The Future of Digital Forensics in Cyber Environment - Challenges & Opportunities

AGENDA

- Profile (Dilip Samji)

- Mentor, Booster (Impulsionador) of ITC and Internet in Mozambique

- Recap – Day 1 MozCyber

- What is Digital Forensics

- Digital Forensics Lab and Forensics Process

- Cloud Forensics and Legal Challenges

- IT Career path & Job Opportunities in Forensics

DATA RECOVERY CENTER DRC®
Digital Forensics

Motto for Innovative Mind

Do not Bring problems to a PROBLEM !!

Bring solutions to a PROBLEM

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Não traga problemas ao PROBLEMA !!

Traga soluções ao PROBLEMA

By: Dilip Samji

Dilip Samji
(Profile)

❖ Master of Information Systems Security (Australia)

❖ Master of Cyber Security (Australia)

❖ Microsoft Certified Systems Engineer (MCSE)

❖ `Certified Computer Forensics Examiner (Florida – USA)

❖ Attended Encase Analysis of Windows Artifacts training at Australian Federal Police (Sydney)

❖ Attended Technical Training and Conference in USA, England, France, Spain, Denmark, Sweden, Portugal , Spain, Ireland , Brazil, India, China, Hong Kong, Singapore, Malaysia, Philippines, South Africa and Kenya.

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Dilip Samji
(Profile)

❖ Technical Director of DRC Australia. The head office of DRC in Portugal. Branches in Switzerland, Germany ,Spain, Brazil and Africa.

❖ Technical Manager of Forensic projects and Operations across Australia, New Zealand and Philippines

❖ Worked 10 years for NSW Lotteries – IT Systems Manager
❖ 5 years for Pioneer International – Sydney Branch (Technical Team Leader)
❖   Several Technical positions in Portugal, Africa and Philippines

❖ Certified Digital Forensics Examiner trained in Computer Crime, Internet Fraud, and Computer Forensic Investigators in Florida (**USA**)

❖ Over 25 years member of Australian Computer Society (**ACS**)

❖   3 years member of Australian Information Security Association (**AISA**)

❖   5 years member of American International Forensics Specialist   (**IACIS**)

Mentor, Booster (Impulsionador) of ITC and Internet in Mozambique

Investa em estudos na área de informática e suas especializações.
Novas portas de oportunidades irão abrir-se !!!

Prof. Doutor, Mentor
Venâncio Massingue

REST IN PEACE

Day-1 MozCyber Ideias and Concepts

❖ Prof Doutor Americo Muchanga – Não podemos eliminar os crimes cibernéticos na totalidade, mas sim reduzir riscos e implementar planos de mitigação, resposta e investigação.

❖ Gercia Sequeira – Impulsionar a industria do software local usando profissionais de IT Moçambicanos e investir na formação

❖ Exmo Min. Transportes Eng Carlos Mesquita – Em caso de ataques ciberneticos devemos persegiur os autores do crime digital.

| Utilizadores, Governo, Empresas, Academia etc **Defesa**	Planos de mitigação e , uma equipe de resposta ao incidente (IRT)	Equipe de Investigação Informática Forense (Digital Forensics)	Hackers e Especialista em Crimes Informáticos $$$$ **Ataque**

What is Digital Forensics, Informática Forense , Computação Forense?

- **The process of documenting, identifying, preserving, analyzing ,extracting,validating and collecting the digital evidence in a forensic manner that is technically acceptable and the evidence admissible to court.**

  - **Civil and Criminals Cases**
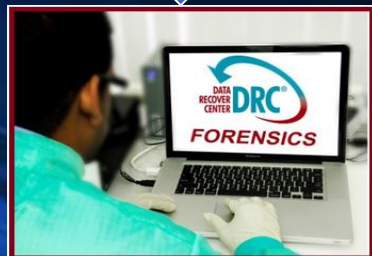
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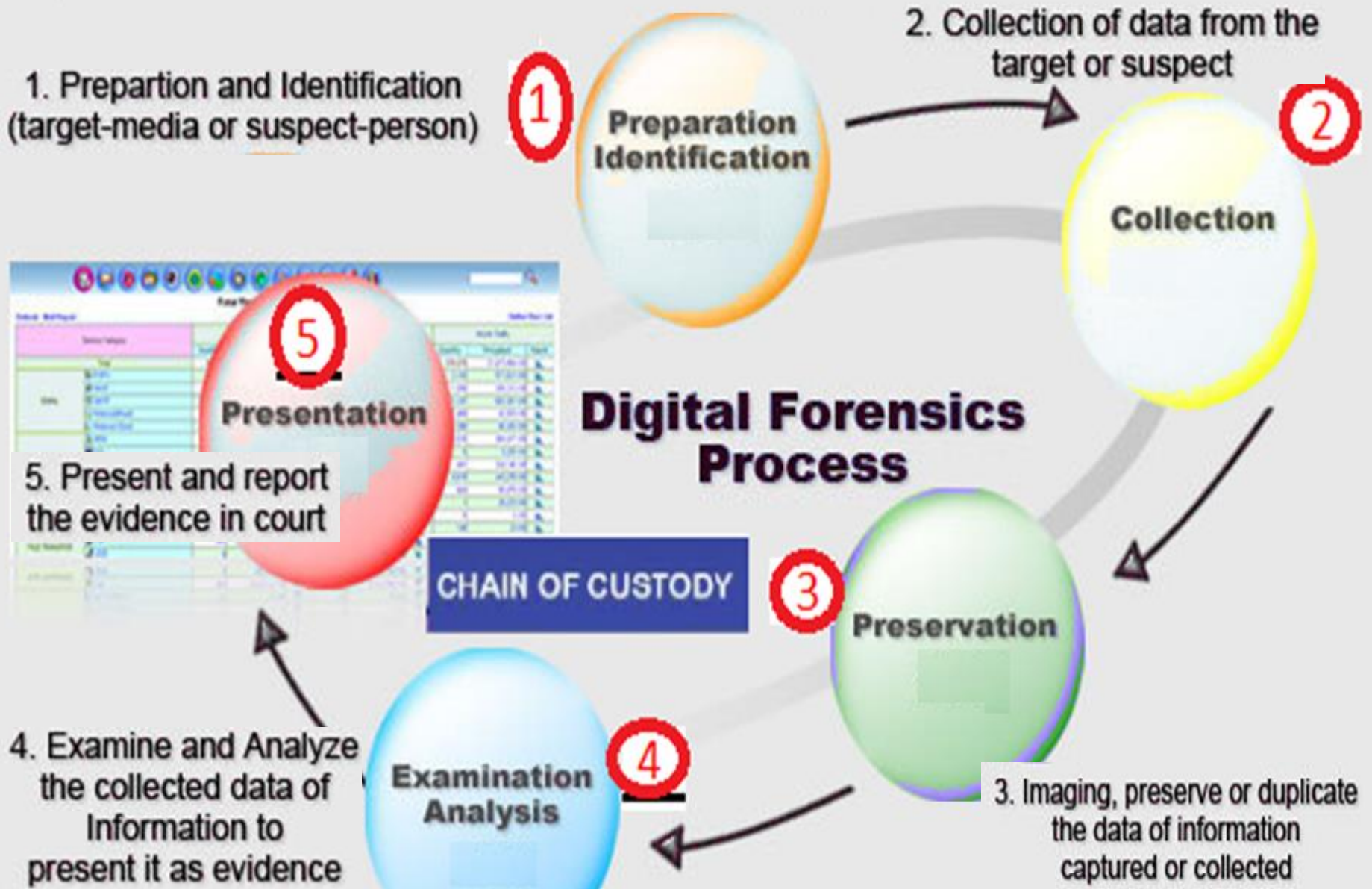
Digital Forensics Lab

1. Hardware Devices / Write Blockers
2. Forensic Software Applications
3. Evidence Collection Accessories
4. Evidence Preservation Devices
5. Digital Data Investigation Kits
6. Other hardware Assemblage Tools

7. Forensic Disk Imaging Tool
8. Mobile Field Kit
9. Different Operating Systems
10egistry Rebuilding Application
11. Password Recovery / Decryption Tool
12. Packet Capturing and Analysis Tool
13. Programming languages
14. Technical Certified staff / Training

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1. Prepartion and Identification (target-media or suspect-person)

2. Collection of data from the target or suspect

Preparation Identification

Collection

Presentation

Digital Forensics Process

5. Present and report the evidence in court

CHAIN OF CUSTODY

Preservation

4. Examine and Analyze the collected data of Information to present it as evidence

Examination Analysis

3. Imaging, preserve or duplicate the data of information captured or collected

Challenges in Digital Forensics

1. Remote delete data on laptop/computer/server

2. Remote wipe phone (Iphone, Android)

3. Lack of training , resources and forensic tools for IoT multiple devices proliferation with variety of operating systems and encryptions

4. Time, and investigation resource for Triage, for the increasing volume of data generated by Email and Social Media (Facebook, Webchat, Gmail, Twitter, Instagram,Skype, Viber, Whatsup**,**
                                    WeChat, QQ
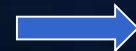
Cloud and Legal Challenges in Digital Forensics

1. Cloud Forensics

1.1. International cross -jurisdiction and legal issues
(To obtain search warrants & subpoenas)

1.2. Cloud multi-tenant data security and privacy issues

1.3. Cloud the data commingled with other customers

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Job Opportunities in Digital Forensics Field

1. Digital Forensics jobs in Law enforcement , AFP and Government

2. Private Digital investigators companies & IT Security Consultancy

3. Lawyers & Legal firms (E-discovery & E-evidence)

4. Insurance Companies or Insurance Partners

5. Banks & Financial Institutions

6. BIG 4 Audit firms (KPMG, PwC, Deloitte, Ernest & Young)

7. Google & www.seek.com

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Digital Forensics

deployed in:

- hacking
- fraud
- paedophiliac rings
- defamation
- immigration fraud
- narcotics trafficking
- credit card cloning
- software piracy

- electoral law
- obscene publication
- perjury
- forgery
- murder
- sexual harassment
- data theft – industrial espionage
- divorce

IT Career Path

1

Systems Auditor

2

Systems Analyst

Project Manager

Application Systems Engineer

3

Technical Engineer

Network Systems

Database Systems

Systems Management

Embedded Systems

Information Security

4

Information Systems Security Administrator

Security Systems Administrator

4

Software Design & Development Engineer **5**

Fundamental IT Engineer (Programmer) **5**

Systems Administrator

Computer / Digital Forensics Jobs in Australia

Senior Manager - Computer Forensics

Kingston Lewis

Sydney > CBD, Inner West & Eastern Suburbs

$130-160K+Super

Information & Communication Technology > Security

Great opportunity to join a growing team in a market leading firm / Work with high profile clients on diverse, challenging projects.

Senior Computer Forensic Consultant

Troy Recruitment

Sydney > CBD, Inner West & Eastern Suburbs

$80,000 - $110,000 + bonus

Information & Communication Technology > Security

Fantastic opportunity to work with the elite in digital forensics, working on interesting and varied cases w major clients. Ongoing training & support

Australian Defence Force Investigator

Defence Force Recruiting

Melbourne > CBD & Inner Suburbs

$79,895 p.a.+superannuation contribution of 16.4%.

Government & Defence > Government - Federal

In Digital Forensics

END

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