





**cdo**  
cyber defence operations



# SigDev Conference 2012

*Cyber Integration*  
*"The art of the possible"*

[REDACTED] **JTRIG / GCHQ**

[REDACTED] **CDO / GCHQ**

Joint Threat Research Intelligence Group, a GCHQ unit focused on cyber forensics, espionage and covert operations



## JTRIG - Core Functions



### JTRIG has the following core functions:

- Covert Internet Investigations
- Forensic Investigation and Analysis
- Active Covert Internet Operations, (including online Humint and Effects)
- Covert Technical Operations
- Provision of Unattributable Internet Access
- Development of new capability

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Explanation of the “base-line” for JTRIG-related work and make-up:

The structure of JTRIG:

- Ops / Technical (Cap Dev) / JBOS.

Mention the “Online Covert Action Accreditation” Programme.

- Commenced September 2011.
- Initially for JTRIG staff.
- A small number of ISD analysts now being accepted on courses.

Main skills covered:

- Information & Influence Operations.
- Online Humint.
- Disruption & CNA.
- Briefing to be provided by [REDACTED].

## Development of new capability:

- Capabilities being developed to access data from various internet services
- How these data sources may help to mitigate the loss that passive access could suffer to encryption etc
- How to look further at integrating /fusing these data sources into our analytic stores and workflows



## *EFFECTS: Definition*



- “Using online techniques to make something happen in the real or cyber world”
- Two broad categories:
  - Information Ops (influence or disruption)
  - Technical disruption
- Known in GCHQ as Online Covert Action
- The 4 D’s: Deny / Disrupt / Degrade / Deceive

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Key statement is the initial one.

Explain the categories more.

The one thing to remember for JTRIG is the 4 “D’s”.



## *Online Covert Action*



# How to ...

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## Stop Someone From Communicating



- Bombard their phone with text messages
- Bombard their phone with calls
- Delete their online presence
- Block up their fax machine

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SMO examples from Afghanistan.

- Significantly disrupting Taleban Operations.
- Sending targets a text message every 10 seconds or so.
- Calling targets consistently on a regular basis.

Ability to delete a target's online presence. Very annoying!!

Older type of Effects, but faxes are still used in some areas.

- Set up a honey-trap
- Change their photos on social networking sites
- Write a blog purporting to be one of their victims
- Email/text their colleagues, neighbours, friends etc

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Honey-trap; a great option. Very successful when it works.

- Get someone to go somewhere on the internet, or a physical location to be met by a “friendly face”.
- JTRIG has the ability to “shape” the environment on occasions.

Photo change; you have been warned, “JTRIG is about!!”

Can take “paranoia” to a whole new level.

Blog writing:

- Has worked on a number of different Ops.
- One example is on a Serious Crime Op. [REDACTED] [REDACTED]
- Other examples on Iran work.

Email/text:

- Infiltration work.
- Helps JTRIG acquire credibility with online groups etc.



- Helps with bringing SIGINT/Effects together.



## *Discredit a company*



- Leak confidential information to companies / the press via blogs etc
- Post negative information on appropriate forums
- Stop deals / ruin business relationships

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### Info Ops style work:

- Use of Open Source info and/or releasable Sigint items.
- Attempts to inform the public, where necessary (government protected environment)
- First stages of disruption and/or discrediting companies / organisations
- Stop /divert the flow of funding. Introduce panic etc.



## Get another country to believe a 'secret'



- Place 'secret' information on a compromised computer
- Send 'secret' information across a network visible to Sigint
- Provide 'secret' information through an online agent

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### Work alongside CNE:

- Use of various masquerade type techniques.
- Placement of potential "damming" information, where appropriate.

### Visible networks:

- Shape the environment, so that Sigint can provide BDA for Operations.
- Use of releasable information, (support from SIA's etc).

### Online agent:

- Use of online aliases to good effect.
- Visibly shaping the online environment.



## Stop someone's computer from working



- Send them a virus:
  - AMBASSADORS RECEPTION – encrypt itself, delete all emails, encrypt all files, make screen shake, no more log on
- Conduct a Denial of Service attack on their computer

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### Virus sending:

- Use of various JTRIG tools, including AMBASSADORS RECEPTION.
- Has been used in a variety of different areas, very effective.



## Active Collection Techniques

- Use of active techniques to collect intelligence required to map out:
  - Who does what?
  - What institutions etc are being used?
  - What companies?
  - Who sets up the websites?
  - How do they communicate between ministries and / or each other?
  - How do they communicate to investors?
  - How do they store information?

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Some basic questions, that are normally associated with scoping potential Active Ops.

In essence Intelligence Analysts use SIGINT to answer the “pattern of life” question.

But... do they know the “online – pattern of life” for their target set??

Do the analyst's know not just what their target is doing, but what is it thinking??



## *Impact of Effects*

- How do we measure the impact of “effects”?
- “Blitz” style approach:
  - Creating as much disruption as possible within a short period of time
- More subtle approach:
  - Effects use less likely to be detected, therefore
  - More sustainable over a longer period of time

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Two main ways to measure the impact of “Effects” Operations.



## Cyber Integration

### Pros:

- Provide an opportunity for JTRIG analysts to be more actively involved with ISD counterparts
- Enable further upskilling (e.g. C2C etc)
- Provide JTRIG analysts with the opportunity to identify CNA-type options a lot earlier in Operations
- Provides ISD analysts a greater baseline and understanding of JTRIG work
- An Opportunity for analysts to learn new ACNO skills, (e.g. On-line HUMINT etc)

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## *Cyber Integration*

### Cons:

- Current lack of JTRIG IT infrastructure on the general floor-plate
- Lack of wider resource investment
- Lack of overall training and support resources
- Integration process will be resource intensive for CDO