

Net neutrality repeal sparks controversy

Lucy Potter
Staff Reporter

An adjustment within the Federal Communications Commission (FCC) could be one of the more drastic and relevant changes we have seen in the Trump presidency regarding deregulation. The Republican chairman of the FCC, Ajit Pai, revoked Obama-era regulations on the broadband industry and net neutrality rules.

The broadband industry consists of major high-speed internet service providers (ISPs), such as Comcast and AT&T, and the net neutrality rules are in place to—ideally—keep the internet playing field equal. ISPs cannot block certain websites or show preferences for customers who pay a higher fee. Without these regulations, ISPs could theoretically block or slow down any site they choose.

In 2015, the Democrat-dominated FCC decided to reclassify ISPs under the Title II classification. This way they could be regulated and net neutrality could be enforced. The new chairman altered this, saying the classification is just another example of government overreach and that it suppresses innovation.

According to the New York Times,

the largest concern is that the internet will have two levels: one with fast service and one without. The fast lane would be made up of big businesses and affluent households that can pay for the service. All others would have the slow lane. ISPs could slow the internet for growing, internet-based companies or new voices within media and entertainment, and allow their most active contributors the fastest speeds. This is especially a disadvantage for young people, including students at OHS.

"I know a lot of friends who have websites and small businesses that are based on the internet," Max DeFeijter (12) said. "They could really suffer from being slowed down, or just com-

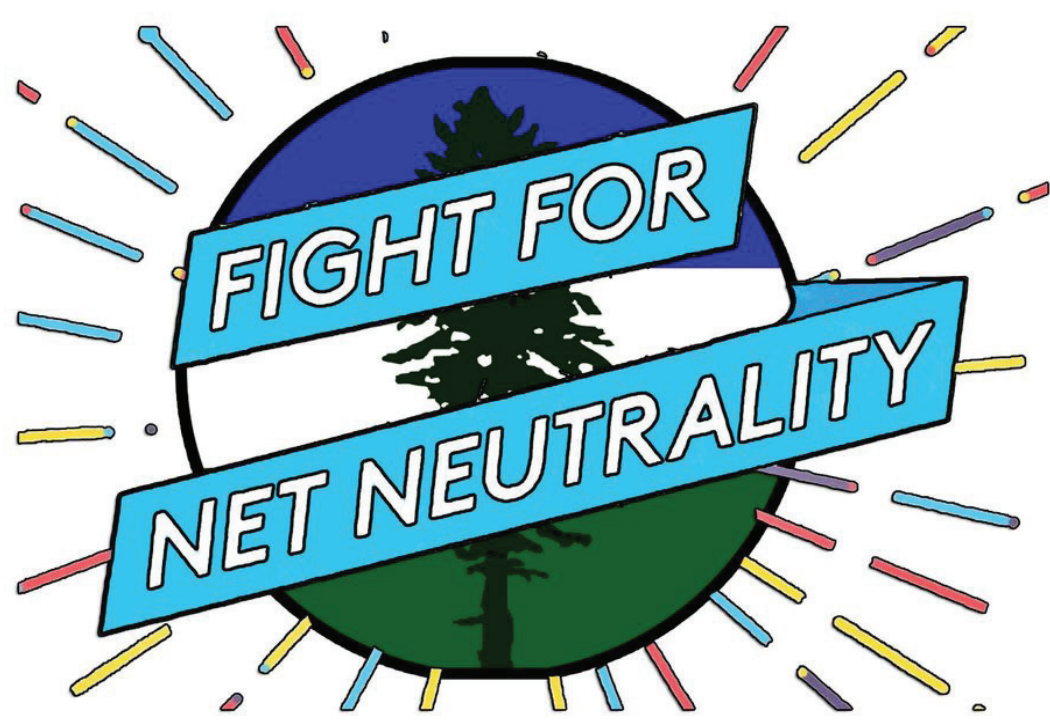


Photo courtesy Cascadia

pletely cut off, which is absolutely ridiculous."

Large companies, like Google and Netflix, would have a simple time paying the higher rent for easy customer access, while startup businesses and people sharing their voices would find it almost prohibitive.

A local business owner Sophie Roman (11) explains how the change could affect her.

"If net neutrality is repealed, then it'll be harder for people to access my website, which will make it harder for people to buy things. So as an independent artist, I wouldn't

be making as much money or getting as much exposure," Roman said. "It also doesn't give people easy access to things. It would be really hard for people, and unfair, to have to pay to use Redbubble or Etsy in a shopping or arts package through their provider. And people aren't gonna do that."

There are, of course, noted potential pros to the decision as well. As an example, the

precedence over dudes Googling Beyoncé's children. Though it could be argued that not all surgeons would be able to afford this, it is still something to consider.

And using almost the reverse of that concept, Connor Landay (12) brings up another point.

"Someone like a grandmother, who only goes on Facebook and her email doesn't need the [speed] to stream online games, watch Twitch, et cetera, because that is not in her needs," Landay said. "She would benefit from having the option to pay less for fewer services. The people who use the internet less are essentially forced to subsidize it for the people who use it more."

Another common opinion is that it will not affect the public's perspective on the Internet as much as people think it will. This is because the public seems to generally like the Internet as it is now; large companies with profit incentives in a free market would not likely change how they work. That way they would not lose any customers, or become less popular and decrease their profits.

There is a general consensus, however, that the change in regulation would increase prices for everyone, but whether it's disadvantaging beginners or making room for innovation is still unknown.

Tesla creates ground-breaking new electric semi

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Staff Reporter

Tesla cars have taken the automotive industry by storm with their fully electric engines and self-driving capabilities.

Tesla Motors was founded in 2003, making it one of the newest car companies in the world. Despite its infant age, Tesla is one of the fastest growing and successful car brands, surpassing many of the older names that have been around for over 100 years.

Tesla CEO Elon Musk continues to bring innovative ideas to the car industry with his recent announcement of the Tesla Semi truck in mid-

November.

Some of the truck's exciting features include its four separate electric motors and its ability to accelerate from 0 to 60 mph in just 20 seconds while being completely full of cargo. Without cargo, the truck is said to reach 60 mph in only five seconds.

The speeds reached by the Tesla Semi makes it 50 percent faster than the standard cargo truck. The quickness of the Tesla Semi truck is accompanied by a battery pack that holds a mileage ranging from 300 to 500 miles all in one charge.

Tesla enthusiast Evan Buck (11) loves the style of the Tesla

Semi.

"I really like how it's a very open cockpit, so the driver has very good visibility over the road and just how safe they are," Buck said.

The truck is said to have enhanced autopilot features in order to prevent accidents, and be a safer, more efficient way of transporting cargo from one destination to another.

Large companies like Walmart quickly noticed the potential of the Tesla Semi and have already begun ordering multiple trucks for their stores just days after its announcement. Walmart alone has purchased 15 of the \$200,000 trucks. According to Electrek, an online clean-energy and electric vehicle magazine,

heads of Walmart have been striving to reduce the prices and emission of their trucks and feel as though the Tesla Semi will provide them with exactly what they are looking for.

Both J.B Hunt and Canadian grocery store Loblaw's have recently voiced their commitment to the Tesla Semi truck. In fact, Loblaw's claims to have already ordered 25 and does not plan to stop there.

Unfortunately, Michigan residents are not able to purchase Tesla products unless they buy from another state. This is because in 2014, Michigan Governor Rick Snyder signed what is informally known as the 'Anti-Tesla' bill. That bill prevents car manufacturers from directly selling in

Michigan unless via their own dealership network within the state.

Tesla sets itself apart from other car brands by specifically not using dealerships to sell their products. Even though they always strive to be different, they recognize that being the only electric car brand in a dealership full of gasoline cars would be awkward and somewhat of a disadvantage, so they stay away from them.

Buck feels as though Michigan's decision was based on a desire to resist electric automobiles.

"Michigan is very into gas powered cars," Buck said. "I think it is time to branch out and accept electric cars. It's going to be the future and Ford and GM haven't made a large enough

step like Tesla has."

In response to the bill, in 2016 Tesla filed a federal lawsuit against that Michigan policy, claiming that it went against the U.S Constitution. As they continue fighting against Michigan's direct-to-consumer sales policy, they have made some strides including the opening of a Tesla gallery in Troy, Michigan.

However, Michigan is not the only state resisting Tesla as they have received push back from a few others including Arizona and Texas.

Despite many oppositions to their sales practices, Tesla has been persistent in fighting for their right to freely sell their products and continue bringing original ideas to the table.

2017 brought scientific innovation, medical advancements

Jack Hertafeld
Staff Reporter

By the year 2045, humanity will be utterly and unfathomably altered as a result of exponential increase in technology, theorizes scientist Ray Kurzweil. This concept, known as the technological singularity, has gained significant traction since Kurzweil's 2005 book, *The Singularity is Near*.

Kurzweil believes that as artificial intelligences become more powerful, they will self-improve at a rate that

will exponentially increase, far surpassing human intelligence.

As a result, humans could transcend biology, becoming conscious digital entities with lives dictated entirely by computers. While this is certainly an outlandish thought, there is validity to what he says considering timely advances in science.

With each year, more scientific breakthroughs are made and humanity's understanding of the universe becomes increasingly thorough. Here are some of the most impactful scientific break-

throughs of 2017.

Water harvesting - In April, a group of teams from MIT and Berkeley created a device that can harvest water out of thin air. The device is powered entirely by solar energy, meaning it doesn't need any additional energy to run, and can extract water from air with humidity levels as low as 20 percent. Approximately 790 million people, or 11 percent of the population, do not have access to clean water. If this technology were applied as a larger scale operation and implemented in areas with arid climates, it could be a major step to-

ward solving the global water crisis.

Human Genetic Engineering - CRISPR, short for Clustered Regularly Interspaced Short Palindromic Repeats, is a tool used by scientists which allows them to easily modify the genomes of organisms. It uses the protein Cas9 to cut out foreign strands of DNA.

In July, a team of researchers in Portland, Oregon used CRISPR technology to modify the genome of a human embryo for the first time. CRISPR was used to alter a strand of DNA that causes beta thalassemia, a blood disorder that reduces hemoglo-

bin production.

The genetic modification of humans is a huge step towards the future of humanity, although which direction we choose to go remains uncertain. The alteration of the human genome raises ethical dilemmas, pushing the boundaries of morality. Therefore, it is important—as with many science related fields—to proceed cautiously.

Metallic Hydrogen - Hydrogen, the universe's most common element, composes an estimated 90 percent of all mass in the visible universe. It typically takes the form of a nonmetal, until January 26, when Harvard scien-

tists produced the world's first sample of metallic hydrogen.

By applying immense pressure, hydrogen can be put into a state by which it takes on properties of a metal. In metallic form, hydrogen acts as a superconductor, meaning it conducts electricity with no resistance. Hydrogen, unlike other superconductors, may be able to do this at room temperature, allowing electrical grids and power plants to run much more efficiently. With current systems, approximately 15 percent of all electricity is transferred to heat and lost during transit.



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