**Overview**

I think the world can agree Tesla was a genius. I personally have been mesmerized since coming into contact with it at a very young age, as I think many people in technology have. What if it were viable to explore that genius by recreating his most poignant work? A lot has been said on the subject of the Tesla coil, but what was the idea of mechanical oscillators and earth resonance that crystallized in Wardenclyffe? To separate fact from fantasy, a scientific answer is required.

Fourth-generation engineer fascinated by the phenomenon of wireless power

I am a specialist in magnetic resonance theory with copious experience in building coils and circuits to test my unique notions about electricity and magnetism. I have been studying the invisible force of electromagnetism since I was in my early teens. From 1996-2004 to a period of intense work 2008 - 2016, I have come to an understanding about physics of the planet and its place in the solar system that I think would greatly benefit our society and its people, just as Tesla would have liked.

**Short Summary**

Hello and thank you for your interest! To being, something about me: I am a specialist in magnetic resonance theory with copious experience in building coils and circuits to test my unique notions about electricity and magnetism. My contention is that we scientists think we know more about the subject than we do, especially in terms of two objects exchanging energy across a distance in space and time. I have been studying this phenomenon since I was in my early teens. Through an eclectic university education, I ended my formal studies with a Ph.D. from the University of Reading, UK where I studied under Professor Kevin Warwick. My thesis has become a foundation of current thinking in applied magnetic resonance for problems in wireless power transmission. I have published several important articles which discuss Tesla’s fundamental patent on wireless power transmission, created several poignant experiments surrounding it, and have added to a body of scientific knowledge by extending what I have learned to other aspects in electromagnetism.

This campaign has at its core a drive to investigate an idea, which has been more mythology than scientific inquiry in the years following Tesla’s death in 1943. Over the years of trying to come to terms of what Tesla was doing in terms of wireless power transmission in the years 1895 to 1904, I did a voluminous amount of research in the years 1996-2001, 2004-2005, and 2008-2016 including a visit to the Tesla museum in Belgrade, Serbia to try to reconstruct the project in terms of the basic “truth” I could reconstruct by taking step-by-step Tesla’s researches. It was at a point in time that Tesla seemed mathematically unaware of the implications of his work and that I needed to develop a framework based upon the concept itself, rather than someone else’s interpretation of it…including Tesla himself.

From personal experience, I intrinsically understand the frustration of not being able to discern what Tesla was really doing— “really” in terms of the physics, mathematics, and engineering strategies—supported by experimentation on real apparatus by a qualified point-of-view and without prejudice. Having not experienced such an epiphany during my years, I now take upon myself the ambition for scientists now and those going through University in the future.

This campaign is not just about revealing the mystery of Tesla’s Wardenclyffe through research and experimentation tracing step-by-step those made by Tesla, but is also about education and outreach to the university system. As illustrated in my publications, the path to understanding Tesla’s wireless transmission work was not gleaned using a treatise of electromagnetism learned in higher education, rather, by performing an “archaeology” of incremental work in electromagnetism from Faraday to Heaviside, approaching Maxwell’s vision and reinterpreting Tesla’s Wardenclyffe using concepts such as velocity-vortex, the vector potential, and magnetic stress among others. Short of proposing a “new” model of mathematical rigor, I posit we as scientists need to question the dogma that all problems in electromagnetism can be solved by four simple equations. You as the contributor can help change not only the face of how we understand wireless power transmission, but also how we teach students using new analytical tools. How will this happen? By a dedicated outreach program facilitated by a lecture tour through universities and institutes in Europe.

**What We Need & What You Get**

Tesla’s Wardenclyffe was a massive, expensive project carried out with the help of some of the most influential investors of the day. While it is not the point to construct a full-size replica or to improve on the design itself, I would like to construct something that would perform similarly on a scale, which is acceptable for demonstrating the concept to everyone’s satisfaction. In this campaign, it is desired to perform a comprehensive scientific investigation on the concept and implementation of Tesla’s World Wireless System exhibited by the construction at Wardenclyffe. This investigation—comprised of theory, numerical simulation, engineering, prototyping, and publications—extends into the realm of education where it will communicate to its backers in the form of a series of lectures and other updates via social media. Pointedly, I have discovered a new analytical technique is required to make this a success, one that I have already discussed publically, that needs great attention to make it coherent not only to the goal of the project, but in communicating it through the University system. Accordingly, this project will aid in supporting prospective graduate students throughout the world who have an interest to learn what will be done during the course of the project.

The first part of the project will be investigation of the research question: What was Tesla doing at Wardenclyffe?

The second part of the project will be mathematization of the research in the form of numerical analysis.

The third part of the project will be the design of the tower, in terms of what was gleaned under research, and a set of incremental coils, circuits, and arrangements to exhibit what it is meant by “earth resonance”.

The fourth part of the project will be improvements on the apparatus and more testing. It is expected an iteration to occur from this step to any of the other steps preceding it, increasing precision in the results.

The fifth part of the project will be implementation of a scaled test to serve as demonstration on a global platform what this project’s interpretation of Tesla’s World Wireless System. And here is where it might get a little strange. To be honest about the solution and to release fair results regarding this campaign, a proper proof would be the requisite of two towers each set upon the antipodes of the Earth. Keeping in Europe as the research station, one in particular could be Cordoba, Spain and Hamilton, New Zealand, among others within acceptable margin of error using GPS. It is expected that the amount of work to accomplish and that it would be myself as the researcher and other students joining, that it will the length of an entire year, perhaps two; nevertheless, it would be better to fully answer the questions of Wardenclyffe during the project and not leave out details for further possible research down the road.

What honors me in particular is that the work will be in process on the fateful day of the Wardenclyffe tower’s demolition: 4 July 1917.

I expect to construct several prototypes during the course of the research, so it would be exciting if some of the campaign’s backers could have their very own set. I would go as far to offer that I will custom-build a signature set that would function as detailed in this research and contain a set of instructions for nonprofessionals to experience it themselves. Other than that, the unique perks are designed to create a space for our contributors to keep pace with the research. This visibility and transparency is at the heart of the ambition to emphasize the educational aspect of the campaign. I cannot stress this enough. It is fine for me to walk through it, but how can others carry on?

In the unfortunate event that the funding goal is now met, I will carry out the research and communicate it on social media sites such as Twitter, Facebook, Academia, and ResearchGate given the available scope and output. While it may not be as ambitious as the fully funded goal and potential (this being the most fun scenario), the project will continue given the available budget yielded by the campaign’s generous contributors.

**The Impact**

Your contribution will mark an important milestone not only in science but also in scientific discourse. It is known that the educational system has suffered due to budget cuts and lack of interest in STEM in a very general way, so that University is forbiddingly expensive and out of reach of the most passionate students. This campaign is also experimenting with the idea that a scientific endeavor—such as an archaeology of Wardenclyffe—can be independent of its orthodoxy and dogma. In a fast-changing global space, there are many useful ideas no one knows because of the suppression of certain points of view. I would like to contribute to change this, to change the face of scientific inquiry. And you can help with this.

So many people have talked about Tesla to me and in books and across the Internet over the years, but what can we learn to take us forward, to separate the myth from the man and give us reproducible results so that we can determine, “yes, the tower would have worked but not exactly in the way it was envisioned for the reasons…” or “no, the tower would never have worked at all.” I am betting it is somewhere in between and with your support, we all will know.

**Risks & Challenges**

Of course, all this pleasantry notwithstanding, there will be numerous challenges and risks to the project and the course of its investigation. I would like to be as transparent as possible discussing honestly what is good and what needs to be overcome. Which is why the campaign has a monthly group chat with me, the scientist, where contributors can receive updates regarding the project and have the opportunity to ask questions within reasonable limits of time given for the session.

We will try problem solving as a group when there are difficulties and will give credit to those who propose ideas that help in solutions. With enough support, those who contribute strongly will have their name included on the peer-reviewed publications. This project will be fraught with challenges and near-impossibilities, but that is what makes it so interesting!

**Other Ways You Can Help**

And, hey, don’t feel bad if you cannot contribute. You can still follow along on my twitter feed, the dedicated Facebook page, YouTube, give us likes and positive comments. You can also tell your friends, help get the word out and make some noise if you believe in Tesla and what we, as a collective group would like to accomplish.

One last thing: Don’t forget to use the Indiegogo share tools!

All the best and thank you for your generous support,

Christopher A. Tucker, Ph.D.