Twitter Thread by CBG-san

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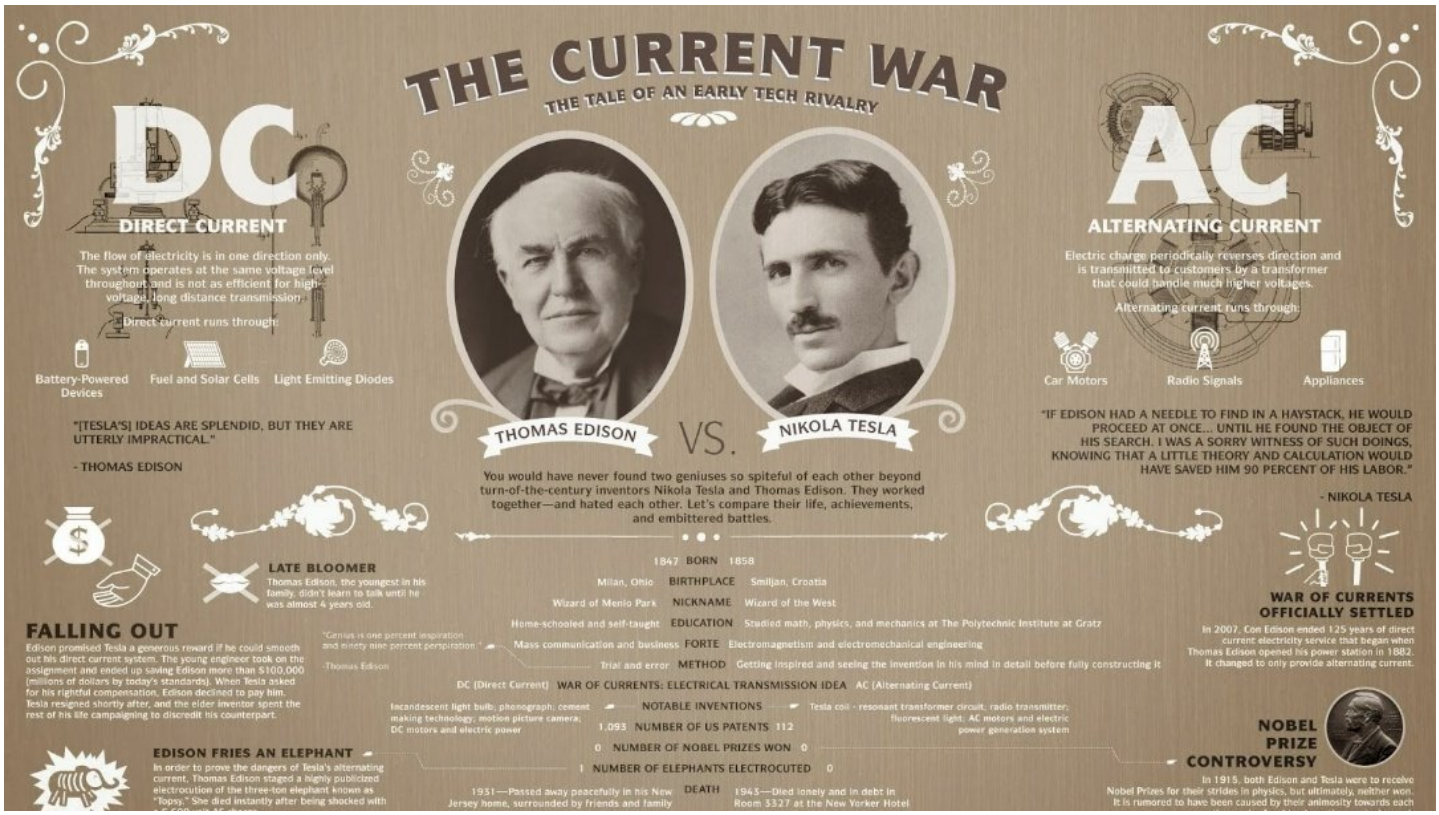
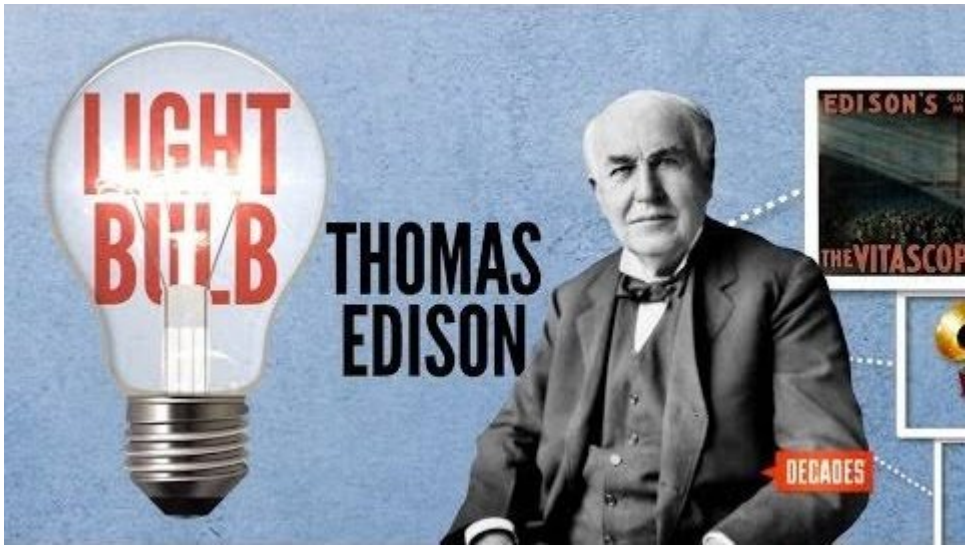
@OnlyNakedTruth

The world is today at equilibrium. Battery operated devices use DC current and the misc household and industrial appliances use AC current

But almost 140 years ago, that was not the case. A fierce battle was fought between two scientists Tesla and Edison over it. #CBG_Thread 1/n



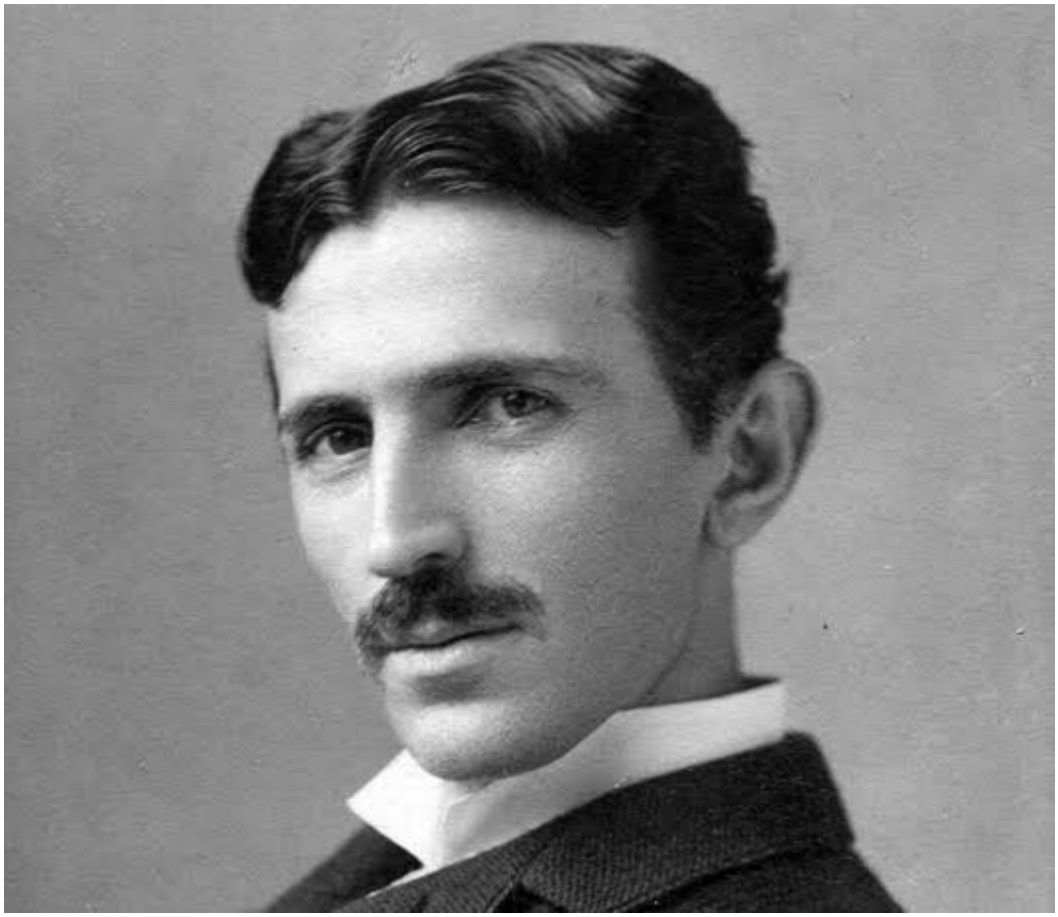
Thomas Edison, a prolific inventor, changed the course of history with the invention of electric bulb in 1870s. It opened up a new market hitherto unknown. 2/n



Edison , backed by J P Morgan, founded a new company Edison General Electric (now GE) to make motors, appliances, wires etc to develop and service this new market. 3/n

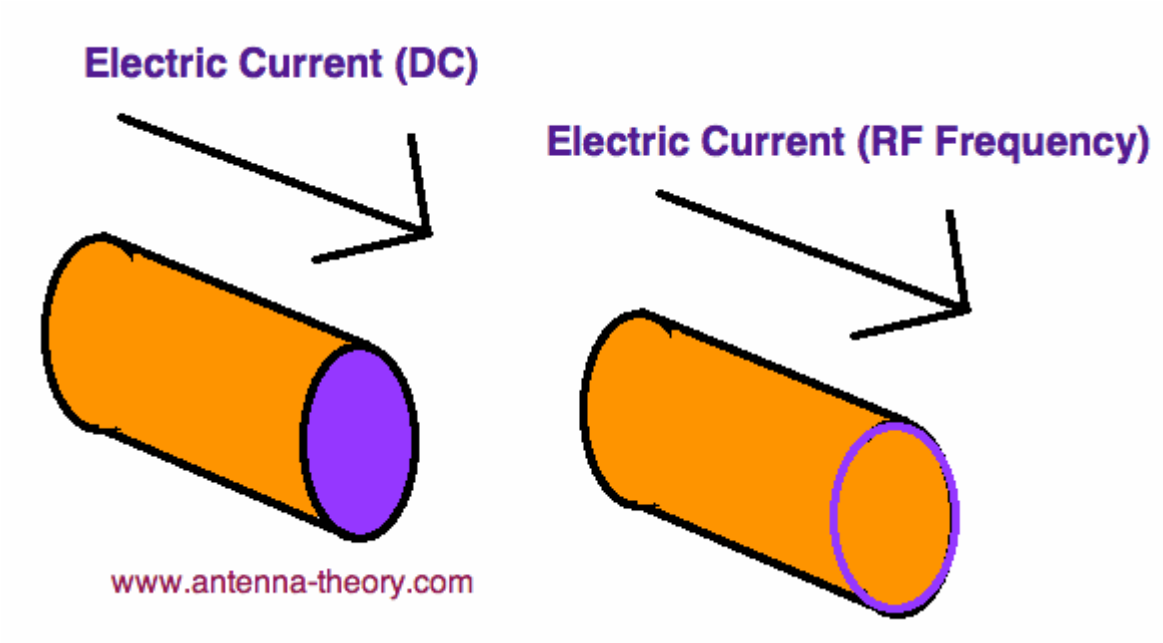
Interestingly, all appliances were based on Direct Current (DC) - similar to what you get from batteries these days. Current flows in one direction only, unlike Alternating Current (AC) - such as 220V supply at home these days. 4/n

Nikola Tesla immigrated to US in 1884 to work for Edison as Electric Engineer for a salary of $100. Tesla was a maverick with novel ideas. He wanted to create an efficient arc lighting and AC motor. Edison however was too arrogant to be receptive to any ideas. 5/n



Eventually Tesla left Edison in 6 months and perfected his AC system. George Westinghouse, Edison's rich rival, bought his patents and backed him for creating this more effecient AC polyphase system. 6/n

DC suffers from higher transmission losses over long distances. In AC, current flows only shallowly over the surface of wire due to a phenomenon called skin effect leading to lesser loss in transmiting power. 7/n

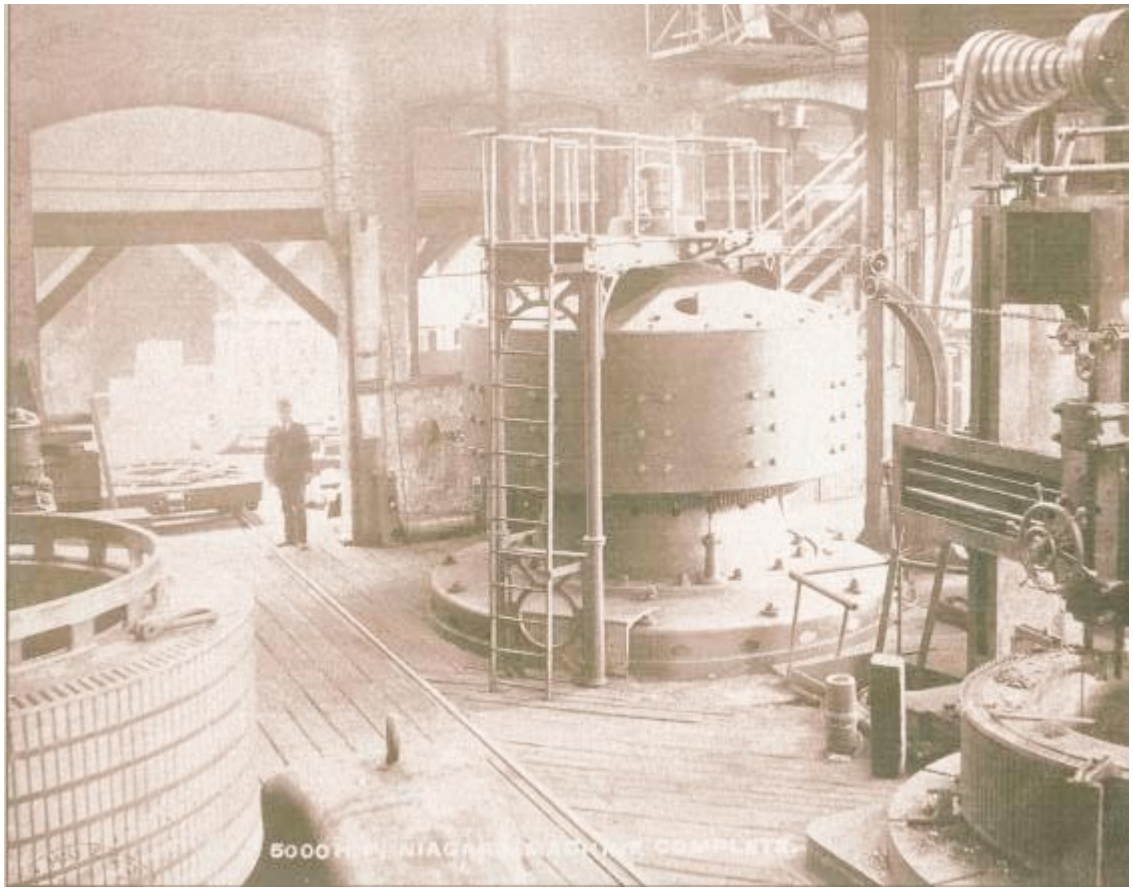


Upset with Tesla's success, Edison teamed up with Harold Brown, inventor of Electric Chair. They argued that body can tolerate even 1000V DC but even 300V AC is lethal. They publicly electrocuted a dog in Brown's Electric Chair with AC current leading to bad press for AC 8/n

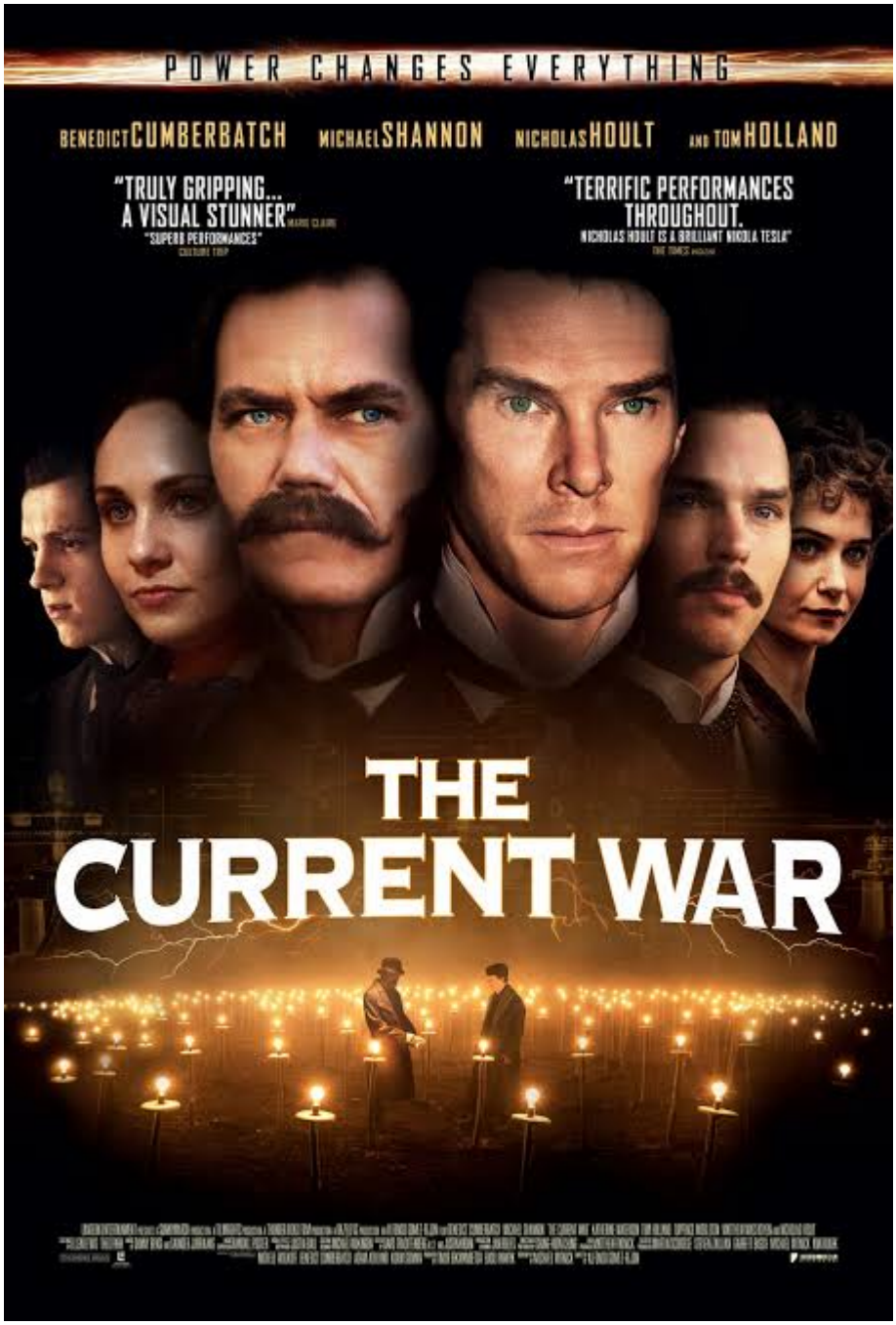
Tesla and Westinghouse got their big break when they illuminated the entire Chicago World Fair in 1893.

The dazzling display left everyone bewitched. 8/n

This was followed by their win to create the first hydro electric power plant at Niagra in 1895. This win pretty much settled the war in favour of AC transmission systems. With that Tesla and Westinghouse had won a bitterly fought battle. 9/n



This fascinating story is also captured in a 2017 Hollywood movie, Current War.
10/n



Eventually, Edison's own company adopted the AC current system and Edison sold all his shares of Edison General Electric which then became GE. Tesla certainly won this war, fair and square. n/n


HERE DIED, ON JANUARY 7, 1943.
AT THE AGE OF 87. THE GREAT
YUGOSLAV-AMERICAN SCIENTIST-INVENTOR,
NIKOLA TESLA, WHOSE DISCOVERIES
IN THE FIELD OF ALTERNATING ELECTRIC
CURRENT ADVANCED THE UNITED STATES
AND THE REST OF THE WORLD INTO THE
MODERN INDUSTRIAL ERA.
YUGOSLAV-AMERICAN BICENTENNIAL
COMMITTEE, JANUARY 7, 1977.