

# **ECMA-96, Syntax of Graphical Data for Multiple-Workstation Interface (GDS)**

## **SCOPE**

This document specifies the set of functions to be used in graphics equipment and their encoding in a 7-bit or 8-bit environment. In addition the code tables are structured in accordance with ECMA-6.

The intention of this document is to facilitate data interchange, not to standardize equipment. The specification of the concepts are included only to delimit the field of application. The definitions of the primitives may not be applicable to a physical device which does not conform to the specified concepts.

The graphics primitives contained in this document are derived from GKS. The set of primitives necessary in a physical device depends on the required GKS level.

Figure 1 shows the model describing the GKS environment and its interfaces. The Graphics application in the field of Computer Aided Engineering (CAE), Computer Aided Design (CAD), Business Graphics, Telematic services etc. can be written in high level languages for which specific bindings with GKS are in the process of standardization.

A graphics application program, using GKS functions, communicates with the physical device through the multiple workstation interface. Above the multiple workstation interface are the GKS normalization transformation which convert world coordinates to normalized device coordinates. Below the multiple workstation interface are the GKS workstations connected to and driven by GKS. The workstations are mapped to the physical device and the normalized device coordinates are transformed to device coordinates by the workstation transformations.

Non-existent capabilities of the physical device must be simulated by using emulation software.