

Acknowledgments

Without the generous cooperation of many people in various settings, including police departments and universities, the variety of examples and particularly illustrations presented in this guide would not have been possible. Some individuals who should have been acknowledged below may have been inadvertently omitted, and I apologize if that is the case. Among those who must be singled out for special recognition are the following (in alphabetical order):

Al Ball, Office of Community Oriented Policing Services (COPS) Regional Institute, Cincinnati, Ohio; Rachel Boba, Tempe Police Department, Tempe, Arizona; Chris Bruce, Cambridge Police Department, Cambridge, Massachusetts; Jim Bueermann, Redlands Police Department, Redlands, California; Philip Canter, Baltimore County Police Department, Towson, Maryland; Peter Dana, University of Texas, Austin, Texas; Wilpen Gorr, Heinz School, Carnegie Mellon University, Pittsburgh, Pennsylvania; Elizabeth Groff, Crime Mapping Research Center, National Institute of Justice, Washington, D.C.; Hal Holtzman, U.S. Department of Housing and Urban Development, Washington, D.C.; James LeBeau, Southern Illinois University, Carbondale, Illinois; Suresh K. Lodha, University of California, Santa Cruz, California; Mark Mattson, Temple

University, Philadelphia, Pennsylvania; Tom McEwen, Institute for Law and Justice, Alexandria, Virginia; Phillip G. McGuire, New York City Police Department, New York, New York; Sara McLafferty, Hunter College, New York, New York; Robert Moland, St. Petersburg Police Department, St. Petersburg, Florida; Tracy Molfino, Salinas Police Department, Salinas, California; Lew Nelson, Environmental Systems Research Institute, Inc., Redlands, California; Mike Neumann, Cincinnati Police Department, Cincinnati, Ohio; Andreas Olligschlaeger, Carnegie Mellon University, Pittsburgh, Pennsylvania; George Rengert, Temple University, Philadelphia, Pennsylvania; D. Kim Rossmo, Vancouver Police Department, Vancouver, British Columbia, Canada; Mark Stallo, Dallas Police Department, Dallas, Texas; Gerry Tallman, Overland Park Police Department, Overland Park, Kansas; Deb Thomas, University of South Carolina, Columbia, South Carolina; Arvind Verma, Indiana University, Bloomington, Indiana; Julie Wartell, Institute for Law and Justice, Alexandria, Virginia; John Werner, Mesa Police Department, Mesa, Arizona; Susan Wernicke, Overland Park Police Department, Overland Park, Kansas; Doug Williamson, Center for Applied Studies of the Environment (CAPSE), City University of New York, New York, New York.



Acknowledgments

I am particularly grateful to Nancy La Vigne, director of the National Institute of Justice (NIJ) Crime Mapping Research Center, who facilitated this project. Several reviewers, anonymous and otherwise, provided invaluable insight that has been incorporated. I am also grateful to my colleague Tom Rabenhorst, former cartographic

editor of *Annals of the Association of American Geographers*, who edited the maps.

Ultimately, all these efforts to spread the blame are in vain, and the author accepts full responsibility for errors, omissions, and misinterpretations.



Foreword

In 1997, when the National Institute of Justice (NIJ) was planning to create its Crime Mapping Research Center (CMRC), we convened a 2-day strategic planning meeting to seek advice on the Center's goals, direction, and mission. Before the meeting, we had assumed that many agencies were already using mapping and that NIJ's goal would be to encourage the field to move beyond descriptive mapping (e.g., pin maps) toward analytic mapping. The meeting helped us recognize that another goal must be to assist the large number of agencies that are not using mapping.

Keith Harries, who received one of the first grants from CMRC, has prepared this comprehensive guide for agencies that are in the early stages of using geographic information systems (GIS). His words are directed to law enforcement professionals who have a little knowledge about GIS and want to learn more about its benefits and limitations.

He has collected more than 110 maps to illustrate how GIS is used. These pictures express the truth of the phrase "one picture is worth a thousand words."

Dr. Harries' guide is not designed to stand alone. Law enforcement agencies will need other curriculum materials as well—especially software manuals—but it will be a starting place. Additional materials and links to other sources of information can be found at CMRC's World Wide Web site (<http://www.ojp.usdoj.gov/cmrc>). As a clearinghouse of information about crime mapping, CMRC also sponsors a list-serv (listproc@aspensys.com), which has more than 640 subscribers, and an annual conference, which draws more than 700 attendees.

Today about 13 percent of law enforcement agencies are using GIS regularly to analyze their crime problems, and we are certain to see this number increase significantly as more and more agencies begin using computerized crime mapping to identify and solve their crime problems. We hope this guide will help them get started. For agencies that are already using crime mapping technology, we hope this guide will spark ideas about new ways to use it.

Jeremy Travis

Director

National Institute of Justice



Preface

This guide introduces the science of crime mapping to police officers, crime analysts, and other people interested in visualizing crime data through the medium of maps. Presumably most readers will be working in law enforcement agencies, broadly interpreted to include courts, corrections, the military police, and Federal agencies such as the FBI, U.S. Bureau of Alcohol, Tobacco and Firearms, National Park Service, U.S. Customs Service, and U.S. Secret Service, as well as police departments. The material is designed primarily for those who know little or nothing about mapping crime and who are motivated to learn more.

This is *not* a guide to software. Nowhere is there more than a word or two on how to do anything technical involving a computer. A purely technical guide would quickly be out of date, and a guide that served one set of software devotees would not serve others. Technical guidance is best sought from the manuals and interest groups specific to each software package.

What *will* be found here is a broad approach addressing the kinds of questions crime mapping can answer and how,

in general terms, it can answer them. Caveats are given from time to time, notably the caution against uncritically accepting all the default settings that crime mapping software so conveniently provides.

Most readers will not read this guide from cover to cover. Some will concentrate on application-oriented material. Others will have an interest in the history of crime mapping, realizing that where we have been can help us figure out where we are going.

The presentation employed in this guide leans heavily on examples. Indeed, the guide is made up of examples with the words draped around them. Crime analysts and researchers from across the United States and from Canada and the United Kingdom have contributed. Without their help, this guide would be an empty shell. I am extremely grateful to all who donated their work so graciously, and a partial listing of these kind souls is found in the acknowledgments.

Keith Harries

