国外计算机科学教材系列

计算机图形学

（第三版）

Computer Graphics with OpenGL, Third Edition
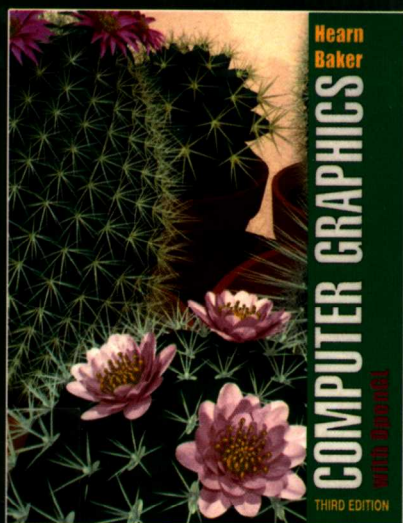
英文版

[美] Donald Hearn
M. Pauline Baker 著

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Computer Graphics with OpenGL, Third Edition

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内 容 简 介

本书是一本内容丰富、取材新颖的计算机图形学著作，并在其前一版的基础上进行了全面扩充，增加了许多新的内容，覆盖了近年来计算机图形学的最新发展和成就。全书层次分明、重点突出，并附有OpenGL编程实例以及各种效果图，是一本难得的优秀教材。

本书共分为16章，全面系统地讲解了计算机图形学的基本概念和相关技术。作者首先对计算机图形学进行综述；然后讲解了二维图形的对象表示、算法及应用，三维图形的相关技术、建模和变换等；接着介绍了光照模型、颜色模型和动画技术。本书还新增了有关层次建模和图形文件格式的介绍，最后的附录给出了计算机图形学中用到的基本数学概念。
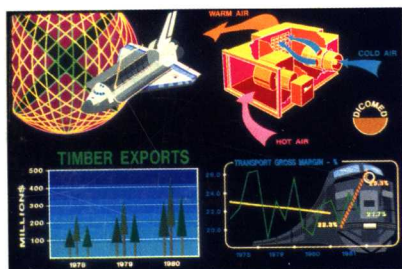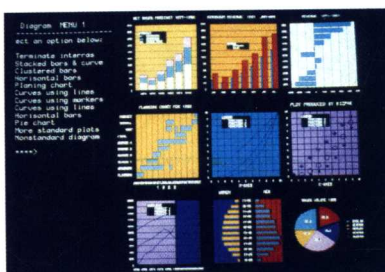
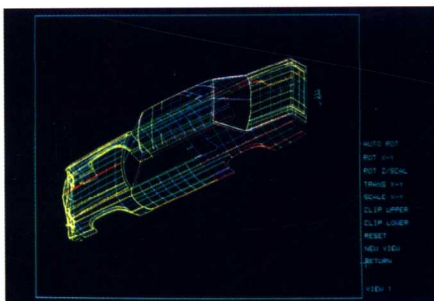本书可作为相关专业本科生和研究生的教材或参考书，也可作为计算机图形学技术人员的参考资料。
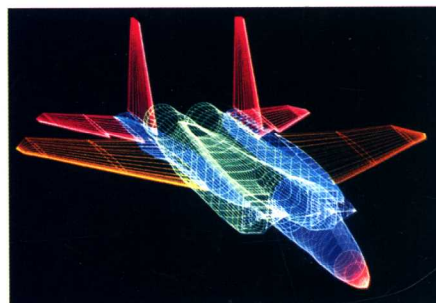
FIGURE 1-1

FIGURE 1-2

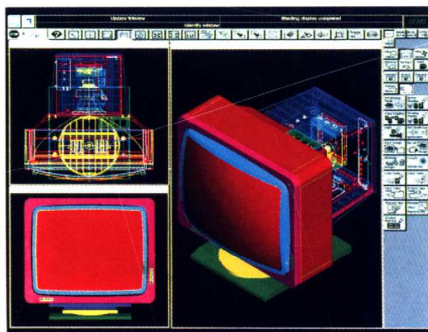FIGURE 1-4
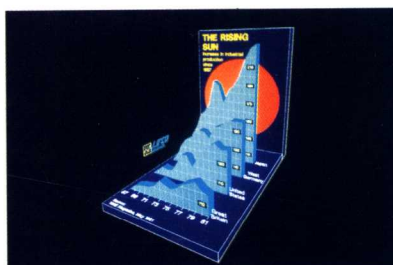
FIGURE 1-8

(a)

(b)

FIGURE 1-9

(a)
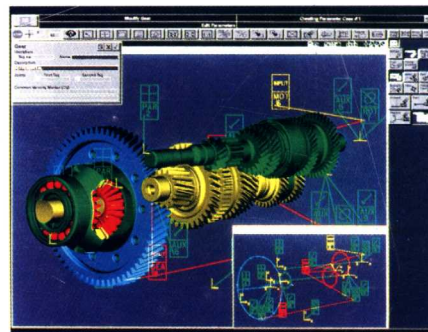
(b)
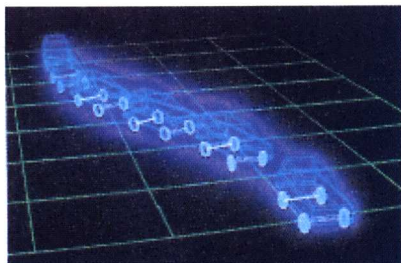
FIGURE 1-11

(a)

(b)

FIGURE 1-12

FIGURE 1-13
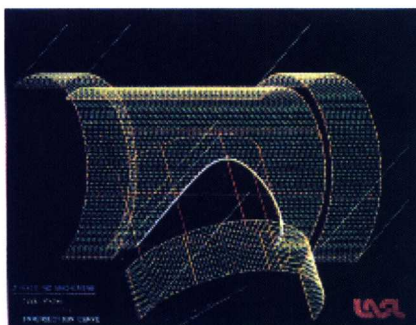

FIGURE 1-14

FIGURE 1-16

(a)

(b)
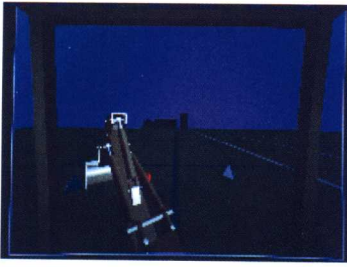

FIGURE 1-17

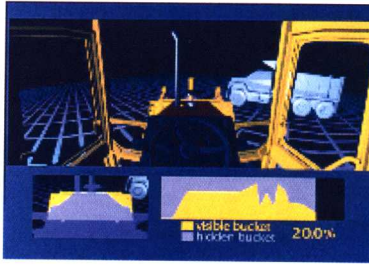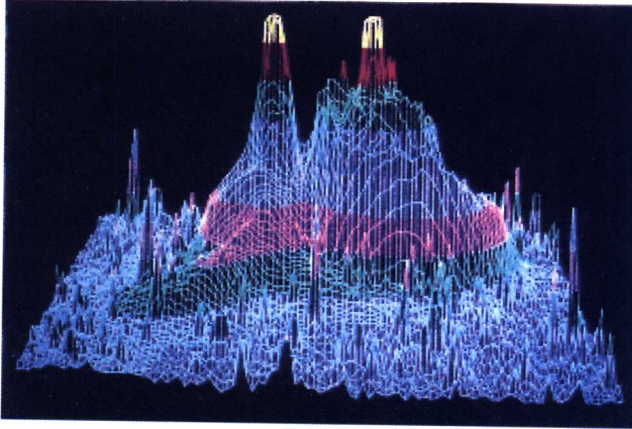**FIGURE 1-18**

FIGURE 1-20

FIGURE 1-21

FIGURE 1-22

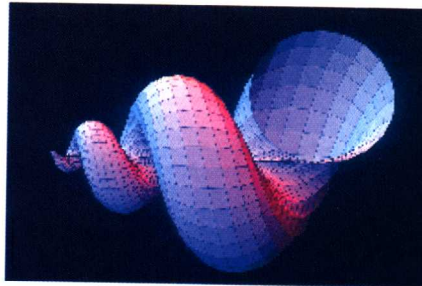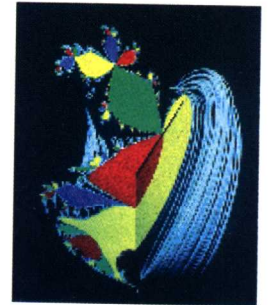FIGURE 1-23

FIGURE 1-24

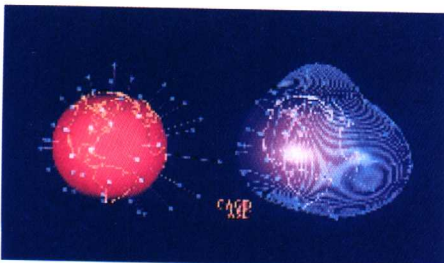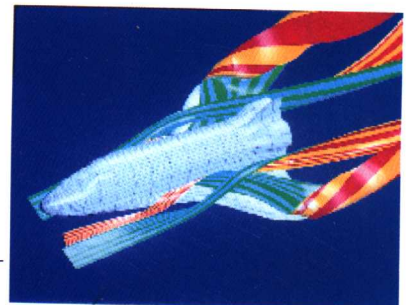FIGURE 1-27

FIGURE 1-25

FIGURE 1-26

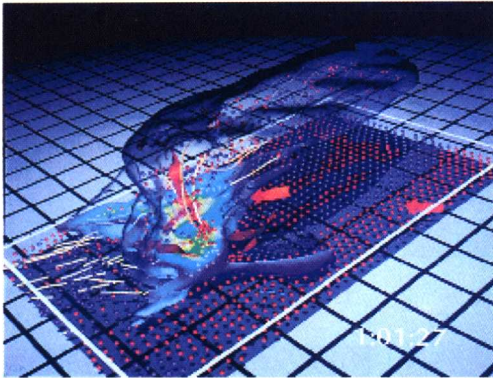FIGURE 1-28

FIGURE 1-29

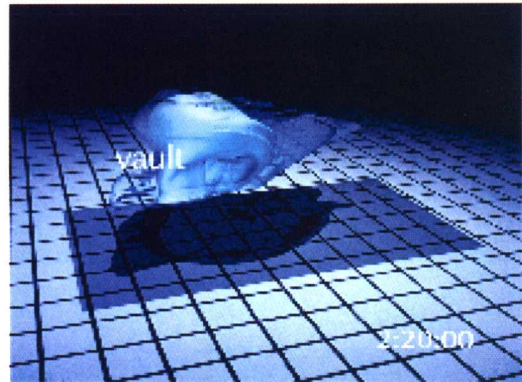FIGURE 1-30

FIGURE 1-31
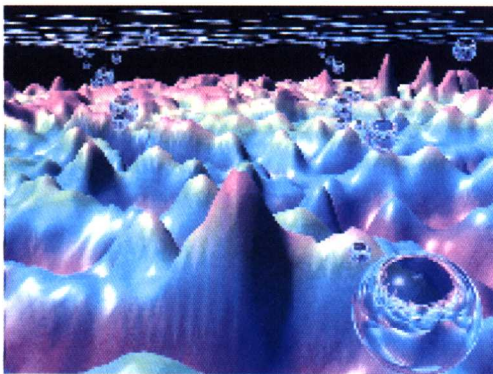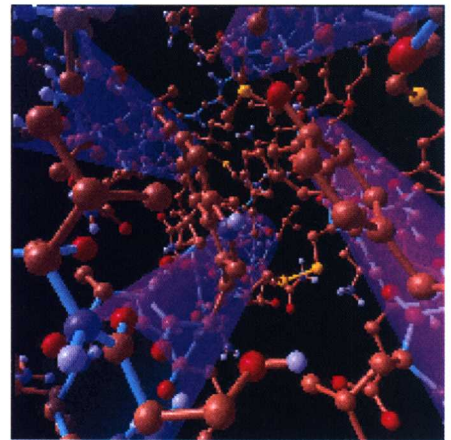

FIGURE 1-33

FIGURE 1-35
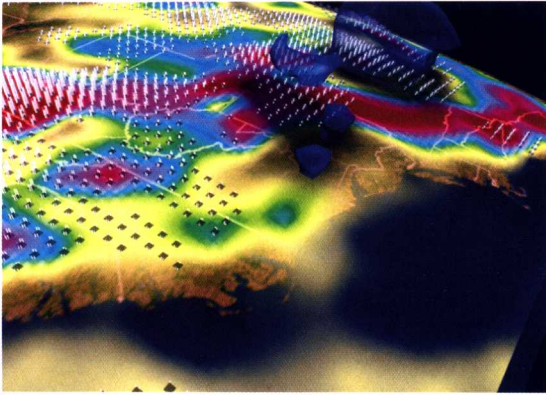

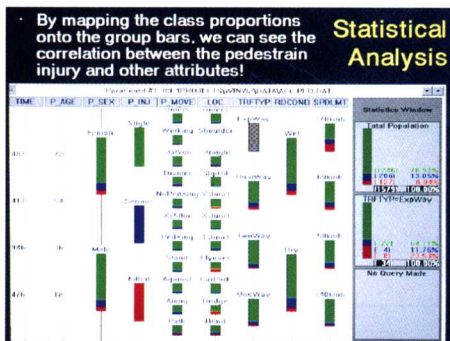FIGURE 1-37

FIGURE 1-38
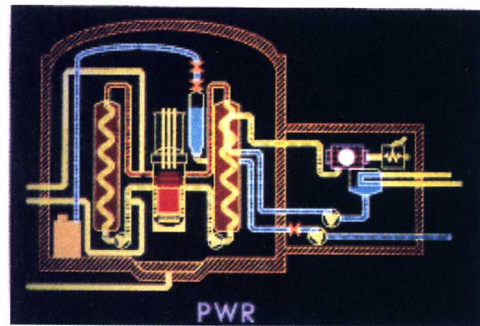

FIGURE 1-36

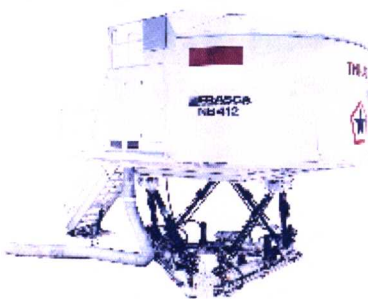FIGURE 1-39
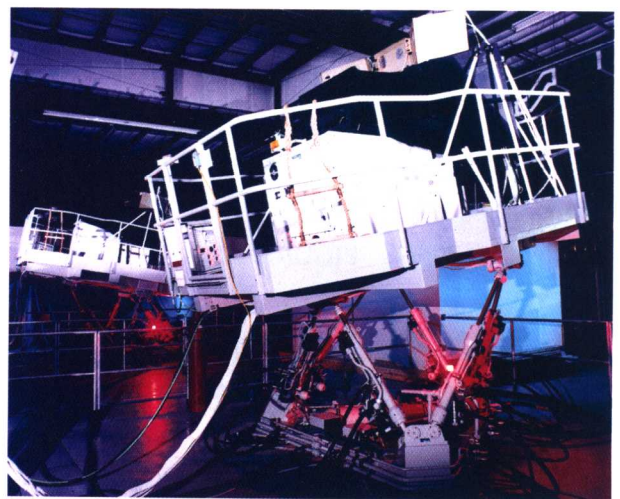

FIGURE 1-40

FIGURE 1-42

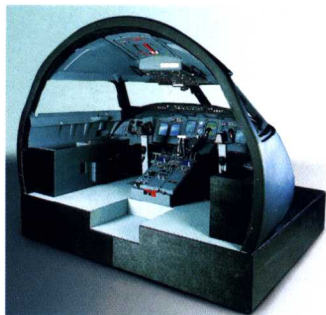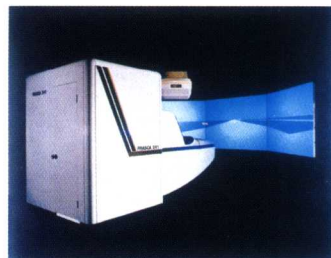FIGURE 1-43

FIGURE 1-44

FIGURE 1-45

(a)

(b)

(c)

FIGURE 1-46

(a)

(b)

FIGURE 1-51

(a)

(b)

FIGURE 1-53

FIGURE 1-55

FIGURE 1-56

FIGURE 1-57

FIGURE 1-65

(a)

(b)

(c)

FIGURE 1-63

(a)

(b)

FIGURE 1-67
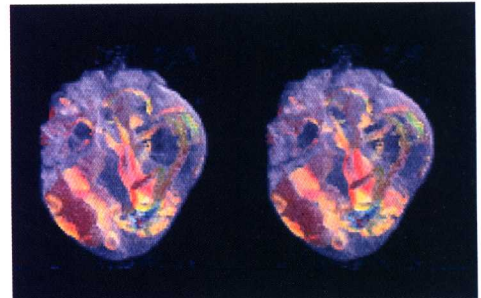

FIGURE 1-68
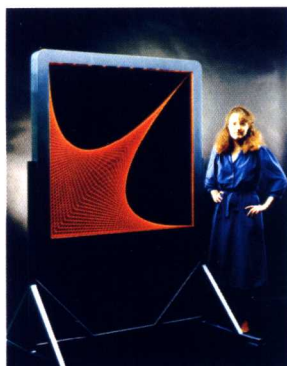

FIGURE 1-71

FIGURE 2-1

FIGURE 2-12

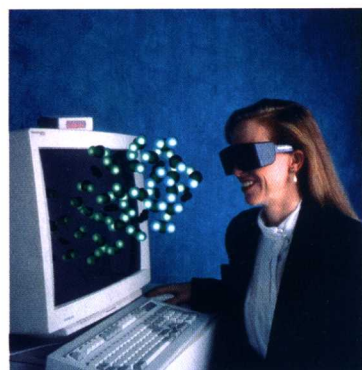
FIGURE 2-18

(a)

(b)

FIGURE 2-19

FIGURE 2-22

FIGURE 2-33

FIGURE 2-34
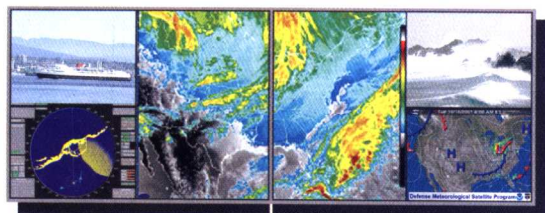

FIGURE 2-35

FIGURE 2-36

FIGURE 2-37

FIGURE 2-38

FIGURE 2-39

FIGURE 2-48

FIGURE 2-49

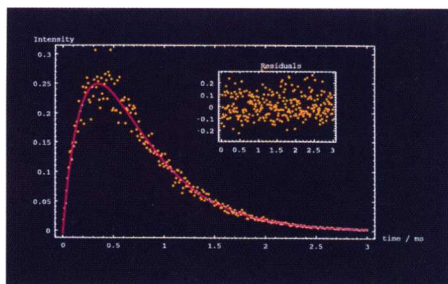

FIGURE 2-52

(a)

(b)

FIGURE 2-53

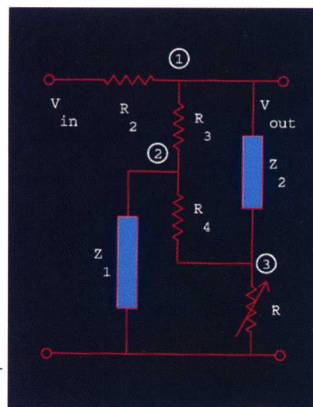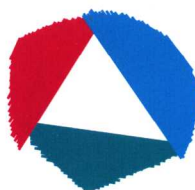FIGURE 2-54

FIGURE 3-65
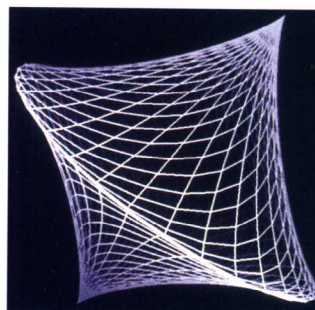
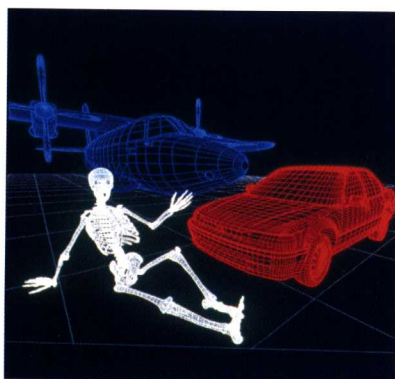

FIGURE 3-66

FIGURE 4-15

FIGURE 4-30

FIGURE 7-6
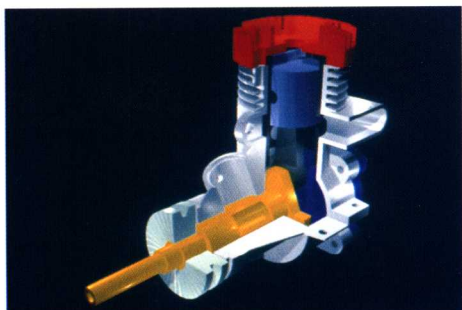

FIGURE 6-1

FIGURE 7-2

FIGURE 7-4
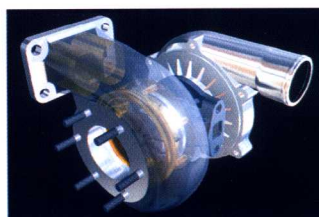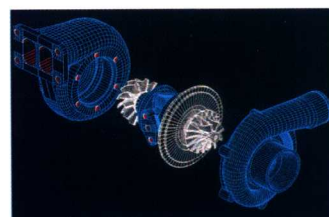
FIGURE 7-7

FIGURE 7-9

(a)

(b)

(c)

(d)

FIGURE 7-8

7 cameras

"eye"

FIGURE 7-18

FIGURE 7-21

FIGURE 8-13

TOP   SURFACE
SIDE   POLYGON NET
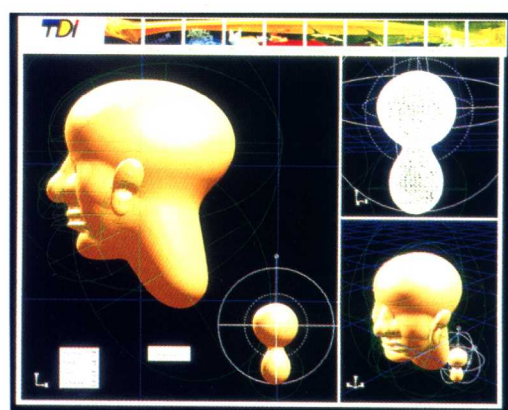FRONT   NET & SURFACE
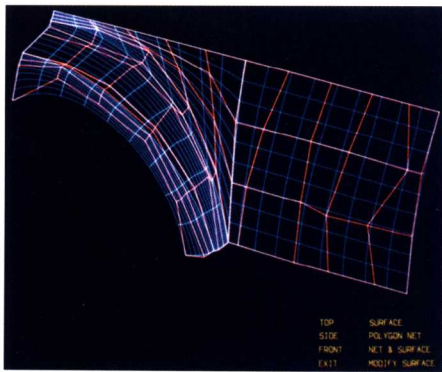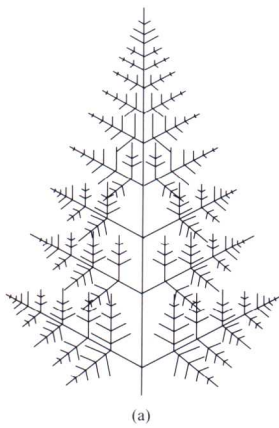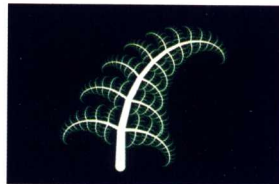EXIT   MODIFY SURFACE

FIGURE 8-16

© SOFTIMAGE
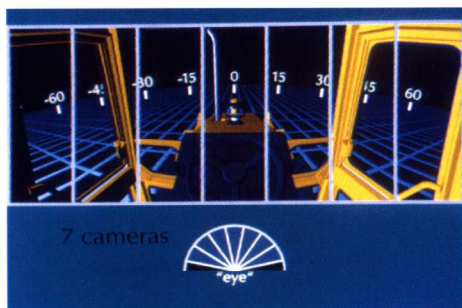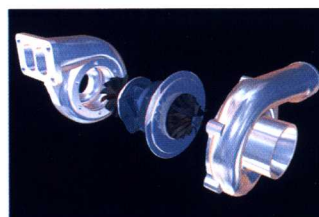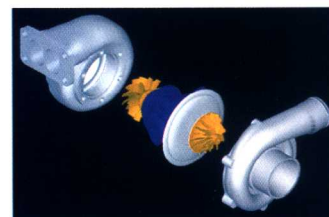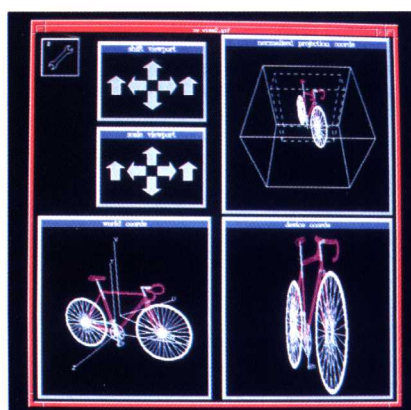
FIGURE 8-46
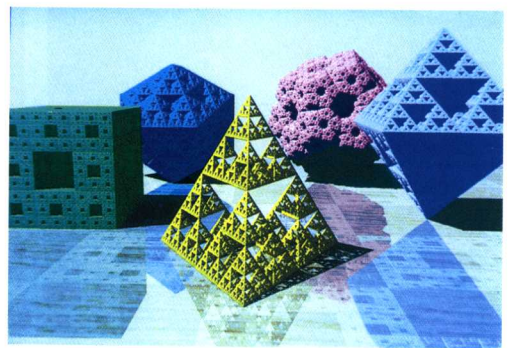

(a)

(b)

FIGURE 8-76
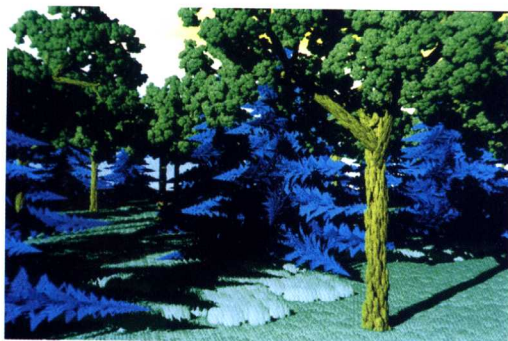

FIGURE 8-78

FIGURE 8-80

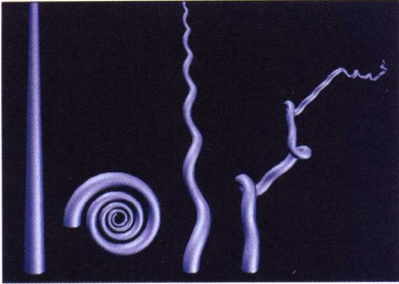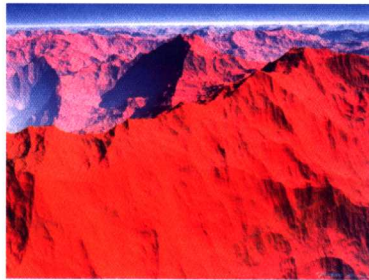FIGURE 8-81

FIGURE 8-82

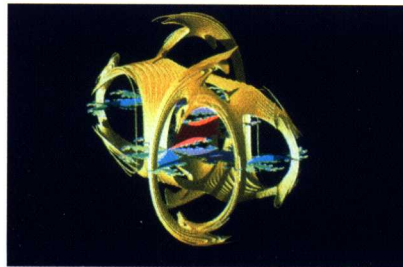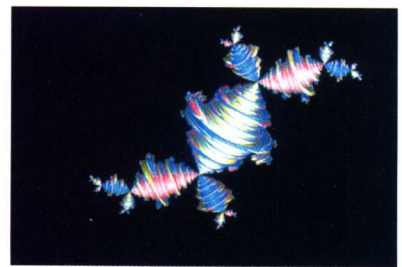FIGURE 8-83

FIGURE 8-84

FIGURE 8-86

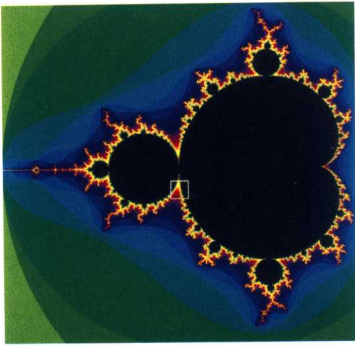FIGURE 8-88
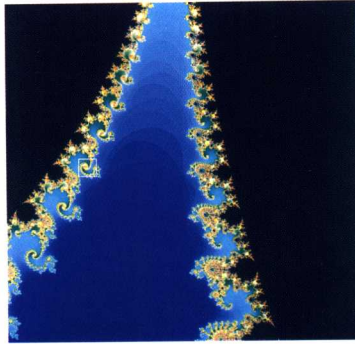

(a)

(b)

(c)

FIGURE 8-87

FIGURE 8-95

(a)

(b)
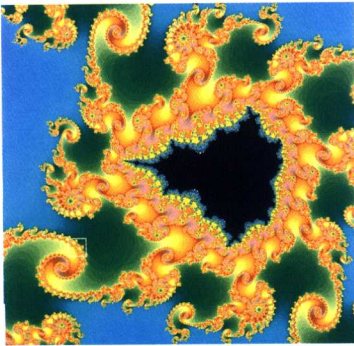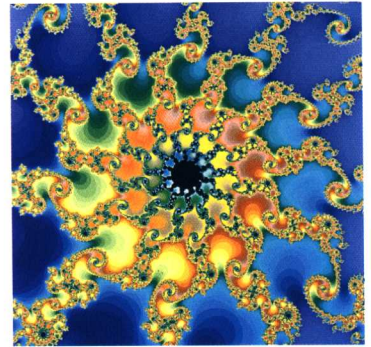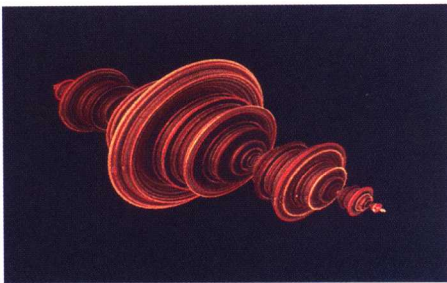
FIGURE 8-103

(a)

(b)

(c)

(d)

(e)

(f)

FIGURE 8-102

FIGURE 8-104
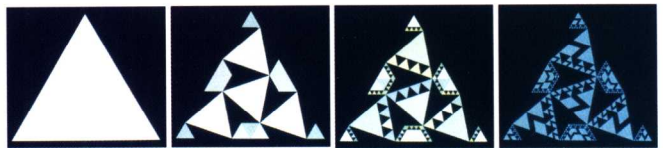

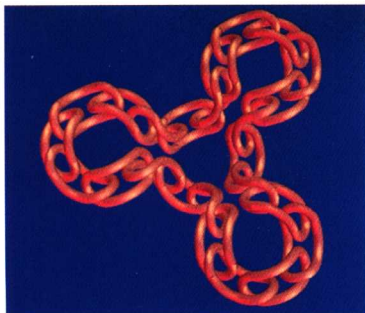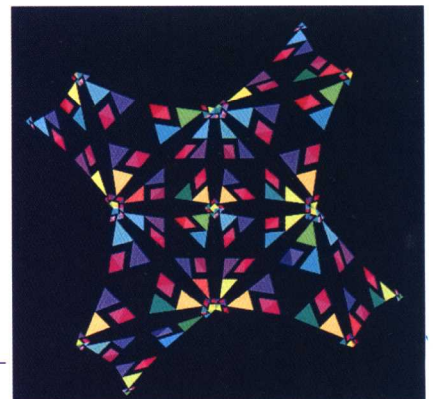(a)   (b)   (c)   (d)

FIGURE 8-108

FIGURE 8-110

FIGURE 8-109