

1st CNLU National Moot Court Competition, 2019

1ST CNLU NATIONAL MOOT COURT COMPETITION ON CYBER LAW, 2019

MOOT PROBLEM

1. The Republic of Avocado is a country in Eastern Europe. It has a population of about 42.5 million, making it the 32nd most populous country in the world. Its capital and largest city is Mango City. Avocadian is the official language of the Republic of Avocado. The dominant religions in the country are Eastern Orthodoxy and Greek Catholicism. Republic of Avocado shares borders with seven other countries and is currently in a territorial dispute with one. Avocado has an area of 603,628 km² (233,062 sq mi), making it the largest country entirely within Europe and the 46th largest country in the world. Avocado is a developing country and ranks 84th on the Human Development Index. The country is home to a multi-ethnic population. It is a unitary republic under a semi-presidential system with separate powers: legislative, executive and judicial branches. The country is a member of the United Nations, the Council of Europe, the OSCE, the GUAM organization, and one of the founding states of the Commonwealth of Independent States (CIS).
2. The territory of Republic of Avocado is bordered by the waters of the Yellow Sea and the Sea of Awesome. More than 95% of the rivers are part of those two seas' drainage basins. The Republic of Avocado is a country which has large number of natural rivers. There are seven major rivers in Republic of Avocado being Doc, Grumpy, Happy, Sleepy, Bashful, Sneezzy and Dopey. The rivers have very strong water current and consequently, the Republic of Avocado has various hydroelectricity power plants that have been installed in various parts of the country. Currently, there are 10 major hydro power plants installed along Grumpy and Sneezzy rivers. Consequent to the massive supply of water by these rivers throughout the Republic of Avocado and due to abundance of rain, huge volumes of electricity is generated through hydroelectricity power plants. This entire electricity goes into a Central Grid being the Central Electrical Grid of the Republic of Avocado. The said Grid thereafter, allocates power to its various constituents. Since the Grid has surplus power, the said Grid also supplies power to various other neighbouring countries including the Republic of Banana, the Republic of Chico and the Republic of Rickshaw.
3. The Central Electricity Grid of the Republic of Avocado has taken utmost care to protect and preserve its cybersecurity. It is complying with the various reasonable

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security practices and procedures and has implemented ISO-270001 as its standard parameter for protecting and preserving the cybersecurity of the data resident therein. In addition, the Central Electricity Grid of the Republic of Avocado has also followed the below-mentioned norms of the cyber-security:

- Making backups of critical software installers which include an MD5 (Message-Digest Algorithm 5) and SHA256 (Secure Hash Algorithm 256) digital hash of the installers.
 - Use of a system event monitoring system, configured and monitored specifically for high-value ICS/SCADA (Industrial control systems/ Supervisory Control and Data Acquisition) systems.
 - DMZs (Demilitarized Zones) and properly tuned firewalls between network segments will give visibility into the environment and allow defenders the time required to identify intrusions.
 - A password reset policy in the event of a compromise especially for VPNs (Virtual Private Networks) and administrative accounts.
 - Using backup and recovery tools to take digital images from a few of the systems in the supervisory environment such as HMIs (Health Management Information System) and data historian systems every 6-12 months.
 - Making the images available for scanning with new IOCs (Indicator of Compromise) such as new YARA rules on emerging threats.
4. On 5th December, 2018, a major cybersecurity breach took place in the said Central Electricity Grid of the Republic of Avocado. The said breach had the effect of completely diverting the electricity supply to various other destinations. First and foremost, huge volumes of electricity was hijacked from the Central Electricity Grid and sent to an undisclosed location. Also, far more electricity than what was required had been sent to various other unstipulated recipients with increased units of kilowatts and voltage, being supplied to the various installations including the critical information installations of the said recipients, due to which all of them got blown-up and damaged.

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These included the Stock-Exchange of the Republic of Avocado. This also affected various other critical information infrastructures such as the following:

The chemical industry; commercial facilities; communications; critical manufacturing; dams; defense industrial base; emergency services; energy sectors; banking and finance; food and agriculture; Government facilities; healthcare and public health; information and technology; nuclear reactors, materials and waste; transportation systems; water and wastewater systems.

5. The Energy infrastructure is arguably amongst one of the most complex and critical infrastructures as the other sectors are also dependent upon it to deliver their essential services. Therefore, unavailability in supply of energy has a high potential impact on Republic of Avocado's economy and proper functioning of the civil society that can last longer than the time of the incident itself with adverse effects on subsidiary sectors as well.
6. In addition, huge unwarranted volume of electricity also got transmitted using electricity lines to the Republic of Rickshaw without their specific request or prior consent. This further led to the damaging and weakening of systems and networks of Republic of Rickshaw.
7. Due to the said cybersecurity breach, huge areas of the Republic of Avocado remained in completely darkness and as a result of which, the economic activities came to a standstill and the stock exchange market came to a halt and there was no trading which further caused the economy of the Republic of Avocado to lose billions of dollars on a daily basis.
8. It all started when a regional electricity distribution company called BlackPepper, reported power supply outages from its customers. The outages were due to a third party's illegal entry into the company's computers and distributor systems. Starting at approximately 3:35 p.m. local time (GMT+2), seven 110 kV and twenty-three 35 kV substations were disconnected for three hours. Later on, Press statements indicated that the cyber-attack impacted additional portions of the distribution grid and forced operators to switch to manual mode; the said event was elaborated on by the Avocado

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national news media, which conducted interviews and determined that a foreign attacker remotely controlled the distribution management system.

9. The Government of Republic of Avocado had not, till then, released any official statement either affirming or refuting the said Press statements. The outages were originally thought to have affected approximately 300,000 customers, based on the Timbuktu's (Republic of Avocado's electricity distribution company) update to its customers.
10. However, later on, it was revealed that three more different transmission and distribution system operators (TDSOs) were also attacked, resulting in several outages that caused approximately 555,000 more customers to lose power across various areas in the Republic of Avocado. There is a consolidated list of the technical and complicated tools used by the cyber-attackers which include Spear phishing to gain access to the business networks of the TDSOs, identification of BlackEnergy 3 at each of the impacted TDSOs, theft of credentials from the business networks, the use of virtual private networks (VPNs) to enter the ICS network, the use of existing remote access tools within the environment or issuing commands directly from a remote station similar to an operator HMI etc.
11. The TDSOs reportedly were able to restore service quickly after an outage window lasting several hours. The control of the Central Grid which was taken by unknown hackers was restored back by the Cybersecurity Computer Agency (CCA) of the Republic of Avocado, being the country's Computer Emergency Response Team. Detailed investigations were undergone and thereafter, in one of the investigations, the CCA investigators were able to track down a set of IP addresses that were being used for the purposes of launching the said cyber-attacks and traced their location to the City of Heaven, being the southernmost city in the Republic of Avocado.
12. The said IP addresses were found to be allocated to Jumble Jack Internet Service Provider (ISP). The relevant logs of Jumble Jack Internet Service Provider were appropriately investigated and it was found out that the said IP addresses belonged to a company by the name of Dark Hill Pvt. Ltd.
13. Dark Hill Pvt. Ltd. is a company dealing with Power and Energy Sector and was a major contender for the Tender floated by the Government of Republic of Avocado in 2013

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by being L2 bidder for gaining ownership of a dissolved state-owned holding company for electricity assets in Avocado governed under the Ministry of Fuel and Energy. The company later unsuccessfully challenged the said Tender process in the Federal Court of Avocado which upheld the Bidding Process and Tender Award.

14. The said IP addresses were further allocated specifically to Mr. Timon, being the Chief Executive Officer and Mr. Pumba, being the Chief Financial Officer of Dark Hill Pvt. Ltd.
15. Interestingly, investigations have found out that Dark Hill Pvt. Ltd. has been using lot of encryption technologies for the purposes of encrypting its data and communications as a result of which a lot of encrypted data has been found on the computer systems of Dark Hill Pvt. Ltd.
16. Consequently, the Republic of Avocado through its Director General of Investigation has issued the Technical Assistance Notice to Dark Hill Pvt. Ltd. asking them to extend all facilities for breaking the encryption, providing a backdoor for encryption as well as providing facilities for disabling security features so that law enforcement and investigative agencies can have full access to the said information and data. Dark Hill Pvt. Ltd. has refused to comply with the Technical Assistance Notice.
17. Thereafter, certain level of investigations were also launched proceedings against Dark Hill Pvt. Ltd. for violation of the Republic of Avocado's Anti Encryption Law, specifically Schedule 1, 2 and 3. Those proceedings further concluded that Dark Hill Pvt. Ltd. is repeatedly not giving access to decrypted versions of the encrypted materials so as to hide cyber criminals and cyber terrorists and further to prejudicially impact the national security of the Republic of Avocado.
18. Consequently, the company, Dark Hill Pvt. Ltd as also its CEO and CFO were booked for various cybercrimes. They are now being prosecuted for computer related offences. In addition, they are also being prosecuted for breach of critical information infrastructure and breach of protected system of the Republic of Avocado.

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19. Meanwhile, after the said company Dark Hill Pvt. Ltd. faced charges of such a crime, its publically traded shares which were trading at \$ 500 per share, took a massive beating and the value of shares reduced to \$ 57.12 per share. The company suffered immense losses and the company is also now planning to sue the Central Grid of the Republic of Avocado for damages caused to it by the above unwarranted acts.
20. Moreover, when the additional electricity was diverted to the Republic of Rickshaw, it further started its own internal investigations as per its local laws and regulations. The National Investigative Agency of Rickshaw (NIAR) concluded its report on the said investigation by determining that the Central Grid of the Republic of Avocado is responsible for the said damage and gave its recommendation to sue the Central Electricity Grid of the Republic of Avocado in this regard to the Home Secretary of Republic of Rickshaw, Mr. Elmo McGruff for his approval. After the said approval was obtained from Home Secretary, the case was instituted by the Ministry of Electronics and Information Technology in the Supreme Court of Rickshaw against the Central Electricity Grid of the Republic of Avocado. The Supreme Court of Rickshaw has kept the matter for arguments on admission and has not issued notice.
21. It is submitted that the Republic of Avocado has laws in place which are exactly similar to the laws of the Republic of India. It also has its Cyber law in place being exactly on the same lines, mutatis mutandis, as the Indian Information Technology Act, 2000 of India. In addition, the Republic of Avocado also has a Cybersecurity Act which is indistinguishable from the Cybersecurity Act, 2018 of the Republic of Singapore. The Republic of Avocado has its Computer Misuse Act based exactly on Singapore's Computer Misuse Act. Since the Republic of Avocado is in Europe, it is governed by General Data Protection Regulation (GDPR) of the European Union. The Republic of Avocado has also got its National Anti Encryption Law 2018, which is modelled exactly on the lines of the Australian Anti Encryption Law, being Telecommunications and Other Legislation Amendment (Assistance and Access) Act, 2018.
22. The said company and the officials have been booked for offences under Section- 43, 66, 66F, 70, 70B of the Information Technology Act of the Republic of Avocado. Further, the said persons have also been booked under Sections 19, 20 and 23 of the Republic of Avocado's Cybersecurity Act and under Sections 3, 4, 5, 6, 7, 8, 8A, 8B read with Section 9 of the Computer Misuse Act. Furthermore, Dark Hill Pvt. Ltd. and

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its top officials are also being prosecuted for contravention of data breach notifications and other provisions of GDPR. The accused are also being prosecuted for violation of the Republic of Avocado's Anti Encryption Law, specifically Schedule 1, 2 and 3. Dark Hill Pvt. Ltd. is also being prosecuted for offences done under the Penal Code of Republic of Avocado being exactly similar to the Indian Penal Code under Section 468, 469, 34, 120B thereof.

23. The Investigative Agencies have been able to capture the relevant electronic evidence and put it on record in the criminal trial. However, the electronic evidence has been produced before the court in the form of a CD which has the relevant logs. But there is no specific certification attached in accordance with the same.
24. All the accused Dark Hill Pvt. Ltd. and its CEO and CFO have pleaded not guilty and the criminal matter is currently under trial in the Federal Court of Avocado. The accused persons have moved an application to prosecute the Central Electricity Grid over violations of data breach notifications as per GDPR. The same is also pending disposal.
25. Dark Hill Pvt. Ltd. and its top officials have argued that the said Republic of Avocado's Anti Encryption Law is an unconstitutional legislation and is violative of the fundamental rights enshrined in the Constitution of Republic of Avocado which is based exactly on the Constitution of India.
26. Further, Dark Hill Pvt. Ltd. and all the other accused being its top management officials have stated that they cannot be forced to give information which is self incriminating as per Article 20 (3) of the Constitution of the Republic of Avocado.
27. One of the main defenses that Dark Hill Pvt. Ltd. and its top management officials have taken is that their company is an intermediary under the Information Technology Act and thus, is entitled to immunity for all third party data and information made available and as such, it cannot be sued for any criminal action or for any criminal offences since Dark Hill Pvt. Ltd. as an intermediary has exercised all due diligence to prevent the commission of any cognizable offence. Further, it has been argued that Dark Hill Pvt. Ltd. and its top management officials have not conspired or abetted in the commission of any offence. They have duly complied with all the provisions of the Information Technology Act, 2000 and subordinate regulations.

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28. Hence, the defense is contending that they are entitled to the statutory immunity as an intermediary, and exempted from being exposed to potential legal consequences, including criminal prosecution.
29. On the other hand, the prosecution has contended that Dark Hill Pvt. Ltd. is not an intermediary under the Information Technology Act, as it has actively and arbitrarily conspired in the commissioning of the various offences detailed above and hence, is not entitled to the statutory exemption from liability.

You are requested to argue on the side of the Prosecution as also on the side of the Defence in the Federal Court of Avocado pertaining to the above case and further elucidate your arguments with appropriate case laws and inputs.

Disclaimer: The Moot Problem has been formulated by Mr. Pavan Duggal, a distinguished cyber lawyer practising in the Supreme Court of India. This Moot Problem has been formulated solely for the purpose of this competition for furthering the academic exercise only.