



### Narrow-band DLC systems

**DLCs** are used in telecom networks to extend the subscriber services available at the Local Exchange ( here-after referred as **LE**) to remote places where the subscribers are located. As the name implies, it uses digital techniques to carry voice and data information of subscribers.

**Telecom Network expansion** is easily achieved by deploying **DLCs** which facilitate provisioning of new connections on demand. The system is very useful for providing **digital** as well as **analog** services without compromising on the quality and bandwidth requirements. With **V5.2 Interface** (a protocol defined by the **ITU-T**), the **DLC** acts as a **Remote Subscriber Unit** supporting concentration of Telecom traffic. The system includes all the resources like Power Plant, MDF, DDF etc., required for a remote exchange. These remote units can be of **Indoor** or **Outdoor** or **Wall-mount** types. These units can be installed in the colonies, commercial buildings, village clusters...etc and are connected to the main exchange through Optical Fiber cables.

#### CATEGORIES:

(01) **Type-1**: Integrated with interface to LE at the level of 2Mbps with **V5.2 interface**.

(02) **Type-2**: Universal with interface to LE at **2-Wire interface**

Typical architecture of the Digital Loop Carrier (**DLC**) on SDH **STM-1** Ring consists of network elements - a Central Office Terminal (**COT**) and a set of remote terminals called Access Terminals (**AT**) all interconnected on 2-fibre SDH STM-1 Optical Ring. The system is configured in a **RING topology** with **TWO aggregate optical ports** at each terminal. The **COT** which forms the hub located at **LE** end consists of **STM-1/4 Multiplexer** deployed in the Add-Drop mode. The **AT**, deployed at the remote-end wherever there are subscriber clusters, consists of **STM-1/4 De-multiplexer** in Add-Drop mode. There can be a max **15 ATs** in a **RING**. They drop the required bandwidth contained in the aggregate **STM-1/4** signal at each of the **ATs** and handle different types of user interfaces for connecting the subscriber equipment to the network. Each AT can provide a max of **480 PSTN** subscribers or combination of different subscriber interfaces.

The equipment is supplied with **Element Management System** software to execute all kinds of configuration, monitoring activities for individual RING and **Network Management System** software to monitor the total network of deployed DLCs and with remote management. Both **EMS** and **NMS** have extensive GUI and they are **SNMP** compliant.