Graphics Programming With GDI+ & DirectX
Synopsis

Providing a look ahead at some of the most promising innovations in graphics technologies, this guide covers the GDI+ graphical library, the .NET Framework platform, C#, and the DirectX library. Theoretical aspects of graphics, algorithms for solving common problems, and examples of their practical implementation are covered. The support of popular graphic file formats, such as BMP, GIF, TIFF, JPEG, EXI, PNG, ICO, WMF, and EMF, as well as bitmap redrawing with the application of the external alpha channel are discussed. Resizing, stretching, distorting, and rotating bitmaps are addressed in detail, as is gradient filling and support for transparency.

Book Information

Paperback: 450 pages
Publisher: A-List Publishing (January 1, 2005)
Language: English
ISBN-10: 1931769397
Product Dimensions: 9.3 x 7.4 x 0.8 inches
Shipping Weight: 1.4 pounds
Average Customer Review: 3.0 out of 5 stars Â– See all reviews Â– (2 customer reviews)

Customer Reviews

My thinking is that this is a pretty good book on graphic programming. Two subject areas are distinguished in this book: the one addressing GDI+ utilization issues and the other describing DirectX usage. Generally speaking, these subjects are not tightly coupled, so it would have been better to have separate books on each graphic library (perhaps it might be already in authors’ plans). The first part describing GDI+ utilization covers the following topics: Library review: class hierarchy, usage of GDI+ on various platforms, usage of GDI+ when programming on API-functions, etc; Vector graphic programming: brushes, feathers, etc, primitives, Bezier splines, use of metafiles, 3D-graphics (for example, for drawing of various surfaces); Raster graphic programming: loading and saving of images in various formats, transparency usage, image analysis with the use of histograms, diversified transformations (for example, brightness, contrast, blur and sharpness filters,
trace contours and creation of effects like emboss, development of multithread applications with the MDI interface. The second part is running on DirectX, it describes both use of unmanaged code (i.e. C++ is utilized as a programming language) and managed one (C# is utilized). Examples show how DirectX initialization is performed, what is transformation matrix and how it is used, the ways to use primitives, vertex buffers, textures and meshes, how to use various effects (for example, fog) etc. Besides, several pages can be considered an introduction to pixel and vertex shaders. The appendix describes mathematical basics of spline building, plane and 3D transformations. A CD is provided with the book.

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