Drafting a Letter of Intent

(Graduate or Postgraduate Studies)

Dr. Harriet Green                                                                  July 15, 2013  
Boston University  
College of Engineering  
44 Cummington Mall, Room 114  
Boston, MA  
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Dear Dr. Green,

I am applying to attend the Boston University PhD program in Engineering which begind in January of 2014. My career objective is to become a scholar who investigates wireless communications using the visible spectrum (Smart Lighting ERC). I would also like to work as a professor at a university or as an engineer at an organization to invent the new technologies of tomorrow.

My passion for computer engineering started as soon as I had my first computer and got the opportunity to study its structure. Throughout my primary education, I was sure that I would attend a university to study computer science, and after being admitted to the National University of France (NUA), I have decided to devote my career to computer technology improvements. I believe that our future is closely related to computing systems.

Therefore, during my university studies, I have spent my spare time working as an assistant at an NUA testing laboratory. However, I have come to see that the use of light in order to transmit data can be limited in comparison to radio waves. There is a great amount of possibilities that can be developed due to this technology. There is a great need of professional research which involves analyzing technical environments from the perspective of using the visible spectrum, preferably built upon a comparative analysis with other types of spectrum. The visible light spectrum is 10,000 times larger than the radio-frequencies spectrum. I wanted to uncover other possible technologies. Thus, my decision to enter graduate school was made.

My first exposure across these studies came from the Southern School of Technologies, where I received my MA in Computing Technologies, on an agenda setting and framing while working on my research paper based upon the comparative analysis of spectrum types. Meanwhile, I had noticed the lack of English-language books on modern engineering available, even at the French National library. I had struggled to find some literature while traveling abroad and ordered books from online bookstores, but the more I read, the more I understood that French and European engineering theory was detached from research work done in the US.

The PhD program at Boston University has been an intellectual lifeline for me. In addition to the literature of which I can only dream of reading, I have also met brilliant engineers who have inspired me to think deeply about my own research interests. Their studies based on comparative spectrum analysis made me ponder the possibility of applying theories from the Southern School of Technologies to visible light communications (VLC) research.

I want to surmise whether Smart Lighting ERC is able to exploit its capacity with suitable electronics. As to the research of Southern School of Technologies, the intensity of the light signal can be controlled rather well, and a large variety of techniques can be applied to this signal. I wish to study how VLCs can be designed under conditions of the core center outcomes of increased safety, energy efficiency, productivity and health. My fluency in several successful research assignments and my resulting familiarity with modern technological theories puts me in a unique position to implement this research.

I am fortunate to join a team of pioneers in my field through the newly created French Technologies of Future (FTF) organization after my graduation. In addition to my direct responsibilities, I am also taking part in numerous seminars and lectures, organized by the FTF and its partners. Moreover, I have also became a technical researcher at the laboratories of FTF. All my activities that I mentioned above are an excellent preparation for my doctorate program, as I am achieving a better understanding of spectral processes within and outside France. I make strong relationships with native and foreign engineers for exchanging scientific knowledge – their expertise and studies will benefit my future research work.

My wish to continue my studies at the Boston University is founded on the groundbreaking research traditions and outstanding faculty members within your Department of Engineering – features that were highly praised by my former professors in France. I am delighted that, unlike European universities, your program gives me two more years for my research improvement and investigation of new technologies as well as taking courses from related centers such as the Photonics Center and the Laboratory of Integrated Nanophotonics & Biosensing Systems before writing a dissertation. With many outstanding and innovative engineers working in your department, I know that I will finish my research and provide more wireless capabilities for the future, as well as pursue my ambition to become a scholar.

Sincerely,  
Brandon Sheer