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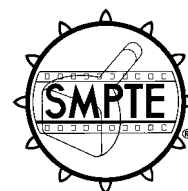
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# Control Message Architecture for Digital Control Interface



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## 1 General

### 1.1 Scope

This practice defines the architecture of the control message language used within a general-purpose communications channel of an interface system which transports data and control signals between equipment utilized in the production, post-production, and/or transmission of visual and aural information.

It is intended that the language described in this practice be utilized when constructing messages used as part of an overall system, allowing interconnection of programmable and nonprogrammable equipment as required to configure an operational system with a defined function, and to allow rapid reconfiguration of a system to provide more than one defined function utilizing a given group of equipment.

**1.1.1** Control message language is composed of vocabulary, syntax, and semantics expressed in terms of tokens, rules, and actions, respectively.

**1.1.2** The primary intent of this practice is to define the architecture of the messages to be transmitted within the supervisory protocol of the communications channel for the purpose of controlling equipment by external means. Syntax is the set of rules which shall be applied to the vocabulary (tokens) to construct control messages. (The content of the vocabulary and its semantics, being specific to the type of generic equipment, is defined elsewhere.) This practice, or sections thereof, may be applied to the interconnection of elements within an item of equipment.

### 1.2 Definitions

For the purpose of this practice, the following definitions shall apply:

**virtual machine:** A logical device consisting of a single device or a combination of devices that responds in essence or effect as a generic type of equipment; e.g., VTR, video switcher, telecine, etc.

**virtual circuit:** A transparent, logical communications connection between virtual machines. The communications path, in reality, passes through other levels and is propagated over a physical medium.

## 2 Message structure

### 2.1 Architecture

The message architecture described in this practice is prepared broadly on the principals of communications levels. This architecture follows a logical structure and is defined in terms of a virtual machine. Messages are of variable length according to function. Complex functions may be divided into basic functions, transmitted as a sequence of shorter messages for execution in the virtual machine.

### 2.2 Virtual machine

All messages pertaining to generic types of equipment shall be defined in terms of the virtual machine. Utilization of the virtual machine concept in defining messages provides a message architecture that is independent of machine-specific characteristics.