

DIALING BACK PHONE VERIFIED ACCOUNT ABUSE

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Keys to the kingdom

One account is all you need

A single username and password gets you into everything Google.



Blackmarket for bulk accounts



Facebook Accounts



Yahoo! Accounts



Twitter Accounts



Hotmail Accounts



YouTube Accounts



Gmail.com



Tumblr Accounts



Linked In



Pinterest Accounts



Craigslist Accounts



Tagged Accounts



Mail.com



Existing protections

CAPTCHAs

Email verification

IP reputation

Phone verification

Existing protections

CAPTCHAs

OCR: 50% accuracy, \$30/mo

Human solver: >95% accuracy, \$0.70 per 1K

Email verification

Mail.ru: \$5 per 1K accounts

Yahoo: \$8 per 1K accounts

IP reputation

Proxies: 15K - 30K IPs for \$250/mo

Phone verification

?

Сейчас в продаже

Служба	Кол-во акков	Цена за 1K аккаунтов
Mail.ru	94369	1K-10K: \$5 10K-20K: \$4.5 20K+: \$4
Gmail.com USA PVA	1710	1K-10K: \$100 10K-20K: \$100 20K+: \$100
Yahoo.com USA PVA	2412	<100: \$0.13 100-1000: \$0.13 > 1000: \$0.13
Hotmail.com USA PVA	2045	<100: \$0.12 100-1000: \$0.12 > 1000: \$0.12
Facebook.com USA PVA	1914	<100: \$0.35 100-1000: \$0.33 > 1000: \$0.3
Gmail.com PVA	481	<100: \$0.5 100-1000: \$0.45 > 1000: \$0.4
Gmail.com Manual PVA	677	<100: \$0.6 100-1000: \$0.55 > 1000: \$0.5

Phone verified accounts (PVA) 10-100x more expensive

Сейчас в продаже

Служба	Кол-во акков	Цена за 1K аккаунтов
Mail.ru	94369	1K-10K: \$5 10K-20K: \$4.5 20K+: \$4
Gmail.com USA PVA	1710	1K-10K: \$100 10K-20K: \$100 20K+: \$100
Yahoo.com USA PVA	2412	<100: \$0.13 100-1000: \$0.13 > 1000: \$0.13
Hotmail.com USA PVA	2045	<100: \$0.12 100-1000: \$0.12 > 1000: \$0.12
Facebook.com USA PVA	1914	<100: \$0.35 100-1000: \$0.33 > 1000: \$0.3
Gmail.com PVA	481	<100: \$0.5 100-1000: \$0.45 > 1000: \$0.4
Gmail.com Manual PVA	677	<100: \$0.6 100-1000: \$0.55 > 1000: \$0.5

Yet we see a steady stream of abusive PVA

Our work

Deep dive into phone verified abuse

Marketplace for accounts

Origin of phone numbers

Registration techniques

Strengthen resource bottleneck for cheap phones



ACCOUNT BLACKMARKET



Advertisements for accounts



BuyAccs.com
СЕРВИС РЕГИСТРАЦИИ АККАУНТОВ

Сейчас в продаже

Служба	Кол-во акков	Цена за 1К акк
Mail.ru	94369	1K-10K: \$5 10K-20K: \$4.5 20K-50K: \$4
Gmail.com USA PVA	1710	1K-10K: \$100 10K-20K: \$100
Yahoo.com USA PVA	2412	<100: \$0.13 100-1000: \$0.13
Hotmail.com USA PVA	2045	<100: \$0.12 100-1000: \$0.12
Facebook.com USA PVA	1914	<100: \$0.35 100-1000: \$0.33

Web storefronts



Forums



Kamal Kishore
Data Entry, Web Scraping, SEO, Web Development

Reputation **4.8**
(285 reviews)

Username: Kamalkishover
Location: Multai, India
Member since: Feb 2008

We have 4 year working experiences of special areas such as Data Entry, Market Research, Internet Marketing, Social Media Marketing, and Search Engine Optimization (SEO), Web Design. We have been able to grow and expand my knowledge and skills. We provide high quality results for my client 100% Satisfaction.

My activity: Completion Rate 68%

My skills: Data Entry 28.5%

Freelance Listings

Blackmarket as an oracle

Identify 14 merchants, track public pricing

Purchase 2,217 Google PVA from 7 merchants

Price: \$85-500

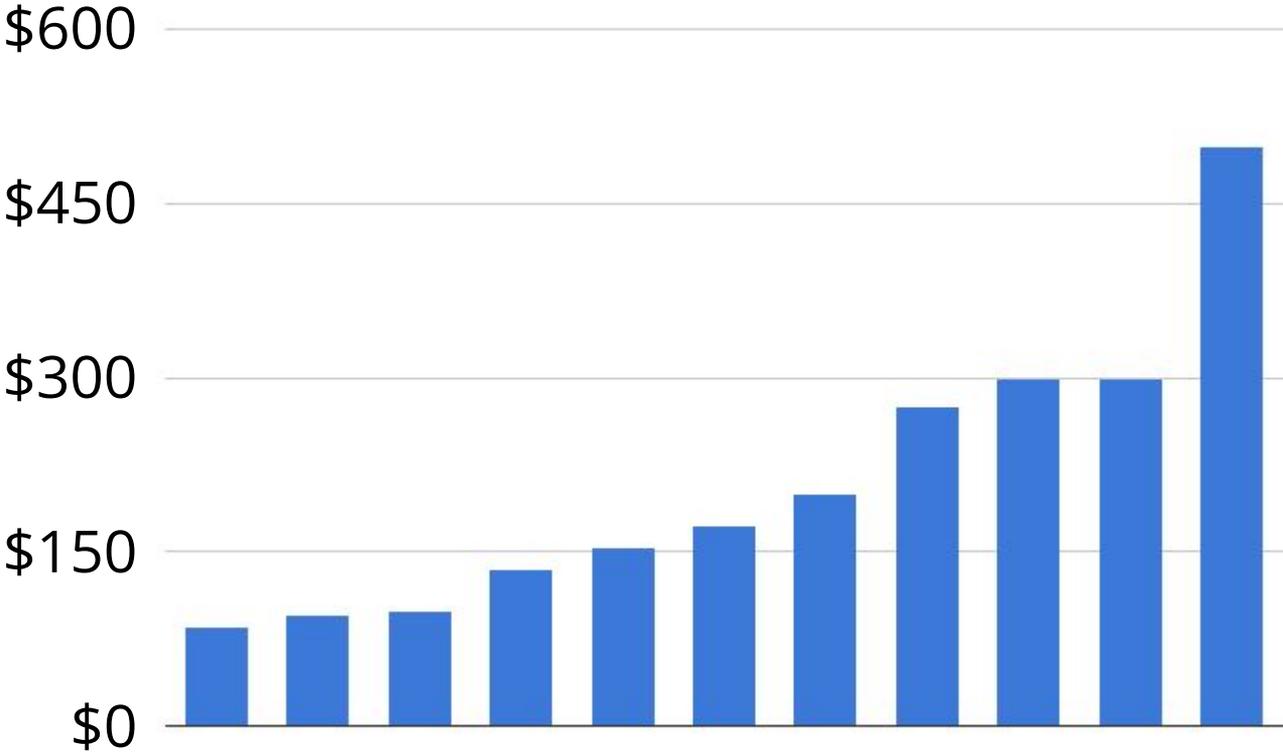
Authenticity: 100% working PVA

Delivery rate: 24-48 hours

Disabled in 1 month: 68%



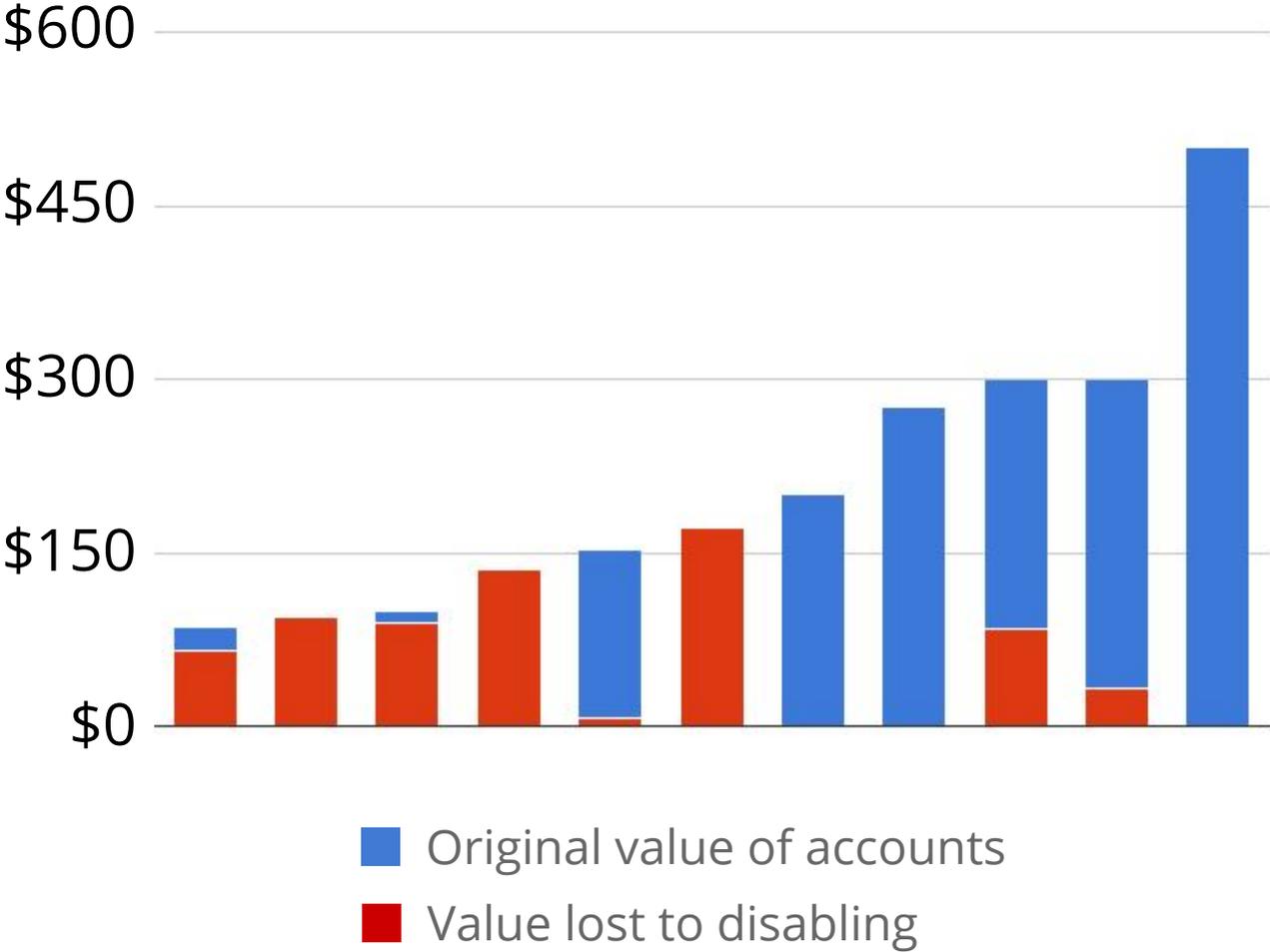
Prices range \$85-500



Price per 1K accounts, multiple merchants

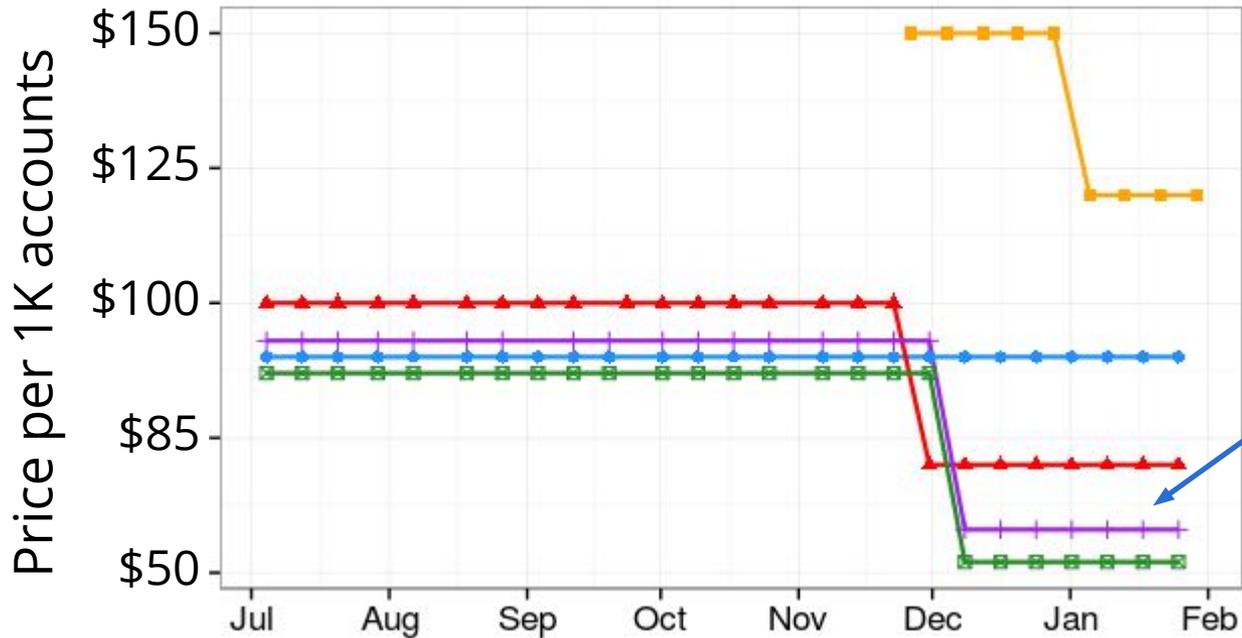


Price reflects quality



Pricing trends over 8 months

Prices over \$150 remain stable



30-40% drop in price of Google PVA

Does price reflect failure in defenses?



2 PHONE ORIGIN



Datasets

Google PVA, disabled for abuse: 300,000

Purchases reveal sample is representative

For each account:

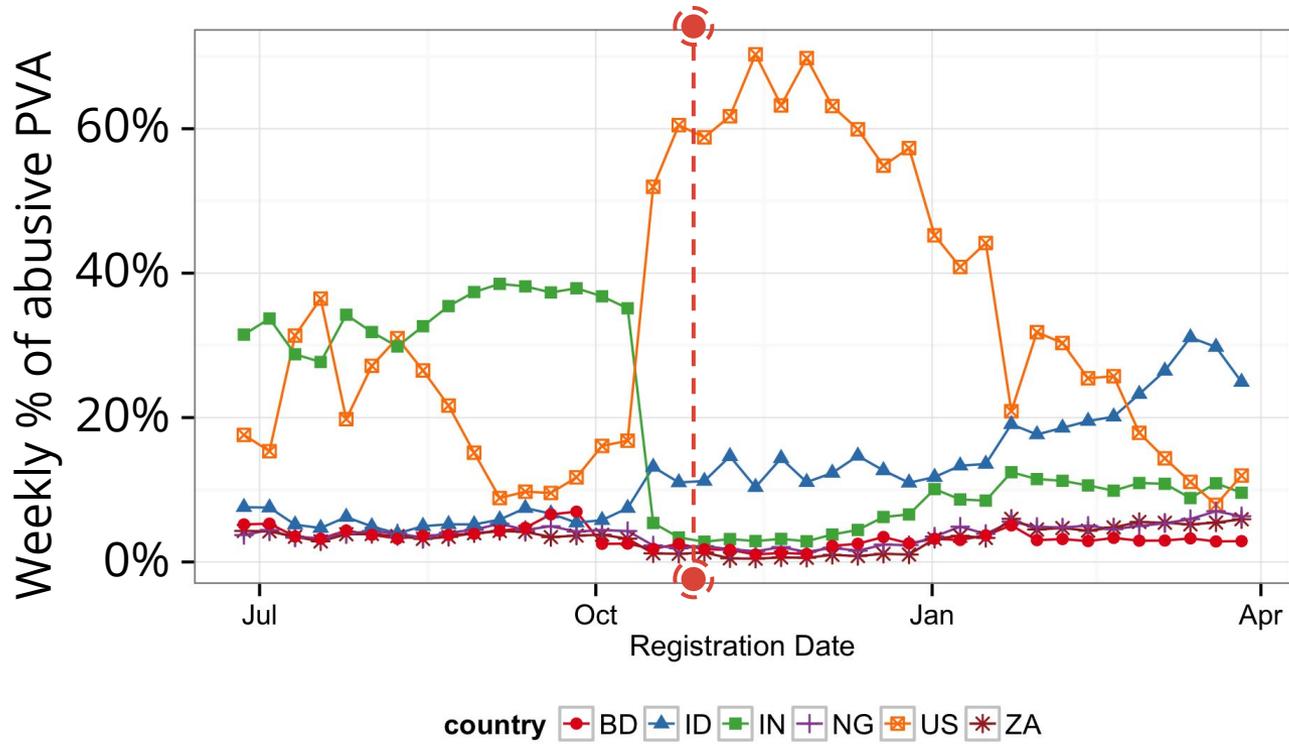
Associated carrier, country information

Geolocation of signup IP

CAPTCHA solution attempts



Phone country of origin



Top origins

United States	27%
India	22%
Indonesia	12%
Nigeria	4%
South Africa	4%
Bangladesh	4%



VOIP largest abuse source

Rank	Carrier	Country	Popularity
1	Bandwidth.com	US	19.9%
2	PT	ID	7.3%
3	Bharti	IN	5.3%
4	Vodafone	IN	4.0%
5	MTN	NG	3.0%
6	Idea	IN	2.8%
7	Telekomunikasi	ID	2.2%
8	Aircel	IN	2.1%
...
18	Level 3	US	0.86%
19	Cell	ZA	0.84%
20	Telengy	US	0.81%

24% of PVA
verified over VOIP

Includes:

Google Voice
Pinger
TextPlus
Enflick
GoTextMe

TextMe

Free Texting and Calling

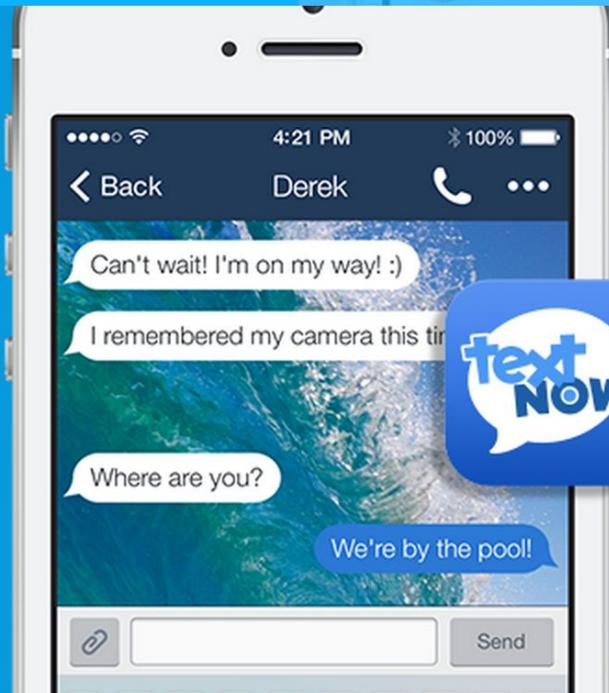
Download ▾



Watch our video and learn more!



We're Hiring



TextNow

Our free app turns any WiFi enabled device into a phone. We also sell a low cost all-IP phone from TextNow.com for those who want to text and call even without WiFi.

Visit TextNow.com



Phone for price of a CAPTCHA

Let's set you up with a new account!

Username @textfree.us

Password

Confirm Password

Email

I agree to the [Terms of Service and Privacy Policy](#) or, if a non-U.S. resident, the [Data Protection Policy](#).

Security Code: 

Phone Number 1 (510) 730-2935

Username @textfree.us

Name

Password [change](#)

Tones ▼

Signature

Email Notifications on off



Strategy in practice [now defunct]

Free SMS Service

New phone per
CAPTCHA

Strategy in practice [now defunct]

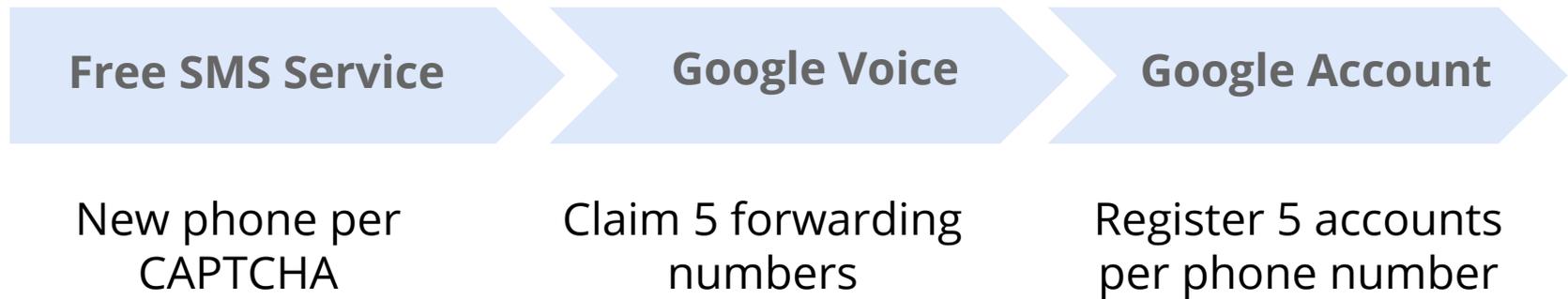


New phone per
CAPTCHA

Claim 5 forwarding
numbers



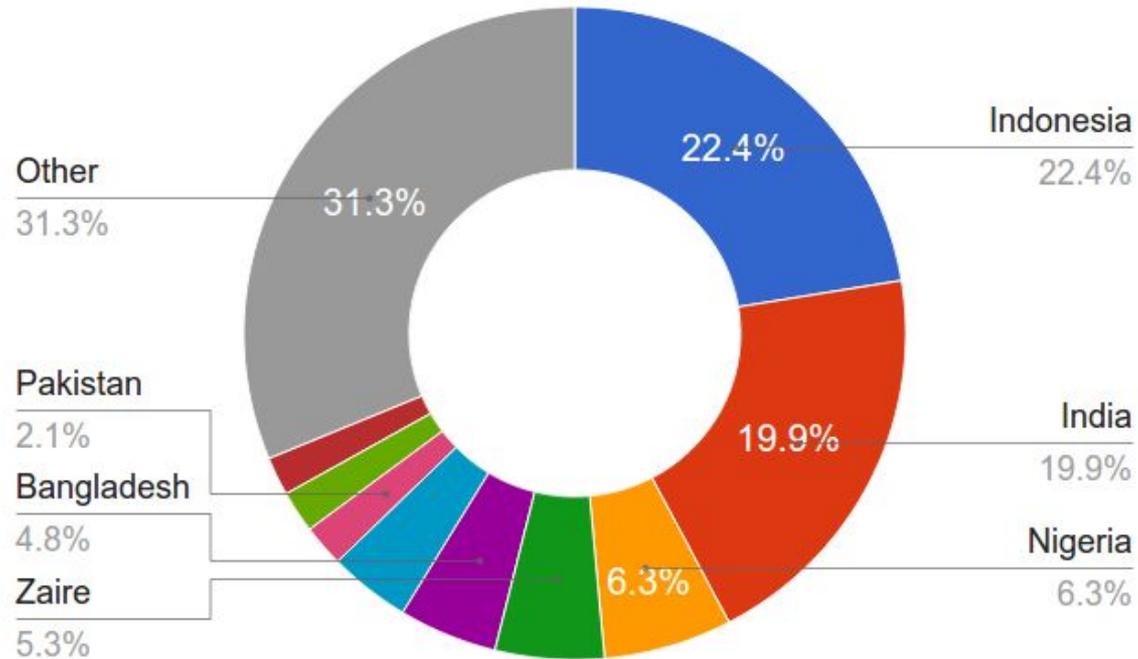
Strategy in practice [now defunct]



25 accounts per CAPTCHA

60-80% of all disabled PVA between Oct-Jan

Where do non-VOIP phones originate?



Same locations as human CAPTCHA farms.
Socio-economic disparity creates an abuse vector.

GarantVotes - MyGarant

ICQ [redacted]

Билайн, МТС, Мегафон

ICQ [redacted]

skype [redacted]

phone [redacted]

\$140-420 per 1K SIMs



Продажа сим-карт

Билайн, МТС, Мегафон

ICQ [REDACTED]

skype [REDACTED]

phone [REDACTED]



\$140-420 per 1K SIMs

- Новости
- Активации
- Номера
- История
- Настройки
- Правила
- FAQ
- Платежи
- Поддержка

Реквизиты:

WMID:

EMail:

Phone:

ICQ:

аттестован

WebMoney

regHound

Надоело активировать в ручную? Мы Вам поможем!

Проведение активаций

[14072.0 рубля]

Заказ

Прием

ВКонтакте

Mamba

Odnoklassniki

4Game

facebook

SEOSprint

PP.UA Domain

WebMoney

QIWI

Google

Other

Как это работает?

1

Выберете сервис

Выберете один из сервисов, для активации которого Вам нужен номер.

2

Выберете страну

Выберете страну номера сами, или предоставте это право нашей системе.

3

Укажите количество

Укажите сколько Вы планируете отправить SMS на получаемый номер.

4

Получите номер

Сообщите нам, что Вы готовы, и система подберет Вам подходящий номер.

Список активных операций:

[Получить номер]

В настоящий момент, активных операций нет.

Buyers bid on SMS endpoints: ~\$0.20/SMS
Sellers list phone numbers, respond with code.

3 REGISTRATION STRATEGIES



How do older protections perform?

CAPTCHAs

~~Email verification~~

IP reputation

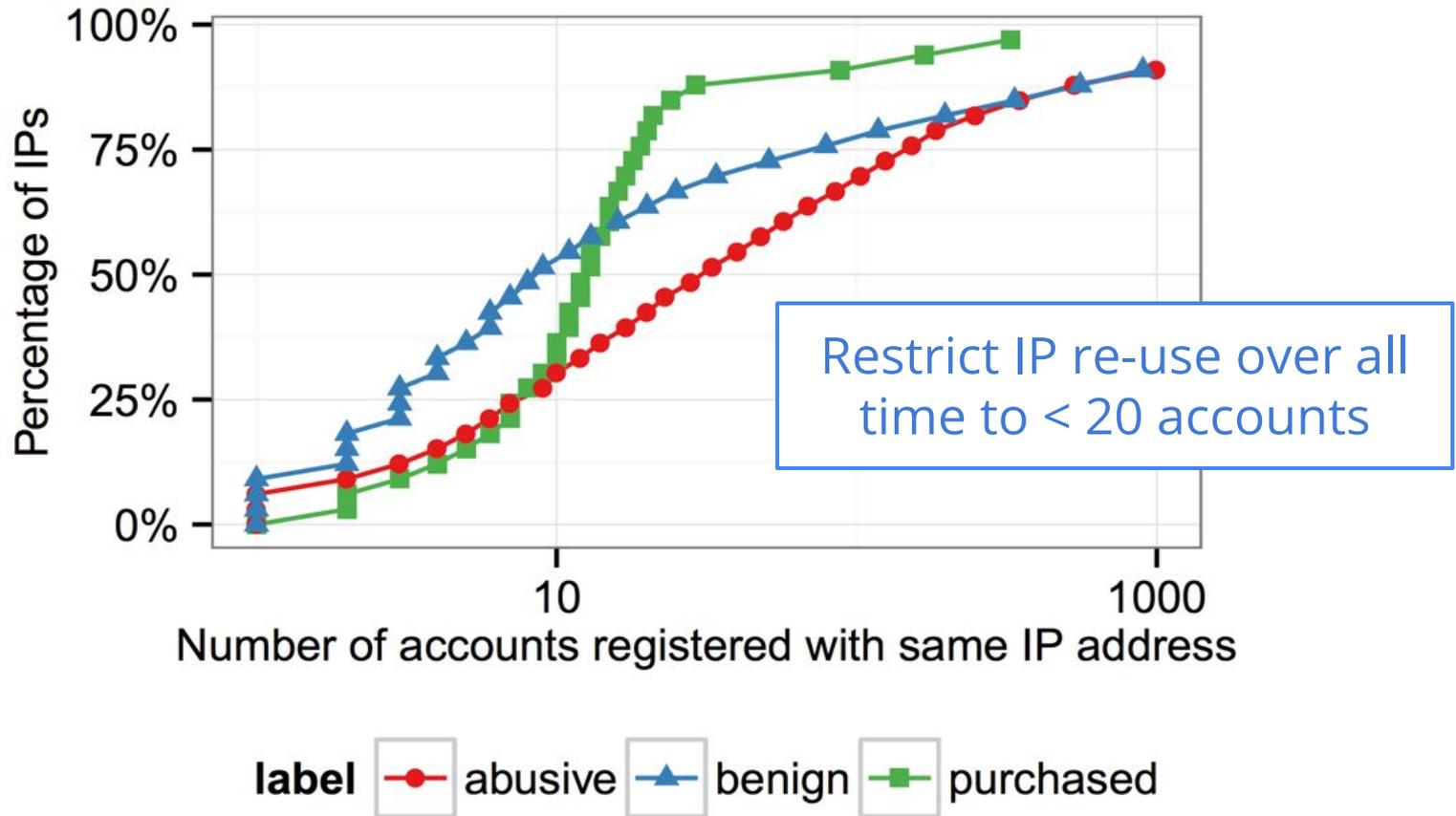
Phone verification

CAPTCHA breaking

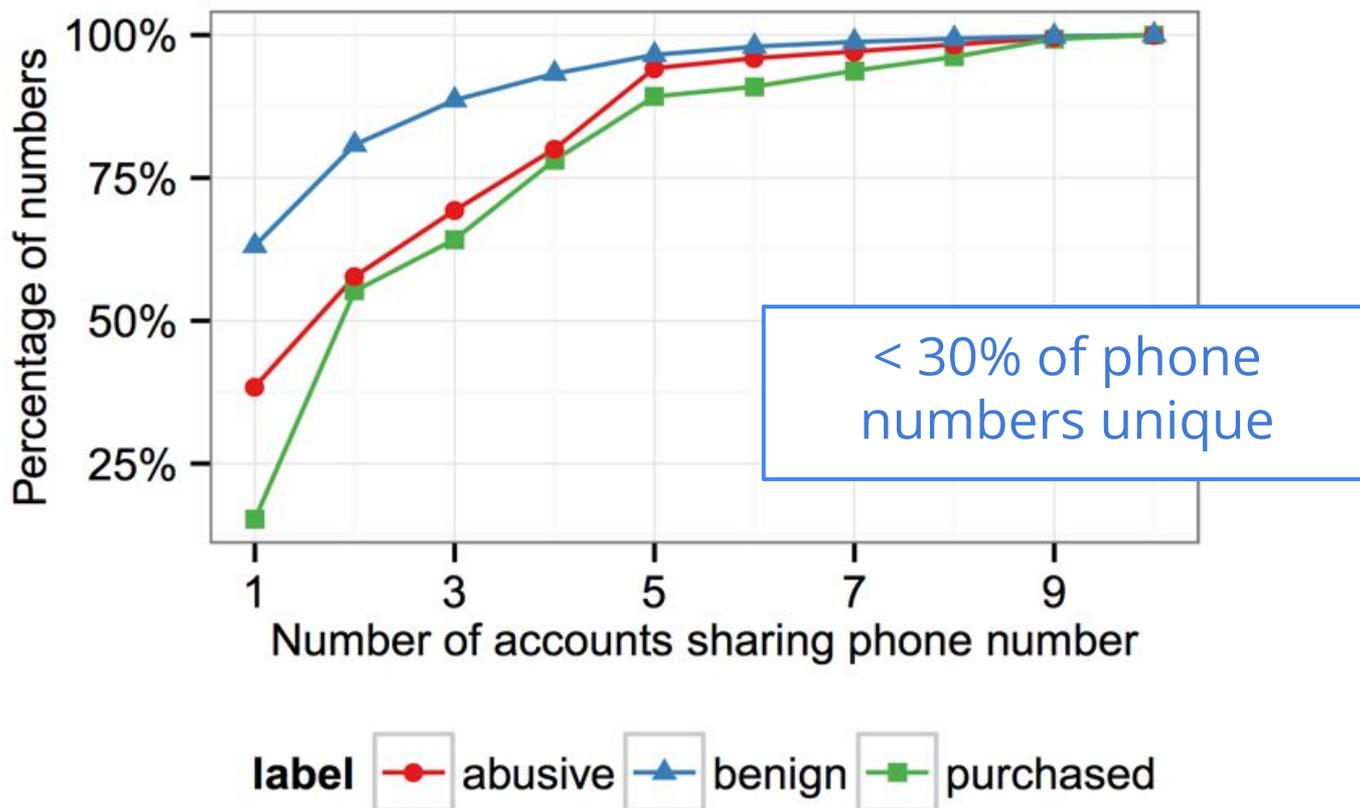
56% of registrations shown a CAPTCHA

Correctly solved 96% of the time
Indicative of human solvers

Minimizing IP re-use

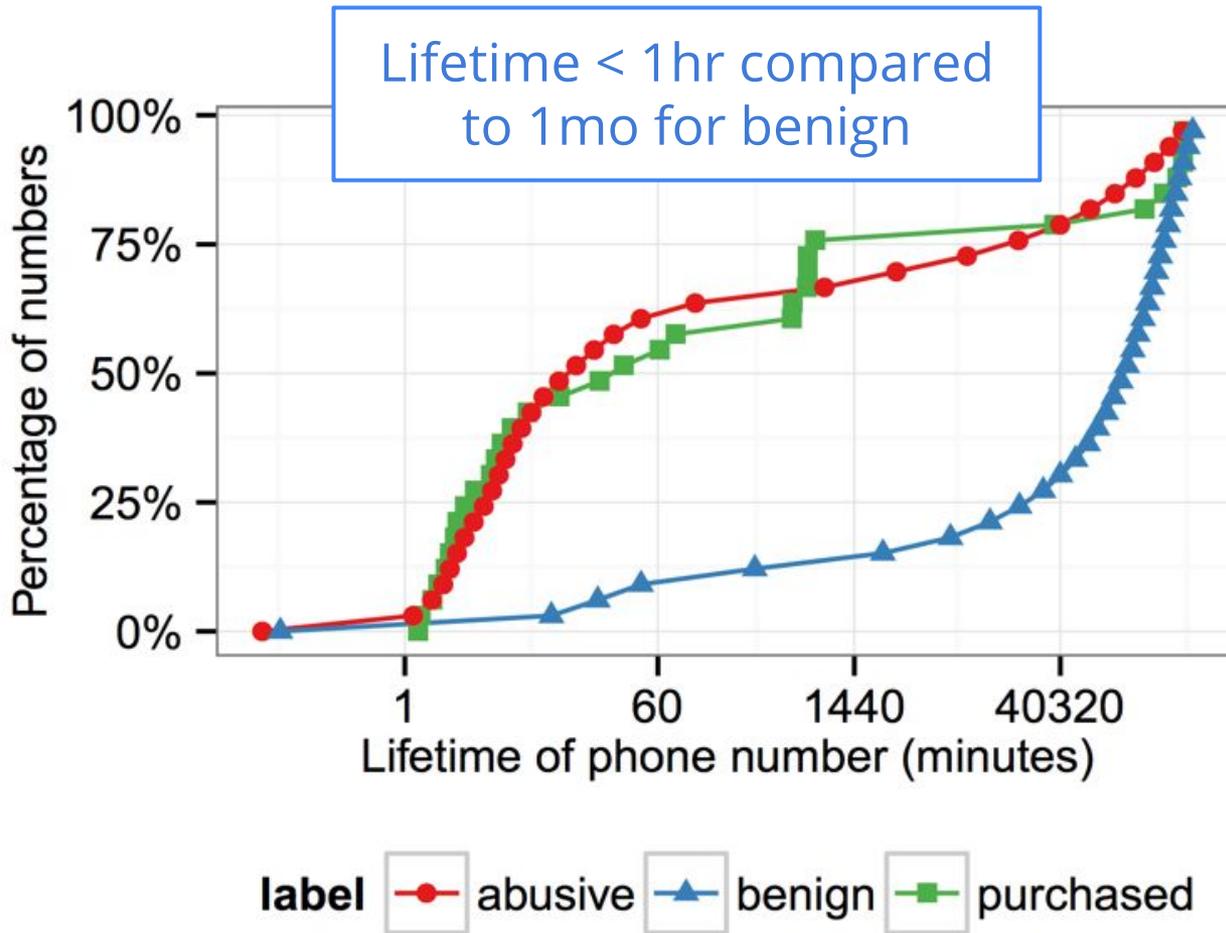


Frequent phone re-use



Can re-use phone numbers multiple times

Access to number is short lived



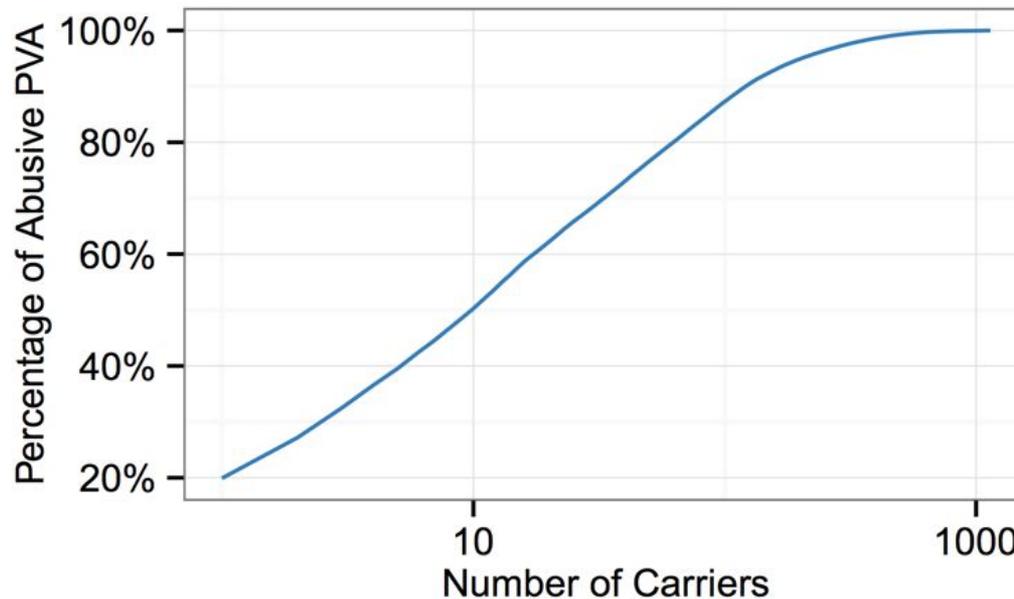
4 DIALING BACK ABUSE



Frequently abused carriers

Over 1,000 abused carriers

Top 10 carriers contribute 50% of abusive PVA



Carrier reputation

Most VOIP registrations abusive

All other carriers serve predominantly good users

Rank	Carrier	Country	% Good
1	Bandwidth.com	US	41%
2	PT	ID	91%
3	Bharti	IN	98%
4	Vodafone	IN	98%
5	MTN	NG	97%
6	Idea	IN	98%
7	Telekomunikasi	ID	99%
8	Aircel	IN	98%

Pushing back on abusive carriers

In January, we took action on carrier abuse:

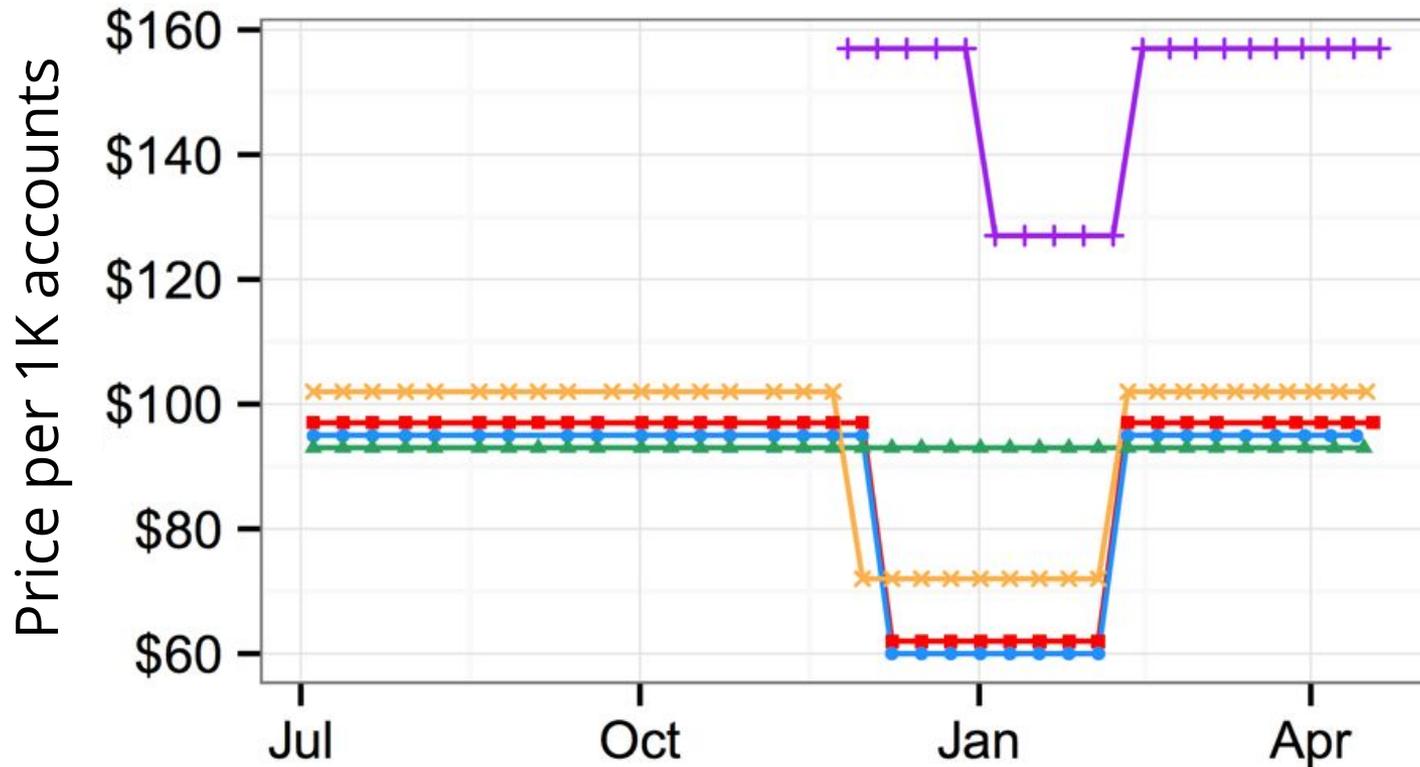
Blocked VOIP numbers acquired with CAPTCHA

Restricted all other known VOIP numbers to single use

Restricted some Indian, Indonesian telcos to single use



Impact on pricing



Price returns back to pre-VOIP levels

How did merchants react?

In April, purchase a new set of 2,478 PVA

Only 12% were Bandwidth.com, compared to 80% before

Some previously unseen VOIP services

Merchants hit max registration limit

Need finer grain phone reputation signals

Summary

Thriving account black market

Use purchasing as an oracle into criminal capabilities

Use pricing as an early warning of failing defenses

Phone verification requires reputation support

THANKS!

kurtthomas@google.com

Google