Layout Command Control Executive Summary

Layout Command Control (LCC) is an accessory bus system that bridges between layout accessories, train traction systems and legacy systems. It is designed to run across numerous transports, including Ethernet, WiFi, CAN, and RF. It is also designed to umbrella legacy systems into a unified whole.

LCC is designed to allow manufacturers wide latitude to innovate, while having a solid base from which to build that ensures compatibility. This lets them access a larger market, while focusing on their area of expertise, and remaining compatible and connected to everyone's products. To this end, LCC includes a testing suite that not only allows manufacturers to self-check their compliance, but also allows modelers to assure themselves that their equipment is working and maintains compatibility.

Modelers do not need to throw out their legacy equipment, but can easily connect to LCC, and hence to other legacy systems, through smart-bridges – devices which know how to buffer and translate from one system to LCC and back. LCC has a very large address-space which can accommodate lots of systems with ease. Every item (node) has a pre-assigned unique identifier number which is used to address it. Because these are unique, there cannot be clashes between two nodes. Modular groups can come together without conflicts, and other features allow them to quickly configure their ad hoc layout.

LCC is well documented by the OpenLCB development team as a set of standard Protocols which generally follow the OSI layering scheme. These Standards documents form a complete and concise basis to build compliant nodes. In addition, the matching Technical Notes explain in greater detail both the intent and examples of the use of the Standards. Each pair of documents describes and teaches a specific protocol, and the protocols are designed to be internally extensible but also to form the basis of newer application protocols.

In summary, LCC forms a solid infrastructure that allows modelers to use the old, but use the new, and grow into the future.

Layers:

- Information: Glossary, CommonInfo, Unique and Event Identifiers
- Physical: CAN and TCP Physical Layer
- Link: CAN Frame Transfer and TCP Transfer
- Network/Transport: Message Network, Event, Datagram, and Stream Transport, and Simple Node Information,
- Session: Configuration Description Information and Memory Configuration