



Stop Watching | Start Living

Our Mission

To enthusiastically provide dynamic tools, research, and services within the financial community by empowering institutions and individuals to redefine what financial freedom really means.

Introduction

In this issue of State of the Bands™ Now You See it and Now You Won't, Why did the Brexit Vote fail again?!, Can you read my mind and there's probably an app for that!, The UK Knife Ban, God Bless The US Sunshine Act, and Clones? Clones? We don't need no stinking Clones And, seriously, how about a real Santa Claus rally this year?



Now You See It . . .

While the idea of invisibility has existed for as long as folktales of leprechauns and dragons have, it wasn't until 2003 that the true concept of invisibility or spectral cloaking could be properly examined. A Chilean mathematician, Gunther Uhlmann, was the first to tinker with several equations that could create the illusion of an invisible object.

Then, while the rest of us were waiting on that acceptance letter written in green (ideally delivered by an owl), two separate research teams were busy making our dreams of invisibility come true. In a race



against the clock, both teams published their initial findings in 2006. The Canadian based team coined spectral cloaking. While it was effective, it was only able to hide 2D objects well. The second research team was a collaborative group that included both American and British scientists who were able to successfully hide a copper cylinder from microwaves. Both were interesting but neither provided the functionality we wanted to see...or not see? Luckily for us, there have been more recent developments from the Canadian team in Montreal. And, as of 2018, they can now conceal any object completely from the naked eye while also concealing the object's casted shadow. I bet you didn't see that coming?

Fun Fact: The word invisible comes from the Latin "in-" for not and "visibilis" for seen

... And Now You Won't!

So how does all of this work? Magic? Well, if you have not paid any attention to the man behind the curtain, this new technology attempts to obscure the object by bending light and selectively shifting energy from certain colors of the light spectrum to other colors which effectively hides the object from our eyes. After the light waves have passed through the object, the light is then restored to its original position in front of or on top of the object.

Interestingly enough, this can also be used with broadband telecommunication links which means that we could potentially use light to hide light. In newer research, scientists are testing several variations of this technique to cloak one-dimensional wave systems (ie: fiber optics). In theory, or practical magic, we now have the ability to hide anything in plain sight including an entire fleet of planes, trains and automobiles or quite possibly any other government secret using this type of technology.

Stocks To Watch

- GASX - Direxion Nat Gas Bear x3
- NVEE - NV5 Global, Inc
- UGLD - US Lighting Group
- SWIR - Sierra Wireless Inc
- FF - Future Fuel Corp
- GLOG - Gaslog LTD
- ATHM - Autohome Inc
- FOE - Ferro Corp



Why Did The Brexit Vote Fail AGAIN!?!

Much like a dramatic celebrity divorce, it's almost impossible to escape some level of coverage of the #Brexit. What is the Brexit you may ask? It's the petition for the United Kingdom (UK) to leave the European Union (EU). The UK joined the EU in 1973 and if it ever successfully withdraws it will be the first member of the EU to leave.



That being said, what are the advantages to being in the EU? Well, it allows free trade and free movement of people such that anyone living within the EU can live and work wherever they choose.

Sounds good, right? Well not exactly for the UK. The UK has seen a substantial increase in their net contribution from £ 2.7 billion in 2008 to £ 11.3 billion in 2013. It also means that the UK cannot negotiate their own trade deals outside of what the EU wants to do as a whole.

The vote was initially brought up June 23, 2016 in a referendum where a majority of those who voted also voted to leave. The Brexit was slated to happen in two years, but the House of Commons voted to extend the deadline from March 14, 2019 to June 30, 2019. This has happened a few more times, with the most recent extension calling for an exit date of January 31, 2020.

Stocks To Watch

- VGR - Vector Group (Tobacco)
- LMNR - Limoneira Co. (Fishing and Farming)
- MED - Medifast Inc (Food Processing)
- HEAR - Turtle Beach Corp (Home Electronics)
- PCRFY - Panasonic Corporation (Solid State Batteries)

The UK Knife Ban

Speaking of the British, kiss your slasher fantasies goodbye with the most recent addition to the UK weapons ban. A line of stab proof kitchen knives will be released in January of 2020. Yes, you read that correctly, Stab proof knives. Since kitchen knives were reclassified as offensive weapons in the Offensive Weapons Act Of 2019, Rayware will be the first to mass produce a product of this type while other large cutlery providers such as Asda and Tesco will be removing products for retailers.



This all started in 1996 with the first and only school shooting in the UK. The result of this tragedy was a ban of handguns. There has been one spree killing since then: the Cumbria shootings in June 2010 (using legally obtained firearms). Of course when monitored and restricted people will get creative. In this case, the new weapon of choice is the knife (and other sharp instruments). The UK has seen a steady increase in offenses involving a knife or sharp object starting around 2015 – hence the need to develop stab proof knives.

That's not the only unusual UK news. The use of TV licenses has also been implemented. That sounds silly, but the money from these licenses goes toward funding BBC programs and services. At a cost of about £154.50 per year (roughly \$171.11 USD), you can stream and download content without getting arrested or paying a hefty fine.

Stocks To Watch

NOC - Northrop Grumman

BA – Boeing Airplane and Transportation

LMT- Lockheed Martin

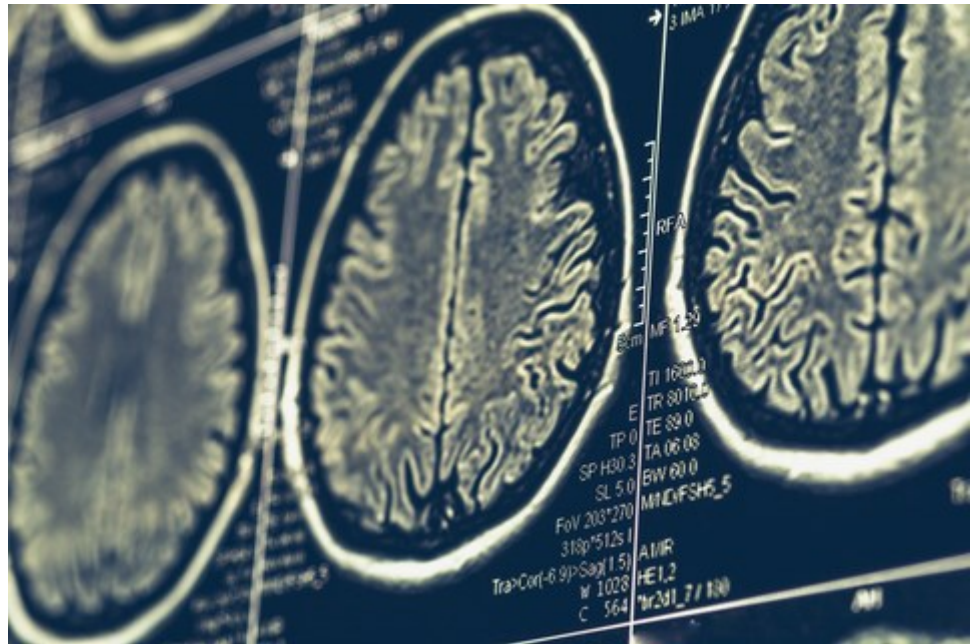
GD - General Dynamics Corp

WW - Weight Watchers

Can you read my mind? There's an app for that!

Well, there really isn't an app for that...yet. This type of technology has been under development longer than you may realize. In 2008, IBM applied for a patent on a methodology for extracting mental images of human faces from human brains. It is now being perfected with functional magnetic resonance imaging (fMRI) and deep neural network (DNN) and deep generator network (DGN). DNN uses translated data from the fMRI to guess what the person is thinking about (so far this has been recalling images). DGN is used to enhance the image and is able to make it look more naturalistic.

As this technology gets more accurate the ethics and uses will have to be specifically outlined. While there are some laws in place in the US that could protect someone (see: the 5th Amendment) it could very easily be abused in places where there are no controls. For example, in the summer of 2008 a woman in India was convicted of murder after an EEG of her brain allegedly revealed that she was familiar with the circumstances surrounding the murder of her fiancé. Imagine being betrayed by your own brain.



Biotech Stocks to Watch

- Anip - Ani Pharmaceuticals
- Aeri - Aerie Pharmaceuticals
- GE - General Electric Co. (Freelium)
- ENR - Energizer Holdings Inc

God Bless The US Sunshine Act

Look up in the sky! It's a bird, it's a plane, no it's a Florida Man! Have you ever wondered why our lives are often graced with a "Florida Man" story? The reason is the Sunshine Act. The Sunshine Act was passed in September 1976 at a federal level by the 94th Congress. While it was meant to enhance the Freedom of Information Act, every state decided on how much they would not allow. But not Florida.



Florida has a proud tradition of oversharing and with the Sunshine Act passed a series of laws in 1995 known as the Florida Sunshine Law. These laws state that the public will have access to ALL public government records in the state of Florida. Unlike other states, there are few exemptions which are more or less personal emails of government officials and drafts/notes.

Arguably, it's better to know than not know. The next time you see a Florida Man headline ask yourself why you haven't seen such titles in your home state and what you could be missing due to the lack of open state government. And remember what happens in Florida stays in the news including Disney.

Fun Fact: A popular, Millennial, search engine based game is to query results for "A Florida Man Does".

Clones? Clones? We don't need no stinking Clones



Just because we can does not necessarily mean we should. Maybe. Earlier this year scientists at the Institute of Neuroscience (ION) in Shanghai used gene-editing to disable a gene in macaque monkeys. They then created 5 nearly genetically identical clones of one of those monkeys. That doesn't sound like a big deal, but it is the first time that researchers have cloned a gene-edited monkey and it serves as a proof of concept for creating populations of genetically identical populations. This gets us one step closer to being able to understand genetic diseases through primate models.

Currently, in the US at least, it takes a lot of paperwork to even get close to an animal bigger than a mouse for research purposes. Now instead of waiting for the perfect primate to test

new therapeutic methods for a genetic disease, with the proper permissions, scientists could have as many genetically identical clones as they need to find therapies and cures for diseases.

Fun Fact: Gene expression can be controlled in ways other than physical alteration. This branch of genetics is known as epigenetics and it is the study of heritable phenotype changes that do not involve physical alterations in the DNA sequence.

Clones? Clones? Clones? Clones? Clones? We don't need no stinking Clones

Genetic studies are not the only ones that would benefit from using genetically identical clones. Studies involving other products that require some level of animal testing (such as pharmaceuticals) would benefit from using clones as well. As previously stated, there can be a lot of red tape involved in getting a primate test subject, but for better or worse primates are the best model to use for exploring human disease and reactions.



Something to consider with this is despite the research potential this will likely face the same, if not more, public backlash due to bioethical concerns. Does a clone have the same rights as the parent animal? Should the clone have the same rights as the parent animal? These are questions that have come up time and time again with no clear answer. As the use of clones for research becomes more abundant we will have to have some additional checks and balances in place to determine where the line is drawn.

Fun Fact: Star Wars Episode 1-6 were all released in the month of May. So this is one of the reasons why people often say “May the 4th be with you!”

Clone Wars (The animated Series) was Released in the month of October and is the shortest of the Star Wars Films.

And Seriously, How About A Santa Claus Rally This Year?

It has been exactly 21 months since the S&P 500 took a small breather in this 10 year bull market and 11 months since we've seen Santa. Typically the market rally's on low volume during the November and December time frame while everyone else is on holiday. This end-of-year rally has been affectionately coined the "Santa Claus" rally. Last year's sell off during the 2018 holiday season has also been coined "the-year-without -a-Santa-Claus" rally because of the huge sell off on December 24th 2018.

S & P 500 Stocks To Watch

- CB - Chubb Limited
- CBS - CBS Corporation
- VIAB - Viacom Inc.



Going into November we are optimistic about the forecast of the market. We are at all times highs for the S&P 500 and NASDAQ. So maybe Santa will come a little early this year. So while you're thinking about Christmas take a look at the all new <https://www.arbitrage.trade.com> and give yourself a raise! On average, each subscription user had at least a 12% return on their entire portfolio this year and last!

Stop Watching | Start Living!

Go to <https://www.arbitrage.trade.com> to learn more.

Disclosure

Arbitrage Trade Analytics, LLC (Arbitrage Trade) is a privately held research company. Arbitrage Trade is solely responsible for the preparation and distribution of the research contained herein. The above references an opinion and is for informational purposes only. It is not intended to be investment advice. Seek a duly licensed professional for investment advice.

The information provided is as of the date above and subject to change. All information used in the publication of this report has been compiled from publicly available sources that are believed to be reliable, however we do not guarantee the accuracy or completeness of this report. Opinions contained in this report represent those of the research department of Arbitrage Trade at the time of publication.

This document is not directed to, or intended for distribution to, or use by, any person or entity that is a citizen or resident of or located in any locality, state, country, or other jurisdiction where such distribution, publication, availability or use would be contrary to law or regulation. This research is not an offer to sell or the solicitation of an offer to buy any security in any jurisdiction. It does not constitute a personal recommendation or take into account the particular investment objectives, financial situations, or needs of individuals or entities.

Links to third party sites/Third party services

This document may contain links and/or references to other websites ("Linked Sites"). The Linked Sites are not under the control of Arbitrage Trade and Arbitrage Trade is not responsible for the contents of any Linked Site, including without limitation any link contained in a Linked Site, or any changes or updates to a Linked Site. Arbitrage Trade is providing these links to you only as a convenience, and the inclusion of any link does not imply endorsement by Arbitrage Trade of the site or any association with its operators.

Certain services made available by Arbitrage Trade are delivered by third party sites and organizations. By using any product, service or functionality originating from this publication you hereby acknowledge and consent to the Terms of Use set by Arbitrage Trade.

No unlawful or prohibited use/Intellectual Property

You are granted a non-exclusive, non-transferable, revocable license to access and use this publication strictly in accordance with these terms of use. As a condition of your use of this publication, you warrant to Arbitrage Trade that you will not use this publication for any purpose that is unlawful or prohibited by these Terms. You may not obtain or attempt to obtain any materials or information through any means not intentionally made available or provided for through this publication.

All content included as part of this publication, such as text, graphics, logos, images, as well as the compilation thereof is the property of Arbitrage Trade or its suppliers and protected by copyright and other laws that protect intellectual property and proprietary rights. You agree to observe and abide by all copyright and other proprietary notices, legends or other restrictions contained in any such content and will not make any changes thereto.

You will not modify, publish, transmit, reverse engineer, participate in the transfer or sale, create derivative works, or in any way exploit any of the content, in whole or in part, found in this publication. Arbitrage Trade content is not for resale. Your use of this publication does not entitle you to make any unauthorized use of any protected content, and in particular you will not delete or alter any proprietary rights or attribution notices in any content. You will use protected content solely for your personal use, and will make no other use of the content without the express written permission of Arbitrage Trade and the copyright owner. You agree that you do not acquire any ownership rights in any protected

content. We do not grant you any licenses, express or implied, to the intellectual property of Arbitrage Trade or our licensors except as expressly authorized by these Terms.

Use of communication services

Arbitrage Trade does not control or endorse the content, messages or information found in any communication and, therefore, Arbitrage Trade specifically disclaims any liability with regard to communications and any actions resulting from your participation in any communication. Managers, employees, hosts, presenters, and other representatives and their views do not necessarily reflect those of Arbitrage Trade.

Materials provided for communication are subject to posted limitations on usage, reproduction and/or dissemination. You are responsible for adhering to such limitations if you acquire these materials.

International Users

The Service is controlled, operated and administered by Arbitrage Trade from our offices within the USA. If you access this publication from a location outside the USA, you are responsible for compliance with all local laws. You agree that you will not use the Arbitrage Trade Content accessed through this publication in any country or in any manner prohibited by any applicable laws, restrictions or regulations.

Indemnification

You agree to indemnify, defend and hold harmless Arbitrage Trade, its officers, directors, employees, agents and third parties, for any losses, costs, liabilities and expenses (including reasonable attorney's fees) relating to or arising out of your use of or inability to use this publication and services provided, your violation of any terms of this Agreement or your violation of any rights of a third party, or your violation of any applicable laws, rules or regulations. Arbitrage Trade reserves the right, at its own cost, to assume the exclusive defense and control of any matter otherwise subject to indemnification by you, in which event you will fully cooperate with Arbitrage Trade in asserting any available defenses.

Arbitration

In the event the parties are not able to resolve any dispute between them arising out of or concerning these Terms and Conditions, or any provisions hereof, whether in contract, tort, or otherwise at law or in equity for damages or any other relief, then such dispute shall be resolved only by final and binding arbitration pursuant to the Federal Arbitration Act, conducted by a single neutral arbitrator and administered by the American Arbitration Association, or a similar arbitration service selected by the parties, in a location mutually agreed upon by the parties. The arbitrators award shall be final, and judgment may be entered upon it in any court having jurisdiction. In the event that any legal or equitable action, proceeding or arbitration arises out of or concerns these Terms and Conditions, the prevailing party shall be entitled to recover its costs and reasonable attorney's fees. The parties agree to arbitrate all disputes and claims in regards to these Terms and Conditions or any disputes arising as a result of these Terms and Conditions, whether directly or indirectly, including Tort claims that are a result of these Terms and Conditions. The parties agree that the Federal Arbitration Act governs the interpretation and enforcement of this provision. The entire dispute, including the scope and enforceability of this arbitration provision shall be determined by the Arbitrator. This arbitration provision shall survive the termination of these Terms and Conditions.

Class Action Waiver

Any arbitration under these Terms and Conditions will take place on an individual basis; class arbitrations and class/representative/collective actions are not permitted. THE PARTIES AGREE THAT A PARTY MAY BRING CLAIMS AGAINST THE OTHER ONLY IN EACH'S INDIVIDUAL CAPACITY, AND NOT AS A PLAINTIFF OR CLASS MEMBER IN ANY PUTATIVE CLASS, COLLECTIVE AND/ OR REPRESENTATIVE PROCEEDING, SUCH AS IN THE FORM OF A PRIVATE ATTORNEY GENERAL ACTION AGAINST THE OTHER. Further, unless both parties agree otherwise, the arbitrator may not consolidate more than one person's claims, and may not otherwise preside over any form of a representative or class proceeding.

Liability disclaimer

THE INFORMATION, SOFTWARE, PRODUCTS, AND SERVICES INCLUDED IN OR AVAILABLE THROUGH THE SITE MAY INCLUDE INACCURACIES OR TYPOGRAPHICAL ERRORS. CHANGES ARE PERIODICALLY ADDED TO THE INFORMATION HEREIN. ARBITRAGE TRADE LLC AND/OR ITS SUPPLIERS MAY MAKE IMPROVEMENTS AND/OR CHANGES IN THE SITE AT ANY TIME.

ARBITRAGE TRADE LLC AND/OR ITS SUPPLIERS MAKE NO REPRESENTATIONS ABOUT THE SUITABILITY, RELIABILITY, AVAILABILITY, TIMELINESS, AND ACCURACY OF THE INFORMATION, SOFTWARE, PRODUCTS, SERVICES AND RELATED GRAPHICS CONTAINED ON THE SITE FOR ANY PURPOSE. TO THE MAXIMUM EXTENT PERMITTED BY APPLICABLE LAW, ALL SUCH INFORMATION, SOFTWARE, PRODUCTS, SERVICES AND RELATED GRAPHICS ARE PROVIDED "AS IS" WITHOUT WARRANTY OR CONDITION OF ANY KIND. ARBITRAGE TRADE LLC AND/OR ITS SUPPLIERS HEREBY DISCLAIM ALL WARRANTIES AND CONDITIONS WITH REGARD TO THIS INFORMATION, SOFTWARE, PRODUCTS, SERVICES AND RELATED GRAPHICS, INCLUDING ALL IMPLIED WARRANTIES OR CONDITIONS OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, TITLE AND NON-INFRINGEMENT.

TO THE MAXIMUM EXTENT PERMITTED BY APPLICABLE LAW, IN NO EVENT SHALL ARBITRAGE TRADE LLC AND/OR ITS SUPPLIERS BE LIABLE FOR ANY DIRECT, INDIRECT, PUNITIVE, INCIDENTAL, SPECIAL, CONSEQUENTIAL DAMAGES OR ANY DAMAGES WHATSOEVER INCLUDING, WITHOUT LIMITATION, DAMAGES FOR LOSS OF USE, DATA OR PROFITS, ARISING OUT OF OR IN ANY WAY CONNECTED WITH THE USE OR PERFORMANCE OF THE SITE, WITH THE DELAY OR INABILITY TO USE THE SERVICE OR RELATED SERVICES, THE PROVISION OF OR FAILURE TO PROVIDE SERVICES, OR FOR ANY INFORMATION, SOFTWARE, PRODUCTS, SERVICES AND RELATED GRAPHICS OBTAINED THROUGH THE SERVICE, OR OTHERWISE ARISING OUT OF THE USE OF THE SERVICE, WHETHER BASED ON CONTRACT, TORT, NEGLIGENCE, STRICT LIABILITY OR OTHERWISE, EVEN IF ARBITRAGE TRADE LLC OR ANY OF ITS SUPPLIERS HAS BEEN ADVISED OF THE POSSIBILITY OF DAMAGES. BECAUSE SOME STATES/JURISDICTIONS DO NOT ALLOW THE EXCLUSION OR LIMITATION OF LIABILITY FOR CONSEQUENTIAL OR INCIDENTAL DAMAGES, THE ABOVE LIMITATION MAY NOT APPLY TO YOU. IF YOU ARE DISSATISFIED WITH ANY PORTION OF THE SERVICE, OR WITH ANY OF THESE TERMS OF USE, YOUR SOLE AND EXCLUSIVE REMEDY IS TO DISCONTINUE USING THE SERVICE.

Termination/access restriction

Arbitrage Trade reserves the right, in its sole discretion, to terminate your access to the Service and any related services or any portion thereof at any time, without notice. To the maximum extent permitted by law, this agreement is governed by the laws of the State of Tennessee and you hereby consent to the exclusive jurisdiction and venue of courts in Tennessee in all disputes arising out of or relating to the use of the Site. Use of this publication is unauthorized in any jurisdiction that does not give effect to all provisions of these Terms, including, without limitation, this section.

You agree that no joint venture, partnership, employment, or agency relationship exists between you and Arbitrage Trade as a result of this agreement or use of the Site. Arbitrage Trade's performance of this agreement is subject to existing laws and legal process, and nothing contained in this agreement is in derogation of Arbitrage Trade's right to comply with governmental, court and law enforcement requests or requirements relating to your use of the Site or information provided to or gathered by Arbitrage Trade with respect to such use. If any part of this agreement is determined to be invalid or unenforceable pursuant to applicable law including, but not limited to, the warranty disclaimers and liability limitations set forth above, then the invalid or unenforceable provision will be deemed superseded by a valid, enforceable provision that most closely matches the intent of the original provision and the remainder of the agreement shall continue in effect.

Unless otherwise specified herein, this agreement constitutes the entire agreement between the user and Arbitrage Trade with respect to the Site and it supersedes all prior or contemporaneous communications and proposals, whether electronic, oral or written, between the user and Arbitrage Trade with respect to the Site. A printed version of this agreement and of any notice given in electronic form shall be admissible in judicial or administrative proceedings based upon or relating to this agreement to the same extent and subject to the same conditions as other business documents and records originally generated and maintained in printed form. It is the express wish to the parties that this agreement and all related documents be written in English.

Changes to Terms

Arbitrage Trade reserves the right, in its sole discretion, to change the Terms under which arbitrageband.com is offered. The most current version of the Terms will supersede all previous versions. Arbitrage Trade encourages you to periodically review the Terms to stay informed of our updates.

Contact Us

Arbitrage Trade welcomes your questions or comments regarding the Terms:

Arbitrage Trade Analytics, LLC
5100 Poplar Ave.
Suite 2223
Memphis, TN 38137

Email Address: info@arbitragebands.com
Telephone number: 901-721-3720
Effective as of February 4, 2019