SCDTR 2016/2017 Project

Revision of the table of commands for the RPI Server

Command	Client Request	Server Response	Observation
Get current measured illuminance at desk <i>.	"g l <i>"	"l <i> <val>"	<val> is floating point number expressing measured illuminance in lux.
Get current duty cycle at luminaire i	"g d <i>"	"d <i> <val>"	<val> is floating point number expressing duty cycle in percentage.
Get current occupancy state at desk <i>	"g o <i>"	"o <i> <val>"	<val> is a Boolean flag: 0 – non-occupied, 1 – occupied.
Get current illuminance lower bound at desk <i>	"g L <i>"	"L <i> <val>"	<val> is floating point number expressing illuminance lower bound in lux.
Get current external illuminance at desk <i>	"g O <i>"	"O <i> <val>"	<val> is floating point number expressing background illuminance in lux.
Get current illuminance control reference at desk <i>	"g r <i>"	"L <i> <val>"	<val> is floating point number expressing illuminance control reference in lux.
Get instantaneous power consumption at desk <i>	"g p <i>"	"p <i> <val>"	<val> is floating point number expressing instantaneous power at desk <i> in Watt. Assume each led nominal power = 1W.
Get instantaneous total power consumption in the system.	"g p T"	"p T <val>"	<val> is floating point number expressing total instantaneous power in Watt. Assume each led nominal power = 1W.
Get accumulated energy consumption at desk <i> since the last system restart.	"g e <i>"	"e <i> <val>"	<val> is floating point number expressing accumulated energy consumption at desk <i> in Joule. Assume each led nominal power = 1W.
Get total accumulated energy consumption since last system restart.	"g e T"	"e T <val>"	<val> is floating point number expressing total accumulated energy consumption in Joule. Assume each led nominal power = 1W.

Get accumulated comfort error at desk <i> since last system restart.	"g c <i>"	"c <i> <val>"	<val> is floating point number expressing the accumulated Comfort Error in lux. See section 4 – Evaluation Metrics
Get total comfort error since last system restart.	"g c T"	"c T <val>"	<val> is floating point number expressing the total Comfort Error in lux. See section
Get accumulated comfort variance at desk <i> since last system restart.	"g v <i>"	"v <i> <val>"	<val> is floating point number expressing the accumulated Comfort Variance in lux/s^2. See section 4
Get total comfort variance since last system restart.	"g v T"	"v T <val>"	<val> is floating point number expressing the total Comfort Variance in lux/s^2. See section
Set occupancy state at desk <i>	"s <i> <val>"	"ack"	<val> is a Boolean flag: 0 – non-occupied, 1 – occupied.
Restart system	"r"	"ack"	Reset all values and recalibrate.

New commands

Get last minute buffer of variable <x> of desk <i>. <x> can be "l" or "d".	"b <x> <i>"	"b <x> <i> <val1>, <val2>, …<val_n>"	Values are returned in a string of comma separated numbers. The string is terminated with the newline character.
Start stream of real-time variable <x> of desk <i>. <x> can be "l" or "d".	"c <x> <i>"	"c <x> <i> <val> <time>"	Initiates a real-time stream of values. Every time a new sample of a certain variable is available, it is sent to the client in a string with the format indicated. <time> is an increasing timestamp in miliseconds.
Stop stream of real-time variable <x> of desk <i>. <x> can be "l" or "d".	"d <x> <i>"	"ack"	Stops the real-time stream of values.