

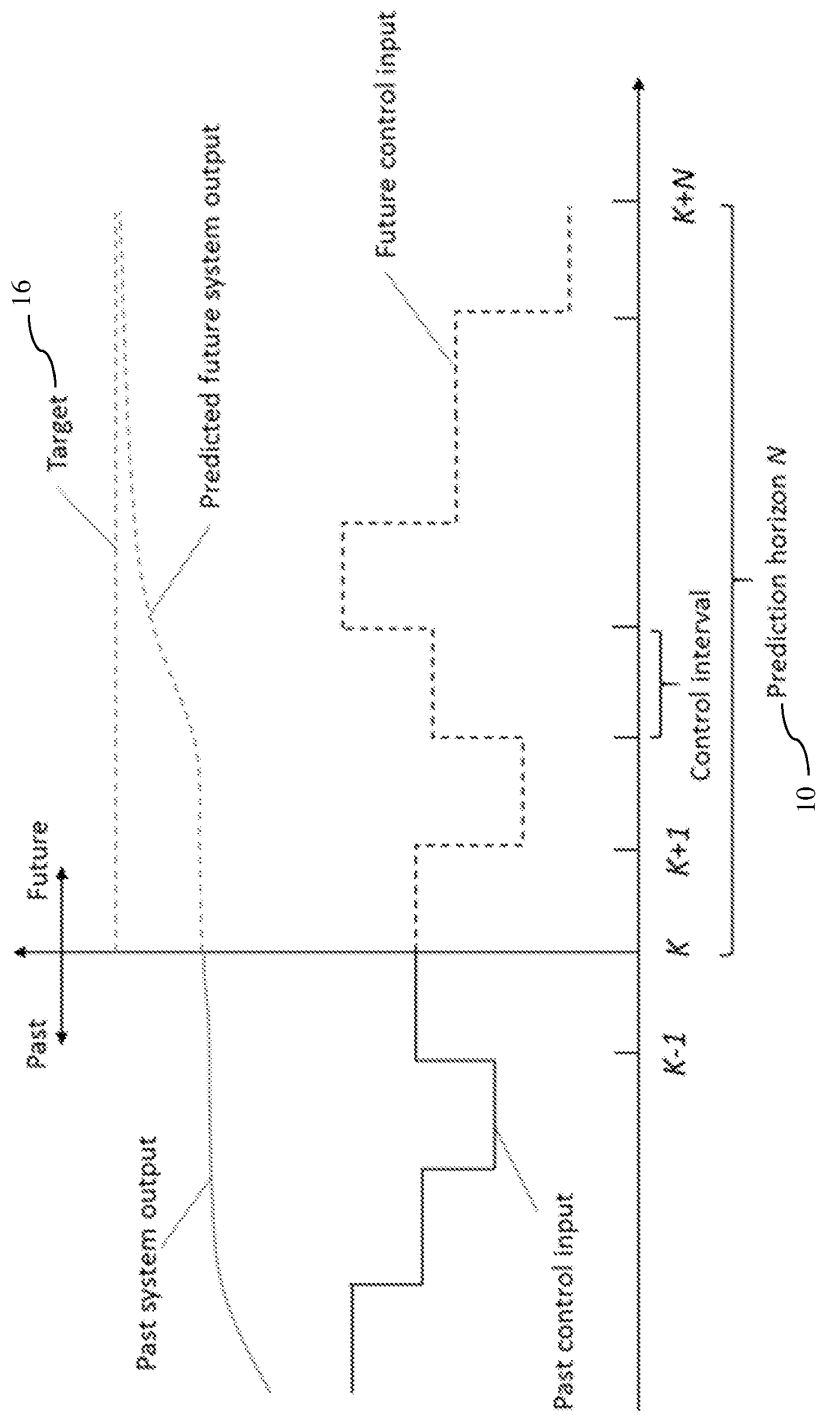


FIG. 1

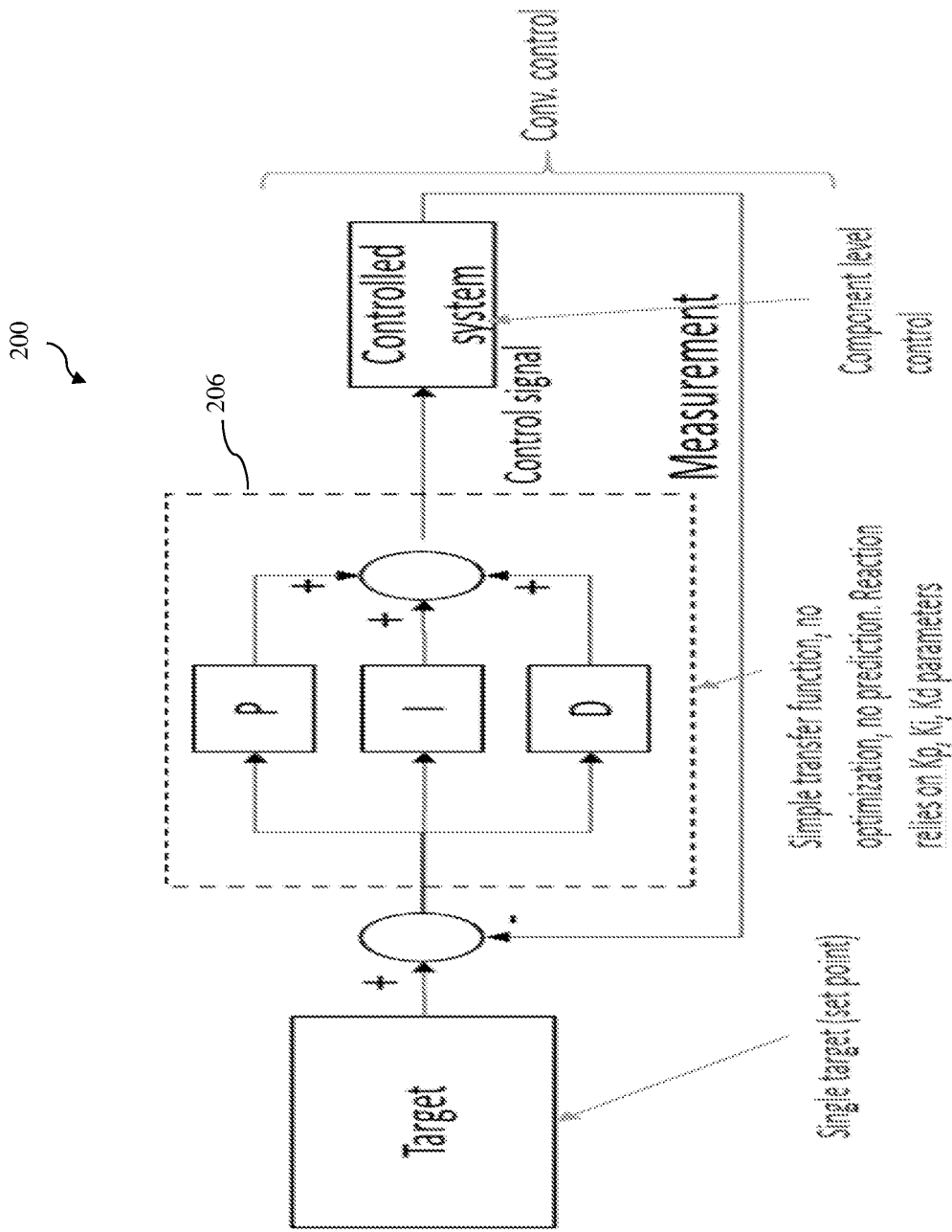


FIG. 2A

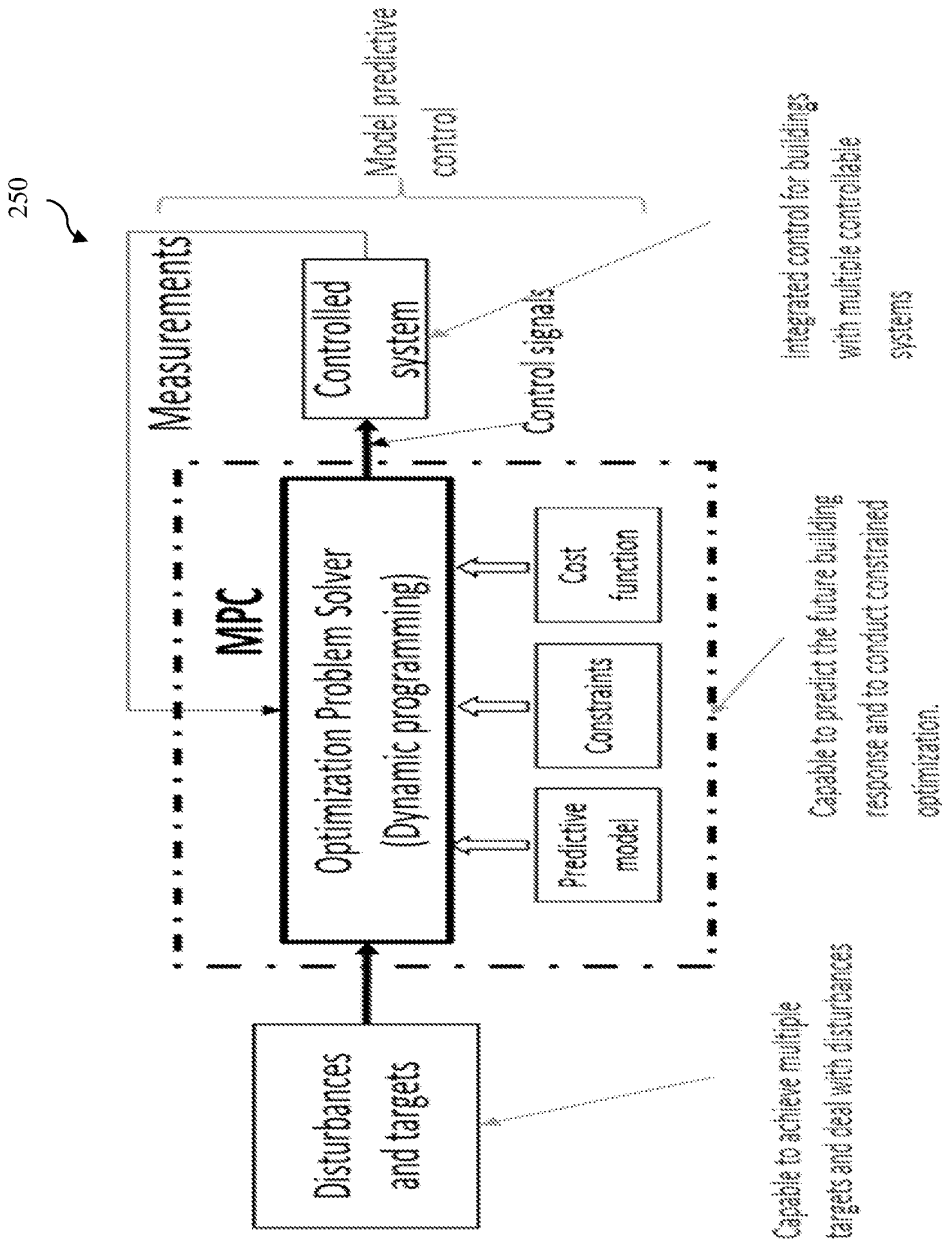


FIG. 2B

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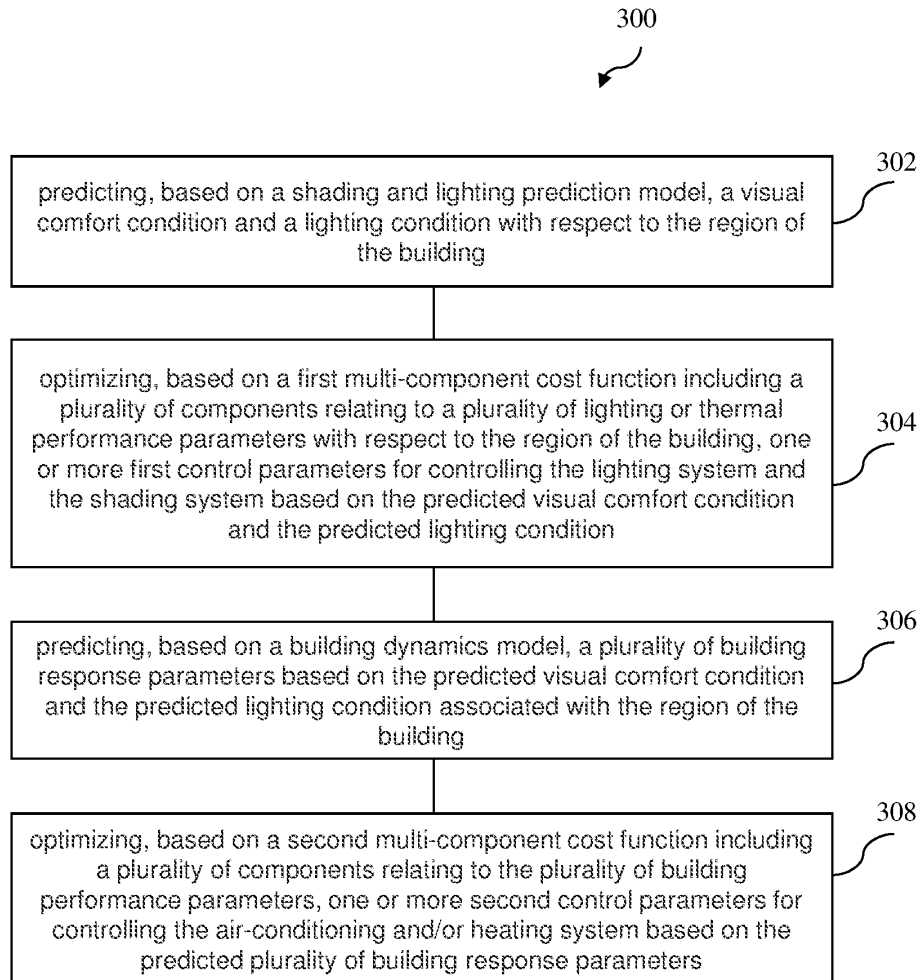
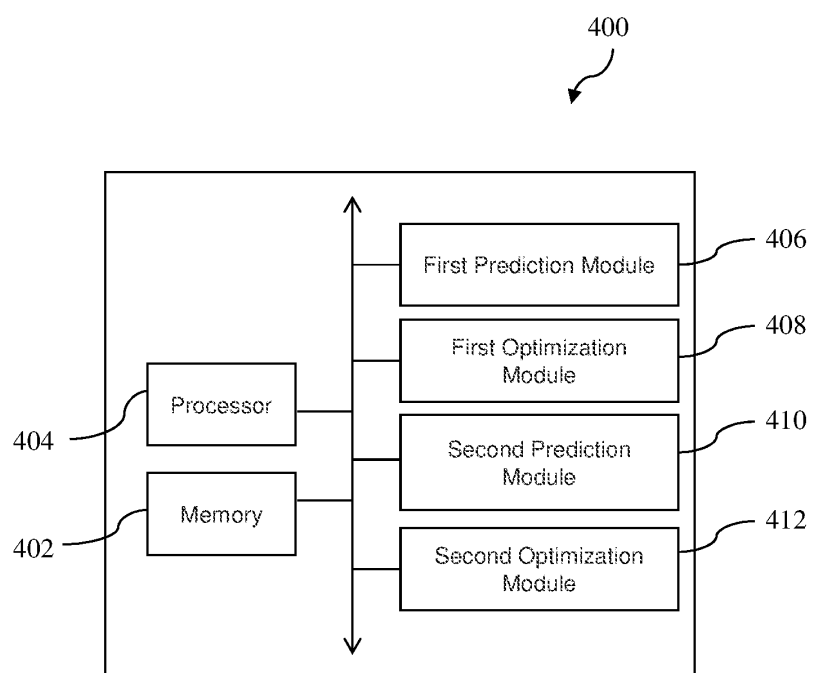


FIG. 3

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**FIG. 4**

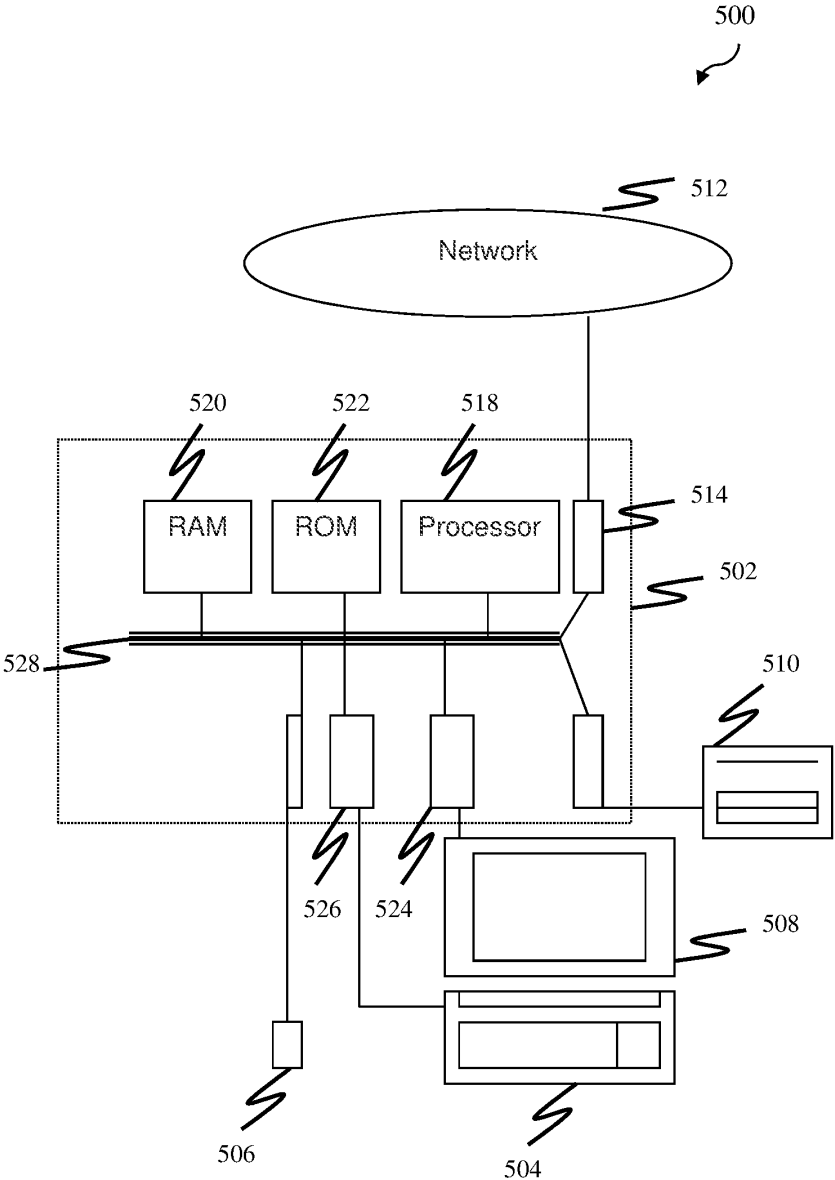


FIG. 5

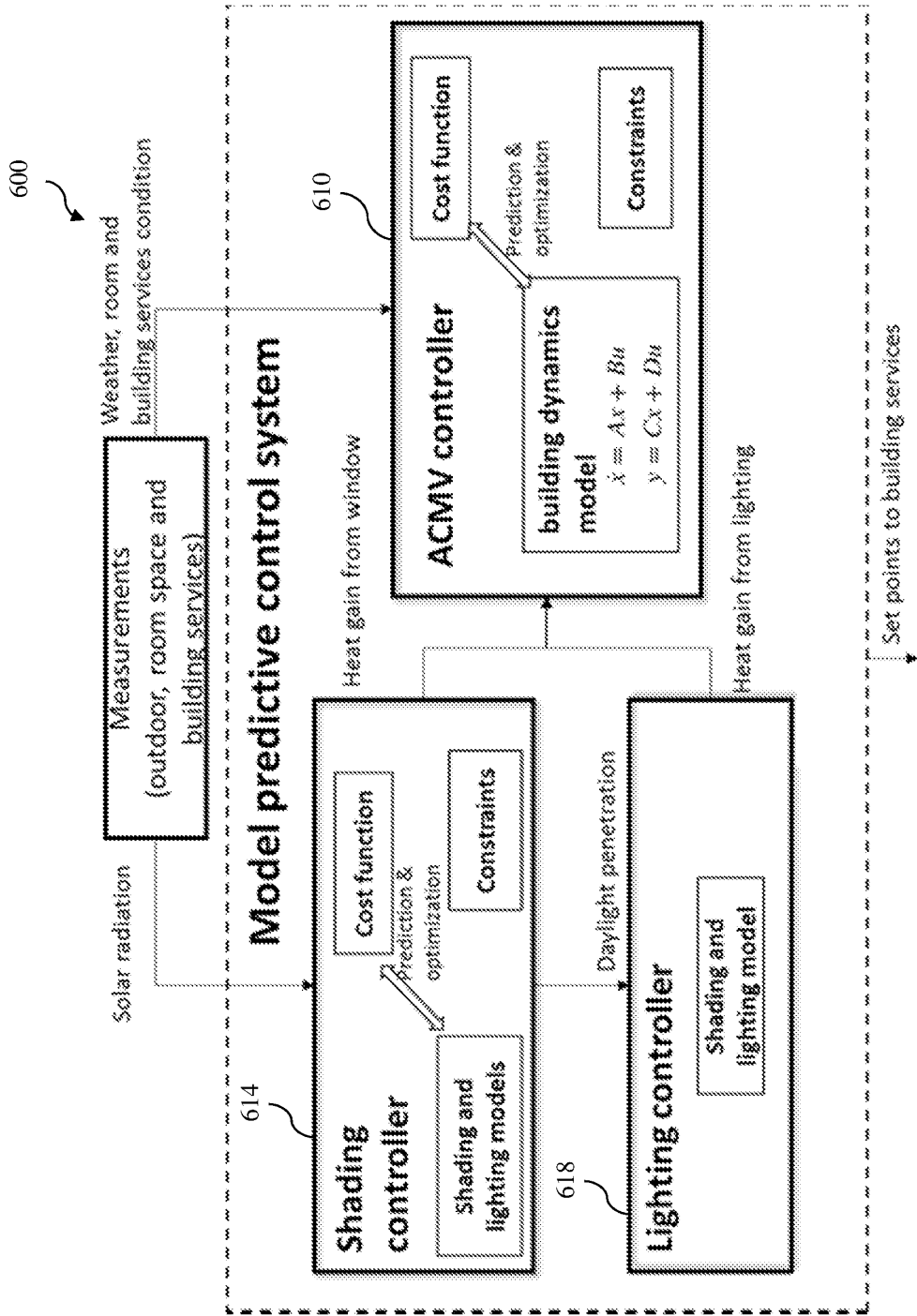


FIG. 6

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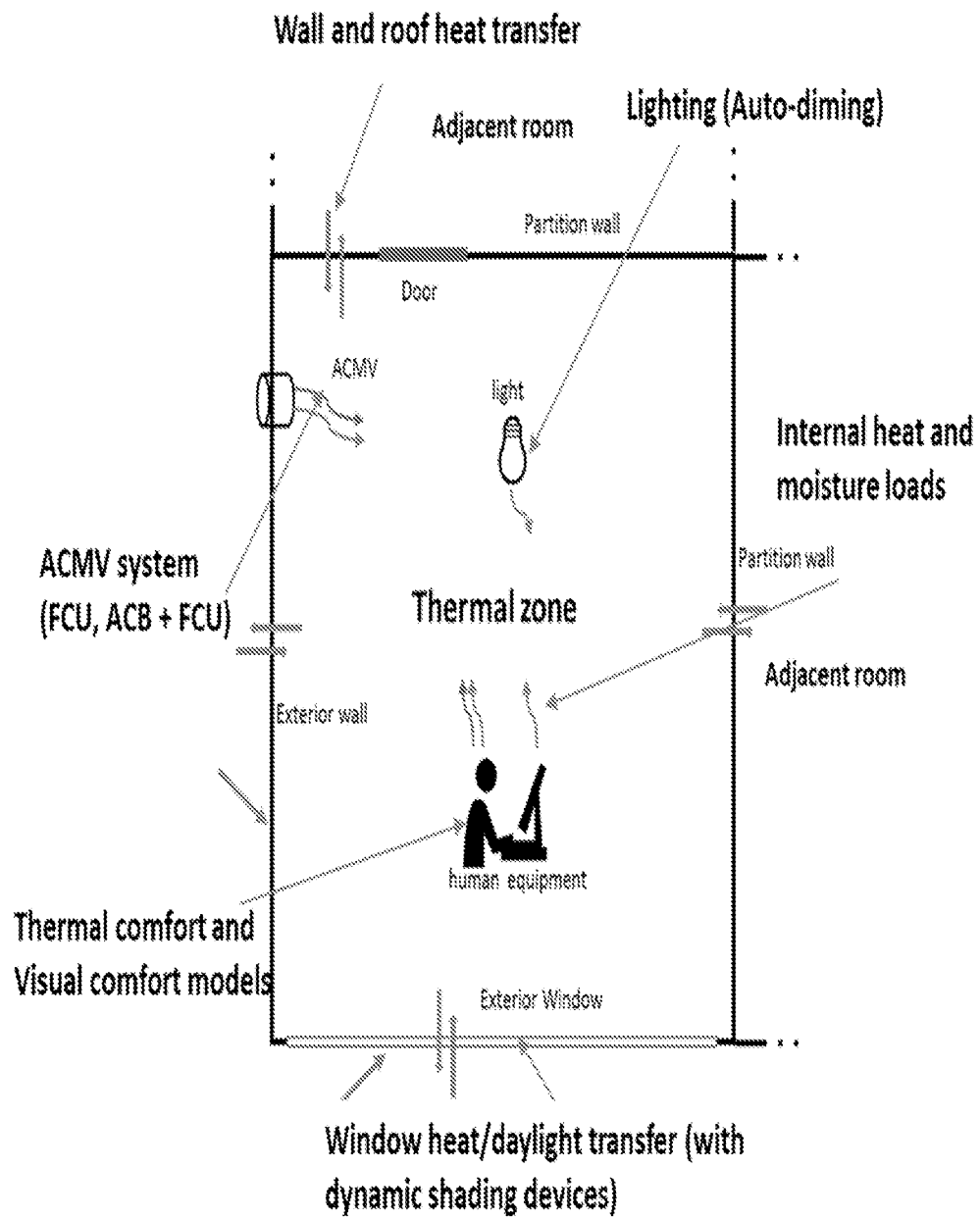


FIG. 7

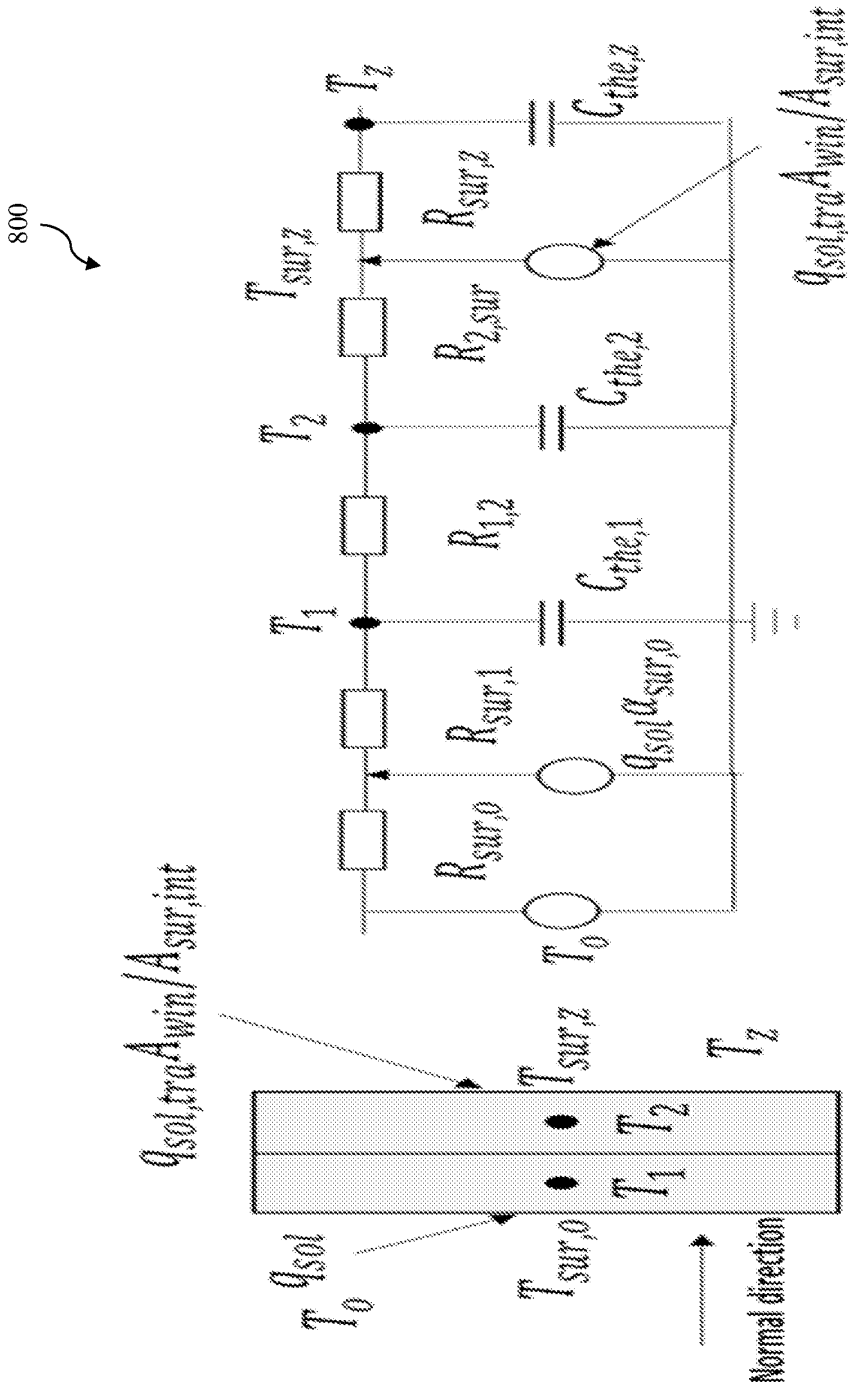


FIG. 8

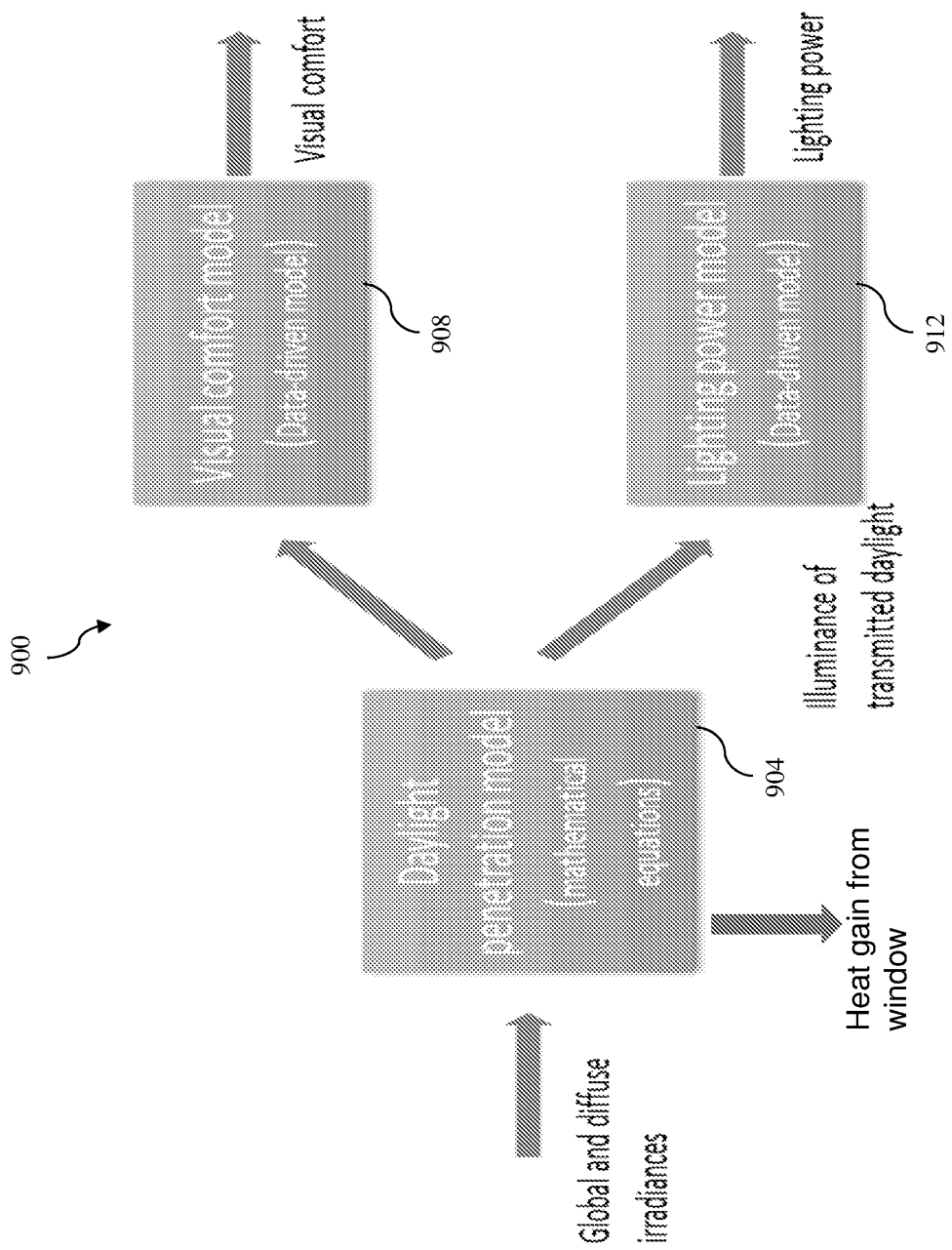


FIG. 9

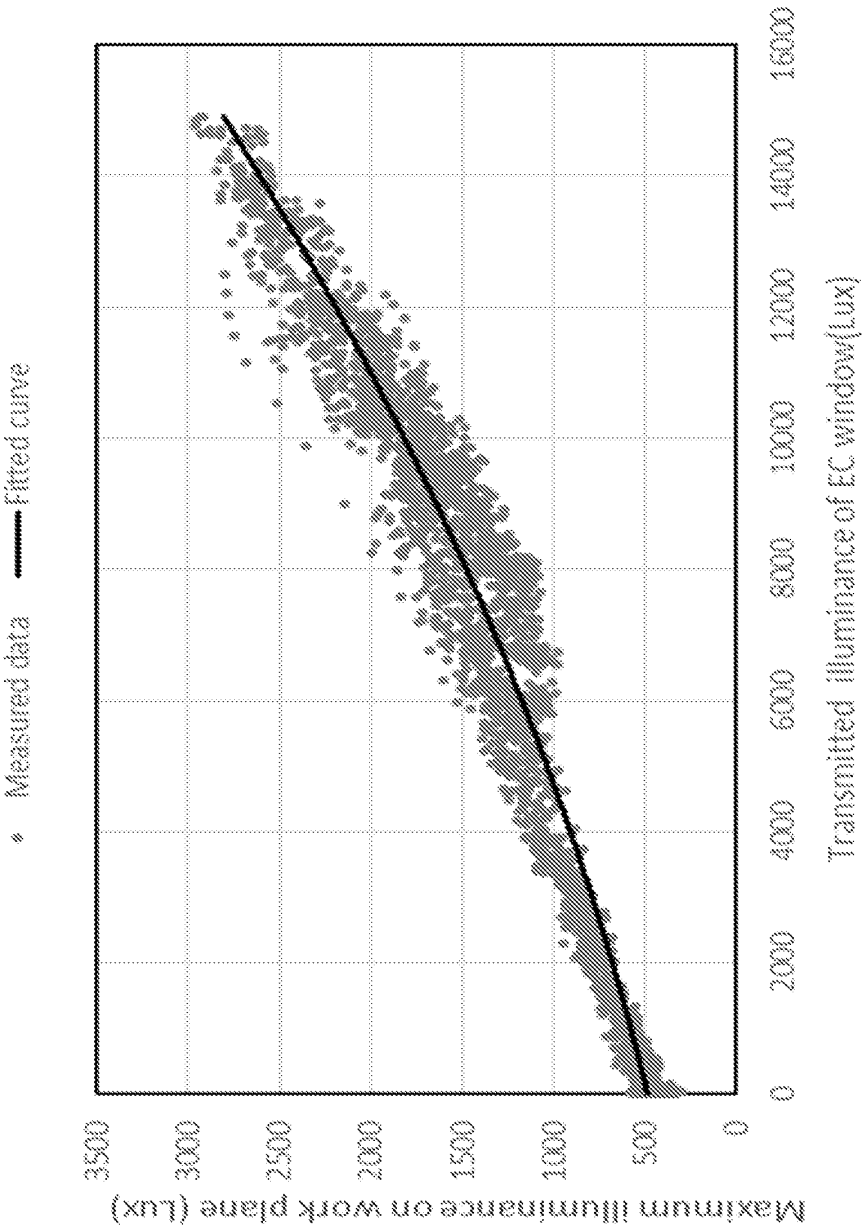


FIG. 10

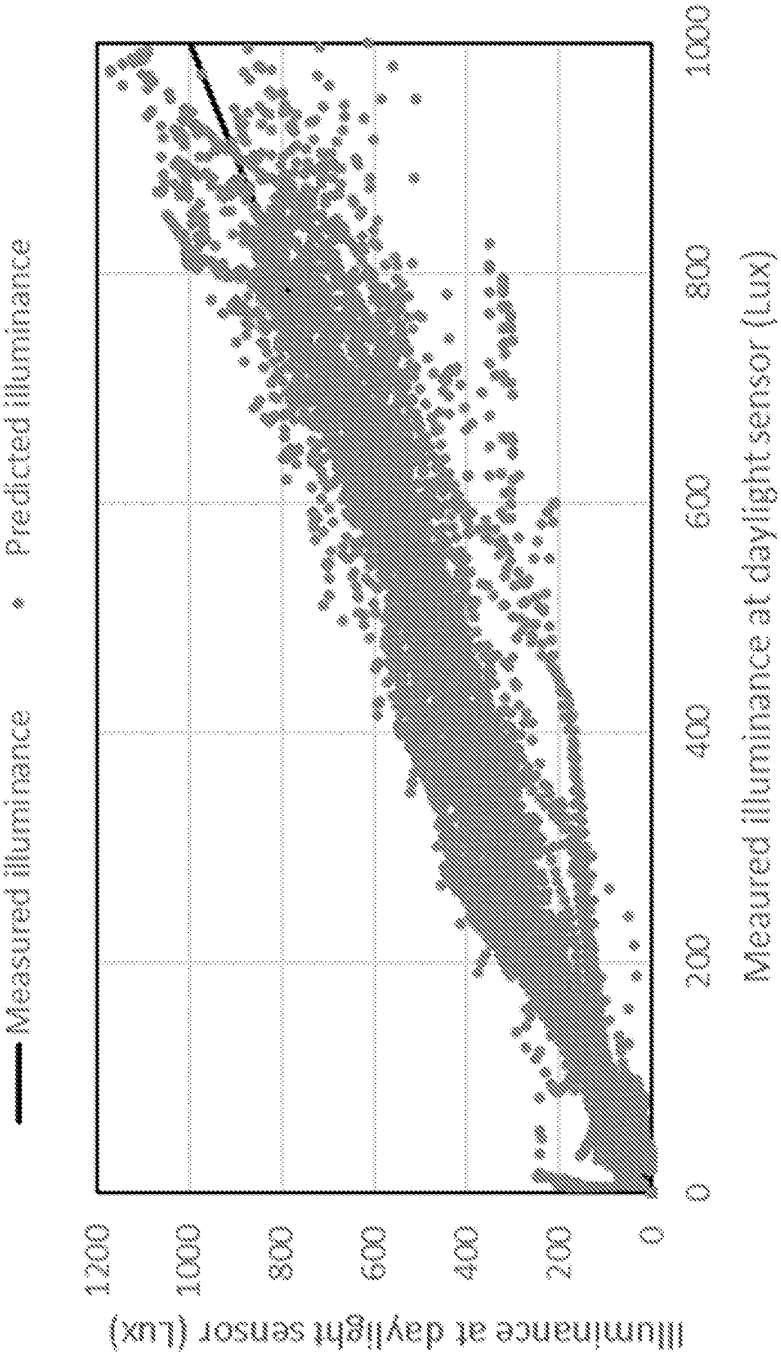


FIG. 11

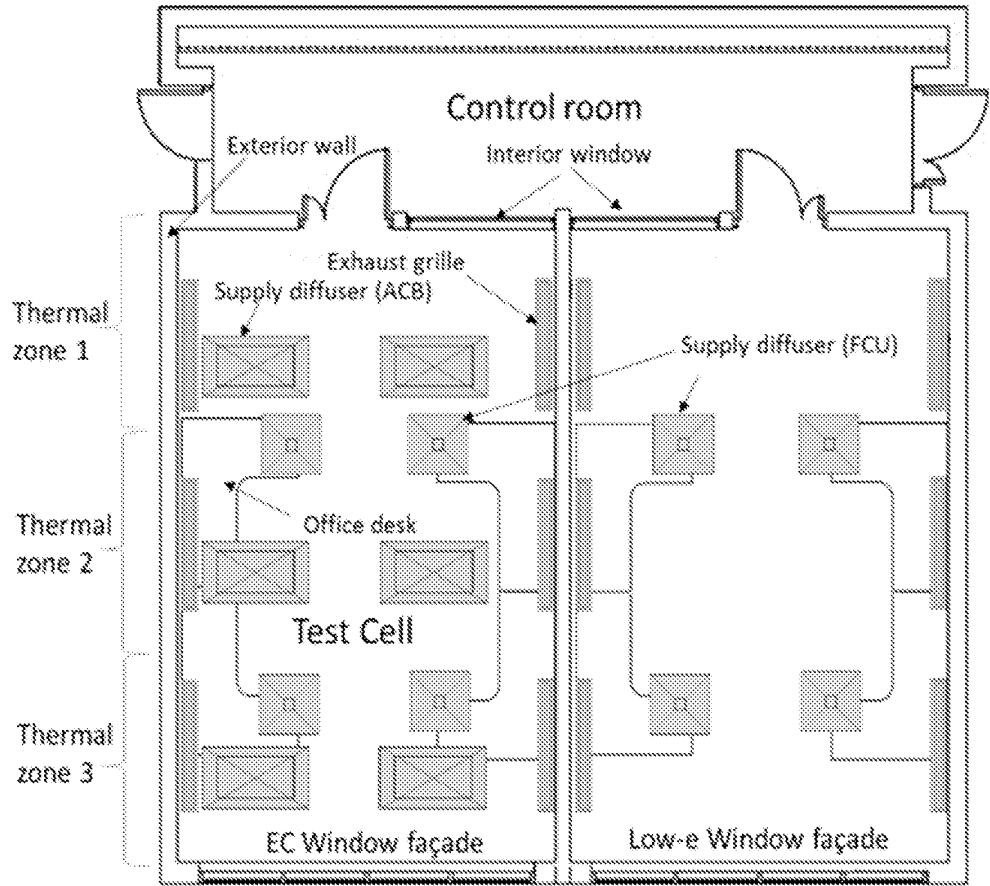


FIG. 12A

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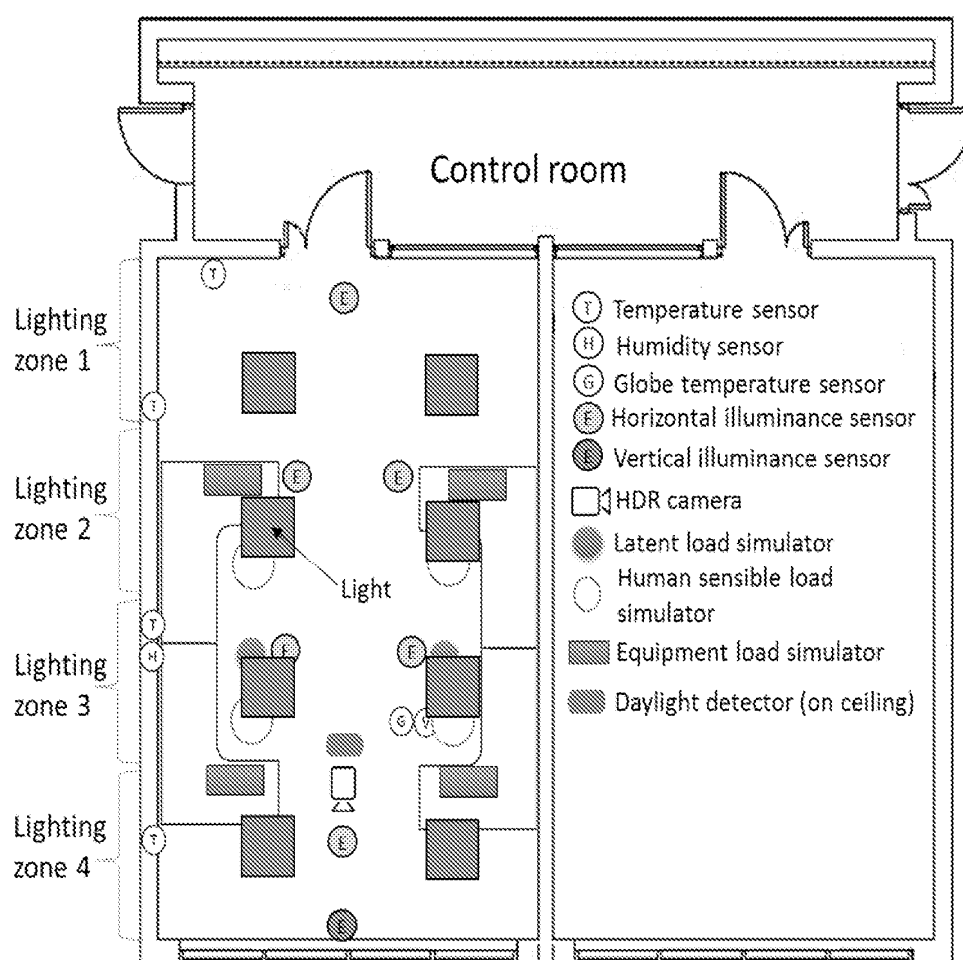


FIG. 12B



FIG. 13

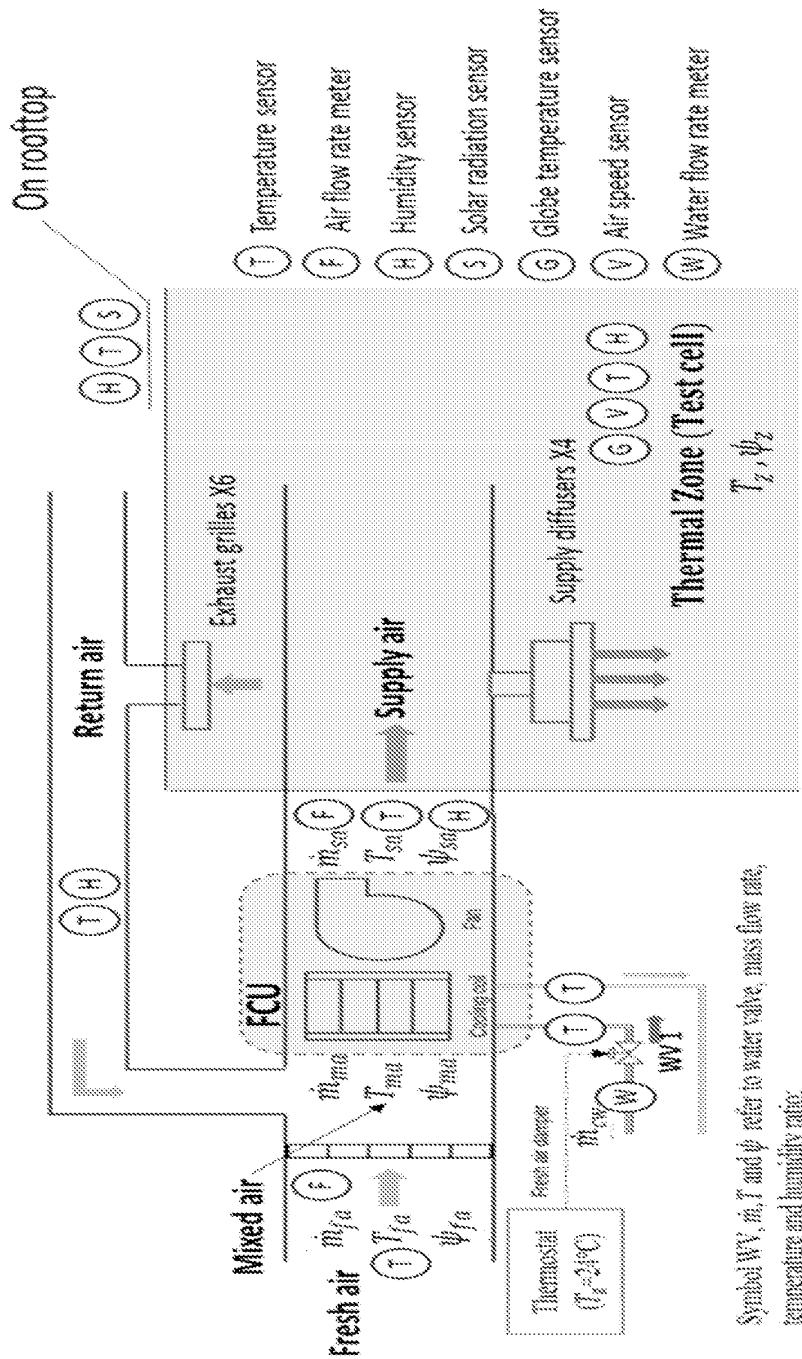


FIG. 14A

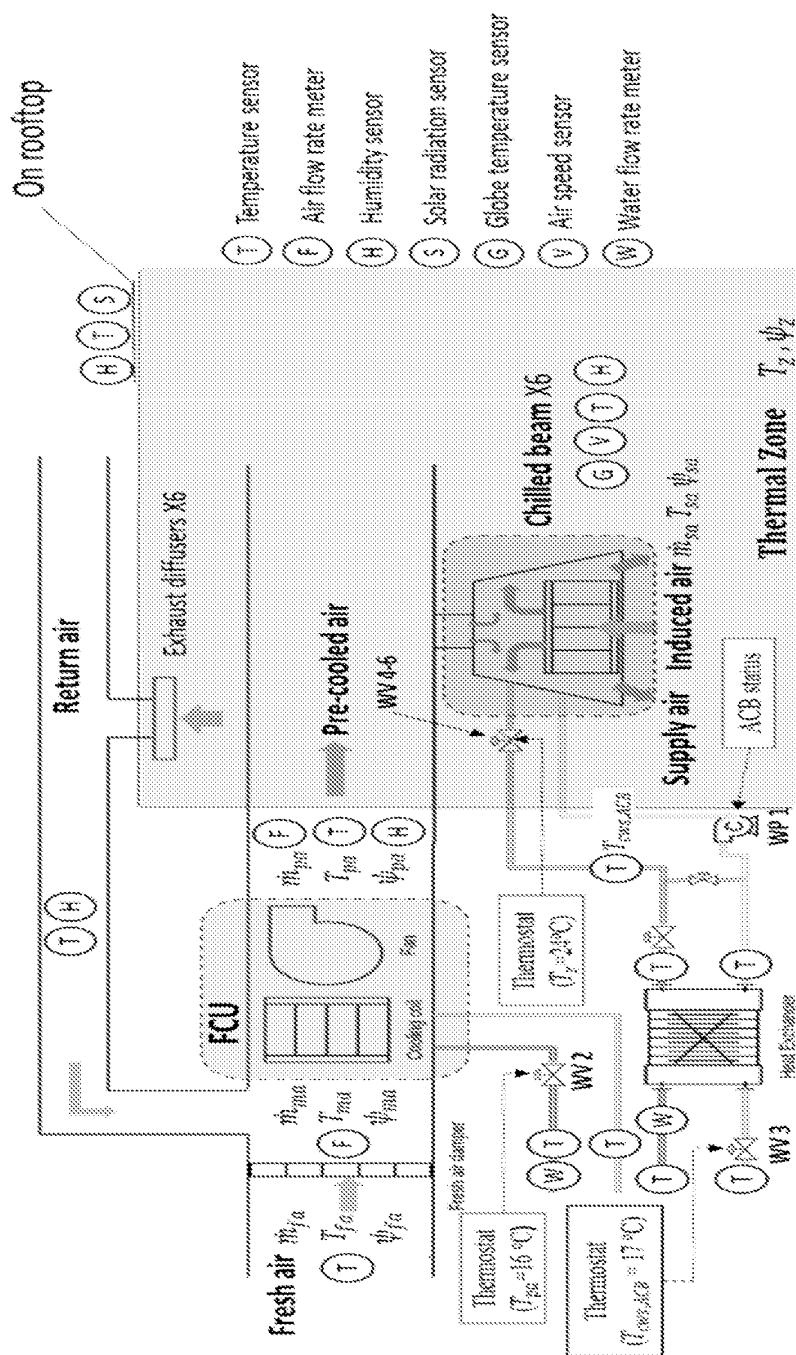


FIG. 14B

Symbol WV , WP , $\dot{m}$, T and ϕ refer to water vapor, water pump, mass flow rate, temperature and humidity ratio.

Subscripts *n*, *m*, *u*, *p*, *d*, *C*, *g*, *ev*, and *e* refer to fresh air, mixed air, supply air, pre-cooled air, active chilled beam, chilled water supply and thermal zone.

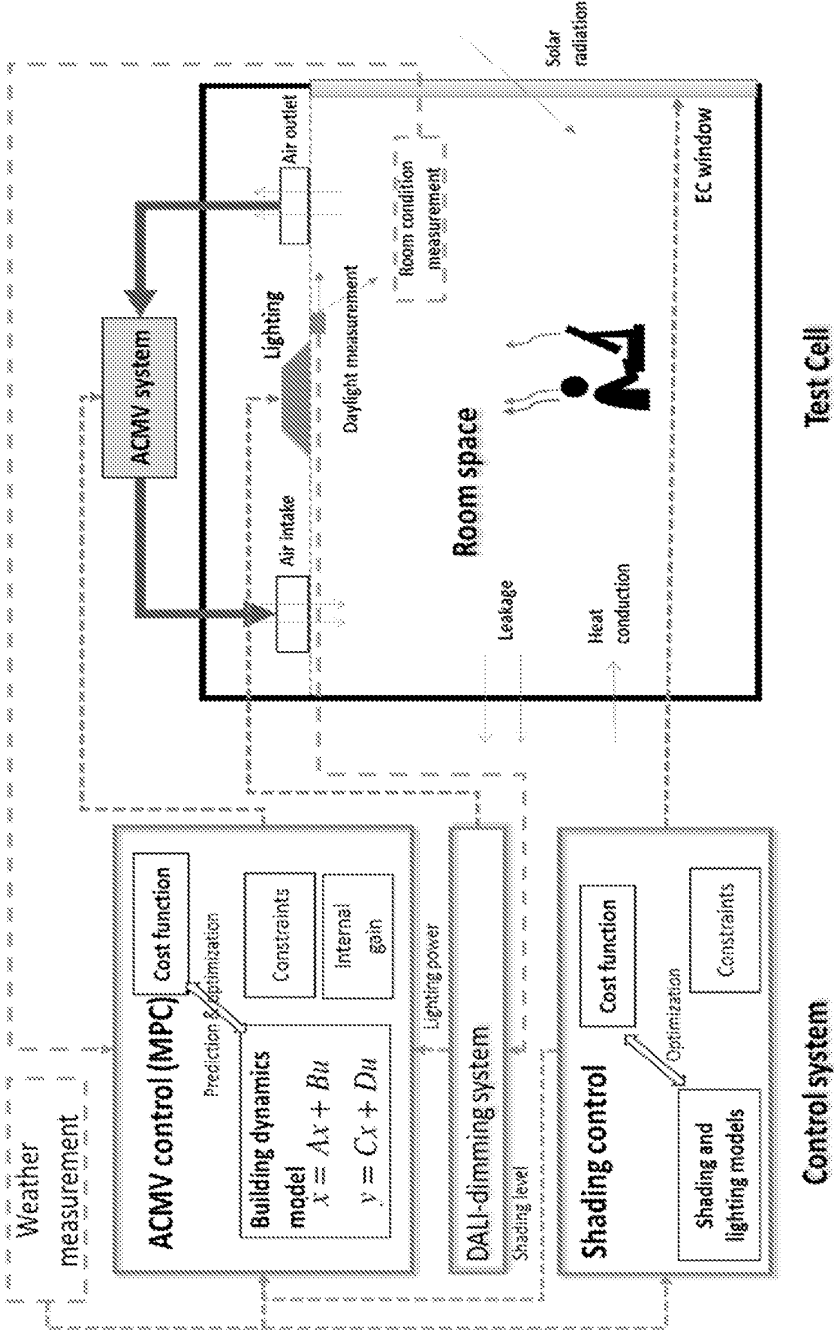


FIG. 15

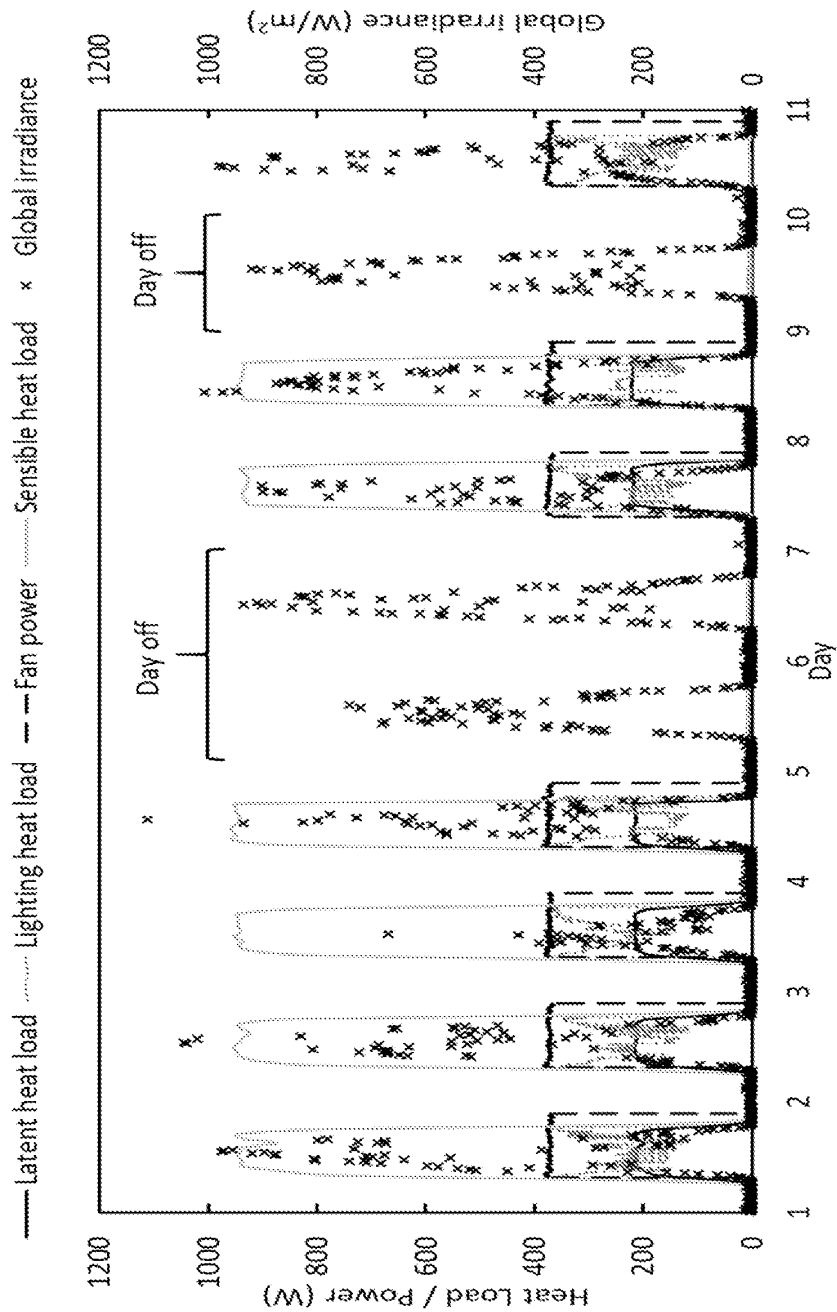


FIG. 16A

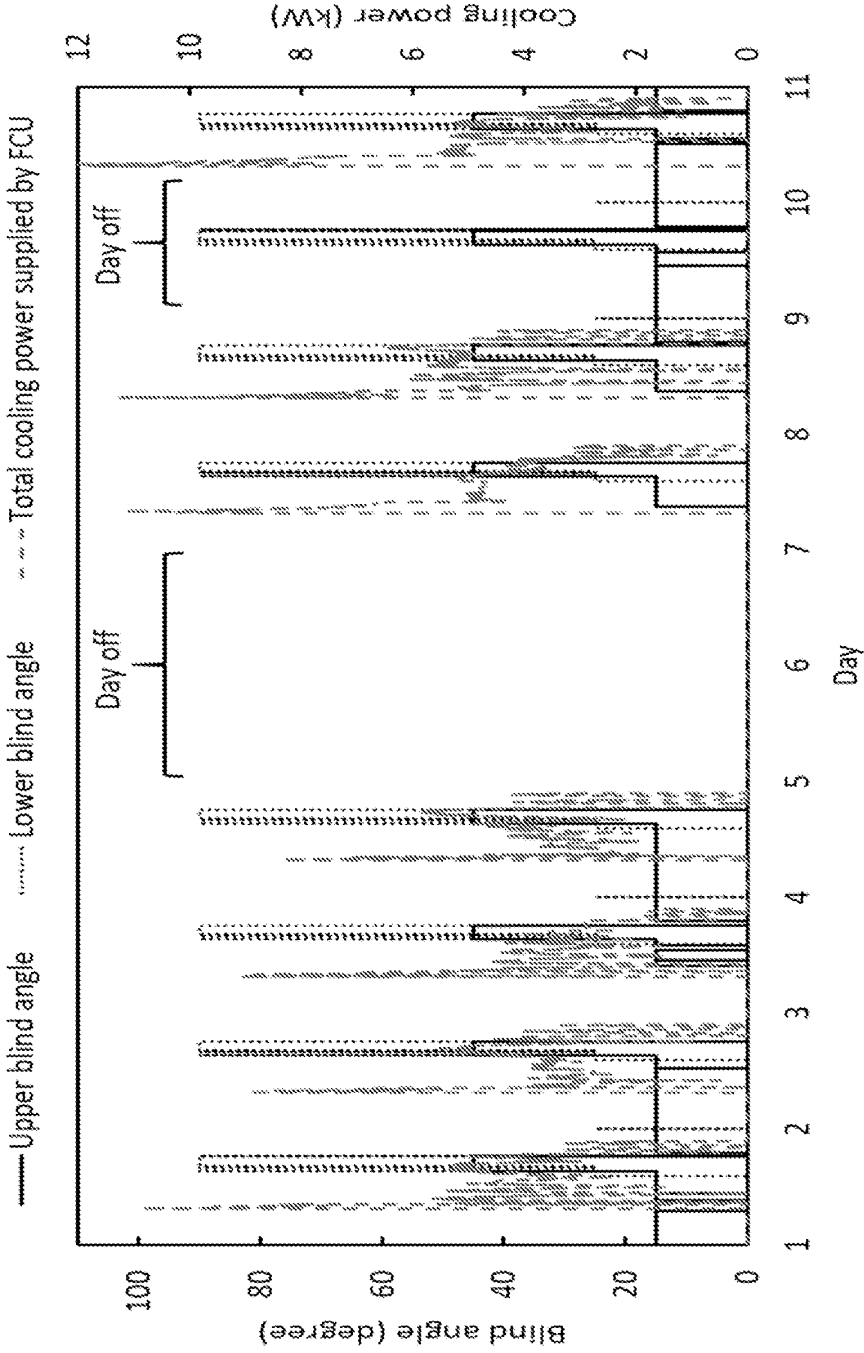


FIG. 16B

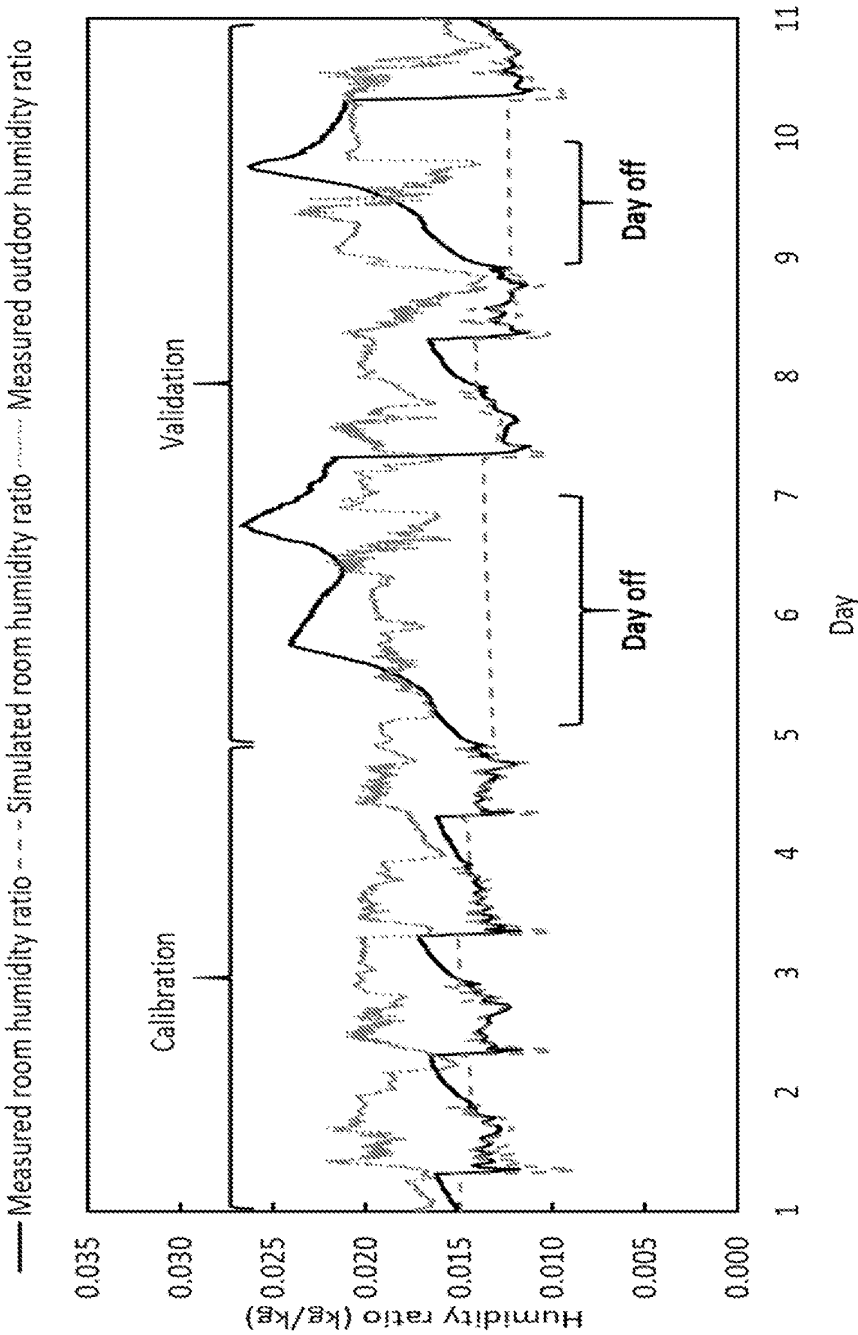


FIG. 17A

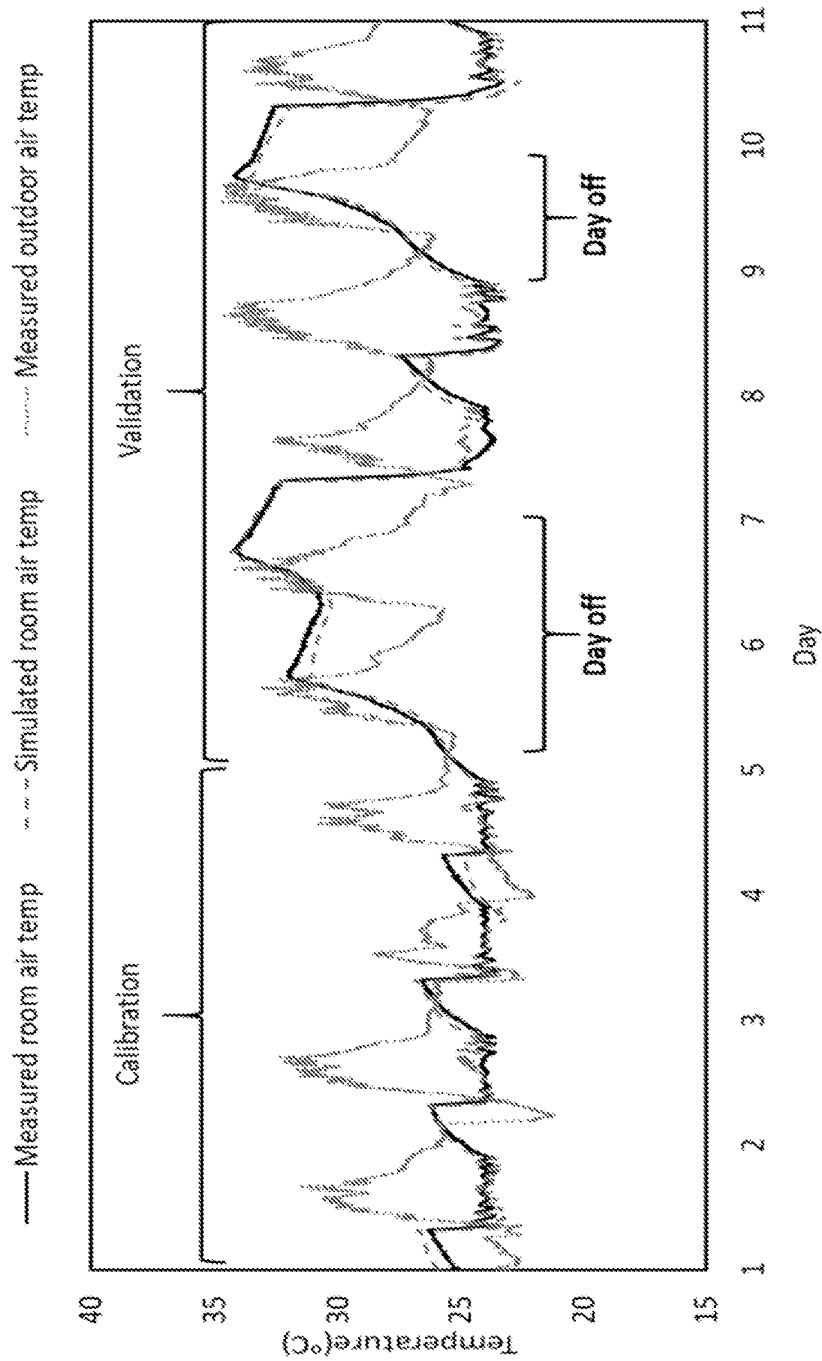


FIG. 17B

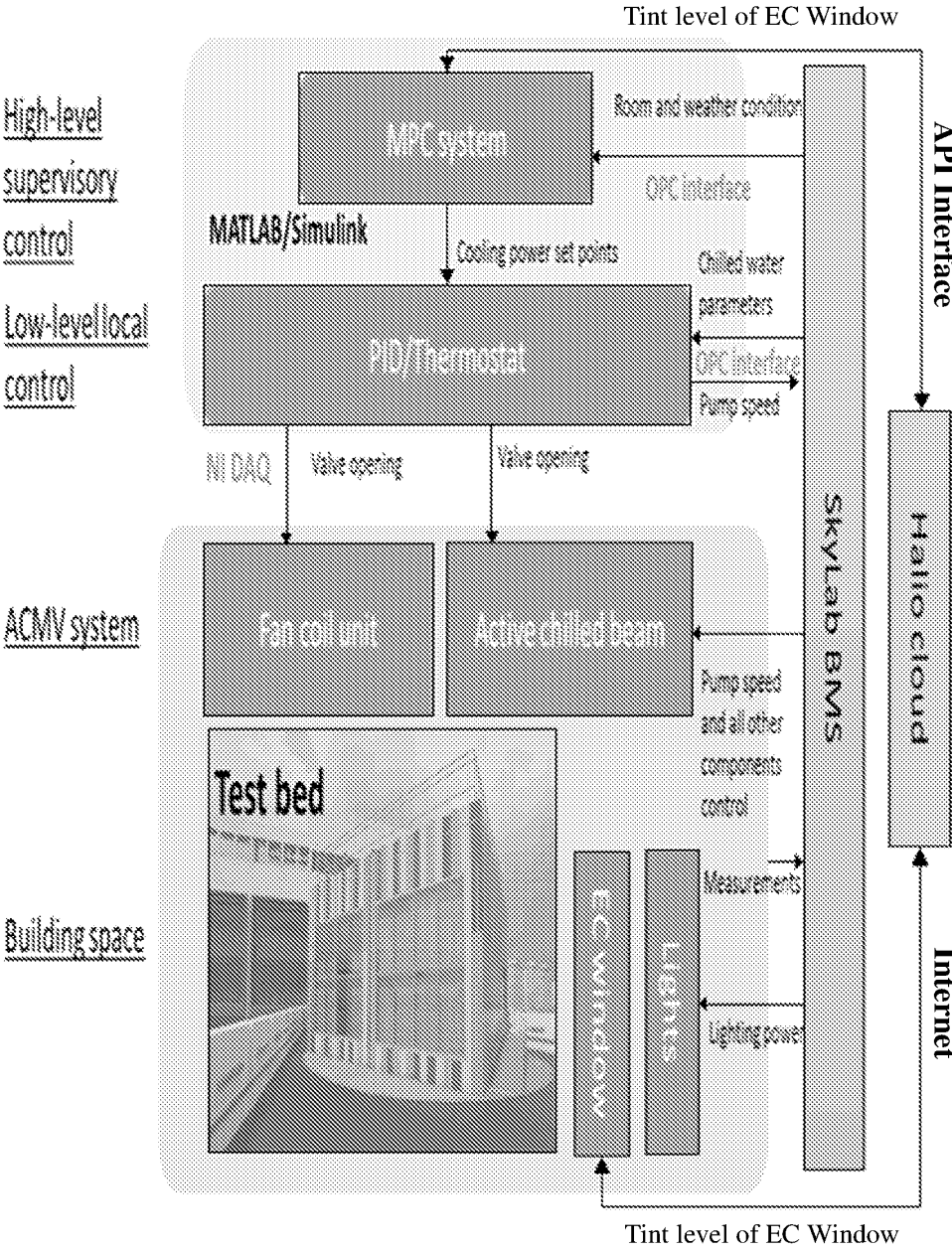


FIG. 18

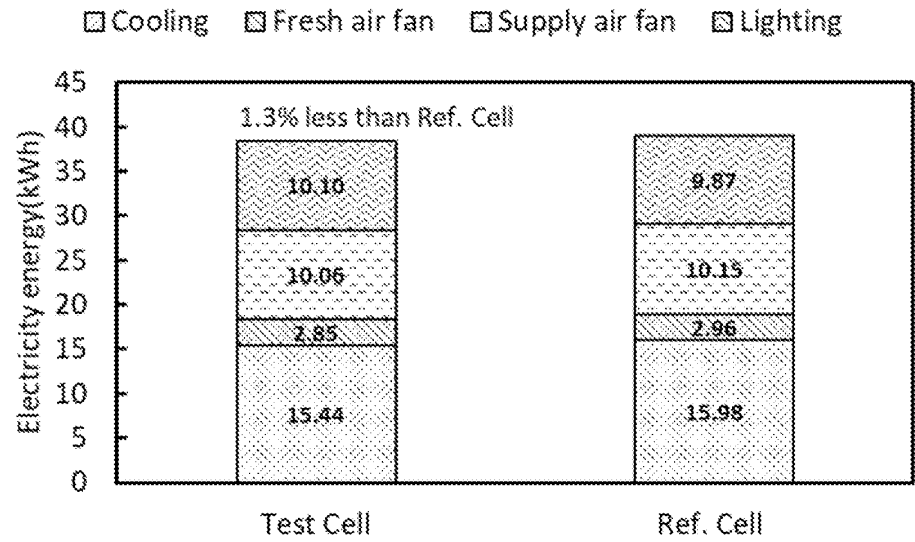


FIG. 19A

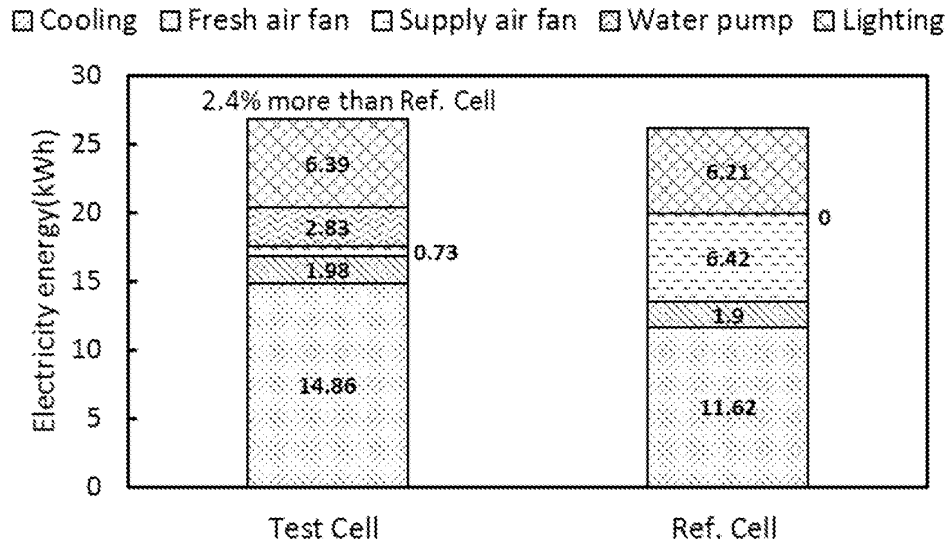


FIG. 19B

Test	Cell	ACMV system	ACMV Control strategy	Glazing	Shading control	Lighting	Test period (days)
1	Test Cell	Conventional FCU	MPC	EC	0.38	Constant	3
	Ref. Cell	Conventional FCU	BMS	Low-e	-	Constant	
2	Test Cell	ACB	MPC	EC	0.38	Constant	4
	Ref. Cell	Conventional FCU	BMS	Low-e	-	Constant	
3	Test Cell	ACB	MPC	EC	MPC	Auto-dimming	2
	Ref. Cell	Conventional FCU	BMS	Low-e	-	Auto-dimming	
4	Test Cell	ACB	MPC	EC	MPC	Auto-dimming	4
	Ref. Cell	Conventional FCU	BMS	Low-e	-	Constant	

FIG. 20

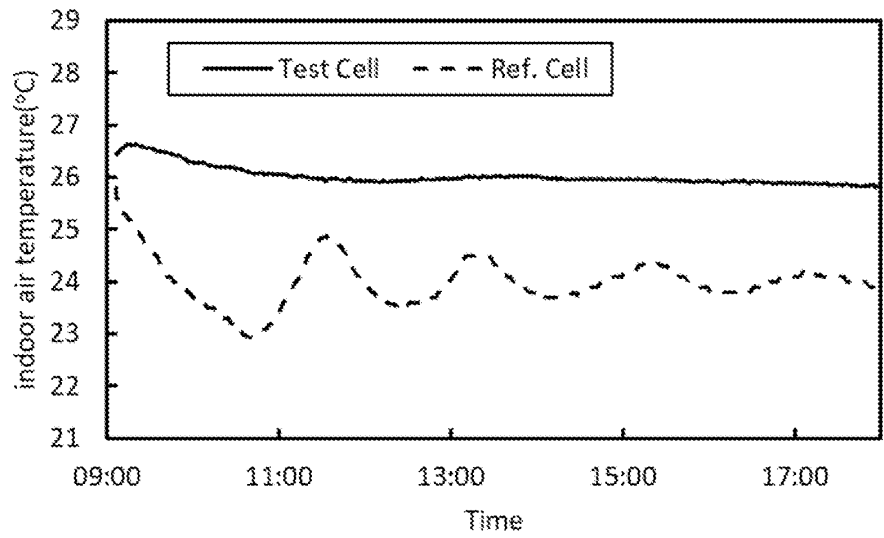


FIG. 21A

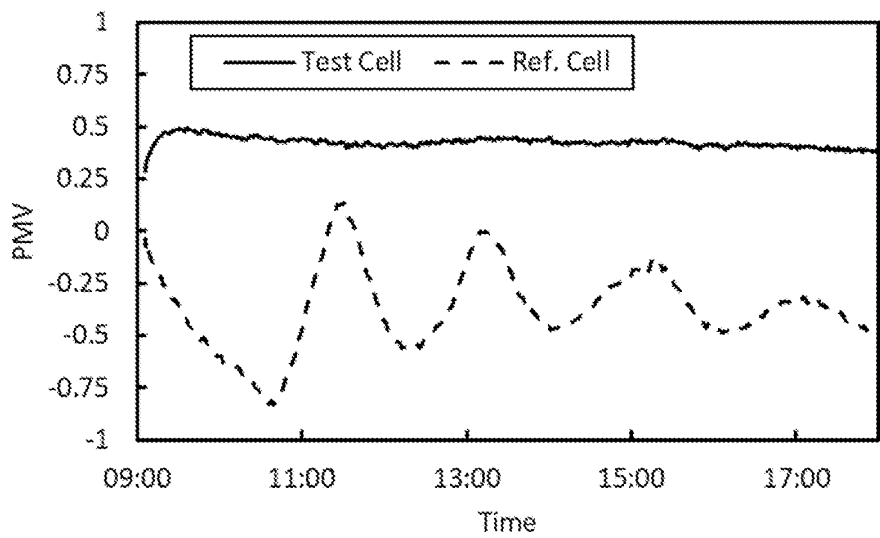


FIG. 21B

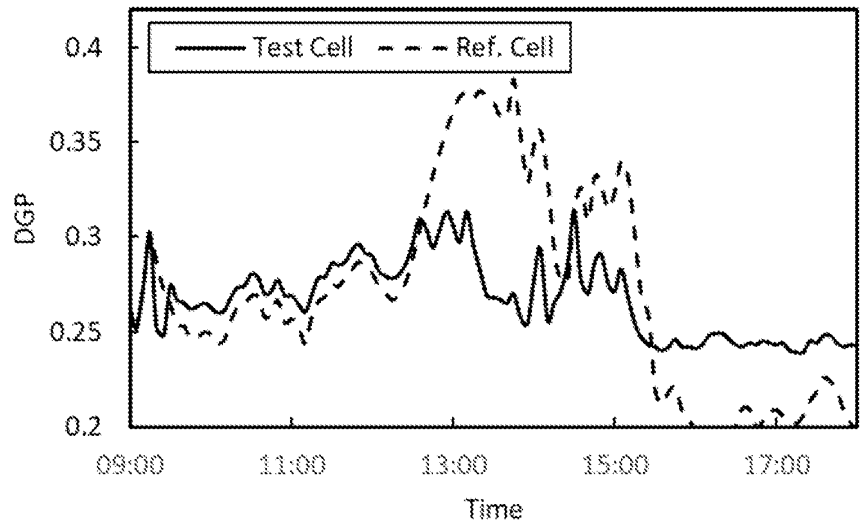


FIG. 22A

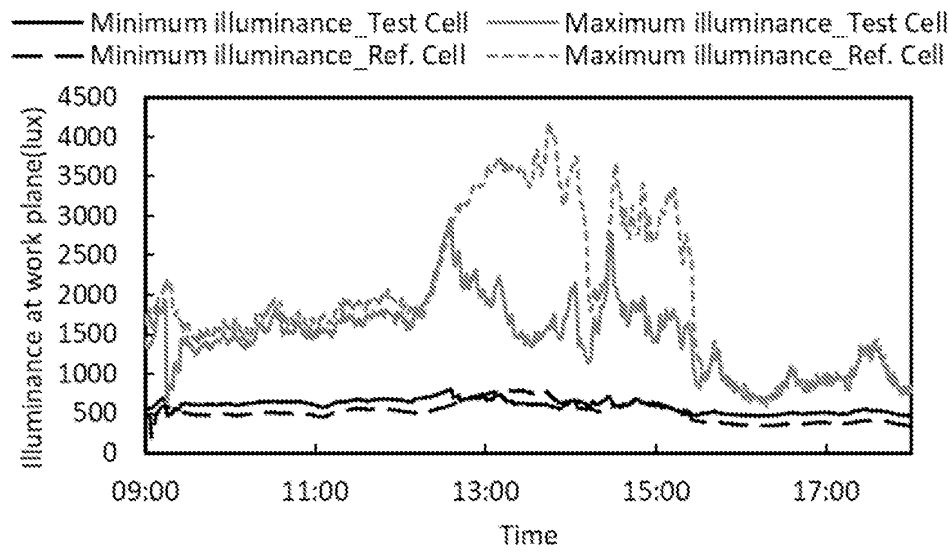


FIG. 22B

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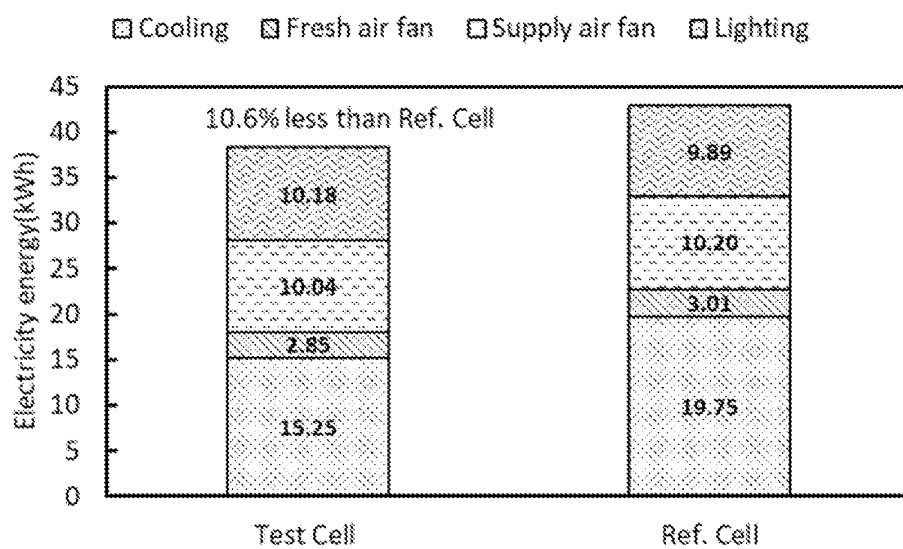


FIG. 23A

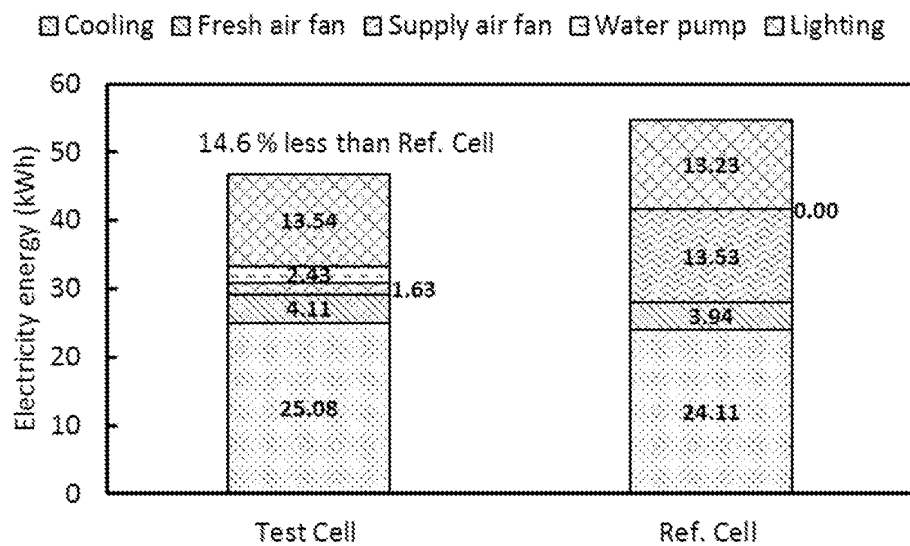


FIG. 23B

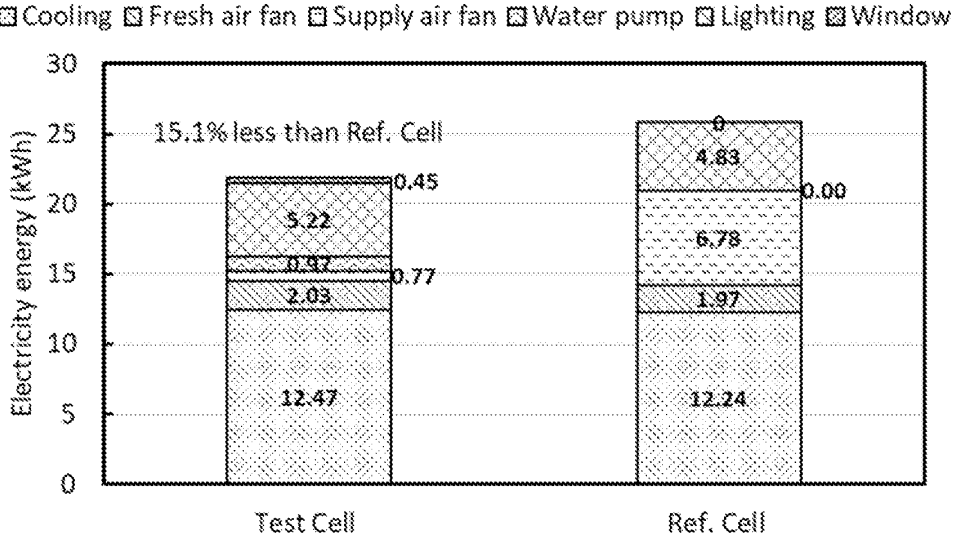


FIG. 23C

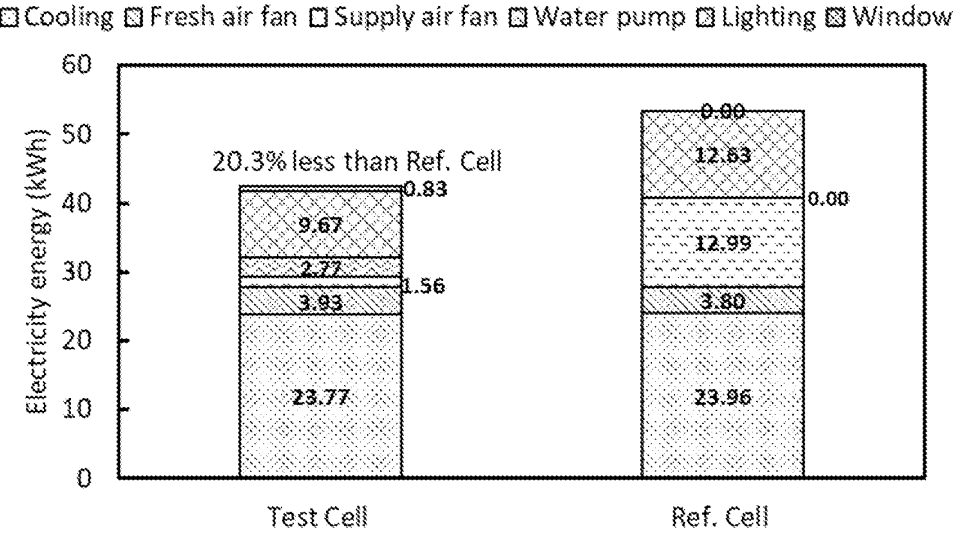


FIG. 23D

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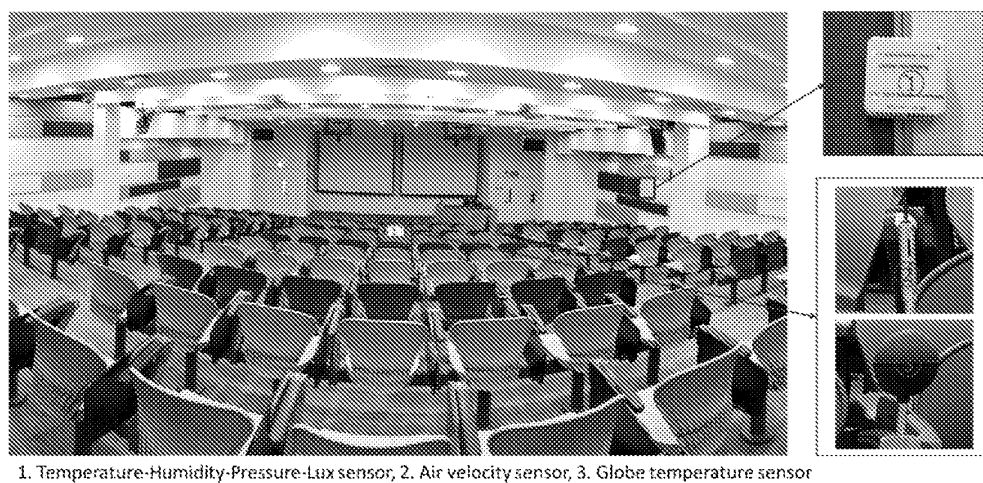
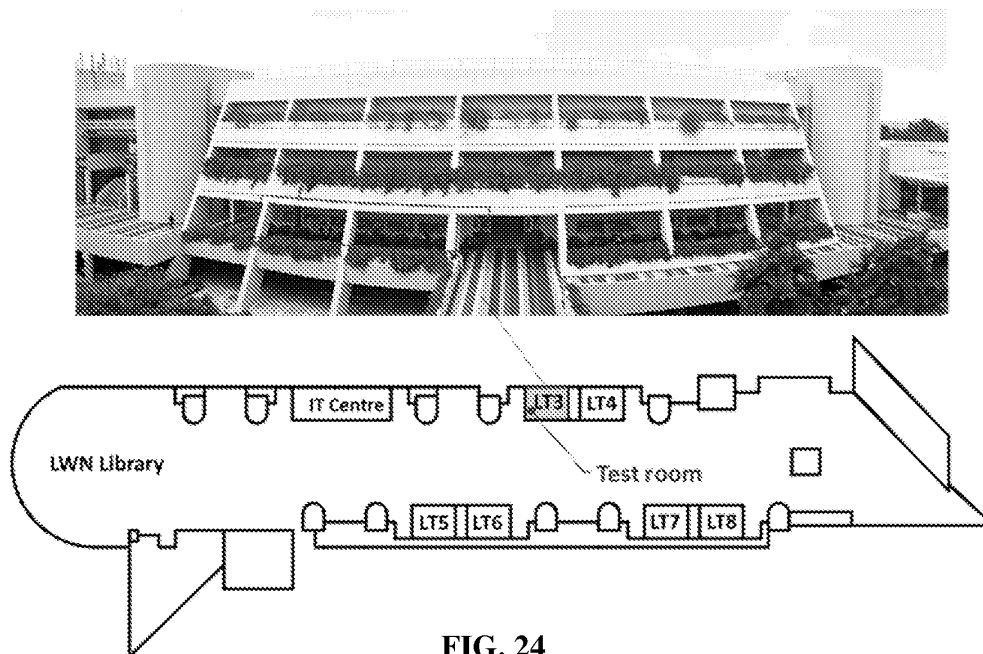


FIG. 25

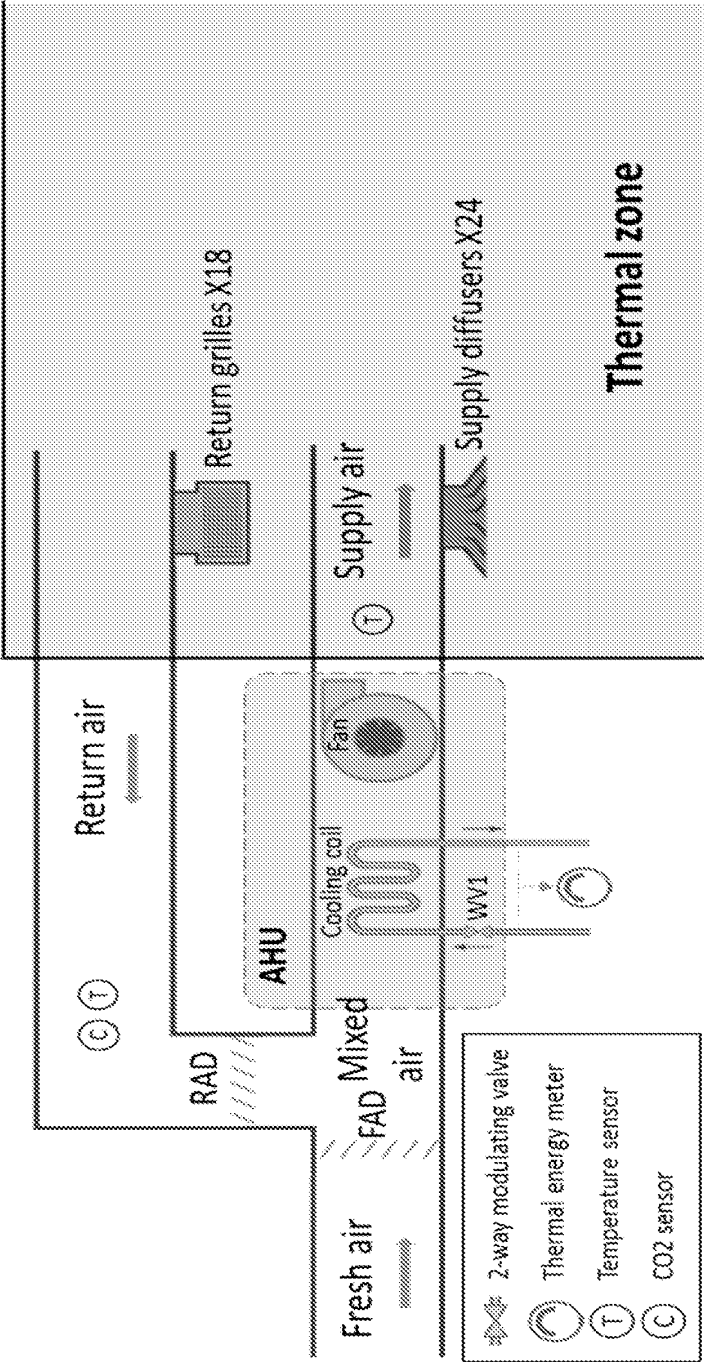


FIG. 26

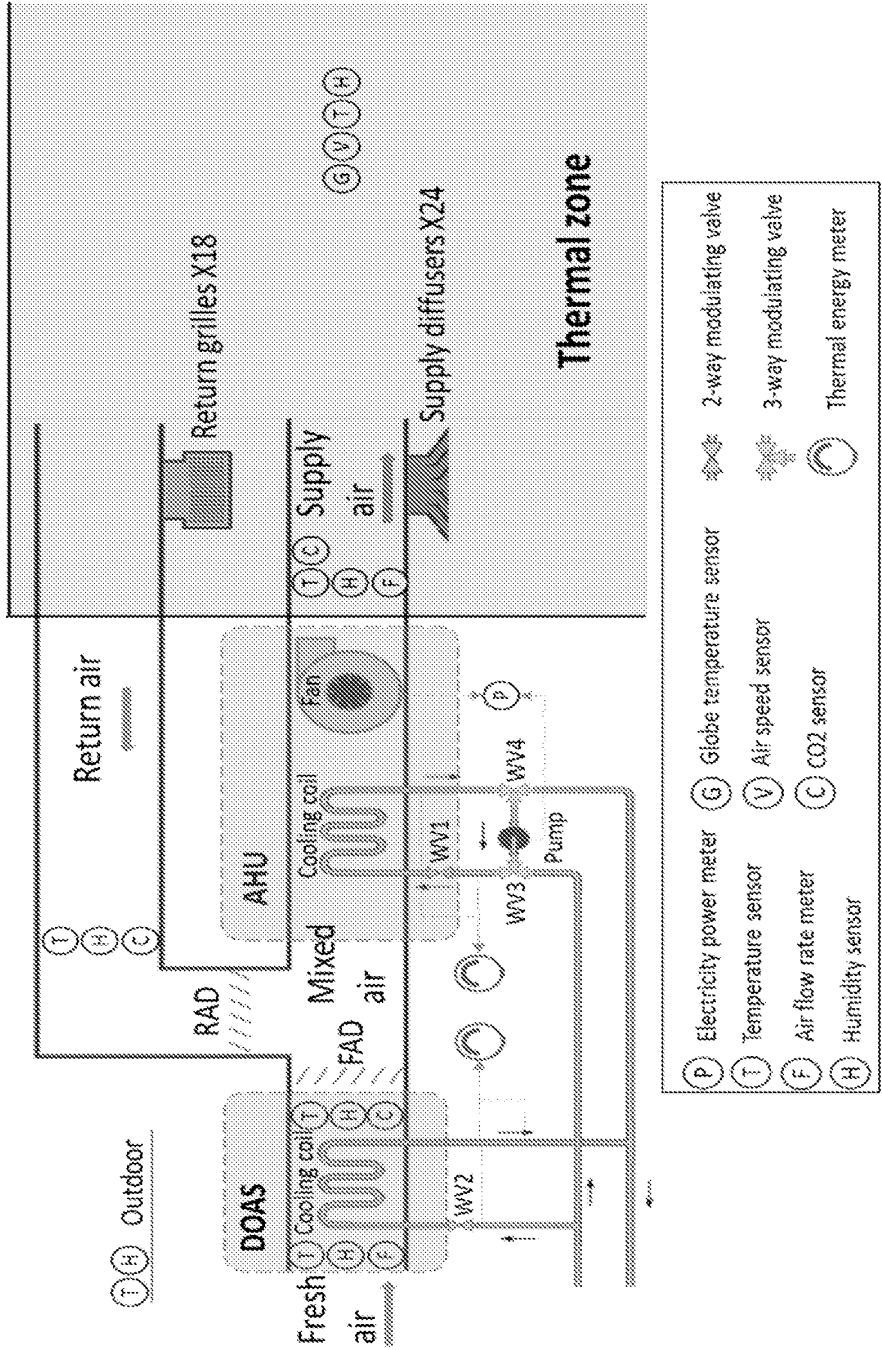


FIG. 27

	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00
Monday													
Tuesday													
Wednesday													
Thursday													
Friday													

FIG. 28

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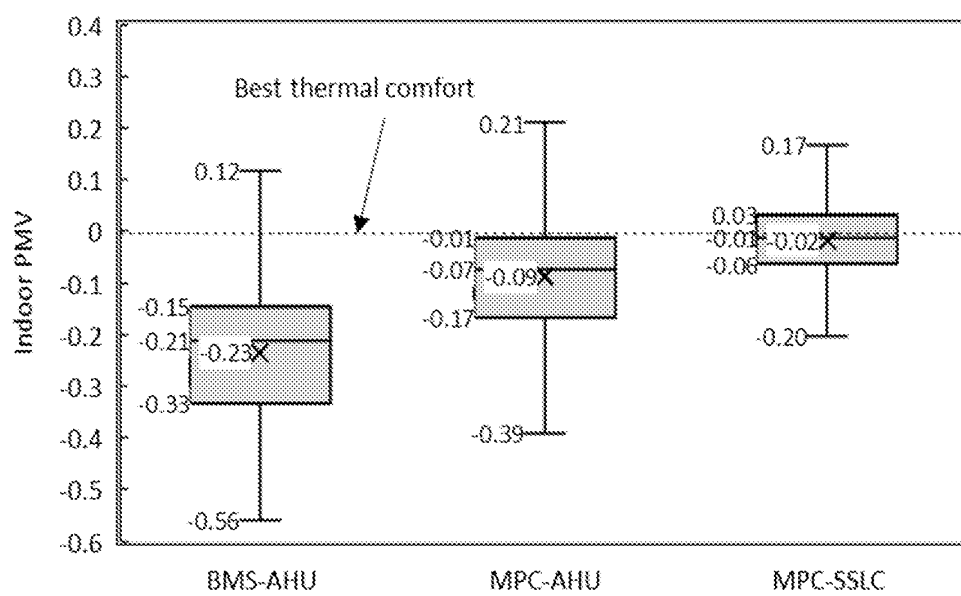


FIG. 29

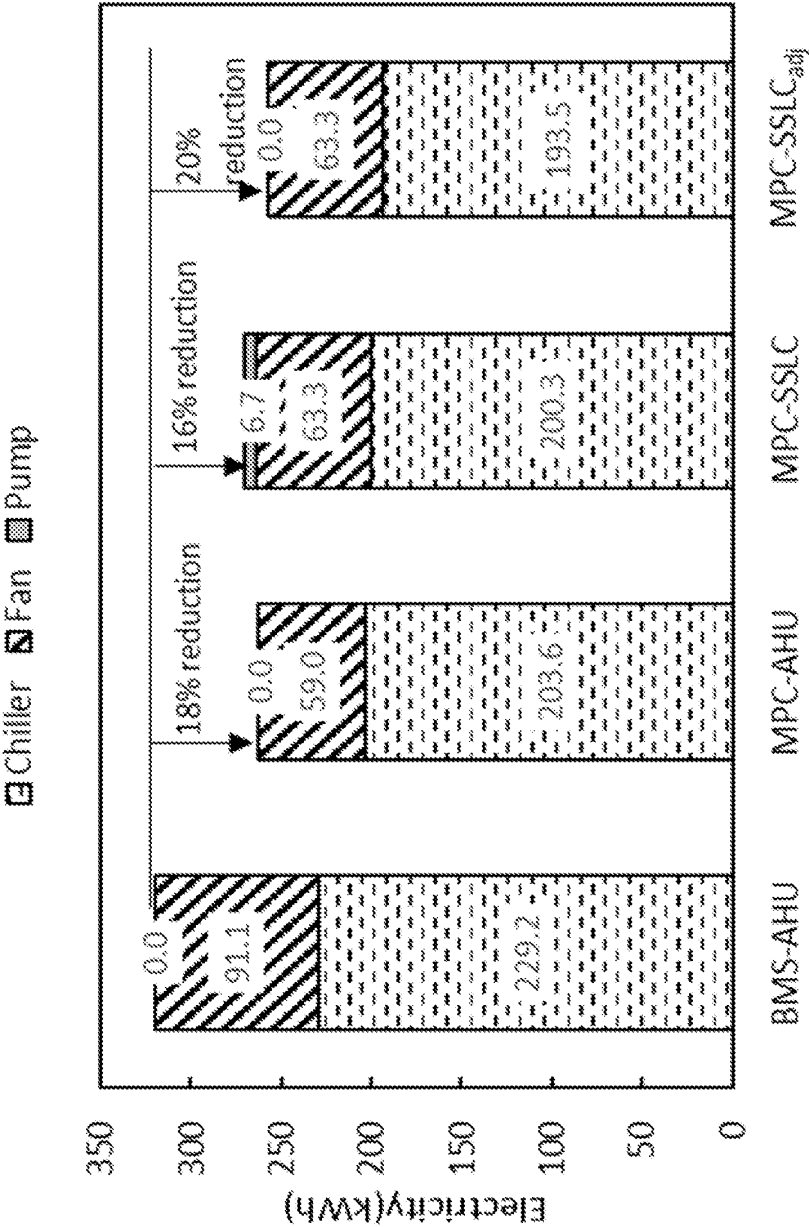


FIG. 30