

Systematic Threat Assessment

How to Adapt Security Measures Based on the
Research on Latest Threats

Florian Schmid

Project Manager Systematic Threat Assessment

Montreal, October 21, 2014

CASRA

Center for Adaptive Security Research and Applications

- › Founded in 2008
- › Emerged from the Visual Cognition Research Group (VICOREG) at the University of Zurich (founded 1999)
- › About 30 employees (mainly psychologists, computer scientists and engineers)
- › **Main aim: Increase security and facilitation at airports and other environments involving people and technology.**
- › CASRA members are from the following organizations:



University of Applied Sciences and Arts
Northwestern Switzerland



University of
Zurich^{UZH}

Project ICU

Intelligence, Competence and Unpredictability



Goal	Increase threat detection performance by combining intelligence with competence of security officers and unpredictable changes of screening level
Funding	Swiss Federal Office of Civil Aviation (FOCA)
Scope	All Swiss airports and security screening providers
Collaborations	Swiss airports, police authorities, federal competence centers and screening providers
Duration	01.01.2013 – 31.12.2015

Challenge: Training Content

Which threat objects should be trained?



Online News

Information about 3D-printed guns

BBC News Sport Weather Capital Future Shop

NEWS SCIENCE & ENVIRONMENT

Home UK Africa Asia Europe Latin America Mid-East US & Canada Business Health Sci/Environm

6 May 2013 Last updated at 06:38 GMT

Share f t

Working gun made with 3D printer

COMMENTS (1079)

By Rebecca Morelle

Science reporter, BBC World Service, Texas



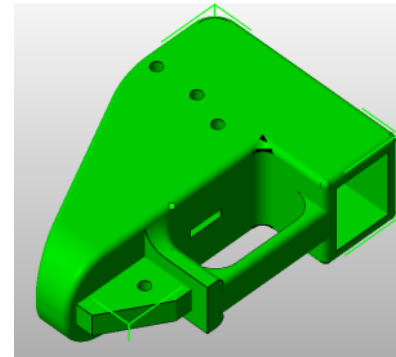
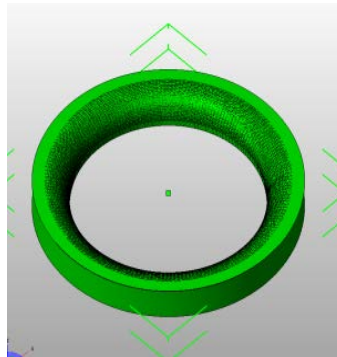
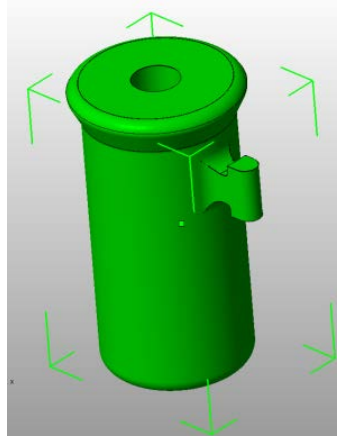
The BBC's Rebecca Morelle saw the 3D-printed gun's first test in Austin, Texas

BBC online: May 06, 2013

Open Online Forum

3D-files of gun parts available

- 380 Barrel (Threaded).stl
- 380 Barrel (Unthreaded).stl
- Bottom Cover.stl
- Firing Pin Bushing.stl
- Frame Pins (x3).stl
- Frame.stl
- Grip Pin.stl
- Grip.stl
- Hammer Body.stl
- Hammer Pin.stl
- Hammer.stl
- Spring (x2).stl
- Spring Connecting Rod Bushing.stl
- Spring Connecting Rod.stl
- Trigger Spring.stl
- Trigger.stl



Defcad Forum: May 2013

Deep Web (aka Darknet)

Printed guns available

The screenshot shows the TorBrowser window with the URL `g[redacted].onion/results`. The page is the Grams Beta marketplace, displaying search results for the term "liberator".

Search Results:

- Search filters:** 1776, Agora, ADM, BlackBank, C9, EVO, SilkRoad, TPM.
- About 9 results for 'liberator' (6.1647 seconds)**
- Listing 1: Liberator pistol next gen stealth compact handgun**
 - URL: `k5zq47j6wd3wvdvjg.onion/listing/11796`
 - Description: "I am selling liberator pistols they are made 0 out of very strong ABS plastice and on high grade machines I will be supplying many spares and extra barrels with each purchase I also will give you a guide on strengthening the liberator which i have developed myself inexpensive materials PICTURE IS OF THE NON COMPACT VERSION AND IS FROM GOOGLE MY PIC WILL BE UP SHORTLY I can make original liberator..."
 - Vendor: ReadySetGo
 - Price: 80.49499118
 - Location: Australia
- Listing 2: Compact Liberator Pistol**
 - URL: `k5zq47j6wd3wvdvjg.onion/listing/738`
 - Description: "The first one to buy one of these gets it for 150 PM me if intersted in this deal This listing is for 1 liberator pistol A liberator is a plastic handgun Pease note that these are not equivalent to a real firearm in tems of dependability or quality but you can t beat the price on these This one is just like the original but has a much smaller frame so it s easier to conceal priced at 250 I also can..."
 - Vendor: Ideal
 - Price: 80.49413785
 - Location: United States
- Listing 3: LIBERATOR COMPACT STEALTH PISTOL**
 - URL: `agorahooawayyfoe.onion/p/czzgoi47Gd`
 - Description: "COMPACT LIBERATOR PISTOL Aussie Seller Hi 10 4 2014 QUICK UPDATE okay so i am getting alot of interest so please read I advise you ALL to simply search google and youtube to ..."
 - Vendor: ReadySetGo
 - Price: 80.49487311
 - Location: Australia

Left Sidebar:

- Currency:** BTC USD EUR GBP
- Sort:** Relevance Price Price New
- News:** 22-04-14
Another New Market!
We Just added the 1776 Market. This market makes multi-sig transactions easy.
[Check them out now](#)
- DISCREET GLOBAL MAILORDER BUNGEE⁵⁴**
BEST COCAINE + MDMA ON THE HIDDEN WEB
TAKE A LOOK AT OUR GOODS!

Deep Web research, April 22, 2014

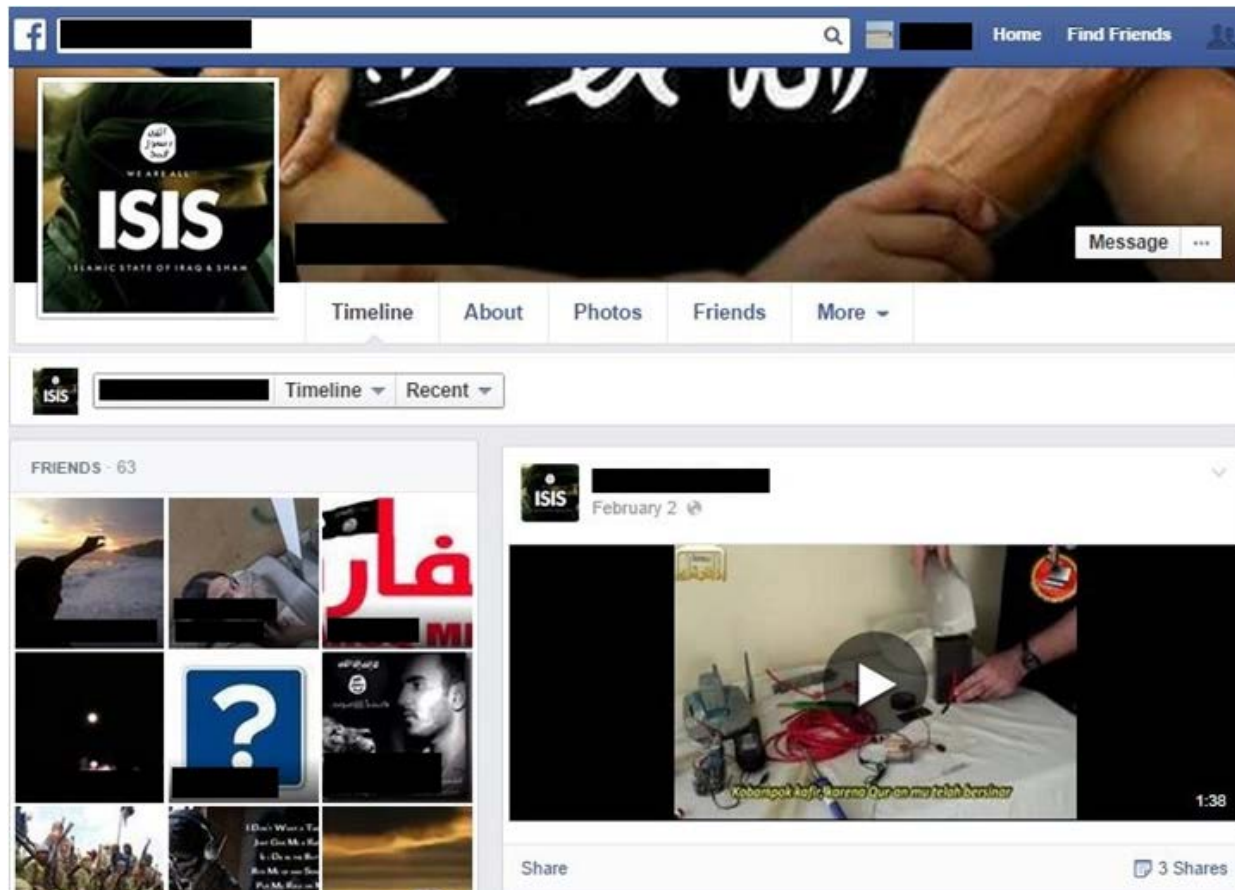
Consequence

Implementation of new objects in X-ray training software?



Social Media

Manuals of Radio-Controlled IEDs (RCIEDs)



Facebook, February 02, 2014

Video Sharing

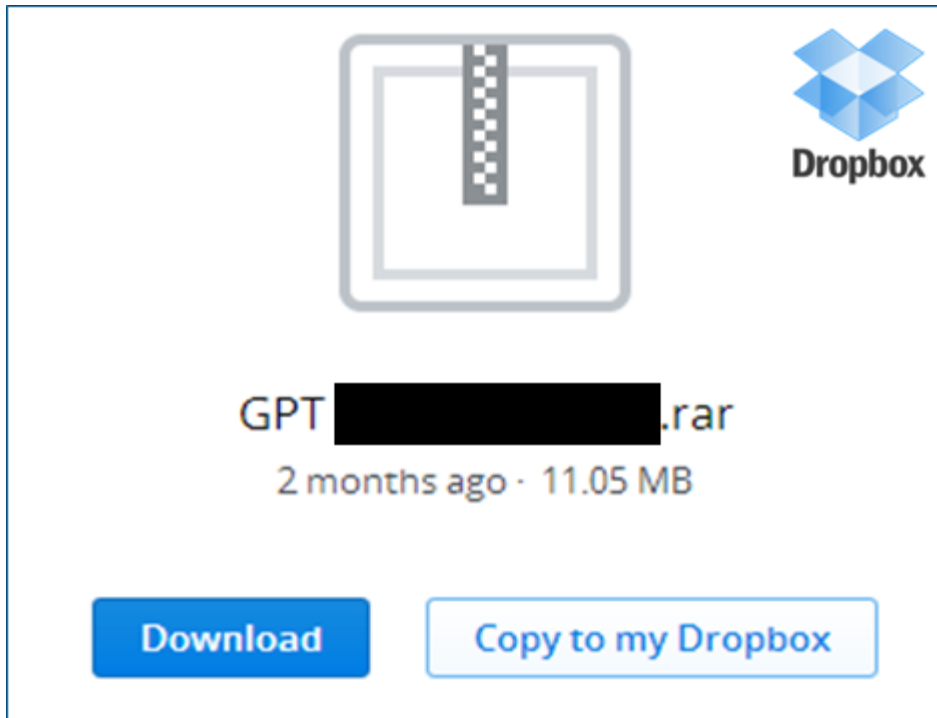
Manuals are distributed on **video sharing websites**



Youtube

File Sharing

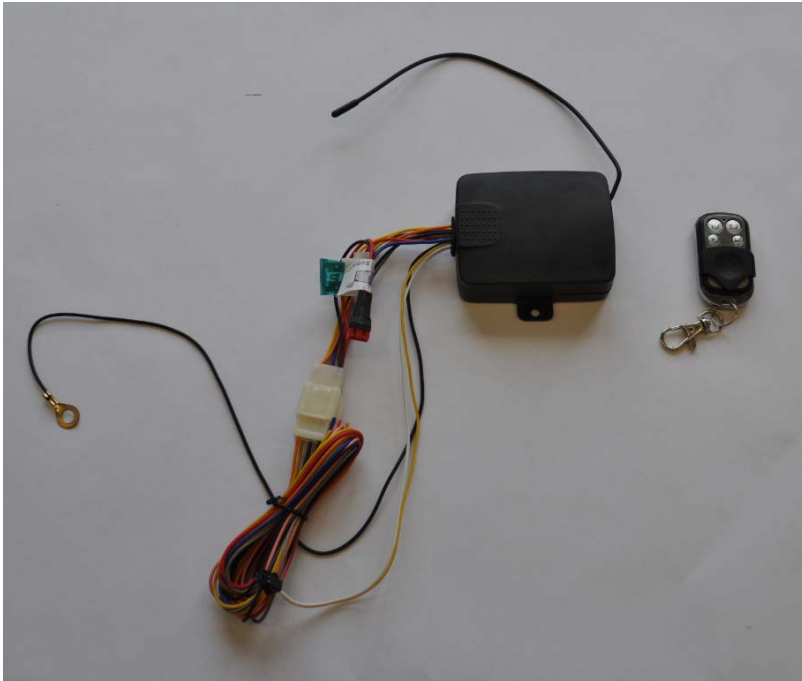
Manuals are distributed on **file sharing platforms**



Dropbox

Consequence

Implementation of new objects in X-ray training software?



Online News

Information about **IEDs** in electronic devices

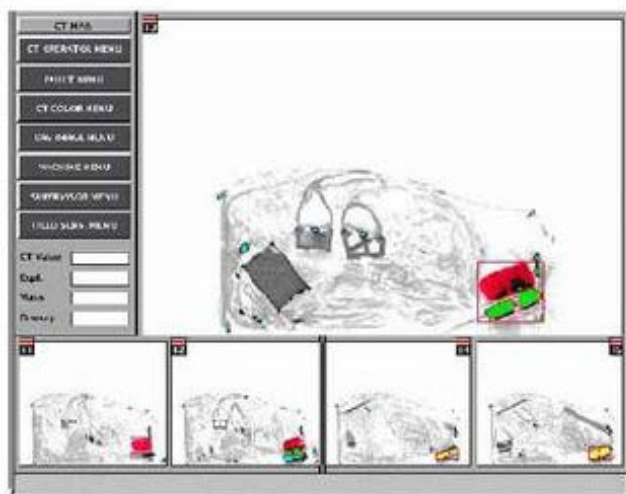


Afghan news site, December 2013

Closed Online Forum

Resurgence of discussion about how to hide explosives

أجهزة الكشف بالأشعة السينية : كانت أجهزة الكشف بأشعة "أكس" الأولية تعتمد على لونين ثم ثلاثة فيما بعد, انتهاء



إذن كيف نجحنا في تحطيم أجهزة الكشف بالأشعة السينية ؟

قمنا باستعمال جهاز يتكون من أجزاء عضوية و غير عضوية و معدنية . تكون خرطوشة الجبر من الكربون الذي هو عادة للشكوك إذا ما تم تفتيتها . خلال تواجد الخرطوشة داخل الطابعة تلمس سفينة معدنية دائرة الأسلاك . بهذا الطريقة صورة لخرطوشة الطابعة المتفجرة و هي متلفة بمادة PETN و يخرج منها سلك التفجير

Jihadist forum, May 2014

Consequence

Implementation of new objects in X-ray training software?



Radical Propaganda

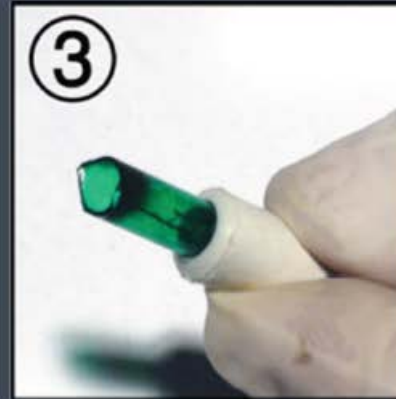
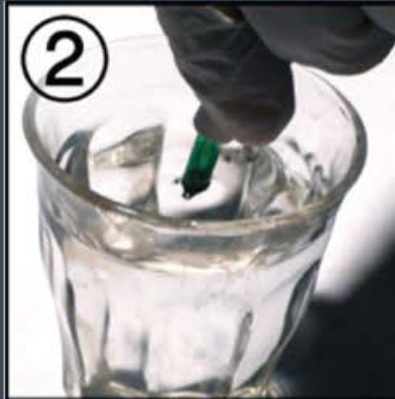
Manual for homemade detonators

Open Source Jihad | Inspire

Summer 1431 | 2010

C. Preparation of the decoration lamp

We will proceed to break the top of the lamp by heating it. Make sure the filament does not break. The filament is the part which when electricity passes through it, it glows and produces light.



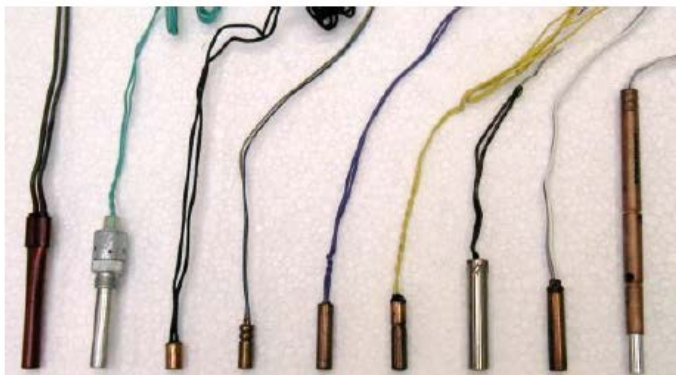
1. Heat the head of the lamp until it becomes black.
2. Place the lamp immediately in water while still hot.
3. Strike the tip of the lamp and it would break.

Inspire magazine, Summer 2010

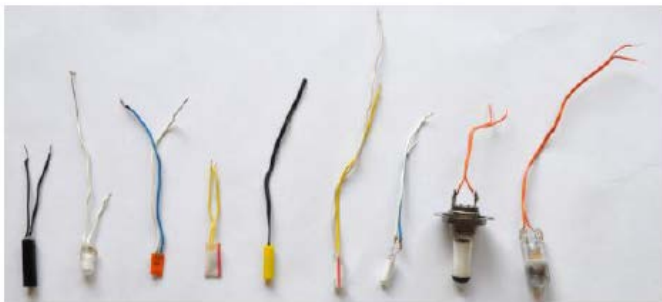
Consequence

Implementation of new objects in X-ray training software?

Standard detonators

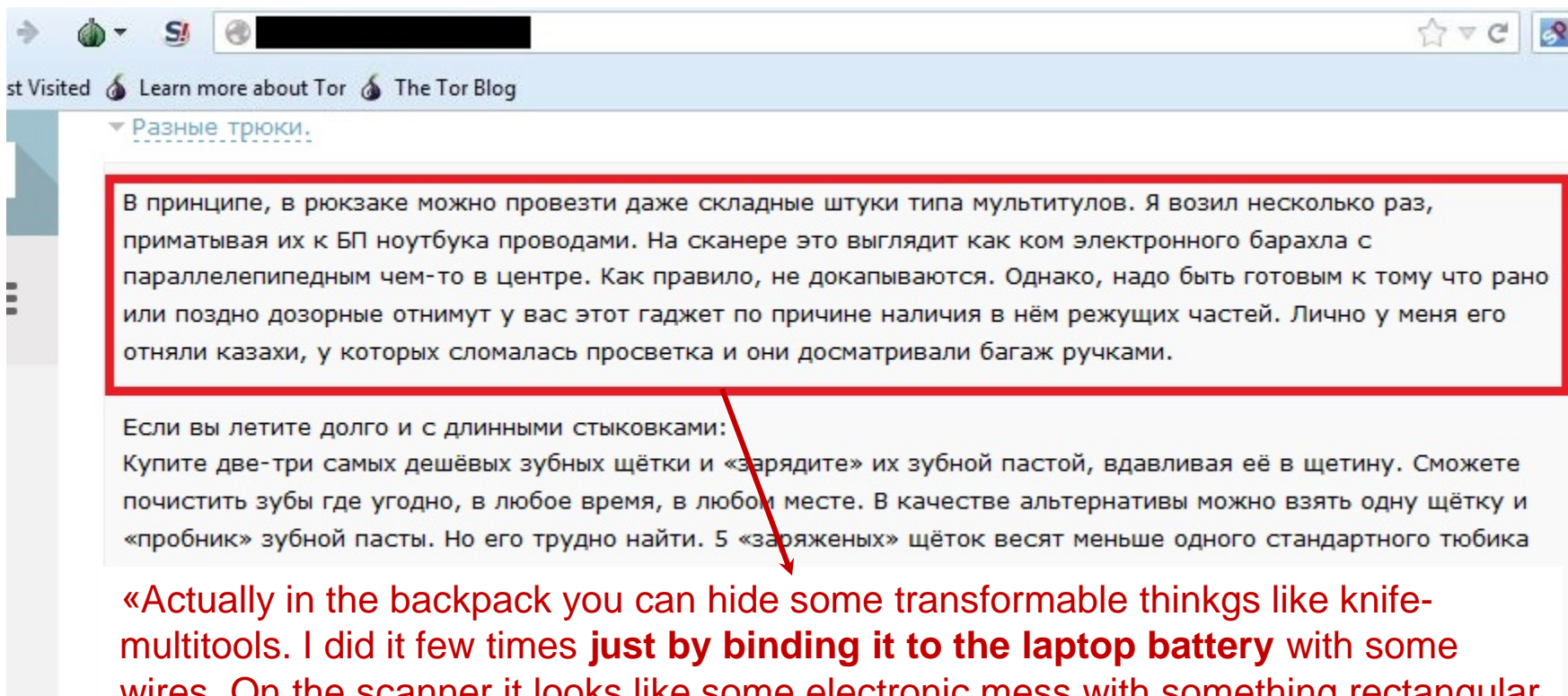


Homemade detonators



Deep Web

How to hide knives



В принципе, в рюкзаке можно провезти даже складные штуки типа мультитулов. Я возил несколько раз, приматывая их к БП ноутбука проводами. На сканере это выглядит как ком электронного барахла с параллелепипедным чем-то в центре. Как правило, не докапываются. Однако, надо быть готовым к тому что рано или поздно дозорные отнимут у вас этот гаджет по причине наличия в нём режущих частей. Лично у меня его отняли казахи, у которых сломалась просветка и они досматривали багаж ручками.

Если вы летите долго и с длинными стыковками:

Купите две-три самых дешёвых зубных щётки и «зарядите» их зубной пастой, вдавливая её в щетину. Сможете почистить зубы где угодно, в любое время, в любом месте. В качестве альтернативы можно взять одну щётку и «пробник» зубной пасты. Но его трудно найти. 5 «заряженных» щёток весят меньше одного стандартного тюбика

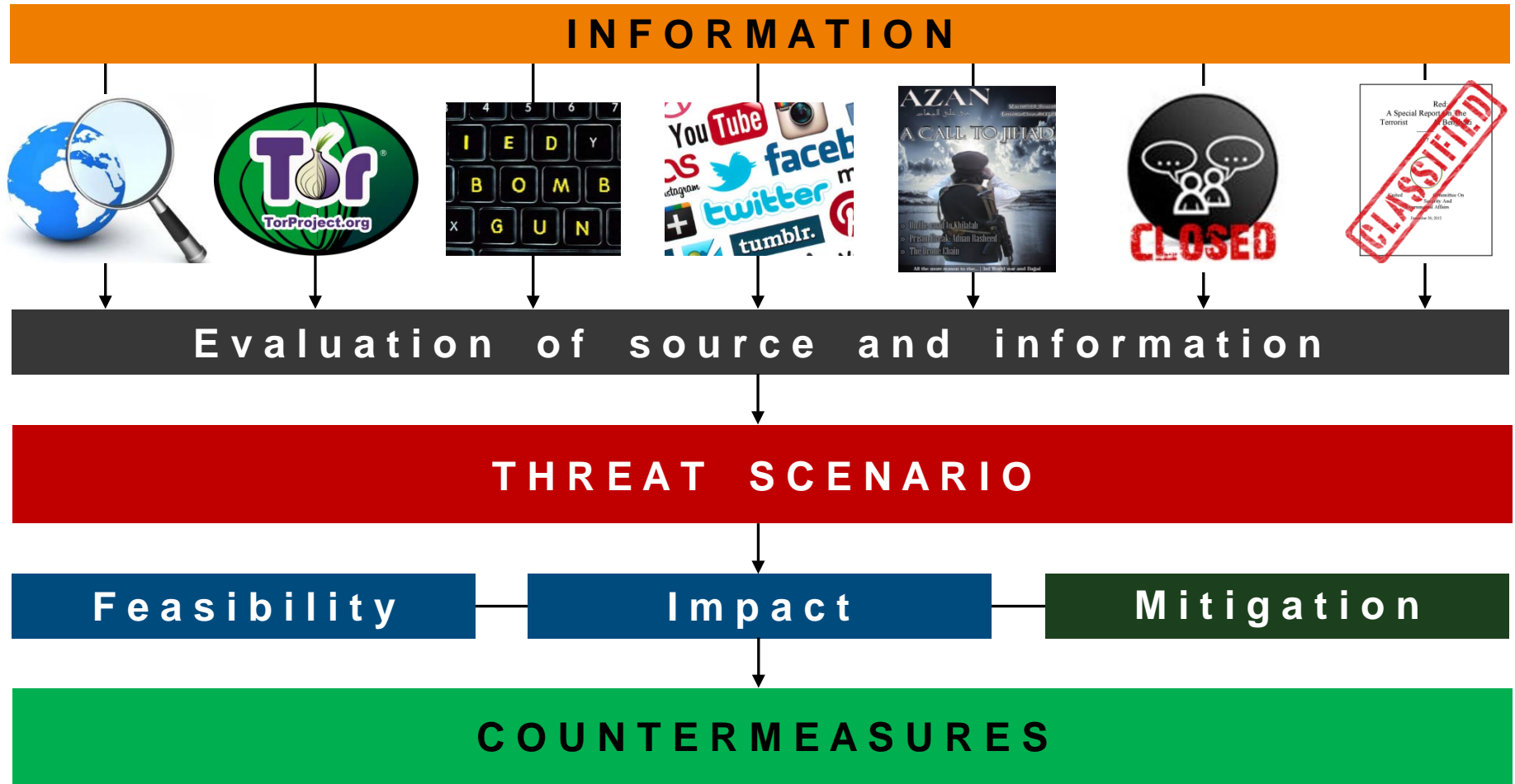
«Actually in the backpack you can hide some transformable thinkgs like knife-multitools. I did it few times **just by binding it to the laptop battery** with some wires. On the scanner it looks like some electronic mess with something rectangular in the center. Usually they [security personnel] don't pay attention to this. [...]

Consequence

Implementation of new objects in X-ray training software?

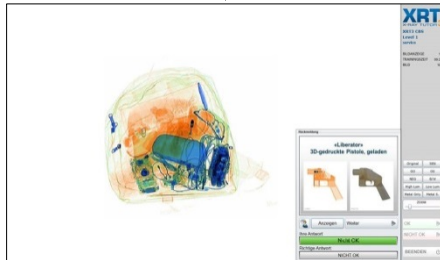


Systematic Threat Assessment

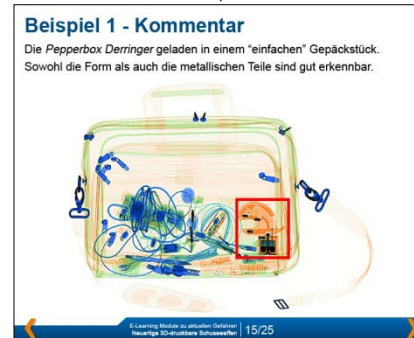


Systematic Threat Assessment

COUNTERMEASURES



XRT
X-RAY TUTOR³



Systematic Threat Assessment

Conclusions

- › Keeping up to date
- › New types of early stage threats can be found
- › Large number of web alerts are constantly generated and have to be evaluated
- › Resulting reports serve as support for decision makers
- › Processes must be defined in order to ensure know-how transfer to security personnel

Thank you for your attention

Florian Schmid

Project Manager Systematic Threat Assessment

sta@casra.ch