

# ANSI/CEA Standard

## Common Application Language Specification

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**CEA**<sup>®</sup>  
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# **CEA 600.81 (Formerly Titled EIA 600.81) CAL Specification**

## **1. Introduction**

This document describes the basic framework of CAL. It is intended as an introduction to CAL operation and syntax that stresses the object-oriented aspects of CAL. It is believed that the object-oriented methodology offers the best means of understanding the complex interaction between devices, controls, and controllers present in the CEBus<sup>®</sup> environment.

### **1.1. Definition of CAL**

CAL, the Common Application Language, is the language by which CEBus devices communicate. CAL was designed as a robust, general purpose command language not dedicated to any particular function within the Application Layer. It provides a language for controlling CEBus devices and allocating resources.

### **1.2. CAL and the Application Layer**

CAL is an element within the Application Layer. It provides services to the User Element of the Application process. These services include Resource Allocation and Control functions. CAL in turn uses the services provided by the Message Transfer Element of the Application Layer in order to communicate with other CEBus devices.

The CAL element also interfaces with Layer System Management. The portion of this interface which is currently specified involves Resource Allocation functions. In particular, a mechanism known as inheritance is used by CAL to allocate a resource to a remote Layer System Management.

## **2. CAL Functions**

CAL provides two main functions: Resource Allocation and Control. Requests for these services are received from both the User Element and Layer System Management. Using CAL syntax, CAL translates these requests into Application Layer Service Data Units (ASDUs) and passes them to the Message Transfer Element for delivery. The CAL element also receives and interprets incoming ASDUs.

### **2.1. Resource Allocation Function**

The Resource Allocation function within CAL is concerned with requesting, using, and releasing CEBus resources. These resources include, but are not limited to Unit individual addresses, Group addresses, House Codes, and data channels. The Node Control, Data Channel Receiver, and Data Channel Transmitter Objects are used to perform the Resource Allocation function.

#### **2.1.1. Address Control**

Allocation of addresses is a significant function of CAL. The Node Control Object of the Universal Context is responsible for management of the three types of addresses in the CEBus