UTS: SPACE MANAGEMENT

UNIVERSITY OF TECHNOLOGY SYDNEY

SPACE UTILISATION

People Counting

A New Hope

Case Study

Bryce Hutchinson
Steve Ivanovski

BACKGROUND INFO - UTS

- Sydney - City Based Campus – Current 315,000 GFA
- 1 Billion Dollar Masterplan - Expanding GFA to 392,000 by 2015
- On Completion No Future Space Available For Expansion
- A Need to Drive Our Existing Spaces To Their Limits

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UTS Space Management Team

- Manager – Space Management
- Facilities Information Manager
- Database Administrator

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The Old Republic Way

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Typical Space Utilisation Survey

(TEFMA Guidelines)

- Request For Survey (Teaching & Learning)
- Funding Approval (4 weeks)
- Return Brief (2 weeks)
- Consultant Tender (3 weeks)
- Tender Review & Approval Process (2 weeks)
- Start Up Project (4-6 weeks)
- Space Utilisation Survey (1 week)
- Evaluate Data – Preliminary Report (4-6 weeks)
- Client Feedback (1 week)
- Final Report (4 weeks)
- Total (29 weeks)

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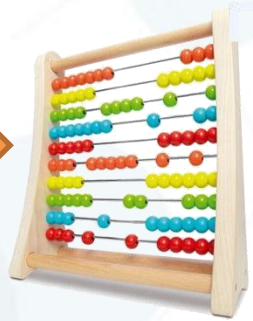
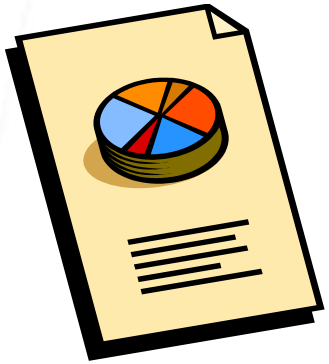
Space Survey - How It Works





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MUST BE A BETTER SOLUTION

? ? ?

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The UTS Way

A New Hope

Technologies Available For People Counting

- Camera
- Laser
- Thermal Image Sensors
- Lockable Spaces With Card Access
- Manual

Key Requirements

- Invisible – No Interruption to Classes
- Accurate
- 24/7 Live and Meaningful Data
- Syllabus Plus Interface (Time Tabling Software)
- Reporting – Daily/Weekly/Semester/Yearly
- Fully Automatic Reporting
- Cost Effective

Test Environment

Stage 1

- Thermal Image Sensor Technology
- 2 Units installed
- 1 General Teaching Space (GTS)
- 1 General Access Computer LAB
- Software Installation
- Reporting – Needs customisation to suit University Requirements

Test Environment

Stakeholders

- UTS – Special Reporting Requirements For Space Utilisation Surveys (TEFMA)
- Local Industry Partner

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Test Environment

Stakeholders

- Issues
- Moving Forward !!
- **Alliance**
- Working Together To Help Achieve Our Goals

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Test Environment

Stage 2

- 8 New Sensors
- Installed in 6 GTS Rooms
- On Going Reporting Development
- **Stage 3**
- Installation of 5 New Thermal Sensors in Informal Teaching & Learning Spaces (occupancy/traffic flows)
- New Report Interface
- **Stage 4**
- R&D Mechanical/Electrical Control Interface with Building Management System (BMS)

The New Hope

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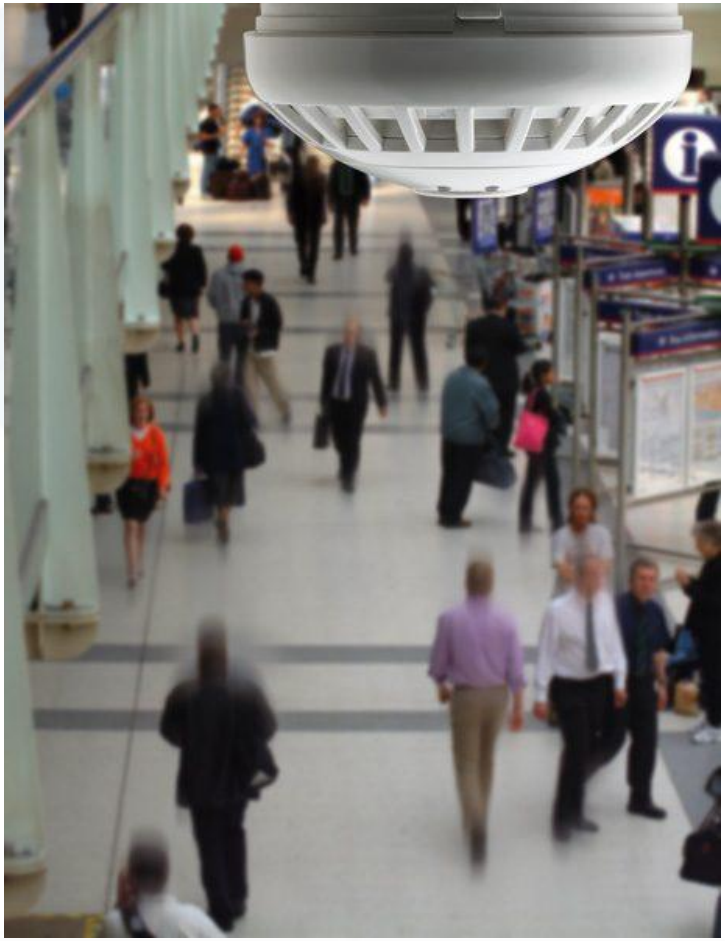
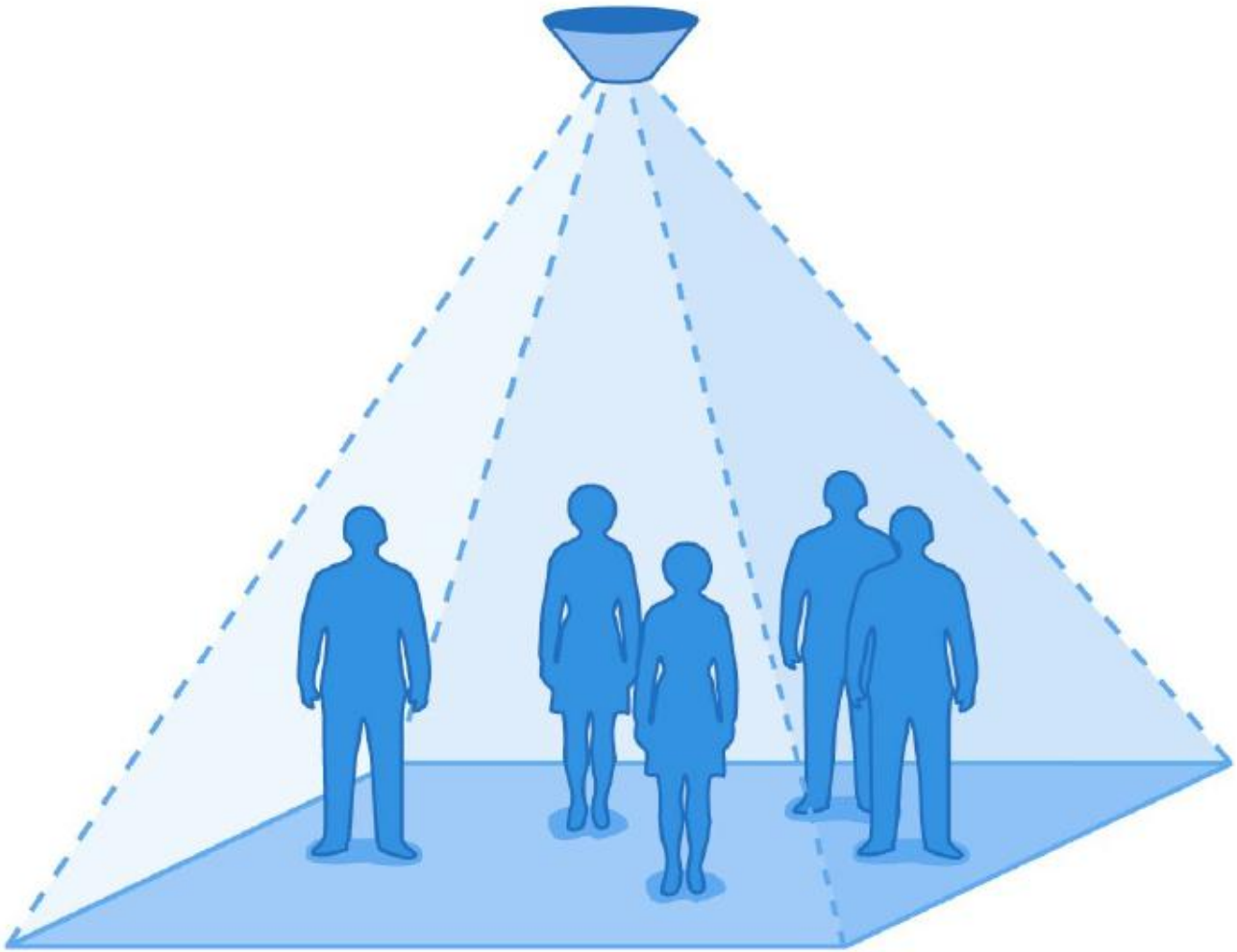
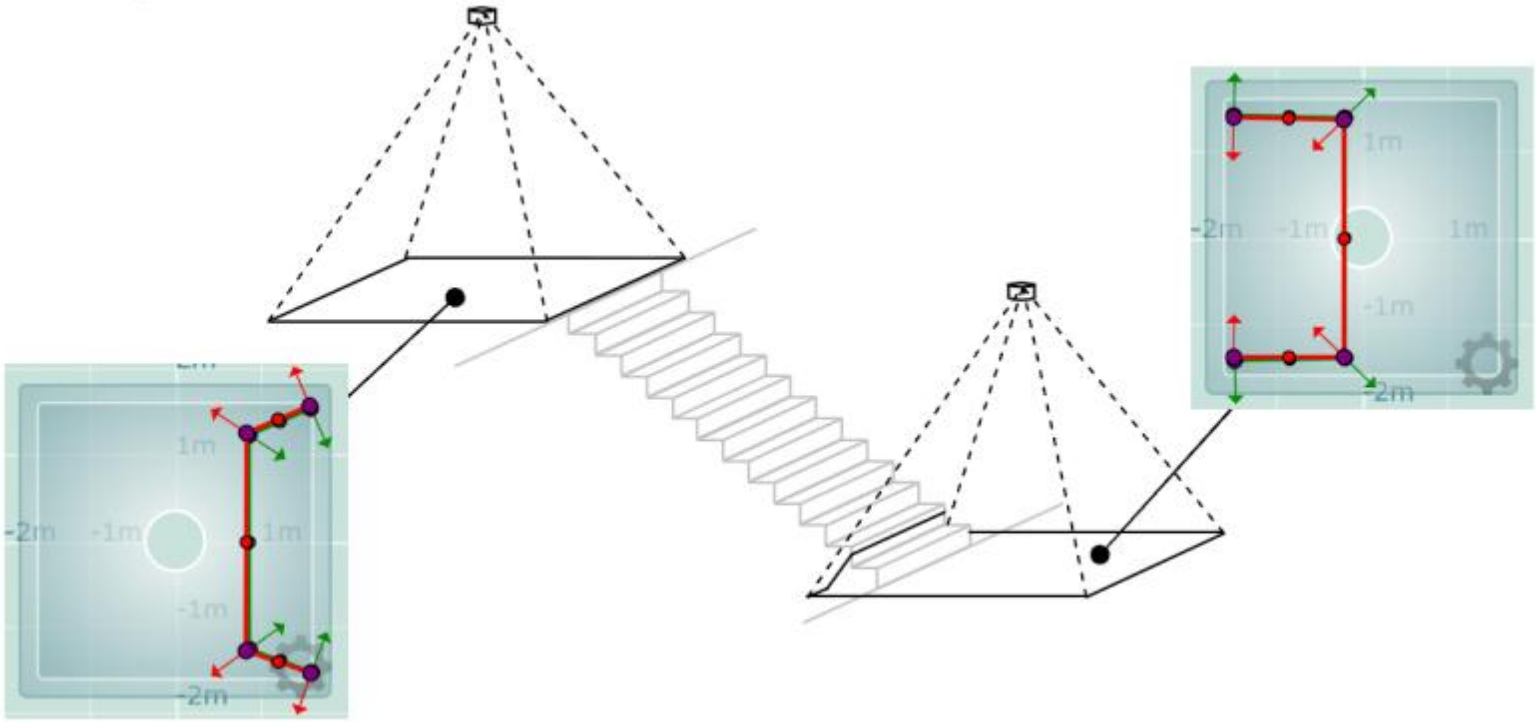


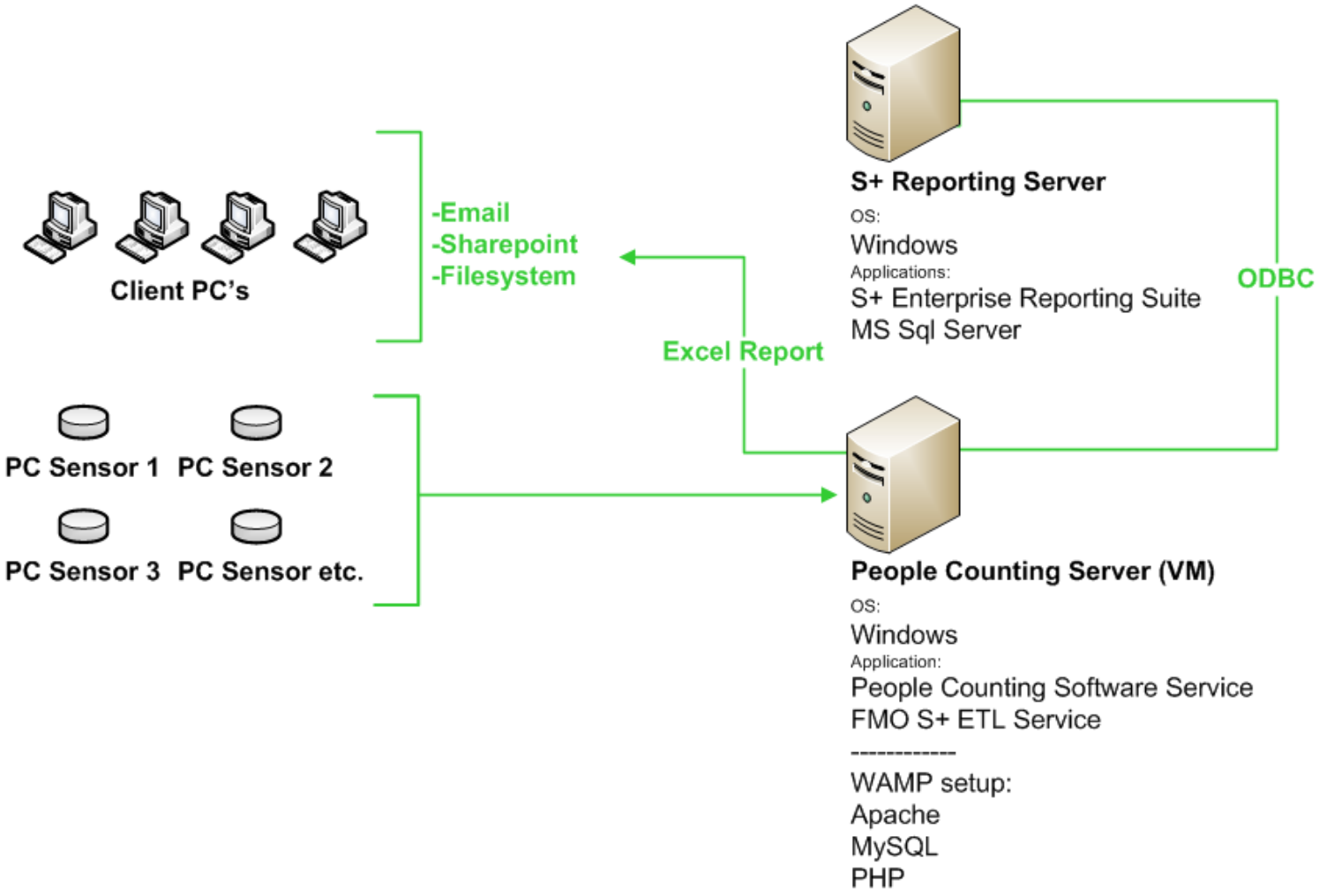
How It Works



How It Works



How It Works


Client PC's
-Email
-Sharepoint
-Filesystem
PC Sensor 1
PC Sensor 2
PC Sensor 3
PC Sensor etc.
Excel Report
S+ Reporting Server
OS:
Windows
Applications:
S+ Enterprise Reporting Suite
MS Sql Server
ODBC
People Counting Server (VM)
OS:
Windows
Application:
People Counting Software Service
FMO S+ ETL Service

WAMP setup:
Apache
MySQL
PHP

How It Works

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- Server failsafe: sensors store 3 months worth of data in units, if server is offline sensors continually poll & collect data.
- Server can be a virtual machine
- Server uses a WAMP software stack, **W**indows, **A**pache, **M**ySQL, **P**HP.
- Units are powered via >=Cat5 POE.

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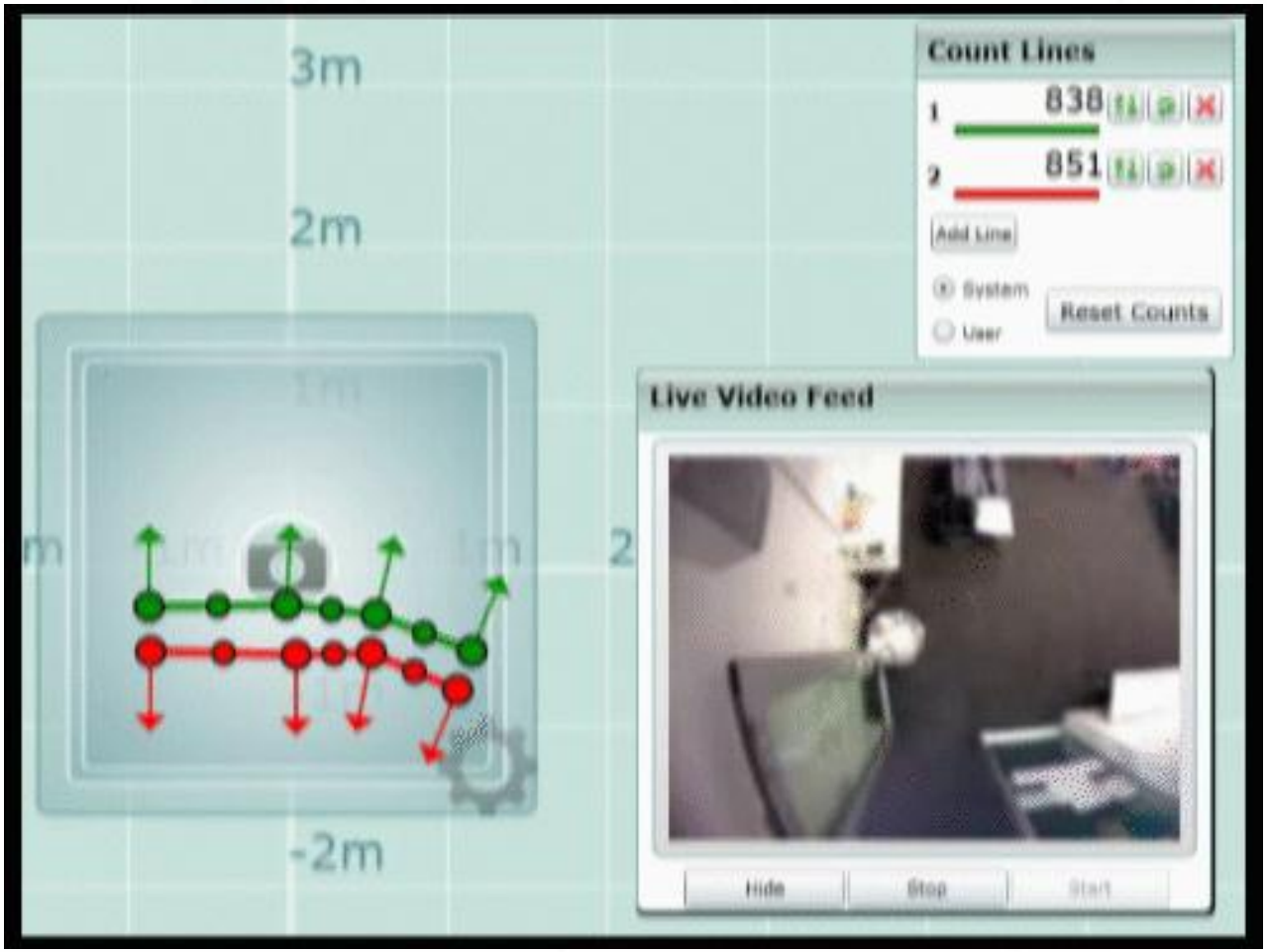
Sensor In Action



Reports
(TEFMA Space Planning Guidelines)

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Facility Teaching Space Audit

UTS - City Campus

Start of Audit	2/04/2012
End of Audit	8/04/2012
Available periods:	120 Core / 132 Non-core

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ROOM SUMMARY

Please do NOT save this file! It should be Read-only. Saving on a Mac will prevent it working on Windows.

Rooms	Frequency	Occupancy	Utilisation	Booking Activity	Periods	Total Cap
8	53.2%	30.0%	19.9%	209	0	732
Targets:	75%	75%	56%			

Room Name	Room Description	Freq	Occ	Util	Bookings	Periods	Capacity
CB02.04.11	Lecture Theatre	43%	33%	14%	32	52	112
CB02.04.13	Lecture Theatre	64%	56%	36%	43	77	230
CB02.04.22	Classroom	44%	18%	8%	1	53	50
CB02.04.23	Classroom	52%	39%	20%	29	62	70
CB02.05.31	Classroom	38%	15%	6%	29	46	76
CB02.05.32	Classroom	34%	20%	7%	25	41	80
CB02.05.40	Classroom	52%	24%	13%	31	62	66
CB02.07.4B	Classroom	39%	61%	24%	27	47	48

Colour code key

Target is green, zero is red. Other values interpolated.

Freq	Occ	Util
100.00%	100.00%	100.00%
90.00%	90.00%	90.00%
80.00%	80.00%	80.00%
70.00%	70.00%	70.00%
60.00%	60.00%	60.00%
50.00%	50.00%	50.00%
40.00%	40.00%	40.00%
30.00%	30.00%	30.00%
20.00%	20.00%	20.00%
10.00%	10.00%	10.00%
0.00%	0.00%	0.00%

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Reports

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UTS: SPACE MANAGEMENT

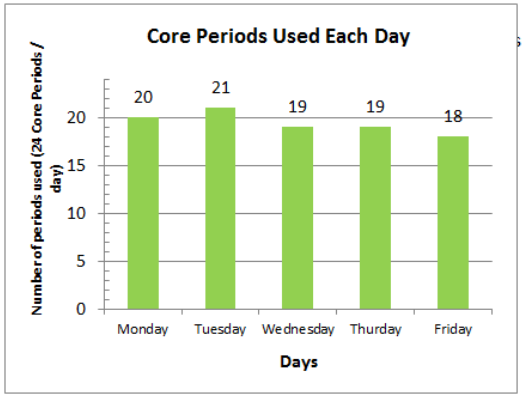
Space Usage Audit
CB02.04.13 (Lecture Theatre, Capacity: 230)
Demo Site

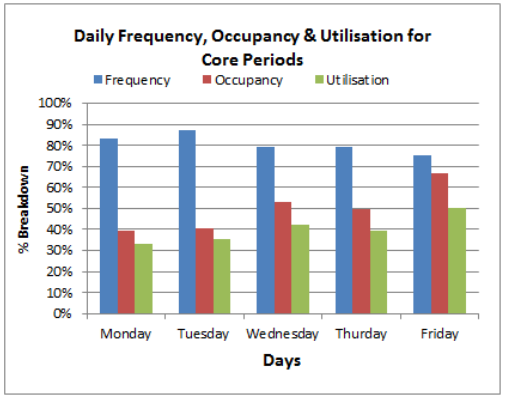
Start of Audit	4/03/2013
End of Audit	10/03/2013
Peak Occupancy	199

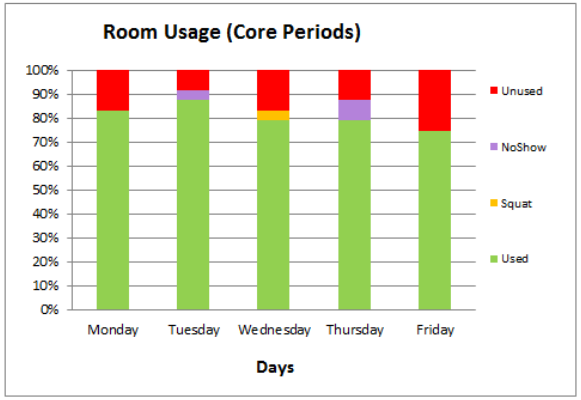
	Core	Non-core	All	Target
Use	97/120	38/132	135/252	173/230
Freq	81%	29%	54%	75%
Occ	50%	16%	4%	75%
Util	40%	5%	2%	56%

Key: Unused in Core Periods; Unused in Non-Core Periods; No Show; Early Finish; Non-core; Used; Early Arrival/Overrun; Used without booking (Squat); Low Occupancy in Core Periods

Day	C	NC	Date	Time	Cnt	Activity	Time	Cnt	Activity	Time	Cnt	Activity	Time	Cnt	Activity	Time	Cnt	Activity	Time	Cnt	Activity	Time	Cnt	Activity	Time	Cnt	Activity	Time	Cnt	Activity	Time	Cnt	Activity
Monday			4-Mar	6:00	0		6:30	0		7:00	0		7:30	0		8:00	0		8:30	136	Lecture	9:00	136	Lecture	9:30	136	Lecture	10:00	0		10:30	24	Lecture	11:00	24	Lecture	11:30	24	Lecture
Freq	20	1	83%	12:00	24	Lecture	12:30	24	Lecture	13:00	24	Lecture	13:30	161	Lecture	14:00	161	Lecture	14:30	161	Lecture	15:00	161	Lecture	15:30	161	Lecture	16:00	0		16:30	137	Lecture	17:00	137	Lecture	17:30	137	Lecture
Occ	161	136	40%	18:00	87	Lecture	18:30	87	Lecture	19:00	87	Lecture	19:30	87	Lecture	20:00	0		20:30	0		21:00	0		21:30	0		22:00	0		22:30	0		23:00	0		23:30	0	
Util			33%			Core:	Unused	4	Periods	NoShow	0	Periods	Squat	0	Periods	Used	20	Periods	Total	1819				Non-Core	Unused	11	Periods	NoShow	0	Periods	Squat	0	Periods	Used	1	Periods	Total	136	
Tuesday			5-Mar	6:00	0		6:30	0		7:00	0		7:30	0		8:00	0		8:30	91	Lecture	9:00	91	Lecture	9:30	91	Lecture	10:00	91	Lecture	10:30	130	Lecture	11:00	130	Lecture	11:30	130	Lecture
Freq	21	1	88%	12:00	107	Lecture	12:30	107	Lecture	13:00	107	Lecture	13:30	107	Lecture	14:00	162	Lecture	14:30	162	Lecture	15:00	162	Lecture	15:30	162	Lecture	16:00	62	Lecture	16:30	62	Lecture	17:00	62	Lecture	17:30	0	EarlyFinish
Occ	162	91	41%	18:00	59	Lecture	18:30	59	Lecture	19:00	59	Lecture	19:30	59	Lecture	20:00	0		20:30	0		21:00	0		21:30	0		22:00	0		22:30	0		23:00	0		23:30	0	
Util			36%			Core:	Unused	2	Periods	NoShow	1	Periods	Squat	0	Periods	Used	21	Periods	Total	1953				Non-Core	Unused	11	Periods	NoShow	0	Periods	Squat	0	Periods	Used	1	Periods	Total	91	
Wednesday			6-Mar	6:00	0		6:30	0		7:00	0		7:30	0		8:00	0		8:30	0		9:00	0		9:30	176	Lecture	10:00	176	Lecture	10:30	176	Lecture	11:00	176	Lecture	11:30	176	Lecture
Freq	19	0	79%	12:00	0	Squat	12:30	105	Lecture	13:00	105	Lecture	13:30	105	Lecture	14:00	0		14:30	126	Lecture	15:00	126	Lecture	15:30	126	Lecture	16:00	126	Lecture	16:30	126	Lecture	17:00	126	Lecture	17:30	136	Lecture
Occ	176	0	53%	18:00	136	Lecture	18:30	136	Lecture	19:00	136	Lecture	19:30	136	Lecture	20:00	0		20:30	0		21:00	0		21:30	0		22:00	0		22:30	0		23:00	0		23:30	0	
Util			42%			Core:	Unused	4	Periods	NoShow	0	Periods	Squat	1	Periods	Used	19	Periods	Total	2323				Non-Core	Unused	12	Periods	NoShow	0	Periods	Squat	0	Periods	Used	0	Periods	Total	0	
Thurday			7-Mar	6:00	0		6:30	0		7:00	0		7:30	0		8:00	0		8:30	164	Lecture	9:00	164	Lecture	9:30	164	Lecture	10:00	164	Lecture	10:30	164	Lecture	11:00	0		11:30	164	Lecture
Freq	19	1	79%	12:00	155	Lecture	12:30	155	Lecture	13:00	155	Lecture	13:30	155	Lecture	14:00	90	Lecture	14:30	90	Lecture	15:00	90	Lecture	15:30	90	Lecture	16:00	0		16:30	0		17:00	77	Lecture	17:30	77	Lecture
Occ	164	164	43%	18:00	77	Lecture	18:30	77	Lecture	19:00	65	Lecture	19:30	65	Lecture	20:00	0	EarlyFinish	20:30	0	EarlyFinish	21:00	0		21:30	0		22:00	0		22:30	0		23:00	0		23:30	0	
Util			39%			Core:	Unused	3	Periods	NoShow	2	Periods	Squat	0	Periods	Used	19	Periods	Total	2161				Non-Core	Unused	11	Periods	NoShow	0	Periods	Squat	0	Periods	Used	1	Periods	Total	164	
Friday			8-Mar	6:00	0		6:30	0		7:00	0		7:30	0		8:00	0		8:30	0		9:00	116	Lecture	9:30	116	Lecture	10:00	116	Lecture	10:30	0		11:00	0		11:30	187	Lecture
Freq	18	0	75%	12:00	187	Lecture	12:30	187	Lecture	13:00	187	Lecture	13:30	199	Lecture	14:00	199	Lecture	14:30	199	Lecture	15:00	199	Lecture	15:30	199	Lecture	16:00	154	Lecture	16:30	154	Lecture	17:00	154	Lecture	17:30	123	Lecture
Occ	199	0	67%	18:00	123	Lecture	18:30	123	Lecture	19:00	0		19:30	0		20:00	0		20:30	0		21:00	0		21:30	0		22:00	0		22:30	0		23:00	0		23:30	0	
Util			50%			Core:	Unused	6	Periods	NoShow	0	Periods	Squat	0	Periods	Used	18	Periods	Total	2768				Non-Core	Unused	12	Periods	NoShow	0	Periods	Squat	0	Periods	Used	0	Periods	Total	0	
Saturday			9-Mar	6:00	0		6:30	0		7:00	0		7:30	0		8:00	6	ExternalHire	8:30	6	ExternalHire	9:00	6	ExternalHire	9:30	6	ExternalHire	10:00	6	ExternalHire	10:30	6	ExternalHire	11:00	6	ExternalHire	11:30	6	ExternalHire
Freq			17	12:00	6	ExternalHire	12:30	6	ExternalHire	13:00	6	ExternalHire	13:30	6	ExternalHire	14:00	6	ExternalHire	14:30	0		15:00	6	ExternalHire	15:30	6	ExternalHire	16:00	6	ExternalHire	16:30	6	ExternalHire	17:00	0	EarlyFinish	17:30	0	EarlyFinish
Occ			6	18:00	0		18:30	0		19:00	0		19:30	0		20:00	0		20:30	0		21:00	0		21:30	0		22:00	0		22:30	0		23:00	0		23:30	0	
																									Unused	17	Periods	NoShow	2	Periods	Squat	0	Periods	Used	17	Periods	Total	96	
Sunday			10-Mar	6:00	0		6:30	0		7:00	0		7:30	0		8:00	55	ExternalHire	8:30	55	ExternalHire	9:00	55	ExternalHire	9:30	55	ExternalHire	10:00	55	ExternalHire	10:30	55	ExternalHire	11:00	55	ExternalHire	11:30	55	ExternalHire
Freq			18	12:00	55	ExternalHire	12:30	55	ExternalHire	13:00	0		13:30	0		14:00	0		14:30	0		15:00	0		15:30	55	ExternalHire	16:00	55	ExternalHire	16:30	55	ExternalHire	17:00	55	ExternalHire	17:30	55	ExternalHire
Occ			55	18:00	55	ExternalHire	18:30	55	ExternalHire	19:00	55	ExternalHire	19:30	0	EarlyFinish	20:00	0		20:30	0		21:00	0		21:30	0		22:00	0		22:30	0		23:00	0		23:30	0	
																									Unused	17	Periods	NoShow	1	Periods	Squat	0	Periods	Used	18	Periods	Total	880	
Total	97	38		Capacity	230		Low Threshold (40% of capacity)						Total Occupancy of all used core periods			11046									Total Occupancy of all used non-core periods									1367					v3.1







Reports

UNIVERSITY OF TECHNOLOGY SYDNEY

Space Usage Audit
No Shows and Early Finishes for the Year
University of Technology, Sydney

UNIVERSITY OF TECHNOLOGY SYDNEY

Start of Year	1/01/2013
End of Year	31/12/2013
Prepared on	9/09/2013

Total hours booked but not used this year: No Shows: 1,961.5, Early Finish: 2,260.9 Total bookings not used this year: No Shows: 783, Early Finish: 846

No Shows / Early Finishes this year by Department (01/01/2013 to 31/12/2013) ignoring no-shows less than 30 mins

Department	Dept	Hours	Bookings	NS-Hours	NS-Bookings	EF-Hours	EF-Bookings
Marketing	AA	13	7	2	1	0	0
Building	AB	33.5	13	6.5	2	0	0
Law	AD	36	25	9	7	0	0
Audio Visual Services	AVS	51.5	9	17	3	0	0
Business	B	19.5	7	9	3	0	0
Law	BA	100.5	50	17	6	0	0
Management	BB	265	157	99	56	0	0
Medical and Molecular Biosciences	BE	25	13	2	1	0	0
Finance	BF	28	14	7	3	0	0
Marketing	BM	86	52	7	6	0	0
Careers	CAR	1	1	1	1	0	0
Engineering and Information Technology	D	190.5	58	72	12	0	0
Student Union	DC	227	93	63.5	27	0	0
Software	DE	885.00	380	200	88	0	0
Systems, Management and Leadership	DL	467.50	188	79.5	42	0	0
Electrical, Mechanical and Mechatronic System	DM	567.5	286	183	109	0	0
Software	DS	188	104	15	8	0	0
Facilities Hire	FAC	2,147.00	227	307.5	43	0	0
Facilities Management Unit	FMU	6.50	3	6.5	3	0	0
Arts and Social Sciences	G	113	47	14	7	0	0
Engineering and Information Technology	GC	246.5	123	38	19	0	0
Language Studies	GL	100	58	11	8	0	0
Social and Political Change	GP	321.5	178	68	38	0	0
Cultural Studies	GS	117.5	63	11	7	0	0
Student Union	INT	49.5	28	20.5	12	0	0
Health	J	175	90	56.5	33	0	0
Mathematical Sciences	L	162	75	25	13	0	0
Marketing & Communications Unit	MCU	221.5	21	67.5	10	0	0
Science	N	55.5	22	19.5	7	0	0
Environmental Sciences	NE	90	44	35	12	0	0
Medical and Molecular Biosciences	NH	482	194	125.5	43	0	0
Mathematical Sciences	NM	460.00	260	130	71	0	0
Law	NP	134	61	72	36	0	0
Institute for Interactive Media and Learning	PC	122	35	62.5	16	0	0
Student Administration Unit	SAU	1,812.00	104	1	1	0	0
Student Services Unit	SSU	377	55	10.5	6	0	0
Student Association	STA	18	2	9	1	0	0
Student Union	UNI	135.5	27	68.5	14	0	0

Autumn Term (detail) | Spring Term | Spring Term (detail) | Vacations | Vacations (detail) | **Whole Year**

UTS: SPACE MANAGEMENT

Reports

UNIVERSITY OF TECHNOLOGY SYDNEY

Space Usage Audit
No Shows and Early Finishes for the Term
University of Technology, Sydney

UNIVERSITY OF TECHNOLOGY SYDNEY

Start of Term	29/07/2013
End of Term	8/11/2013
Prepared on	0/01/1900

Total hours booked but not used this term: No Shows: 225.0, Early Finish: 369.4 Total bookings not used this term: No Shows: 90, Early Finish: 210

No Shows / Early Finishes this term (Spring) showing individual bookings (29/07/2013 to 08/11/2013) ignoring no-shows less than 30 mins

Dept	Title	Session	Room	Start	Hours	NS-Hours	EF-Hours
FAC	Church Group _Facilities Hire (Michelle x4011	~0000$_EN0000_train_B	CB02.04.29	17/08/2013 6:00	16	16	0
MCU	Open day_Anna Yiasemides x1697	~MCU_Open day_31Aug	CB02.04.29	31/08/2013 6:00	18	0	15.9
MCU	Open day_Anna Yiasemides x1697	~MCU_Open day_31Aug	CB02.04.13	31/08/2013 6:00	18	0	15.2
MCU	Open day_Anna Yiasemides x1697	~MCU_Open day_31Aug	CB02.04.11	31/08/2013 6:00	18	0	14.2
MCU	Open day_Anna Yiasemides x1697	~MCU_Open day_31Aug	CB02.04.23	31/08/2013 6:00	18	0	14
FAC	Indonesian Reform _Facilities Hire (Michelle	~448$_EN8599_reli_B	CB02.05.31	11/08/2013 8:00	12	12	0
FAC	Indonesian Reform _Facilities Hire (Michelle	~448$_EN8599_reli_B	CB02.05.32	11/08/2013 8:00	12	12	0
FAC	Indonesian Reform _Facilities Hire (Michelle	~448$_EN8600_reli_A	CB02.04.13	8/09/2013 8:00	12	0	11.6
FAC	Indonesian Reform _Facilities Hire (Michelle	~448$_EN8600_reli_B	CB02.05.31	8/09/2013 8:00	12	0	11.1
FAC	Indonesian Reform _Facilities Hire (Michelle	~448$_EN8600_reli_B	CB02.05.32	8/09/2013 8:00	12	0	10.9
FAC	IELTS _Facilities Hire (Rachael x4684)	~165$_EN8677_exam_A	CB02.07.4B	3/08/2013 8:00	10	0	9.6
FAC	IELTS _Facilities Hire (Rachael x4684)	~165$_EN8678_exam_A	CB02.04.13	7/09/2013 8:00	10	0	9.6
FAC	IELTS _Facilities Hire (Rachael x4684)	~165$_EN8677_exam_B	CB02.04.13	17/08/2013 8:00	10	0	9.5
FAC	IELTS _Facilities Hire (Rachael x4684)	~165$_EN8677_exam_A	CB02.04.13	3/08/2013 8:00	10	0	9.5
FAC	IELTS _Facilities Hire (Rachael x4684)	~165$_EN8677_exam_B	CB02.07.4B	17/08/2013 8:00	10	0	9.4
FAC	IELTS _Facilities Hire (Rachael x4684)	~165$_EN8677_exam_A	CB02.05.32	3/08/2013 8:00	10	0	9.3
FAC	IELTS _Facilities Hire (Rachael x4684)	~165$_EN8678_exam_A	CB02.07.4B	7/09/2013 8:00	10	0	9.3
FAC	Indonesian Reform _Facilities Hire (Michelle	~448$_EN8599_reli_B	CB02.05.32	25/08/2013 8:00	12	0	9.2
STA	Solidarity Club_Weekend long meeting_JEAN PA	~STA_Solidarity_17Aug	CB02.04.11	17/08/2013 9:00	9	9	0
FAC	Church Group _Facilities Hire (Michelle x4011	~0000$_EN0000_train_B	CB02.04.29	18/08/2013 6:00	16	0	8.9
FAC	Indonesian Reform _Facilities Hire (Michelle	~448$_EN8600_reli_C	CB02.04.11	1/09/2013 8:00	12	0	8.7
FAC	Indonesian Reform _Facilities Hire (Michelle	~448$_EN8600_reli_B	CB02.05.31	1/09/2013 8:00	12	0	8.5
FAC	Indonesian Reform _Facilities Hire (Michelle	~448$_EN8599_reli_C	CB02.04.11	4/08/2013 8:00	12	0	8.2
FAC	Indonesian Reform _Facilities Hire (Michelle	~448$_EN8599_reli_B	CB02.05.31	25/08/2013 8:00	12	0	8.1
FAC	Indonesian Reform _Facilities Hire (Michelle	~448$_EN8599_reli_B	CB02.05.32	4/08/2013 8:00	12	0	8.1
FAC	Indonesian Reform _Facilities Hire (Michelle	~448$_EN8599_reli_B	CB02.05.31	4/08/2013 8:00	12	0	7.1
J	Issues in Australian Health Services (Worksho	92606_SPR_U_1_B_Wks2/01	CB02.04.11	31/07/2013 9:00	8	0	6.3

NoShows and Early Finishes for Spring Term

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Autumn Term | Autumn Term (detail) | Spring Term | **Spring Term (detail)** | Vacations | Vacations (detail) | Whole Year

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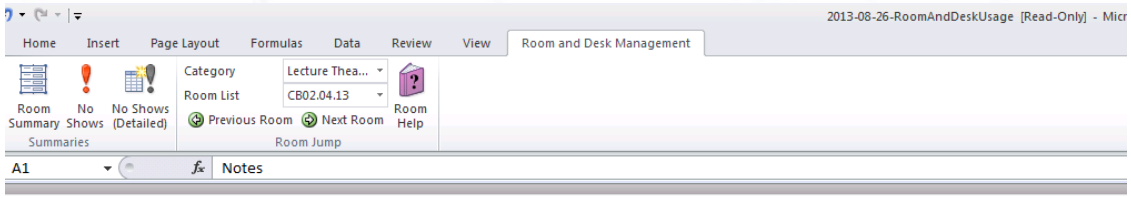
Reports



Click to add header

Notes

The reports are based on the AAPPA Space Planning Guidelines, which can be downloaded from www.tefma.com
www.tefma.com/uploads/content/26-SpaceGuidelines.pdf

Use

Use is divided into Core, Non-core and Total. The figure before the '/' is the number of periods used, and the figure after is the number of periods available.
Core periods are 9am-9pm (12 hours) Monday to Friday. Non-core periods are 6am-9am and 9pm to midnight weekdays, and 6am-midnight at weekends

Frequency

Room Frequency is the number of hours the room is in use, during the audit period, divided by the number of hours that the room is available for use, during the audited period.
Frequency = PeriodsUsed / PeriodsAvailable
PeriodsUsed = the number of periods the room was in use during the audit period.
PeriodsAvailable = the maximum number of periods the room could be used during the audit period.
Room Frequency pertains to the room being physically in use, not the theoretical use as recorded as bookings on a room booking or scheduling system.

Occupancy

Room Occupancy represents the average number of students in the room, when the room is in use, compared to the total room capacity. Room Occupancy is independent of Room Frequency.
Occupancy = TotalStudentPeriods / (Capacity x PeriodsUsed)
TotalStudentsPeriods = Total number of students counted in the room over the audit period.
Capacity = the maximum number of students the room can hold, usually based on the number of seats in the room.
PeriodsUsed = the number of periods the room was in use during the audit period. As Room Occupancy is dependent on the accuracy of Capacity, and Capacity is generally an approximate measure (particularly in spaces other than classrooms and lecture theatres), Room Occupancy data can be misleading. Room Occupancy levels above 100% can occur.
A Room Occupancy level in excess of 100% may be due to either overcrowding or reflect how the facility is being used, e.g. a laboratory space may be used as a convenient seminar space between laboratory classes. The number of students may exceed the room's listed capacity as a laboratory. Another concern with Room Occupancy data is the difference between students enrolled in a course, and the number of students attending the classes. Rooms must be booked to allow for every enrolled student to attend the class, even if this rarely occurs. In these cases low occupancy may not be an issue with the facilities provided.

Utilisation

Utilisation = Frequency x Occupancy
Utilisation combines Room Occupancy and Room Frequency data to give an indication of how the room is being used. Utilisation, as an abstract measure, is only useful as an indicator of rooms requiring further investigation of usage patterns, and comparative assessments.

Abbreviations

WRB-Active = Web Room Booking
Squat = Room Used without Booking
No Show = Room booked but not used

Check Data

Why do I sometimes see the link, 'Check Data' on the summary sheet?
If you see this, it means that there is a problem with the data integrity, possibly caused by a problem with the SQL queries. If you follow the link, it will take you to the sheet where the data integrity is checked, and it should be clear what is wrong.

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The UTS Way

Moving Forward : Further R&D

BMS / HVAC Control

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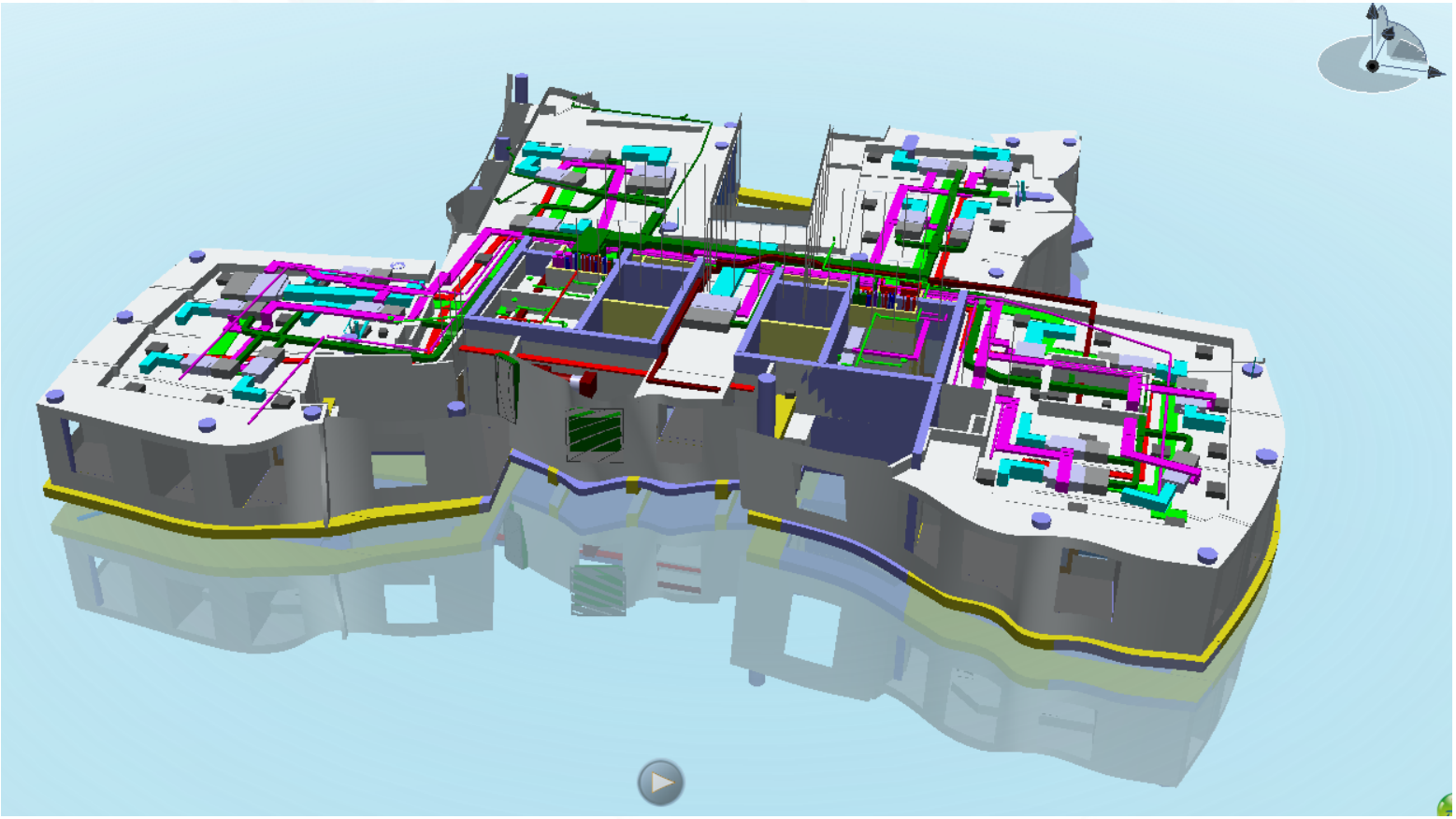
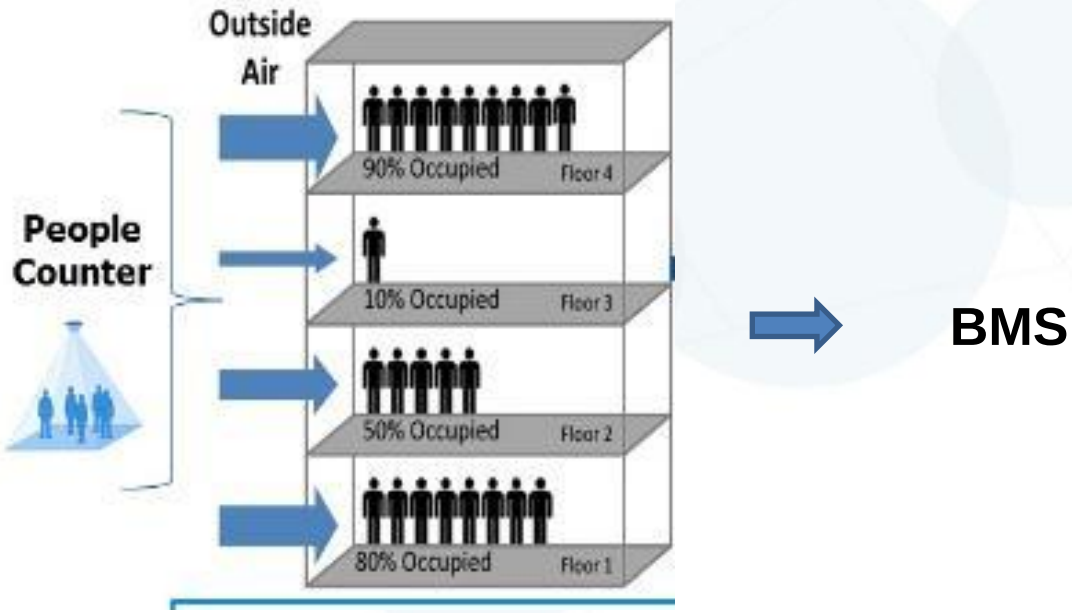


CB08 - Dr Chau Chak Wing Building (GHERY)

BMS / HVAC Control



Part Image from Feedbacksolutions

Archibus Interface

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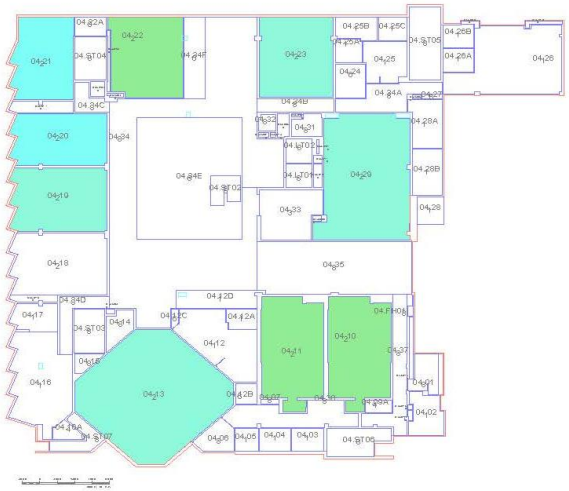
Classroom Frequency - Aggregate
Page 1
05/03/2013

Building Two Level 04



Highlight Pattern - AC.	Total Count	Total Area	Description
	2	149.96	20-29% Frequency
	4	578.42	30-39% Frequency
	3	292.75	40-49% Frequency
	3	3	Count for Drawing Name: CB0204PP
	3	3	Overall Count

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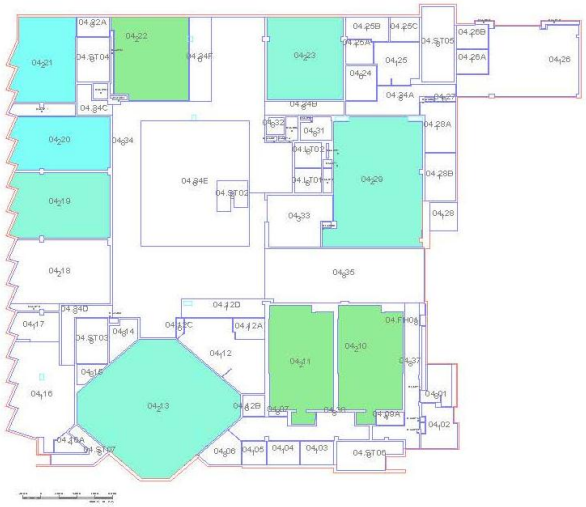
Classroom Utilisation - Aggregate
Page 1
05/03/2013

Building Two Level 04



Highlight Pattern - AC.	Total Count	Total Area	Description
	2	149.96	20-29% Utilisation
	4	578.42	30-39% Utilisation
	3	292.75	40-49% Utilisation
	3	3	Count for Drawing Name: CB0204PP
	3	3	Overall Count

Email Notification

- Client Feedback:
  - ✓ No Show
  - ✓ Early Finish
  - ✓ Poor Occupancy
- Security
  - ✓ Room Alert Out Of Hours Usage

Benefits

- Real Time Data
- Meaningful and Accurate Space Utilisation Reports
- Highlight No Shows, Early Finishes, Utilisation
- User Feedback
- Reports on Frequency, Occupancy and Utilisation to TEFMA Standards
- Demonstrate Efficiency Gains For Government Reporting
- Energy Reduction

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Accelerating Ahead

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Questions??

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Thank You

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