November 2021
VOL. XXXVIII, NO. 11

Daniel Burrus'

Celebrating 30+ Years of Publication

TECHNOTRENDS® NEWSLETTER

The biggest ideas that are changing everything

IN THIS ISSUE

www.DanielBurrus.com

Everything Sucks, and Why That's Perfect!

By Daniel Burrus, CEO of Burrus Research

You read that headline right: everything does suck! And in this article, I'm going to give you the solid reasons why this makes me both optimistic and excited about our future!

Think to yourself: On any given day, how many times do you hear someone grumbling about their phone not working well, traffic patterns on their way to work driving them insane, how a business of any kind inconvenienced them by having poor customer service, or a government institution – commonly one like the DMV – putting them in a sour mood?

Last week, a good friend went to the DMV in Las Vegas to renew his driver's license, and after five hours – yes, I did say five hours – he made it to the front of the line only to find that he needed a document that their website didn't say he needed and he would have to come back and start all over again.

You can likely think of several instances of things like this occurring, right? Maybe the first thing that comes to mind is you complaining about something that's slowing you down, wasting your time, or simply not working the way it should.

What about the computer or tablet or smartphone you're reading this on; is this the best humans can do? What about the seat you're sitting on now; is that the best seat humans can possibly design? Is it the perfect chair? No! As a matter of fact, when you get right down to it, I'll bet you've been thinking about getting a better chair because the one you're sitting on now is not all that perfect, and in most cases, it simply sucks.

And let's not forget about the software you use. For the most part, that sucks too!

> *Everything sucks because no product or service is perfect, and that's great news!*

I said it above, and I'll say it again with confidence: Everything sucks!

Now, before you close this article after reading a seemingly pessimistic introductory outlook on our world, I implore you to be patient and read on, because believe it or not, this is a very good thing! But how? And more importantly, why are people increasingly jumping to the notion that if everything sucks now, things will only get worse?

The answer is that they don't see the opportunity for themselves and others.

continued on page 8

TECHNOLOGY NEWS HIGHLIGHTS

Robotic Dubbing

With the global market for streaming media growing at an unprecedented pace, translating audio into multiple languages has become a major challenge for content creators. But new advanced dubbing methods that utilize artificial intelligence (AI) and deep learning algorithms are making the process faster, easier and less costly than ever.

Speech-to-speech translators such as Deepdub and Respeecher can translate audio directly into various languages while preserving the vocal characteristics and nuances of the original speaker.

This not only reduces bottlenecks by eliminating the need for traditional voice-over methods, but also allows for more natural-sounding audio. Applications for these systems go beyond film and television to include gaming, animation, podcasts and audio books. In advertising, they can even be used to generate regional accents to target specific audiences.

Visual technology is also quickly being refined so the actors look as though they are actually speaking the words.

Such sophisticated digital voice "manufacturing" will undoubtedly generate a whole new series of questions about how this technology will and/or can be used.

For information: Deepdub.ai, 121 Derech Menachem Begtin, Tel Aviv-Yafo 67012, Israel; Web site: https://deepdub.ai/ Respeecher, Kyiv, Ukraine; Web site: https://www.respeecher.com/

World's Largest Carbon Capture Facility

The largest direct air capture (DAC) plant to date recently became operational in Iceland. Known as Orca, the facility will be able to remove 4,000 metric tons of carbon dioxide (CO_2) from the atmosphere every year at full capacity. Once removed, the CO_2 will be safely stored underground where it will be converted to stone in approximately two years.

The system operates by drawing ambient air into a collector containing a filter material. When the filter is saturated with carbon dioxide, geothermally-heated water raises the temperature of the collector to release highly concentrated CO_2, which is then mixed with water and injected into the ground to a depth of 1,000 meters. There the CO_2 reacts with basalt rock to form carbonate minerals.

Another facility in Scotland, which will be capable of capturing 500,000 to 1 million metric tons of CO_2, aims to be operational by 2026. However, both plants will need to focus on innovative plans to make their service economically feasible. DAC facilities are expensive to operate and scaling up the technology to meet the needs of industrial customers is a challenge. Regardless, they could be an important tool in combatting climate change over the long term.

For information: Climeworks AG, Birchstrasse 155, CH-8050 Zurich, Switzerland; phone: +41-(0)44-533-2999; email: contact@climeworks.com; Web site: https://climeworks.com/ Carbon Engineering Ltd., P.O. Box 187, 37322 Galbraith Road, Squamich, B.C., Canada V8B 0A2; Web site: https://carbonengineering.com/

From iPhones to EVs

Foxconn recently announced plans to bring three electric vehicles to market including an electric SUV, a luxury electric sedan and an electric urban bus.

The SUV – known as Model C – will seat seven passengers, have a range of 434 miles (700 kilometers) on a single charge and accelerate from 0-62 miles per hour in 3.8 seconds.

The Model E sedan features a body design by Pininfarina (known for their work with Ferrari). The 750 horsepower sedan will have a range of 460 miles (740 kilometers) and go from 0-62 miles per hour in 2.8 seconds. It will also feature personal technology – including mobile devices, facial recognition and "smart windows" – that enable Model E to become a mobile office.

Finally, the electric urban bus (dubbed Model T) may be closer to release than either the SUV or the sedan with over 120,000 miles of endurance testing already completed. It will have a range of 250 miles (400 kilometers) and a top speed

of 75 miles per hour (120 kilometers per hour) when fully loaded.

Other software-driven initiatives expected in the near future will include a smart gateway, smart cockpit and smart driving platforms.

For information: Foxconn, Hon Hai Group, No. 2, Zihyou Street, Tucheng District, New Taipei City 236, Taiwan; phone: +886-2-2268-3466; email: media@foxconn.com; Web site: https://www.foxconn.com/en-us/ or https://www.foxconn.com/en-us/press-center/press-releases/latest-news/694

Nano Magnets

Researchers recently developed a magnet that's only one atom thick. The breakthrough would allow vastly larger amounts of data storage and could be a gamechanger for quantum computing.

The new magnet is made of zinc oxide and cobalt in a precise ratio that fine tunes the magnetic intensity. The resulting flexible sheet could be used to develop spintronics – devices that encode data using electron spin rather than charge. It's widely believed that spintronic devices are a key component of future quantum computers.

In addition, the material does not need to be supercooled like other nanoscale magnets. It's stable at room temperatures and can be heated to the boiling point of water without losing its magnetic properties. This, in itself, eliminates a huge obstacle to the use of nanomagnets for commercial applications.

Next steps will involve studying how the magnets interact with other two-dimensional materials. The goal would be to stack them like a deck of cards with other single-atom compounds to tailor their properties for specific functions.

For information: Jie Yao, University of California Berkeley, Department of Materials Science and Engineering, 380 Hearst Mining Memorial Building, Berkeley, CA 94720; email: yaojie@berkeley.edu; Web site: https://www.berkeley.edu/ or https://vcresearch.berkeley.edu/faculty/jie-yao

Pet Clones

Cloning animals has become increasingly more common in many commercial applications. For example, ranchers use it to strengthen their livestock herds and horse owners have been known to replicate their best steeds for competition or breeding.

Now dog and cat owners are taking advantage of the science to create genetic twins of their favorite pets.

The process – called genetic preservation (GP) – involves collecting a tissue sample, a procedure that can be performed in any veterinary office.

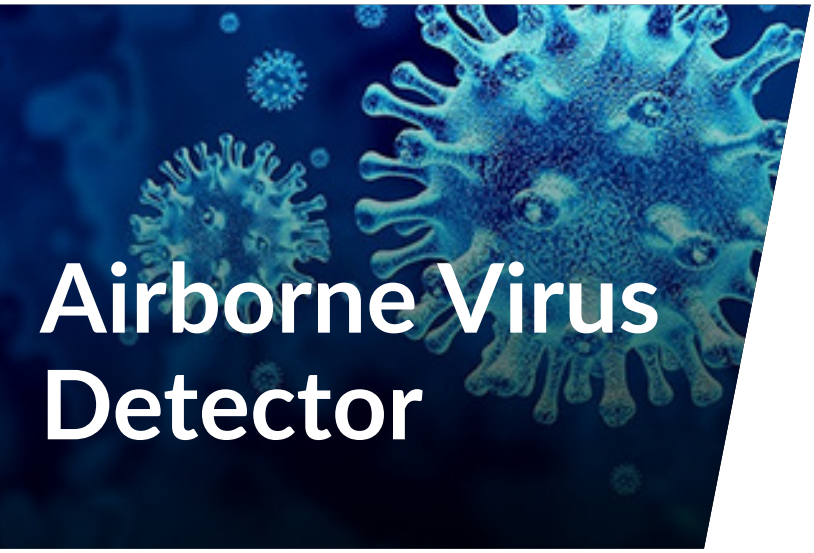
The biopsy is then sent to the cloning facility where additional cells are cultured and frozen until the owner is ready to clone their pet.

According to a provider of cloning services, cloned twins not only look like their original "parent." Since the cells are genetically identical, they often share other key attributes such as temperament and intelligence.

Cloning your favorite animal will set you back a few bucks – an estimated $35,000 for a cat, $50,000 for a dog and $85,000 for a horse. But that's not the only side of the story.

The technology is also being used to protect endangered species including coral that is dying out due to increasing water temperatures. In this way, cloning can help to conserve important resources and preserve biodiversity.

For information: ViaGen Pets, 715 Discovery Blvd., Suite 410A, Cedar Park, TX 78613; phone: 888-876-6104; Web site: https://www.viagenpets.com/



Airborne Virus Detector

A new system that can detect pathogens in ambient air could change the way we combat a variety of viruses including Covid-19. Known as Poppy, the sampling device looks somewhat like a smoke detector. It uses static electricity to pull viruses from the air and collects them on a test strip.

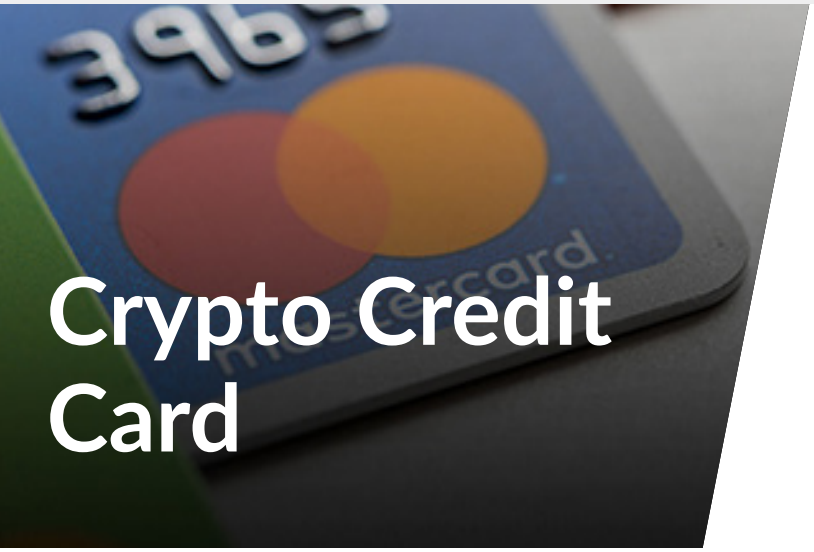
Once a day, the strips are sent to a lab for analysis using LAMP testing – a DNA amplification method that can provide highly accurate results on more than 1,000 different viruses, bacteria, molds and pests in about 30 minutes. The results are delivered via a customized online dashboard.

An important aspect of the system is the ability to position multiple units within a space to monitor the actual flow of pathogens. In order to do this, Poppy periodically sends out its own unique DNA barcoded agent that is nebulized into droplets the same size as those generated by human breath.

These agents act as a control to ensure that the system is sampling all of the air and enables it to generate a map of indoor airflow which can be used to pinpoint stagnant areas and quantify how long pathogens remain in a space.

The overarching goal is faster detection and earlier intervention. This non-intrusive method bypasses issues of personal liberties associated with individual testing and also provides a measurable indicator of just how safe – or unsafe – specific public spaces may be.

For information: Poppy, 150 King Street W, Suite 200, Toronto, Ontario, Canada M5H 1J9; Web site: https://poppy.com/



Crypto Credit Card

MasterCard is planning to integrate crypto services into their payment network, a move that could expand the use of cryptocurrency globally.

The service will be managed by Bakkt, a spinoff of Intercontinental Exchange with experience in all aspects of crypto commerce.

The partnership will allow MasterCard partners to buy, sell and hold cryptocurrencies. By offering crypto wallets and credit cards, banks will be able to keep their customers on their platform rather than seeing assets migrate to crypto exchanges.

Merchants, restaurants, hotels and airlines will have the option of offering rewards in bitcoin rather than conventional points. And customers will have the ability to convert existing rewards for crypto while having more spending flexibility.

MasterCard's global network includes 20,000 financial institutions and 2.8 billion card users.

For information: MasterCard; Web site: https://www.mastercard.com/news/press/2021/october/mastercard-and-bakkt-partner-to-offer-innovative-crypto-and-loyalty-solutions/
Bakkt; Web site: https://www.bakkt.com/

Hybrid Motorcycle

Segway recently unveiled a new two-wheeled concept vehicle that's powered by a hybrid hydrogen-electric powertrain.

Known as the Apex H2, it converts gaseous hydrogen into electrical energy using a special fuel cell. The hydrogen canisters can be swapped and refilled to reduce recharge time (compared to plug-in electric motorcycles).

The futuristic-looking motorbike with its bold design and neon-lit accents will definitely turn some heads. But its performance statistics are pretty impressive too. ApexH2 boasts a top speed of 93 miles per hour (150 kilometers per hour).

It can generate more than 80 horsepower and accelerate from 0-60 miles per hour in less than four seconds.

The company plans to begin production in 2023 with deliveries starting later that year. The expected retail price will be around $10,700.

For information: Segway-Ninebot; Web site: https://www.ninebot.com/product/SegwayApexH2/

Everything Sucks, and Why That's Perfect!

continued from page 1

Think of it this way: Everything sucks because no product or service is perfect, and that's great news! If everything was perfect, you and I would have no way to improve anything, no reason to innovate, because there would be no problems to solve.

Since everything is imperfect, there are infinite problems to solve, endless ways to improve a product, a process, or a service, and countless reasons to apply our creativity and new technology to create an innovative solution that's far better that what we have now.

We Expect Perfection

Even prior to the digital boom we've been experiencing, businesses and organizations that make products or offer services were marketing those products and services as a catch–all for solving consumers' problems.

The confidence a business or organization demonstrates about their creations in their marketing has a powerful ripple effect on a consumer's psyche, and as a result, said consumers believe the product or service truly is the perfect solution.

The problem is business owners and consumers only think a perfect product or service can be created. That in no way actually makes the world perfect.

The term "perfection" itself actually details this reality in its definition: "the condition, state, or quality of being free or as free as possible from all flaws or defects."

Being **as free as possible** of issues is an extremely subjective observation, and the fact that in the very definition of the term "perfection," we have included both "free of flaws or defects" and "as free as possible" means we have generalized the very concept of perfection from the get–go, setting us up for constant disappointment.

New Technology Creates New Opportunities and New Imperfections

Decades ago, people consumed their news and entertainment over the radio. There was no television, no streaming, no Internet – it all came from one type of media that we merely listened to.

For years, whether it was said or not, all consumers who had access to a radio likely assumed this was the absolute best of the best even though it often had static, had few controls, and had a so–so speaker. Most could never conceive of a world where you would be entertained or informed at home using any other medium.

Well, look at how far we've come! Not only did the television get invented, which actually showed the individuals in these live shows or news broadcasts, but the media itself evolved as cable television emerged on the scene. This was mind–blowing at the time, and surely this was the future, right?

Wrong again! Along came this thing called the Internet, a huge network connecting millions of personal computers that evolved to act as entertainment and information devices, way beyond our televisions.

On this network, the power of media consumption was put directly in the consumer's hands, giving us streaming and binge watching and much more. With new smartphones, tablets, wearables, VR headsets, AR glasses, 5G connectivity, and more, we also have an overload of social media information, misinformation, and disinformation, Google searches that give us thousands of answers we will never read, and what many feel is a world that sucks even more.

Yes, in many ways, our current high–tech devices do suck!

I know, all of this sounds as harsh as it did earlier on in this article, but it's true! We consistently complain about our phone not being fast enough, being too big or too small, our mobile apps not working, and a plethora of other issues.

The fact of the matter is that the diversity of these media devices in our pockets and purses does indeed open the window for more issues and less perfection.

Our Needs and Expectations Evolve

Functionality may be an issue, but we as consumers are an issue in and of ourselves! We find things we are unhappy with because we too evolve!

If you are a business leader, put on your consumer hat for a moment. How often do you feel frustrated with a product or service that we now know isn't perfect, and in that frustration, find yourself stammering, "Why don't they just do this or that with their app; that would be so much easier!"

The subjectivity of human needs really authenticates the concept that everything sucks in that we are never fully satisfied with what we have.

That's not to say we are greedy or ungrateful for what we do have, but instead, as a primordial survival trait, we are always looking for a better way to accomplish something. Think of cavemen and cavewomen: If it rained out, they sought shelter to stay dry. And a better shelter is always more desirable.

Because it is so heavily ingrained in humans to want something better, thinking products and services are perfect as they are goes against the very science behind evolution. So, to tie this into what I call an Anticipatory Mindset: If you think your product or service will never be disrupted by something that better solves the problem, you are knowingly setting yourself up for failure!

Look for Opportunity with An Anticipatory Mindset

So, as I stated at the start of this article: Everything sucks, and this is most definitely a good thing! Everything can be improved, and if you think big enough, dramatically improved!

We think everything sucks because perfect is impossible. That means that all of us, as entrepreneurs, business leaders, and employees, are already prepped with an Anticipatory mindset unconsciously. The key is bringing it to our conscious minds and acting on it!

One of the key principles of Anticipatory Thinking is to Keep Your Opportunity Antennae Up! As a consumer, the next time you're frustrated with an app, a business process at your organization, how a restaurant operates, or any number of material and nonmaterial things in this world, take a breath and instead recognize it as an opportunity.

This specific product, service, or process may be a status quo that a business is clinging to that not only could be improved upon, but should be improved upon with your suggestions and actions.

Conversely, as a business leader, use anticipation to recognize something in your own business or organization that needs to be improved. Customers finding things wrong with your products and services is a Hard Trend – a future certainty due to the fact that in a primordial sense, they are unconsciously Anticipatory, always finding ways in which things can and should be better.

If one customer complains about how inconvenient something is in your operation, chances are many more feel the same way and just have not voiced said concern just yet. Observe this Hard Trend, be Anticipatory, and pre-solve the problem before it becomes an even bigger one.

You are the driving force behind a change that needs to happen in your industry! But remember, part of being Anticipatory means you must always have your opportunity antenna held high, as once you make a change, there will be another day when this new change you've made must be changed yet again.

Nothing is perfect, and that's why everything sucks. Just always know that this is a very good thing, providing you with endless opportunities to improve everything and to positively impact the world and the people around you.

Burrus Research®

Technotrends is published 12 times a year by Burrus Research, Inc., a research and consulting firm that monitors global advancements in science and technology and their direct impact on business and consumers. Mary Norby, Editor, 1860 Executive Drive, Suite E2, Oconomowoc, WI 53066. To subscribe, call 262-367-0949 or email office@burrus.com.