

# Recovering RIPE resources assigned to non-existing entities

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# Microsoft Internet Safety Team

## Introduction

- Global team of investigators and lawyers defending against Internet crime and abuse
- Specific missions:
  - Protect children from technology facilitated crimes
  - Advance safety and integrity in the online advertising marketplace
  - Ensure security and safety in cloud computing and emerging technologies



# The problem

Bullet-proof hosting



# Illegal or malicious content

- Examples of illegal content
  - Child pornography
  - Racist and xenophobic expressions
  - Crimes against computer systems (Ddos, virus)
  - Intellectual Property and data theft
  - Fraud
  - Phishing



# Hosting providers' perspective

- Hosting companies cannot and don't want to be the judge of which of their customers' content is illegal.
- DMCA placed the liability on the request to remove copyright infringing content. The EU directive is broader and concerns any illegal content.
- Hosting providers are liable if they doesn't remove the content promptly after having been requested to do so.



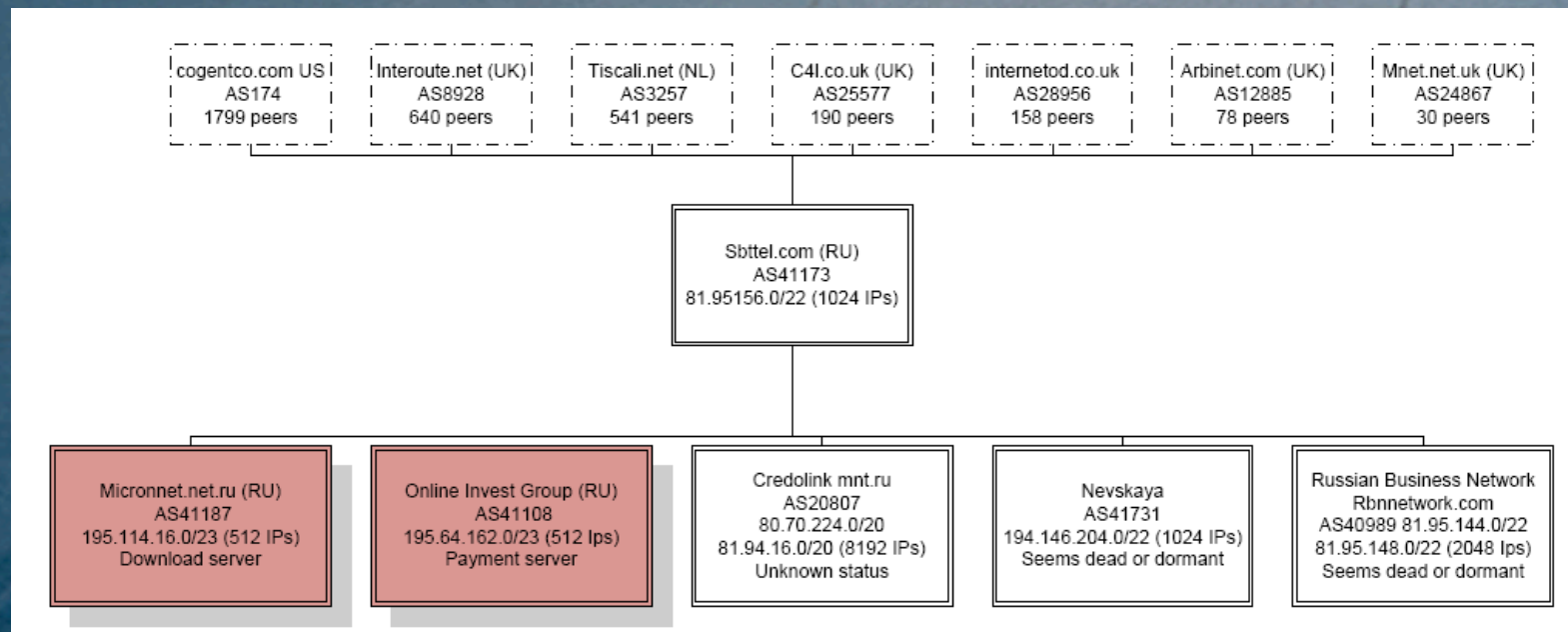
# Why won't would a hosting company not comply?

- The Notice and Take Down legislation may only cover copyright
- The content may not be illegal, for example not all jurisdictions have anti-spam legislation
- The hosting company is a reseller with no legal control over the computers.
- What if the hosting provider does not exist?



# Bullet proof hosting

- What our investigators found in a particular case, at a particular time





# Connectivity providers' perspective

## The problem situation

- No liability – “Mere conduit”.
- Some may comply depending on the situation and the requestor. Today we see court orders for filtering
- Connectivity is usually abundant, and a court order cannot be obtained in each case in an expedited manner.



# Bullet proof hosting

- Increased media focus on the problem
- RIPE has a working group with law enforcement

## Shadowy Russian Firm Seen as Conduit for Cybercrime

By [Brian Krebs](#)

washingtonpost.com Staff Writer





Saturday, October 13, 2007; Page A15

An Internet business based in [St. Petersburg](#) has become a world hub for Web sites devoted to child pornography, spamming and identity theft, according to computer security experts. They say Russian authorities have provided little help in efforts to shut down the company.

The Russian Business Network sells Web site hosting to people engaged in criminal activity, the security experts say.

Groups operating through the company's computers are thought to be responsible for about half of last year's incidents of "phishing" -- ID-theft scams in which

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# The solution

Bullet-proof hosting



# What this is not about

- This is not about:
  - Technical action when a legal action can't be taken. Phantom-ISPs provide fake identities to avoid the rule of law
  - Creating additional bureaucracy for RIPE
  - Making the Internet community arbiters of legal and illegal activity



# Phantom Internet companies

## Change of policy

- RIPE NCC assigns resources to legal entities and natural persons. Not to an email address, a cat, or a tree.



- Two focus areas for addressing the problem of phantom Internet companies having been assigned Internet resources:
  - Validation of accurate Whois information for assigned IP addresses and ASNs
  - Validation that the original criteria of the conditions for the



# Inaccurate Whols information

## Change of policy

- Accurate Whols information is a larger problem and not limited to phantom companies
  - Some valid assignments are many years old and may not be up to date
  - Transfer of resources as companies merge and change identity



# The original criteria for the assignment

## Change of policy

- RIPE only assigns resources for as long as the original criteria for the assignment are still valid
- Resources however should not be revoked when:
  - Resources are utilized, but for a different purpose, for example moving from dial-up to ADSL, or from VPN usage to mail servers
  - Change of ownership of the company
- Resources should be revoked when they were obtained through fraud or deceit



# Clarification of RIPE-452 and 471

## The solution

- RIPE-452 (*Contractual Requirements for Provider Independent Resource Holders*) allows the revoking of PI IP for incorrect Whois information but does not address the question of non-existing entities.
- RIPE-471 (*IPv4 Address Allocation and Assignment Policies*) states that:
  - All assignments are valid as long as the original criteria on which the assignment was based are still valid and the assignment is properly registered in the RIPE Database. If an assignment is made for a specific purpose and that purpose no longer exists, the assignment is no longer valid. If an assignment is based on information that turns out to be invalid, the assignment is no longer valid.



# How can an entity prove that it exists?

- Evidence should be appreciated by the arbiters:
  - Printouts from the national company registry?
  - Third-party validation: rental agreements, utility bills
  - Public notaries, validated according to international norms
  - Police cooperation
  - Should be kept open other way, to keep the system flexible



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