



GHOST EXCHANGE

PRESS KIT

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ARBITRAGE PICTURES PRESENTS "GHOST EXCHANGE"

FEATURING JAMES ANGEL SAL ARNUK ERIC HUNSADER TED KAUFMAN SETH MERRIN JOHN NETTO BILL O'BRIEN
CATHY O'NEIL HARVEY PITT JOE SALUZZI GUS SAUTER ADAM SUSSMAN LARRY TABB DAVID WEILD IV

WRITTEN AND DIRECTED BY CAMILLA SULLIVAN DIRECTOR OF PHOTOGRAPHY AND EDITOR ROB LYALL

WWW.GHOSTEXCHANGEMOVIE.COM

GHOST EXCHANGE

Cast

Dr. James Angel
Associate Professor, Georgetown University

Sal L. Arnuk
Partner & Co-Founder, Themis Trading

Eric Hunsader
Founder, Nanex

Edward E. "Ted" Kaufman
Former U.S. Senator, Delaware

Seth Merrin
Founder & CEO, Liquidnet

John Netto
Founder & President, M3 Capital

William O'Brien
CEO, Direct Edge

Cathy O'Neil
Independent Consultant

Harvey Pitt
CEO, Kalorama Partners

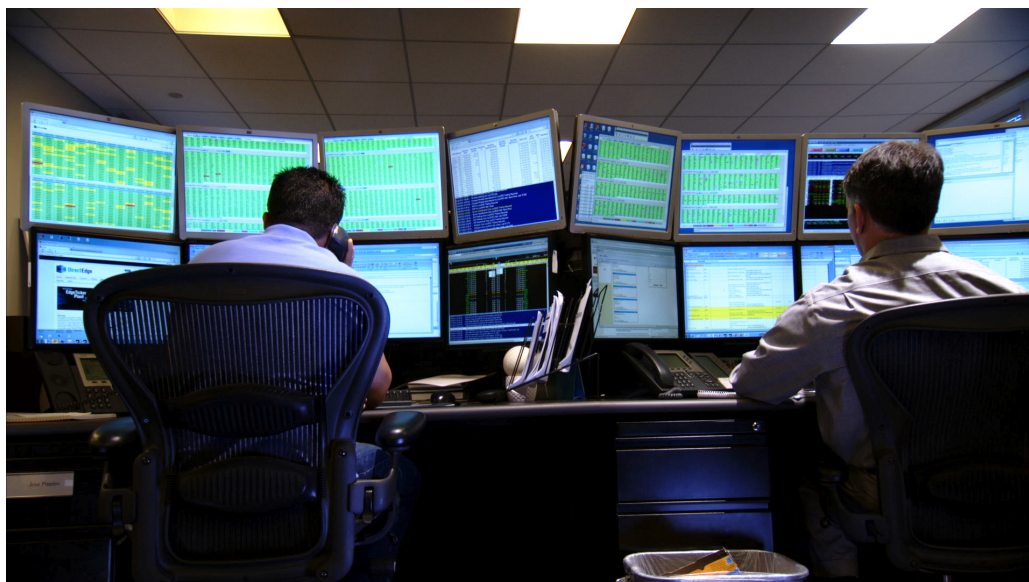
Joe Saluzzi
Partner & Co-Founder, Themis Trading

Gus Sauter
Managing Director & CIO, Vanguard Group

Adam Sussman
Partner & Director of Research, TABB Group

Larry Tabb
Founder & CEO, TABB Group

David Weild IV
Founder & Chairman, Capital Markets Advisory Partners



GHOST EXCHANGE

Crew

Writer, Producer & Director
Camilla Sullivan

Director of Photography & Editor
Rob Lyall

Narration
Linda Semans Donovan

Unit Production Manager
Julie Neil

Assistant Camera
Rob Migrin
Bryan Wieder

Associate Producers
Lara Harpold
Katie Perros

Leia Pankovich
Laura Rehbein

Post-Production Supervisor
Christina Crawley

Assistant Editors
Christina Crawley
Bryan Wieder

Sound Mix
Ott House Audio
Richard Shapiro

Cheryl Ottenritter
Alex Roldan

Music By:
Nick Cave & The Bad Seeds
Mieka Pauley
Breakestra
Thom Janusz
Band of Frequencies

Shawn Lee's Ping Pong Orchestra
Ohmega
Nomo
Monophonics
The Soul Surfers

Technical Detail

Filmed on Location in
Jersey City
New York City
Washington, D.C.
Wilmington, Delaware

Running Time: 1 hr 28 min
Aspect Ratio: 16x9
Format: HD Digital Video
5.1 Dolby Surround Sound
Completed 2013

Presented by Arbitrage Pictures
www.ghostexchangemovie.com
<http://arbitragepictures.com/>

Available exclusively on iTunes in the United States, United Kingdom, Australia, New Zealand, Canada, Ireland, Belgium, Brazil, Dominican Republic, Denmark, Finland, France, Germany, Greece, Italy, Japan, Mexico, Netherlands, Norway, South Africa, Switzerland, Hong Kong and Sweden.

GHOST EXCHANGE

Synopsis

Our financial markets provide a vital link between investors and businesses in need of capital. They enable companies and governments to raise funds for operations, and investors to participate and earn a return. Their smooth and stable operation is inextricably intertwined with the well-being of the entire global economy. Since the birth of the republic, the US financial system has been challenged, tested, shaken and subject to growing pains. However in very recent times, it has been shaken by tremors so powerful, they are weakening confidence in a market that once was the envy of the world.

Ghost Exchange probes the current state of US capital markets, the impact of high frequency and algorithmic trading, the lack of, or ineffective regulatory oversight and the risks that are now inherent in our markets by going right to the source –Wall Street's leading insiders – who shine a light on startling signs that the US stock market has built so much speed and complexity into the current system that it is impossible to regulate. The system has become – a Ghost Exchange.

The technology powering these markets has evolved at breakneck speed and change has accelerated dramatically. An unrelenting focus on technology, hyper short-term trading, speed, and volume has eclipsed sanity in some areas – benefiting an increasingly smaller group of players. Mathematical algorithms conduct nearly 75% of US stock trades today. Machines trade against each other, chasing mathematical models written by an elite group of engineers and mathematicians. The idea that Wall Street is a loud market place of open commerce is a long gone myth. Now, traders' machines are moving blocks of stock and holding them for less than a microsecond. There are more than 50 trading venues, (once it was just the NYSE, NasDaq and the American Stock Exchange) the majority of which are so-called dark pools where trades are executed without transparency to the public.

The film seeks to explain how all this happened, who did it, what it means, and what's coming next- understanding the true implications of events ranging the "Flash Crash" of 2010 to the trading system crash for the Facebook IPO in 2012...and most importantly, what it may mean to the investing public, what can be done to change it and what the SEC is (or isn't) doing about it.



GHOST EXCHANGE

Camilla Sullivan

Executive Producer
Producer/Director
Photographer
Writer

Filmmaker Biographies



Since escaping a successful corporate communications career in 2007, Camilla embraced the bug she caught growing up in a television/documentary film production family, in her native Australia. With a passion for transforming complex concepts into compelling stories with powerful visuals, Camilla has conducted more than 1000 subject matter expert interviews, produced more than 400 original videos in locations from Shanghai to Sydney, Mumbai to Munich and anywhere the story takes her. With a raft of production awards behind her – and a particular interest in finance and capital markets Camilla wrote and directed her first independent feature Ghost Exchange in 2012.

Camilla's perfect day – sunrise location shoot in Santa Fe, afternoon on horseback, cooking a gourmet dinner and bedtime stories with the kids.

Rob Lyall

Executive Producer
Director of Photography



Rob has a passion for creating indelible images. A seasoned, dynamic, and innovative cinematographer, having worked in all corners and environments of the world Rob brings his sixteen years of feature film, documentary, commercial and broadcast production to Arbitrage. The result? His signature visual storytelling delivers a fusion of slick, high-end, commercial production with the organic and innovative world of documentary filmmaking.

From his work on documentary projects for National Geographic, History Channel, Smithsonian Networks, HBO Original Films, the Academy Award-nominated film Spellbound, Discovery Channel and many other major networks – Rob proves to be happiest when holding a camera.

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Interview with Dr. Angel



Camilla hobbling around town



Oil change at 130,000 miles



Behind the scenes at Liquidnet

Production History

January 2012 - Spark to a Flame

A conversation with a very connected Wall St consultant kicked us from interested in the Flash Crash, to driven by a mission to make a film about it. We couldn't sit to watch it being discussed only in narrow circles anymore. And so the mindmapping began. We went to Target and bought lots of sketching pads and sharpies.

February 2012 - Research, Research, Research

Research kicked into full swing. Collectively we must have read 50,000 pages of material. We couldn't get enough, and it was like pulling a loose thread – one thing lead to another – flash crash lead us to decimalization which lead us to algos which lead us to HFT etc. Some of this research was being done while attempting to take an annual vacation in St Lucia where the Internet is patchy at best. Camilla spent quite some time standing on a table in the bar to get the fragment of wifi, much to the other guests chagrin.

May 2012 - Texting and Walking Don't Mix

Camilla smashed her ankle (falling into a construction hole while texting and walking), and had major reconstructive surgery. But 6 days later was our first interview with the former Senator Ted Kaufman. Despite doctor's order for 30 days bed rest, we weren't likely to cancel – so Rob loaded up the grip truck, along with Camilla in a cast and in a wheel chair, and drove the lot to Delaware. The Senator was a little surprised to see what was wheeled in front of him to conduct the interview.

June 2012 - Getting More Interviews Locked Down

We were working the phones and pitching our ideas to the key subject matter experts we really wanted to get on film. As soon as one would say yes, we'd literally drop everything, pack up the truck and hit the road to the next location.

July 2012 - Maybe We Need a New Grip Truck

We put a lot of miles on our trusty 2003 Suburban. It was already an ex secret service vehicle when we got it. Now it's pushing 130,000 miles and showing a few signs of age. Not sure we trust the oil light anymore. Comes on rather suddenly when oil levels are already dire! Camilla became an expert at sensing when this was going to happen, and made lots of friends along the way up and down the I-95 between NYC and DC. She wasn't always dressed to do an oil service though...

August 2012 - Nightmare on Wall Street

After months of coordination we were very excited to interview Tom Joyce at the Knight Capital trading floor – where Oliver Stone shot Wall St 2. As we were already on the road to Jersey City, we got a call. Seems there'd been a slight software error – to the tune of \$440M in trading losses. Tom had to cancel our interview. However, turning lemons into lemonade we decided to see whom we could talk to about what just happened – an example of trading technology gone haywire. Well that's what the movie is about isn't it?!

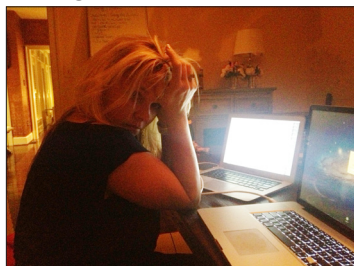
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The edit suite during rough cut



Shooting aerials over NYC



Marathon edit session over Christmas

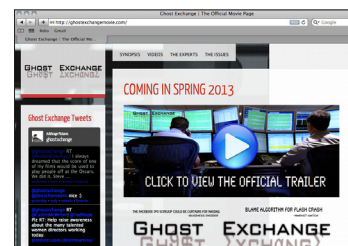


End of a beautiful shoot day in NYC

Production History - Continued

September 2012 - Time to Cut a Trailer

Seemed this film was really going to get done! Decided we better start building a website, cutting a trailer and designing some titles.



October 2012 - Going Back for More Interviews

More interviews – whenever we thought we were done we discovered there was another angle to include. Staying current with an ever evolving and highly complex topic was not easy! The website went live, and we put up the trailer – we weren't quite ready for what happened next. More than 7,200 views in the first three hours and 50,000 views in 6 weeks! Seems we had an audience.

November 2012 - Last Shoot Days

Somewhere we had to draw the line on how many hours of interviews we could work with and fit into the film. We got the last 2 in, and went back to Liquidnet, this time onto the trading floor. With Thanksgiving approaching, we knew we needed to get into post production mode and some serious editing. And iTunes accepted the film for distribution so lots of work to do now to get to a final output.

December 2012 - Edit Marathon

December was a blur of days and nights and edit suites. We had three running consecutively day and night. Christmas eve was spent at my dining room table –just for a change of scenery. It's amazing how much you can get done if you put your mind, body and soul to it.

January 2013 - It's In the Mix

Wow – laying this back to Dolby 5.1 and it's sounding incredible. We put a lot of thought into the music direction, featuring some classic artists like Nick Cave, and some new and upcoming artists like Mieka Pauley and the catalogue from Ubiquity Records.

February 2013 -Hurry up and Wait

Well we shipped it off for encoding for iTunes... takes a while. Waiting to hear back from film festivals... all of a sudden no deadlines.