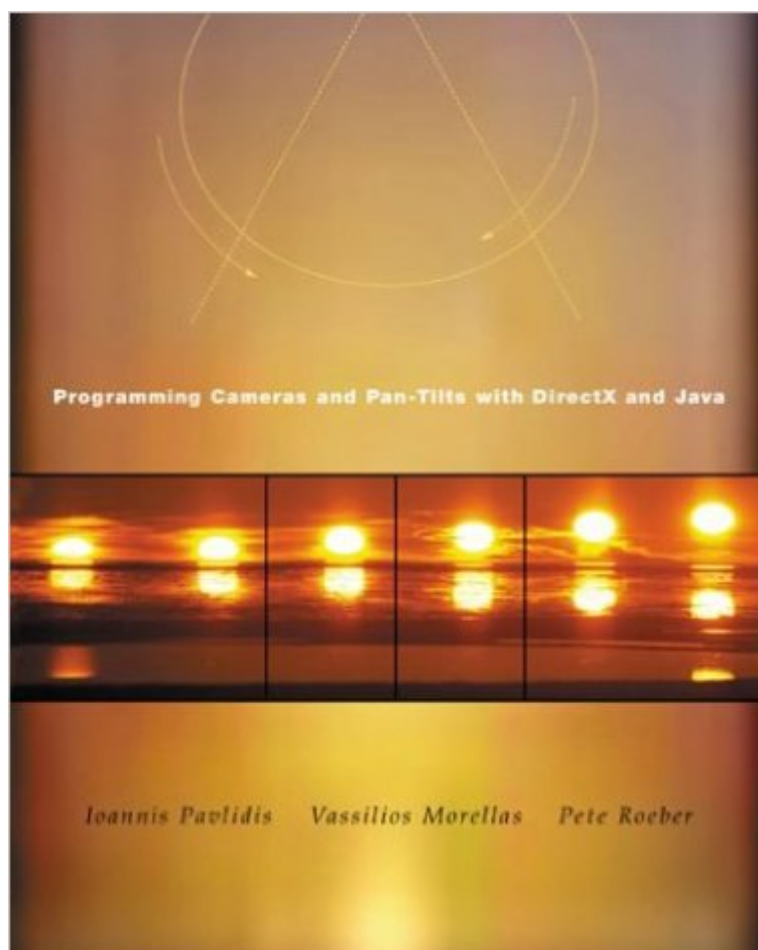


The book was found

# Programming Cameras And Pan-Tilts: With DirectX And Java



## Synopsis

The rapid rise of PC-based cameras has led to the enormous growth of software applications that use real-time video programming. These applications include video conferencing, computer games, scientific research, automated security and surveillance, industrial inspection, and Web cameras. Previously, developers had to search through manufacturer manuals or research papers in computer vision or image processing to learn how to program devices for these applications. *Programming Cameras and Pan-Tilts with DirectX and Java* is the first book to offer practical tools and techniques for those struggling to gain an in-depth understanding of programming computer vision applications with live camera streams and pan-tilt devices. It shows how to build DirectShow filters from scratch and introduces computer vision concepts as needed to understand the code. Special emphasis is devoted to DirectShow programming and popular computer vision applications such as segmentation and tracking. \*Shows step-by-step how to program cameras for a variety of applications in both Visual C++ .NET and the Java Media Framework (JMF). \*Describes programming methods proven in industrial and research settings that can be used with any camera that connects to a PC through a DirectShow-compliant frame grabber. \*Provides easy-to-understand explanations of the underlying concepts of the code examples suitable for those studying computer vision, image processing, or multimedia. \*Includes a CD-ROM with all the source code from the book and a companion Web site with additional code and application examples.

## Book Information

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## Customer Reviews

I am surprised that this little book was largely ignored during the brief time it was in print. It is lacking as a tutorial, but it is great if you are interested in combining some interesting video and motion algorithms with DirectX and Java Media Framework to create a working application. Chapter one is just an introduction to the components that make up a video application. It is very general and therefore not too useful. Chapters two and three are about DirectShow and how to expand it if necessary. These chapters are also very general and there are better books on the subject. Chapter four is where the interesting part of the book begins. The authors implement a change detection filter in DirectShow. The code is commented well enough with the algorithm clearly exposed so that you could implement it in any other language. I tried it out myself in Java and found that the algorithm worked quite well. Chapter five extends the simple change detection filter into a full blown security application with plenty of details on the controls needed, and was a very interesting read. Chapter six is about using DirectShow to interface to a pan-tilt camera. I read through it and found it interesting, but I did not implement anything shown there. Chapter seven is a very good chapter on object tracking using the mean-shift algorithm. I translated this code into Java and the algorithm did work as advertised. It is very hard to find readable discussions, much less working implementations, of object tracking algorithms, and this chapter has both. There are plenty of equations shown to explain what is going on and why the algorithm works.

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