中国电动车

CHINA ELECTRIC VEHICLE

May./June 2014

081

中国电动车最佳展示平台
Advanced Platform
for China Electric Vehicle

WINSTON CHUNG HALL

让工程科技造福人类创造未来

ENGINEERING TECHNOLOGY TO BENEFIT HUMANS AND CREATE THE FUTURE

——在2014年国际工程科技大会上的主旨演讲

——Keynote speech at 2014 International Engineering Technology Conference

中华人民共和国主席　习近平

The People's Republic of China President Xi Jinping

没有动力电池的电动车就没有未来！

EV WITHOUT POWER BATTERY WOULD HAVE NO FUTURE

——访温斯顿能源集团技术总监 钟馨稼

——Interview with Winston Chung Director of Winson Energy Group

USD 4 HKD 30 RMB 28

ISSN 1818-569X

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马斯克将专利奉献全人类

Musk to Open His Patents

本刊评论员 Text / Our Commentator

在大数据、云计算、移动互联网时代，IT企业得天独厚参与到汽车行业，电商、车联网、无人驾驶及机器人技术等等正在改变汽车行业的游戏规则。美国一个在硅谷搞电子支付、发射火箭的“大神”此前并不懂汽车，几年后却把一款名叫“特斯拉”的电动车弄得风生水起风靡全球，成为全球电动汽车的“领头羊”。连通用、丰田等汽车巨头都没搞定的事情，他搞定了！特斯拉的出现正是IT企业造车大趋势的产物。前有波导，后有比亚迪，如今的特斯拉更让传统汽车制造商瞠目结舌。

更让人意外的是：北京时间2014年6月13日，特斯拉的CEO马斯克（Elon Musk）先生在该公司的官方博客里发布《我们的所有专利都属于你》的文章称：“就在昨天，特斯拉专利还被封闭在我们帕洛阿尔托的总部内。从今以后，这种局面将不复存在。我们本着开源运动的精神，开放了我们的专利，目的是推动电动汽车技术的进步。”（“Tesla will notinitiate patent lawsuits against anyone who, in good faith, wants to use ourtechnology。”）【这是原文】

此话宣告：电动汽车进入了开源时代！特斯拉的核心技术瞬间属于全人类!

特斯拉的专利集中在电池结构、充电方案和电动机三个领域，截至6月13日，“TESLA”专利共有749项，其中美国专利454项，欧专局专利85项，还有13项中国专利。技术分类最多的前三位是H01M（用于直接转变化学能为电能的方法或装置）共125项专利；H02J（供电或配电的电路装置或系统；电能存储系统）共85项专利；以及B60L（电动车辆动力装置）共53项专利。

埃隆·马斯克先生只是对市面销售的汽车只有不到1%使用电池驱动痛感失望，才决定开放特斯拉专利，希望竞争对手迎头赶上。真可谓慈悲为怀！对此，全球舆论哗然。有赞赏的，有质疑的，还有说风凉话的，更有怀疑是“诡计”的。

纵观特斯拉的成功，无疑是创新驱动的成功。

其一、特斯拉是科技创新的成功。特斯拉高度重视IT技

In the era of big data, cloud computing, and mobile Internet, the IT enterprise takes the advantage to participate in the automotive industry. The electrical tech, car networking, unmanned and robot technology and so on are changing the the auto industry. Musk from Silicon Valley in the United States successfully launches Tesla electric cars and popularizes it. Thus, he is a leader in the global electric vehicle industry. He is ahead of auto giants such as GM and Toyota. Tesla is represents the current trend in the field of the car attended by the IT companies. In China, BYD is a new player which is different from the traditional automobile manufacturers.

What is more surprising is that, on June 13, 2014, Tesla CEO Elon Musk in his company's official blog expressed his opinions that their all patents would be opened. He said that, just yesterday, Tesla's patents were closed within our headquarters at Palo Alto. However, this this situation would cease to exist. They would open the patents for the sake to promote the development of the electric car technology. His words, “Tesla will not initiate patent lawsuits against anyone who, in good faith, wants to use our technology."

This means that the electric vehicles enter the era of open source! Tesla's core technology belongs to all mankind!

TESLA's patents are mainly in the battery structure, charging scheme and motor. As of June 13, Tesla had 749 patents, including 454 patents in the U.S., 85 patents in the Europe, and 13 patents in China. 125 patents belong to H01M (methods or devices used in direct transformation of chemical energy into electrical energy); and 85 patents H02J (power supply or power distribution circuit devices or systems; electrical energy storage systems) and 53 patents B60L (electric vehicle power units).

Musk felt disappointed that less than 1% cars use the power battery. He opened his patents, so that the competitors would catch up. He is merciful! To this, the global public outcried. Some people appreciated it, some questioned it, and some suspected it as a "trick".

The success of Tesla is due to the innovation in drive.

First, Tesla is successful in technology innovation. Tesla attaches great importance to the IT technology. The combination of the Internet communication technology and the automobile industry leads to the technology innovation of

术、互联网通讯技术和汽车行业的融合应用，实现了电动车的技术创新。

目前，IT是美国硅谷强项，面对汽车智能化、电动化的潮流，引发它们对电动汽车基本设备，从电动车组件、电池管理系统、电池充电和更换技术到电动车整车制造的关注，硅谷已然成为电动车行业的中心。硅谷IT企业以颠覆性思维，正在重新定义“汽车”概念，创新“电车”概念。谷歌、苹果及三星等正在聚集正能量，意欲造车。

特斯拉的技术创新，绕开了大家束手无策的大电池，而是选择技术并不先进、能量密度较高的小电池，改进电池管理系统而一举成功的。

其二、特斯拉最大特色是商业模式创新的成功。创新商业模式，突破目前充电桩等基础设施的瓶颈，推动电动汽车产业发展。

特斯拉创新商业模式，抓住电动车推广的最大难题基础设施配套不足。于是，前期投入资金建设超级充电网络，成为特斯拉打开市场的“敲门砖”。为了打开电动车市场，马斯克花费巨大的精力在美国铺设充电网络；他到中国也承诺投入巨资在中国建设跨越北京、上海等一线城市的免费超级充电网络。而且，特斯拉汽车的充电时间仅为其他品牌的1/20。

其三、马斯克向外开源全部特斯拉专利，实现品牌形象创新。特斯拉在电动车领域迈出了此前微软、苹果等老牌王者都无法走出的一步。十分难能可贵！

建立在“私有制”基础上的资本主义社会，设置“专利壁垒”、保护“知识产权”是天经地义的。马斯克此举被视为现实版“钢铁侠”、现代版“活雷锋”。有位思想家说过：“科学绝不是一种自私自利的享乐，有幸能够致力于科学研究的人，首先应该拿自己的学识为人类服务。”马斯克将专利奉献全人类，完全摆脱了“私有制”的束缚，高举起“公有制”的大旗。这样，马斯克立即抢占到道德和道义的制高点，创新特斯拉品牌形象。这是迄今为止的品牌都不可企及的！马斯克先生释放的善意，真值得大家理解和尊敬。

如今，中国的行家里手们，“看不懂”的或许能看懂了，质疑“安全”的或许会释怀了，讥笑“概念炒作”的或许该安静了，至于“分秒”就能造特斯拉的或许已冷静了。

是的，特斯拉开源的核心技术，主要在基础设施充电设备上。这种技术优势，或可激活资本市场，或将打破电动汽车推广的“瓶颈”，必将进一步改变汽车行业的游戏规则，为电动汽车的发展铺平一条康庄大道。

electric vehicles.

At present, IT is the strength of Silicon Valley. In the tide of intelligent and electric vehicles, IT technicians pay attention to electric vehicle components, battery management system, battery charge and electric vehicle manufacturing. Silicon Valley has become the center of the electric car industry. IT companies in Silicon Valley adopt the disruptive thinking to redefine the concept of the car. Google, Apple and Samsung enter the field of cars.

Tesla bypasses big batteries but adopts the small batteries. It is successful to improve the battery management system.

Second, Tesla's biggest success is in the business model innovation. It overcomes the bottleneck of current charging piles and so forth and promotes the development of electric vehicle industry.

Tesla's innovative business model can solve the problem in the infrastructure of the electric cars. In the first stage, Tesla invested to build the super charge network. In order to open the electric car market, Musk spend enormous effort in the United States to build the charging network. He also promised to construct the charge network across Beijing and Shanghai and other cities in China. Moreover, the charge time of Tesla cars is only about 1/20 of that in the other brands.

Third, Musk opened all of Tesla's patents to build a better brand image. Tesla made a step where Microsoft and Apple and so on did not. This is very nice!

In the capitalist society based on "private ownership", it is the norm to set up a "patent barrier", and protect the "intellectual property". Musk due to the move is seen as the real version of the "iron man" or the modern version of living "Lei Feng". A thinker once said, "Science is not selfish pleasure. A person who is devoted to scientific research, first of all, should take their own knowledge to serve the humanity." Musk who let the other people freely use his patent completely gets rid of the bondage of "private ownership", and lifts up high the flag of the "public ownership". So, Musk immediately grabs the commanding heights of the ethical and moral and build Tesla's brand image. Mr. Musk has his insight.

Nowadays, China experts who misunderstood on this or question the motive from Musk should calm down and spend real efforts on doing their own work, in order to contribute to the electric car industry.

Core technology opened by Tesla is mainly in infrastructure charging equipment. This technology can activate the capital market or break the "bottleneck" in the promotion of EV. This will further change the rules of the game in the auto industry, paving a way for the development of electric vehicles.

CEV
中国電動車 China
ELECTRIC VEHICLE MAGAZINE

Issue 74 May - June 2014
国际标准刊号 ISSN 1618-569X
定价Price USD 5 HKD 30 RMB 28

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