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Crypto Valuations

Frameworks, Considerations and Inputs

Version 1.3

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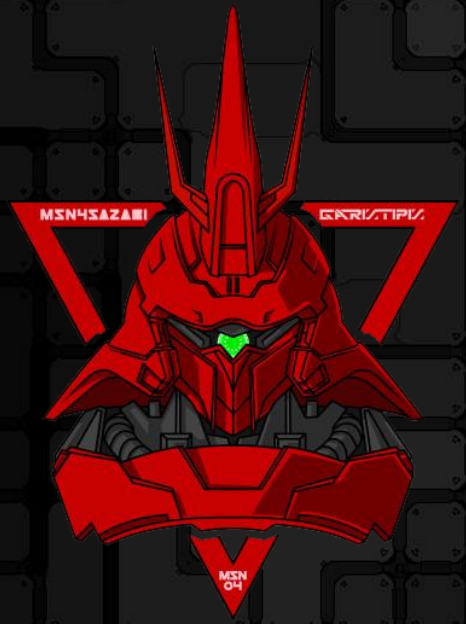
A little about Mark

Past life: IT infrastructure <3 code

Work: Consultancy and Advisory

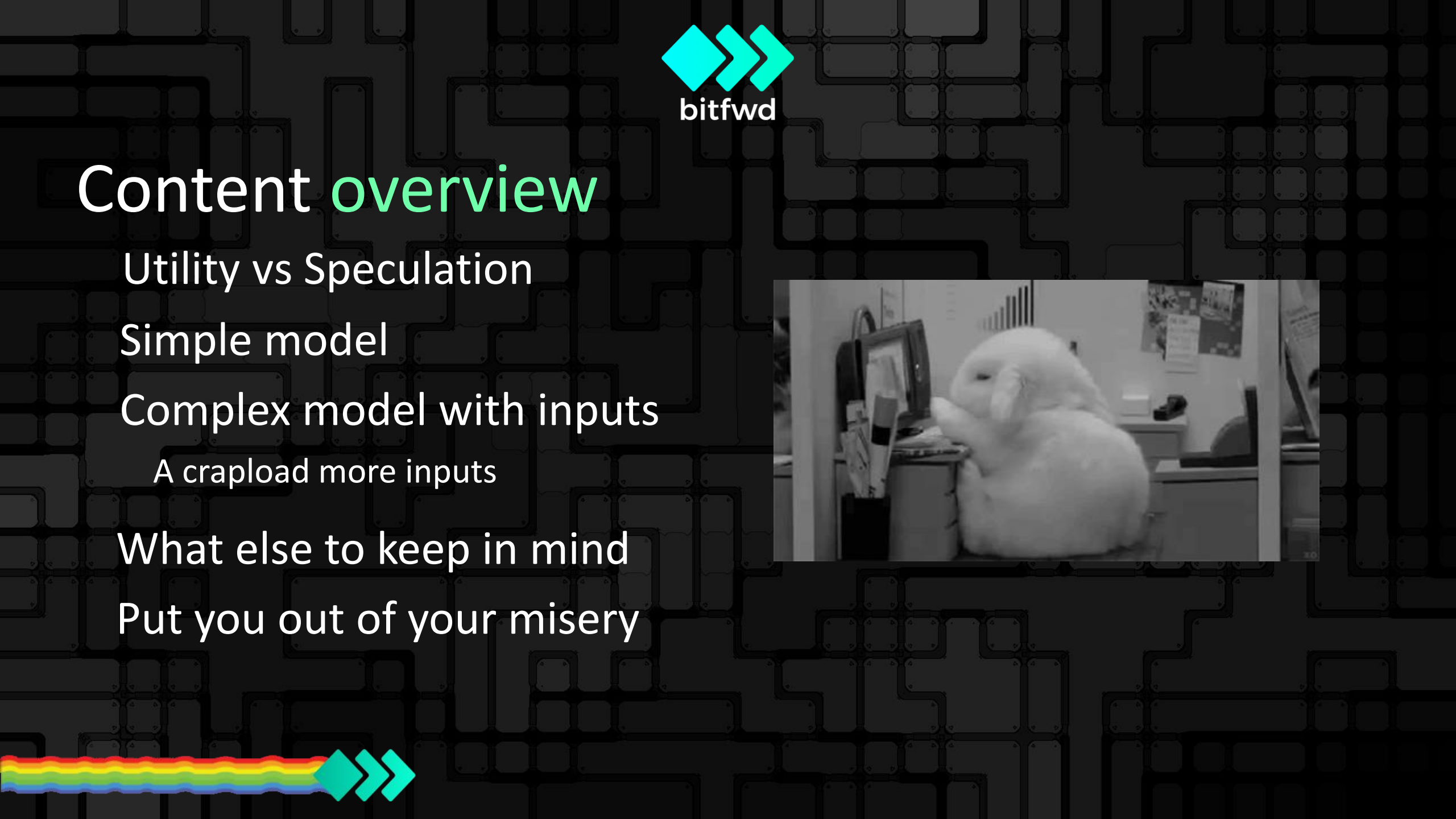
Kids & MBA: Strategy and incentives

Fell down crypto rabbit hole



What this session is and isn't about

- Immature frameworks and ideas
- Constant flux around inputs
- Focus on inputs not numbers
- These are not mine
- Sexy: Chris Burniske, Ryan Selkis, John Pfeffer et. al.
- This is not investment advice LUL



Content overview

- Utility vs Speculation
- Simple model
- Complex model with inputs
  - A crapload more inputs
- What else to keep in mind
- Put you out of your misery

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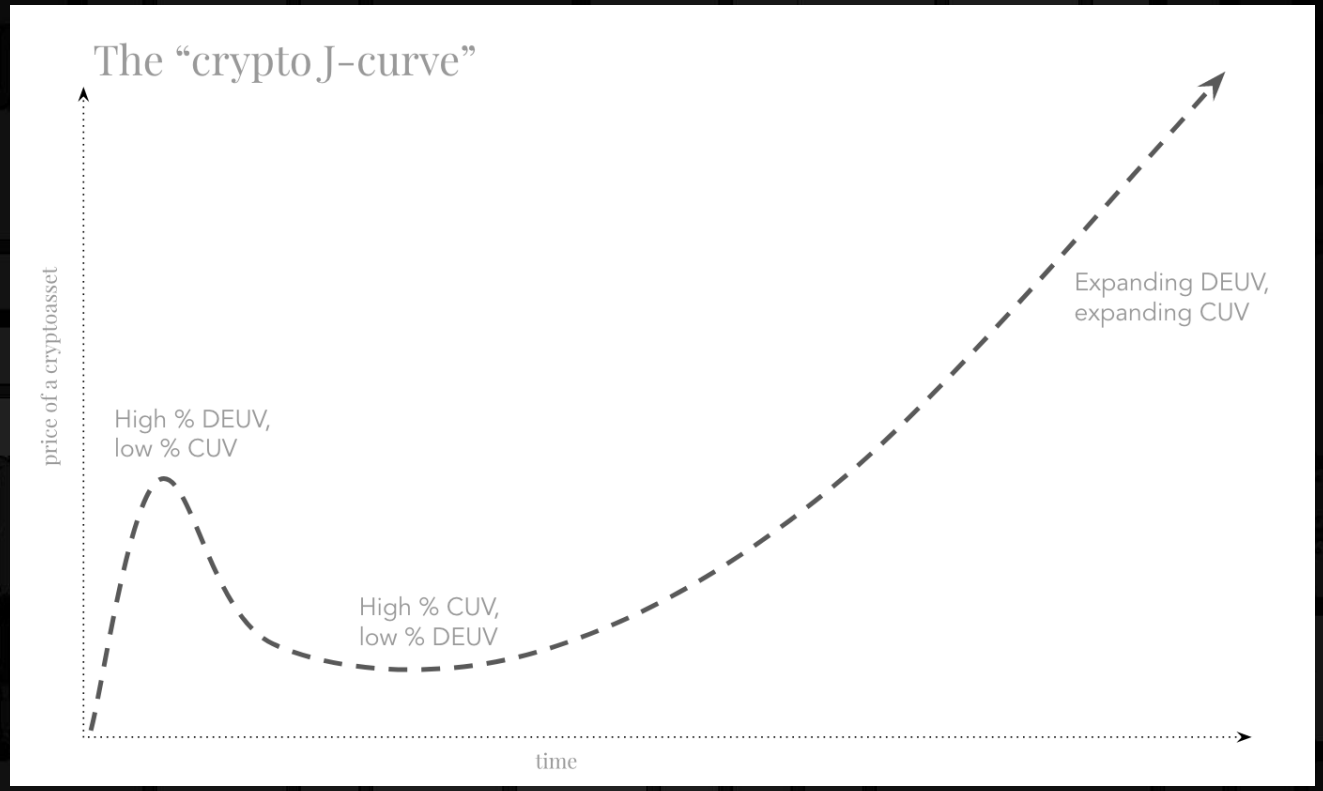
Utility vs Speculation – Crypto J-Curve

Background

Current Utility Value (CUV)

Discounted Expected Utility Value (DEUV)



Early BTC example

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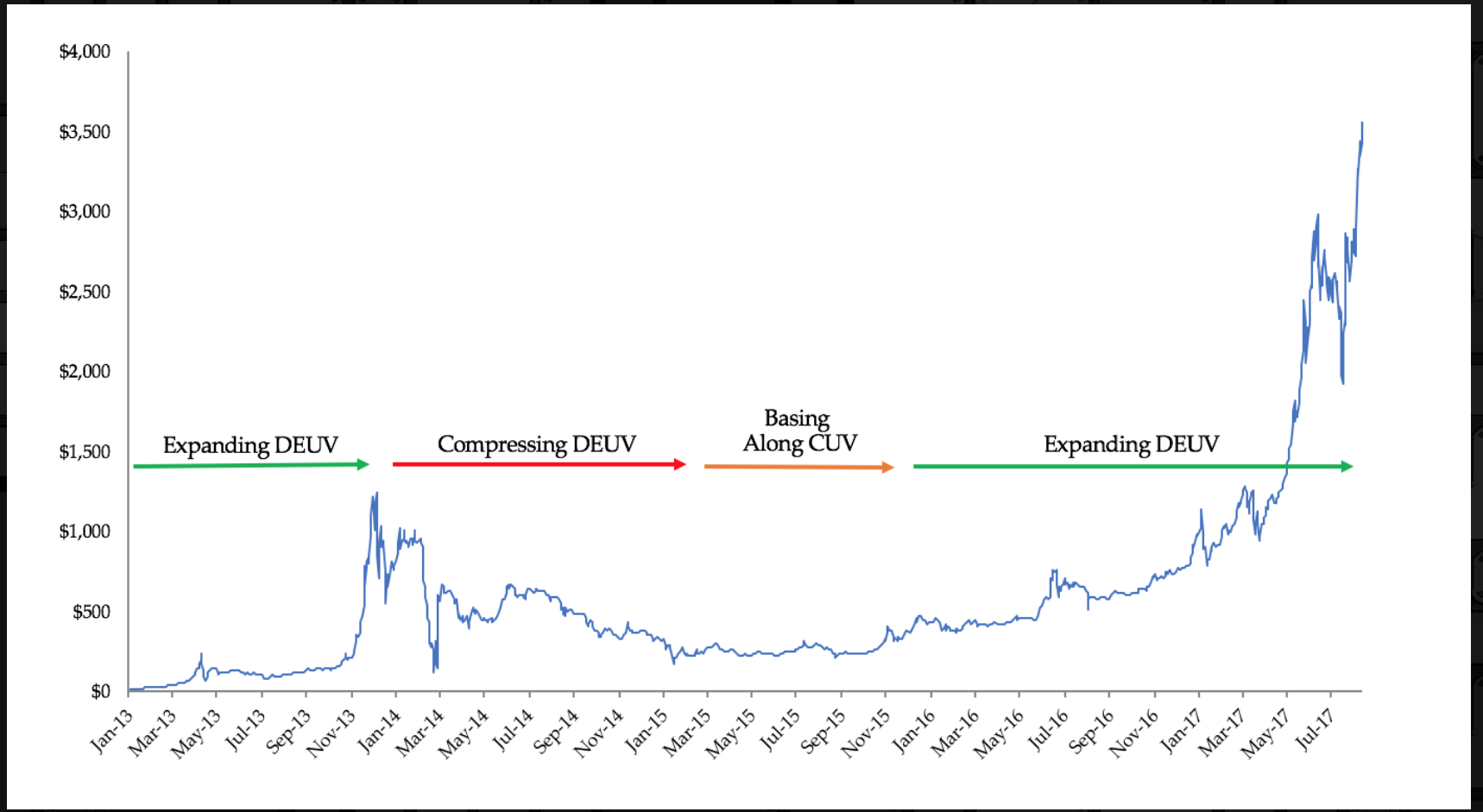

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BTC remittances

TAM: 600B (2016)

Penetration: 10%

Velocity: 4.5

Coins supply: 16.8Mil

Math: 600B x 10% / 4.5 = 13B

13B / 16.8M = $771 per BTC

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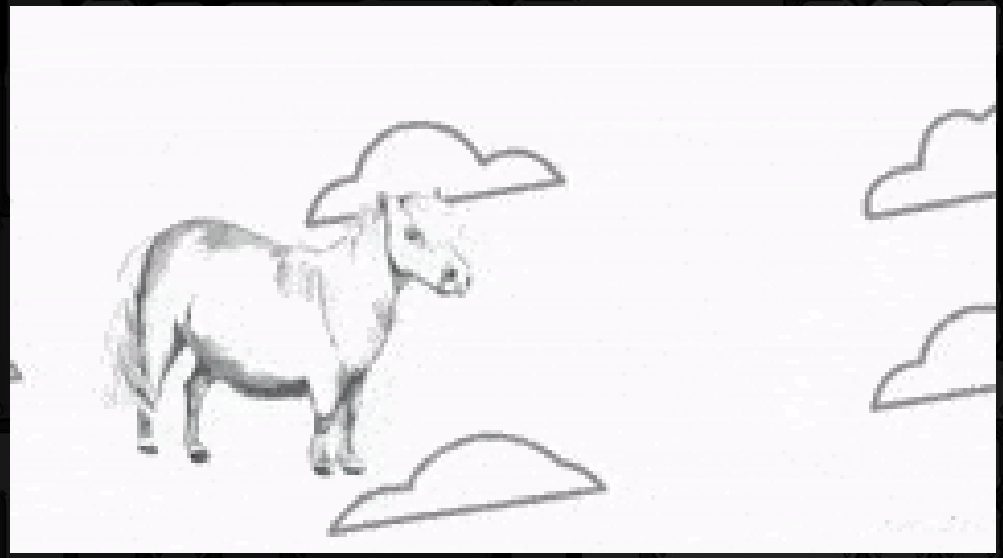
BTC remittances

- Framework has holes
  - No growth of TAM
  - No penetration timeframe
  - Current supply
- Other use cases?
- Sexy: Spencer Bogart & Gil Lauria (Grayscale's GBTC)



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Basics

Cryptoassets != companies

Equation of exchange

MV = PQ

Considerations

Controversy

- (P) Price level
- (Q) Index of expenditure
- (M) Money supply
- (V) Velocity of money

BTC velocity reference:
PQ/M = V
58B/8.9B = 6.5

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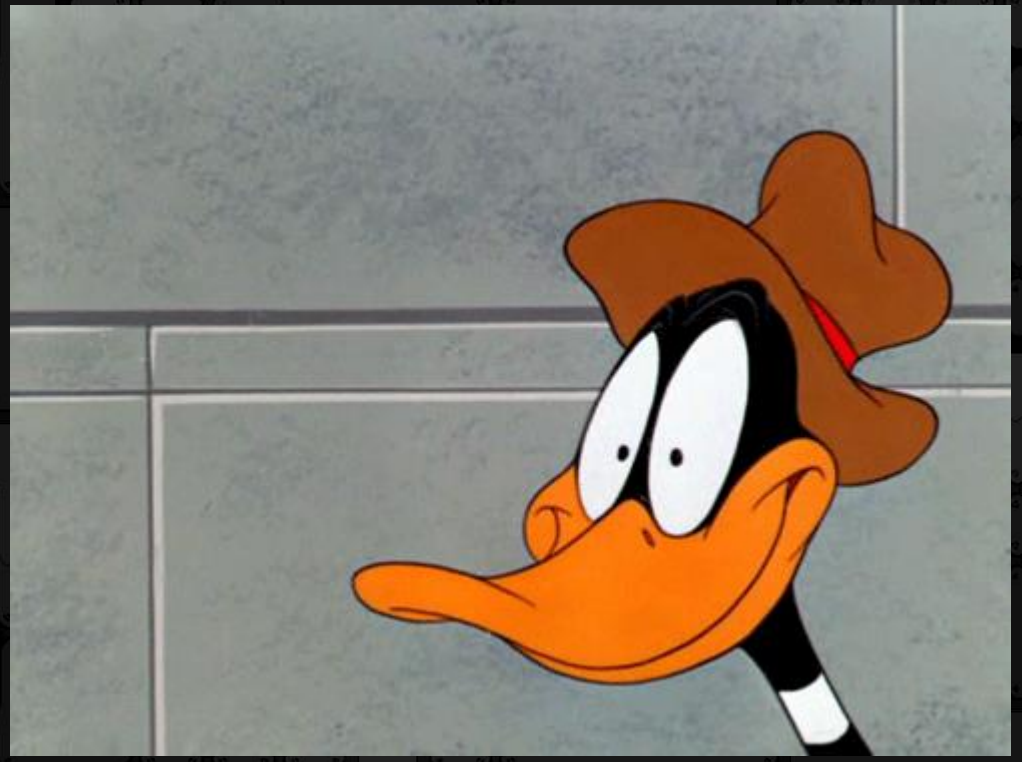
Token INET

- Utility token
- Bandwidth GB for $
- ICO
- Airdrop
- Insert flavour of the month



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Recap

TAM: 600B (2016)

Penetration: 10%

Velocity: 4.5

Coins supply: 16.8Mil

Math: 600B x 10% / 4.5 = 13B

13B / 16.8M = $771 per BTC

Playing: https://goo.gl/mFn69Q

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Better TAM

Costs /GB & decline

Total IP traffic

Growth (CAGR)

% addressable

What else?

INET Economy Inputs		
Metric	**Assumption**	
Cost per GB for INET	$	0.25
Cost decline for bandwidth		16%
Annual global IP traffic (2016)		1,200,000,000,000
CAGR for global IP traffic (2016-2021)		24%
% of global IP traffic addressable for INET		75%
Velocity		20
Blue represents a particularly subjective assumption		

Addressable Market?

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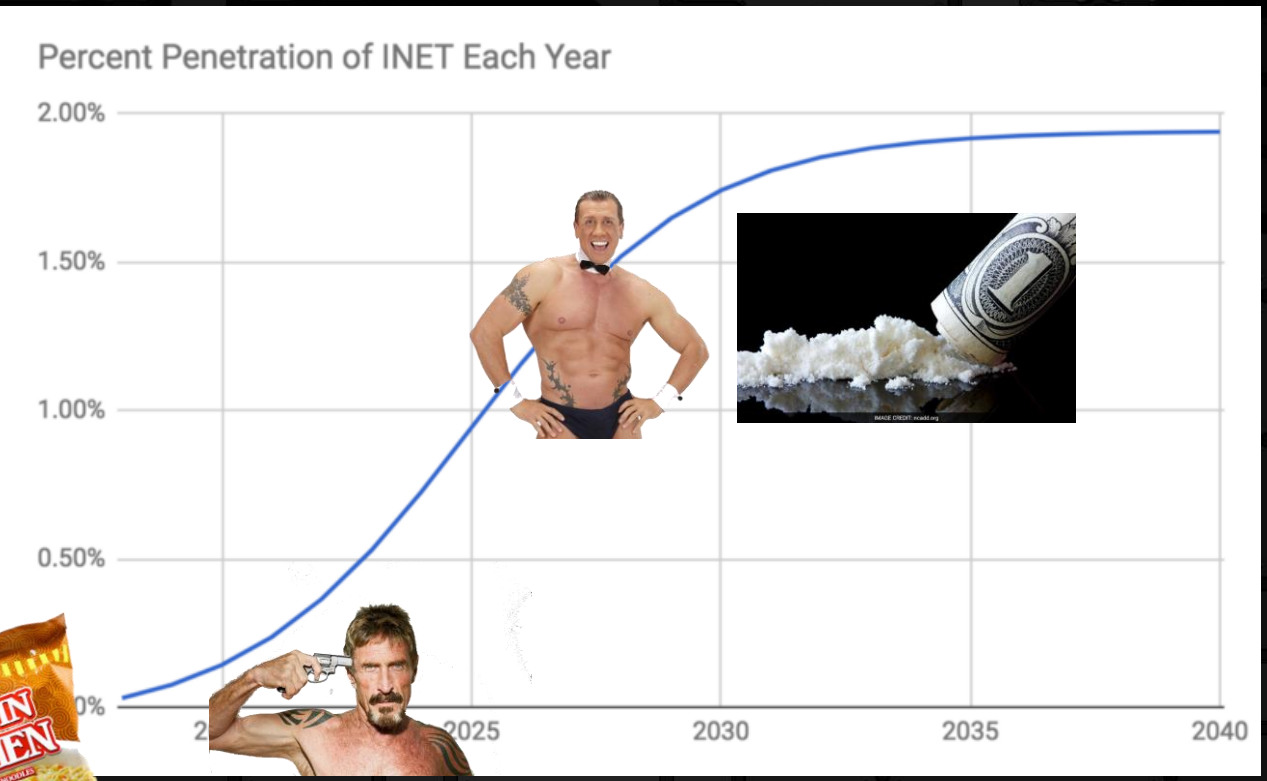
Better penetration

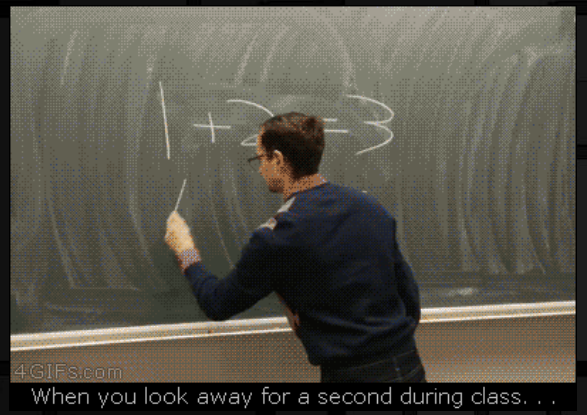
- Base year
- Saturation % (max TAM)
- Start of fast growth
- Time from 10% to 90%



Combine TAM with penetration

(a)	Annual global IP traffic (GB)		1,845,120,000,000
(b)	Annual global IP traffic available to INET (GB)		1,383,840,000,000
(c)	% Share of VPN Market Facilitated by Token		0.01%
(d)	Traffic Facilitated by INET Each Year (GB)		172,666,079
(e)	GDP Facilitated by INET Each Year	$	43,166,520

We now have PQ in MV = PQ



Math:

1.2T x ((1+24%)^2) = (a)
(a) x 75% = (b)
(c) From stripper chart
(b) x (c) = (d)
(d) x 25c = (e) aka PQ

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Revisit velocity

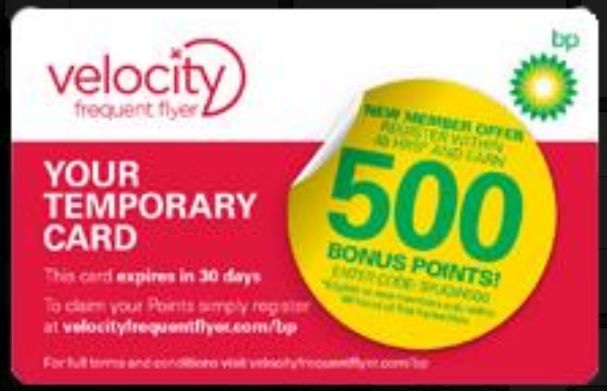
F*cking Hard

1) HODL'ers + Bonders
2) Foundation & Staff
3) Normal users

Inside knowledge helps

Alex's criticisms

Sexy: Alex Evans, Brett Winton



Math (hybrid velocity):
% of token use 1 x Velocity 1
+ % of token use 2 x Velocity 2
+ % of token …
Chris used velocity 20 for INET

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Better coins supply

- Foundation & Founders
- Private sale
- Public sale
- Bonding
- HODL'd
- Considerations

Metric	Assumption
Total Planned Supply	100,000,000
Percent of Tokens Issued in Private Sale	5%
Lock-up Period for Private Sale Investors	3
Percent of Tokens Issued in ICO	75%
Percent of Tokens Issued to Foundation	10%
Lifetime of Foundation	50
Percent Issued to Founders	10%
Lock-up for Founders	5
Percent of Tokens in Float Bonded by Nodes	20%
Percent of Tokens in Float Initially hodl'd	60%
Decrease in percent of INET that is hodl'd each year	1%

Blue represents a particularly subjective assumption

Current coins outstanding:
15.5Mil for 2018

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Solve MV = PQ

INET Economy and Utility Value Output			
Year From Launch		2018	
Cost per GB for INET use ($/GB)	$	0.25	$
Annual global IP traffic (GB)		1,845,120,000,000	
Annual global IP traffic available to INET (GB)		1,383,840,000,000	
% Share of VPN Market Facilitated by Token		0.01%	
Traffic Facilitated by INET Each Year (GB)		172,666,079	
GDP Facilitated by INET Each Year	$	43,166,520	$
Monetary Base Necessary for INET's GDP	$	2,158,326	$
Current Utility Value of Each Token in the Float	$	0.14	$

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So what now?

Critiques and improvements

Discounting future value

Expected Value

Other factors

Sweet release

Discounting Future Value – Part 1

Holding period (H)

Discount rate (D)

Market value (MV)

Forecast 2028

2028
0.06
15,857,746,390,538
11,893,309,792,904
0.61%
72,755,670,185
4,123,129,372
206,156,469
7.45

Math

Current utility value (CUV)

Future expected utility (FEU)

MV on FEU = CUV / ((1 + D) ^ H)

MV on FEU = 7.45 / (1.4^10) = 0.258

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Discounting Future Value – Part 2

MV – UV = % of speculation (FEUV)

MV on FEU = 7.45 / (1.4^10) = 0.258

0.258 – 0.14 = 0.118 (46% speculation)

Second order valuation

Converges on current utility value

% of speculation

Sexy: @woonomic

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Expected Value

What do I do now? Coin X is $10k

Does that mean I buy?

X has a 1% chance success

Math: 1% x 10k = $100

How much do I buy?

What happens if I win?

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Other things…

- Reflexivity
- Government regulations
- Competition
- Human greed
- Stock markets
- Accessibility drives up $
- Institutional money
- MPT & Sharpe Ratio

Sexy:
@AriDavidPaul, @TuurDemeester, @KyleSamani

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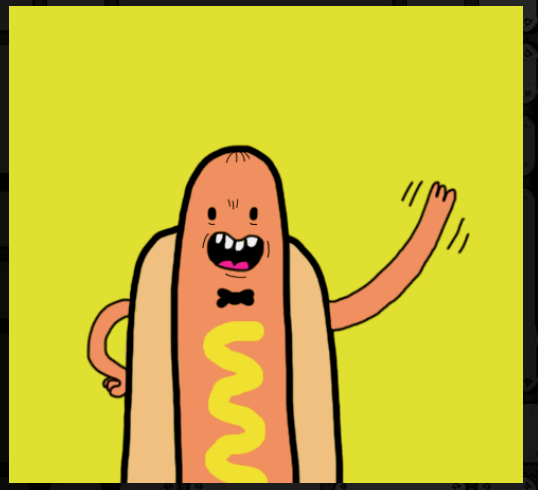
Questions & Feedback



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