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So what is Big Data really? On the internet, you can encounter different Big Data definitions. For example:

- Big Data is used when data amount is greater than 100GB (500GB, 1TB, who likes it);
  - Big Data is data type that cannot be processed in Excel;
  - Big Data is data amount that cannot be processed on one computer;
- and even the following:
- Big Data is any data in general.
  - Big Data does not exist, it was thought up by marketers.

In general, the definition of "big data" can be simplified to the classical, rather popular, American definition through '3V': Volume (the enormous information amounts which traditional systems cannot cope with), Velocity (the tremendous speed of their change, getting in the first place) and Variety (data semantics, data formats, and data structures types, too) [1, p. 14].

Big Data cannot be stored for processing within next few years – it changes extremely fast and needs to be processed now and today. Data can be presented as traditional, relational databases, which are divided into tables, each of which, in its turn, consists of columns and rows. Everything within Big Data is structured: just numbers, just names, just dates and time. However, this does not apply to Big Data, since only a small particle of it is structured data, and the rest of Big Data is not. They can be received as a text, a video, an audio, data from sensors, data streams, and social media information – any type. At the same time, the number of sources from which information is received (telephones, video cameras, social networks, various interconnected systems) is increasing rapidly. Every minute Facebook processes about 350 GB of information. 100 hours of new videos are uploaded to YouTube. Every minute Twitter users send 277,000 tweets. In the nearest future, to all above mentioned information amounts millions of bank transactions, reviewed web pages, published photos and opinions expressed online are to be added. By 2020, the online dossier for each of the Earth inhabitants will be compared to an electronic library of 5,000 books [2, p. 37].

To summarize, the fact is that only a few years ago any data size was calculated by terabytes. New definition for zeta-bytes amounts should be put in wide application. Therefore, randomly accumulated huge Big Data amounts have to be put into practice.

## References

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## **INTRODUCTION OF TESLA AUTOMOTIVE SYSTEM INTO DIRECTIONAL GRIDS OF SMALL TOWNS**

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Unfortunately, air pollution is a main problem of all cars, that is why most of us live in smog-choked cities and this is what our immunity cannot withstand and protect our health from. The greatest solution of this problem is transition from usage of petrol vehicles to driving Tesla cars.

Current research includes the study of Tesla automotive system, its advantages over common directional grids of small towns meant for petrol and gas vehicles. The purpose of this study is to

determine whether it is possible to switch from available transport infrastructure to alternative automotive system which includes battery electric vehicles in large part. Expenses for town directional grid renovation and personal BEV owners' costs are taken into consideration.

In order to streamline the switchover to cars, which don't pollute the air, *Main System of Tesla Cars* [1] should be implemented into everyday townspeople routes for example when they drive to university, to work, to college or cafe, etc.

*Main System of Tesla Cars* allows:

- to drive cheaper. Tesla cars have the advantage of much lower running costs, because electricity expenses are lower than fossil fuel for a common car. In addition, nowadays scientists experiments with solar panels to facilitate unlimited electric energy production;

- to maintain vehicles cheaper. Spare parts for electric vehicles batteries are cheaper; moreover, they are fewer than spare parts for diesel cars;

- to conserve the environment because pollution from traffic fumes is reduced to minimum and eco-friendly ways to produce energy for electric cars tend to be rapidly developed and shortly after accepted by automotive industry.

There some disadvantages of using a Tesla car in a small town, too:

- Recharge places. Electric recharging stations are still at the design stage. Therefore, it is necessary to start change-over from petrol vehicles to BEVs gradually by introducing Tesla automotive system in small towns where there will be no long queues, then analysis of the situation should be made and this should be system improved correspondingly [2].

- Range and speed limit. Any battery electric vehicle is speed and range limited. Most of them have range limit about 80 miles and then they need to be recharged. So for now it is inconvenient to use them for long trips, except for solar panel cars, they can use sun energy all day long.

- Recharge time. Unfortunately, electric car recharge time is really essential (it takes up to 4-6 hours), while diesel cars refuelling takes several minutes. So, in a small town, special electric power stations to charge Tesla cars are to be arranged and abundant where a car can be left for several hours safe and unproblematically.

- Commonly 2 seats. Most of electric cars nowadays have two seats, it is sufficient if a Tesla car is used just for going nearby with the only purpose to get the destination point, but that is a huge problem when it is necessary to drive a family or possessions [3].

To summarize, it should be pointed out that the best way to introduce electric cars into directional grids of small towns (by the example of Tesla cars) is to force global brand manufacturers to create their battery electric vehicles. It would help electric car industry evolve rapidly and increase affordability of BEVs for regular motorists in small towns.

## References

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