CENTRUNIT

Centrunit is the centralised control system developed by CE+T Technics for its emergency lighting systems.
It is simple, intuitive and flexible to use and offers special features, such as an Excel spreadsheet.

Description :

This system enables to supervise and control installations comprising the following elements:

- ### The lighting fixtures

    Any emergency light from CE+T Technics (ARGOS, ELIOS, LEDRAIL, LUCIOLE, LP4B, NP55AC,…). They must be of a 'centralised' type.

    Such lighting fixtures are equipped with an interface that enables them to communicate with the coordinating units.
    Such communication provides information regarding the status of the lighting fixtures and enables to send remote control signals. However, each lighting fixture is entirely autonomous and able to operate safely even in the absence of communications with the rest of the system.

- ### The lighting network(s)

    Each lighting network comprises a bus which physically connects the lighting fixtures and enables them to communicate together and with a coordinating unit.
    The care taken to wire this network is essential to the correct operation of the installation; furthermore, the wiring must meet certain requirements.
    Each coordinating unit is connected to a network of lighting fixtures.

- ### The coordinating unit(s)

    The coordinating unit acts as a concentrator and is in charge of the communications between the Internet network and a group of lighting fixtures.
    Such group may have up to 200 lighting fixtures.
    Each coordinating unit has an Internet connection (RJ-45) and is connected to its associated lighting network.
    Each coordinating unit has a fixed IP address that enables to identify the group of lighting fixtures which is connected to it.
    A complete installation may have as many coordinating units as required by the number of lighting fixtures or by the layout in the building(s).
    Therefore, there is no real limitation regarding the configuration of an installation or its expansion possibilities.

- *The Internet or Intranet network*

Here, we have a standard Ethernet network.
Each coordinating unit must have its own Ethernet access.
Thus, the number of Ethernet connections in the network must match the number of coordinating units in the installation.
If the Internet network is used, a firewall enables to counter malevolent actions by preventing unauthorised people from accessing the network.

- *The server PC (console)*

This device is a PC equipped with a Windows XP or superior operating system, on which the Centrunit_srv service is run.
Each installation has only one PC per installation, and it must be kept on.
It automatically and regularly communicates with the coordinating units in order to know the status of each lighting fixture.
These statuses may be stored in a table located inside this server, and such table may be read instantly by the remote client PCs.

- *The Centrunit_srv service*

This software is to be installed only on the server PC (which is constantly on) and is totally invisible for the standard users.

- *The client PC(s)*

These PCs have Windows XP or superior, plus the Centrunit software.
The number of client PCs is unlimited, and they may be located anywhere, provided they have access to the Internet. The users may at any time know the status of the lighting fixtures, carry out several tests or change the system parameters, provided they have the authorisation to do so.

- *The Centrunit software*

This software must be installed on each client PC.
It serves as user interface.
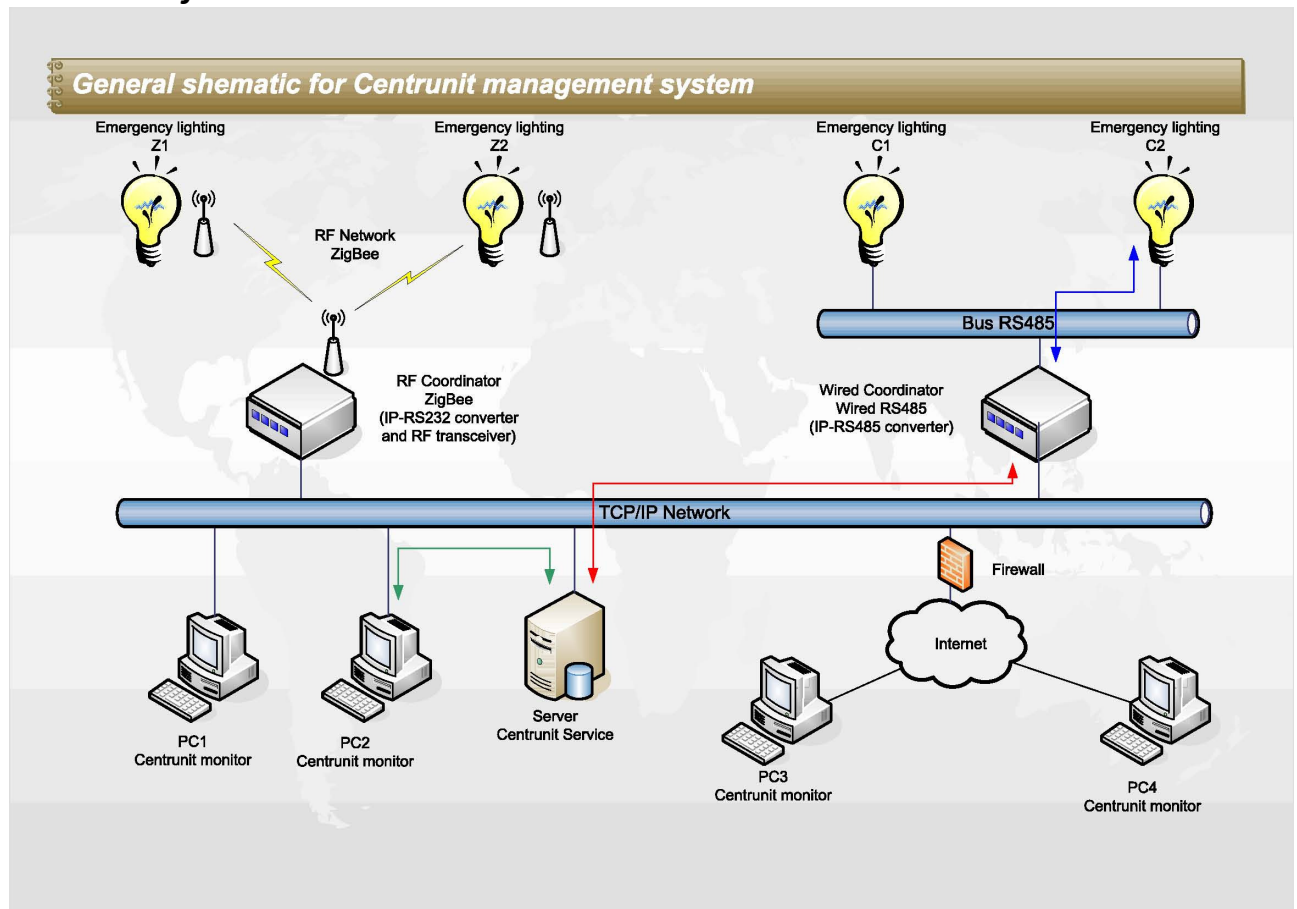According to the rights granted to them, the users will be able to:
   o know at any time the operating status of the lighting fixtures

   o send a query to the lighting fixtures (to all of them, to given groups or to single fixtures)

   o launch autonomy tests on the lighting fixtures

   o check the correct operation of the light tubes of each fixture

   o schedule periodic testing programmes

   o schedule the precise time and date of each test

o   check the correct operation of the communications.

Furthermore, this software is able to generate reports, such as the followings:
   o   Report regarding the correct operation of the installation, as required by control authorities

   o   List of equipment to be ordered for the preventive maintenance of the installation

   o   List of equipment to be ordered for the corrective maintenance of the installation

- *Overview of an installation:*

The drawing above shows:
   o   2 client PCs (Centrunit consoles) connected to the Intranet

   o   2 client PCs (Centrunit consoles) connected to the Internet via a firewall

   o   1 server PC on which the 'Centrunit_srv' service is installed, connected to the Intranet.

The server is the system's brain: it dialogues with each lighting fixture and records its status. The client PCs are the interfaces for the system's users: they enable to display information and to set the parameters of the managing system. The lighting fixtures can be interconnected:
   o   using a wired network, by means of a 'Wired Coordinating Unit' interface and using the RS-485 protocol

   o   using a wireless radio network, by means of a 'Zigbee Coordinating Unit' interface.

- *Main control screen:*

- *Test report :*

Test automatique des éclairages de secours

Rapport de test relatif à une installation d'éclairages de secours située à: CE+T technics
Rue Hauzeur, 17
Belgique-4031 Angleur

Date d'impression du test: 2/09/2010	
Nombre total d'éclairages installés: 8	Personne de contact: Installateur (CE+T technics)
Nombre d'éclairages défectueux: 2	Installateur des éclairages
	Tel: +32 4 3404660 FAX: +32 4 340 46 61 E-Mail: info@cettechnics.be

Groupe	Ecl. N°	Modèle	Type	Flux (lm)	Résultat du test	éclairage Installé le	tube Rempl. le	batterie Rempl. le	Commentaire
Co1-	1	ELIOS 35NPAC	Non Permanent	310	En charge	7/06/2010	7/06/2010	7/06/2010	ELIOS C1.1 / Salle de réunion sortie de secours
Co1-	2	ELIOS 20PAC	Permanent	240	En charge	30/11/2009	30/11/2009	30/11/2009	Elios C1.2 / Salle réunion entrée
Co2-CET-	1	ELIOS 35NPAC	Non Permanent	310	Ne répond pas	30/11/2009	30/11/2009	30/11/2009	Elios C2.1 / Produits finis (porte principale)
Co2-CET-	2	ELIOS 35NPAC	Non Permanent	310	En charge	30/11/2009	17/11/2009	30/11/2009	Elios C2.2 / Produits finis (fond)
Co2-CET-	3	ELIOS 35NPAC	Non Permanent	310	En charge	30/11/2009	30/11/2009	30/11/2009	Elios C2.3 / Produits finis (porte latérale)
Co3-CET-	1	ELIOS 35PAC	Permanent	310	En charge	30/11/2009	30/11/2009	30/11/2009	Elios C3.1 / Entrée principale
Co3-CET-	2	ELIOS 35NPAC	Non Permanent	310	Erreur Tube	30/11/2009	30/11/2009	30/11/2009	Elios C3.2 / Magasin composants
Co3-CET-	3	ELIOS 35NPAC	Non Permanent	310	En charge	30/11/2009	30/11/2009	30/11/2009	Elios C3.3 / Entrepôt volet