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**SECURITY MANAGEMENT IN EAST AFRICA:**

*The East Africa Communications Organizations (EACO)  
Region Experience*

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# 1. Preamble

***Declaration of Principles of the World Summit on the Information Society (WSIS), held in Tunis in 2005 adopted by Heads of States and Governments stated that:***

- Cyber security is threatening the evolution of the Internet and hence a global concern;
- There is need to build confidence and security in the use of ICTs at the national, regional & global levels;
- There is need to also ensure the protection of data and privacy, while dealing with Cyber security issues; and
- ICTs should be used for developmental purposes.



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# 1. Preamble ...

- ✚ Cybersecurity has become a global concern due to:
  - The **global and Borderless nature** of the Internet.
  - The **exponential growth in the use of the Internet**:
    - There are over 1.8 billion Internet users globally.
    - Social Networking: Facebook, Twitter, etc.
    - Convergence between Telecom, broadcasting, IT, etc (IP Telephony, digital TV...).
    - Financial services (E-Commerce, E-Banking, Mobile Money/M-Money.)
    - E-Government Services (E-Tax, E-Procurement, E-Education, E-Health).
- ✚ Hence to ensure security in the Cyberspace requires national, regional and international cooperation.



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## 2. Examples of Cybersecurity issues

- ✚ We are already witnessing highly sophisticated cyber criminal acts on Critical Infrastructure:
  - **April 2007:**
    - Estonia experiences cyber attacks on its critical national infrastructure.
  - **August 2008:**
    - Russia is accused of attacking Georgian government websites in a cyber war that accompanied their military bombardment.
  - **December 2009:**
    - Google detects a highly sophisticated and targeted attack on their corporate infrastructure originating from China.
  - **The Conficker Worm:** Attack on the DNS;
- ✚ As such, Cybersecurity management should be in every country's National ICT Agenda.



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**3.**

**OVERVIEW OF THE  
MANAGEMENT OF  
CYBERSECURITY IN THE E.A  
(EACO) REGION**



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## 3.1. The EACO Cybersecurity Taskforce

### + Definition of EACO:

- East Africa Communications Organization (EACO):
  - ICT Regulators, Telecom Operators, Postal Operators & Broadcasting Operators
- **Member E.A. Countries:** Kenya, Tanzania, Uganda, Rwanda & Burundi;

+ The recent landing of three (3) fibre optic cables along the Coast of the East Africa has led to high Internet speeds and hence exponential growth in the use of the Internet/ICTs in the region:

- On one hand, this has brought East Africa closer to the rest of the global information ecosystem;
- On the other hand, it has made East Africa more prone to cybersecurity attacks (faster speeds favourable to criminals).

+ Hence, East Africa region is **making conscious and deliberate efforts** to enhance Cybersecurity management in the region under the **EACO** banner.



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## 3.1. The EACO Cybersecurity Taskforce ...

- # The EACO Cybersecurity Taskforce was formed in 2008 to coordinate the development of a Cybersecurity management framework for the EACO region.
- # The EACO Taskforce Members are the 5 East Africa Countries:
  - Tanzania,
  - Uganda,
  - Burundi,
  - Rwanda,
  - Kenya.
- # The taskforce is Chaired by Kenya.



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## 3.1. The EACO Cybersecurity Taskforce ...

- ✚ The TOR of the EACO taskforce is to:
  - Facilitate the establishment of National Computer Emergency Response Teams (CERTs) to facilitate Internet-wide response to Cybersecurity events and conduct research targeted at improving the security of existing systems;
  - Coordinate response to Cybersecurity incidents at the regional level;
  - Establish regional and international partnerships with other national entities involved with the management of Cybersecurity incidents;
  - Provide regional Cybersecurity Incident reports annually to EACO member countries, among others.



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## 3.2. Achievements made by EACO Taskforce

- ✚ So far the taskforce has attained several milestones, including:
  - Partnership with the ITU (and IMPACT) in the deployment of National Cybersecurity frameworks;
  - Benchmark visits to Finland and Hungary (2009);
  - Capacity Building workshops:
    - In Kenya in collaboration with ICANN, FIRST, ENISA (March 2010 in Nairobi).
    - In Kenya in collaboration with Symantec (March 2010 in Nairobi).
    - In Uganda in collaboration with the ITU-IMPACT (May 2010 in Uganda).
  - Country Assessment by the ITU-IMPACT on the national CERT establishment needs for the EACO member countries;
  - EACO member countries have now embarked on the establishment of national CERTs in their respective countries.



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**4.**

# **MANAGEMENT OF CYBERSECURITY IN KENYA**

## 4.1. Steps taken by Kenya in Cybersecurity management

- ✚ Kenya has put in place various provisions to enhance the management of cybersecurity:
- ✚ **Enactment of a Law**
  - Provisions of Cybersecurity management are enshrined in the Kenya Communications (Amendment) Act of 2009 which mandates the Communications Commission of Kenya (CCK), Kenya's national ICT Regulatory Authority, to develop a national Electronic Transactions (E-Transactions) framework.

# 4.1. Steps taken by Kenya in Cybersecurity management ...

## + National Cybersecurity Framework

- Establishing a national Computer Emergency Response Team (CERT) known as the 'Kenya Computer Emergency Response Team' (KE-CERT)
- National CERT will coordinate response to cyber security incidents at the national level and cooperate with regional and international entities involved with the management of cybersecurity incidents.
- CERT constituency will comprise of relevant stakeholders.
- **Services:** Proactive, reactive, capacity building, awareness creation and Research & Development

## + National Certification Authority framework

- This will provide the platform for the provision of digital certificates in Kenya.

## 4.1. Steps taken by Kenya in Cybersecurity management ...

### + Collaboration



- Partnership with the International Telecommunication Union (ITU) in the area of cybersecurity management through the International Multistakeholder Partnership Against Cyber Threats (IMPACT).

### + Capacity Building

- March 2010: EACO Cybersecurity workshop in conjunction with ICANN and the Forum for Incident Response and Security Teams (FIRST)
- April 2010: EACO Cybersecurity workshop in conjunction with ITU/IMPACT

## 4.1. Steps taken by Kenya in Cybersecurity management ...

### Domain Name Management

-  Public policy oversight over the management of the dot KE country code Top Level Domain (ccTLD) registry.
-  KENIC is in the process of deploying DNSSEC.



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## 5. Conclusion

- + Cybersecurity management requires a combined effort and collaboration between national, regional and international stakeholders.
- + Harmonization of Cybersecurity management frameworks at the Regional level (at the very least) is key.
- + **E.A. countries** should:
  - Develop relevant Policies, Legal and Regulatory frameworks.
  - Establish national CERTs, thus providing a Trusted Point of Contact (TPOC) in Cybersecurity management. The CERTs main objectives would be to:
    - Coordinate response to cybersecurity incidents;
    - Build Capacity: Technical, legal and policy;
    - Create awareness in cybersecurity;
    - Conduct Research and development in cybersecurity; and
    - Build trust at the National, regional and international level.



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# Thank you

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