

## PANEL

## TECHNICAL IMPLICATIONS OF PROPOSED GRAPHICS STANDARDS

CHAIR: David Straayer, Tektronix, Inc.

PANELISTS: Peter Bono, Athena Systems  
 Richard Ehlers, Evans & Sutherland  
 Gunter Enderle, Karlsruhe Nuclear Research  
 Theodore Reed, Los Alamos National Laboratory  
 David Shuey, McDonnell Douglas Automation  
 Mark Skall, National Bureau of Standards  
 Elaine Sonderegger, SIGGRAPH  
 Tom Wright, ISSCO

## CHAIRMAN'S INTRODUCTION:

This panel session is intended to present recent technical developments in the efforts to standardize computer graphics.

Several alternative approaches to 3-D standards will be presented and contrasted. The Virtual Device Metafile will be presented, as well as a proposed binding of the GKS standard to Fortran.

Presentations will be made by the following individuals:

Dr. Peter Bono is the chairman of the ANSI X3H3 technical committee developing standards for Computer Graphics Programming Languages, and will present the current status of the effort to adopt 2-D GKS as an International Standard and as an American National Standard.

Tom Wright will be available to respond to questions about the Programmer's Minimal Interface to Graphics (PMIG) proposal, and its current status as a new output level of the draft proposed American National Standard (dpANS) GKS.

Mark Skall will present a proposed binding of GKS to the Fortran Language. Mr. Skall will also discuss progress in the field of formal specification of graphics standards and developments in the establishment of conformance/certification procedures for implementations of GKS.

Theodore Reed will present the technical content of the Virtual Device Metafile (VDM) draft proposed American National Standard. Discussed will be the relationship of the VDM to GKS and to the yet to be proposed Virtual Device Interface. Specific functionality of the VDM will be discussed as will specific bindings of that functionality as a character set extension and as a binary format.

David Shuey will present an overview of the Programmer's Hierarchical Interface to Graphics (PHIGS) proposal. The PHIGS proposal is intended to support hierarchical structuring of graphics data, in contrast to the Core System and GKS proposals. This type of structure addresses highly interactive graphics applications which need to modify the presentation and the relationships within graphics data.

Richard Ehlers will present the attribute model of the PHIGS proposal and explore the relationship of attribute model to structured graphics data bases. Also, Mr. Ehlers will discuss the viewing and transformation implications of structured graphics data bases using examples.

Gunter Enderle is a member of the West German delegation to the International Standards Organization (ISO) Working Group on Computer Graphics. Herr Enderle will be discussing ISO proposals for the extension of the GKS standard from 2-D to 3-D functionality. Several such proposals have been made, including one by DIN (the official standards making body of the German Federal Republic) and a Norwegian proposal called IDIGS.

Elaine Sonderegger was a member of the ACM SIGGRAPH Graphics Standards Planning Committee, and is the ACM SIGGRAPH representative to ANSI X3H3. Ms. Sonderegger will contrast the 3-D functionality of the Core System, IDIGS, DIN proposed 3-D extensions, and PHIGS.