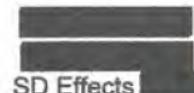


UK TOP SECRET STRAP1



Full-Spectrum Cyber Effects



SIGINT Development as an enabler
for GCHQ's "Effects" mission

Effects

Destroy | Deny | Degrade | Disrupt | Deceive | Protect

Computer Network Attack (CNA)

Computer Network Information Operations (CNIO)

Disruption

Effects in GCHQ

- Definition: having an impact in the real world
- Key deliverers: JTRIG and CNE
- Now major part of business – 5% of Operations
- Across all target types
- Continuous innovation of new tools and techniques

CNIO

Computer Network Information Operations

- Propaganda
- Deception
- Mass messaging
- Pushing stories
- Alias development
- Psychology

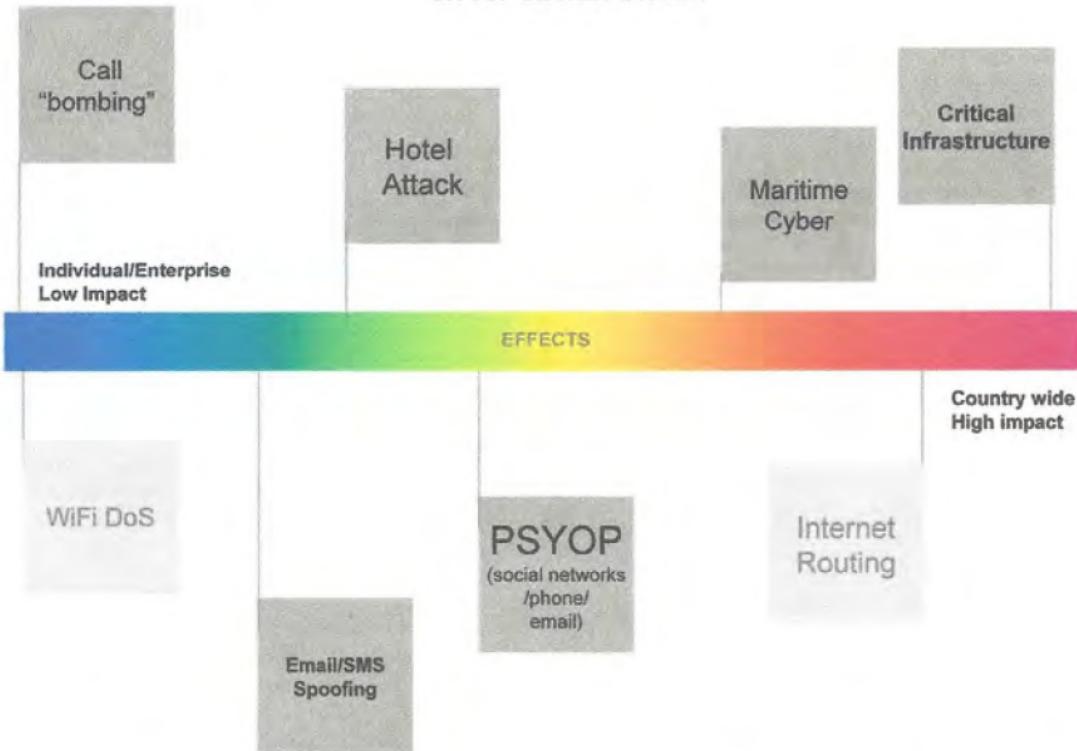


Disruption / CNA

- Masquerades
- Spoofing
- Denial of service
 - Phones
 - Emails
 - Computers
 - Faxes



UK TOP SECRET STRAP1



Information Operations

INFINITE CURVATURE/MOUNTAIN SLOPE

Sending messages across the full spectrum of communications

Telephony SMS FAX Email

SALAMANCA
Data Mining

Phone Code
Prefix

Open
Source

RADIUS Data →
TDIs

IP GEO → TDIs

UK TOP SECRET STRAP1

ROYAL CONCIERGE

A SIGINT driven hotel reservation tip-off service

From: reservations@expensivehotel.com
To: new-target@mod.gov.xx

"Thank you for reserving....."

ROYAL CONCIERGE exploits these messages and sends out daily alerts to analysts working on governmental hard targets



**What hotel are they visiting?
Is it SIGINT friendly?**

An enabler for effects – can we influence the hotel choice? Can we cancel their visit?

We can use this as an enabler for HUMINT and Close Access Technical Operations

Mobile Information Ops



50 new mobile TDIs being Developed by end of 2010

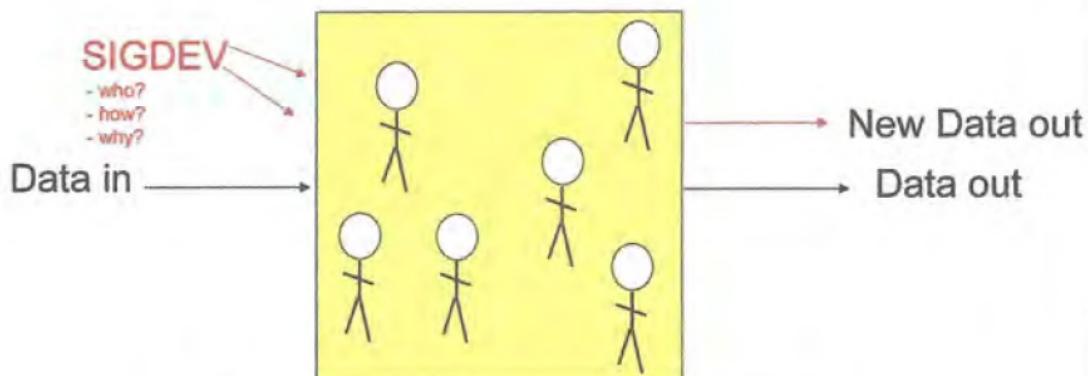
Also - Target Geographical Identifiers (TGI)

We can shape CNIO against specific locations, users with a high degree of cognition

Human Systems Analysis

Foreign News Agencies:

- Credential Harvesting
- Employee Analysis



Social not technological solution

Future?

Formalising Tradecraft for Analysts:

“What SIGDEV needs to be done prior to starting an Effects operation?”



Joining up with 5 EYES where possible (cyber development)



SIP and VoIP Effects – Denial of Service, Psychological Operations

Provide the defensive advice from the offensive perspective