

基於COBIT與ISO 27001建構資訊安全治理：以健保局為例

張淑清、曹偉駿

E-mail: 9707252@mail.dyu.edu.tw

摘要

自1997年以來我國全面實施電子化政府，健保局為因應電子化政府的推動，因而建置健保IC卡及電子病歷交換等相關技術，雖然可省去換卡及資料交換的問題，但是健保資料其牽涉範圍極大且攸關全國人民隱私權，因此對於健保資料的保護，不僅是健保局的責任，國家也必須負起監督的義務。因此，本研究針對隸屬於行政院衛生署之健保局為研究對象，藉由ISO 27001與COBIT之關聯性達成資訊安全治理。本研究透過個案研究的方式，第一階段主要是探討中央健康保險局之資訊安全概況；第二階段則是將ISO 27001納入COBIT中，且對該局之決策者以及資訊相關人員進行深度訪談，並以策略、技術、組織、人力及環境之主題推導出相關命題，且針對健保局提供資訊安全治理策略之建議，促使健保局達成營運永續之願景。

關鍵詞：資訊安全管理；資訊技術控制目標；國際資訊安全標準；資訊技術治理；資訊安全治理

目錄

中文摘要	iii	英文摘要	iii
iv 誌謝辭		v 內容目錄	
. vi 表目錄		viii 圖目錄	
... ix 第一章 緒論	1	第一節 研究背景與動機	1
... 1 第二節 研究目的	3	第三節 研究限制與範圍	3
... 4 第四節 研究流程	4	第二章 文獻探討	4
... 7 第一節 資訊安全	7	第二節 資訊技術治理	7
... 16 第三節 資訊安全治理	20	第四節 COBIT與ISO 27001之探討	20
... 26 第三章 研究設計與方法	37	第一節 研究設計	37
... 37 第二節 研究方法	39	第四章 研究過程與分析	39
... 47 第一節 個案探討	47	第二節 命題推導	47
... 53 第三節 研究成果	67	第五章 結論與建議	67
... 69 第一節 結論	69	第二節 建議	69
... 70 參考文獻	72		

參考文獻

一、中文部份 中央健康保險局(2008a)，中央健康保險局簡介[線上資料]，來源：http://www.nhi.gov.tw/webdata/webdata.asp?menu=1&menu_id=3&webdata_id=1159&WD_ID=16[2008, January 19]。中央健康保險局(2008b)，中央健康保險局全球資訊網隱私保護及安全政策[線上資料]，來源：<http://www.nhi.gov.tw/950322網站隱私保護政策.htm>[2008, January 2]。中央健康保險局網站(2005)，全民健康保險統計動向[線上資料]，來源：[http://www.nhi.gov.tw/webdata/webdata.asp?menu=1&menu_id=4&webdata_id=2063&WD_ID=\[2008, Januar y 21\]](http://www.nhi.gov.tw/webdata/webdata.asp?menu=1&menu_id=4&webdata_id=2063&WD_ID=[2008, Januar y 21])。中華民國監察院(2004)，中央健康保險局之糾正案文[線上資料]，來源：<http://www.cy.gov.tw/index.asp>[2008, January 6]。朱惠中，廖崇賢，陳惠娟(2006)，從管理層面探討當前的資訊安全問題，2006年資訊管理學術與實務研討會論文集，161-168。行政院研究發展考核委員會(2008a)，行政院及所屬各機關資訊安全管理要點[線上資料]，來源：<http://www.rdec.gov.tw/lp.asp?CtNode=3608&CtUnit=743&BasedSD=7&nowPage=2&pageSize=25>[2008, January 20]。行政院研究發展考核委員會(2008b)，行政院及所屬各機關資訊安全管理規範[線上資料]，來源：<http://www.rdec.gov.tw/lp.asp?CtNode=3608&CtUnit=743&BasedSD=7&nowPage=2&pageSize=25>[2008, December 20]。李菱菱(2001)，國民健保IC卡之規劃與推動，研考雙月刊，25(1)，50-57。孫淑景(2003)，內控處理準則電腦資訊循環之個案研究-以BS7799資訊安全及COBIT控制目標為例，中原大學會計學系未出版之碩士論文，4-21。曹子珊，曹偉駿(2004)，基於平衡計分卡架構設計適用於金融控股產業之資訊安全管理研究，電腦稽核，11，54-69。葉俊榮(2005)，電子化政府資通安全發展策略與展望，研考雙月刊，29(1)，20-34。劉見祥(2006)，捍衛醫療資訊隱私權健保憑證邁入新紀元[線上資料]，來源：http://www.nhi.gov.tw/webdata/webdata.asp?menu=1&menu_id=&webdata_ID=1419[2008, January 10]。樊國楨(2003)，資訊安全管理系統與稽核，行政院國家科學委員會科學技術資料中心，台北:行政院國家科學委員會。謝安田(2006)，企業研究方法論(第三版)，彰化:著者發行。樊國楨，林樹國，鄭東昇(2005)，資

訊安全保證框架標準初探:根基於ISO/IEC 17799: 2005-06-15之12.6.1節, 資通安全分析專論T94003, 1-33。梁定澎(1997), 資訊管理研究方法總論, 資訊管理學報, 4(1), 1-6。李東峰(2001), 企業資訊安全控制制度之研究, 第三屆全國資訊管理博士生聯合研討會論文集, 1-22。吳琮璠(1997), 資訊管理個案研究方法, 資訊管理學報, 4(1), 7-17。二、英文部份 Andersen, K. V., & Henriksen, H. Z. (2006). E-Government maturity models: Extension of the Layne and Lee model. *Government Information Quarterly*, 23(2), 236-248. Andersen, W. P. (2001). Information security governance. *Informati- on Security Technical Report*, 6(3), 60-70. Elsevier Ltd. Bakry, S. H. (2004). Development of e-Government: A STOPE view. *International Journal of Network Management*, 14(5), 339-350. Bonoma, T. V. (1985). Case research in marketing: Opportunities, problems, and a process. *Journal of Marketing Research*, 22, 199-208. Broderick, J. S. (2006). ISMS, security standards and security regulations. *Information Security Technical Report*, 11(1), 26-31. Elsevier Ltd. Brown, A. E., & Grant, G. G. (2005). Framing the frameworks: a review of IT governance research, *Communications of the Association for Information Systems*, 15, 696-712. Churgin, P. G. (1995). Computerized patient records: The patients' response. *Hmo Practice / Hmo Group*, 9(4), 182-185. CNS 27001: 2007 (2007). *Information Technology - Information Security Management System - Requirements*, Chinese National Standard. Taipei: Author. CNS 27002: 2007 (2007). *Information Technology - Information Technology - Security Techniques - Code of Practice for Information Security Management*, Chinese National Standard. Taipei: Author. Computer Security Institute. (2007). 2007 computer crime and security survey. Arlington, Virginia. Dyer, C. (1986). Disclosure of medical records in litigation. *British Medical Journal*, 293, 1298. Eloff, M. M. & Von Solms, B. (2000). Information security management: An approach to combine process certification and product evaluation. *Computers & Security*, 19(8), 698-709. Esteves, J., & Joseph, R. C. (2008). A comprehensive framework for the assessment of e-Government projects. *Government Informa Forte*, D. (2008). Selling security to top management. *Network Security*, 2008(3), 18-20. Gadd, C. S., & Penrod, L. E. (2000). Dichotomy between physicians' and patients' attitudes regarding EMR use during outpatient encounters. *Proceedings/ AMIA Annual Symposium*, 275-279. Hall, M. A., & Rich, S. S. (2000). Genetic privacy laws and patients' fear of discrimination by health insurers: the view from genetic counselors. *The Journal of law, medicine & Ethics: a journal of the American Society of Law, Medicine & Ethics*, 28(3), 245-257. Hardy, G. (2006). Using IT governance and COBIT to deliver value with IT and respond to legal, regulatory and compliance challenges, *Information Security Technical Report*, 11(1), 55-61. Elsevier Ltd. Hebert, M. A. (1998). Impact of IT on Health Care Professionals: Changes in work and the productivity paradox. *Health services management research: an official journal of the Association of University Programs in Health Administration / HSMC, AUPH*, 11(2), 69-79. Information Systems Audit and Control Association. (2002). *IS Standards, Guidelines and Procedures for Auditing and Control Professionals*. Illinois: Author ISO 27001: 2005. (2005). *Information technology - Security techniques - Information security management systems - Requirements*. International Organization for Standardization. Geneva, Switzerland: Author ISO 27002: 2005. (2005). *Information Technology - Security Techniques - Code of Practice for Information Security Management*. International Organization for Standardization. Geneva, Switzerland: Author. IT Governance Institute. (2007). *COBIT: Control Objectives Management Guidelines Maturity Models* (4.1th ed.). United States of America: Author. Johnson, E. C. (2006). Security awareness: switch to a better programme. *Network Security*, 2006(2), 15-18. Moulton, R., & Coles, R. S. (2003). Applying information security governance. *Computers & Security*, 22(7), 580-584. National Institute of Standards and Technology. (2007). *NIST Special Publication 800-100, Information security handbook, A guide for managers*. Organization for Economic Co-Operation and Development. (1992). *OECD Guidelines for the Security of Information Systems*. Paris: Author. Organization for Economic Co-Operation and Development. (2001). *Guidelines for the Security of Information System*. (Rev. Ed.). Paris: Author. Organization for Economic Co-Operation and Development. (2002). *Guidelines of the Security Information System and Networks - Towards a Culture of Security*. Paris: Author. Ozier, W. (1997). Generally accepted system security principles, *Computer Security Journal*, 13(2), 69-75. Pasquinucci, A. (2007). Security, risk analysis and governance: a practical approach. *Computer Fraud & Security*, 2007(7), 12-14. Prakash, A., & Hart, J. A. (1999). *Globalization and Governance: An Introduction*. London: Routledge. Relyea, H. C. (2008). Federal government information policy and public policy analysis: A brief overview, *Library & Information Science Research*, 30(1), 2-21. Rusell, D. & Gangemi, G. T. (1992). *Computer Security Basics*. California : O ' Reilly & Associates Inc. Saleh, M. S., Alrabiah, A., & Bakry, S. H. (2007). Using ISO 17799: 2005 information security management: A STOPE view with six sigma approach. *International Journal of Network Management*, 7(1), 85-97. Schneider, E. C., & Therkalsen, G. W. (1990). How secure are your system? *Avenues to Automation*, 68-72. Schultz, E. E., Proctor, R. W., & Lien, M. C. (2001). Usability and security an appraisal of usability issues in information security methods. *Computer & Security*, 20(7), 620-634. Schwarz, A., & Hirschheim, R. (2003). An extended platform logic perspective of IT governance: managing perceptions and activities of IT. *Journal of Strategic Information Systems*, 12(2), 129-166. tion Quarterly, 25(1), 118-132. Wilson, P. (2007). Governance and security: Side by side. *Computer Fraud & Security*, 2007(4), 15-16. Von Solms, B., & Von Solms, R. (2004). The 10 deadly sins of information security management. *Computers & Security*, 23(5), 371-376. Von Solms, B. (2005). Information security governance: COBIT or ISO 1997 or both? *Computers & Security*, 24(2), 99-104. Von Solms, B. (2006). *Information security - The fourth wave*. *Computers & Security*, 25(3), 165-168. Von Solms, R. (1996). Information security management: The second generation. *Computer & Security*, 15(4), 281-288. Von Solms, R., & Von Solms, B. (2006). Information security governance: A model based on the direct - Control cycle, *Computers & Security*, 25(6), 408-412. Yin, R. K. (1989). Case study research: Design and methods. (Rev. ed.). Newbury Park, California: Sage Publications. Yin, R. K. (2001). Case study research: Deign and method. Sage Publications.