



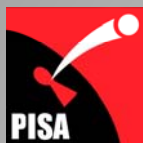
香港無線局域網安全調研報告 簡介

講者：方健僑先生 KEN FONG

香港無線科技商會主席



資料來源：香港無線科技商會及專業資訊保安協會於2009年進行之無線網路應用保安普查報告
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主辦機構

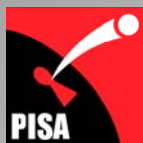


Professional Information Security
Association (PISA)
專業資訊保安協會

Hong Kong Wireless Technology
Industry Association (WTIA)
香港無線科技商會

贊助

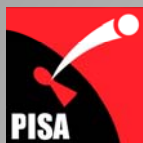




關於SafeWiFi.HK

- 提高市民對Wi-Fi保安的意識
- 網站：www.SafeWiFi.hk提供豐富的Wi-Fi安全知識
- WTIA 與PISA攜手進行香港無線局域網安全調查及其他推廣活動

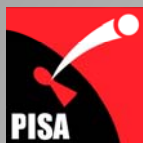




有關WTIA

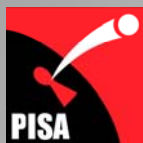


Hong Kong Wireless Technology Industry Association
www.hkwtia.org



有關WTIA

- 香港無線科技商會(WTIA)成立於2001年，其中旨包括：
- 代表無線科技行業向政府及國際組織發表意見，為業界維護本身的權益
- 推動香港無線科技應用的發展、使用及認知
- 促進業界不同種類公司間的溝通及合作
- 提升在無線科技應用方案中軟體及硬體的專業標準



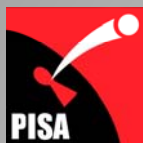
有關WTIA

- 香港無線科技商會(WTIA)現有超過170個來自本地及外地的公司會員，包括流動網路營運商、流動器材生產商、軟硬體經銷商、系統集成商、無線應用開發商，流動內容供貨應商等。
- 商會積極與政府、其他商會和商業機構保持緊密合作，統籌並舉辦不同類型產品和技術的重要推廣活動以促進業界的發展。



無線局域網安全調研報告

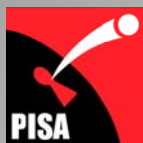
- HK Wi-Fi Security Survey
- 昵稱：HK War Driving
- WTIA、PISA 之中立定義：
利用無線裝置以非闖入方式沿街掃描無線局域網；
搜尋網路的名稱、訊號及位置



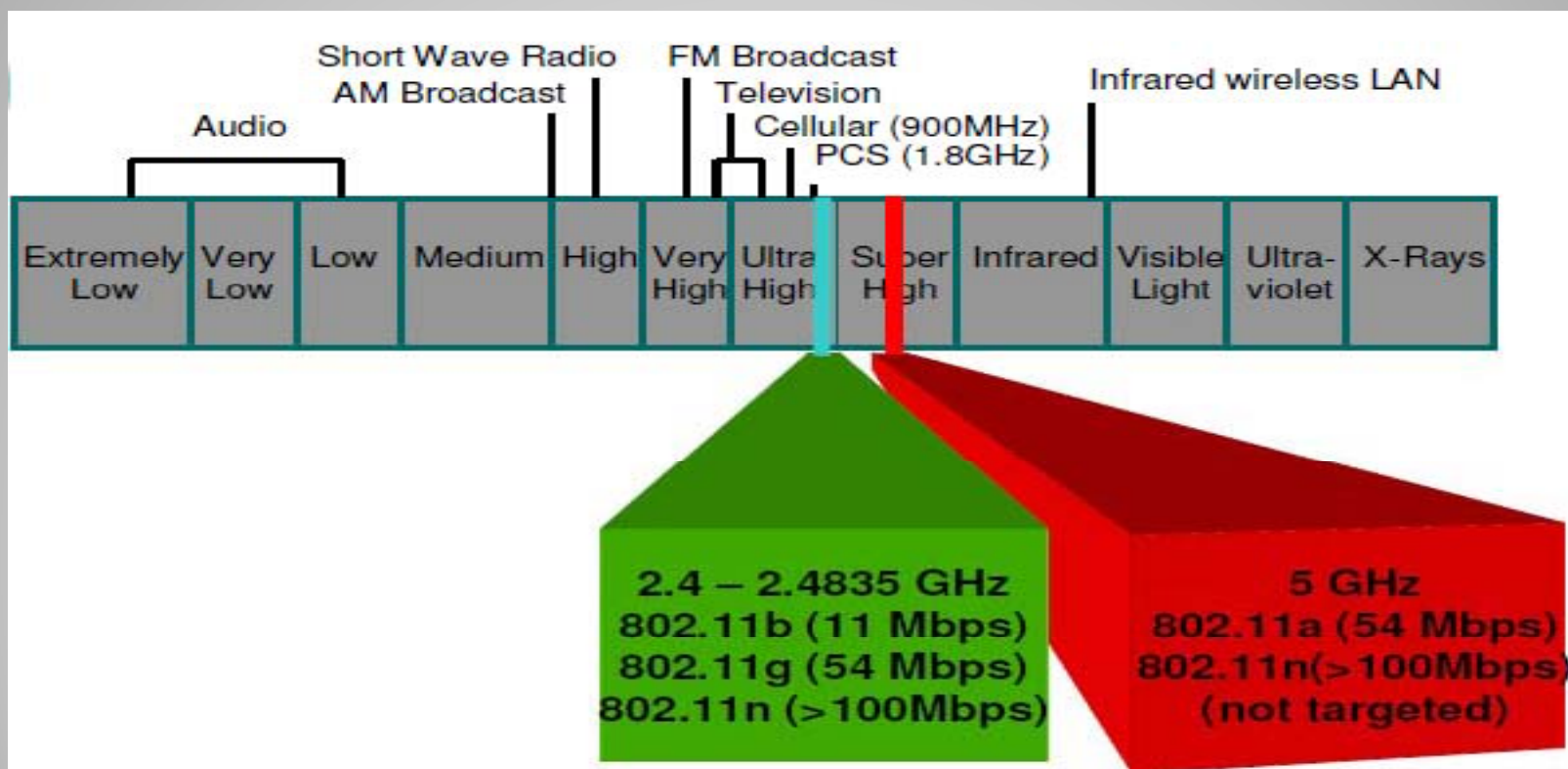
無線局域網的保安危機

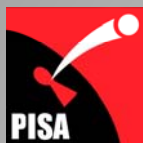
- 訊息可能被截取
- 導致個人資料被盜
- 被駭客入侵網路及電腦
- 被利用作非法用途





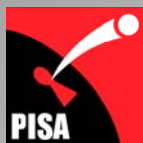
2.4G 免授權頻普 - 我們的焦點





調研局域網的道德守則

- 以研究為示旨，瞭解無線局域網的保安狀況以提高市民對無線局域網的保安意識
- 不公開個別欠安全的接入點之所在位置和用戶名稱-只公佈綜合資料
- 不連接入欠安全之接入點，更不進一步搜尋其弱點
- 不妨礙/堵塞任何無線局域網



歷屆WTIA/ PISA War Driving

年份	電車路線	其他路線
2002	路線A (Route A)	N/A
2003	路線A&B(Route A&B)	香港山頂 – 長距War Driving
2004	路線A&B(Route A&B)	維港渡輪-War Sailing
2005	路線A&B(Route A&B)	九龍- 汽車及巴士
2006	路線A&B(Route A&B)	香港島環島遊- 小巴
2007	路線A&B(Route A&B)	澳門War Driving
2008	路線A&B(Route A&B)	山頂-九龍-新界及澳門 War Driving
2009	路線A&B(Route A&B)	九龍-新界公共及私人屋苑 War Driving



War Tramming 路線 A & B



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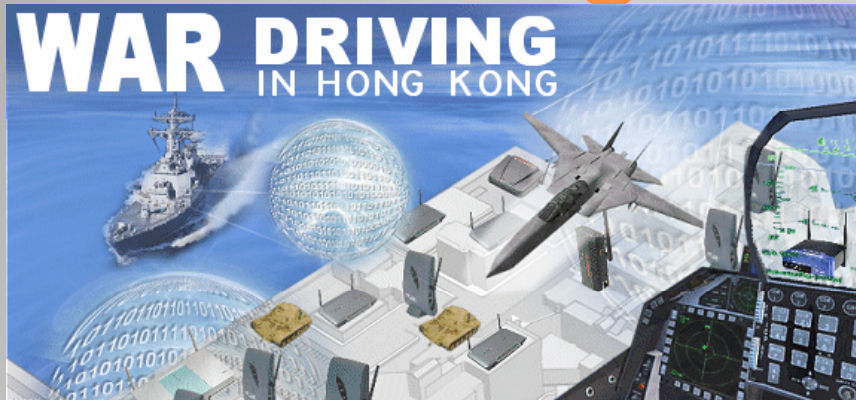
War Driving 2003



Two Checkpoints on the Victoria Peak
Point <1> Peak-West Point <2> Peak-East (near Peak Tram Station)



War Driving 2004



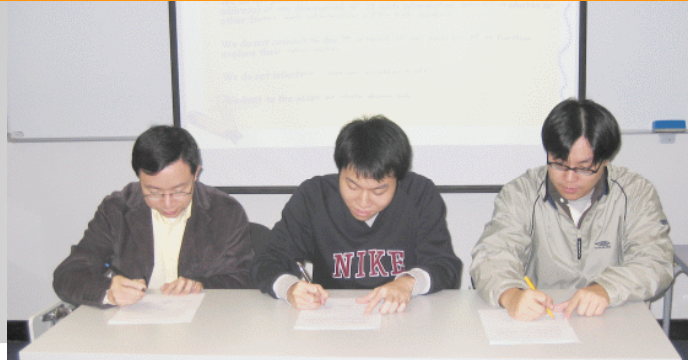
Jointly Organized



Professional Information Security Association



WTIA 香港無線科技商會



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War Driving 2005



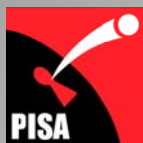
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War Driving 2006



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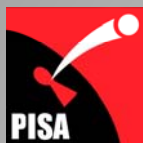
War Driving 2007



港澳兩地的 無線局域網



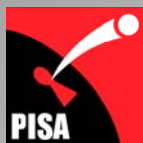
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香港無線網路應用保安普查 (War Driving) 2008

香港最全面的War-driving普查：
覆蓋香港島(電車沿線)、九龍、新界及維多利亞港一帶

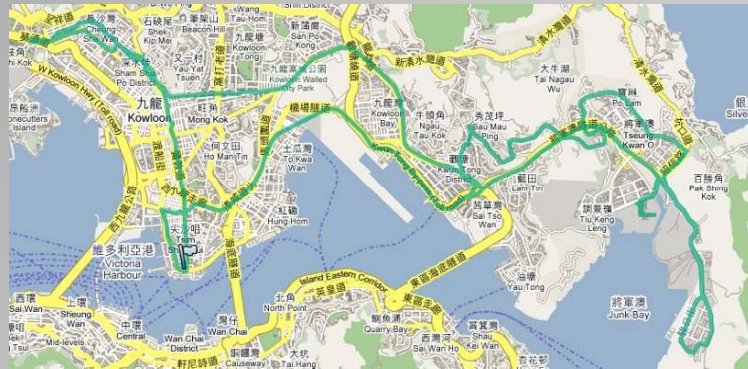




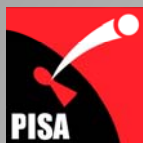
香港無線網路應用保安普查 (War Driving) 2009

覆蓋香港、九龍、新界及公共與私人屋苑





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香港無線網路應用保安普查 (War Driving) 2009 –宗旨

- 瞭解無線局域網的保安狀況
- 利用2002-2008歷年的資料，評估成效
- 進行非闖入方式無線局域網之研究
- 提高市民對無線局域網的保安意識
- 比較公共與私人屋苑使用加密的方法
- 評估鄰近地區(如澳門)的狀況



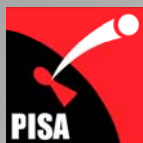
配備應用

硬體：

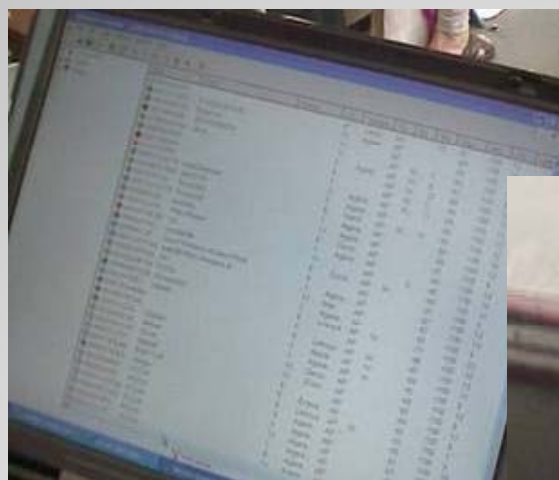
- 筆記簿電腦
- 智慧型電話
- WLAN Card、天線及全球定位系統 (GPS)

軟體：

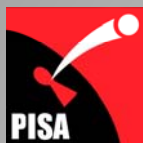
- Vistumbler
- (<http://vistumbler.sourceforge.net>)
- WiFi Hopper (<http://www.wifihopper.com>)



調研發現

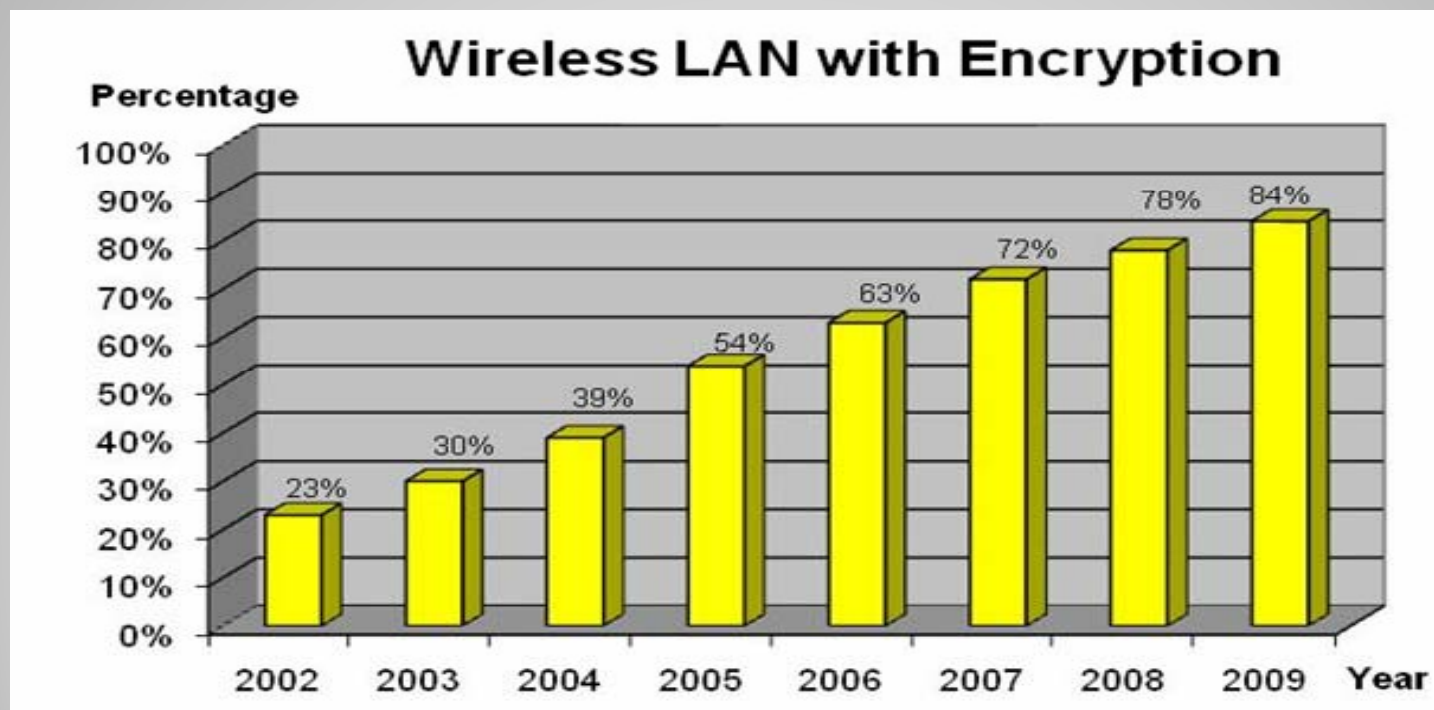


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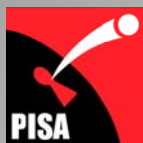


香港：加密模式

採用加密設定的增長趨勢

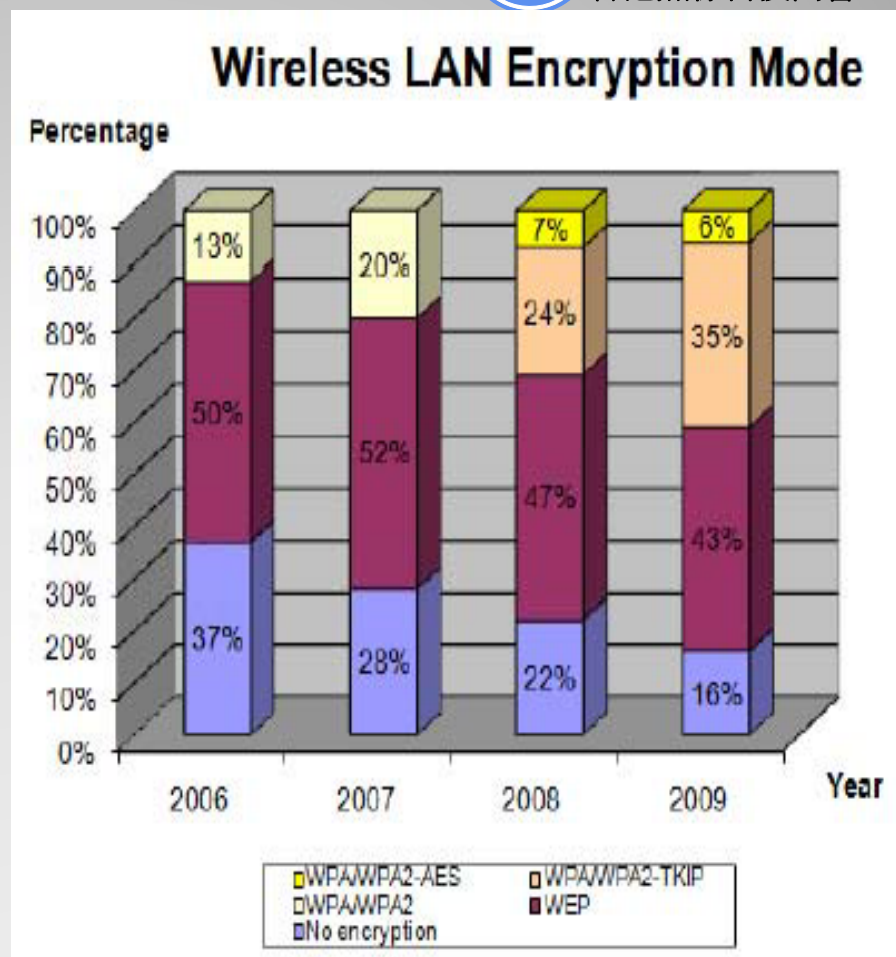


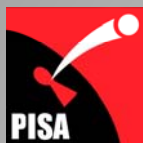
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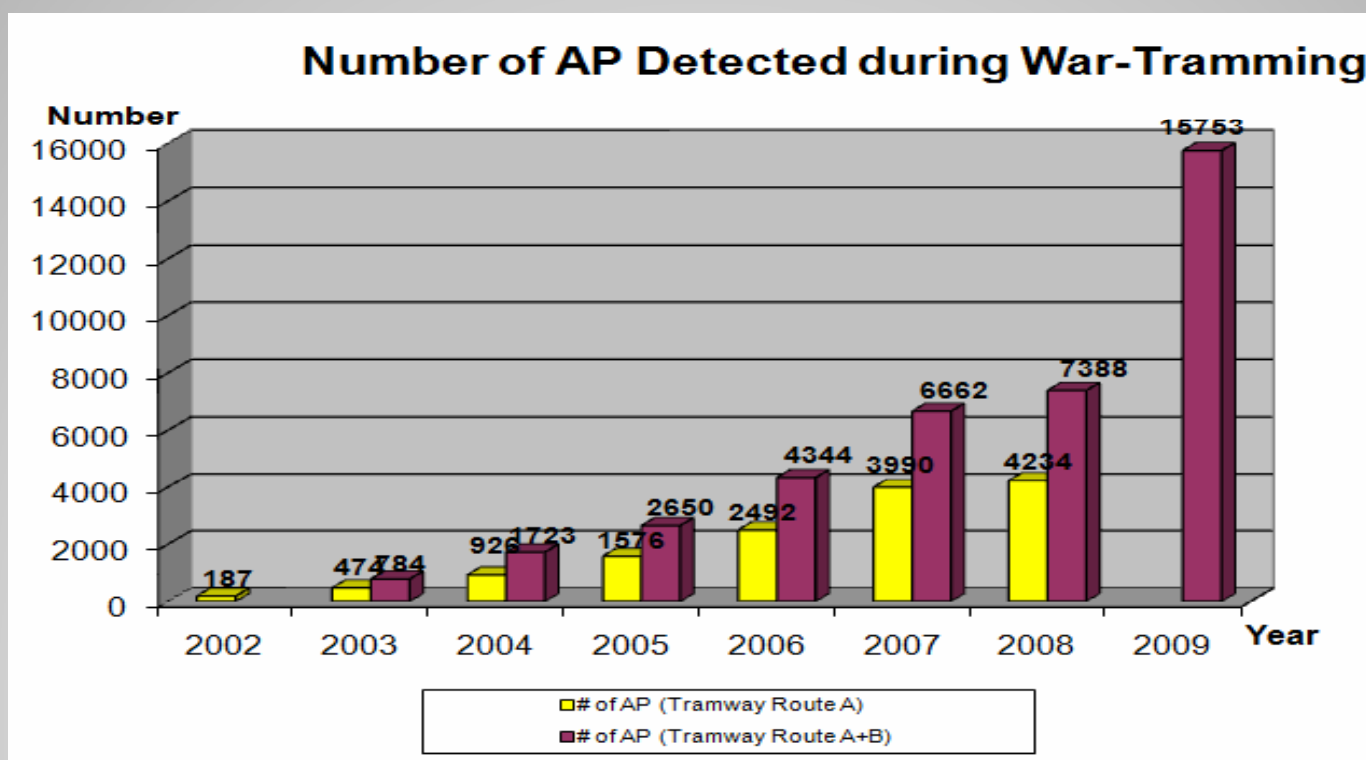
香港：加密模式

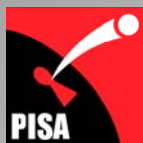
- 儘管使用WEP 加密比率高
- 可是WEP已變得不夠安全
- WEP/ WEP2- TKIP亦有漏洞，有可能被非法入侵
- 鼓勵使用WPA/ WPA2- AES
- (目前只有6% WLAN採用此高度安全的加密技術)





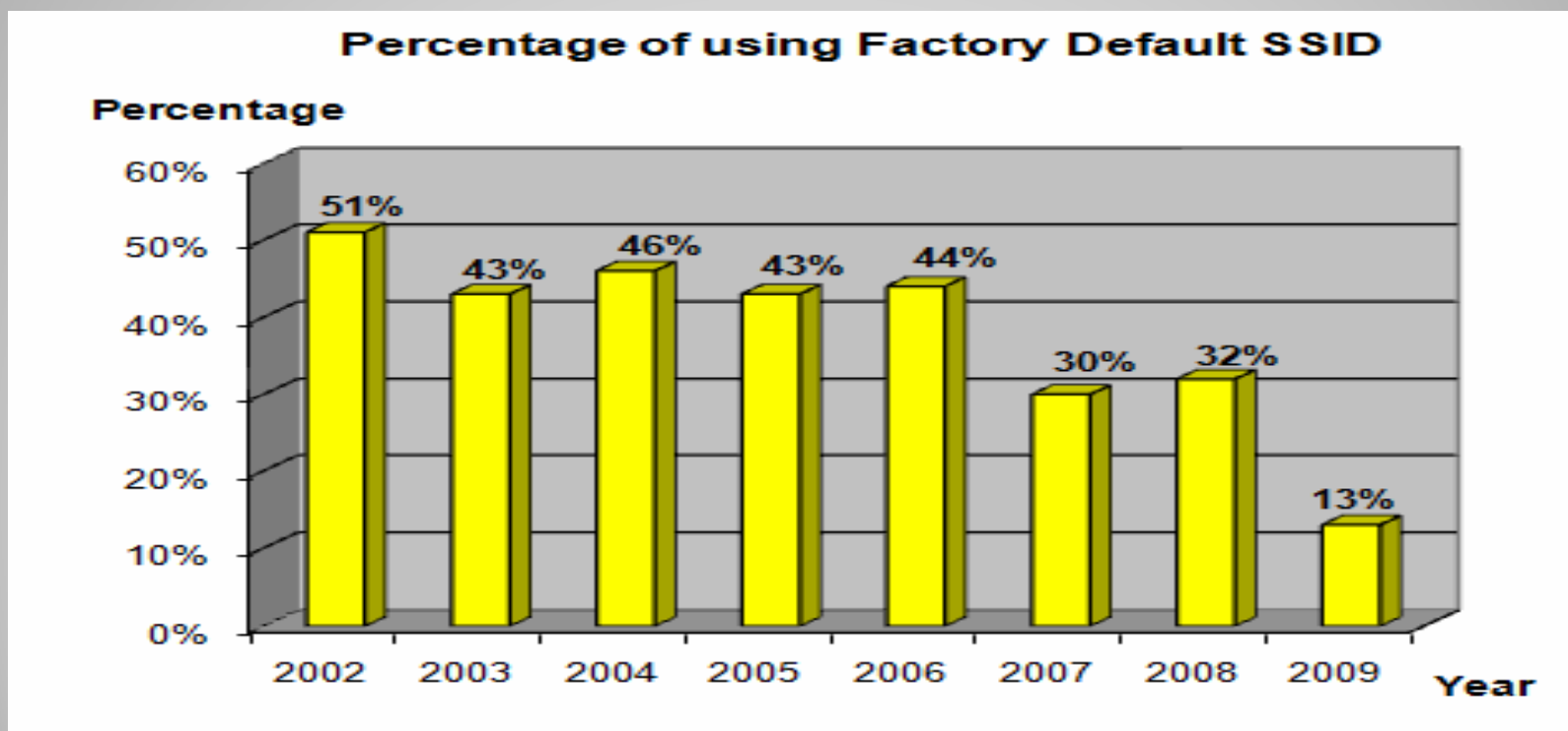
香港：無線接入口數目





香港：出廠設定

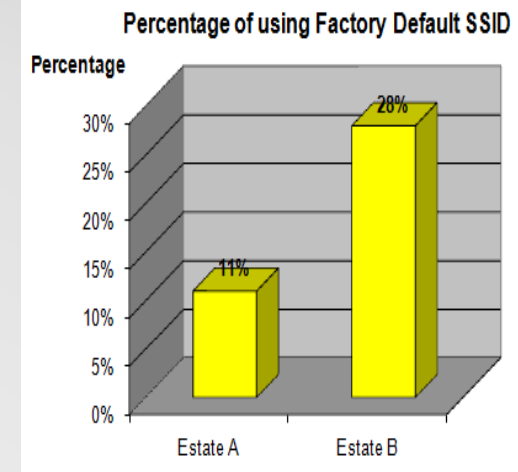
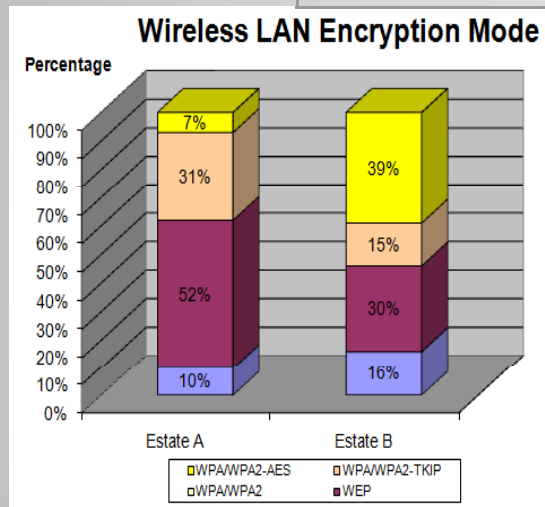
按出廠設定的SSID

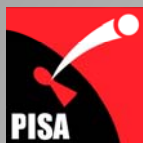




香港：比較公共與私人屋苑

Estate A	Information	Estate B
Private Housing Estate	Type	Public Rental Housing Estate
Since 1977	Year	Since 1963
61	Number of Apartment Buildings	9
12,698	Apartment Flats	3,129
3653	Access Point	279

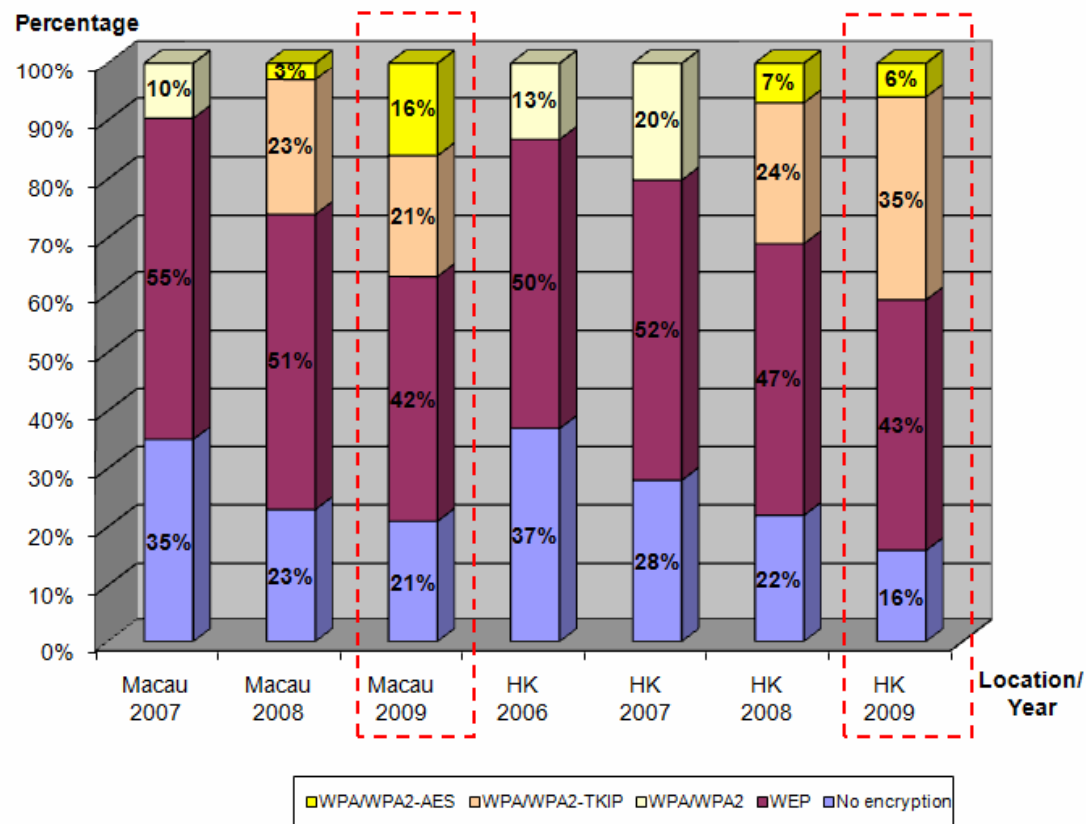




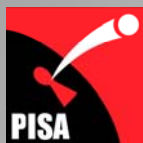
香港 vs 澳門

- 兩組資料相似
- 而且有增長趨勢

Wireless LAN Encryption Mode (Macau vs HK)



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提問環節



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鳴謝

All WD2009 Team Members including

WTIA

- Ken Fong (Convener) , Eric Leung, Eric Lo, Jacky Cheng, Joseph Leung, Lawrence Li, Michael Kan,
- Voker Lam

PISA

- Alan Ho (Convener) , Alan Tam, Charles Mok, Chee Huen, Frank Chow, George Chung, Howard Lau,
- Jim Shek, Sang Young, SC Leung, Thomas Tsang,
- Warren Kwok, WS Lam



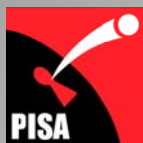
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www.hkwtia.org
Kencept.blogspot.com
kenfong@hkwtia.org