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# EDUCATION & TRAINING IN FORENSICS

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Meaning	Theoretical learning in the classroom or any institution is education	The process of inculcating specific skills in a person is training
Based on	Theoretical orientation	Practical application
Perspective	Wide	Narrow
Objective	To develop a sense of reasoning and judgement	To improve performance and productivity
Teaches	General concepts	Specific task

<https://keydifferences.com/difference-between-training-and-education.html>

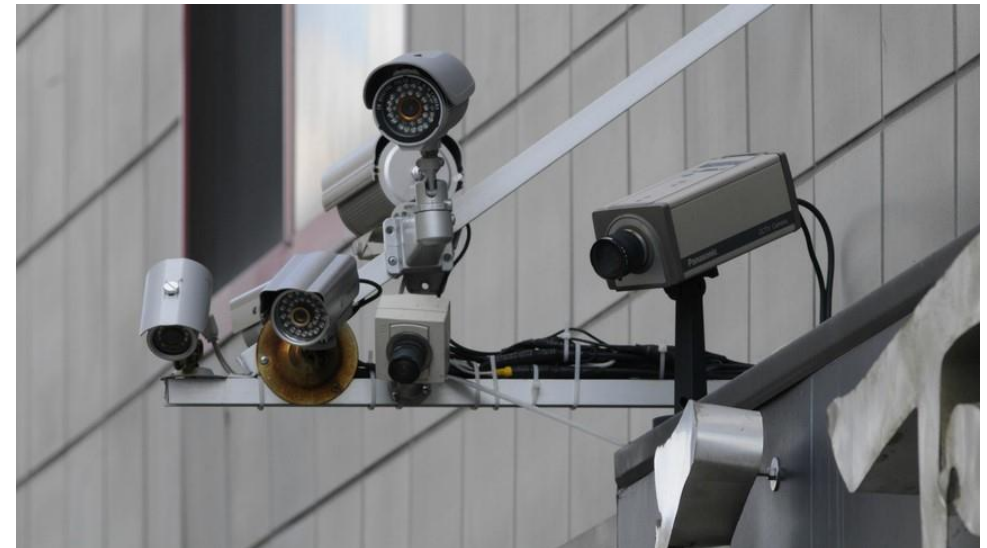
# IS E&T IN FORENSICS NEEDED?

# TECHNOLOGICAL DEVELOPMENTS

- New areas of forensic science
  - forensic IT
  - data analysis from computers, tablets or mobile phones, wearables, etc
  - image analysis, including CCTV



Forensic Control



Elliott Forensics

# TECHNOLOGICAL DEVELOPMENTS

- Big data management  
*e.g. London Heathrow airport - over 6500 cameras*



Thousand Wonders



MBIS

# TECHNOLOGICAL DEVELOPMENTS

- In many areas, evidential material is increasingly becoming digital, e.g., *electronic signatures or speech recordings*



# TECHNOLOGICAL DEVELOPMENTS

- New sources of information, e.g., EDR – Event Data Recorder (black box), or Advanced Driver Assist Systems (ADAS)

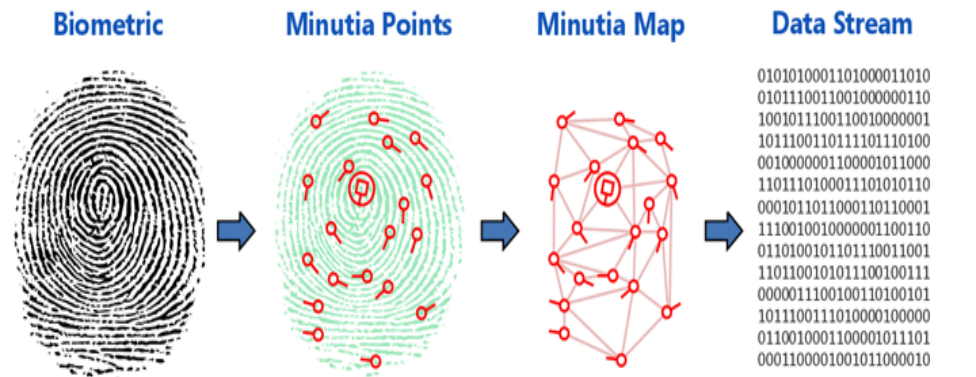


# TECHNOLOGICAL DEVELOPMENTS

„Digital’ developments in traditional fields such as fingerprinting and marks analysis



Pressly.com



identityone.net



Pinterest

# TECHNOLOGICAL DEVELOPMENTS

New technologies are being introduced in the production of cars, printers or other materials that are subject to investigation



Amazon.com



Stylowi.pl

# SCIENTIFIC DEVELOPMENTS

- Technological progress in the construction of the instruments allows for the detection of ever smaller quantities of substances and the development of portable devices is developed so that analysis can be carried out at the scene of crime



The RapidHIT ID is a fully automated sample-to-answer system for short tandem repeat (STR)-based human identification.

# QUALITY

- Quality requirements related to the introduction and development of quality systems not only in the laboratory but also at the crime scene



*Past*

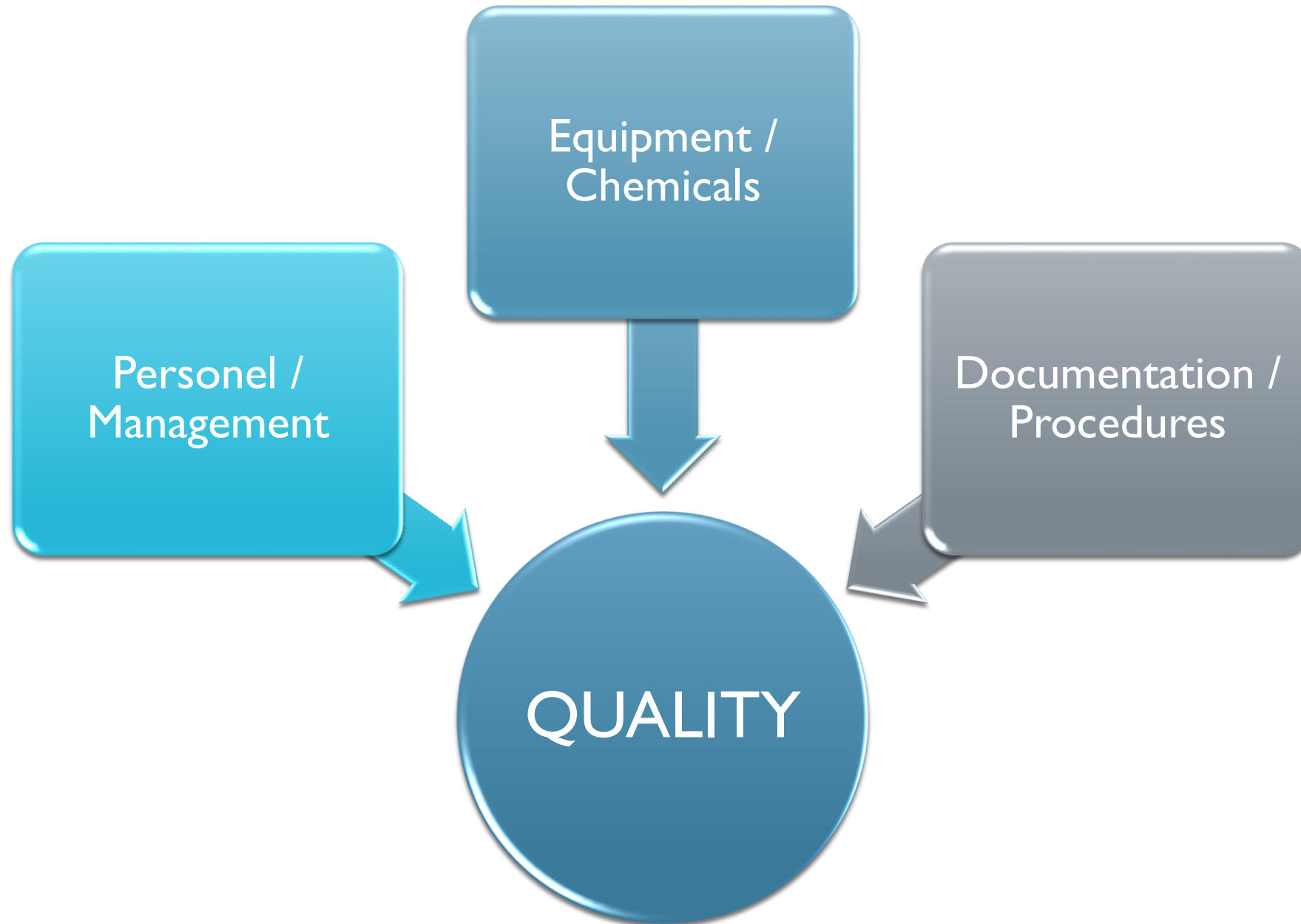


*Nowadays*

# INTERNATIONAL STANDARDS

- ISO 17025 – General requirements for the competence of testing and calibration laboratories
- ISO 17020 - Conformity assessment -- Requirements for the operation of various types of bodies performing inspection
- ISO 21043 – Forensic Sciences
- ILAC Guidelines (Modules in forensic science process, ...)
- ...





# THE RISE OF ORGANIZED CRIMES AND CROSS-BORDER CRIMES

- This necessitates cooperation, exchange of data, the use of equal standards and procedures
- There is an increase in the number of databases whose quality must be adequate
- It is also necessary to know the legal provisions concerning the exchange of data and the protection of personal data, especially in the context of the exchange of biometric data

# EUROPEAN SINGLE MARKET (OPEN BORDERS WITHIN THE EU)

- Free movement of **goods**
  - Customs duties and taxation
- Free movement of **capital**
- Freedom to establish and provide **services**
  - Services
  - Digital Single Market
- Free movement of **persons**
  - Free movement of workers
  - Free movement of citizens
  - The Schengen Area



FotoForum - Gazeta.pl

# MIGRATION CRISIS



capital.gr



The Cipher Brief

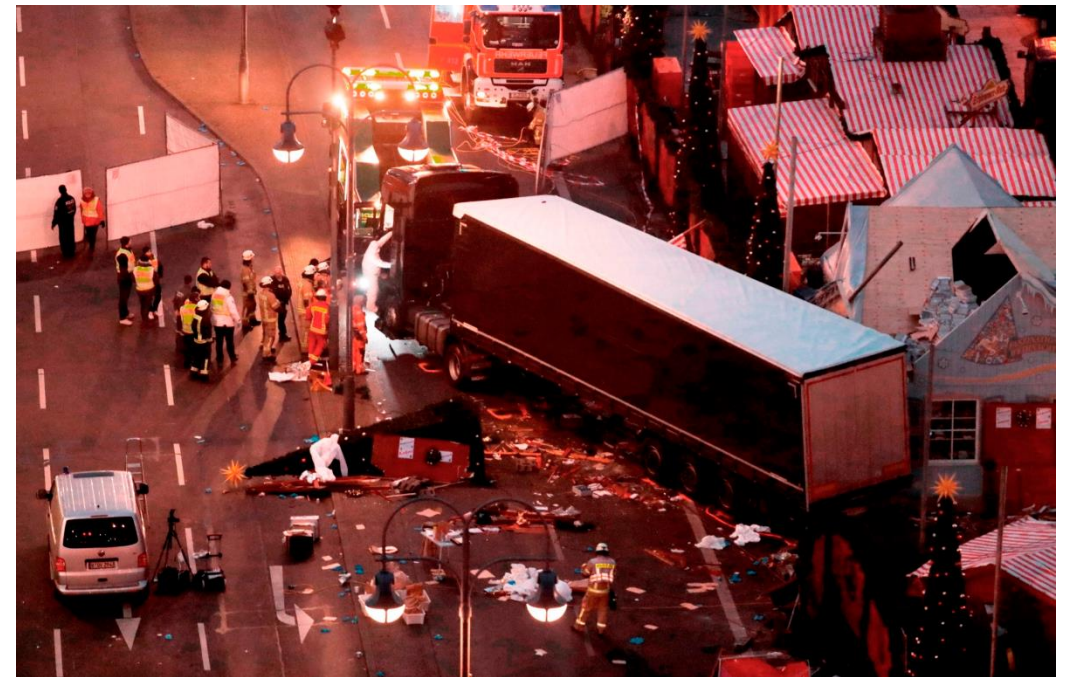
# THE INCREASE IN TERRORIST THREATS

13 November 2015 in Paris



[www.pbs.org](http://www.pbs.org)

19 December 2016 in Berlin



Flanders Today

- The need to develop procedures and their use in the detection of chemical, biological, radiological, nuclear and explosive hazards (CBRNE)

# THE IMPROVEMENT OF REPORTING THE FORENSIC RESULTS FOR COURTS

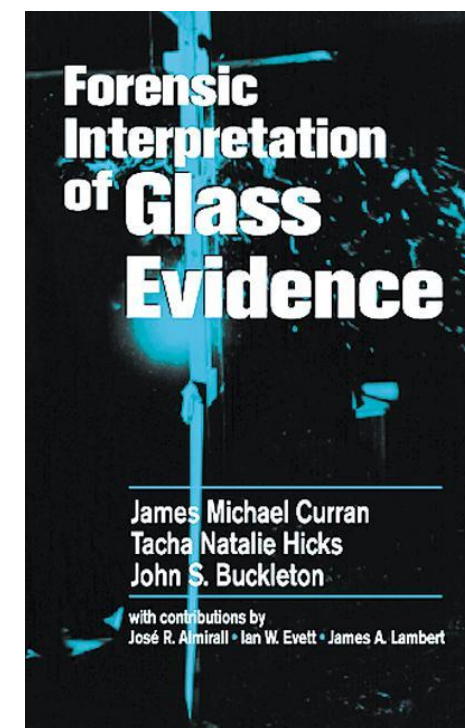
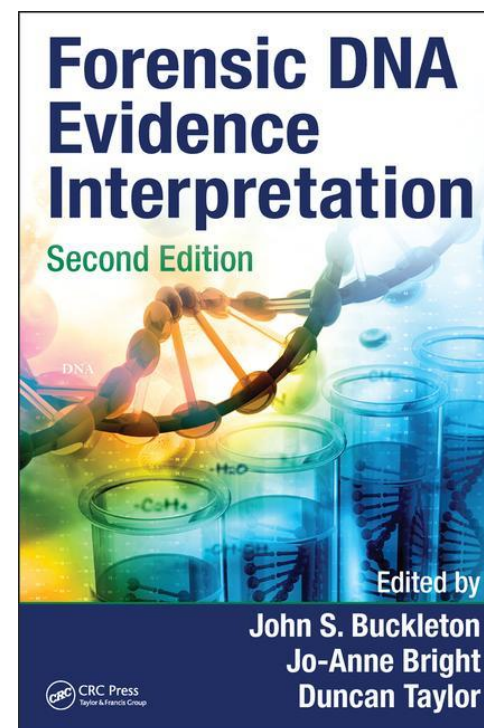
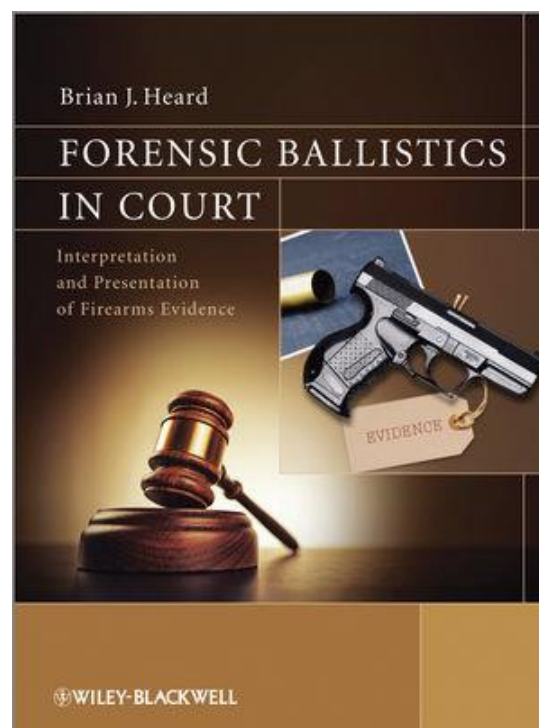
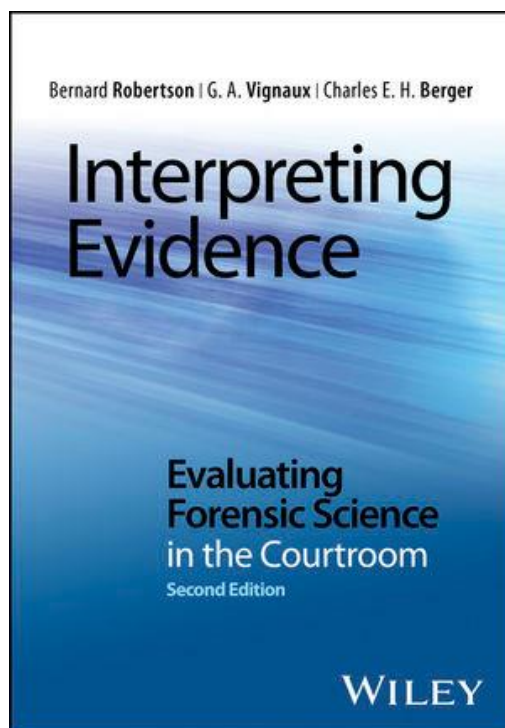
- Interpretation of forensic evidence

## ENFSI GUIDELINE FOR EVALUATIVE REPORTING IN FORENSIC SCIENCE

Values* of likelihood ratio	Verbal equivalent (two options of phrasing are suggested)
1	<p>The forensic findings do not support one proposition over the other.</p> <p>The forensic findings provide no assistance in addressing the issue.</p>
2 - 10	<p>The forensic findings provide weak support** for the first proposition relative to the alternative.</p> <p>The forensic findings are slightly more probable given one proposition relative to the other.</p>
10 - 100	<p>...provide moderate support for the first proposition rather than the alternative</p> <p>...are more probable given...proposition...than proposition...</p>

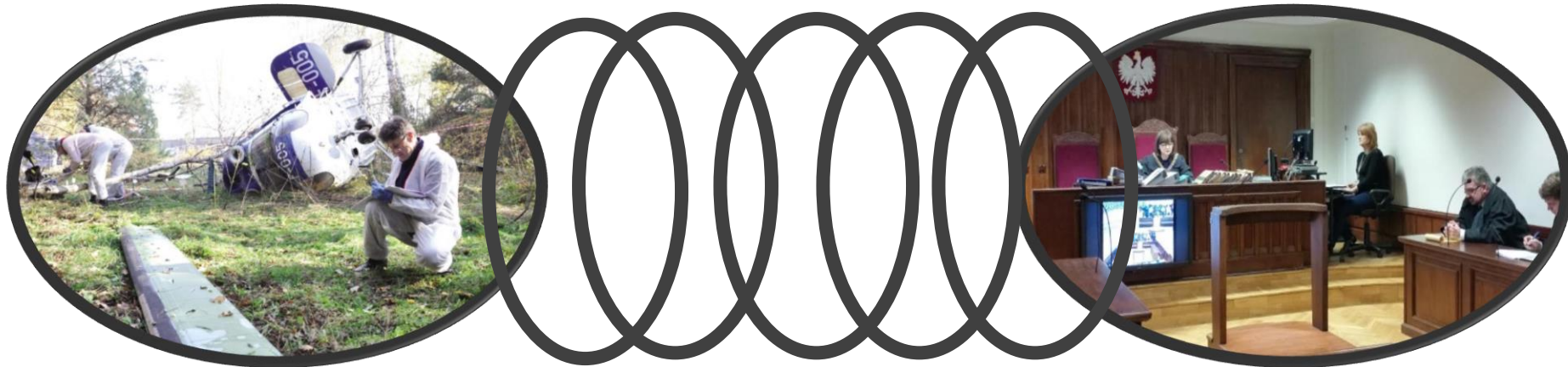
# THE IMPROVEMENT OF REPORTING THE FORENSIC RESULTS FOR COURTS

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# MODULES IN FORENSIC SCIENCE PROCESS

## From Crime Scene to Courtroom



Collection

Transportation

Examination

Interpretation

Presentation

# TRAINERS - TRAINEES

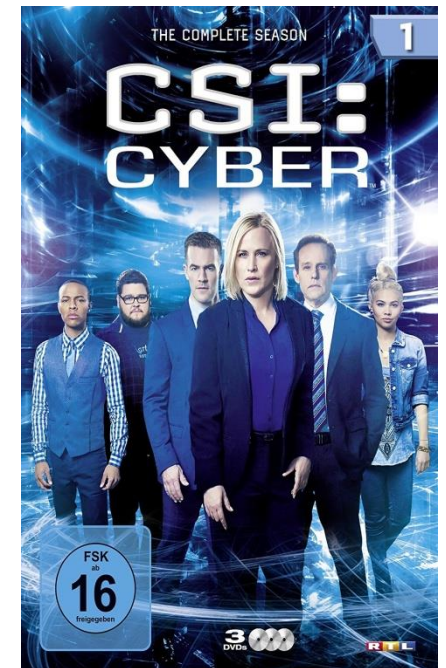
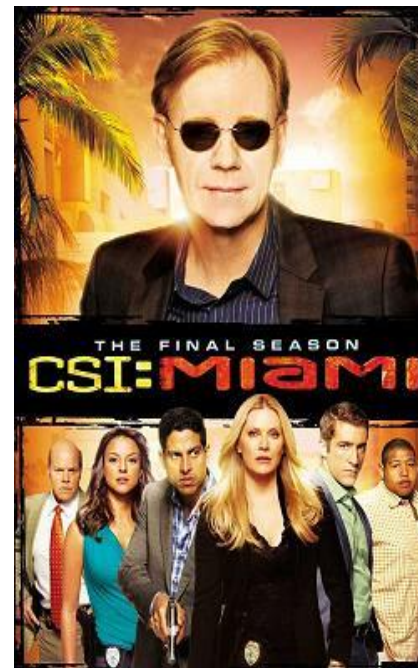
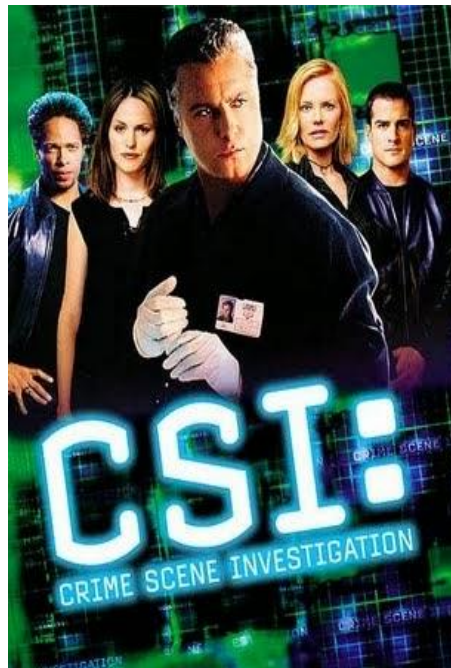


# TRAINEES – TARGET GROUPS

- Crime scene technicians
- First responders
- Forensic experts
  - (Candidates)
  - Junior
  - Senior
- Stakeholders
  - Police officers
  - Prosecutors
  - Magistrates / Judges
- Students (of forensic sciences and beyond)
- Society

# CSI EFFECT (SYNDROM, INFECTION ...)

**CSI:**  
CRIME SCENE INVESTIGATION



# TRAINERS

- Experienced forensic experts (practitioners)
  - Institutional
  - Private
  - Retired
- Law enforcement officials / judges experienced in cooperation with forensic experts
- Academic scientists
- Scientific consultants & technical experts
- QA experts, eg UKAS

# EDUCATION

- Universities
- EU agencies, eg CEPOL (and EJTN)



[muscarelle.org](http://muscarelle.org)



Office of the Medical Investigator - UNM

# FORMS OF CONDUCTING E&T

- Lectures
- Seminars
- Workshops
- Practical trainings
- Study visits
- Mentor visits
- Webinars
- Online courses
- Digital sharing (website, weblog, discussion forum, FAQ etc.)



Phnom Penh Post

E-Learning Heroes - Articulate



# IFR KRAKOW - EXAMPLES

- **National School of Judiciary and Public Prosecution (KSSiP)**
  - Initial training for trainees to work as a judge, judge's assessor, prosecutor, prosecutor's assessor
  - training and enhancing the professional competence of judges, judge's assessors, prosecutors and prosecutor's assessors



# IFR KRAKOW - EXAMPLES

## Course for judges and prosecutors – 2018

- **Recent developments of forensic sciences in human identification**
  - DNA
  - Facial analysis and reconstruction (Images and Recordings)
  - Speech analysis
  - Fingerprints

# IFR KRAKOW - EXAMPLES

- **Crime scene investigation**
  - Computers (e.g., cyber crimes)
  - Rape
  - Clandestine laboratory
  - Car accident



# IFR KRAKOW - EXAMPLES

- Mutual cooperation with academia
  - Lectures/seminars/workshops for students / postgraduate students
  - Master and Ph.D. thesis
  - Scientific seminars and conferences
  - ...

# IFR KRAKOW - EXAMPLES

- Organisation of seminars/conferences for experts



# ENFSI – ET TASK FORCE

- Coordination of E&T in forensics at European level





QUESTIONS?

THANK YOU FOR YOUR ATTENTION

