Information Sheet – Multi-Site / Utility Function

As the need for electrical power increases, and the provision of supply is reaching capacity, there becomes a need to control the usage, and in some instances reduce consumption to meet demand. This may be within: a large organisation; multiple sites; multi-occupancy sites; or, on a wider scale, through Utility providers.

Some Utilities have already started providing a service, where parts of buildings are re-wired to allow shutdown of everything on that supply, however, this is an expensive mechanism to provide control, and means that changes could be cumbersome to achieve.

The Rayzig System has been designed to provide a centralised mechanism to control multiple sites, with easy configuration which does not require a separate income supply.

Control can be via Raymon (a PC based application), which can login to multiple sites (one at a time), giving the specified level of control (for say building management), where a change can be made, and then link to another site, to carry out a similar or alternate alteration. Access is via WAN / Internet.

For multi-site operations, a site list is stored within a local SQL database (currently Rayzig uses MariaDB or MySQL). For each site, user access is at a designated level, **Engineer (E)**, **Administrator (A) or User (U)** which is set on each specific site. Operational changes can then be made according to the level of authorisation.

Ŧ	Connect	D New	🖉 Edit	Delete							
ogin[stecode	site name			utitef	URL		poit	a.b	ulipwd	
E	R200013	Costalot shopping araca	de	P	w1457225555	costalol org.uk		3366	0		
A	R200067	Frosty Food sprocessing	plant	P	w177653	power.hostyfood.com		2333	2		
E	R200001	Rayzig subnet A gatewa	y un channel a	14 P	W343434	192 168 1 140		3140	5	USA-accatativutà	
E	R200001	Rayzig subnet D gatewa	y on channel	12 P	W897897	132 168 1 142	314			NGĂĂĮÁSĂIA-2Ă	
E	RZ00034	Crunchy Crisp Ltd		P	W33445	www.crunchy.crisps.co.uk		3344	2		
E	8200002	Rayzig-one Text Rig		h	M0001	192 168 1.130		3377	1	IVJey/*#E0 bDt	

Within the Utility login, for each site, a load list can be created, defining the zone being controlled, the duration of any outage and the delay before start-up. Additionally, a number of shutdown groups can be defined so that a group, rather than specific loads, can be controlled.

To achieve Load Management, it is necessary to ensure that each output module within the target system is assigned to a zone in the 800-999 range. (users may define up to 6 zones for each output module). This is undertaken with the client agreeing to the service.

Zone ID	0/	0/P nodes only							
Α	В		C						
D	E		F						

The module can then be controlled by the load management list, or through an API, which will specify the length of shutdown and the restart delay – (this ensures that not all modules are coming on line together after a shutdown and causing an overload situation).

The Utility login provides the ability to send messages to specified sites to carry out an agreed shutdown operation for a specified period of time. This is achieved by selecting the loads, sites or shutdown group from Raymon's Load Management list and issuing a 'Zone Off' command.



40	load name	km	20/10	mins off	delay sec.	A	8	C	D	notes
RZ00	001 PW1889344 Rayzig main subnet gateway o	channel	16 15	2.168.1.	143:3143					n
-VA	Office lighting on 6010 and 0057	1	807	1	0	8	0	0	0	Central 1-10v fluorescient on port 4
-VA	Dali demo on 6016	1	808	1	0	8	0	0	0	Four DALI controlled spot lamps
VA	Four sets of DALI fluorescents on 6012	Ū	809	1	0	8	0	0	0	Make my office look like tanning studio
RZ00	013 PW1457225555 Costalot shopping aracade	coatalo	l.org.uk	3366						
RZ00	067 PW177653 Frosty Food sprocessing plant	powar fro	styfood	com :233	33					
-VA	Refridgeration 5 and 6	3	814	120	13	16	0	1	0	
VA	Behidgeration units 2,3 and 4	2	808	120	11	16	0	0	0	Internited load - 2.3kW max
RZ00	001 PW343434 Rayzig subnet A gateway on ch	snnel 24	192.16	8.1.140	3140					
VA	Test relay output module 7A02	0	817	3	0	Б	0	0	0	Demo only - has no loads
RZ00	001 PW897897 Rayzig subnet D gateway on ch	annel 12	192.16	8.1.142	3142					
VA	test realy output module 7D02	0	800	2	0	6	Ð	0	0	
RZ00	034 PW33445 Crunchy Crisp Ltd www.crunchy	critps.co	uk :334	14						
-VA	Main crisp cruncher	0	800	240	8	21	0	0	0	7kw - crunches a lot of crisps
-VA	Waste disposal unit	10	814	120	5	21	0	0	.0	
RZ00	002 IoM0001 Rayzig-emc Test Rig 192,168.1.	130:3377								
VA	Environmental Chamber	3	909	120	30	10	0	0	0	Operational Chamber

For the benefit of load management, a load can be defined in groups. Up to four Groups (0-999) can be specified (under group A - D), which can be used to provide a quick mechanism to instigate a shut-down on a specified group, which would allow a particular 'load' profile can be achieved. (Users still have the ability to manually turn the defined modules back on, prior to the defined restart).

The use of Rayweb as an Engineering Status user will allow a list of Sites with / without loads to be shown and printed.

Print Reyzig Utility sites i	ing i	oads	URC 744	Ny New York 2018	ingen sold	Stret and 1									
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A log file shows whether connection has been made to a particular site, and utility load monitoring would be able to show whether the required levels have been reached. In the event of needing to reduce further a new group, site or load command can be issued to achieve the level of control.

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