

data has overrun error. The parity bit is included to ensure there is no enter symbol detection occurred in the data transmitted. The sites are identifiable with the help of a 3-bit address code, with 000 through 111 means SITE0 through SITE7.

Similarly after the slave address the next 3-bits are used to identify one of the eight devices. At idle the data line is pulled up, once it is pulled down the transmission started. Then, the appropriate data for specific command will be sent follows the format discussed above. The data is fed to the PLDC modem by appending the start bit, parity and the stop bit to the data. The corresponding bits of some of the commands are detailed using the interrupt capability of the controller; the start bit can be detected by the microcontroller of the slave devices. Once the start bit detected, the slave will test again the start bit at the 2/3 of the data pulse width to ensure the right timing on the data detection and to get rid of the bouncing effect of the line. If the start bit is detected successfully, the slave will read all the data transmitted and the parity bit referred to the data pulse width. The parity and the stop bit will be checked by the slave. If any one of them failed, all the data will be ignored. The experiment has been set up. The three phase system is controlled by switching on and off the three phase isolator.

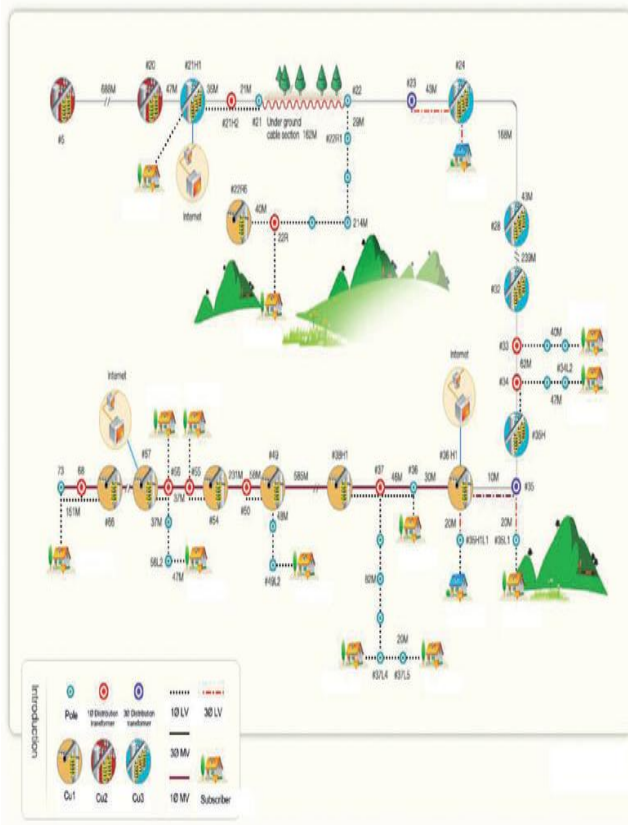


Figure 6: Deployment configuration of PLC Network in South Korea

6. Results and Conclusion

The system is designed to work as expected and has been tested to be showing good response in a noise free environment. The device identity codes sent down the line are properly received and identified by their respective slaves and devices. Also, the slaves act to result into appropriate

action on the devices connected to the slaves concerned. However, the circuit shows picking up noise in environment with loads such as exhaust fans, air conditioner.

References

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