An Analysis of Digital Forensic Laboratory Development among Malaysia's Law Enforcement Agencies

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Abstract : Cybercrime is on the rise, and yet many Law Enforcement Agencies (LEAs) in Malaysia have no Digital Forensics Laboratory (DFL) to assist them in the attrition and analysis of digital evidence. From the estimated number of 30 LEAs in Malaysia, sadly, only eight of them owned a DFL. All of the DFLs are concentrated in the capital of Malaysia and none at the state level. LEAs are still depending on the national DFL (CyberSecurity Malaysia) even for simple and straightforward cases. A survey was conducted among LEAs in Malaysia owning a DFL to understand their history of establishing the DFL, the challenges that they faced and the significance of the DFL to their case investigation. The results showed that the while some LEAs faced no challenge in establishing a DFL, some of them took seven to 10 years to do so. The reason was due to the difficulty in convincing their management because of the high costs involved. The results also revealed that with the establishment of a DFL, LEAs were better able to get faster forensic result and to meet agency's timeline expectation. It is also found that LEAs were also able to get more meaningful forensic results on cases that require niche expertise, compared to sending off cases to the national DFL. Other than that, cases are getting more complex, and hence, a continuous stream of budget for equipment and training is inevitable. The result derived from the study is hoped to be used by other LEAs in justifying to their management the benefits of establishing an in-house DFL.

Keywords : digital evidence, digital forensics, digital forensics laboratory, law enforcement agency

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