particular license provides the liberty to not have to pay a license fee or ask permission to use the software. By using this software we will be able to market our product at a more affordable price through the creation of our own microcontrollers, avoiding royalties.

One condition that accompanies Creative Commons licenses is that if we do republish the reference design, we must give credit to the original Arduino group. Additionally, our new modified boards must be licensed under the same or a similar Creative Commons license to ensure that our modified version will be equally open-sourced to the public.

Conclusion

To conclude, intellectual property is a vital concept and model to be followed that will ensure the prosperity and protection of inventions marketed to the public. In this deliverable we were able to identify the intellectual properties and describe the relationships that exist with our product. We also further defined the importance that these intellectual properties hold in regards to our product and brand success by discussing the ways in which our team intends to manage intellectual property in the marketing of our product. We found that intellectual property personally affects our brand through trademarking, patenting through designs and utility, as well as the permission to utilize pre-existing software for profit.