朝陽科技大學 097學年度第1學期教學大綱
Introduction to Information Hiding 資訊隱藏概論

當期課號	2612	Course Number	2612
授課教師	呂慈純	Instructor	TZU,CHUEN LU
中文課名	資訊隱藏概論	Course Name	Introduction to Information Hiding
開課單位	資訊管理系(四日)三A	Department	
修習別	選修	Required/Elective	Elective
學分數	3	Credits	3
課程目標	本課程將探討兩大研究主題：訊息藏匿 (steganography) 和數位浮水印 (digital watermarking)。人類自古以來就發明許多的資訊隱藏技術，例如：利用特殊墨水寫下隱形文字、利用文字安排將訊息藏於看似正常的文章中、以及微縮影片藏密等等。進入數位時代，這些技術將如何以數位方式實現？如何利用網路傳遞秘密訊息而不爲人察覺或破解？另一方面，過去各類具智慧財產權之作品大多以簽章方式宣告著作權，在數位世界裡，人工簽章已不可行，而且資料的修改變得非常容易且不易察覺，如何進一步保障數位產品的完整性及其著作權？這些新一代的數位問題將在本課程中深入探討。資訊隱藏結合了各方不同的研究領域，包括影像處理、資訊安全、資訊理論、統計學等，是個有趣並且多采多姿的新研究領域。	Objectives	Two main topics will be discussed in this course: steganography and digital watermarking. There has been a number of information hiding techniques since the development of human civilization, for example, invisible characters written with special ink, information hidden via rearrangement of the words in a seemingly normal article, and information hidden in microfilms, etc. How will these techniques be implemented in the digital era? How to transmit secret messages through the Internet without causing any notification? On the other hand, hand written signatures were usually used in the past to assert the copyrights of intellectual properties. As they are obviously infeasible for digital products, how to protect the products' integrity and copyright, especially when they can be easily modified? These types of digital problems will be fully discussed in this course. Information hiding is a new area which combines research areas of image processing, information security, information theory, statistics, and so on. It is a new and interesting research topic.
教材	主要作者 Johnson Neil F 書名/作者 Information hiding : steganography and watermarking : attacks and countermeasures / by Neil F. Johnson, Zoran Duric, Sushil Jajodia 出版項 Boston, MA : Kluwer Academic, c2001 書名/作者 Disappearing cryptography : information hiding : steganography & watermarking / Peter Wayner. 出版項 San Francisco, Calif. : MK/Morgan Kaufmann Pub., 2002. 版本項 2nd ed.	Teaching Materials	主要作者 Johnson Neil F 書名/作者 Information hiding : steganography and watermarking : attacks and countermeasures / by Neil F. Johnson, Zoran Duric, Sushil Jajodia 出版項 Boston, MA : Kluwer Academic, c2001 書名/作者 Disappearing cryptography : information hiding : steganography & watermarking / Peter Wayner. 出版項 San Francisco, Calif. : MK/Morgan Kaufmann Pub., 2002. 版本項 2nd ed.
成績評量方式	■平時成績： 10% ■期中考試： 30% ■期中報告： 20% ■期末專題： 40%	Grading	1.discussion 10% 2.case 20% 3.test 30% 4.project 40%
教師網頁	http://www.cyut.edu.tw/~tclu		
教學內容	1. 資訊隱藏概念 2. 隱像術 3. 文字隱藏 4. 磁碟空間隱藏 5. 影片及聲音隱藏 6. 浮水印	Syllabus	1. Hiding information 2. Steganography 3. Hiding in Text 4. Hiding in Disk Space 5. Hiding in Audio and Images 6. Watermark

	7. 攻擊		7. Attacks

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