



「平板電腦電子學習計劃」

培正中學資訊科技統籌主任

馬凱雄

程序



- 過去本校推行「移動學習」的概況及成效
- 本校「平板電腦電子學習計劃」的理念
- 推行「平板電腦電子學習計劃」流程及細節安排

移動學習 - 目標及理念

- 在傳統的教室，教師都會透過提問，了解同學們的學習成效，與同學作互動的交流。
- 但是這個方式，往往只能在教室中，抽取一、兩位同學進行提問，能夠參與的同學所佔的比例很少。
- 因此我們希望透過資訊科技的幫助，能夠讓教室內所有的同學均能參與。

方案實踐



- 使用具有**無線上網功能(WiFi enable)**的智能手機(Smart Phone)。
- 採用**Google Android** 或 **Windows Mobile**平台，透過校園的無線網絡或手機網絡(GPRS/3G)，連線上網。
- 透過瀏覽器(Web Browser)，連接學校的考評伺服器(Assessment Server)，回答問題。

自携裝置(BYOD)方案

- 真正成為學生個人學習工具，能於課餘時間繼續進行學習
- 減少不必要的派機、收機、充電、安裝應用程序等繁瑣工作
- 學校不必定期更新裝置，資源可投放在校園無線網絡及學習平台上

使用者守則(AUP)

- 同學必須在老師指示下，才可使用 **Mobile Device** 進行學習活動，否則作違規處理。

優點



- 每一位同學，均能即時測試自己對課題的了解程度。
- 教師能即時收集全班同學的成績，作出教學評估，及作出相應的教學調節。
- 教師能全面掌握每一位同學的成績，以便照顧不同學生的學習差異。

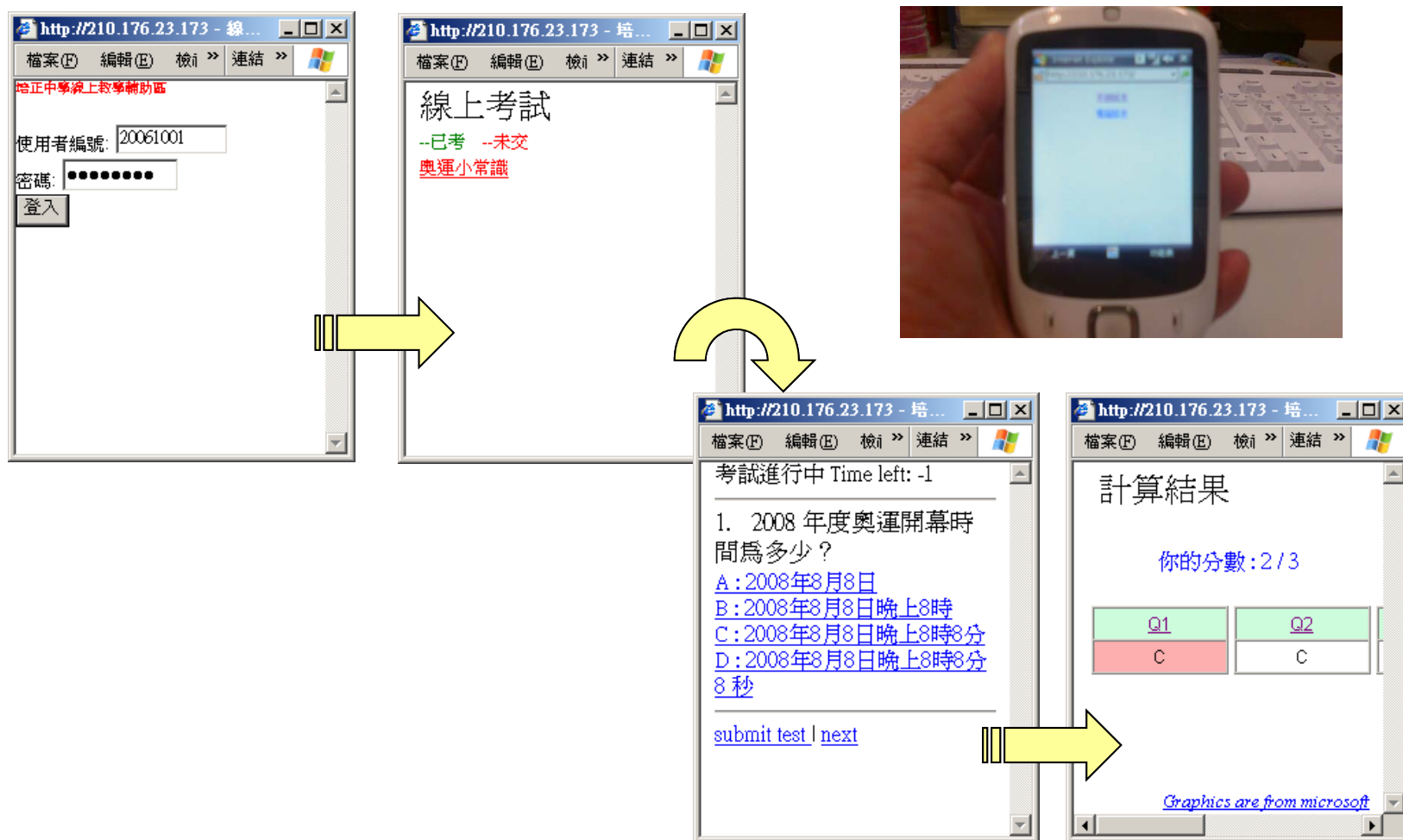
移動學習應用 - 放眼世界



透過培正校園電視台，每天於班主任節，向全校同學播放新聞剪輯，並透過「移動學習」線上學習系統回答問題，以培養學生收看新聞時事的習慣，為新高中通識科作好預備。



「移動學習」線上系統



「移動學習」線上系統

- 教師可透過「移動學習」線上系統，檢視同學們的成績，提供即時的回饋。

學號	姓名	成績
20061234	蘇朗希	D
20061235	譚嘉裕	A
20061236	曾俊喬	
20061237	鄺文皓	
20061238	黃學端	C
20061239	黃鈞堯	C
20061241	黃瑞翔	C
20061242	胡君俊	
20061243	余子羊	A
20061244	余藹村	A

紀錄類別	等級	人數	總分
本班紀錄	A	0	25
	B	0	17
	C	96	38
	D	0	21
	E	0	0
過往紀錄	A	0	0
	B	0	0
	C	0	0
	D	0	0
	E	0	0

Q1 Q2 Q3

本班人次: 40
參與考試人次: 24

完成 網際網路

延伸應用－培正自然教育徑

PCGPML7B.jpg



1009-004 Pui Ching Pui Ching Green Path Map Design Size: 9.6 x 2.4m File Name: PC-GPM-L7 Date: 22.12.10 E.L.

延伸應用－培正自然教育徑



延伸應用－培正自然教育徑

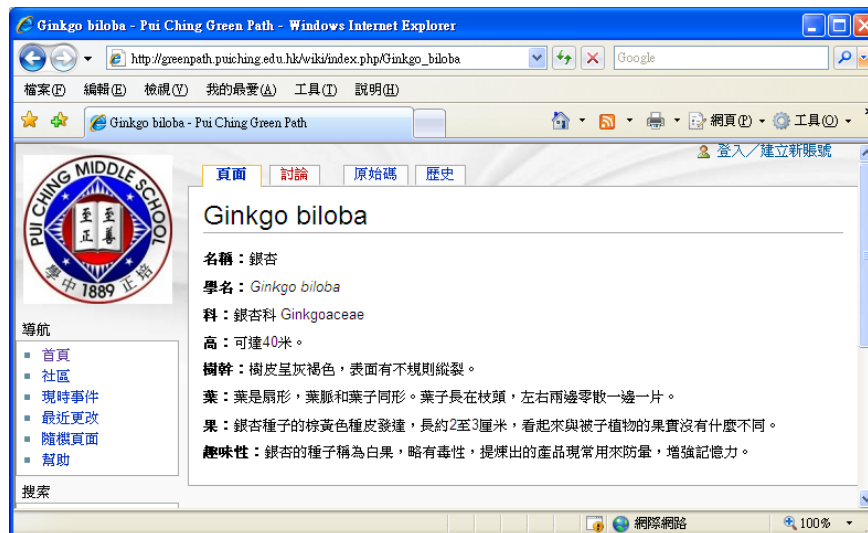
- 替每棵植物加上名牌，附加QR-Code
- 以智能手機進行解碼
- 連線到網上資料庫，進一步認識有關植物資料



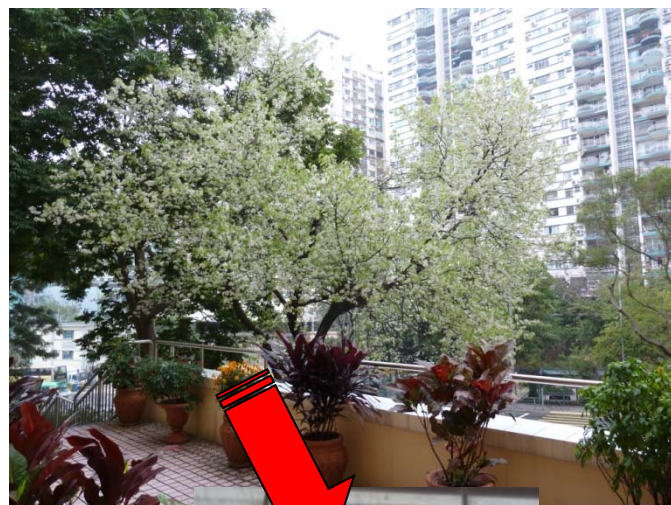
延伸應用－培正自然教育徑

- Online Database and Webpages

<http://greenpath.puiching.edu.hk>



延伸應用－培正自然教育徑



Wifi/GPRS



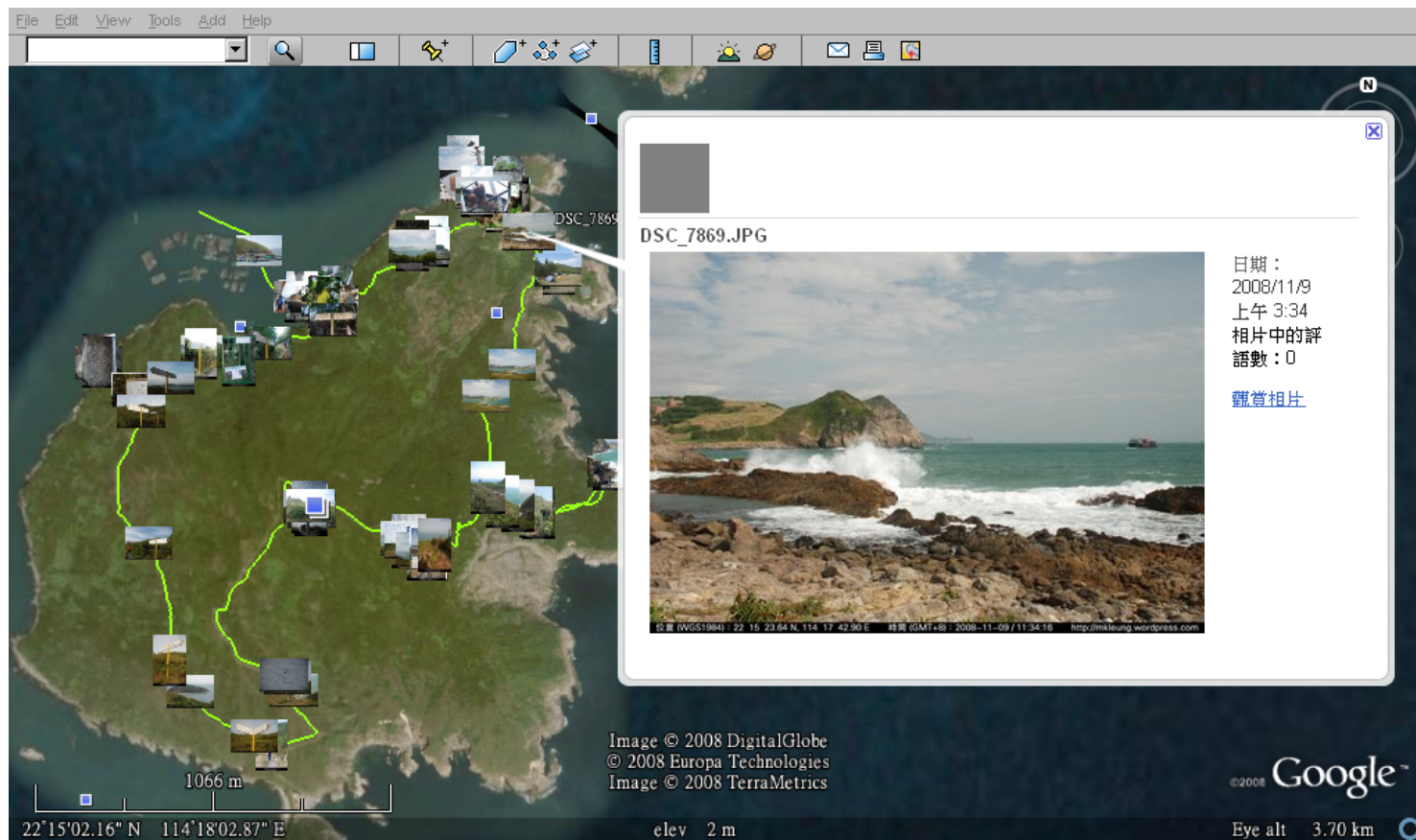
GPS 應用

Project based Learning – Kowloon City Field Trip



GPS 應用

Geography Field Trip - 東龍洲



GPS 應用

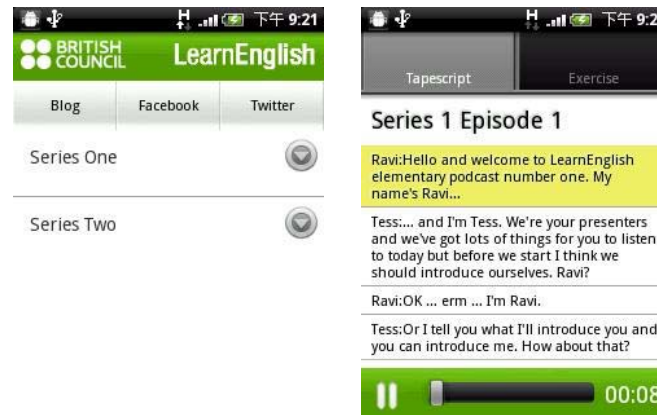
History Field Trip - 馬灣舊村



安裝教育應用程式(Education Apps.)

- Download Education Apps from Android Market

- LearnEnglish



- Musical Lite



規範式的中文輸入

Formal Chinese Language Usage

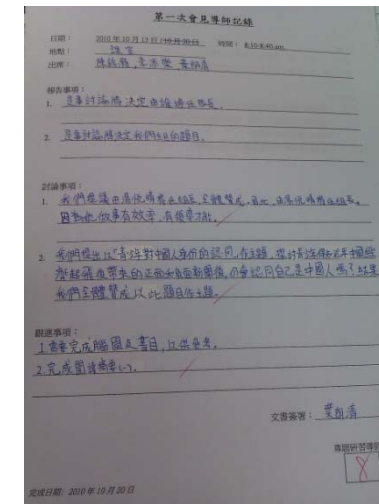
- Installation of CKC Chinese Input System (縱橫輸入法)
- One of the strengths of CKC Chinese Input System is that it caters for the input of phrases to increase input speed.



- The system has predefined common Chinese phrases, such as “香港特別行政區”(063060)、”知書識禮”(865335), etc.
- Students encouraged to input Traditional Chinese phrases instead of slang.

功課遞交 (Handwriting Document Submission)

- Capture the image of the Handwriting Document by using the Smartphone Camera
- Share and submit the image file to the school-based IT platform
- Teachers can retrieve and mark submitted assignments afterward.



功課遞交表			
課程名稱: SI Computer Literacy 中一普通電腦科			
功課名稱: 我的自傳 (275)			
學生組別: 1B			
截止日期: 2010-06-09 00:00:00			
01. 歐漢銘 20091039.DOC (2562K)	02. 陳俊宏 20091040.doc (2448K)	03. 陳佩婷 20091042.doc (3782K)	04. 陳蔭碧 20091043.doc (24K)
05. 張曉恩 20091044.doc (96K)	06. 張福軒 20091045.doc (1843K)	07. 錢豐 20091046.doc (24K)	08. 趙善德 20091047.doc (106K)
09. 莊家輝 20091048.doc (19K)	10. 周正晴 20091049.doc (592K)	11. 周海賢 20091050.doc (3209K)	12. 朱嘉瑜 20091051.doc (24K)
13. 侯天恩 20091052.doc (34K)	14. 姜奕齡 20091053.doc (22K)	15. 郭俊希 20091054.doc (26K)	16. 黎頌恩 20091055.doc (26K)
17. 黎弘毅 20091056.doc (19K)	18. 林曉茵 20091057.doc (324K)	19. 林嘉露 20091058.doc (22K)	20. 林盈盈 20091059.doc (22K)
21. 劉恩穎 20091060.doc (22K)	22. 劉香正 20091061.doc (22K)	23. 廖卓琳 20091062.doc (22K)	24. 廖佩儀 20091063.doc (22K)

[« Hong Kong Is Investing in Its Children – Big Time | Main | Pommes Frites & an Intellectual Aphrodisiac »](#)

06/07/2009

Hong Kong School Leads the World in Cellphone Computer Use

Elliot: We have to tell our readers about what we saw at [Pui Ching Middle School](#) in Hong Kong.

Cathie: I'll bet you didn't tell our readers that the URL you provided for the school requires them to read Chinese.

Elliot: Cantonese to be precise.

Cathie: Tsk, Tsk, listen to you. You go to Hong Kong for 6 days and you return an authority on the Chinese language! So, tell us about how 700 of the 1400 students at Piu Ching are using HTC smartphones for curricular purposes.

Elliot: It is pretty impressive! Students are learning English by reading about current events displayed on their cellphone computers. The kids also take quizzes about the current events on their cellphone computers. Mr. Yip, the principal, worked out a favorable deal on a data plan with one of Hong Kong's cellular providers – CSL. And, what is really a coup, he had the parents purchase the cellphone computer and pay for the monthly data plan.

Cathie: To the best of our knowledge, Pui Ching, over 120 years old and one of the most prestigious schools in Hong Kong, has the most educationally-oriented cellphone computers in one school in the world.

Elliot: The old meets the new. The leaders, educators and IT staff at Pui Ching are to be commended for their bold vision and action.

Cathie: And what is most exciting: this is just the beginning of a huge transformation. We respectfully say: may Pui Ching's record be broken very soon!



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[“All's the world's information in the Palm of Every Student's Hand](#)

[Desktop, Laptop and Now, Thumbtop Computers](#)

[It's not a “cellphone” – it's “cellphone COMPUTER”](#)

[Even with Bifocal Contacts Bloomberg Can't See](#)

平板電腦電子學習計劃－目標及理念

學校發展計劃：

第三部份「知識管理，知識創新」

「數碼平台，凝聚知識，觀摩評比，啓迪智慧」

- 建立學生個人電子網誌平台，製作個人歷程檔案
- 開放電子評估平台，建立「知識傳播」文化
- 透過「多讀、多念、多寫」提昇學生中英語文能力

平板電腦電子學習計劃

網上分享討論的平台

<http://student.puiching.edu.hk/>

The screenshot displays the Pui Ching i-Community website interface. The browser address bar shows <http://student.puiching.edu.hk/>. The website features a navigation menu with links like MEMBERSLIST, FEEDBACK, ARCHIVE, STATS, SECTIONS, RECOMMEND US, TOP 10, and HELP. The main content area is titled "Pui Ching i-Community 討論區主頁" and shows a forum post by user "chungsir" (SuperHero) dated 2013-09-03 10:57. The post is titled "[ICT-P] 創社 Pascal programming 軟件開發課程 重要資料" and discusses the development of a Pascal programming software for the ICT (Computer) course. It mentions that the software is based on the official Pascal compiler and includes a photo quiz tool. The post also lists several resources for the course, including a glossary and a list of materials for the 05-06, 07-08, and 08-09 academic years. The website layout includes a sidebar with a "Main Menu" and a "Forum" section, and a bottom section with "All the links" and a "Pascal Learning Web" link.

平板電腦電子學習計劃

網上分享討論的平台 Facebook / Edmodo

The image displays three overlapping screenshots of online learning platforms:

- Facebook Screenshot (Left):** Shows a user profile for "Ma Hoi Hung" and a group page for "Sir Jason's Academy of Education". The group page includes a cover photo, a profile picture, and a post by "Mark Chan" discussing public justice and religious beliefs.
- Pui Ching Middle School Facebook Page (Top Right):** Shows the school's official Facebook page, featuring a cover photo of a spiral staircase and the school's logo. The page has 3,028 likes and 61 members.
- Edmodo Screenshot (Bottom Right):** Shows the Edmodo home page, which includes a search bar, a calendar, and a list of latest posts. The posts are categorized by "Library Skills" and "Project Based-Learning".

平板電腦電子學習計劃

中文科、英文科：網上閱讀篇章

<https://sites.google.com/a/puiching.edu.hk/reading/>

第二篇 - 失物 (陸蠡)

1 幼年的時候，一個小小的紙匣裏藏着我最愛的物件——一塊紅玉般的石子，一隻自己手製的磁甌山……我時常想，假如房子起火延燒起來，不用躊躇的，第一，我便捧着這匣子跑。但是房子終沒有失慎，我沒有機會表示我對於那幾樣物件的心愛。

2 年來已不再那樣的孩子氣。但心頭的頑固終未祛除(1)。心中念念不忘的是過去生活的遺骸，心中戀戀不捨的是曾被過去的生命賦予一息的遺物。

3 啊，七八年間綠色的生命，這小小的信物便是他的證人。不是粉紅色卻是檀香般高貴的愛，沒有存着將來應用的心，純是為了愛好，對於知識的追求和努力……一切，如初夏的早晨一樣地新鮮。

4 現在我時常感到空虛，往昔回憶的精靈在我的面前時隱時現，卻又攔不住它，回憶的蟬翼是太薄且輕了。

5 正如扶乩(2)者的桃枝，正如巫者的魔杖，我便憑着我小小的寶貴的信物，將散失的影像召集攏來，啊，數不清的腮邊的吻，數不清的江上的漁火，數不清的山林落葉的聲音……一切的回憶向我點頭，使我渾然(3)忘了自己。

6 現在，魔杖遺失了。可憐的巫者已無法召回往昔的精靈，只長望着無垠(4)的天空唏噓而已。

注：

1. 第3段中的「七八年間綠色的生命」指的是甚麼？*

- ☐ (A) 在鄉村生活的七八年時光
- ☐ (B) 每天都能呼吸清晨新鮮空氣的七八個年頭
- ☐ (C) 幼年美好清純的時光
- ☐ (D) 終日存着幻想的時光

2. 「數不清的腮邊的吻，數不清的江上的漁火，數不清的山林落葉的聲音」(第5段)這裏運用了甚麼修辭手法？*

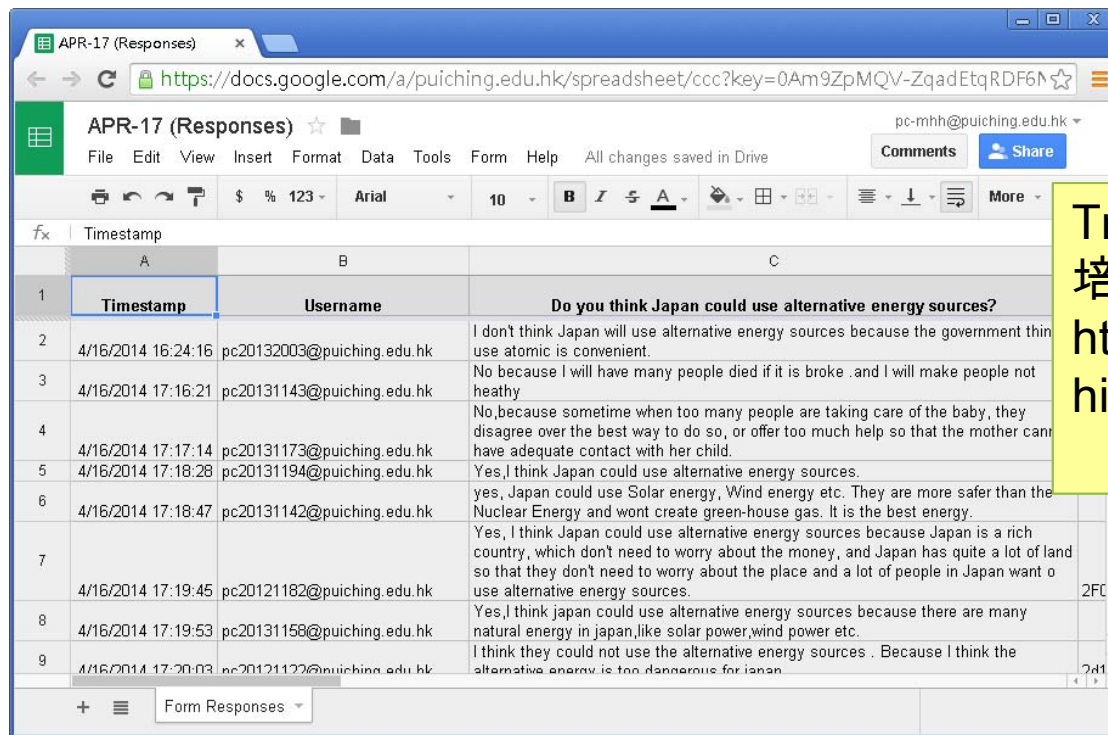
- ☐ (A) 排比
- ☐ (B) 對偶
- ☐ (C) 誇張
- ☐ (D) 反復

3. 哪一件東西是你兒時的最愛？試用30-70字表達你對該物件的愛。*(標點符號計算在內)

平板電腦電子學習計劃

中文科、英文科：網上閱讀篇章 (收集回饋)

<https://sites.google.com/a/puiching.edu.hk/reading/>



The screenshot shows a Google Docs spreadsheet titled "APR-17 (Responses)". The spreadsheet has three columns: "Timestamp", "Username", and "Do you think Japan could use alternative energy sources?". There are 9 rows of data, each containing a timestamp, a username, and a response.

Timestamp	Username	Do you think Japan could use alternative energy sources?
4/16/2014 16:24:16	pc20132003@puiching.edu.hk	I don't think Japan will use alternative energy sources because the government think use atomic is convenient.
4/16/2014 17:16:21	pc20131143@puiching.edu.hk	No because I will have many people died if it is broke .and I will make people not healthy
4/16/2014 17:17:14	pc20131173@puiching.edu.hk	No,because sometime when too many people are taking care of the baby, they disagree over the best way to do so, or offer too much help so that the mother can't have adequate contact with her child.
4/16/2014 17:18:28	pc20131194@puiching.edu.hk	Yes,I think Japan could use alternative energy sources.
4/16/2014 17:18:47	pc20131142@puiching.edu.hk	yes, Japan could use Solar energy, Wind energy etc. They are more safer than the Nuclear Energy and wont create green-house gas. It is the best energy.
4/16/2014 17:19:45	pc20121182@puiching.edu.hk	Yes, I think Japan could use alternative energy sources because Japan is a rich country, which don't need to worry about the money, and Japan has quite a lot of land so that they don't need to worry about the place and a lot of people in Japan want to use alternative energy sources.
4/16/2014 17:19:53	pc20131158@puiching.edu.hk	Yes,I think japan could use alternative energy sources because there are many natural energy in japan,like solar power,wind power etc.
4/16/2014 17:20:03	pc20121122@puiching.edu.hk	I think they could not use the alternative energy sources . Because I think the alternative energy is too dangerous for japan.

Try it by yourself:

培正閱讀網

<https://sites.google.com/a/puiching.edu.hk/reading>



平板電腦電子學習計劃

中文科、英文科：朗誦錄音 (SoundCloud)



SoundCloud: stream music & audio and listen to playlists 4+

SoundCloud Ltd. >

提供 App 內購買

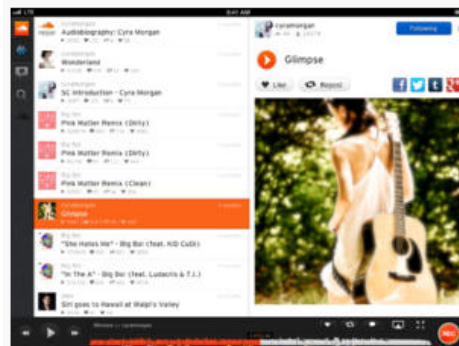
☆☆☆☆☆

開啟

詳細資訊

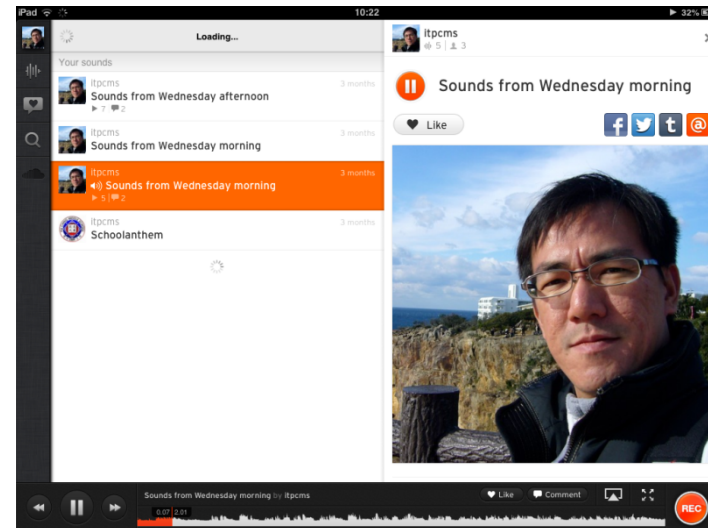
評論

相關項目



描述

Over 250 million people use SoundCloud to listen to music and audio for free.



平板電腦電子學習計劃

中文科、英文科：朗誦視頻錄影 (YouTube)



平板電腦電子學習計劃

中文科、英文科 – Apps for Presentation Haiku Deck, Prezi



Haiku Deck - 搭配圖表建立漂亮的簡報與

投影片 [12+]

Haiku Deck, Inc >

提供 App 內購買

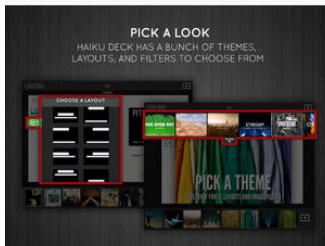
☆☆☆☆

開啟

詳細資訊

評論

相關項目



描述

Haiku Deck提供了一種簡單而有趣的新方式來建立漂亮的簡報，無論您是宣傳思想、授課、講故事，還是宣講行動，它都很實用。Haiku Deck入選了iTunes“新款值得關注”和“熱門應用”列表，讓建立漂亮的投影片變得快速而有趣，並且您將會很自豪地去分享。

“一款可以快速建立漂亮投影片的智慧應用，讓你的iPad生產力變得更高效率” – 華爾街日報.. [更多](#)



Prezi [4+]

Prezi Inc. >

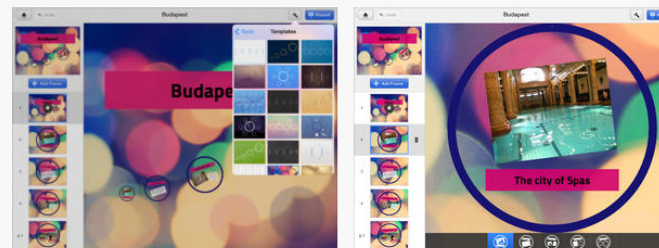
☆☆☆☆

開啟

詳細資訊

評論

相關項目



描述

Create and present beautiful presentations with Prezi for iPad. Get started by choosing one of our stunning templates then add your text and images. Pinch to zoom on topics, retouch your prezis and adjust your presentations on the move.

Features:... [更多](#)

平板電腦電子學習計劃

數學科：應用(2) – Education Apps

UPAD、GeoGebra、SketchPad Explorer、iCross



平板電腦電子學習計劃

數學科：應用 (2) - ASSESSMENT SERVER 繳交習作

The screenshot shows the iPad Assessment Server interface. The top bar displays the time as 10:35 and battery level at 73%. The address bar shows the URL 210.176.23.171/assessment/assess/assess12/. The left sidebar contains navigation links: 數學 (Maths), 課程管理 (Course Management), 考試區 (Exam Area), 功課區 (Homework Area), 下載區 (Download Area), 學生管理 (Student Management), OLE 學生管理 (OLE Student Management), 更改密碼 (Change Password), and 退出 (Logout). The main area displays a table of student work submissions. The table has columns for student ID, student name, and a thumbnail of the submitted work. A red circle highlights the student 何芷筠 (Ho Chi Yuen) in the table. A yellow arrow points from the highlighted student to a larger view of their submitted work.

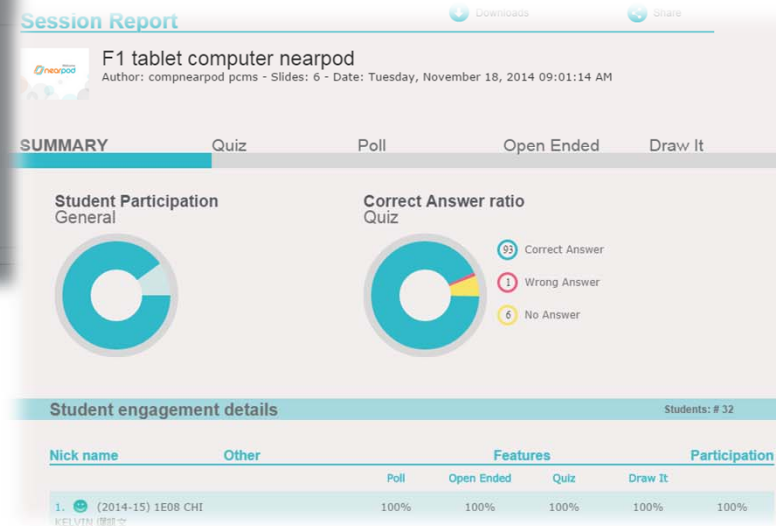
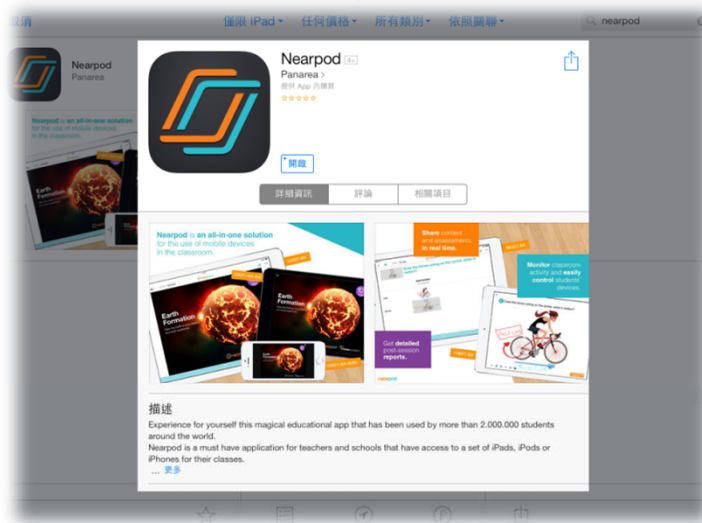
學生組別	學生姓名	功課名稱	功課內容
01. 區梓博	02. 陳耀杰	03. 陳榕珊	04. 張琪珣
05. 張靖欣	06. 趙逸匡	07. 朱家聲	08. 鍾卓禧
09. 方嘉蔚	10. 何曼如	11. 何晞童	12. 何芷筠
13. 姜曉晴	14. 郭曉瑜	15. 劉雋穎	16. 劉樂盈

The screenshot shows the iPad Assessment Server interface displaying a student's submitted work. The top bar displays the time as 8:34 and battery level at 72%. The address bar shows the URL 210.176.23.171/assessment/assess/assess12/. The main area displays a grid of student work submissions. The grid has columns for student ID, student name, and a thumbnail of the submitted work. A red circle highlights the student 何芷筠 (Ho Chi Yuen) in the table. A yellow arrow points from the highlighted student to a larger view of their submitted work.

學生組別	學生姓名	功課名稱	功課內容
01. 區梓博	02. 陳耀杰	03. 陳榕珊	04. 張琪珣
05. 張靖欣	06. 趙逸匡	07. 朱家聲	08. 鍾卓禧
09. 方嘉蔚	10. 何曼如	11. 何晞童	12. 何芷筠
13. 姜曉晴	14. 郭曉瑜	15. 劉雋穎	16. 劉樂盈

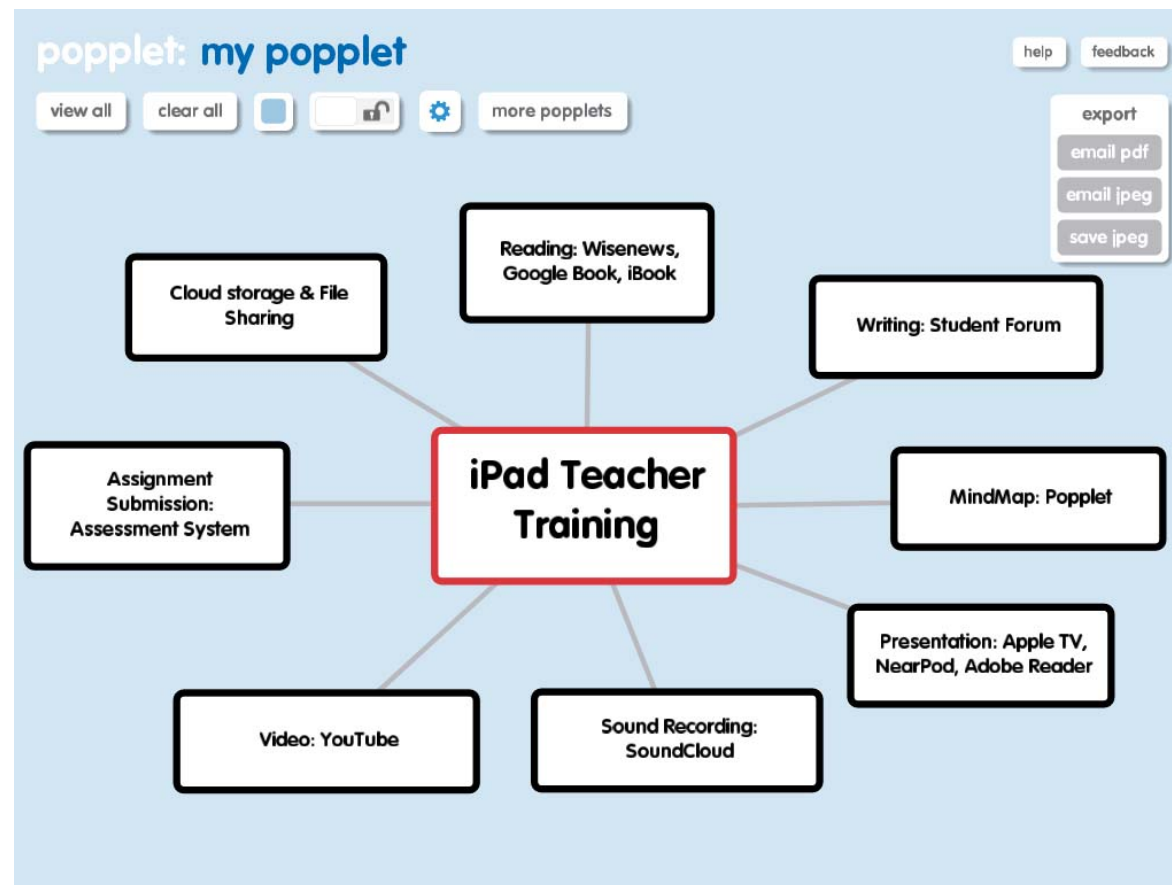
平板電腦電子學習計劃

科學科： Education Apps Nearpod



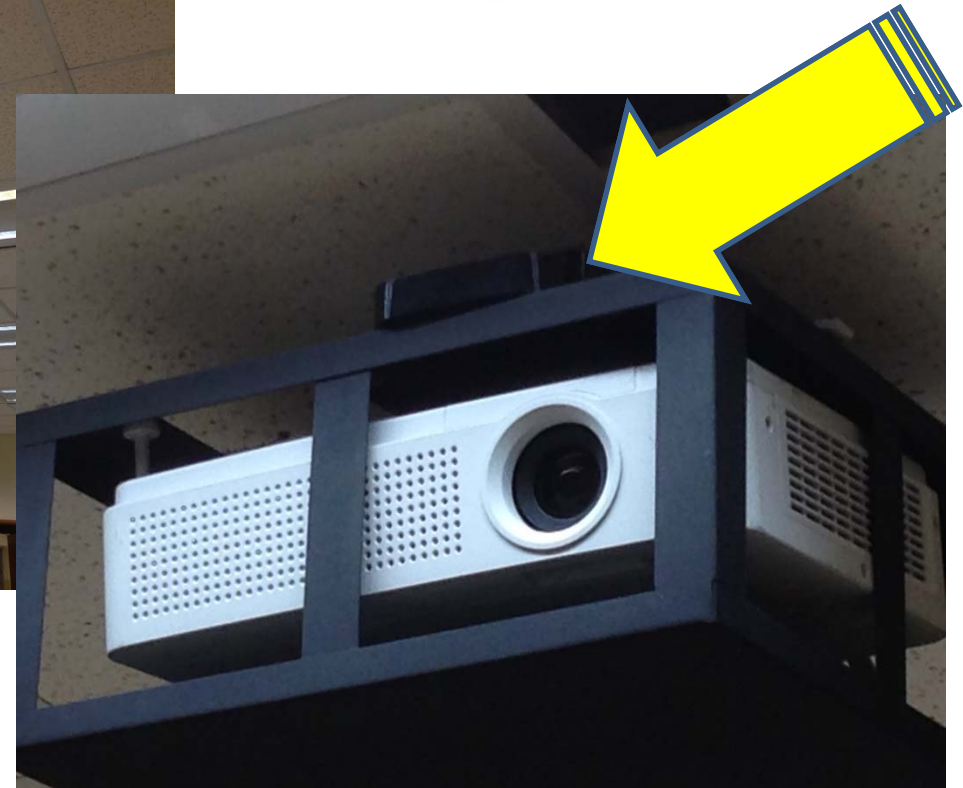
平板電腦電子學習計劃

英文科、專題研習科：MindMapping (Popplet)



平板電腦電子學習計劃

- 硬件配置 – Apple TV



平板電腦電子學習計劃

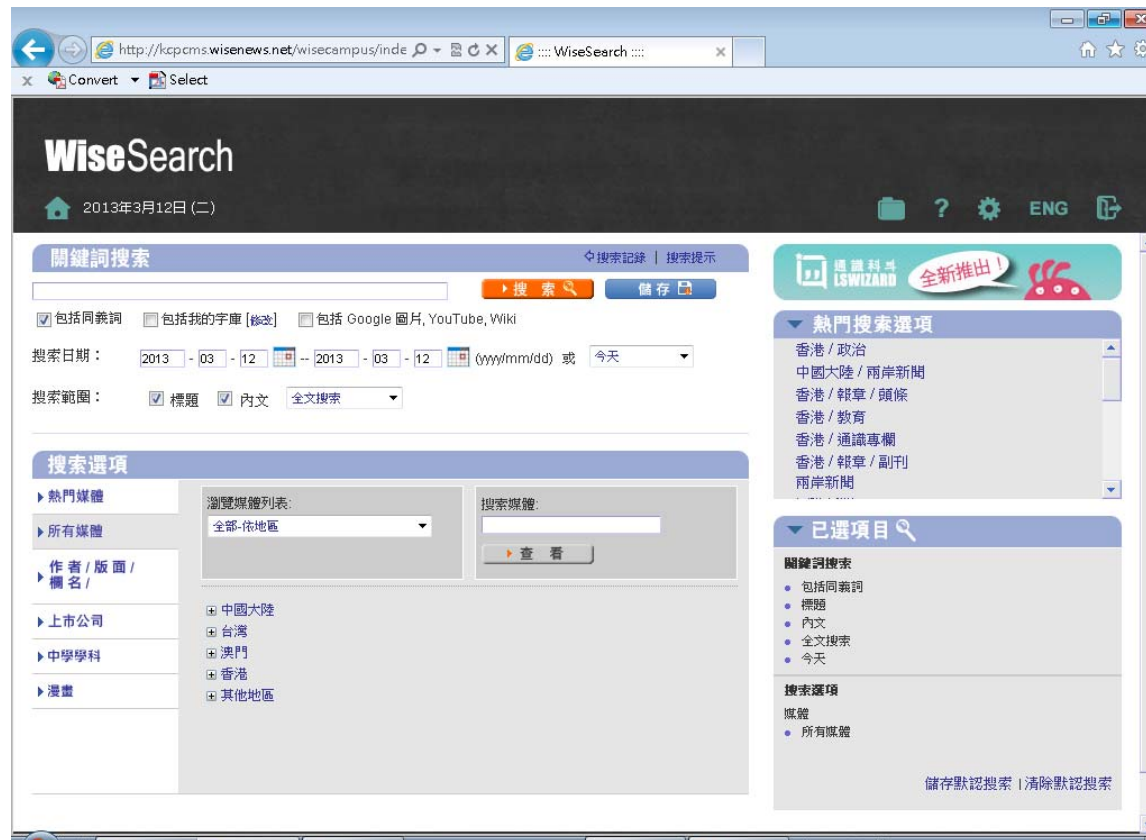
- 硬件配置 – Apple TV



平板電腦電子學習計劃

WiseneWS (School Campus Access Only)

<http://kcpcms.wiseneWS.net/?gid=kcpcms&user=ipaccess>



平板電腦電子學習計劃

明報英語網 (Need Subscription)

<http://english.mingpao.com/>

明報網站 新聞 訂戶 財經 教育 旅遊 OL·消閑 健康 求職增值 會員 萬華媒體 訂閱/更改資訊電郵

電子報|新聞|即時新聞|財經|易博網|健康|MP Travel|翠明假期|OL|教育|親子|求職增值|亞洲週刊|明月|書店|讀書|Video

明報 英語網 MP ENGLISH

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Home > News English > Editorial 2014/5/27 Tue

Hot Vocabulary

- endorse
- standstill
- imminent

Pic

Glossary

connive /kənˈnaɪv/ at seem to allow something wrong to happen

hijack /ˈhaɪdʒæk/ use or take control of something, especially a meeting, in order to advertise your own aims and interests

proceedings /prəˈsiːdɪŋz/ the events of an occasion, meeting, etc

(明報製圖)

Editorial [Archive]

--- Please select ---

Effective operation of Legco 兩派應改議事規則 維護立會有效運作

Publishing Date: 2014/5/26

【明報專訊】YESTERDAY (May 22) the Chief Executive's (CE's) question time at a Legislative Council (Legco) meeting broke up because of three legislators' misbehaviour. That prevented citizens from learning more about CE Leung Chun-ying's policies, and it is clear from what happened yesterday that the several radical legislators have gone to even greater lengths to impede Legco and government business. Recently, a few Legco members have filibustered on the pretext of supervising the executive but with a view to paralysing it and the legislature. That has much to do with the public interest. It is now doubtful that Legco can effectively supervise the executive and fulfil its other functions.

Listen audio 1

立法會行政長官答問會，昨日因為3名議員的不檢點行為而首次腰斬，事態除了使市民未能更多地

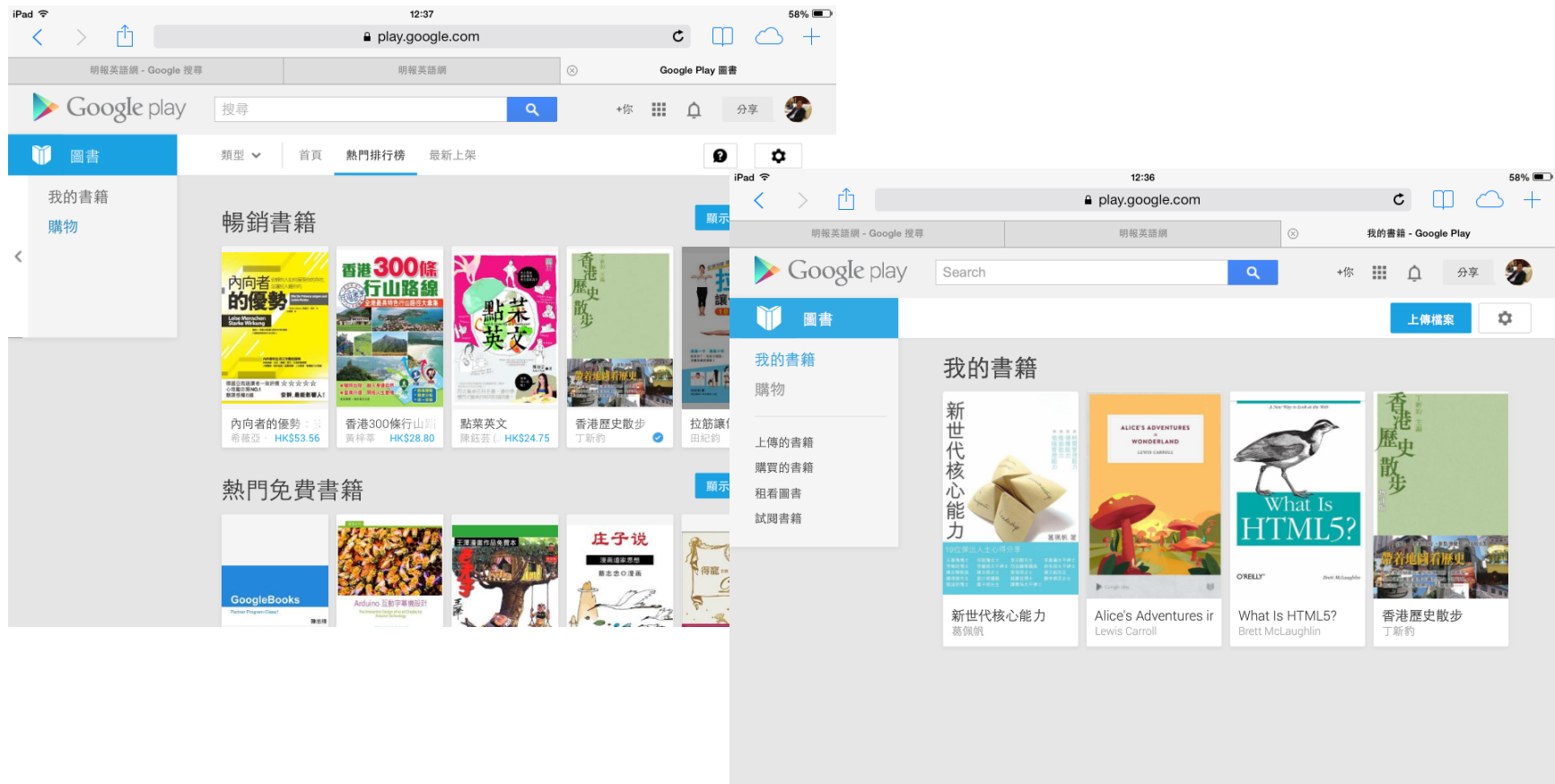
iPad 朗讀語音功能

平板電腦電子學習計劃

Google Drive – for File Sharing

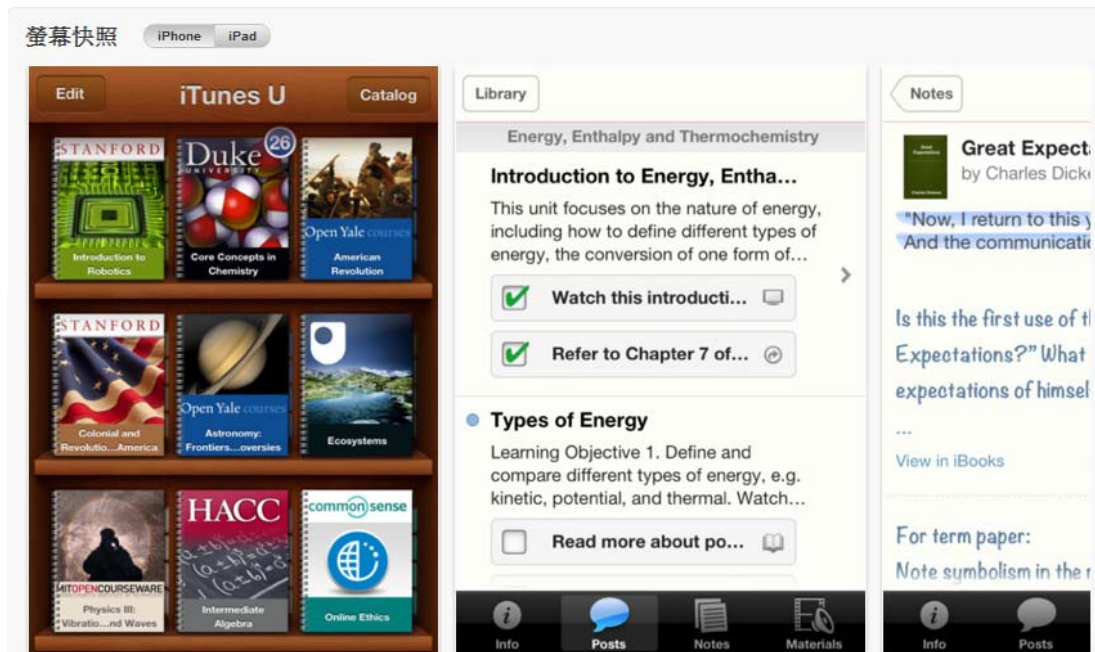
平板電腦電子學習計劃

Google Play



平板電腦電子學習計劃

- 課外延伸學習 Apple iTunes U

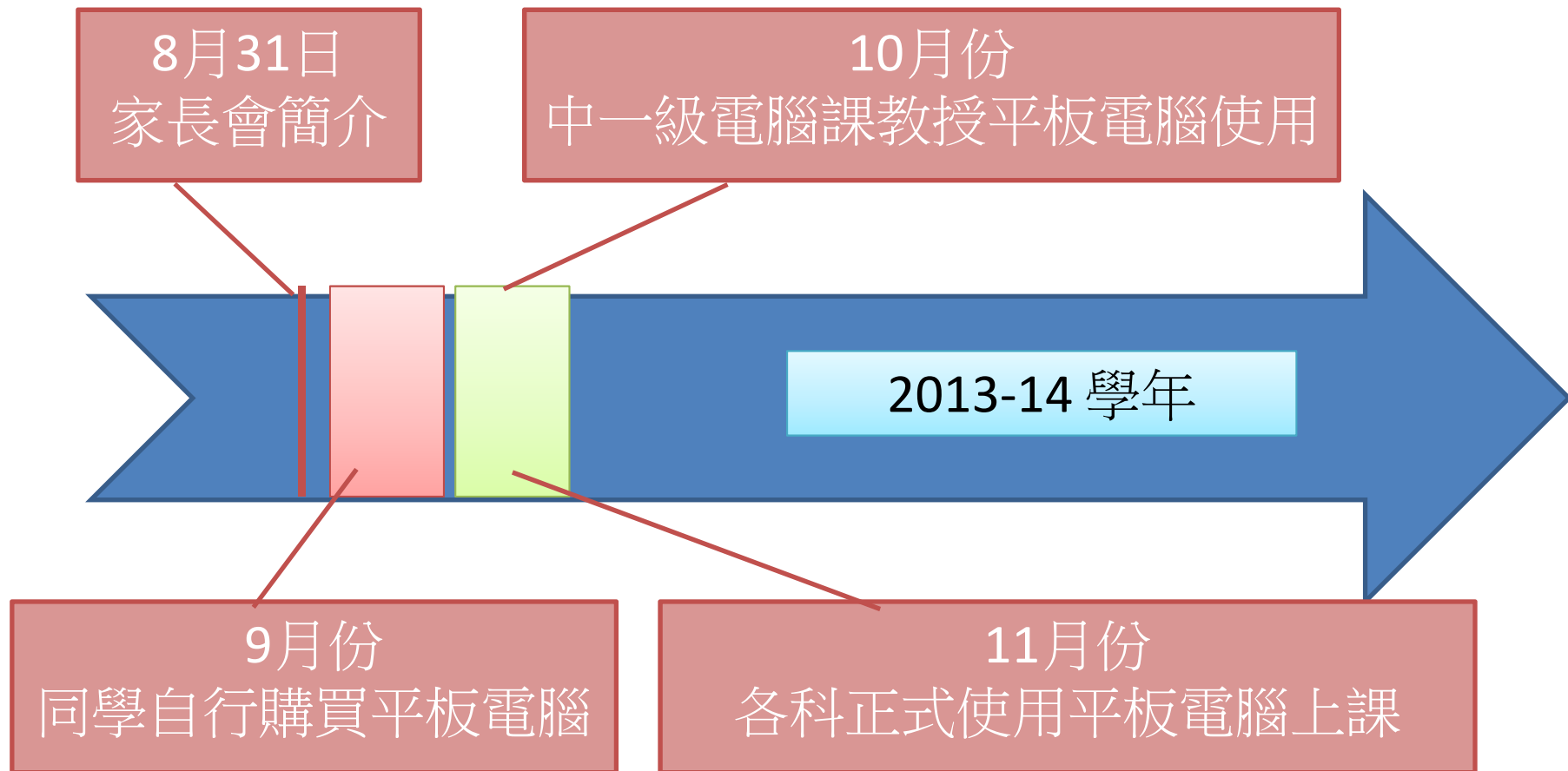


平板電腦電子學習計劃

- 硬件配置 – Locker in Classroom and CCTV

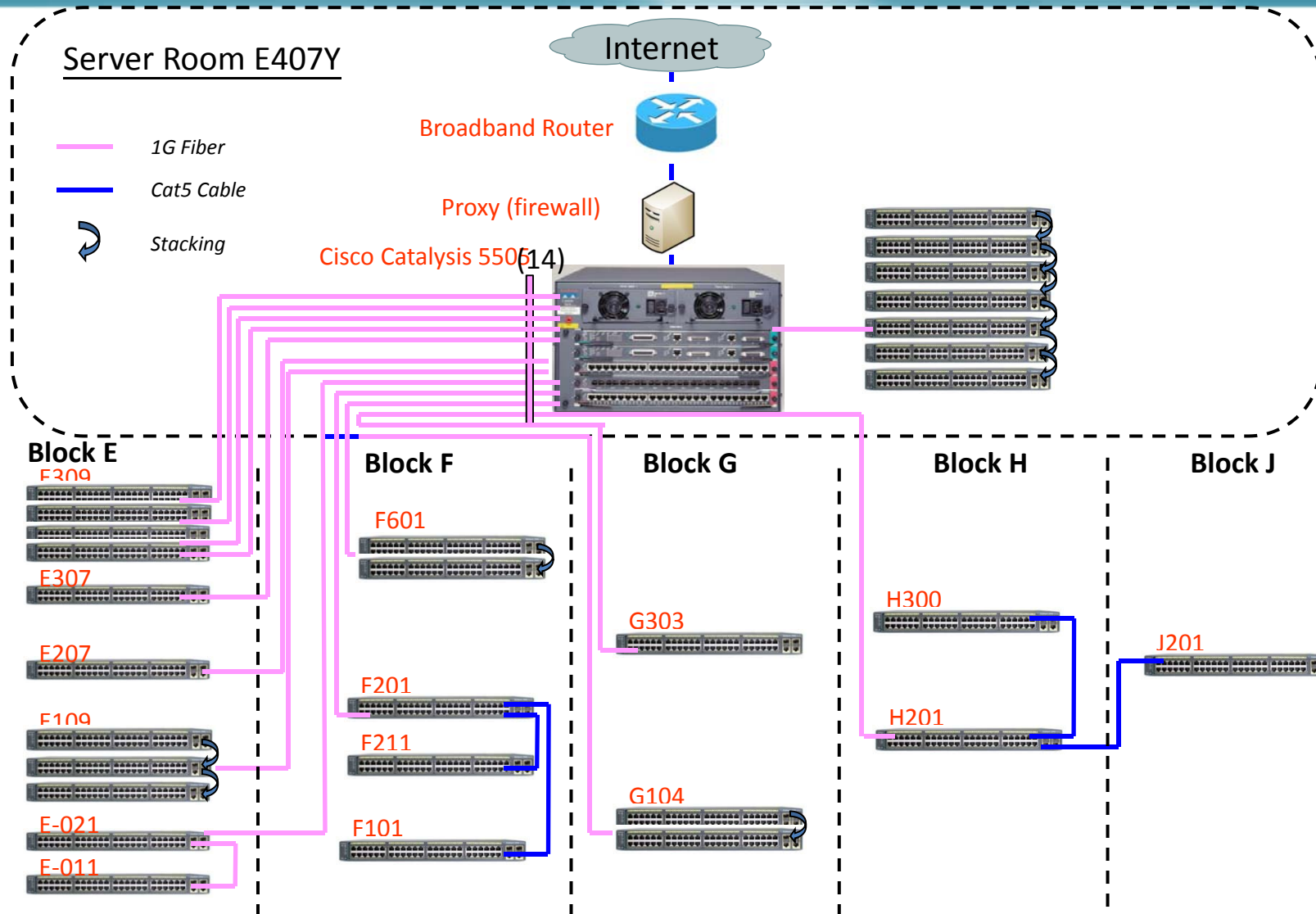


推行「平板電腦電子學習計劃」流程



第一代網絡

Network Diagram (1998 – 2013)



困境



2012年9月起於中一級推行「平板電腦電子學習計劃」

1. 網絡設備老舊過時
2. 校園客戶機的數量急速增長
 - 400 PC → 300 PC + 1500+ Mobile Devices
3. 無線網絡的速度限制
 - 802.11g (54 Mbit/s) V.S. 802.11n (450 Mbit/s)
4. 保安及管理
 - MAC address Filtering V.S. 802.1X authentication



新網絡設計要求

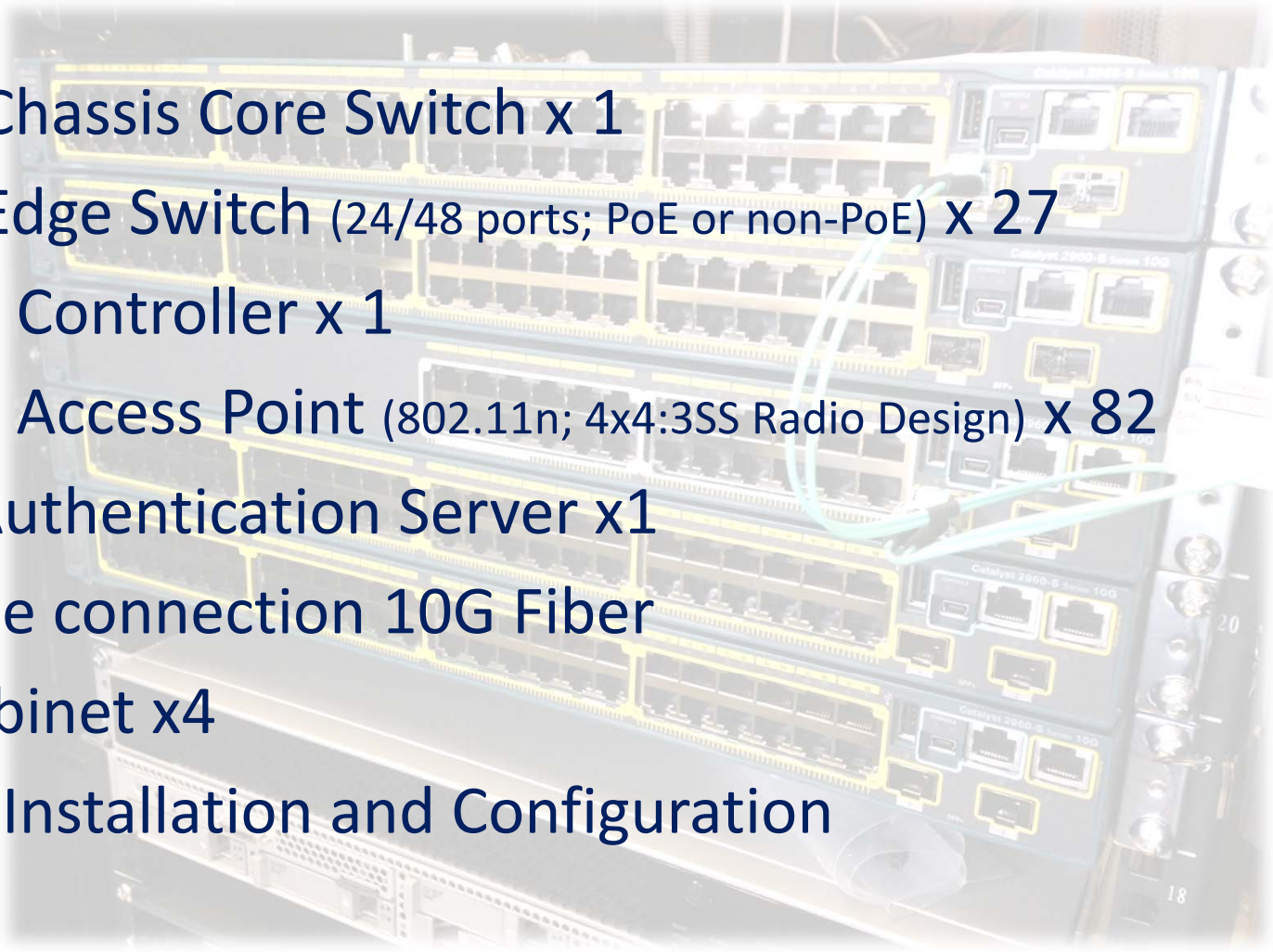
Network Requirements



1. 每個課室能支援最少**40**個客戶端**同時**無線上網
2. 禮堂及展覽中心能支援**400**個客戶端**同時**無線上網
3. 能支援全校師生約共**1500**個客戶端**同時**無線上網
4. 無線用戶使用**Active Directory** 進行身份認證
5. 為不同無線用戶設定不同的使用權限(**User Profile**)
6. 於不同區域設置**VLAN** 減少**Broadcast** 的信號影響
7. 每個課室設置**AppleTV** 只供班中師生使用

網絡設備及工作清單

Network Equipment and Job List

1. Layer 3 Chassis Core Switch x 1
 2. Layer 2 Edge Switch (24/48 ports; PoE or non-PoE) x 27
 3. Wireless Controller x 1
 4. Wireless Access Point (802.11n; 4x4:3SS Radio Design) x 82
 5. Radius Authentication Server x1
 6. Backbone connection 10G Fiber
 7. Rack/Cabinet x4
 8. Cabling, Installation and Configuration
- 

計劃及設計

Planning and Design

Data Node-Pui Ching with breakdown (20130727) (1) [Compatibility Mode] - Microsoft Excel

Floor	Room / Location	Existing AP	New Install AP	AP Plastic Enclosure	Data Node (New Install Cat5)	Data Node (Existing Cat5)	Closet with Data Node QTY	New Switch QTY	New Fiber uplink	New Cabinet	Existing Switch QTY	Fiber uplink	Copper Uplink	Remarks
	Classroom													
	Server Room / Closet													
BLOCK F	E023		1	1	3									
	E024 (Student Union)		1	1	2									
	F01		1	1	1									
	F01*		1	1	1									
	F501		1	1	1									
	F401		1	1	2									
	F402		1	1	2									
	F403		1	1	2									
	F301		1	1	2									
	F302		1	1	2									
	F303		1	1	2									
	E201 (Staff Room) *		1	1	1									
	E211 (Staff Room) *		1	1	31									
	F212 (Staff Room)													
	F101A *				4									
	F101B		1	1	4									
	F101C				4									
	F101D		1	1	2									
	F103		1	1	2									
	F021 (Staff Rest Room)		1	1	2									
	LG2				2									
BLOCK G	G501		1	1	4									
	G502				2									
	G503		1	1	2									
	G401		1	1	2									
	G402		1	1	2									
	G403		1	1	2									
	G301		1	1	2									
	G302		1	1	2									
	G303 *		1	1	2									
	G201		1	1	2									
	G202		1	1	2									
	G203		1	1	2									
	G204 (Religion Hall)		2	2	2									
	G204A				2									
	G101		1	1	2									
	G102		1	1	2									
	G103		1	1	2									
	G104 (Library) *		2	2	1									
	G1 (Garden)				1									
BLOCK H	H401 (Gym Room)		2	2	1									
	H300 *		4	2	6									
	Exhibition Hall				1									
	H201 (Control Room) *				24									
	Sport Complex				3									
	H101 (School Hall)		4		2									
	H201 (Covered Playground)		1	1	2									
BLOCK J	JL01				2									
	JL02 *		1	1	6									
	JL03				2									
Total		0	82	62	249	548	14	27	12	13	13	4		

Equipment List

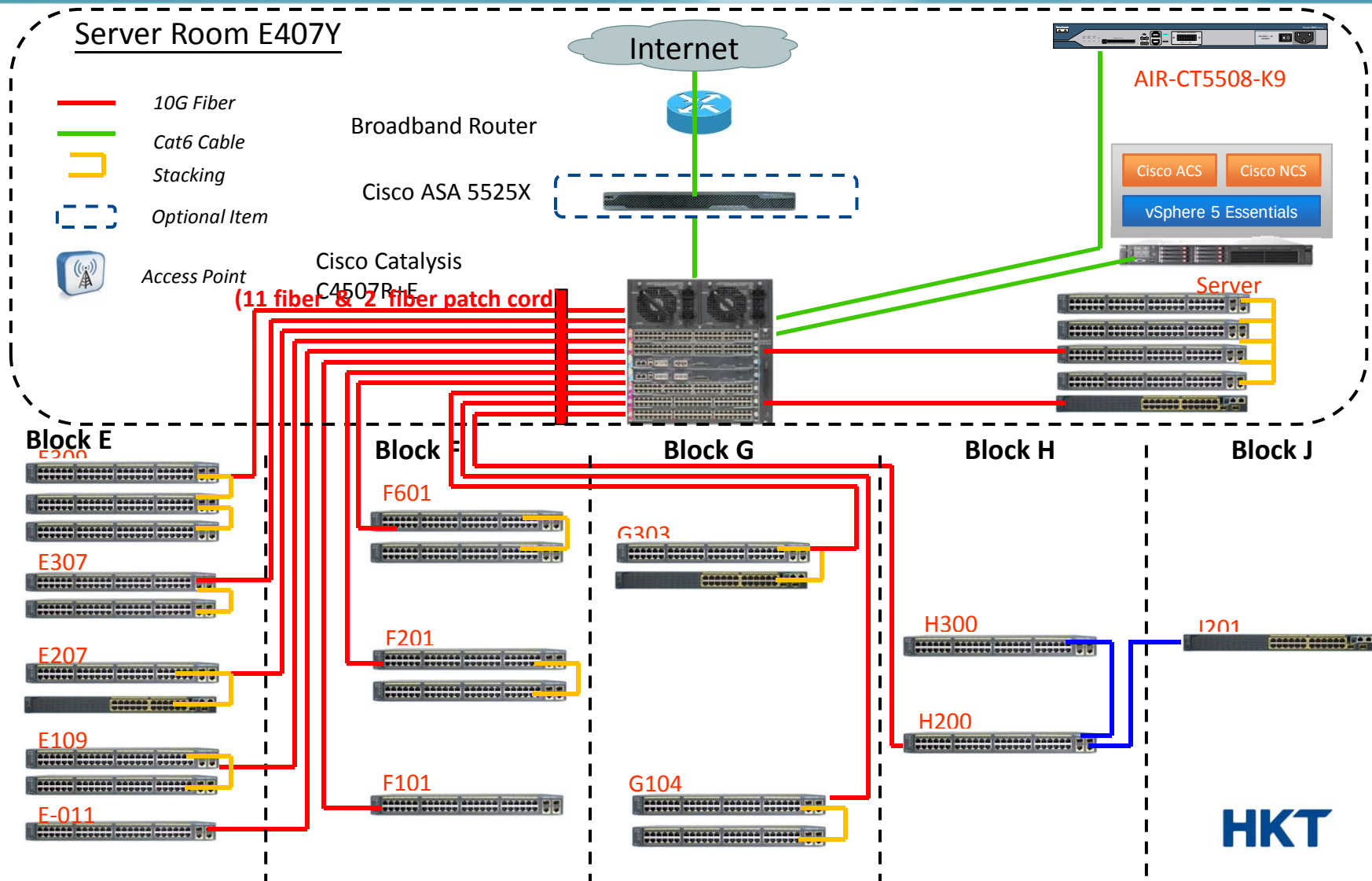
Ready

ITCA & YITAA 頒獎禮報名情況2013-14.xls 已更新

ITCA & YITAA 頒獎禮報名情況2013-14.xls 已更新為最新版本(按一下檢視內容)

Network Diagram (2013 -)

Network Diagram (2013 -)



記録 Documentation



記錄 Documentation



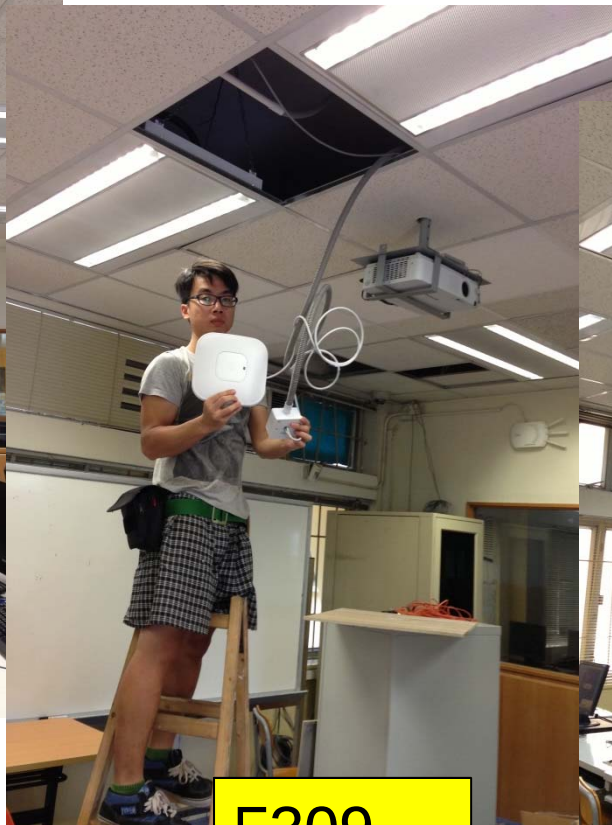
記錄 Documentation



記録 Documentation



E308



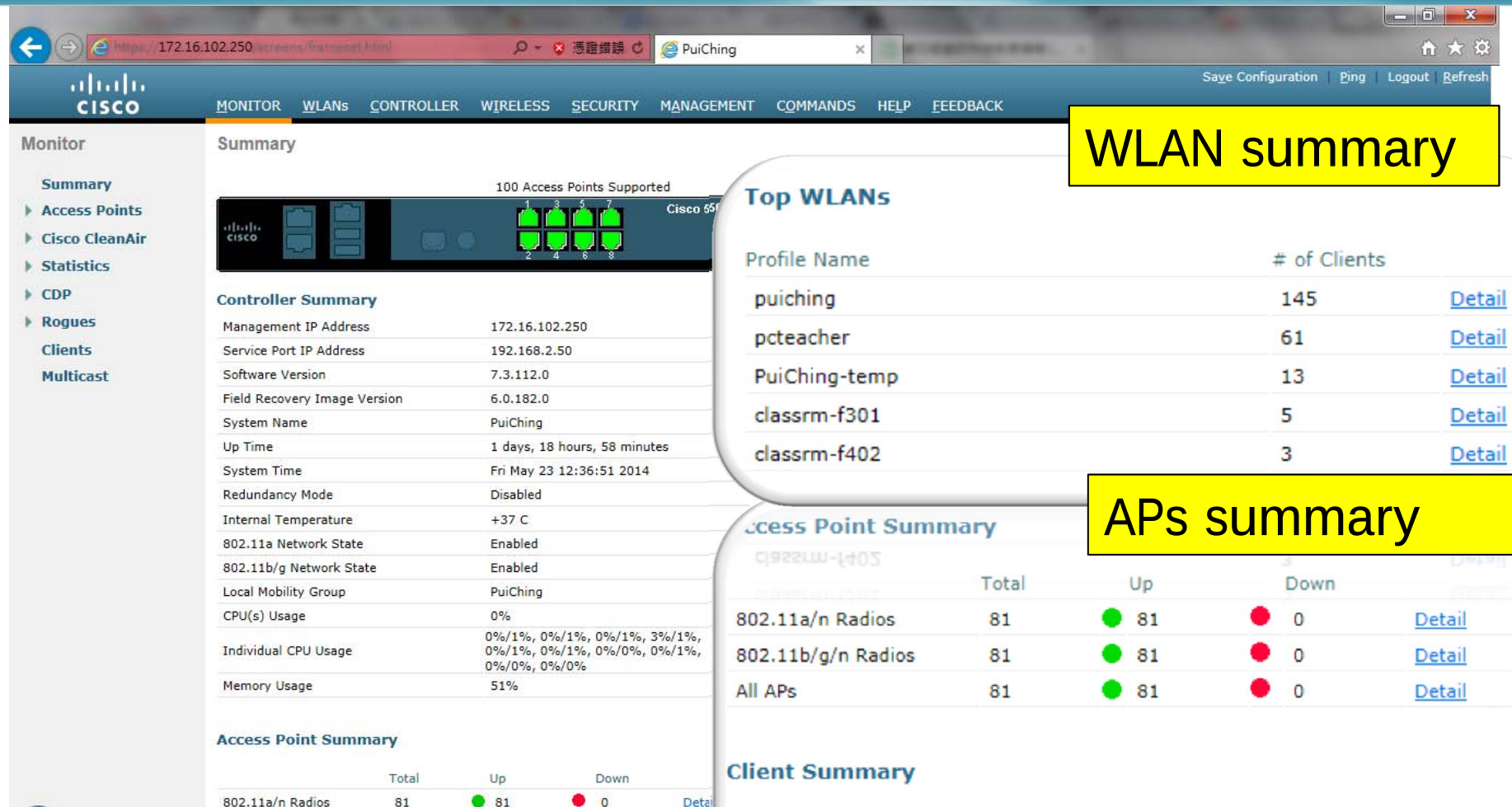
E309



E310

系統監察

System Monitoring



系統監察

System Monitoring

Clients summary

Cisco WLC Monitor - Clients Summary

Entries 1 - 75 of 226

Client MAC Addr	AP Name	WLAN Profile	WLAN SSID	User Name	Protocol	Status	Auth	Port	PMIPv6	WCCP
00:0a:f5:2a:f2:38	AP_E_107	pteacher	pteacher	pcmsteacher	802.11bn	Associated	Yes	13	No	No
00:37:6d:6e:57:58	AP_E_411	pteacher	pteacher	pcmsteacher	802.11bn	Associated	Yes	13	No	No
00:61:71:da:75:63	AP_E_103	puiching	puiching	gary	802.11an	Associated	Yes	13	No	No
00:eb:2d:e0:78:8c	AP_F_201	pteacher	pteacher	pc-cck	802.11bn	Associated	Yes	13	No	No
00:ee:bd:42:1d:1b	AP_E_204	PuiChing-temp	PuiChing-temp		802.11an	Associated	Yes	13	No	No
04:f7:e4:d1:25:79	AP_G_402	puiching	puiching	pcstudent	802.11an	Associated	Yes	13	No	No
0c:1d:af:71:ab:1f	AP_F_201	pteacher	pteacher	pc-ccwa	802.11bn	Associated	Yes	13	No	No
0c:30:21:cf:9b:12	AP_G_101	puiching	puiching	pcstudent	802.11an	Associated	Yes	13	No	No
0c:30:21:d2:ed:72	AP_J_100	puiching	puiching	pcstudent	802.11bn	Associated	Yes	13	No	No
0c:74:c2:22:29:7f	AP_G_204B	puiching	puiching	pcstudent	802.11bn	Associated	Yes	13	No	No
10:1c:0c:85:d3:df	AP_G_401	puiching	puiching	pcstudent	802.11an	Associated	Yes	13	No	No
10:68:3f:f3:75:bb	AP_J_100	pteacher	pteacher	pcmsteacher	802.11bn	Associated	Yes	13	No	No
14:5a:05:2f:d9:70	AP_E_112	puiching	puiching	pcstudent	802.11bn	Associated	Yes	13	No	No
14:8f:c6:10:31:d4	AP_E_407	pteacher	pteacher	pc-lfw	802.11bn	Associated	Yes	13	No	No
14:8f:c6:2e:b2:ad	AP_G_101	puiching	puiching	pcstudent	802.11bn	Associated	Yes	13	No	No
14:99:e2:d6:72:2b	AP_E_209	puiching	puiching	pcstudent	802.11an	Associated	Yes	13	No	No
14:99:e2:e7:10:bb	AP_E_405	pteacher	pteacher	pc-wsy	802.11an	Associated	Yes	13	No	No
14:99:e2:eb:25:45	AP_G_401	PuiChing-temp	PuiChing-temp		802.11an	Associated	Yes	13	No	No
18:20:32:d5:ec:c3	AP_F_401	puiching	puiching	pcstudent	802.11an	Associated	Yes	13	No	No
18:af:61:85:36:0b	AP_J_100	PuiChing-temp	PuiChing-temp		802.11an	Associated	Yes	13	No	No
1c:1a:c0:10:8b:09	AP_G_401	puiching	puiching	pcstudent	802.11an	Associated	Yes	13	No	No
1c:1a:c0:4e:a4:61	AP_E_104	pteacher	pteacher	pcmsteacher	802.11an	Associated	Yes	13	No	No

系統監察

System Monitoring

Browser address bar: <https://172.16.102.250/screens/frameset.html>

Navigation tabs: MONITOR, WLANs, CONTROLLER, WIRELESS, SECURITY, MANAGEMENT

Monitor

- Summary
- Access Points
- Cisco CleanAir
- Statistics
 - Controller
 - AP Join
 - Ports
 - RADIUS Servers
 - Mobility Statistics
 - IPv6 Neighbor Bind
 - Counters
 - PMIPv6 LMA Statistics
- CDP
- Rogues
- Clients
- Multicast

Multicast Groups

Layer3 MGID(Multicast Group ID) Mapping

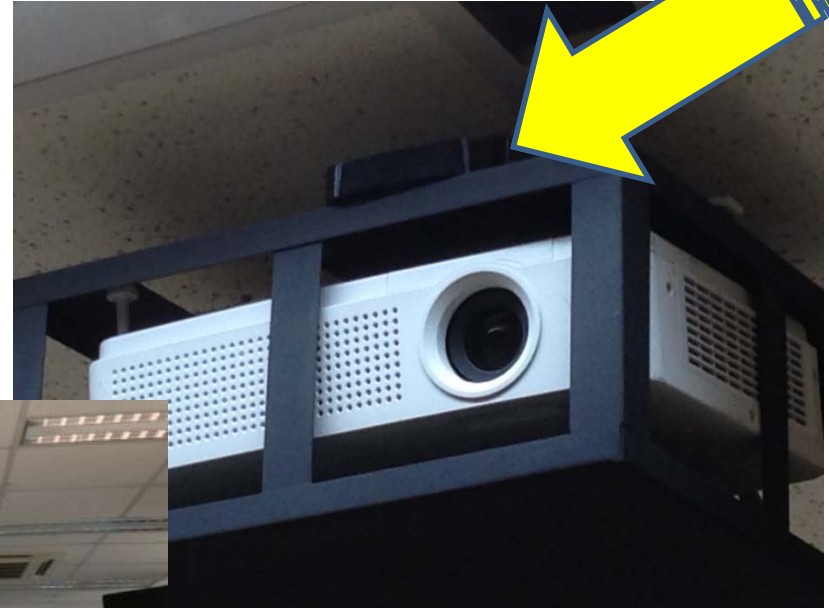
Group address	Vlan	MGID	IGMP/MLD
224.0.0.251	103	14938	IGMP
224.0.0.251	104	14995	IGMP
224.0.0.251	105	14980	IGMP
224.0.0.251	109	14988	IGMP
224.0.0.251	110	15000	IGMP
224.0.0.251	111	14584	IGMP
224.0.0.251	112	15380	IGMP
224.0.0.251	113	14976	IGMP
224.0.0.251	114	15045	IGMP
224.0.0.251	115	14953	IGMP
224.0.0.251	116	14982	IGMP
224.0.0.251	205	15462	IGMP
224.0.0.251	206	15468	IGMP
224.0.0.251	244	15464	IGMP
224.0.0.251	245	15342	IGMP
224.0.0.251	248	15375	IGMP
224.0.0.252	104	15195	IGMP
224.0.0.252	105	14981	IGMP
239.255.255.250	103	15357	IGMP
239.255.255.250	104	15199	IGMP
239.255.255.250	105	14979	IGMP

Layer2 MGID(Multicast Group ID) Mapping

InterfaceName	vlanId	MGID
classrm-e021	201	26
classrm-e023	202	27
classrm-e101	203	28
classrm-e102	204	29
classrm-e103	205	30
classrm-e104	206	31
classrm-e106	207	32
classrm-e107	208	33
classrm-e108a	209	34
classrm-e108b-110	210	35
classrm-e111	211	36
classrm-e112	212	37
classrm-e201	213	38
classrm-e202	214	39
classrm-e203	215	40
classrm-e204	216	41
classrm-e205	217	42
classrm-e206	218	43
classrm-e207	219	44
classrm-e208	220	45
classrm-e209	221	46
classrm-e210	222	47
classrm-e211	223	48
classrm-e301	224	49
classrm-e303	225	50
classrm-e304	226	51
classrm-e305	227	52
classrm-e306	228	53
classrm-e307	229	54
classrm-e308	230	55
classrm-e309	231	56
classrm-e310	232	57
classrm-e311	233	58
classrm-e401	234	59
classrm-e405	235	60
classrm-e407	236	61

Multicast info
For Apple TV

Apple TV Deployment



Apple TV Deployment

- 硬件配置 – Locker in Classroom and CCTV



無線網絡設定

WLAN Configuration

Different
Wireless LAN



MONITOR **WLANs** CONTROLLER WIRELESS SECURITY MANAGEMENT CO

Save

WLANs

▼ **WLANs**

WLANs

► **Advanced**

WLANs

Current Filter: None [\[Change Filter\]](#) [\[Clear Filter\]](#)

Create New ▼ Go

☐	WLAN ID	Type	Profile Name	WLAN SSID	Admin Status	Security Policies	
☐	1	WLAN	pcteacher	pcteacher	Enabled	[WPA2][Auth(802.1X)]	▼
☐	2	WLAN	puiching	puiching	Enabled	[WPA2][Auth(802.1X)]	▼
☐	3	WLAN	pcguest	pcguest	Enabled	Web-Auth	▼
☐	4	WLAN	classrm-e021	classrm-e021	Enabled	[WPA2][Auth(802.1X)]	▼
☐	5	WLAN	classrm-e023	classrm-e023	Enabled	[WPA2][Auth(802.1X)]	▼
☐	6	WLAN	classrm-e101	classrm-e101	Enabled	[WPA2][Auth(802.1X)]	▼
☐	7	WLAN	classrm-e102	classrm-e102	Enabled	[WPA2][Auth(802.1X)]	▼
☐	8	WLAN	classrm-e103	classrm-e103	Enabled	[WPA2][Auth(802.1X)]	▼
☐	9	WLAN	classrm-e104	classrm-e104	Enabled	[WPA2][Auth(802.1X)]	▼
☐	10	WLAN	classrm-e106	classrm-e106	Enabled	[WPA2][Auth(802.1X)]	▼

無線網絡設定

WLAN Configuration

WLANs > Edit 'pcteacher'

WLAN: pcteacher

General **Security** **QoS** **Advanced**

Profile Name: pcteacher
Type: WLAN
SSID: pcteacher
Status: ☒ Enabled

Security Policies: [WPA2][Auth(802.1X)]
(Modifications done under security tab will appear after applying the changes.)

Radio Policy: All
Interface/Interface Group(G): staff-group (G)
Multicast Vlan Feature: ☐ Enabled
Broadcast SSID: ☐ Enabled

WLANs > Edit 'pcteacher'

General **Security** **QoS** **Advanced**

Layer 2 **Layer 3** **AAA Servers**

Layer 2 Security: WPA+WPA2
MAC Filtering: ☐

Fast Transition
Fast Transition: ☐

WPA+WPA2 Parameters

WPA Policy: ☐
WPA2 Policy: ☒
WPA2 Encryption: ☒ AES ☐ TKIP

Authentication Key Management

802.1X: ☒ Enable
CKKM: ☐ Enable
PSK: ☐ Enable
FT 802.1X: ☐ Enable
FT PSK: ☐ Enable

WLANs > Edit 'pcteacher'

General **Security** **QoS** **Advanced**

Quality of Service (QoS): Silver (best effort)

Override Per-User Bandwidth Contracts (k) ¹⁶

	DownStream	UpStream
Average Data Rate	0	0
Burst Data Rate	0	0
Average Real-Time Rate	0	0
Burst Real-Time Rate	0	0

Clear

Override Per-SSID Bandwidth Contracts (k) ¹⁶

	DownStream	UpStream
Average Data Rate	0	0
Burst Data Rate	0	0
Average Real-Time Rate	0	0
Burst Real-Time Rate	0	0

Clear

無線網絡設定

WLAN Configuration

WLANs > Edit 'pcteacher'

WLAN: pcteacher

General **Security** **QoS** **Advanced**

Profile Name: pcteacher
Type: WLAN
SSID: pcteacher
Status: ☒ Enabled

Security Policies: [WPA2][Auth(802.1X)]
(Modifications done under security tab will appear after applying the changes.)

Radio Policy: All
Interface/Interface Group(G): staff-group (G)
Multicast VLAN Feature: ☐ Enabled
Broadcast SSID: ☐ Enabled

WLANs > Edit 'pcteacher'

General **Security** **QoS** **Advanced**

Layer 2 **Layer 3** **AAA Servers**

Layer 2 Security: WPA+WPA2
MAC Filtering: ☐

Fast Transition
Fast Transition: ☐

WPA+WPA2 Parameters

WPA Policy: ☐
WPA2 Policy: ☒
WPA2 Encryption: ☒ AES ☐ TKIP

Authentication Key Management

802.1X: ☒ Enable
CKKM: ☐ Enable
PSK: ☐ Enable
FT 802.1X: ☐ Enable
FT PSK: ☐ Enable

WLANs > Edit 'pcteacher'

General **Security** **QoS** **Advanced**

Quality of Service (QoS): Silver (best effort)

Override Per-User Bandwidth Contracts (k) ¹⁶

	DownStream	UpStream
Average Data Rate	0	0
Burst Data Rate	0	0
Average Real-Time Rate	0	0
Burst Real-Time Rate	0	0

Clear

Override Per-SSID Bandwidth Contracts (k) ¹⁶

	DownStream	UpStream
Average Data Rate	0	0
Burst Data Rate	0	0
Average Real-Time Rate	0	0
Burst Real-Time Rate	0	0

Clear

無線網絡設定

WLAN Configuration

WLAN: pcguest

WLANs > Edit 'pcguest'

General Security QoS Advanced

Profile Name: pcguest
Type: WLAN
SSID: pcguest
Status: ☒ Enabled

Security Policies: **Web-Auth**
(Modifications done under security tab will appear after applying the changes.)

Radio Policy: All
Interface/Interface Group(G): guest-group (G)
Multicast Vlan Feature: ☐ Enabled
Broadcast SSID: ☒ Enabled

WLANs > Edit 'pcguest'

General Security QoS Advanced

Layer 2 Layer 3 AAA Servers

Layer 3 Security: None

☒ Web Policy
☒ Authentication
☐ Passthrough
☐ Conditional Web Redirect
☐ Splash Page Web Redirect
☐ On MAC Filter failure

Preauthentication ACL: IPv4: None IPv6: None WebAuth FlexAcl: None

Over-ride Global Config: ☐ Enable

WLANs > Edit 'pcguest'

General Security QoS Advanced

Quality of Service (QoS): Silver (best effort)

Override Per-User Bandwidth Contracts (k)

	DownStream	UpStream
Average Data Rate	3100	3100
Burst Data Rate	3100	3100
Average Real-Time Rate	3100	3100
Burst Real-Time Rate	3100	3100

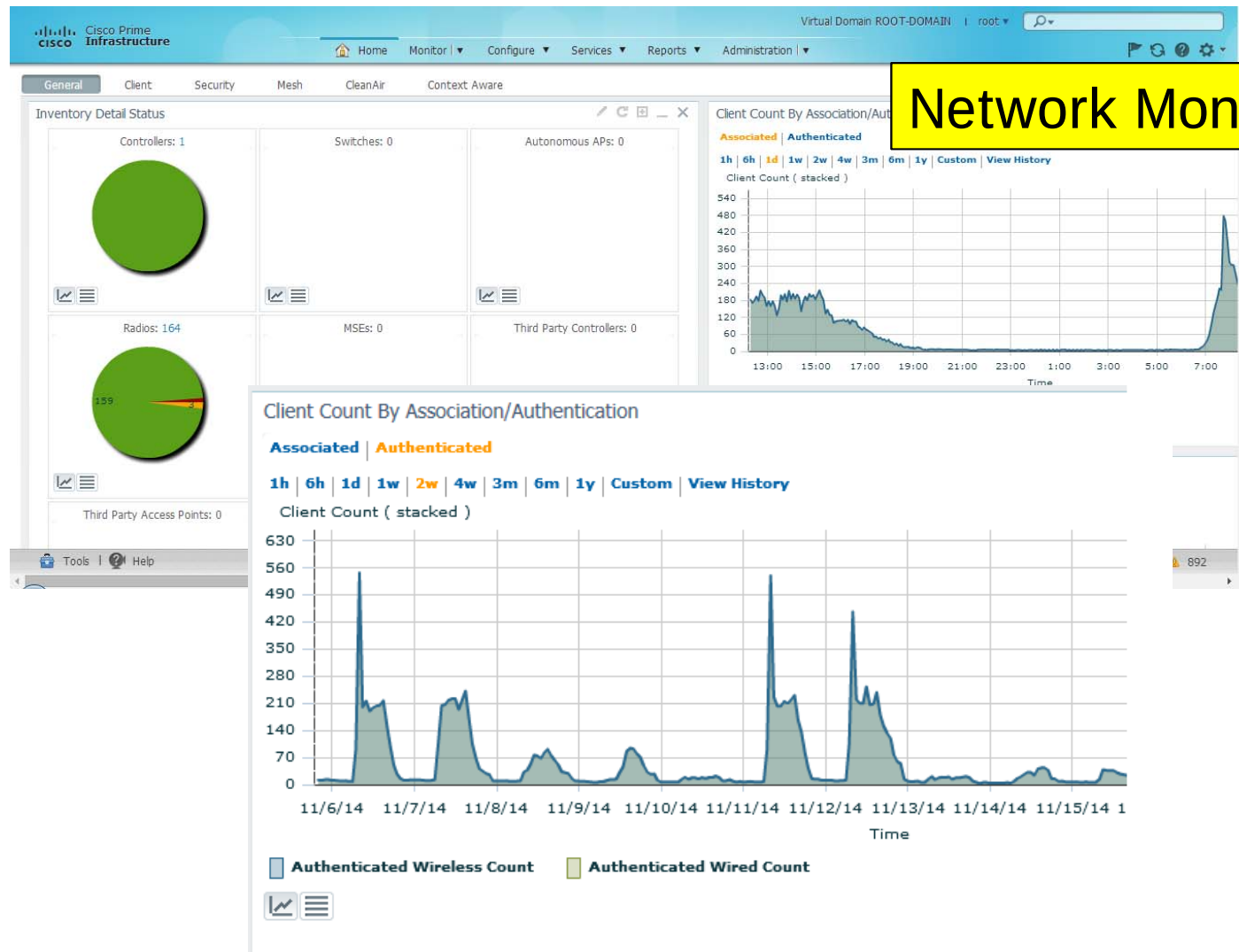
Clear

Override Per-SSID Bandwidth Contracts (k)

	DownStream	UpStream
Average Data Rate	0	0
Burst Data Rate	0	0
Average Real-Time Rate	0	0
Burst Real-Time Rate	0	0

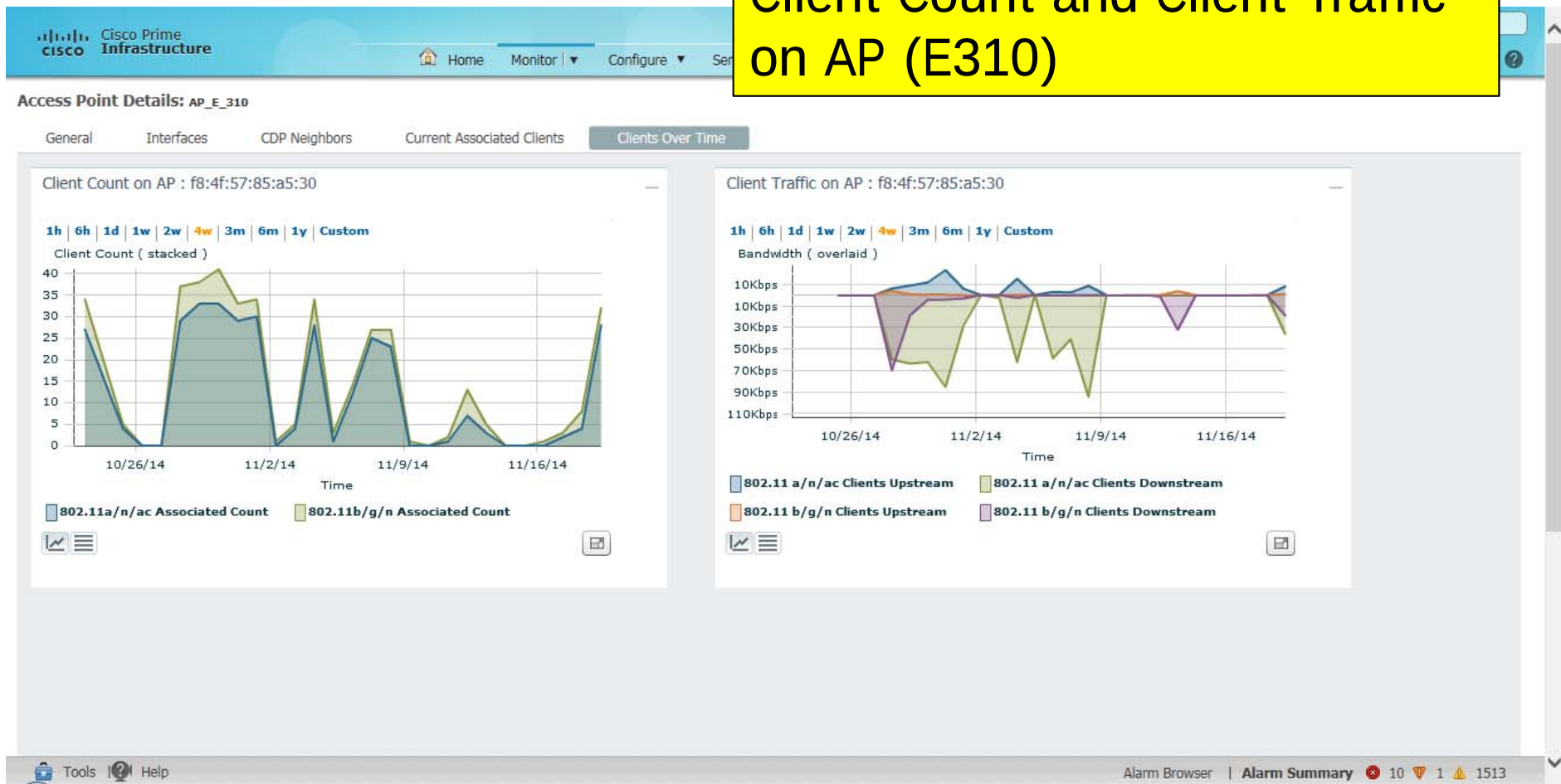
Clear

Prime Infrastructure (PI)



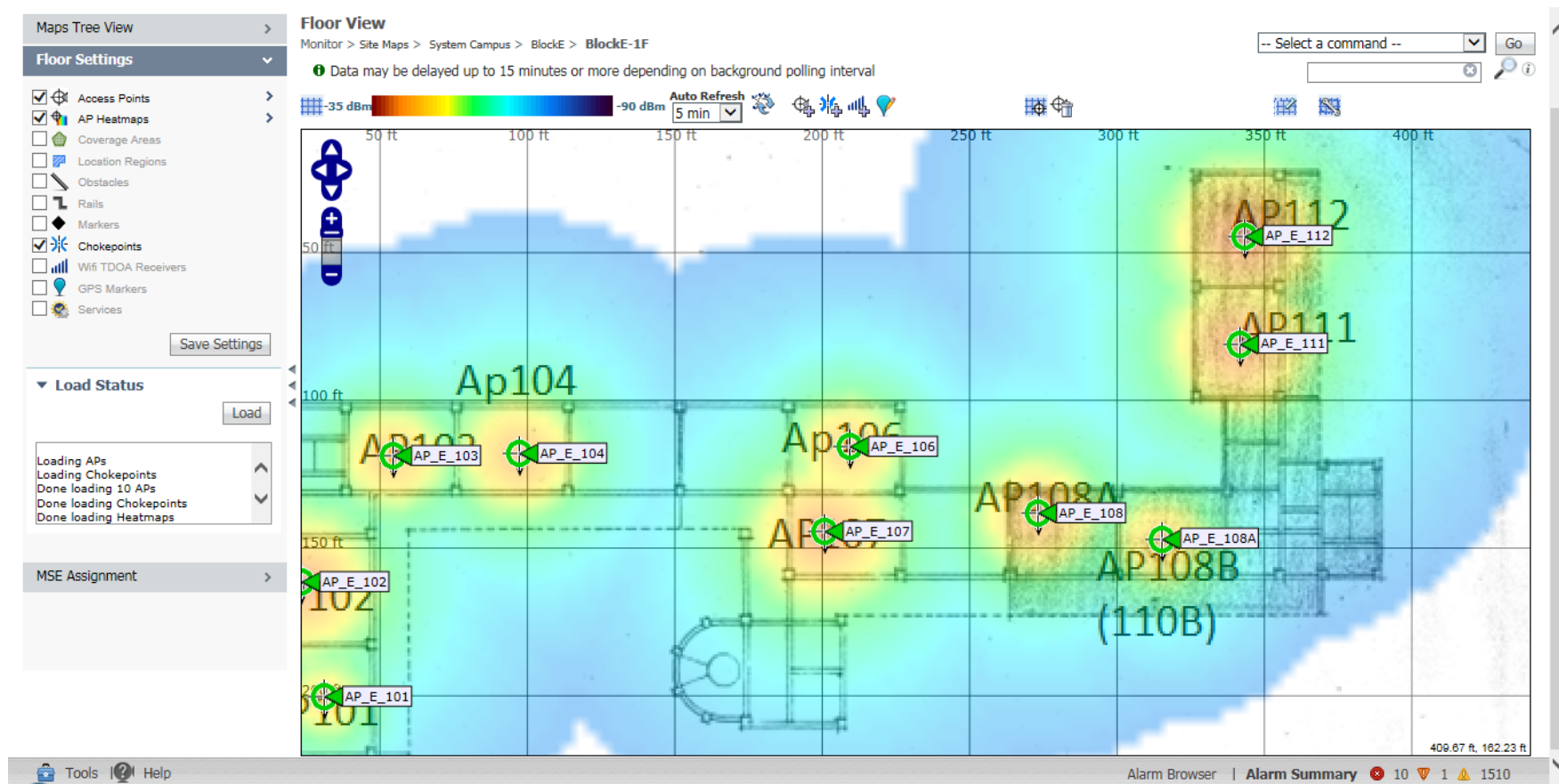
Prime Infrastructure (PI)

Client Count and Client Traffic on AP (E310)



Prime Infrastructure (PI)

AP signal Strength





謝謝
問答時間