

## Essays on Nikola Tesla Part 1: The Early Years

Howard W Penrose, Ph.D., CMRP

There are quite a few lessons associated with the wizard of electrical engineering who changed the world at the end of the 19<sup>th</sup> and first half of the 20<sup>th</sup> Century. Seen as eccentric by many, Nikola Tesla was a unique individual, let alone inventor, engineer, futurist, humanist, humanitarian, and genius. He is attributed with honestly inventing for the 'good of mankind' with all of the sparse funds he gathered during his life being re-invested into research. Towards the end of his life he ran into financial difficulties finally being supported by the Westinghouse Corporation with a \$125/month consulting retainer, as well as all of his hotel costs associated with his living quarters in the New Yorker in New York City, right up until his death. In the end, the man who transformed the world passed away alone, on January 7, 1943, in his hotel room leaving us to quietly mourn his passing and gradually allowing him to fade into history.

What made up the man who forced the world into AC power, held numerous patents, invented remote control, radar, radio, television, understood mechanical vibration and systems, and developed virtually all of the power distribution system from the turbine to generator, transformers, distribution systems, single, two and three phase motors, and their controls? What created the genius, who was attributed great mental powers, was considered by some to be psychic, others to be magic, never graduated college but was given over 53 honorary doctorates in electrical engineering before his death? Who is it that started one of the biggest, most sensational, battles against the normal in order to institute changes that transformed everything? A man who would plunge into poverty and debt but, through recognized genius, be supported by some of the biggest financiers of the age? That could have been the richest man on Earth but chose to live out his final days in near poverty? In addition to great genius, Nikola Tesla was a man of great contradictions and a change agent for humanity.

After many years of looking to Nikola Tesla as a role model, we undertook the journey to his birthplace in Smiljan, Croatia, in the province of Lika, then to the Tesla Museum in Belgrade, Serbia, where his



The Author Next to Tesla's  
Ashes at the Tesla  
Museum; Belgrade, Serbia

ashes are displayed in a copper orb. It is almost as if a Faraday shield is being used to contain his genius in the tiny container, even after his death, but I don't think they understood: his genius has penetrated that orb, overcoming the laws of physics and the dimension of time, his blessed 'laws of nature' shattered, as the man continues to push us into the future.

My fiancé was born in the nearby village of Liki Osik, just outside of Gospic and close to Smiljan and the Velebit Mountain range which follows the coastline. In the 1990s this area was part of the front line during the war between Serbia and Croatia and Liki Osik had been occupied. A small community that was a beacon prior with parks, pathways, schools, movie theaters, a grand hotel, and manicured lawns amongst



An example of some of the repaired damage from the war.

apartments, twenty years later still hold the scars of the war. The hotel is destroyed, there are shrapnel and bullet holes in almost every wall of every building, the theater is abandoned, but the community still exists amongst the gravel/dirt and pothole streets. For three days we stayed in a condominium in this community, which has been maintained, but not regularly occupied, over the past twenty years. English is understood, slightly, by the younger generation who are exposed to it in school, movies, entertainment and the internet. Just as in America, the young to middle generation can be seen walking around with smart phones or entertaining themselves with computers, both gifts of a man born minutes away in 1856. The neighbors are friendly, the local plum brandy and homemade food flows freely, and to these people Nikola Tesla is known because his name is seen here and there and he is still seen as a local hero.

We visit friends and relatives the first day as the Nikola Tesla museum is closed on Monday and we had arrived mid-day on Sunday. The temperature is in the high 30C (over 90F) but the nights are relatively



The view after a hike to the top of the Velebit Mountain Range

cool. As mentioned in histories related to Tesla, the people in this region tend to be tall. The air is fantastic and the area is very rural, even in town, and the food is rich and healthy. On the Monday we spend time with family and friends and travel up through the Velebit Mountains partly by car and then on foot. These are the areas that Nikola was known to have traveled on his walks and while he played as a child. Looking

at the surroundings I could understand more and more how Tesla saw the importance of harmony with nature, a tone that continues to be shared with the local residents that we met, to this day.

This area was a main highway and was of strategic military importance since Roman times and still contains plaques and monuments throughout the area. The area of Smiljan and Gospic are actually on a relatively high plane and protected by the mountains that surround it.



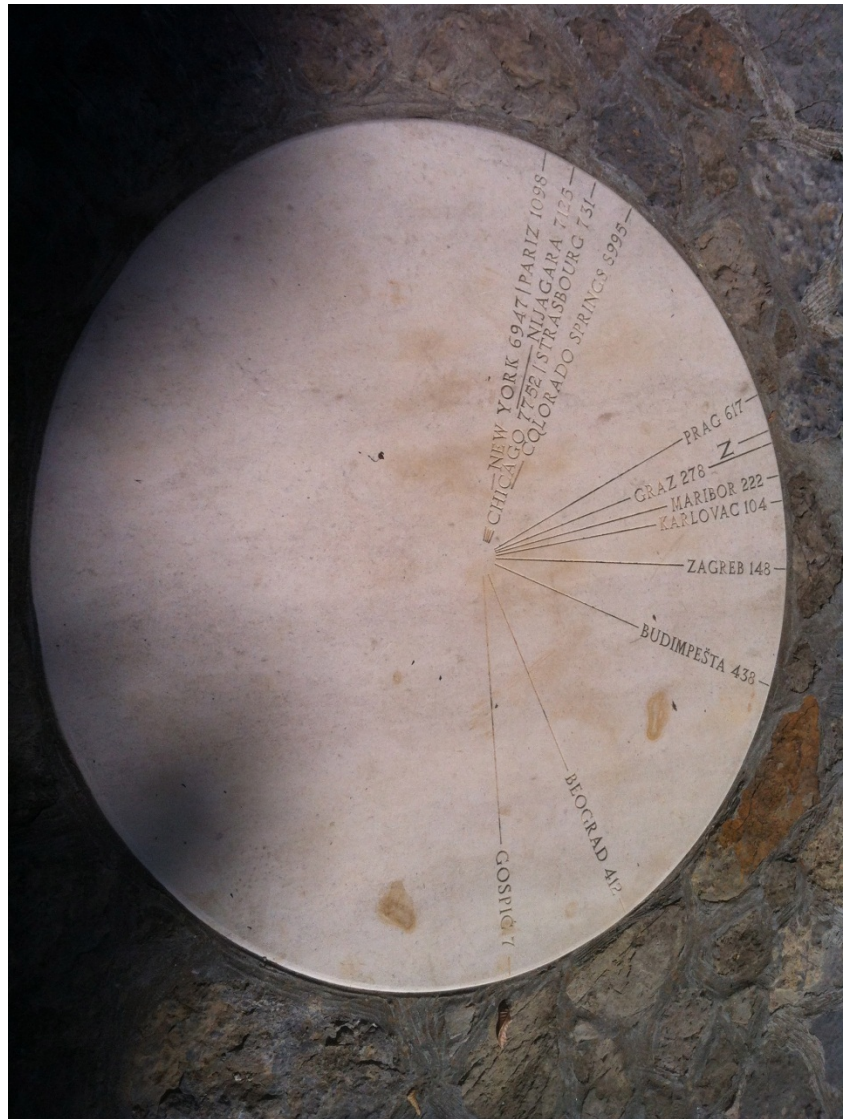
Austrian Monument in Karlobag

The provincial name of Lika actually relates to the major river that runs through the valley.

Further along we visited Karlobag which was a pass from the coast and inland towards Gospić. The monuments in the area dated back to the 1750s and represented the importance of the area to Austria and, later, Yugoslavia. The views both inland and towards the Adriatic Sea were breathtaking and peaceful. Just the surroundings alone, as well as the sense of community, give rise to a sliver of understanding of Tesla's views.

On August 21, 2012, we travel the short distance from Liki Osik to Smiljan down a small road and to the birthplace of Nikola Tesla, a protected park established in the 1950s. The church and house, as well as the barn associated with the house, are there, as well as a handful of displays associated with Tesla. There is not as much here as I had hoped, but more than I expected, including some personal items, a few demonstrations, and a display of the remote control boat that he invented and a number of abstract displays. Outside the home is a small stone monument in the sidewalk giving the distances that Nikola traveled from this birthplace during his life.

There is a small brick building nearby that provides a demonstration of the Tesla coil in action. There is a display area



that contains the radio controlled boat as well as a few pieces of abstract art and busts of Tesla which was also supposed to have a movie of the life of Tesla. Unfortunately, that was not functioning. At the birth-house where, on July 10, 1856, at about midnight, Nikola Tesla was born. The legends, including the information on display at the house, claim that it was exactly at the stroke

of midnight during a lightning storm. To my knowledge, there is no documentation confirming this as fact, but it does fit in with many of the strange stories surrounding Tesla's life and experiences.

On the first floor of the house, there is a timeline of Nikola's life, a recording of the radio announcement of his death in New York City, and a set of drawers with interesting facts associated with his life. This included original documents with signatures, statements and photos of Tesla and those associated with him. A lot of the information was existing knowledge; other information was relatively new to us.



I suppose one of the most disturbing parts of the trip related to the land surrounding the site. There is a graveyard immediately next to the small church his father was responsible for. It was fascinating, especially the ages of many of the graves and even that many of them were recent. Next to the Tesla memorial and graveyard was a fenced area with a sign. When I asked for it to be translated, I was made aware that it was a left-over minefield from the war. The irony that the museum of this man of peace and conscientious objector would have been part of the conflict and that weapons of war were surrounding his birthplace did not

go unnoticed and I found it profoundly disturbing.

Nikola was the fourth of five children born to Serbian parents Reverend Milutin Tesla and Djorka Tesla. The older three were his sister Milka, brother Dane, and Angelina all born in Senj. Dane was considered to be extremely smart but passed away in an accident when he was very young. Nikola and his younger sister Marica were born in Smiljan. Nikola's mother, Djorka, was well known for being intelligent, was a creative inventor, had a fantastic memory for reciting and memorizing, but was illiterate due to her need to raise her brothers and sisters after her mother died very young. His father joined the ministry after having dropped out of military school as he rebelled against the restrictions of that lifestyle. The Tesla family was well regarded and well positioned within the military





with many of the family having advanced to high level positions. This would serve as an important connection in Tesla's later years. His father also wrote often about current problems and would sign those papers under the name Srbin Pravicich, which translated as 'Man of Justice' in Serbian.

From an early age Nikola was particularly inventive, but also got into a lot of trouble due to his curiosity. Following Dane's death, Milutin was advanced to lead a church in the city of Gospic and they

moved there. Nikola became involved in a number of 'adventures' which caught peoples' attention, but not in a positive light, until an incident concerning a brand new fire wagon purchased by the city's fire brigade. The town officials made a big deal of the new machine and had taken it down by the river to demonstrate its function. The hand-pumped machine was operated, but no water came out. As a child, Nikola noticed something not quite right, stripped down and jumped into the water to discover that the inlet hose had been kinked. He unkinked the hose and had them pump the machine which accidentally watered down the townspeople and officials. Regardless, the fire brigade hoisted him on their shoulders and took him around as a hero.

Nikola was very good with technical and math classes in school. In only one case did he receive poor grades in mathematics. In this case he demanded a retest before a group of instructors which resulted in a perfect score. His father actually wanted him to join the ministry suggesting that he discontinue going to school, in particular to protect his health as he would often work himself until he became ill. During this argument he ended up attending the gymnasium (school) in Karlovac, living with a cousin and her husband who would keep him near starvation. After three years in Karlovac he completed a course that should have taken four and planned on returning home unaware that there was an epidemic of cholera in Gospic. Upon returning home, due to his weakened state, he contracted cholera and was bedridden for over 9 months, appearing to give up. He appeared to gain strength upon his father agreeing that he would be able to go to engineering school. However, the results of the illness, coupled with his personal drive would come back to trouble him for the rest of his life.

There was one other challenge to his future. At the time there was a requirement for every male citizen to join the military for three years. His father sent him on an extended hunting trip into the mountains, one that would take a full year, while family that held high positions in the military worked on the problem eventually absolving him of his military obligation. During this time away he developed many of the concepts that would become power distribution, radio, and many other inventions and discoveries later in his life.

In the next essay we will discuss Tesla's college years and his first years working within Europe.

References:

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Nikola Tesla's birthplace in Smiljan