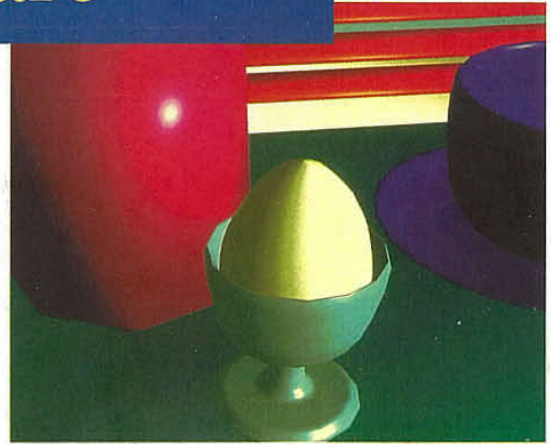


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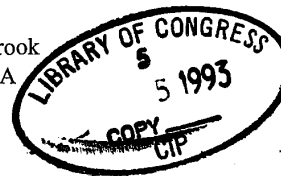
Focus on Computer Graphics

Edited by W. T. Hewitt, R. Gnatz, and W. Hansmann
for EUROGRAPHICS –
The European Association for Computer Graphics
P. O. Box 16, CH-1288 Aire-la-Ville, Switzerland

T385
.R458
1993

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Coverpicture: H. Selzer, Fraunhofer-Institut
für Graphische Datenverarbeitung (see also contribution p. 37)

ISBN 3-540-56787-9 Springer-Verlag Berlin Heidelberg New York
ISBN 0-387-56787-9 Springer-Verlag New York Berlin Heidelberg

93-27514

Library of Congress Cataloging-in-Publication Data
Rendering, visualization and rasterization hardware / A. Kaufman, (ed.). p. cm. – (Focus on computer graphics) "Comprehensive record of the contributions to the Sixth Eurographics Workshop on Graphics Hardware held on 1-2 September, 1991 in Vienna, Austria, in conjunction with the Eurographics '91 Conference" – Pref. Includes bibliographical references and index. ISBN 0-387-56787-9 (U.S.) 1. Computer graphics–Congresses. 2. Computer input-output equipment–Congresses. I. Kaufman, Arie. II. Eurographics Workshop on Graphics Hardware (6th: 1991: Vienna, Austria). III. EUROGRAPHICS (1991: Vienna, Austria). IV. Series. T385.R458 1993 621.39'9–dc20

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Printed in Germany

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Typesetting: Camera ready copy by authors/editors
45/3140 – 5 4 3 2 1 0 – Printed on acid-free paper

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Preface

The material in this book represents a comprehensive record of the contributions to the Sixth Eurographics Workshop on Graphics Hardware held on 1-2 September 1991 in Vienna, Austria, in conjunction with the Eurographics '91 Conference. The Sixth Eurographics Workshop on Graphics Hardware is the sixth in an established series of workshops. These workshops have been an excellent forum for an exchange of information and ideas on the latest development and work-in-progress report in the field of graphics hardware.

The papers in this book are revised versions of those presented at the Workshop. The papers were revised based on the reviewers comments and the discussions during the Workshop.

The book has five parts and a keynote paper. The keynote paper is by Kurt Akeley, Vice President and Chief Engineer of Silicon Graphics, who delivered the keynote address on "Issues and Directions for Graphics Hardware Accelerators" at the Workshop. The first part of the book concerns graphics hardware design. The papers in this part discuss simulation and silicon compilers for such a design. The second part contains two papers on graphics systems: a high-performance graphics system and the I.M.O.G.E.N.E. machine. The third part focuses on volume (voxel-based) machines. The papers in this part describe two devices to facilitate transformations of volumes. The fourth part of this book includes papers on rasterization systems, including character rasterization and scan-conversion of triangular faces. The papers in the last part of the book focus on rendering machines. They include a programmable rendering engine, primitive shaders, and radiosity implementation on a parallel architecture.

The book is a testimony that there are flourishing activities in the development of novel architectural and algorithmic ideas in graphics hardware. Specifically, the impact of VLSI technology, newly developed algorithms and approaches, and the increasing diversity of application encourage new hardware solutions and keep the graphics hardware topic a viable research and development area.

I am very grateful for the amount of time and energy put into the refereeing process and the planning of the Workshop by the members of the Program Committee. In addition, I would like to thank the Eurographics Association for supporting the Workshop series; Max Mehl from FhG-AGD, Darmstadt, for his effort in organizing the Workshop; the Technical University of Vienna for hosting the event; Gerhard Hiess from TU Vienna for local organization; and my students Cláudio Silva and Juliana Silva for preparing the book for publication. Last, but not least, my thanks go to the authors of the papers for the careful preparation of their manuscript.

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