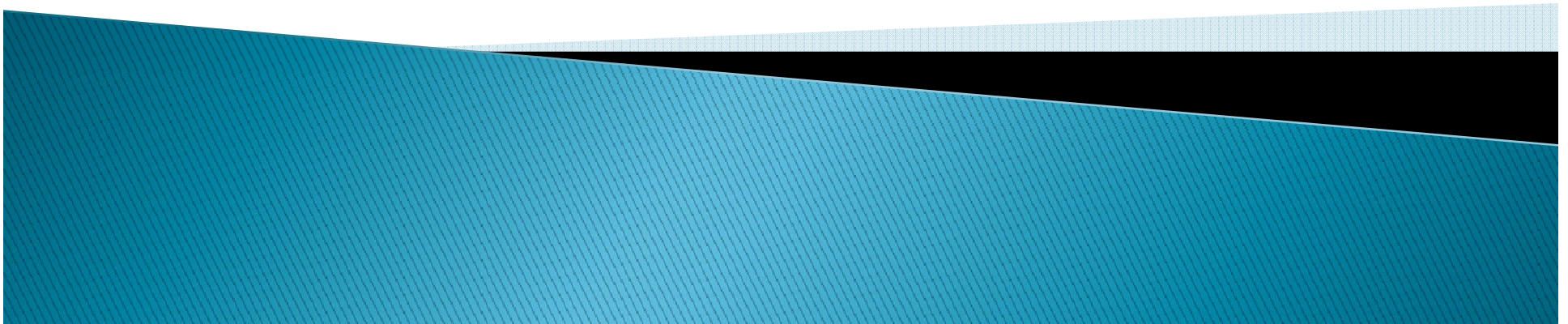


Mobile Payments and the Global Remittance of Funds

T. Jack Williams
28 July 2011





The Titanic's "wireless" equipment was state of the art. >>

Ship left Southampton on April 10, 1912 .



Wrong MSG Prefix used for ice report >>

April 14, 1912 at 7:50 pm a message was sent to Captain Smith with wrong MSG prefix, he never received alert from another ship that dangerous icebergs are ahead! One of the worst peacetime maritime disasters will happen within a few hours...

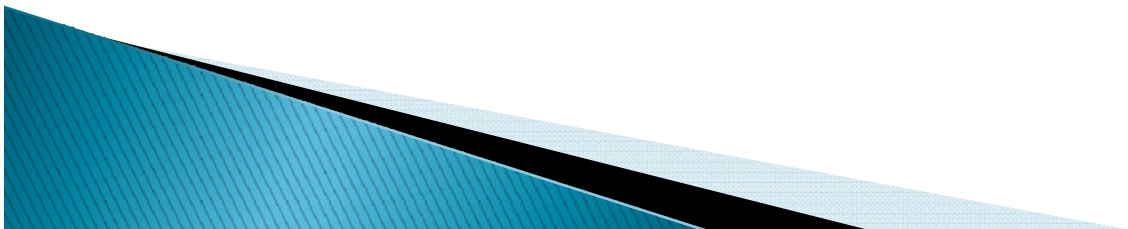
In a letter to Secretary Geithner...

"We write to urge you to immediately propose and finalize a rule to make prepaid access, including stored value cards, subject to cross-border reporting requirements.

Without this rule in place, our laws will continue to lag behind drug trafficking organizations as they develop new ways to transport illegal proceeds from the United States to Mexico."

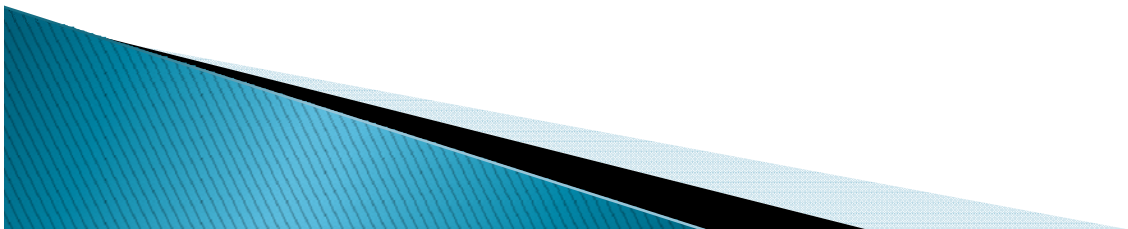
Senate Caucus on International Narcotics Control

14 March 2011

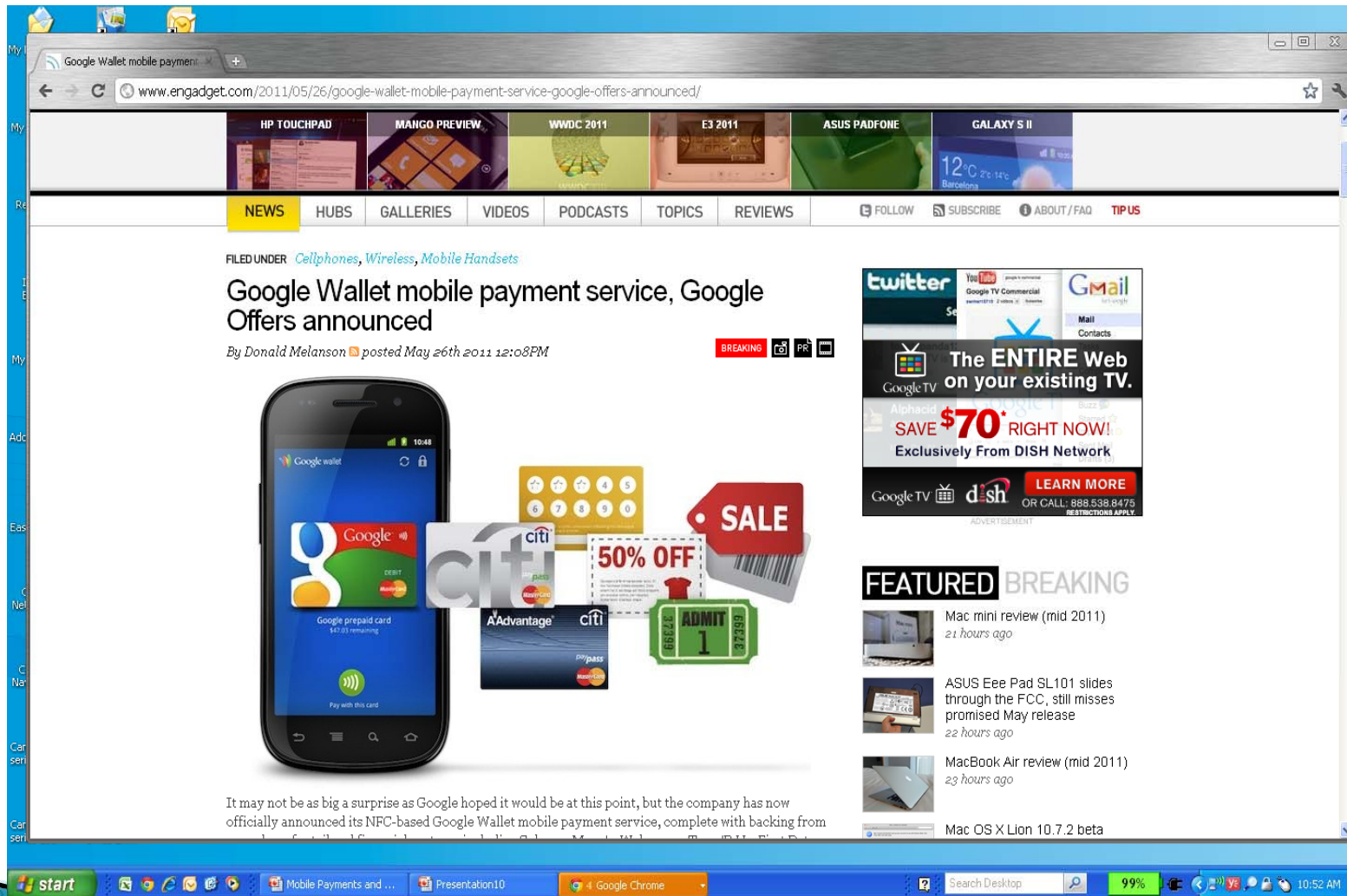


Why all the noise about Mobile?

- ▶ “We (Gartner Consulting) predict that in 2011, merchandise purchases via mobile devices will account for 90% of all transactions in North America.” (speech in 2009)
- ▶ *Isis*, NFC (AT&T/Verizon with Apple) misjudged the market and selected the wrong process, and is behind Android. It will be difficult to catch up.
- ▶ *Google’s Android OS*, NFC and partnering with MasterCard, FirstData and Citi have launched the first test. Will begin to add other issuers and processors in 2012. More android based handsets will be offer NFC chips.
- ▶ More are on the horizon!

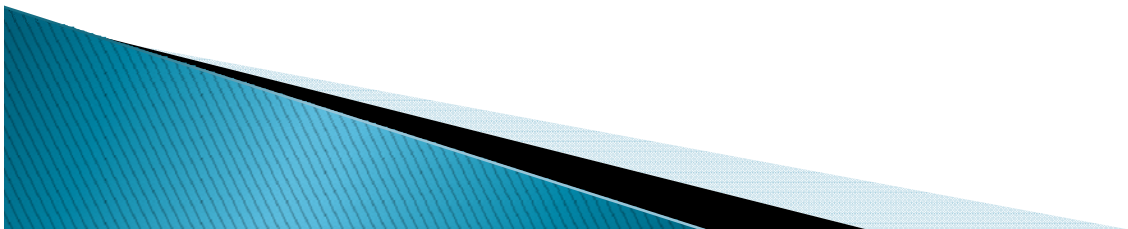


Google's Android



The Mobile Ecosystem

- ▶ ***Mobile Banking***, the ability to perform real time balance inquiries and portfolio value.
- ▶ ***Mobile Commerce***, the ability to buy or sell goods or services using a mobile phone as the access device to the virtual account.
- ▶ ***Mobile Remittance***, is the movement of funds from anywhere to anywhere using a mobile device tied to a virtual prepaid debit account. These accounts use the branded networks or ATM networks to provide access to funds



M-Pesa in Keyna

The screenshot displays the Safaricom M-PESA website interface. At the top, the browser address bar shows www.safaricom.co.ke/index.php?id=250. The Safaricom logo is prominently displayed on the left, with a navigation menu on the right including links for Home, About Us, Investor Relations, Safaricom Foundation, Dealer Login, Careers, T&Cs, Ethics Hotline, Mobile Number Portability, and Contact Us. Below the logo, a search bar is available. The main navigation bar features tabs for Voice, Internet on Mobile, Value Added Services, M-PESA (selected), Bonga Loyalty Program, Safaricom Shop, Business, and Brand. Under the M-PESA tab, a secondary menu lists: How to Register, M-PESA Services, M-TICKETING, My M-PESA, International Money Transfer (IMT), Corporate M-PESA, M-PESA Agents, and M-PESA Resource Centre.

The central banner features a woman smiling while holding a mobile phone, with a speech bubble containing the M-PESA logo and the text "Nunua na M-PESA". To the right of the banner, it says "Introducing 'Nunua na M-PESA' the convenient way to pay for goods and services." Below the banner is a pagination bar with numbers 1 through 17.

Below the banner, there are three main content blocks:

- M-PESA**: Describes M-PESA as an innovative mobile transfer solution. It includes links for "How to Register", "M-PESA Tips", "Corporate Solutions", "Send Money", "Deposit Cash", and "M-PESA Agents".
- M-KESHO**: Describes M-KESHO as a bank account introduced by both Equity and Safaricom where customers can earn interest from as little as Ksh1. It includes links for "Read More" and "M-KESHO FAQs".
- Buy Goods**: Describes a milestone in re-defining the shopping experience, allowing Kenyans to pay for goods at supermarkets using the M-PESA service. It includes a link for "Read More".

At the bottom, there are two more sections:

- Latest Offers at the Safaricom Shop**: Displays two mobile phones with prices of 12,999/- and 9,999/-.
- M-PESA Tips**: A section with a mobile phone icon and the M-PESA logo.

The Windows taskbar at the bottom shows the Start button, several application icons, and the system clock indicating 10:58 AM on 10/58 AM.

NFC at a merchants now

- ▶ NFC, (Near Field Communications) is in use today for tap and go NFC cards. NFC chips in mobile devices is similar. Uses the MC/V payments payment rails for authorization, clearing and settlement traffic.



Mag stripe in a phone.

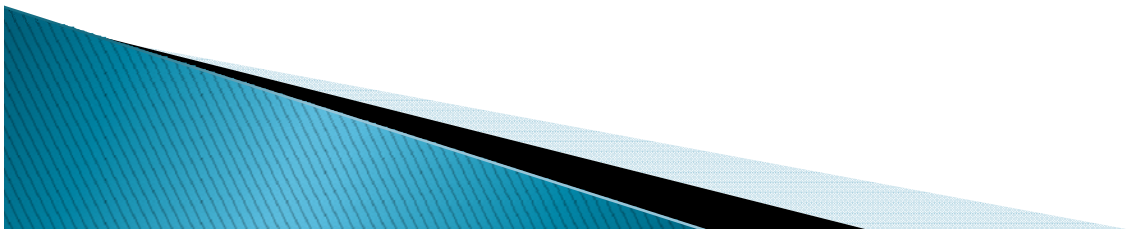
What is the big deal about NFC?

- ▶ NFC is the embedding of the magnetic stripe information of a payment card, into the NFC chip in the phone. The carrier has little to do with a NFC phone other than initial embedding of magnetic stripe information.
- ▶ NFC uses the merchants existing terminal, settlement and general ledger system in place for credit card transactions. No real changes by the merchant.
- ▶ NFC chips allow for purchase transaction, they do not empower bank to bank, or other transactions.



Where is the real threat?

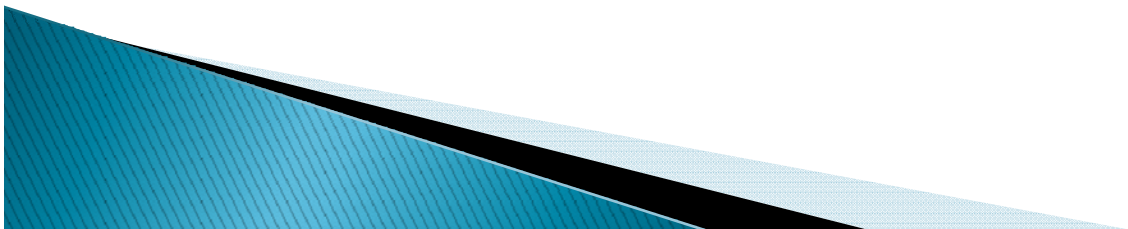
- ▶ *Virtual accounts*, processed from anywhere in the world that support access from a mobile phone can and do, move large sums of funds globally.
- ▶ Together, the virtual account and mobile handset with the right application or even Short Message Service (SMS) or text messaging can provide instructions to move money anywhere in seconds. Using a “short code”, time to send instructions is even faster.



The threat is very real.

“In the past year, said John Tobon, a senior U.S. Immigration and Customs Enforcement agent, the cards have become the preferred means of paying couriers who transport illicit drugs across the U.S.”

HuffPost Business
23 May 2011



Easy entry to processing:

- ▶ For the most part, it is not the US based processors for prepaid cards that drive high value prepaid debit cards, it is the off-shore processors that operate outside the US borders.
- ▶ An mobile application for the iPhone or Android, embedded behind a game or other application can be custom built for \$30–40k. Combined with a short code, instructions are sent in seconds, and impossible to scan for during an arrest.
- ▶ The mobile device can instruct the processor to complete a card–2–card transaction, using the same account, only a different card number and all is done. By moving card account balances from one card to another, in essence there is no access to funds by LE.



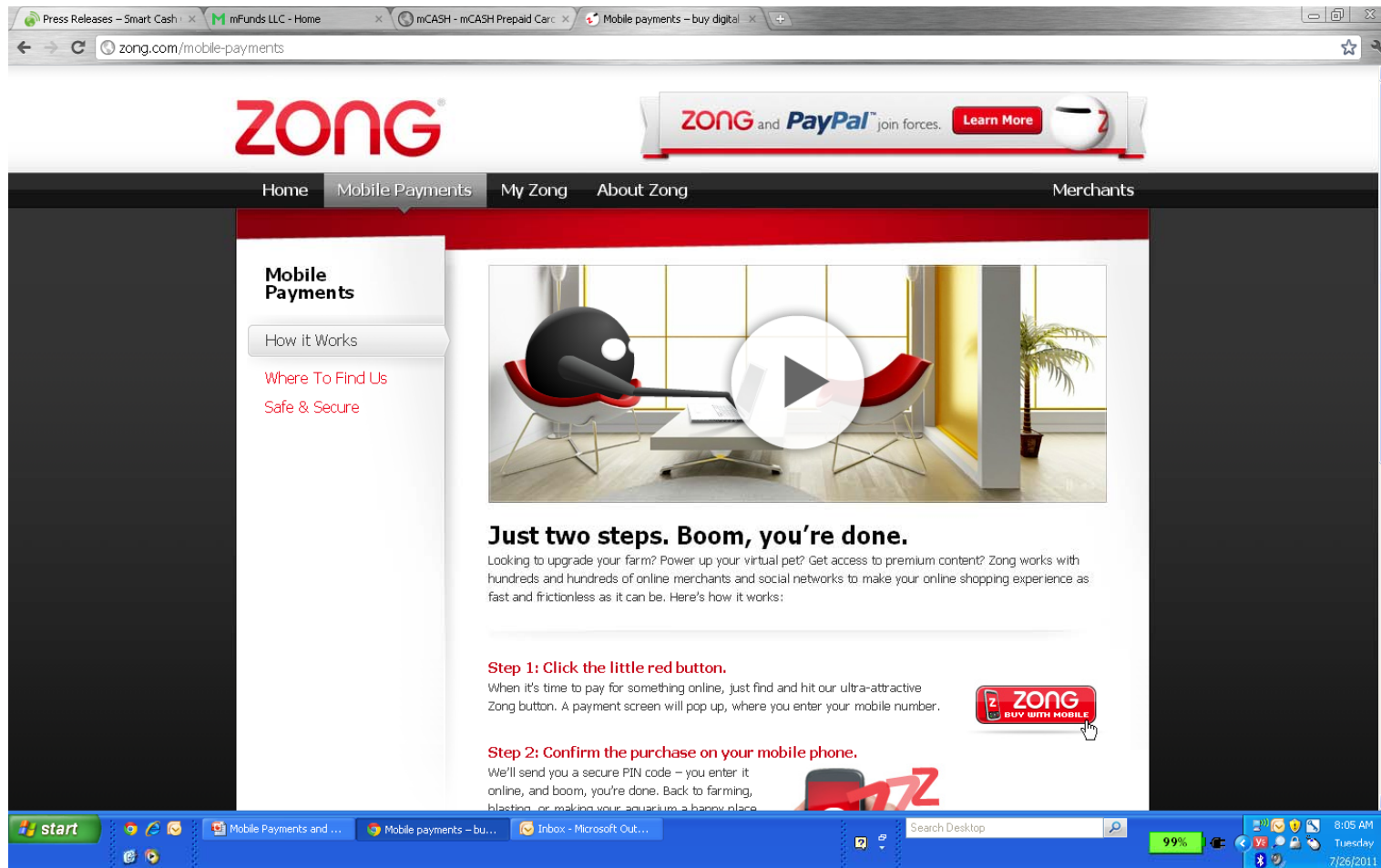
Mobile with Carrier



Mobile access to virtual accounts



Gaming and Social Network



Over 180m payments, to 37 countries



Card to Xoom in seconds

Send Money to Colombia - Xoom

Yoom Corporation [US] https://www.xoom.com/sendmoneynow/xoom-home

XOOM

Sign Up Log In Help Go To English

Send Money to

Colombia

Amount \$

2999.00

Send Now

Track Your Transaction

Transaction Number **Track**

[Track Your Last Transaction »](#)

Now, you can send money through **Bancolombia** here.

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- How to Send Money [Four Simple Steps](#)

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Cash Pickup 981 Locations »

With Cash Pickup service, your loved one can pick up the money in cash at one of our network locations. The money is normally available in minutes during the bank's business hours.

Our locations include: [Bancolombia](#), [Macrofinanciera](#) (Cambios Country) and [Davivienda](#).

Bank Deposit View Banks »

With Bank Deposit service, the money is put directly into your loved one's bank account. It is the easiest and safest way to receive money.

We offer fast deposits to all banks in Colombia. For Bancolombia, the money is available in 15 minutes every day, if sent from 6AM to 11PM, Colombia time. At other banks, the money is normally available the next business day.

Xoom Online Privacy and Security

Xoom uses the latest security technology to make every transaction worry-free.

VeriSign Secured

ACCREDITED BUSINESS

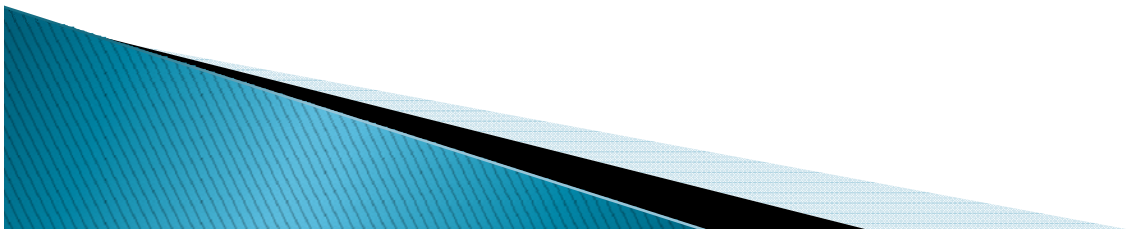
TRUSTe CERTIFIED PRIVACY

Learn more

What customers are saying

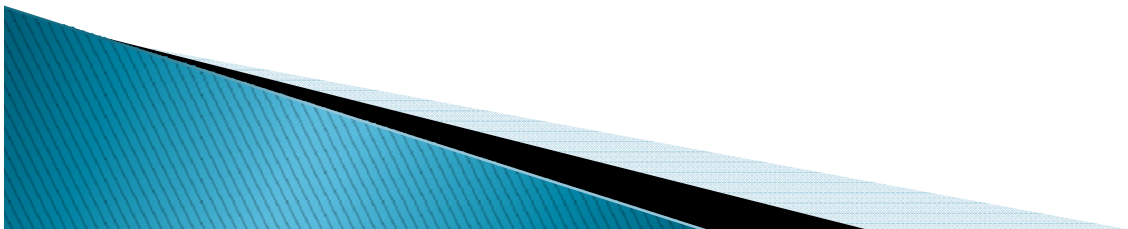
Moving money via virtual accounts:

- ▶ The mobile handset is only an access device that can transmit an instruction to a virtual account processor.
- ▶ It is the virtual account that accesses the payments infrastructure and actually completes the transaction. Phones to not hold funds...
- ▶ Cards are still required and will be for ATM transactions. The ATM industry will not spend the money to upgrade their units until a dominate platform emerges as the winner.



The future...

- ▶ New methodologies to move illicit funds are not being developed, they are being implemented and expanded.
- ▶ Using a virtual prepaid debit card account, processed overseas, with the access a mobile device or internet provides, the Cartels have significant capabilities to move large values of funds in seconds.



Thank you.

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