

Template for Evidence(s) UI GreenMetric Questionnaire

University : Universiti Malaysia Pahang
Country : Malaysia
Web Address : <http://www.ump.edu.my/> and <http://mygreen.ump.edu.my/>

[2] Energy and Climate Change (EC)

[2.3] Smart Building Implementation

UMP Pekan

No	Name	Place	Automation		Safety				Energy		Water		Indoor Environment				Lighting				Building Area	Status
			B1	B2	S1	S2	S3	S4	E1	E2	A1	A2	I1	I2	I3	I4	L1	L2	L3	L4	m2	SB
1	FTKMA	UMP PEKAN, MALAYSIA	X		X	X		X		X	X	X			X	X		X		24,890	Smart building	
2	FTKEE		X		X	X		X		X	X	X			X	X		X		14,673	Smart building	
3	FTKPM		X		X	X		X		X	X	X			X	X		X		20,191	Smart building	
4	ASRAMA 648		X		X	X									X	X		X		13,263	Smart building	
5	ASRAMA 1400		X		X	X									X	X		X		17,992	Smart building	
6	CTAR		X		X	X					X	X	X			X	X		X		9,558	Smart building
7	DEWAN SERBAGUNA		X		X	X						X	X			X	X				10,940	Smart building
8	POS PENGAWAL JALAN TEGAK		X		X	X										X	X				20	Smart building
9	PUSAT PEMBANGUNAN & PENGURUSAN HARTA		X		X						X					X	X		X		1,214	Smart building
10	RUMAH KAKITANGAN (40 UNIT)		X								X					X			X		3,610	
11	TAPAK SEMAIAN		X		X	X					X					X	X		X		284	Smart building
12	PENCAWANG 33KV		X		X	X		X				X	X			X					879	Smart building
13	PENCAWANG 11KV		X		X	X						X	X			X					150	Smart building
14	LIBRARY		X		X	X		X			X	X	X			X	X		X		5,940	Smart building
15	PTMK & PBM		X		X	X					X	X	X			X	X		X		14,966	Smart building
16	PUSAT KESIHATAN UNIVERSITI		X		X	X										X	X		X		1,017	Smart building
17	MENARA JAM		X		X											X	X				345	
18	RUMAH KAYAK		X		X						X					X	X				467	Smart building
19	SURAU		X								X					X	X		X		113	Smart building
20	TEACHING FACTORY		X		X	X					X	X	X			X	X		X		8,405	Smart building
21	PEJABAT KESELAMATAN		X		X	X					X					X	X		X		576	Smart building
22	PUSAT AKTIVITI PELAJAR, PAP		X		X	X						X	X			X	X		X		3,038	Smart building

*Smart Building : Min. at least five requirements for each building.

No	Name	Place	Automation		Safety				Energy		Water		Indoor Environment				Lighting				Building Area m2	Status SB
			B1	B2	S1	S2	S3	S4	E1	E2	A1	A2	I1	I2	I3	I4	L1	L2	L3	L4		
1	3 BLOK A	UMP GAMBANG, MALAYSIA	X		X	X										X			X	8,771	Smart building	
2	5 BLOK B		X		X	X										X			X	7,968	Smart building	
3	15 BLOK C		X		X	X										X			X	38,544	Smart building	
4	ASTAKA		X		X	X										X			X	1,331	Smart building	
5	FAS. BUILDING		X		X	X										X			X	4,073	Smart building	
6	CAFETERIA KK1 & KK3		X		X	X										X			X	1,544	Smart building	
7	MASJID		X		X	X					X					X				3,107	Smart building	
8	BLOK M		X		X	X										X				613		
9	BLOK X		X		X	X										X			X	3,814	Smart building	
10	BLOK Y		X		X	X										X			X	2,834	Smart building	
11	BLOK Z		X		X	X										X			X	1,890	Smart building	
12	KPU (PEJ 2 TINGKAT)		X		X	X		X				X	X			X			X	5,562	Smart building	
13	MAKMAL TT1		X		X	X						X	X			X			X	34,591	Smart building	
14	KOLEJ KEDIAMAN KE 2		X		X	X		X								X			X	31,061	Smart building	
15	BLOK W		X		X	X										X				5,405		
16	KOMPLEK BARU		X		X	X										X	X		X	27,398	Smart building	
17	KK4 UMPH		X		X	X		X								X				17,475	Smart building	
18	KOMPLEK UMPH		X		X	X										X			X	8,433	Smart building	
19	LIBRARY		X		X	X													X	5,870		
20	KOMPLEK SUKAN		X		X	X										X			X	4,920	Smart building	

Smart building implementation

$$\frac{\text{total smart building area}}{\text{total building area}} \times 100\%$$

Total Building Area: 487,188 m²

$$\frac{351,892 \text{ m}^2}{484,627 \text{ m}^2} \times 100\% = 72.6\%$$

Note: One building could be classified as a smart building if it has a minimum of 5 features. Please add the total smart building area from buildings which are classified as smart buildings.



Logged in as
MOHD NURULAKLA BIN MOHD AZLAN
(01179)

- Dashboard
- Work Request
- Work Order 23
- Check List
- Preventive Maintenance 48
- HSSR 6
- PIO Task
- Master Code
- Vendor
- Material
- Asset
- Location
- Report
- CORRECTIVE MAINTENANCE**
- WORKSCOPE**
- Monthly Aging
- Monthly
- Weekly
- Aging
- WORKTRADE**
- Monthly
- Weekly

Report By Aging [Work scope]

Location: UMP KAMPUS PEKAN

Work Scope: -SELECT-

From Date: 01/01/2022

To Date: 09/30/2022

[Generate](#)

Aging Report for from Date : 01/01/2022-09/30/2022

10 records per page Search:

Work Scope	0 to 3 days		4 to 10 days		11 to 30 days		More than 30 days	
	Open	Close	Open	Close	Open	Close	Open	Close
ADMINISTRATION	0	7	0	7	0	9	0	1
CIVIL	3	1044	5	434	3	239	8	264
DEVELOPMENT	0	5	0	1	0	4	6	5
ELECTRICAL	12	1448	48	431	20	61	0	5
LANDSCAPE	1	6	0	7	2	6	1	3
MECHANICAL	18	353	16	140	13	109	67	127
Total	34	2903	69	1020	38	428	82	405

Showing 1 to 7 of 7 entries ← Previous 1 Next →

Work order for from Date : 01/01/2022-09/30/2022

10 records per page Search:

Work Order	W/O Generate Date	Description	Aging (Days)	Status
000242734	10-JAN-22	CAT PUDAR	263	OPEN
000242735	10-JAN-22	SINGLE LINE DIAGRAM TANDA	263	OPEN
000242737	10-JAN-22	JALAN DAN TANAH MENDAP AKBEAT DARI LALUAN KABEL HT YANG TIDAK DITUTUP DAN DICOIMPACT DENGAN SEMPURNA	263	OPEN
000245195	17-JAN-22	AIRCOND SILING PEJABAT BAHAGIAN PERUMAHAN ROSAK	256	OPEN
000245405	21-JAN-22	AIRCOND ROSAK DI RUANG PEJABAT BAHAGIAN PERUMAHAN UMP TO PPH	252	OPEN

Facility Management System, FMS in UMP. Inhouse software development.

SMART CARD DOOR ACCESS - Security – 873 In/Out Access system are implemented in all buildings in Universiti Malaysia Pahang



Reader 1 (In)



Reader 2 (Out)

ASIS technologies
www.asis-technologies.com

ACU1000 Four/Eight Door Access Controller

The **ACU1000** is an intelligent, multi door controller suited for enterprise security. Its modular architecture and plug-n-play design makes it truly versatile. The **ACU1000** can be used for door access, lift access and car park system. With advanced on board networking, the **ACU1000** is the ideal solution for Ethernet LAN/WAN connectivity.

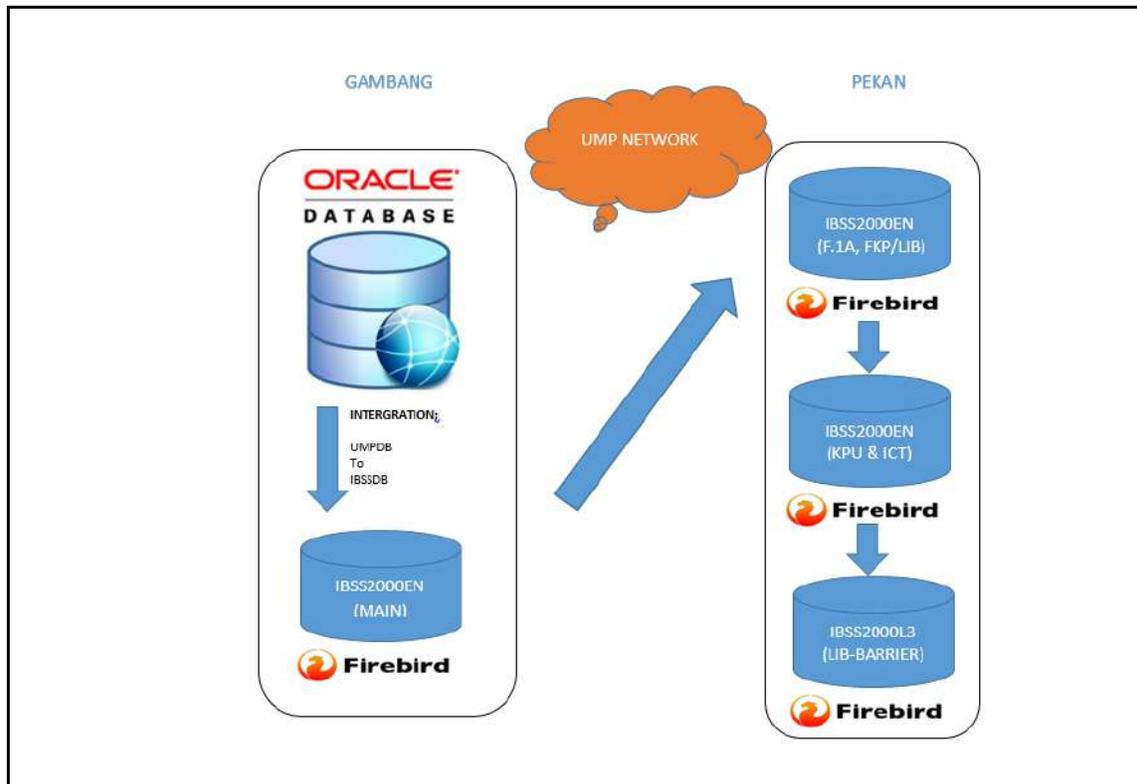
Fully scalable, the **ACU1000** can operate as a standalone unit or with full networking of up to 2,048 access control readers and 45,000 input/output points.



1. Key Features

- Support TCP/IP protocol and RS485 network communication between controller and software
- Detection automatic for each additional module with plug-able connectors, without software changes
- Modular 4 reader boards with up to 176 input/output points
- Modular 10A power supply unit with battery backup and automatic switchover
- Built-in lighting/surge protection circuits
- Supervised alarm input for open circuit and short circuit detection
- Flash memory design for easy controller software upgrade
- Support standard Wiegand format and RS485 interface for proximity, biometric & MIFARE readers
- 100,000 cardholders and 200,000 events
- Highly expandable from standalone unit up to 2048 access control reader and 45,000 input/output points
- Multiple access groups (4 x 256)
- Interface to advanced Windows based user-friendly GUI software (IBSS2000)

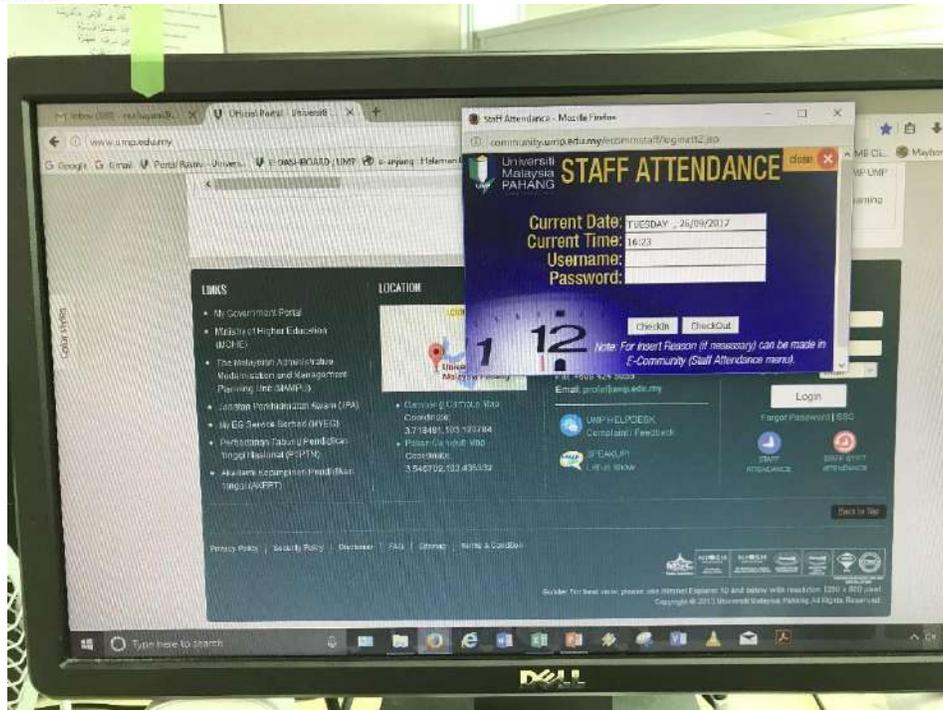
The system key features



The system diagram

Bil	ITEM/MODEL	LOCATION	ASIS - PRODUCT	CONTROLLER	READER
1	IBSS2000EN	GAMBANG	ASIS	95	323
2	IBSS2000EN	FASA 1A (FKEE/FKM/FKP/LIB)	ASIS	86	386
3	IBSS2000EN	PUSAT ICT & KPU	ASIS	33	160
4	IBSS2000L3	LIBRARY (BARRIER GATE)	ASIS	2	4

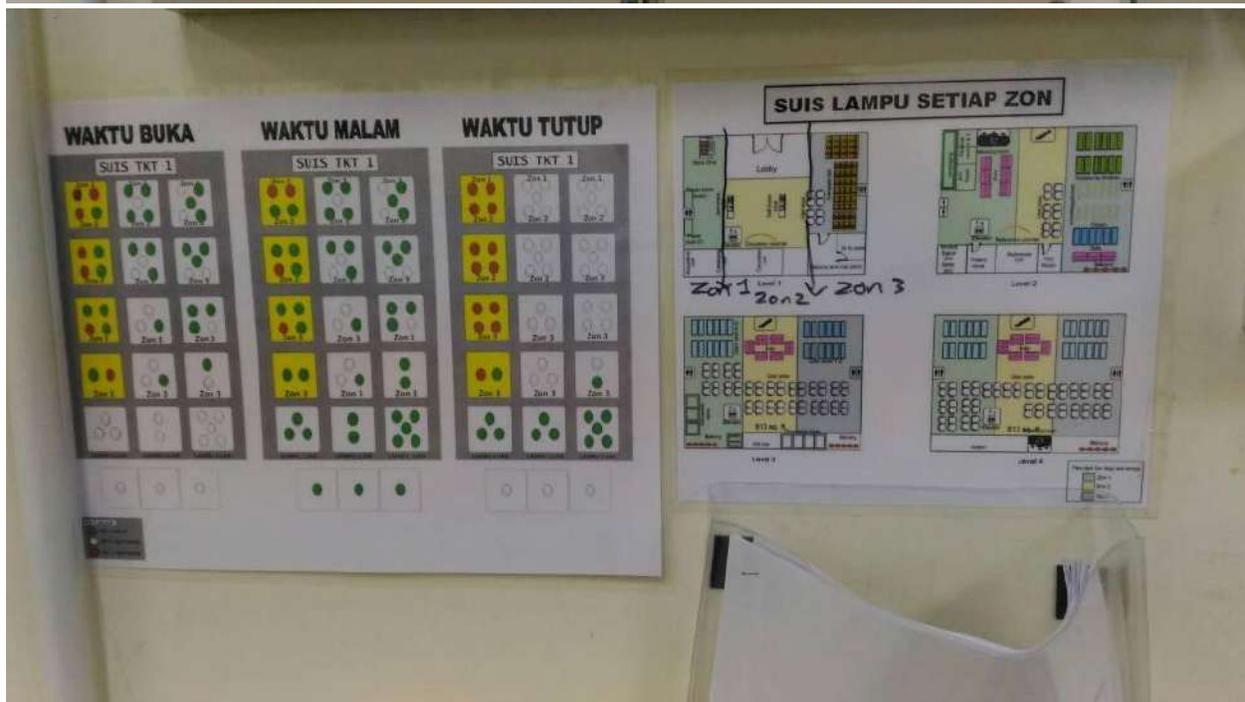
The access card system data output



Online check in and check out system – to record staff attendance



Kiosk attendance – Staff attendance record systems



Master switching system



CCTV control room to monitor 382 camera around campus

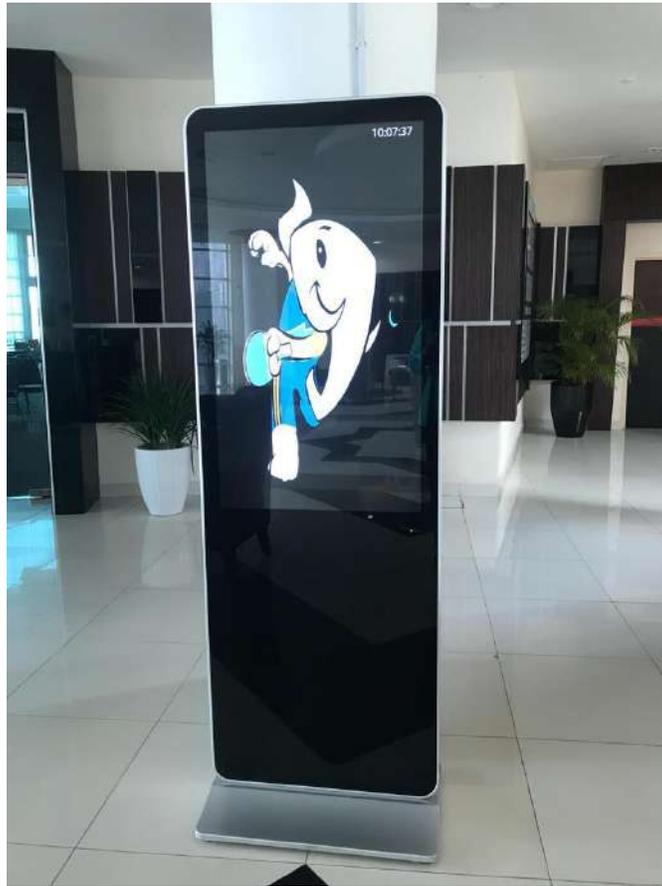


UMP install sensor at the toilets, recently more than 160 sensors been install at the admin and hostel toilets. The sensors control 4 to 5 lights and a exhaust fan for each toilets. The sensor detects motion and thermal of the user.



Automatic door

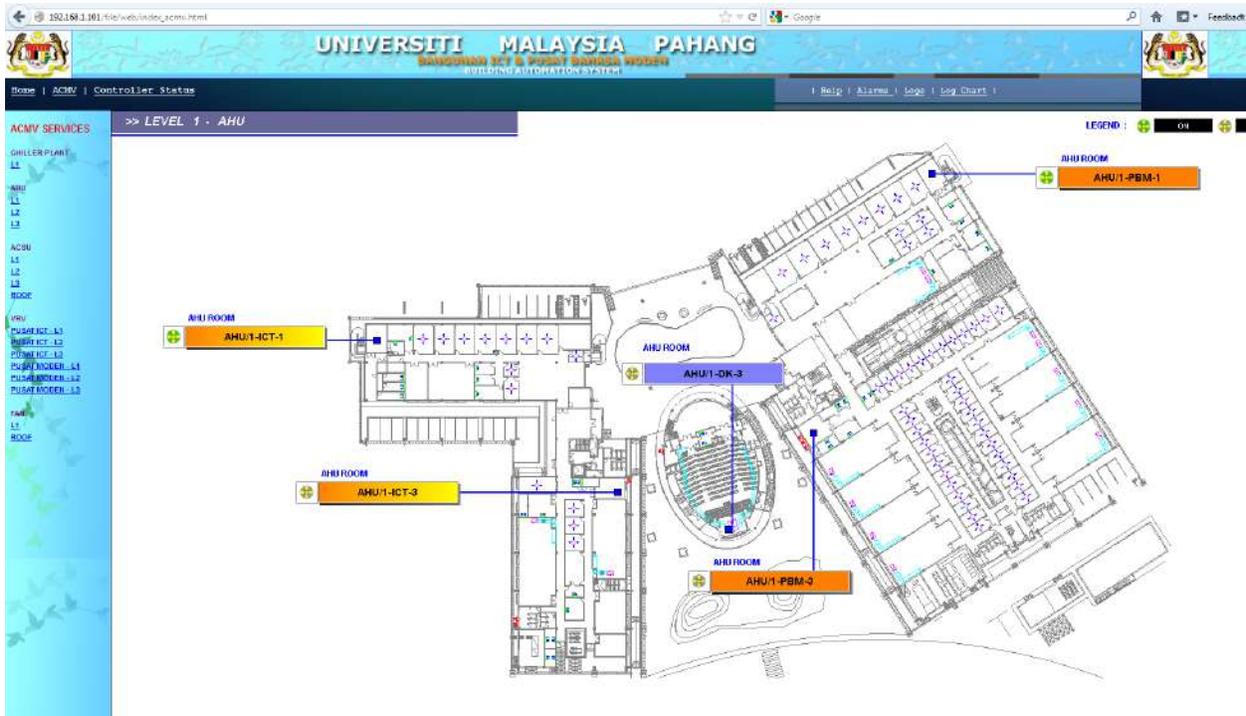
using sensor



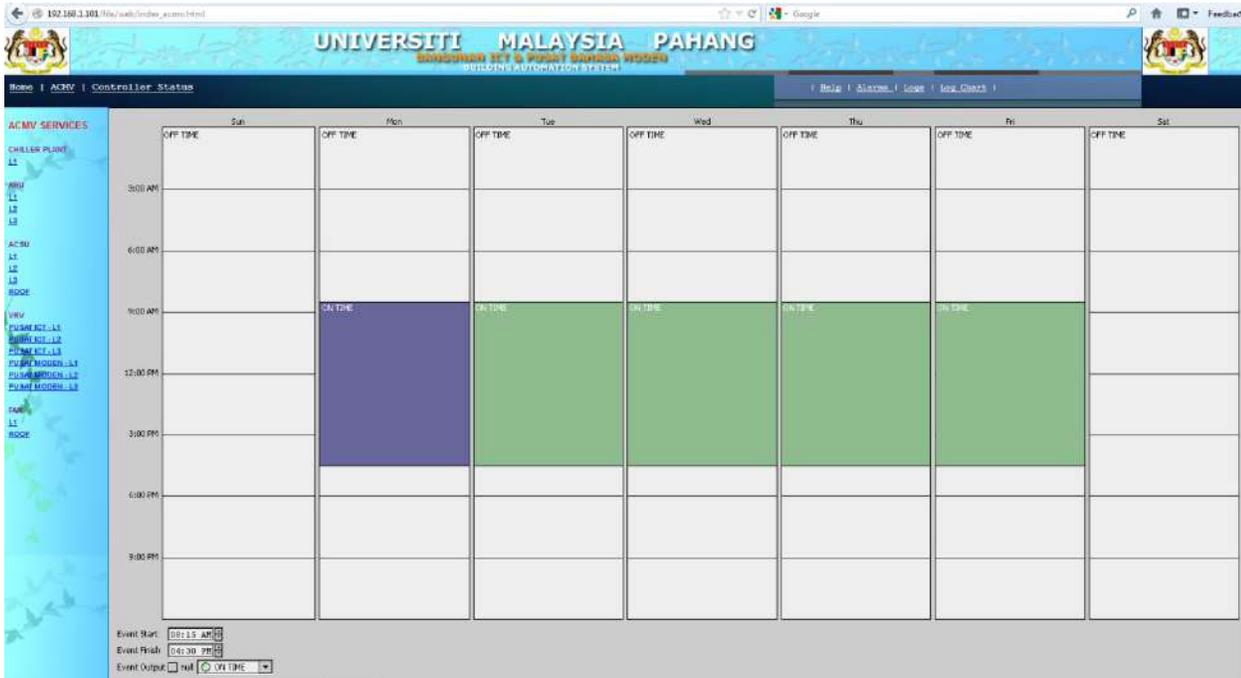
Digital LED – to provide and promotes latest information and events in campus



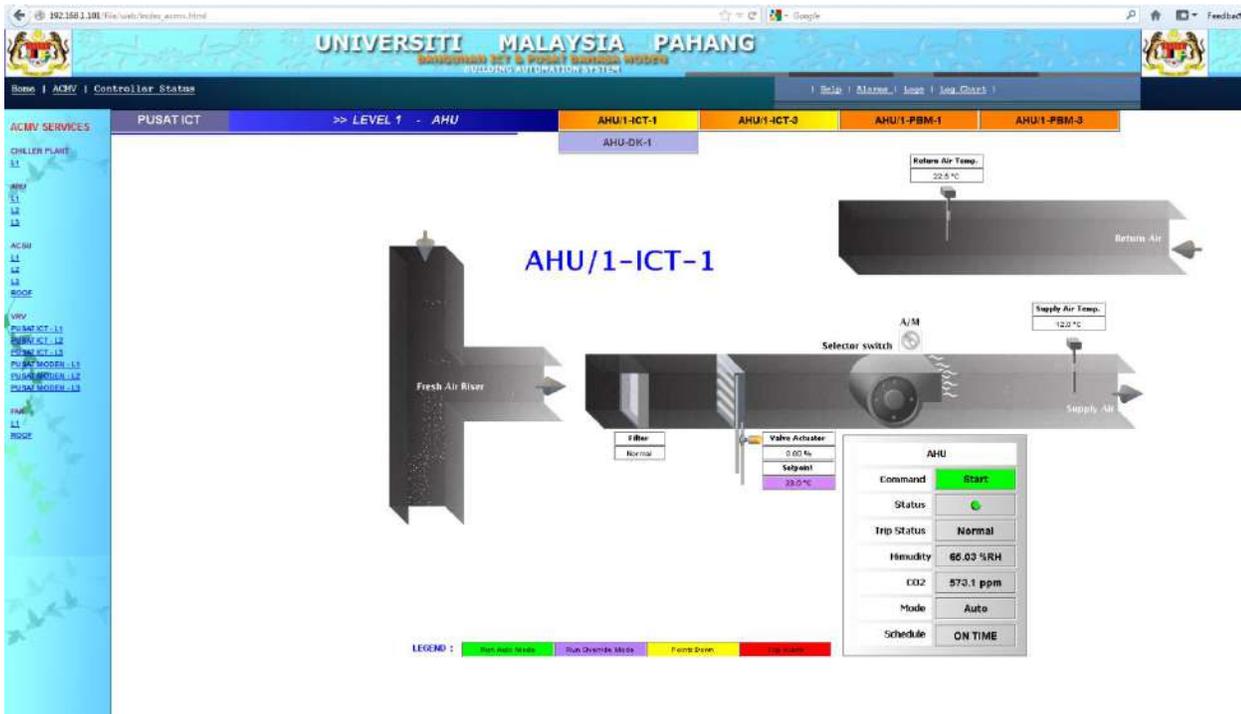
Buiding Automated System for PTMK & PBMSK Building



Layout of building



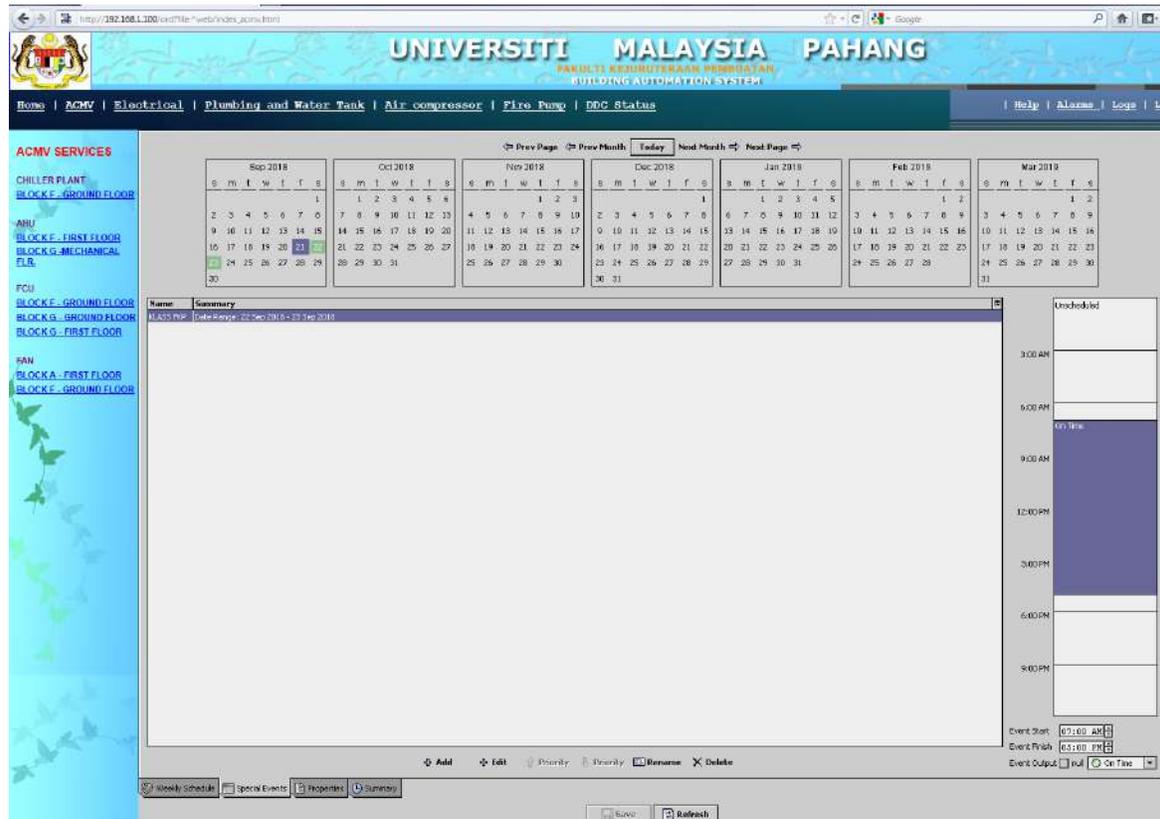
Controller status - time setting



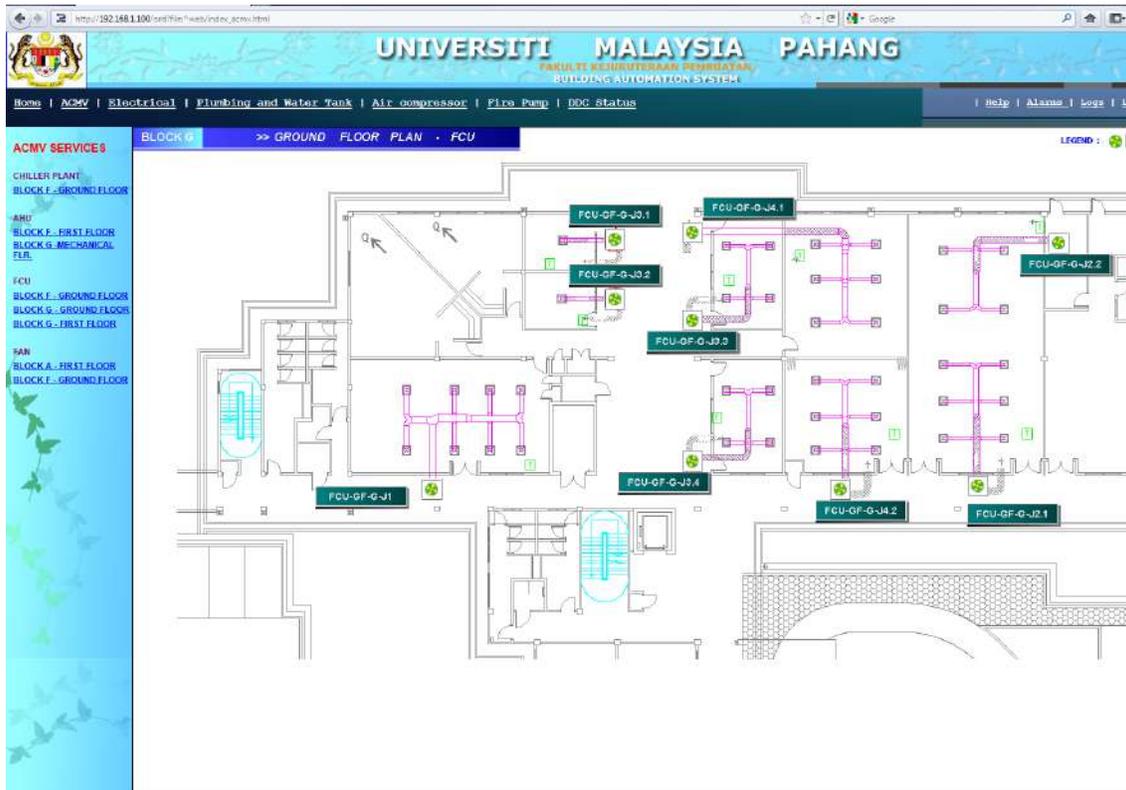
Controller status



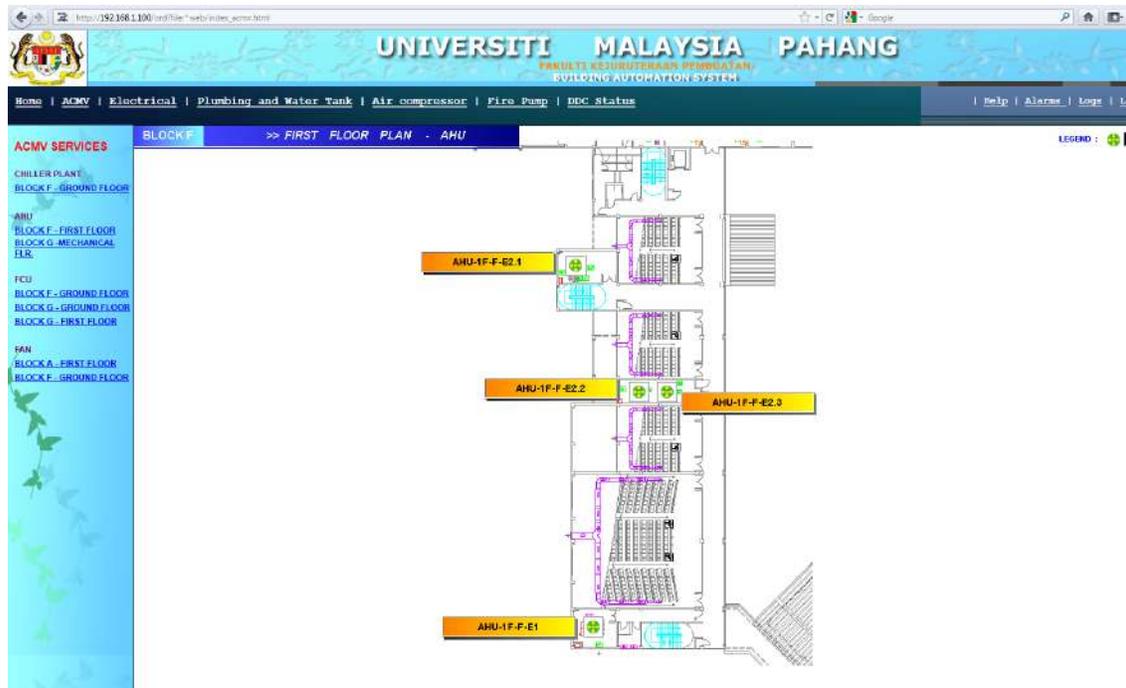
Building Automated System for FKP



Controller status - Time setting



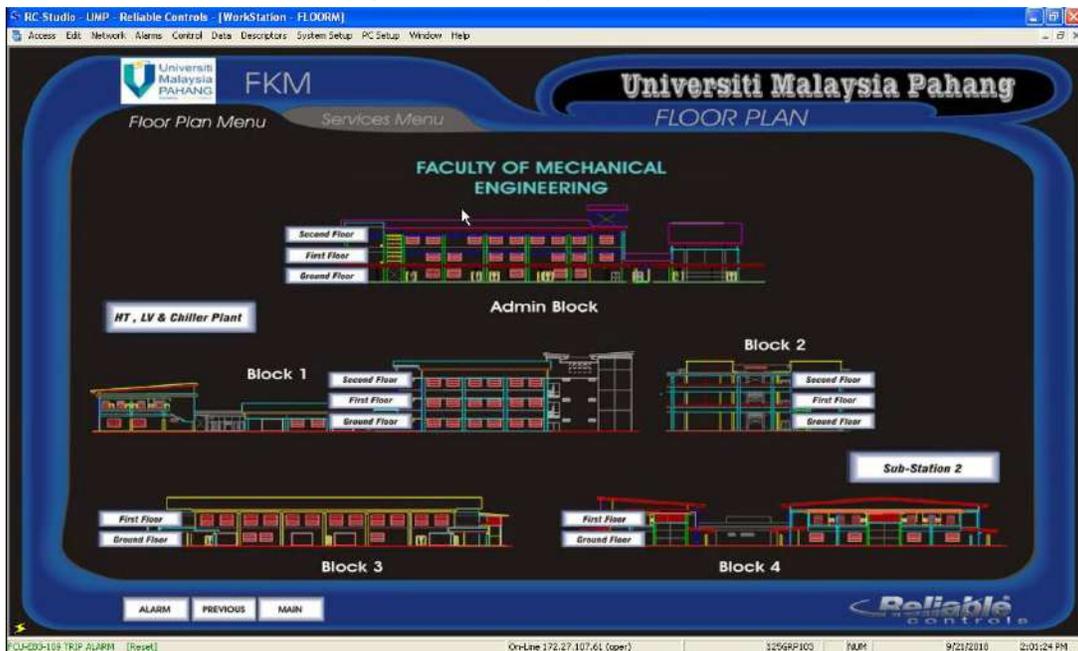
System layout



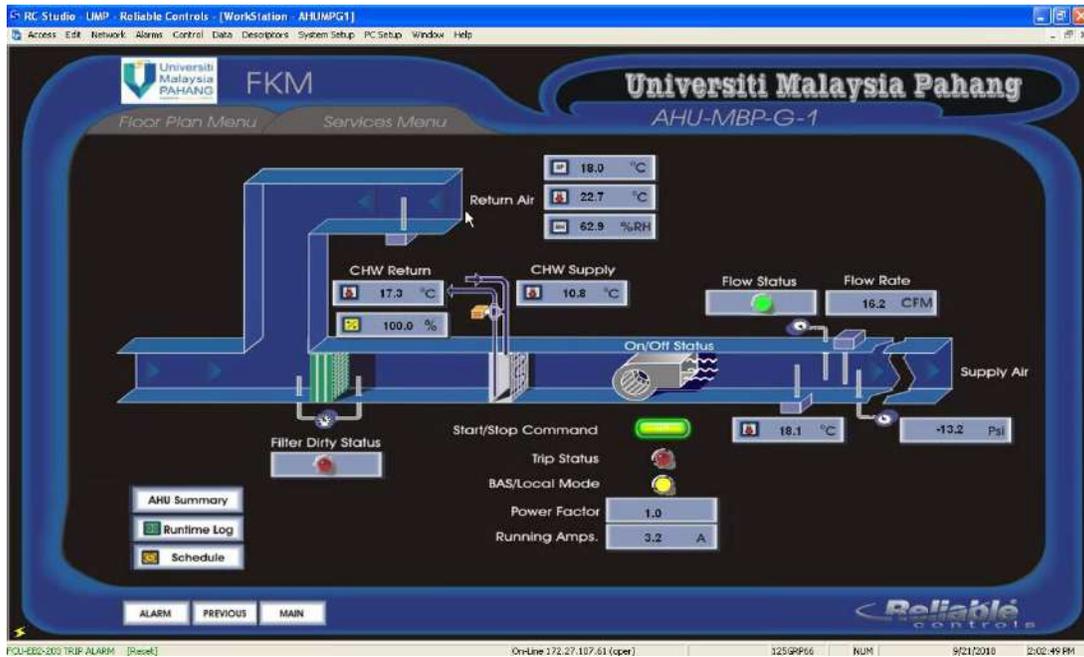
System layout



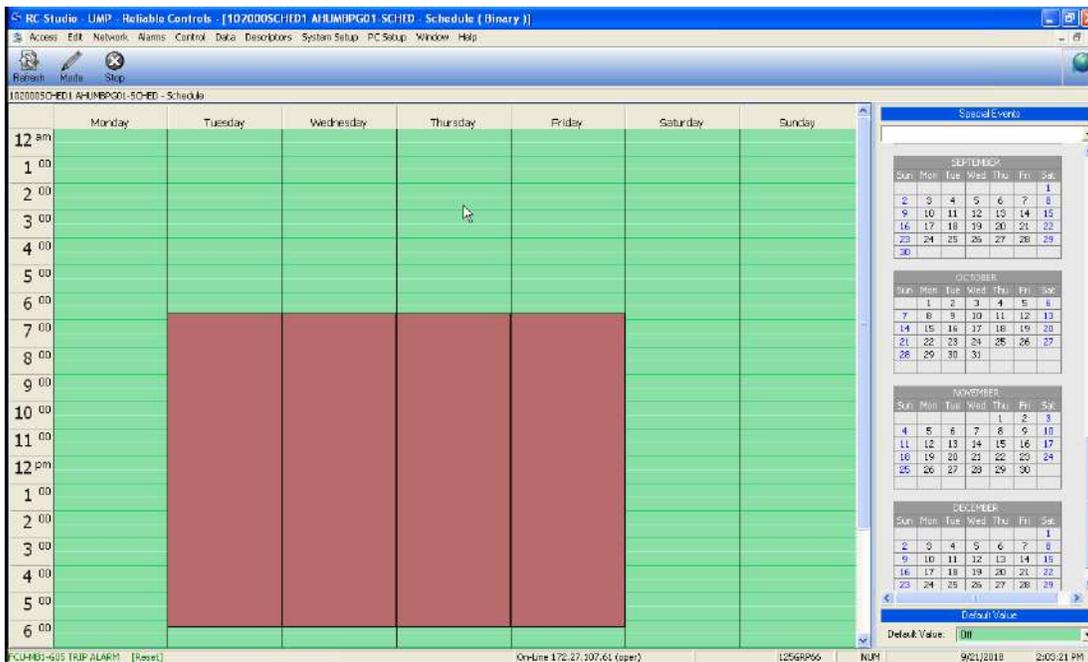
Building Automated System for FKEE & FKM



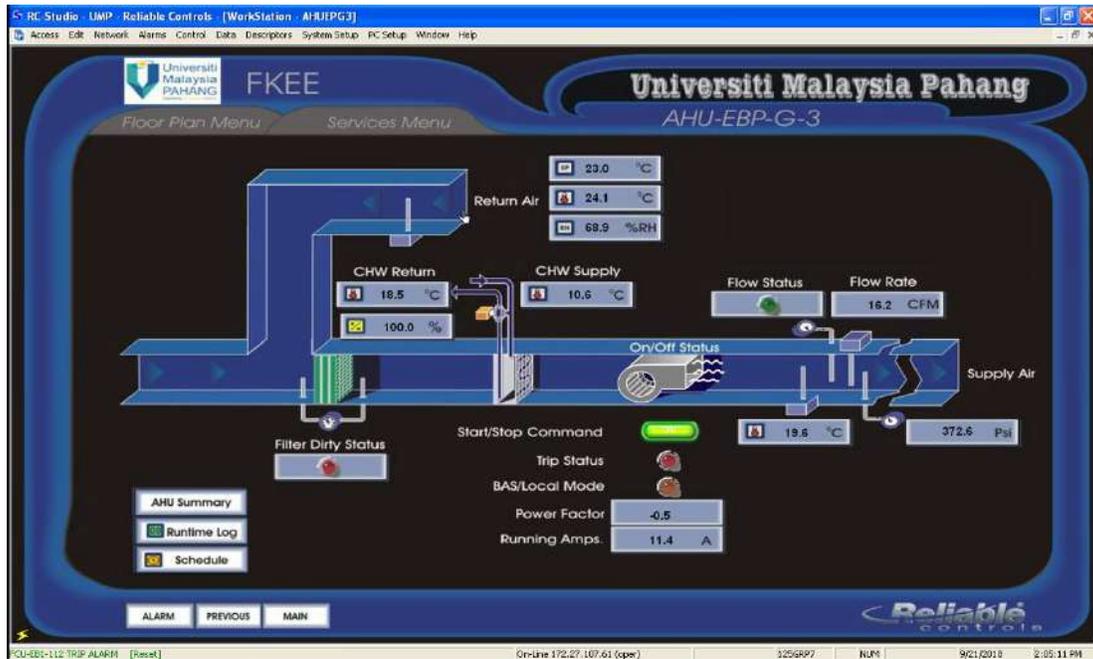
Controller status for FKM



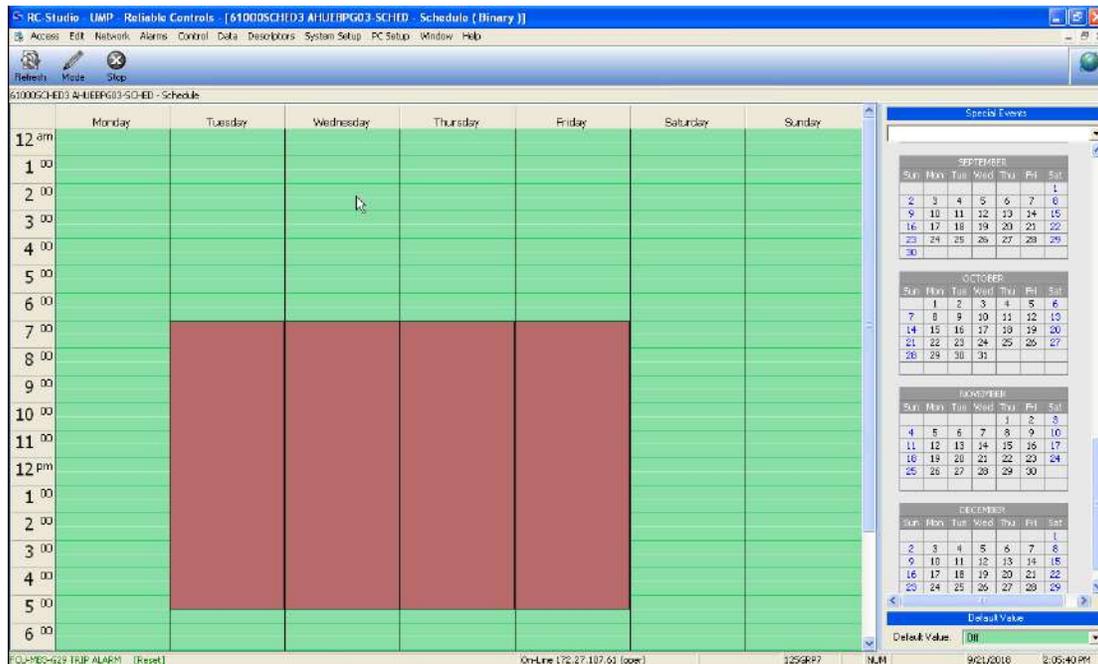
Controller status for FKM



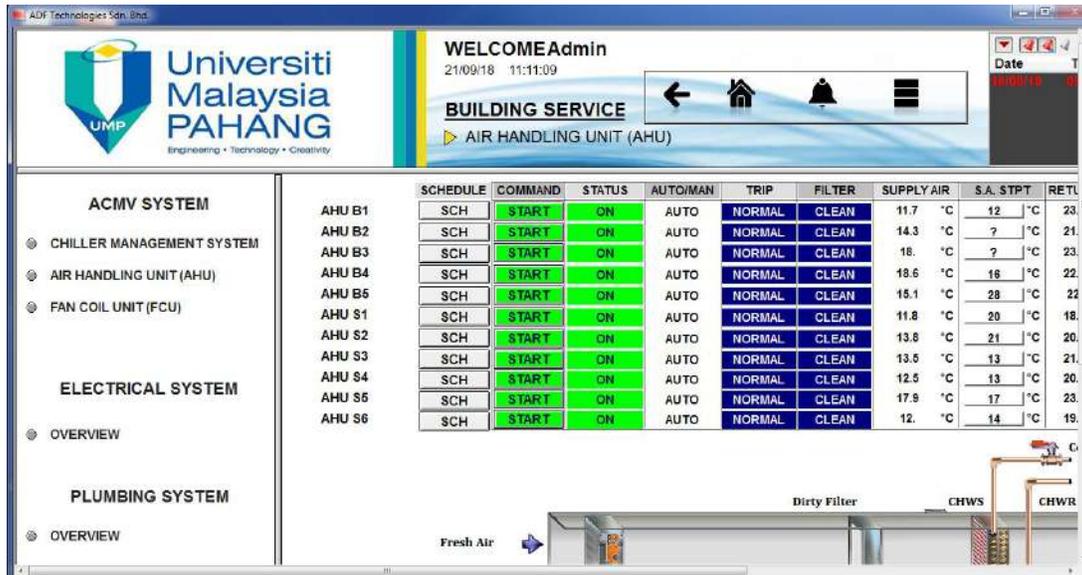
Controller status for FKM – time setting



Controller status for FKEE



Controller status for FKEE – Time setting

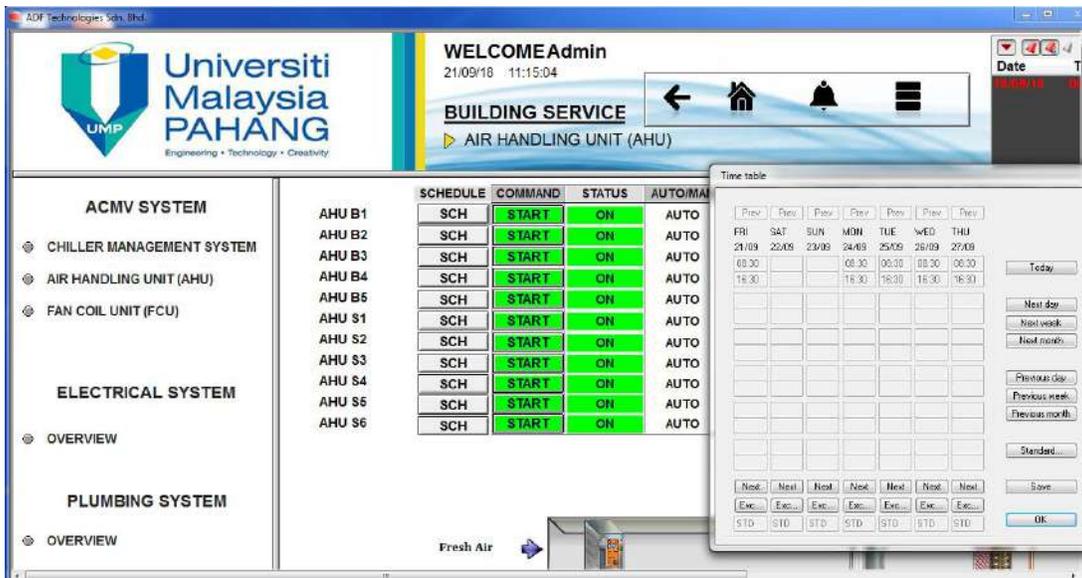


WELCOME Admin
21/09/18 11:11:09

BUILDING SERVICE
AIR HANDLING UNIT (AHU)

	SCHEDULE	COMMAND	STATUS	AUTO/MAN	TRIP	FILTER	SUPPLY AIR	S.A. STPT	RETL
AHU B1	SCH	START	ON	AUTO	NORMAL	CLEAN	11.7 °C	12 °C	23
AHU B2	SCH	START	ON	AUTO	NORMAL	CLEAN	14.3 °C	? °C	21
AHU B3	SCH	START	ON	AUTO	NORMAL	CLEAN	16 °C	? °C	23
AHU B4	SCH	START	ON	AUTO	NORMAL	CLEAN	18.6 °C	16 °C	22
AHU B5	SCH	START	ON	AUTO	NORMAL	CLEAN	15.1 °C	28 °C	22
AHU S1	SCH	START	ON	AUTO	NORMAL	CLEAN	11.8 °C	20 °C	18
AHU S2	SCH	START	ON	AUTO	NORMAL	CLEAN	13.8 °C	21 °C	20
AHU S3	SCH	START	ON	AUTO	NORMAL	CLEAN	13.0 °C	13 °C	21
AHU S4	SCH	START	ON	AUTO	NORMAL	CLEAN	12.5 °C	13 °C	20
AHU S5	SCH	START	ON	AUTO	NORMAL	CLEAN	17.9 °C	17 °C	23
AHU S6	SCH	START	ON	AUTO	NORMAL	CLEAN	12 °C	14 °C	19

Building Automated System for Chancellery Tun Abdul Razak



WELCOME Admin
21/09/18 11:15:04

BUILDING SERVICE
AIR HANDLING UNIT (AHU)

SCHEDULE	COMMAND	STATUS	AUTO/MAN	
AHU B1	SCH	START	ON	AUTO
AHU B2	SCH	START	ON	AUTO
AHU B3	SCH	START	ON	AUTO
AHU B4	SCH	START	ON	AUTO
AHU B5	SCH	START	ON	AUTO
AHU S1	SCH	START	ON	AUTO
AHU S2	SCH	START	ON	AUTO
AHU S3	SCH	START	ON	AUTO
AHU S4	SCH	START	ON	AUTO
AHU S5	SCH	START	ON	AUTO
AHU S6	SCH	START	ON	AUTO

Controller status – time setting for AHU

ADF Technologies Sdn. Bhd.

Universiti Malaysia PAHANG
Engineering • Technology • Creativity

WELCOME Admin
21/09/18 11:16:59

BUILDING SERVICE
FAN COIL UNIT (FCU)

Time table

Time	FRI	SAT	SUN	MON	TUE	WED	THU
08:30							
15:30							

FCU	SCHEDULE	COMMAND	STATUS	AUTO/MAN	TRIP	RETURN AIR	R.A. STPT
FCU B1	SCH	START	ON	AUTO	NORMAL	23.5 °C	26 °C
FCU B2	SCH	START	ON	AUTO	NORMAL	22.9 °C	? °C
FCU B3	SCH	STOP	OFF	MANUAL	NORMAL	22.9 °C	5.44 °C
FCU B4	SCH	START	ON	AUTO	NORMAL	24.9 °C	? °C
FCU B5	SCH	START	ON	AUTO	NORMAL	24.8 °C	? °C
FCU B6	SCH	START	ON	AUTO	NORMAL	24.9 °C	41 °C
FCU S1	SCH	START	ON	AUTO	NORMAL	20.8 °C	20 °C
FCU S2	SCH	START	ON	AUTO	NORMAL	26.9 °C	18 °C
FCU S3	SCH	START	ON	AUTO	NORMAL	25.8 °C	20 °C
FCU S4	SCH	START	ON	AUTO	NORMAL	26.9 °C	27 °C
FCU S5	SCH	START	ON	AUTO	NORMAL	26.5 °C	20 °C
FCU S6	SCH	START	ON	AUTO	NORMAL	27.5 °C	18 °C
FCU S7	SCH	START	ON	AUTO	NORMAL	26.4 °C	24 °C

Controller status – time setting for FCU



Rainwater harvesting for plants irrigation.



99.14% in UMP using Energy Efficiency Appliances.