Robo-Advisors instrumentos financieros inteligentes

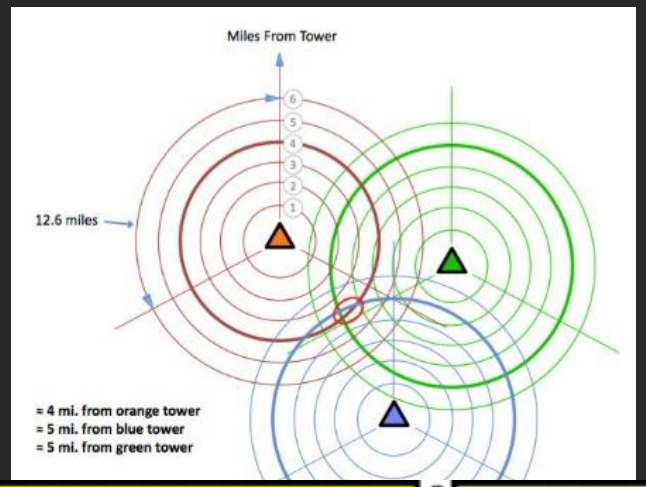
Andrés Felipe Umaña Chaux

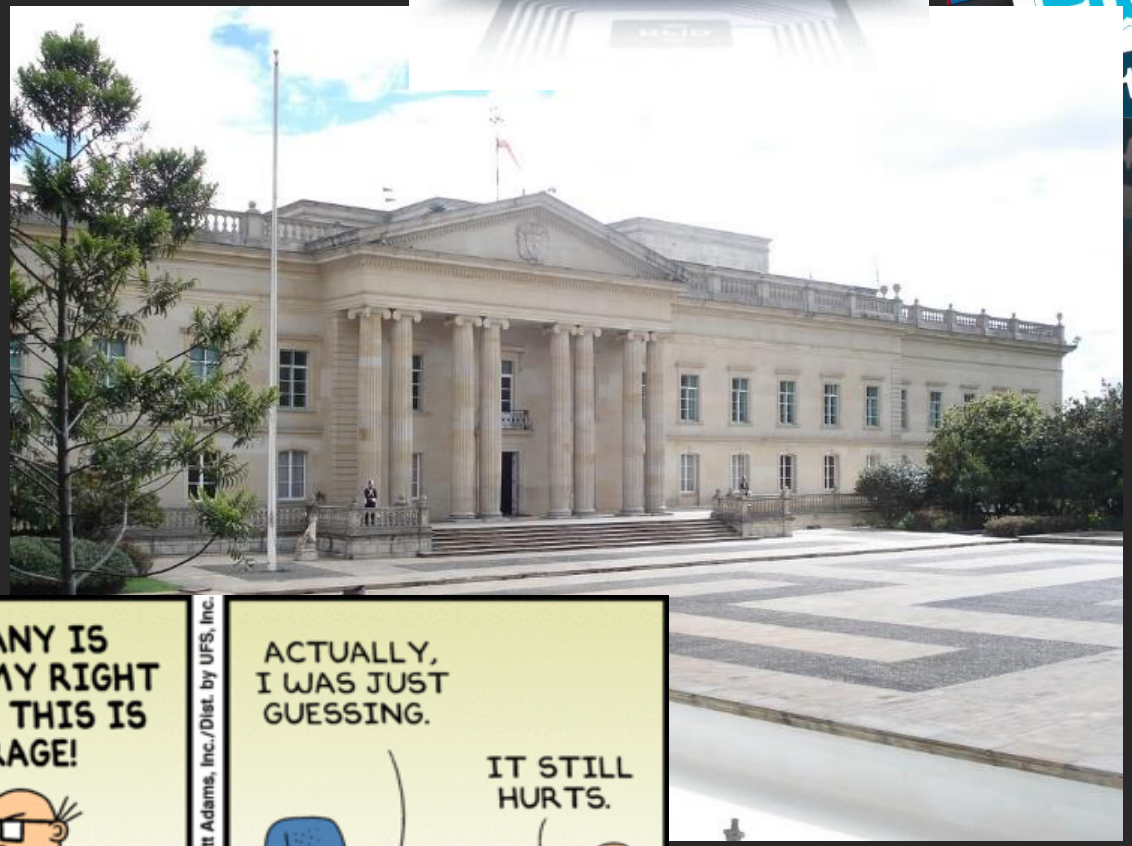
Director de Asuntos Legales, Externos y Corporativos

NDRIVE
1.0 km
De Clercqstraat
Menu
G400

RFID

LinkedIn
foursquare
LIVEJOURNAL
vimeo
YouTube
facebook
Blogger
flickr
tumblr.
Like
yelp


Miles From Tower
12.6 miles
= 4 mi. from orange tower
= 5 mi. from blue tower
= 5 mi. from green tower



CATBERT: EVIL DIRECTOR OF HUMAN RESOURCES
100% OF YOUR EMAIL MESSAGES THIS MONTH INVOLVED LINKS TO FUNNY VIDEOS.
THE COMPANY IS VIOLATING MY RIGHT TO PRIVACY! THIS IS AN OUTRAGE!
ACTUALLY, I WAS JUST GUESSING.
IT STILL HURTS.
DilbertCartoonist@gmail.com
Dilbert.com
5-6-10 ©2010 Scott Adams, Inc./Dist. by UFS, Inc.

Pay with
Square
DISCOVER
NOVUS
VISA
MasterCard
AMERICAN EXPRESS Cards

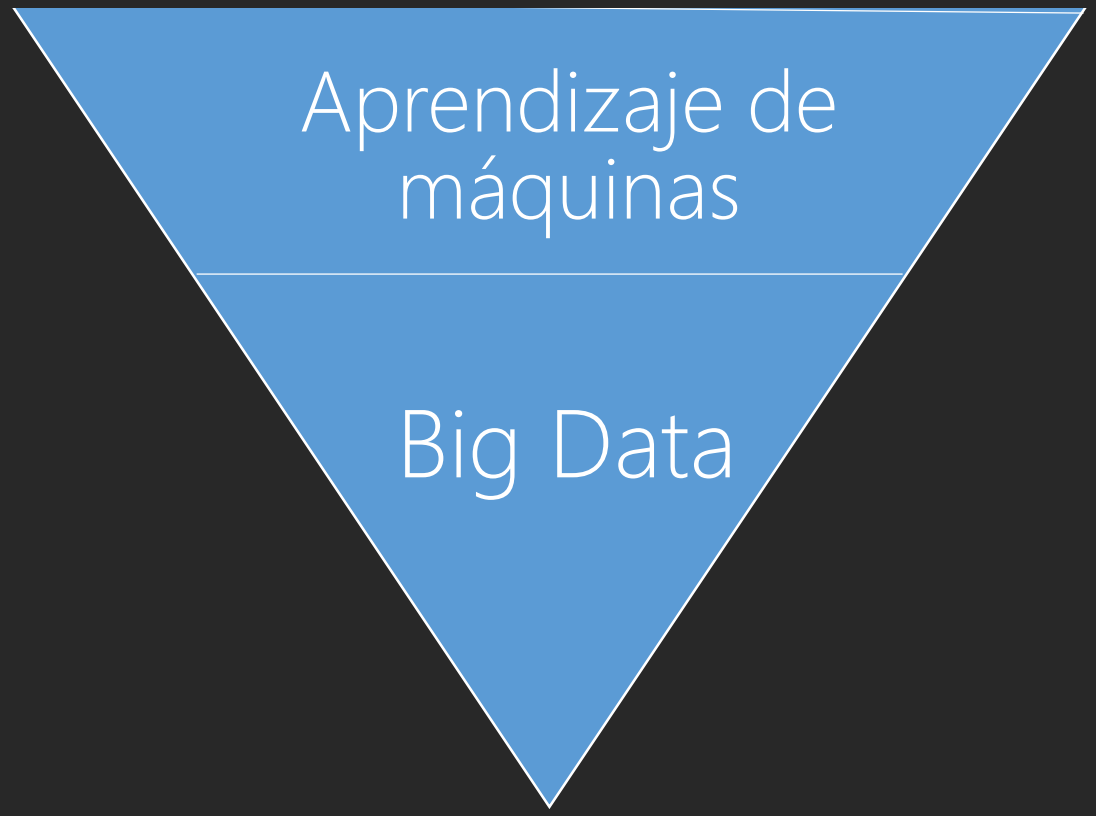
1.7 megas por segundo

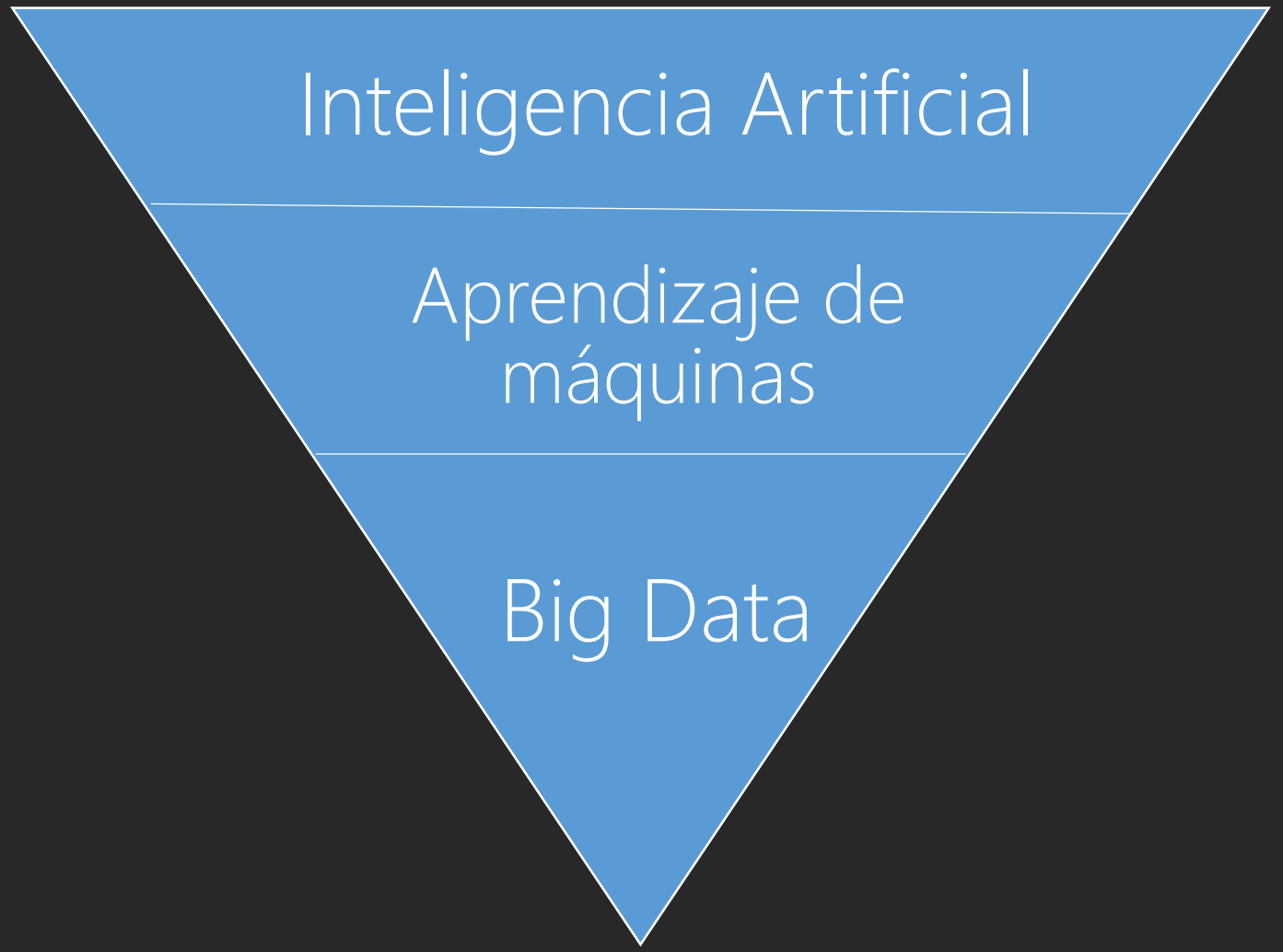
146 Gigas en un día

4400 gigas por día

Correlaciones → Predicciones

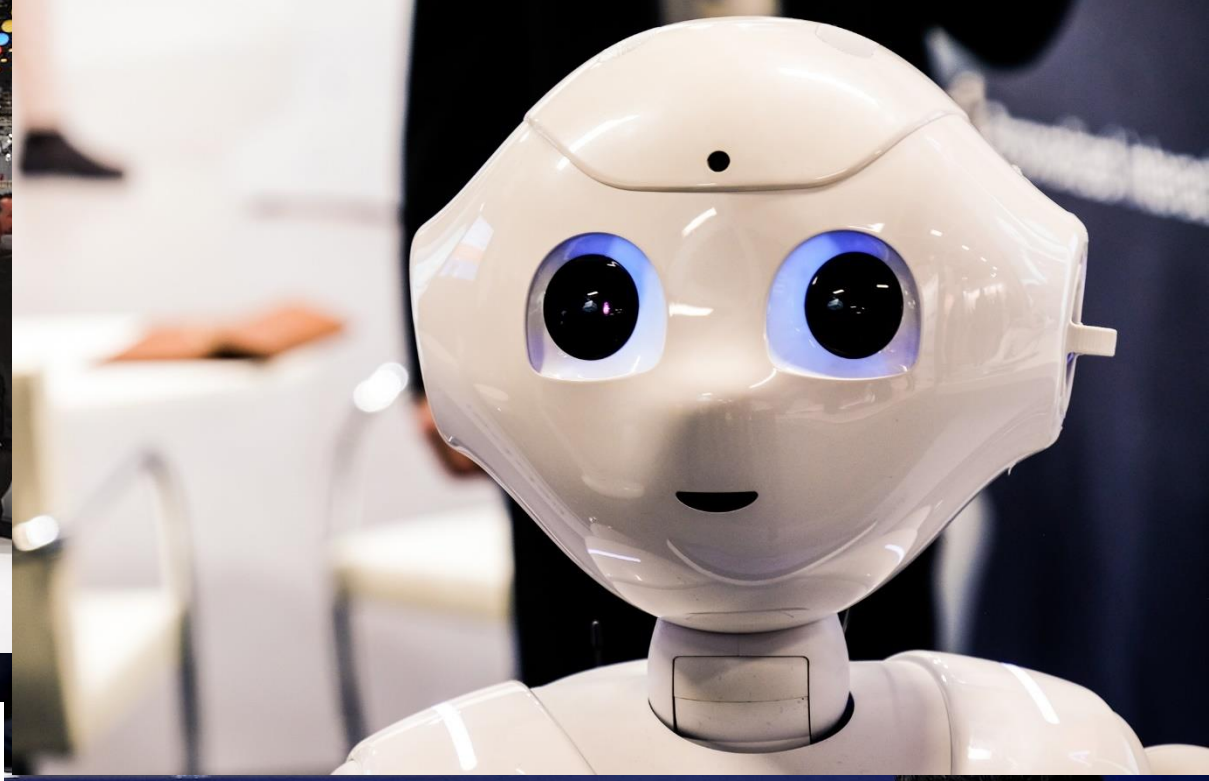
Big Data

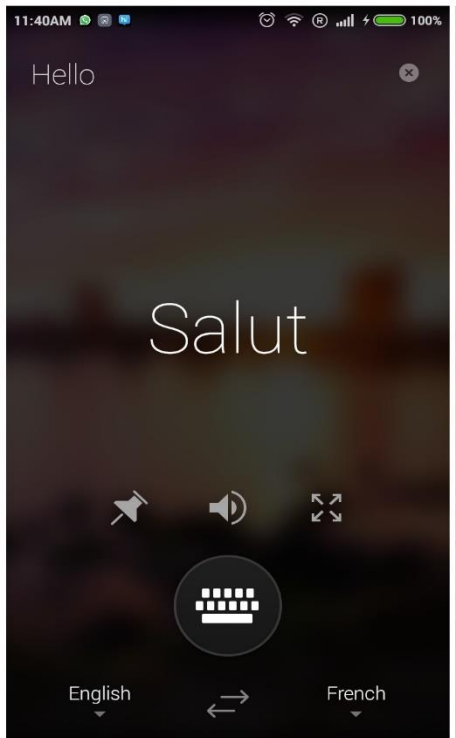

Aprendizaje de máquinas
Big Data

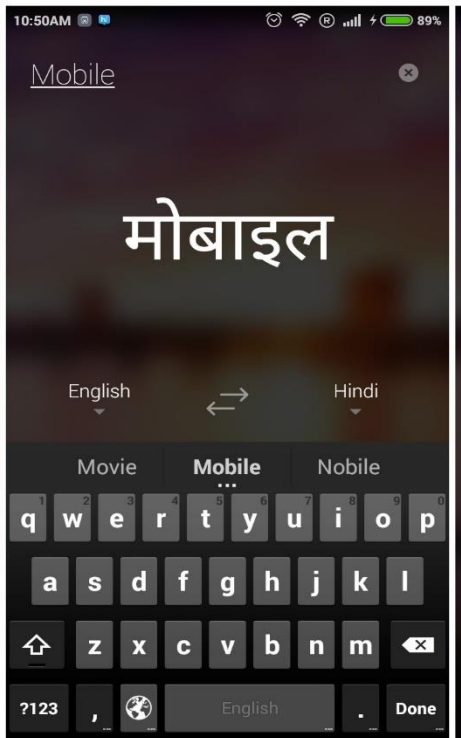

Inteligencia Artificial
Aprendizaje de máquinas
Big Data

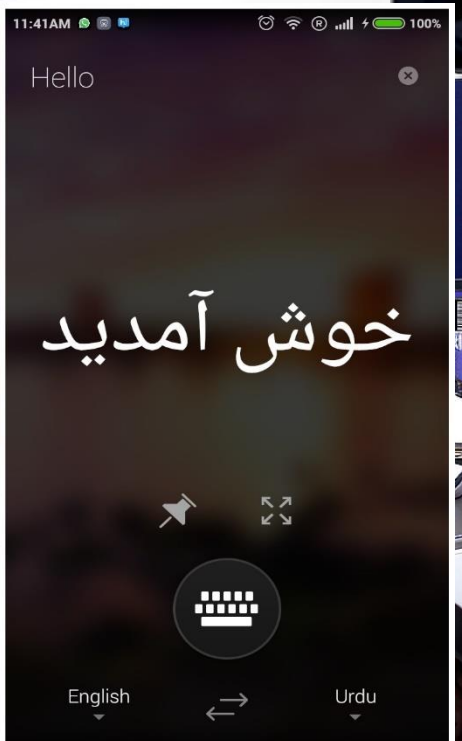
Inteligencia artificial

RENAULT
NISSAN BOUTIQUE
NISSAN
Autonomous Drive




11:40AM
100%
Hello
Salut
English
French

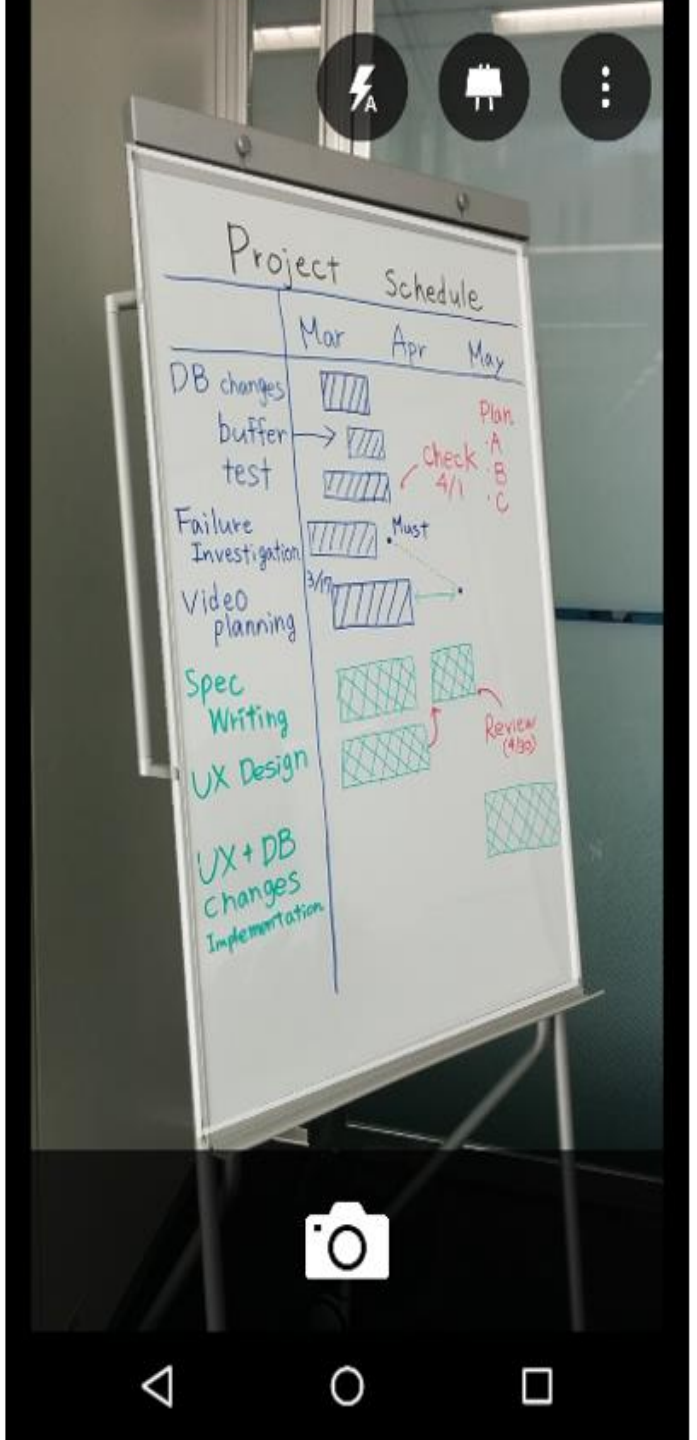

10:50AM
89%
Mobile
मोबाइल
English
Hindi
Movie
Mobile
Nobile
Done

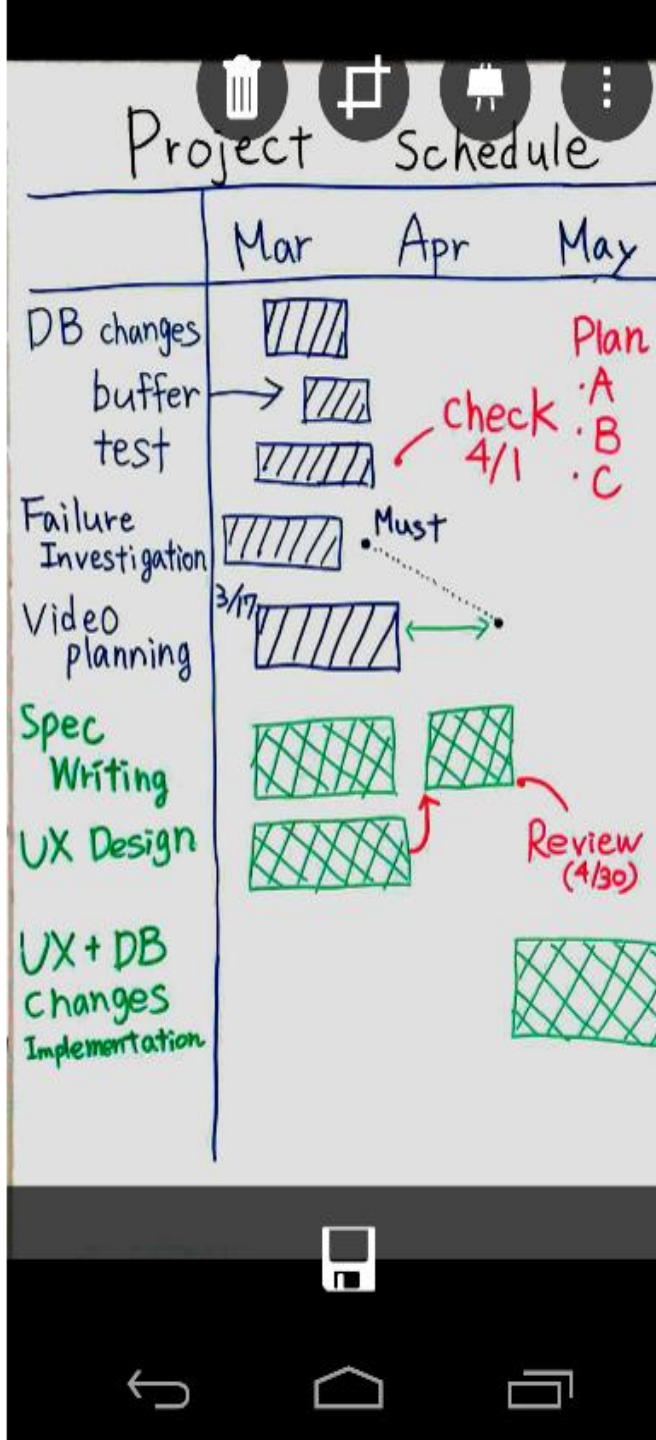

11:41AM
100%
Hello
خوش آمدید
English
Urdu

ALPHAGO
01:59:25
AlphaGo
Lee Sedol

Fourth Coffee
5678 Main Street
Concord, NH 87509
Sep17'13 10:16AM
Credit
XXXXXXXXX9999
SWIPED
PURCHASE
12345
1234
Bill
9.47
Subtotal:
Tip:
Total:
Signature
CUSTOMER COPY

Fourth Coffee
5678 Main Street
Concord, NH 87509
Date: Sep17'13 10:16AM
Card Type: Credit
Acct#: XXXXXXXXX9999
Card Entry: SWIPED
Trans Type: PURCHASE
Auth Code: 12345
Check: 1234
Server: Bill
Subtotal: 9.47
Tip:
Total:
Signature
CUSTOMER COPY

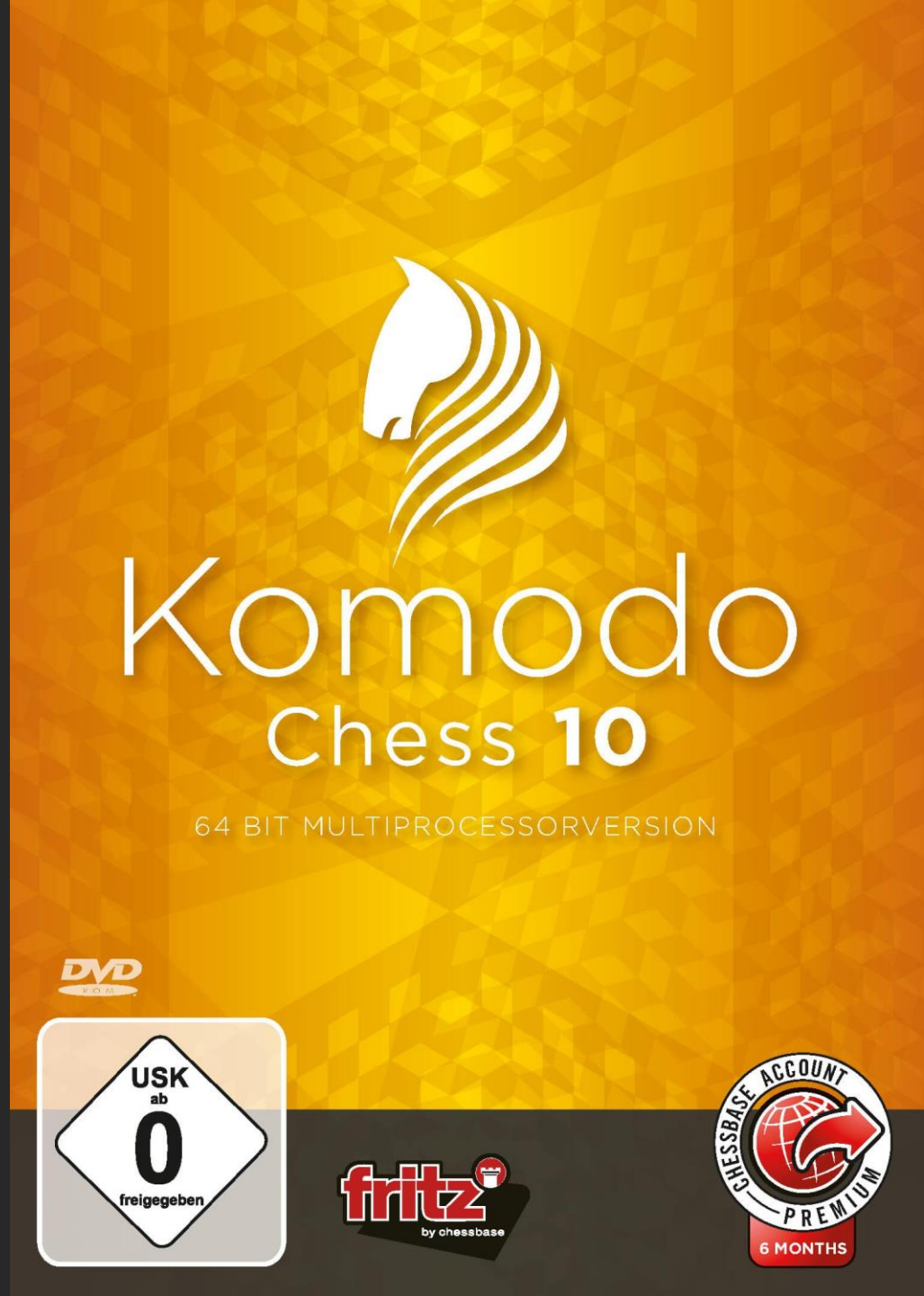

Project Schedule
Mar
Apr
May
DB changes
buffer
test
Plan
A
B
C
check
4/1
Failure Investigation
Must
3/17
Video planning
Spec Writing
UX Design
Review (4/30)
UX + DB changes
Implementation


Project Schedule
Mar
Apr
May
DB changes
buffer
test
Plan
A
B
C
check
4/1
Failure Investigation
Must
3/17
Video planning
Spec Writing
UX Design
Review (4/30)
UX + DB changes
Implementation

1. e4 c6 2. d4 d5 3. Nc3 dxe4
Panasonic
Panasonic

2882

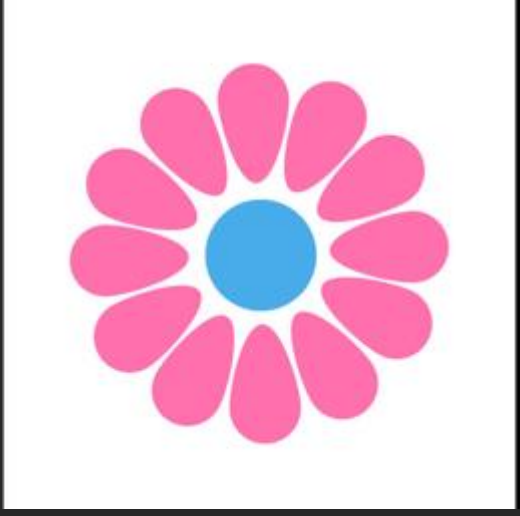
3344


Komodo
Chess 10
64 BIT MULTIPROCESSORVERSION
DVD ROM
USK ab 0 freigegeben
fritz by chessbase
CHESSBASE ACCOUNT PREMIUM 6 MONTHS

柯洁 KE JIE
00:46:57

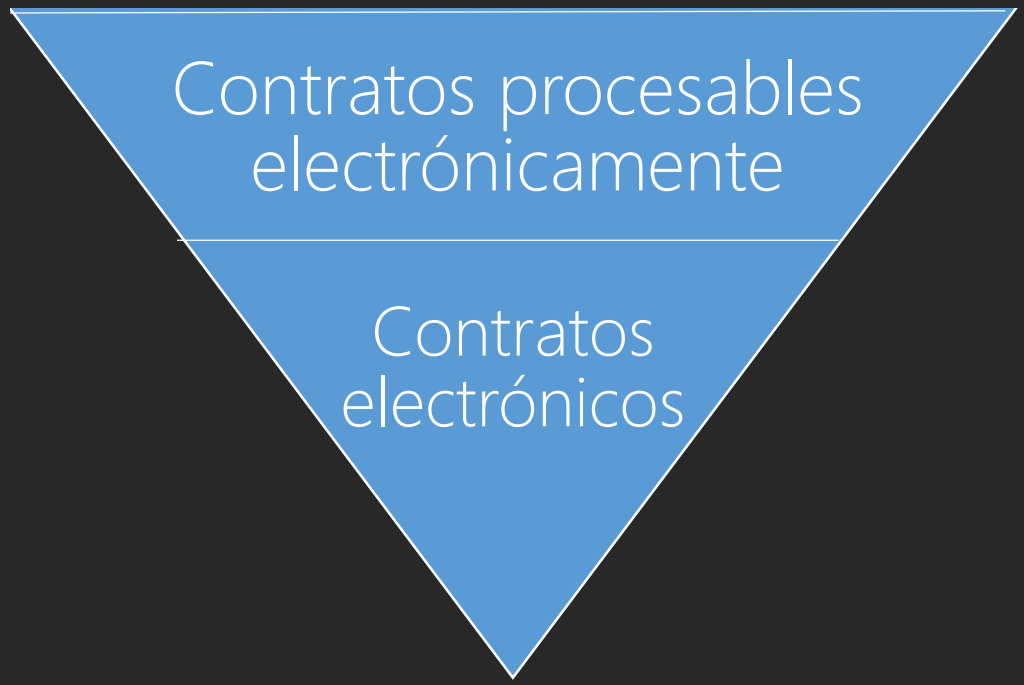
18
31:47
36
50
9
KILLED BY
Lester.
PUDGE
LUNA
14
639/1500
117+24
12
330
+99
39
58+30
40
Respawning in 9 seconds
870
120
59
200
63
SHOP
Shift-click shop items to set Quick Buy
MOUSE4
MOUSE5
10
K/D/A 4/10/5
LH/D 84/0

Redes distribuidas



Centros de datos

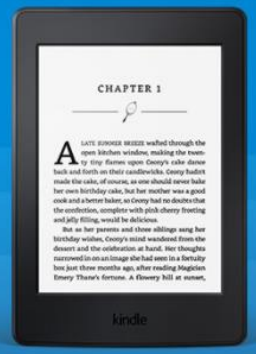
Contratos
electrónicos


Contratos procesables electrónicamente
Contratos electrónicos

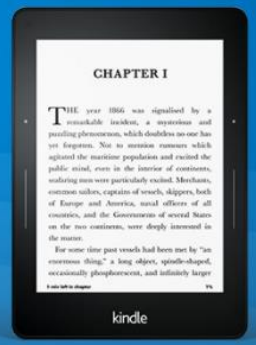
kindle

The best devices for reading, period.

kindle
$79.99



kindle paperwhite
$119.99



kindle voyage
$199.99

PRIME

KNOW YOUR BENEFITS
Get the Prime newsletter

VIDEO

INCLUDED WITH PRIME
Top movies & TV shows

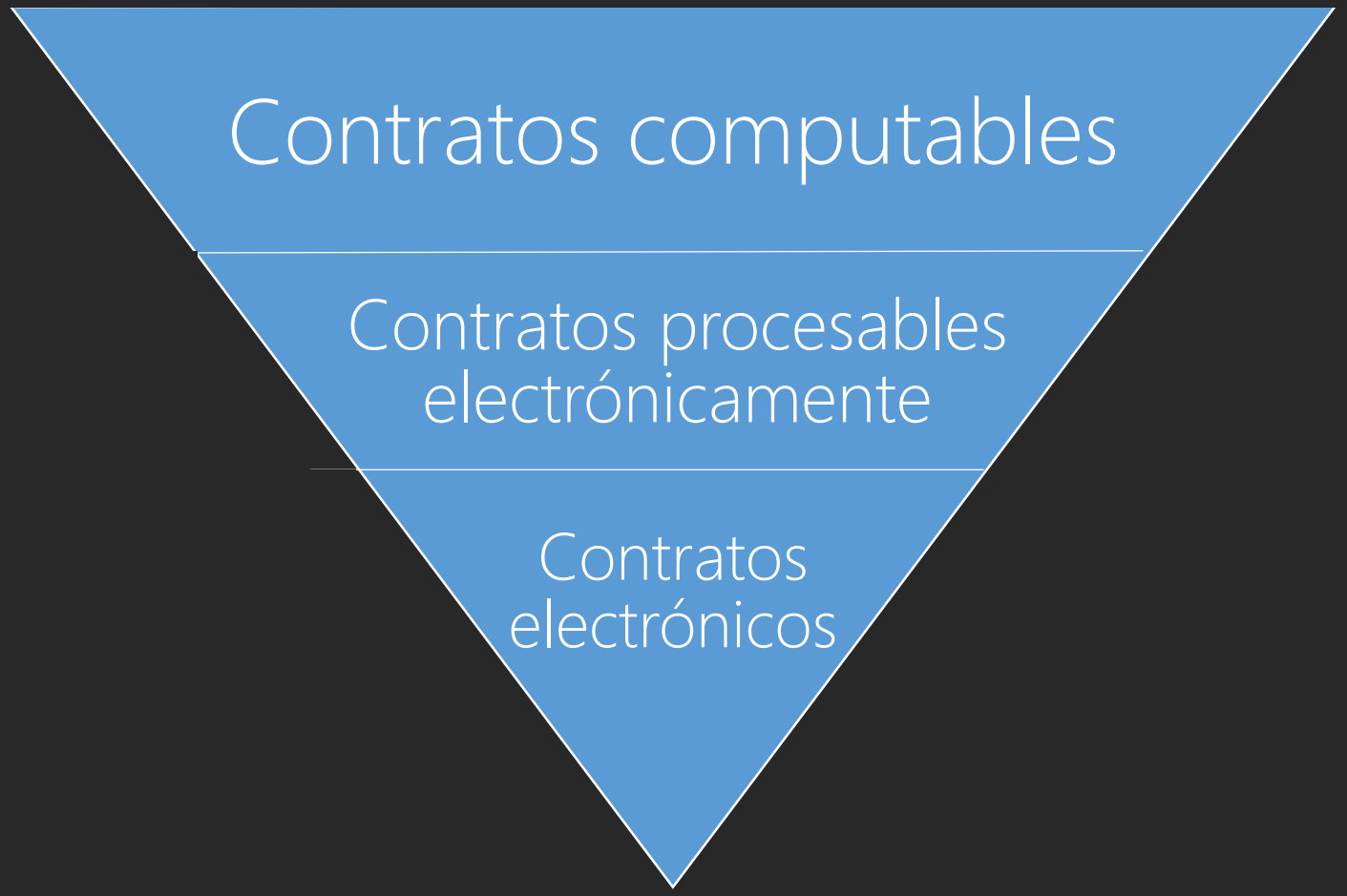
MUSIC

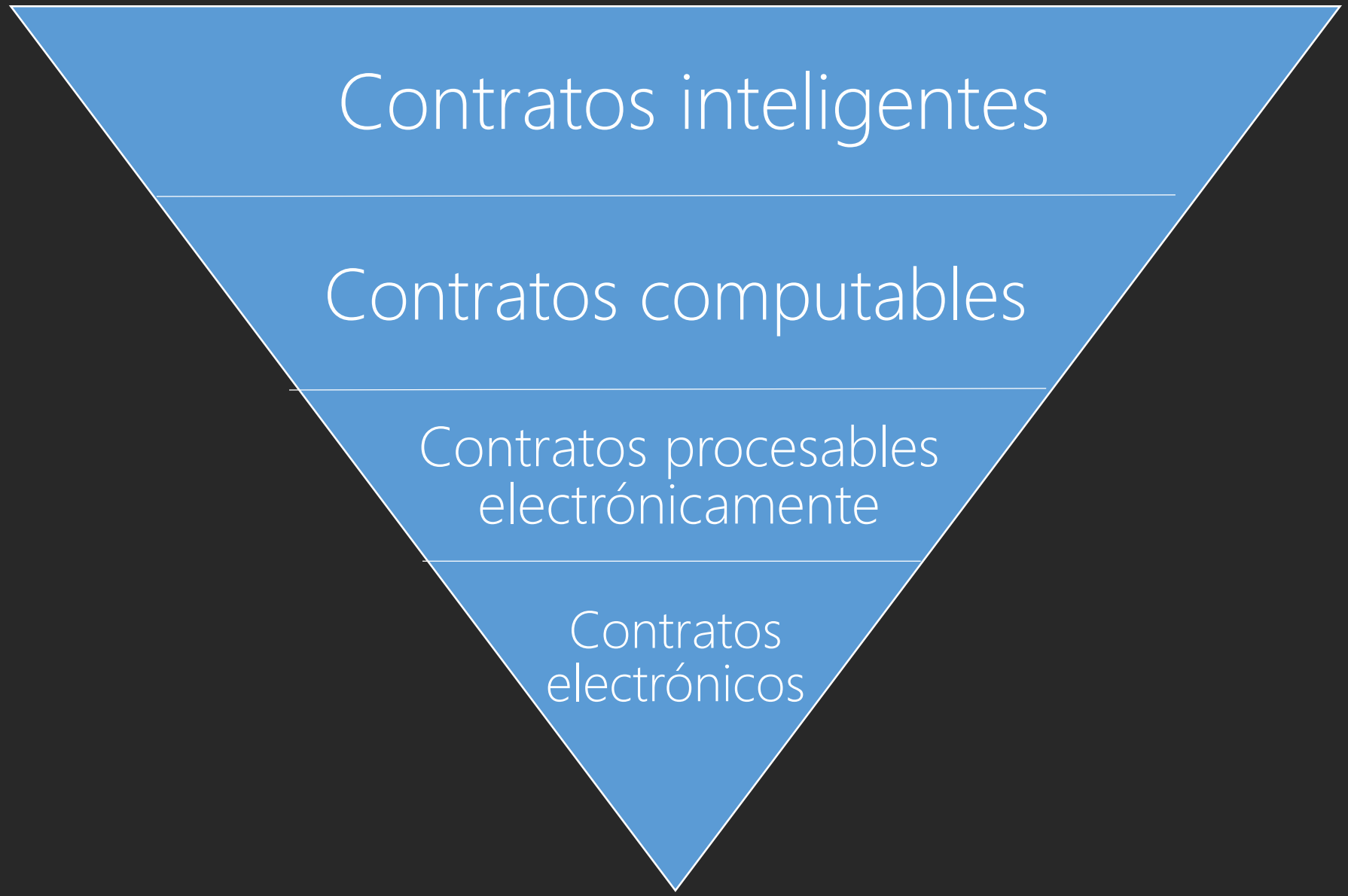
AMAZON MUSIC UNLIMITED
Stream any song, anywhere

MEET ALEXA

VOICE CONTROL YOUR
Echo & Alexa Devices

Ad feedback


Contratos computables
Contratos procesables electrónicamente
Contratos electrónicos


Contratos inteligentes
Contratos computables
Contratos procesables electrónicamente
Contratos electrónicos

Contrato inteligente

Autocumplible

Autoejecutable

westomatic
snackpoint
securevend
Guaranteed Delivery
or your MONEY BACK!
westomatic

ALARM MONITORED
SECURITY FENCE
GALLAGHER

Contractware

Solidity realtime compiler

https://ethereum.github.io/browser-solidity/#gist=ca2e2927d72b472c5ee24f3db71a0987

Apps Bookmarks P+ p fb t f i e s w GitHub gh h Other bookmarks

ApolloTrade Untitled

```
1  contract ApolloTrade {
2      uint public kWh_rate = 1000;
3      mapping (address => uint) energyAccount;
4      mapping (address => uint) coinAccount;
5      address public owner;
6
7      function ApolloTrade() {
8          owner = msg.sender;
9      }
10
11     modifier onlyOwner {
12         if (msg.sender != owner) throw;
13         _
14     }
15
16     function setRate(uint rate) onlyOwner {
17         kWh_rate = rate;
18     }
19
20     // I am selling some energy; this will credit my account
21     function sellEnergy(uint kwh) public {
22         coinAccount[msg.sender] += (kwh * kWh_rate);
23     }
24
```

ApolloTrade at 0x692a70d2e424a56d2c6c27aa97d1a86395877b3a (memory)

(fallback)

owner

Value: "0x0000000000000000000000ca35b7d915458ef540ade6068dfe2f44e8fa733c"
Cost: 370 gas. *(caveat)*
Decoded:
1. address: 0xca35b7d915458ef540ade6068dfe2f44e8fa733c

kWh_rate

Value: "0x0000000000000000000000000000000000000000000000000000000000003e8"
Cost: 245 gas. *(caveat)*
Decoded:
1. uint256: 1000

buyEnergy uint256 coin

getCoinAccount

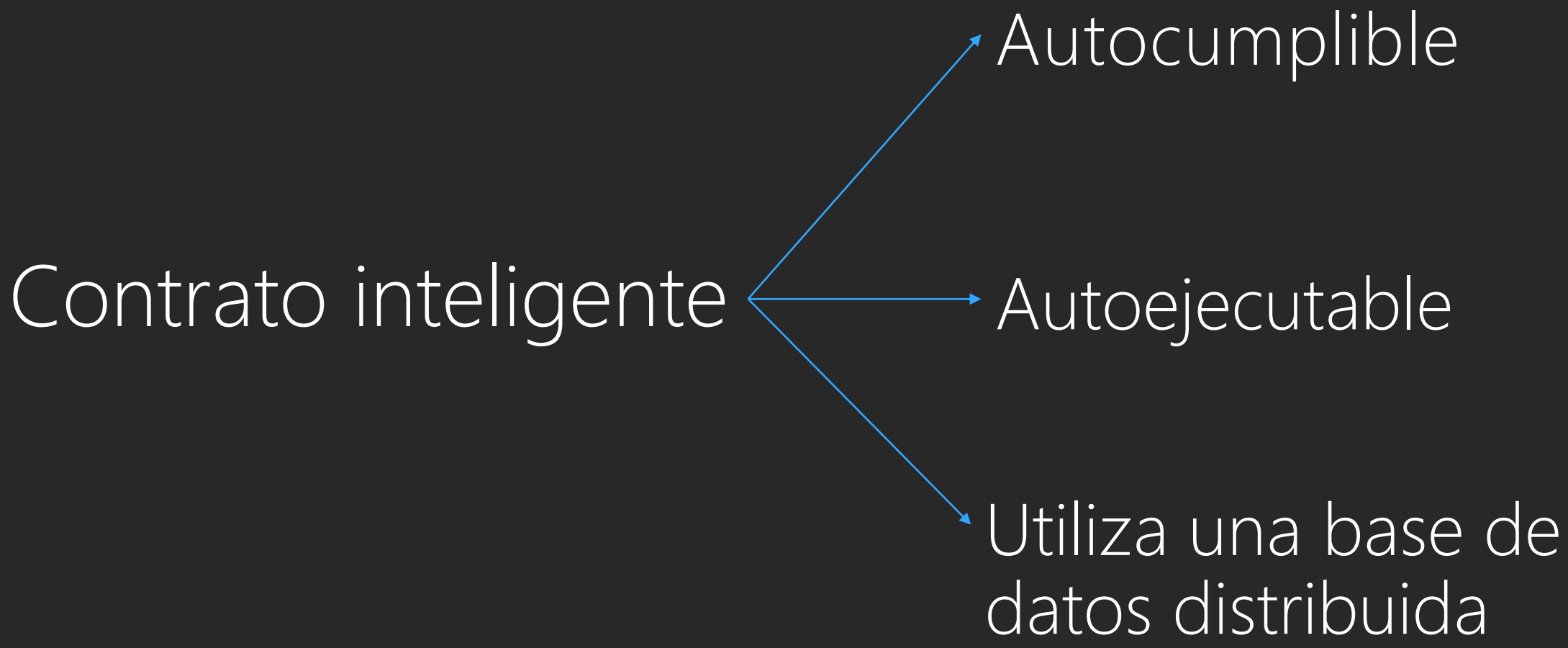
getEnergyAcc...

sellEnergy uint256 kwh

Confianza

ethereum
HOMESTEAD RELEASE
BLOCKCHAIN APP PLATFORM

napster®


Contrato inteligente
Autocumplible
Autoejecutable
Utiliza una base de datos distribuida

TOTAL RETURN SWAP

LOGIN

Click to browse or

Drag uPort-wallet-id file here.

uPort Password:

This password decrypts your uPort wallet file.

LOGIN

TOTAL RETURN SWAP

Nigel Woolworth

WELCOME NIGEL

uPort Public Address

0x58415ffcb3a993cc3c702af21b3cb356237caccb

AML/KYC Verified

Normalized Oracle Reputation

94/SD

INPUT CONTRACT TERMS »

TOTAL RETURN SWAP

Nigel Woolworth

CONTRACT TERMS

Please enter TRS terms below

Counterparty B: Enter address

VERIFY COUNTERPARTY

Notional Amount (USD) $: e.g. 10,000,000

Term (minutes):

Underlying Asset Long

MAKE SELECTION...

SPOT PRICE ORACLE

Underlying Asset Short

MAKE SELECTION...

SPOT PRICE ORACLE

Counterparty B Collateral % *

Counterparty B Blockchain Asset Account

Collateral % *

TOTAL RETURN SWAP SMART CONTRACT

The counterparties agree to the following:

Nigel Woolworth

NOTIONAL AMOUNT	$10,000,000
POSITION	MSFT / Gold
REQUIRED COLLATERAL AMOUNT	$500,000 NOT FUNDED
BLOCKCHAIN ASSET ACCOUNT	$2,500,000

Macy Hawkins

NOTIONAL AMOUNT	$10,000,000
POSITION	Gold / MSFT
REQUIRED COLLATERAL AMOUNT	$1,200,000 NOT FUNDED
BLOCKCHAIN ASSET ACCOUNT	$3,000,000

SPOT PRICE

MSFT : 53.58

Gold : 1067.62

SWAP TERM

4 minutes

NEXT STEPS:

FUND COLLATERAL ACCOUNT

Upload ISDA/CSA File

ESIGN CONTRACT

TOTAL RETURN SWAP

Nigel Woolworth

SWAP IN PROGRESS

Smart Contract ID: 0x8ab2cee77f24cd85388ea663fd2b1fde74344ee2

TIME REMAINING: 3:40

MSFT PRICE	% CHANGE	GOLD PRICE	% CHANGE	RETURN DIFFERENCE
$ 52.36	-2.131 %	$ 1072.10	0.321 %	-2.452 %

NOTIONAL AMMOUNT	RETURN DIFFERENCE	CURRENT SWAP VALUE
$ 10,000,000	-2.452 %	$ -245,200.00

Nigel Woolworth

NOTIONAL AMMOUNT	$10,000,000
POSITION	MSFT / Gold
REQUIRED COLLATERAL AMMOUNT	$745,200
BLOCKCHAIN ASSET ACCOUNT	$1,754,800

Normalized Oracle Reputation

94/SD

Macy Hawkins

NOTIONAL AMMOUNT	$10,000,000
POSITION	Gold / MSFT
REQUIRED COLLATERAL AMMOUNT	$1,445,200
BLOCKCHAIN ASSET ACCOUNT	$1,554,800

Normalized Oracle Reputation

79/FEU

Nigel Woolworth

NOTIONAL AMMOUNT	$10,000,000
POSITION	MSFT / Gold
REQUIRED COLLATERAL AMMOUNT	$853,700
BLOCKCHAIN ASSET ACCOUNT	$1,646,300

Normalized Oracle Reputation

94/SD

Macy Hawkins

NOTIONAL AMMOUNT	$10,000,000
POSITION	Gold / MSFT
REQUIRED COLLATERAL AMMOUNT	$2,053,700
BLOCKCHAIN ASSET ACCOUNT	$946,300

Normalized Oracle Reputation

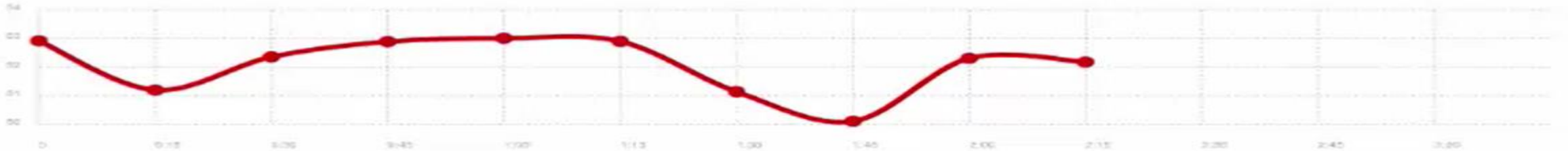
74/FEU

REPUTATION DOWNGRADED

COLLATERAL REBALANCING EVENT

FUNDS TAKEN FROM BLOCKCHAIN ASSET ACCOUNT

MSFT



Gold

TOTAL RETURN SWAP

Nigel Woolworth

SWAP SETTLEMENT

FINAL OUTCOME

Nigel Woolworth

NOTIONAL $10,000,000

Reputation Score

94/SD

MSFT / Gold

+ $94,400.00

Macy Hawkins

NOTIONAL $10,000,000

Reputation Score

74/FEU

Gold / MSFT

- $94,400.00

FINAL RETURN DIFFERENCE

0.944 %

COLLATERAL ACCOUNTS RELEASED

BALANCE

“We are the self-driving cars of the financial services”

Jon Stein
CEO Betterment

rebalanceIRA

acorns
invest the change

WiseBanyan

wealthfront

Betterment
FOR BUSINESS

SIGFIG

FutureAdvisor

PERSONAL
CAPITAL

Hi, I'm Alex, and I'll be guiding you today.

I'll ask a few short questions, and then tell you how we can help you maximize your money.

Continue

Let's get started. Are you retired?

- Yes
- No

Continue

What's your primary reason for investing?

- Saving for retirement
- General investing
- Saving for an emergency fund
- Saving for a major purchase

Continue

Do you have debt?

We recommend paying off high-interest debt before investing.

Learn more

What's your primary reason for investing?

- [ ] Saving for retirement
- [x] General investing
- [ ] Saving for an emergency fund
- [ ] Saving for a major purchase

When analyzing returns, most people don't take taxes and fees into account. We focus on returns net of fees and taxes to help you maximize your money.

Continue

Do you have debt?

We recommend paying off high-interest debt before investing.
Learn more

Los retos

¿Naturaleza jurídica?

Transparencia

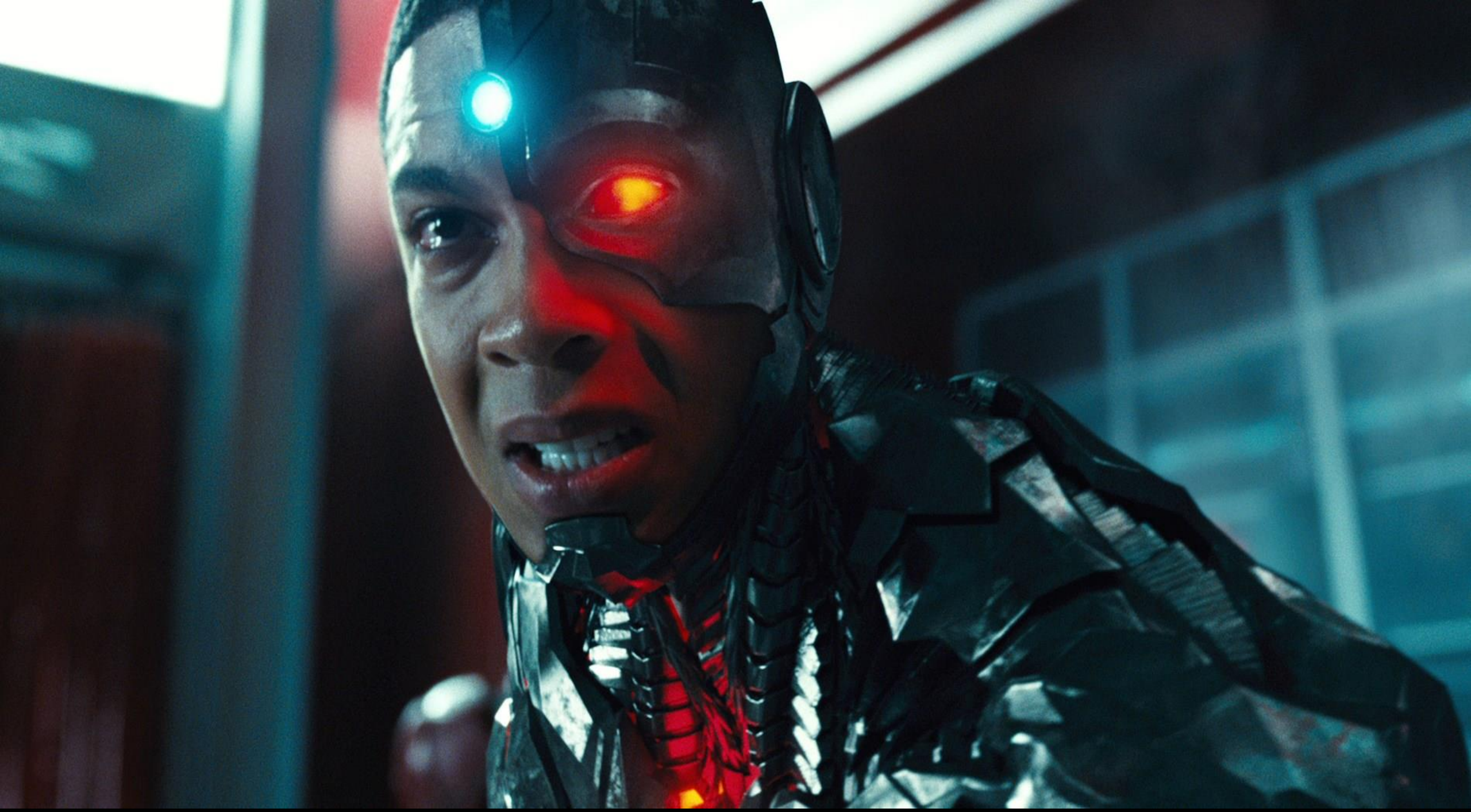
ATSB Asset
ATTENTION
OBSERVE PRECAUTIONS FOR HANDLING ELECTROSTATIC SENSITIVE DEVICES
FLIGHT RECORDER DO NOT OPEN

NO MORE
LIES!
GREENPEACE

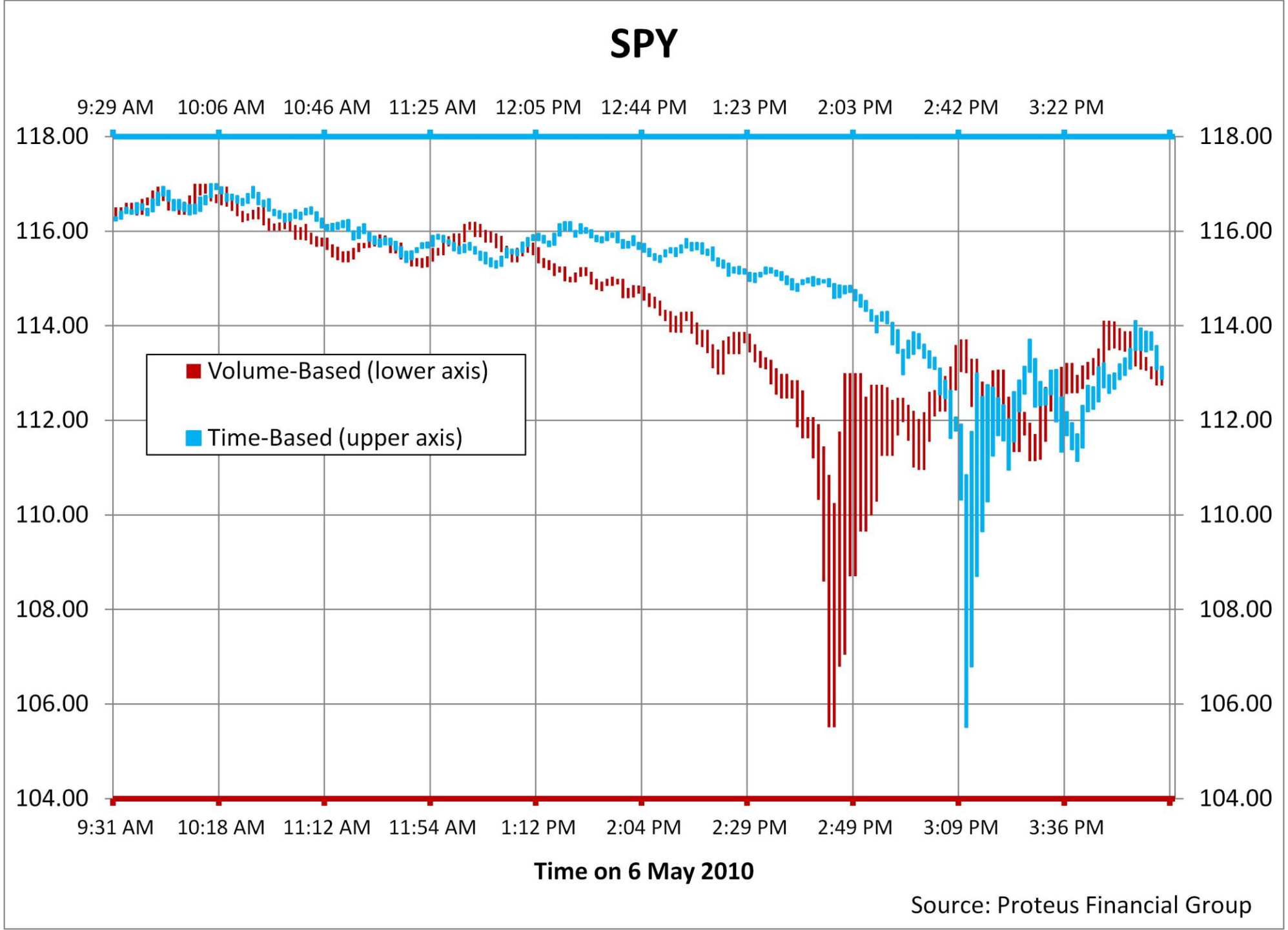
Un algoritmo está siendo usado

Descripción de los supuestos y limitaciones del algoritmo

Nivel de involucramiento humano



El control y la responsabilidad

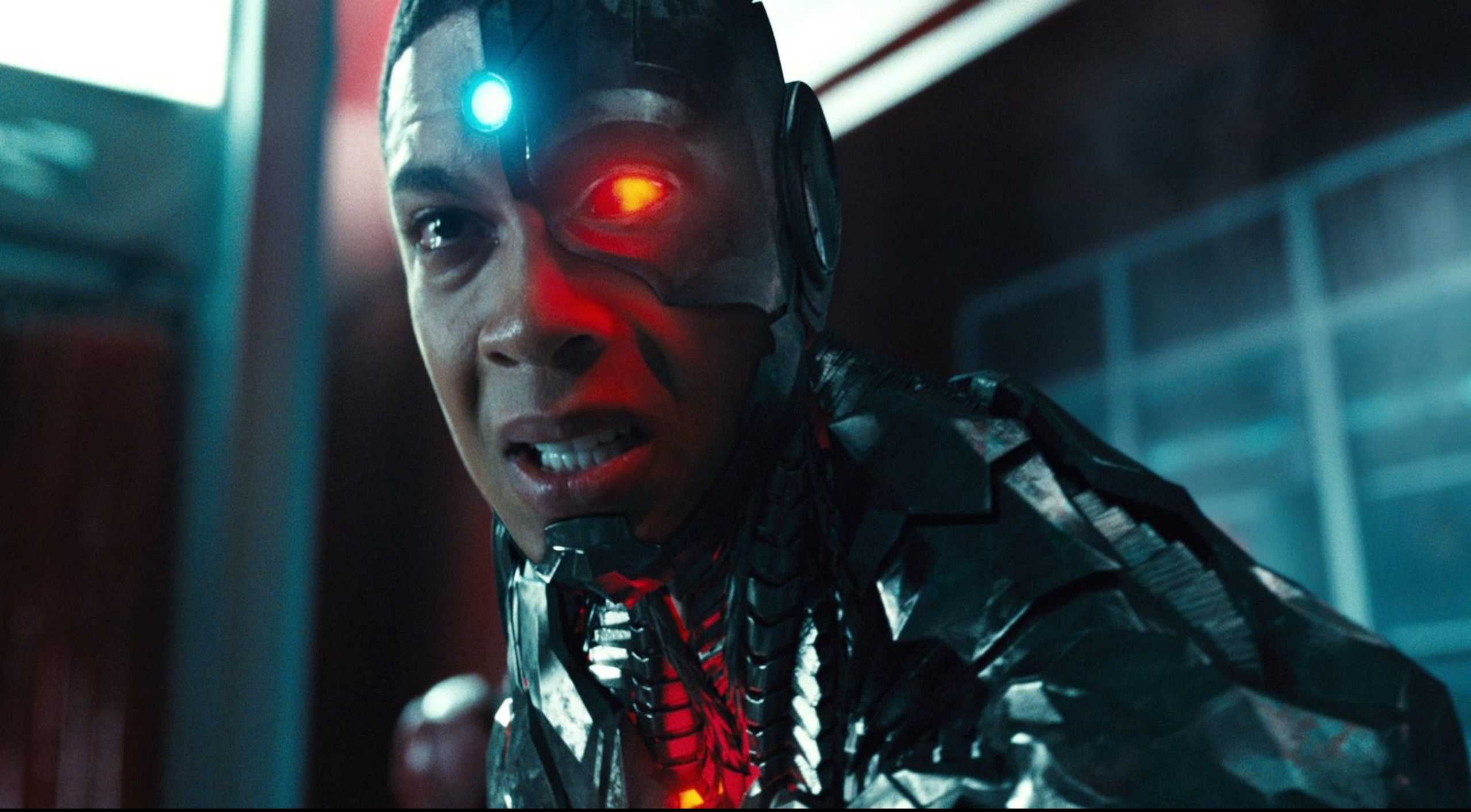

SPY
9:29 AM
10:06 AM
10:46 AM
11:25 AM
12:05 PM
12:44 PM
1:23 PM
2:03 PM
2:42 PM
3:22 PM
118.00
116.00
114.00
112.00
110.00
108.00
106.00
104.00
Volume-Based (lower axis)
Time-Based (upper axis)
9:31 AM
10:18 AM
11:12 AM
11:54 AM
1:12 PM
2:04 PM
2:29 PM
2:49 PM
3:09 PM
3:36 PM
Time on 6 May 2010
Source: Proteus Financial Group

Knight

¿Hacia una hermenéutica booleana?

¿Hacia una hermenéutica booleana?

<El tipo de dato **lógico** o **booleano** es en computación aquel que puede representar valores de lógica binaria, esto es 2 valores, valores que normalmente representan *falso* o *verdadero*>



La efectividad judicial

Solidity realtime compiler

https://ethereum.github.io/browser-solidity/#gist=ca2e2927d72b472c5ee24f3db71a0987

Apps Bookmarks P+ p fb t f i e s w GitHub gh h Other bookmarks

ApolloTrade Untitled

```
1  contract ApolloTrade {
2      uint public kWh_rate = 1000;
3      mapping (address => uint) energyAccount;
4      mapping (address => uint) coinAccount;
5      address public owner;
6
7      function ApolloTrade() {
8          owner = msg.sender;
9      }
10
11     modifier onlyOwner {
12         if (msg.sender != owner) throw;
13         _
14     }
15
16     function setRate(uint rate) onlyOwner {
17         kWh_rate = rate;
18     }
19
20     // I am selling some energy; this will credit my account
21     function sellEnergy(uint kwh) public {
22         coinAccount[msg.sender] += (kwh * kWh_rate);
23     }
24
```

ApolloTrade at 0x692a70d2e424a56d2c6c27aa97d1a86395877b3a (memory)

(fallback)

owner

Value: "0x0000000000000000000000ca35b7d915458ef540ade6068dfe2f44e8fa733c"
Cost: 370 gas. *(caveat)*
Decoded:
1. address: 0xca35b7d915458ef540ade6068dfe2f44e8fa733c

kWh_rate

Value: "0x0000000000000000000000000000000000000000000000000000000000003e8"
Cost: 245 gas. *(caveat)*
Decoded:
1. uint256: 1000

buyEnergy uint256 coin

getCoinAccount

getEnergyAcc...

sellEnergy uint256 kwh

FBI! OPEN THE DOOR, SIRI!
CHAPPATTE
International New York Times

Apple

vs

FBI

¿Cuál es el rol de los abogados?

JPMorgan Software Does in Seconds What Took Lawyers 360,000 Hours

By **Hugh Son**

February 27, 2017, 7:31 PM GMT-5 *Updated on* February 28, 2017, 7:24 AM GMT-5

- New software does in seconds what took staff 360,000 hours
- Bank seeking to streamline systems, avoid redundancies

ethereum
HOMESTEAD RELEASE
BLOCKCHAIN APP PLATFORM

THE DAO IS CODE.

GET DAO TOKENS

Digital currency Ethereum is cratering because of a $50 million hack

Rob Price
Jun. 17, 2016, 10:34 AM 29,030

FACEBOOK LINKEDIN TWITTER EMAIL PRINT

- **Video: Transgender Thais face nightmare at ar…**
  (Reuters TV)
- **Want to speak a new language in just 15 hours…**
  (Babbel)
- **5 Countries That May Give Free Housing To Ne…**
  (Women's Article)
- **The Device That Puts an End to Snoring**
  (My Snoring Solution)

Sponsored Links

The value of the digital currency Ethereum has dropped dramatically amid an apparent huge attack targeting an organisation with huge holdings of the currency.

The price per unit dropped to $15 from record highs of $21.50 in hours, with millions of units of the digital currency worth as much as $50 million stolen at post-theft valuations.

1.===== BEGIN SIGNED MESSAGE =====
2.To the DAO and the Ethereum community,
3.
4.I have carefully examined the code of The DAO and decided to participate after finding the feature where splitting is rewarded with additional ether. I have made use of this feature and have rightfully claimed 3,641,694 ether, and would like to thank the DAO for this reward. It is my understanding that the DAO code contains this feature to promote decentralization and encourage the creation of "child DAOs".
5.

1.===== BEGIN SIGNED MESSAGE =====
2.To the DAO and the Ethereum community,
3.
4.I have carefully examined the code of The DAO and decided to participate after finding the feature where splitting is rewarded with additional ether. I have made use of this feature and have rightfully claimed 3,641,694 ether, and **would like to thank the DAO for this reward**. It is my understanding that the DAO code contains this feature to promote decentralization and encourage the creation of "child DAOs".
5.

I am disappointed by those who are characterizing the use of this intentional feature as "theft".

I am making use of this explicitly coded feature as per the smart contract terms and my law firm has advised me that my action is fully compliant with United States criminal and tort law. For reference please review the terms of the DAO:

"The terms of The DAO Creation are set forth in the smart contract code existing on the Ethereum blockchain at 0xbb9bc244d798123fde783fcc1c72d3bb8c189413. Nothing in this explanation of terms or in any other document or communication may modify or add any additional obligations or guarantees beyond those set forth in The DAO's code. Any and all explanatory terms or descriptions are merely offered for educational purposes and do not supercede or modify the express terms of The DAO's code set forth on the blockchain; to the extent you believe there to be any conflict or discrepancy between the descriptions offered here and the functionality of The DAO's code at 0xbb9bc244d798123fde783fcc1c72d3bb8c189413, The DAO's code controls and sets forth all terms of The DAO Creation."

```
16. Yours truly,
17. "The Attacker"
18. ===== END SIGNED MESSAGE =====
```

```
16. Yours truly,
17. "The Attacker"
18. ===== END SIGNED MESSAGE =====
```

"This dark, exhilarating work is the most important book of its generation about the relationship between law, cyberspace and social organization."*

AND OTHER LAWS OF CYBERSPACE

LAWRENCE LESSIG