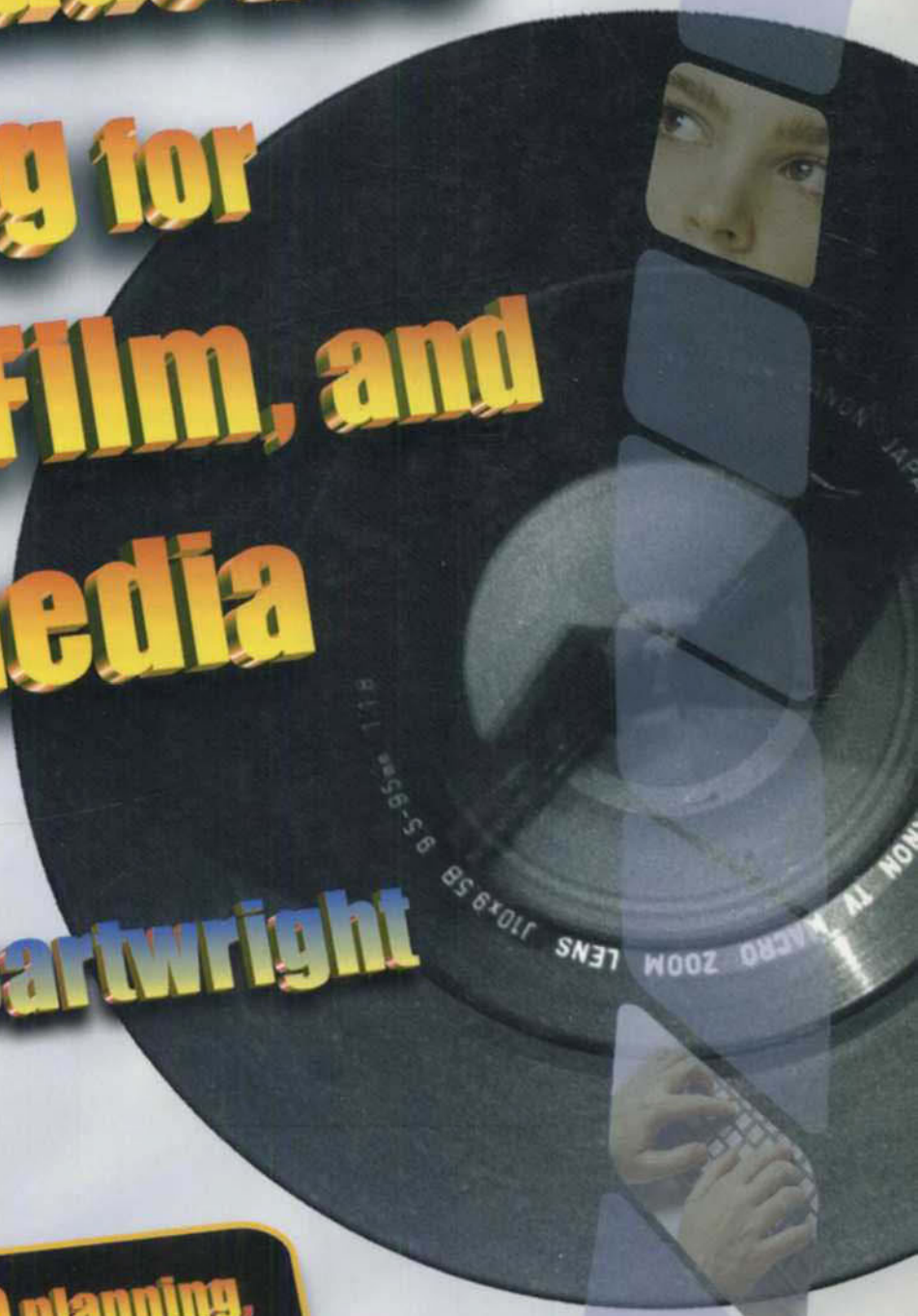
Pre-Production Planning for Video, Film, and Multimedia



Steve R. Cartwright

Includes 30 planning, production, and post-production forms on 3.5" disk

Pre-Production Planning for Video, Film, and Multimedia

Steve R. Cartwright

Focal Press

Boston Oxford Johannesburg Melbourne
New Delhi Singapore

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Library of Congress Cataloging-in-Publication Data

Cartwright, Steve R.
Pre-production planning for video, film, and multimedia / Steve R. Cartwright.
p. cm.
Includes index.
ISBN 0-240-80271-3 (pbk. : alk. paper)
1. Motion pictures—Production and direction—Planning. 2. Video recordings—Production and direction—Planning. 3. Multimedia systems—Planning.
PN1995.9.P7C33 1996
791.43'0232—dc20 96-17689
CIP

British Library Cataloguing-in-Publication Data

A catalogue record for this book is available from the British Library.

The publisher offers discounts on bulk orders of this book.
For information, please write:

Manager of Special Sales
Butterworth–Heinemann
313 Washington Street
Newton, MA 02158–1626
Tel: 617-928-2500
Fax: 617-928-2620

For information on all Focal Press publications available, contact our World Wide Web home page at: http://www.bh.com/fp

10 9 8 7 6 5 4 3

Printed in the United States of America

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FOREWORD

- Why does it always seem to take longer and cost more than planned for media production projects?
- Why does the budget for your interactive multimedia project seem to double when you begin to produce the video and audio segments?
- Why does it always seem to take so long for graphics and animation to be created?
- Why do technical problems constantly come up during production?
- Why do clients seem to expect so much and yet are only willing to pay for so little?

Should any or all of these questions strike a familiar chord, this book is for you. These typical production problems reflect a lack of planning, and planning is the most important element for successful productions. Whether you are shooting video or film or producing an interactive multimedia project, planning is the key. In this book I provide specific production planning techniques and tips for video, film and multimedia that will save you valuable production time, help you create better looking programs and generate a higher return on your production dollars.

Too often the production of a video or training film is an afterthought, tagged on to a larger (more important) training or communications event, with little thought given to planning, budgeting and scheduling. Because of this, production usually takes longer than anticipated, costs escalate, quality suffers and tempers flare. As a result, companies become discouraged and plans to develop media further are dropped because of the "expense and time" involved. I hope that this book will strengthen the case for good production planning and provide techniques that will shorten production time, reduce costs, increase quality and open many more opportunities to effectively produce and use media.

The techniques and production tips provided in this book evolved over a twenty year career in the production business both as an in-house corporate video producer and as the owner of a training and communications development company. I have been very fortunate to have worked with some of the best artists, camera operators, lighting directors, multimedia developers, editors and directors in the industry. Through many conversations with these very gifted people, I have developed ideas and tips into (I hope) a comprehensive method for production planning.

WHO THIS BOOK IS DESIGNED FOR

This book is designed to be a practical and useful guide for the novice as well as the seasoned media professional. It is intended to cover specific planning techniques for the pre-production, production, and post-production phases of program development. It will help you become a better project manager, understand the production process and empower you to work more successfully with talent, crew and clients. In short, this book is intended to make you a better camera operator, editor, director, multimedia developer, media production manager and producer.

SCOPE OF THIS BOOK

The scope of this book covers the planning process for video, film and multimedia production from pre-production meetings to post-production editing and distribution. Although the bulk of the material

presented falls within the context of video production, there are many, many, planning techniques that go beyond traditional video production into applications for film productions and multimedia development.

OVERVIEW OF THE CONTENTS

Why should you know about line, form, color, and mass for graphics production? Why is understanding camera technical operation and lighting techniques important for pre-production? Why is an understanding of audio production and video editing important for planning your next media project? Because through a better understanding of all the elements of production comes a better understanding of the pre-production planning process. To plan well you have to understand the process. This book covers numerous production techniques; the intent is to provide you with a thorough production process background so that good planning can take place around each phase of production.

The planning process from pre-production to post-production is covered with chapters dedicated to program design and scriptwriting, budgeting and contracts, multimedia development, film production, video conferencing and using computers in production.

THE FUTURE

The tools we use for production are changing rapidly. And, although I have tried not to mention specific production technologies that will continue to change over the lifetime of this book, I have referred to general technology advancements that will assist the producer in the process of planning and producing video, film and multimedia. Resources for the producer are becoming readily available on computers and on-line services. New on-line services that the producer can access, such as the International Teleproduction Society's *ITSnet* and the Independent Filmmaker's *Internet Resource Guide*, are being developed daily. This exciting resource area will continue to grow for the benefit of the producer.

ACKNOWLEDGMENTS

Like any major production, this book would not have become a reality without the contributions of many people. I wish to extend my sincere thanks to my reviewers Jerry Freund and Robert Tat, and to those who granted interviews, resources, facts, and figures: Randy Baker, Oliver Peters, Grayson Mattingly, Cecil Smith, Mark McGahan, Bill Van Nostran, Thomas Kennedy, Steve Floyd, Shara Fountain, Stan Hankin, Ed Hearn, Bill Burkett, and Robert Tregenza, and to the many manufacturers that provided photos and information about their products.

Finally, I wish to thank my editor, Ellen Lazer, for her patience in the long process of writing this book and again to my family for all of their support and encouragement. This book is dedicated to my two teenage sons, Christopher and Kevin, who have made all this hard work worthwhile.

Steve R. Cartwright
Tucson, Arizona

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The Importance of Pre-Production Planning

1

- Halfway into editing your program you realize that a complete scene is missing. What happened? In the heat of production you inadvertently forgot to shoot Scene Eight! Now you remember telling yourself that you would come back to that part in the script and pick up the shot later. But you obviously forgot to do so.
- Your client is trying to save money by not doing a site survey before the day of the shoot. He wants to save time by not checking out the actual shooting locations. After all, you're just doing quick interviews at the plant. "Set the interview up against a nice background and just do it. Don't worry about lighting. . . ." the client says. The shoot ends up taking a full day instead of the original two hours as planned and budgeted because of poor backgrounds (windows in the shot, moving forklifts), sound problems (a PA system close by) and power problems (surges from heavy equipment). The client ends up spending more money than planned to re-shoot the interviews.

Both situations could have been avoided through pre-production planning. Both situations created problems with the program, required re-shooting, and cost additional time and money.

With the excitement and challenge of production, often we hurry through the planning process to get to the shooting and editing. But experience tells us good planning is the key to a successful project. It is one area that you must not hurry through, skimp on or delete. Whether you are producing film, video or multimedia projects, production takes an enormous amount of resources—resources that cost money (your money, the company's money or the client's), and time (more time than we usually anticipate). Good planning will save you both time and money.

A DEFINITION

I define pre-production planning as the preparation for all the steps required to execute the production and post-production of a video/film/multimedia project. I include post-production because planning is as important for the post-production process as it is for the production process (actual shooting) in saving time and money.

My definition encompasses the planning of a project from concept through completion. As I detail later in this book, planning starts with the problem, idea or communication need and continues through the distribution of the program to the intended viewer. Planning for production involves defining the problem or communication need and selecting a vehicle that will best resolve that need. Planning involves the process of content organization, scripting and visualization, equipment, crew, and talent selection and preparation, graphics planning, planning for the actual day of the shoot and planning for the editing (post-production) process. This basic planning process will apply to video, film and multimedia development.

And the planning process doesn't stop there. Planning is also needed for the duplication and distribution of the program as well.

Pre-production planning is a craft, as is lighting, camera work, directing and editing. Good pre-production comes with knowing and practicing each craft. For every successful producer there usually is an excellent associate producer working on all the details of production. This involves the art of planning. **It is one thing to come up with a great idea to put on video, and quite another to execute it.**

Figure 1 – 1
It takes a "team" of dedicated, skilled individuals to produce media. A typical "crew" could consist of a Director, Camera Operator (Director of Photography), audio technician and Production Assistant.

When I refer to production in this book, I will generally be referring to single camera style, video production, the type of production most of us are doing either for traditional linear type programming or for multimedia. However, the basic planning process also applies to film projects.

We are usually shooting "film style" or with a single camera as opposed to multiple camera production in which the editing decisions or camera shots are selected "live" through a switcher. During single camera production, we record all the various camera shots (wide shots, medium shots and close-ups) first, usually out of sequence according to our script (if we have one). Later we edit all the shots together in the sequence called for in the script or story. We are generally using small production crews or are shooting everything ourselves and producing commercials, training and information programs for organizations we work for or for clients that have hired us to do a video program. What is discussed within these pages applies to all types of production, including marketing and sales programs, documentaries, commercials and corporate news programs.

I refer to clients as anyone for whom we are producing a program. Whether you work for an organization or are hired on contract by an organization, we all have "clients" or customers for whom we are developing programs.

WHAT THIS BOOK COVERS

This book will cover each of the steps necessary in producing video projects and the video portions of multimedia. However, most of the pre-production steps apply to film production as well, as I point out in Chapter 4.

We will cover the importance of pre-production planning, comparisons of planning for film and video and multimedia, and the major elements of the production process. We will devote a chapter to what goes into the design of a program—both instructional design and production design. Another chapter is devoted to proposals and budgets and another

to the details of pre-production. Planning for post-production will be covered as well as planning for duplication and distribution. Since the computer has become such a valuable production tool I have devoted a chapter to using the computer for the planning, production and post-production process.

THE 70-30-10 RULE

As a general rule, when we are producing training and information programs, we often devote as much as 70% of our time to the pre-production process and 30% to post-production with the remaining 10% (if you work at 110% like I do) devoted to the actual shooting. But the world of video seems to stress technology. So much attention is given to the equipment (the production element), it almost seems that if we simply purchase a camera we can instantly create programs. I've seen ads in magazines that lead you to believe that the video equipment is all you need to produce award winning programs. Not quite! The equipment is only one element, and a very minor element at that, needed in the production process.

The percentages should tell you where the real work and the success of the program lie. It's not in the 10%. It's in the 70%. Pre-production represents the least expensive part of your production, in actual dollars spent, but will have the biggest impact on the overall project's cost and success! That's justification enough for devoting more time to the pre-production process.

There is only one thing that can replace good pre-production planning . . . money. Pouring money into the production can sometimes replace poor pre-production planning, but don't even count on that! Devoting only a few hours to planning a program will have a drastic effect on the outcome of the project. If we spend less time in pre-production, we will spend more time in production and post-production—the most expensive parts of the project and certainly the most mentally and physically stressful.

The time we spend in pre-production will directly affect the percentage of time we have to spend in the other more expensive phases of production. An example would be not planning for a program and perhaps spending as little as 1% of our time in pre-production. We could end up spending as much as 40% of our time in production and close to 60% of our time in post-production, trying to fix the mistakes we made in production because we didn't plan properly.

Seasoned video pro Grayson Mattingly of Mattingly Productions in Fairfax, VA, states that "99% of the problems that go wrong in production usually can be traced back to poor pre-production planning."

In summary . . .

A well planned program for which we devote more time to the pre-production process will SAVE production and editing time, saving us money in the overall production of the project. The key to successful programs is planning. Whether you are producing video, film or mulitimedia projects, the more time you spend in the planning process, the more success you will have with the program.

THE APPROVAL PROCESS

- As an in-house video manager/producer for a microelectronics manufacturing company I developed many technical training

programs. When I started working for the company, I was given a technical training project and assigned a subject matter expert who provided me with very specific direction on a certain technical process. I wrote the script around the process and shot the footage. But the process I recorded was actually not being done properly, so I ended up recording a technical process that was being performed improperly according to management. This problem can be traced back to the pre-production process. The appropriate approvals were not granted to the project.

- Grayson Mattingly describes a project he had been working on for several months for a client. The client had approved the video script with several changes that affected the shooting. During the production, however, the client was transferred to another state. So his client changed, as did the approval process. The new client went on to change the script further. This left Mattingly in the position of almost having to start over, which would add a great deal of time and costs not originally planned for in the budget. What happens to the budget? Who pays the difference? Again, this problem can be traced back to pre-production. The proposal and production contract did not explain specifically how script and client changes would be handled.
- A video producer with the Air Force put together scenes to be shot during a production. The script was approved earlier, so the producer followed the script closely. However, as they shot the script, there was no approval person on the set. The production team returned with the footage and edited the program. The rough cut was shown to the client who said that the talent in the shots was not the image he wanted to project. This problem could have been avoided through better pre-production planning, having the client's desired policies and practices approved and agreed upon way in advance of the shoot. The problem could also have been avoided if the client was present on the set as the script was being shot, or by having the client approve all field footage before starting the edit.

The problems cited in these examples could have been avoided if the approval process for the projects was in place. Approval means not only final approval of the project by the big boss or client but approval on all the many steps along the way. It is very important to agree to approval points before the project begins. Forms 1, 2, and 3 show suggested video production request forms that will help the approval process.

Suggested approval points (referred to as the **21 Steps to Approval**) for a video project could include: the initial rough idea or objective of the project, often referred to as the *project proposal*, the *content outline* or what material the project entails, the *treatment* or how the material will be handled (more on this in Chapter 2), the *budget*, the *rough script*, the *final script*, *storyboard*, the *talent* to be used in the production, the *shooting locations* where the shooting will take place, *sets* to be constructed, *stock footage* to be used in the program, the *original footage* shot on location (also referred to as camera tapes), final changes on script after shooting (*edit script*), *voice narration, music selections*, the *graphics* and *animation* needed in the program which include the rough layouts (storyboards for the graphics and the final pieces of work), the *rough edit*, the *final edit*, workbook or *printed support materials*, *duplication and packaging* of the final program and the *evaluation process*.

Form I

VIDEO PRODUCTION REQUEST

WORKING TITLE _____ PROPOSED LENGTH _____

DEPARTMENT _____

DEPARTMENT MANAGER/SUPERVISOR _____

PROJECT REPRESENTATIVE _____ PHONE _____

DATE PROJECT SUGGESTED _____ DESIRED COMPLETION _____

IN-BRANCH RELEASE DATE _____

1. DESCRIBE THE PROJECT BRIEFLY _____

_____

2. WHO IS THE INTENDED AUDIENCE? (POSITION AND AVERAGE AGE) _____

_____

   A. EDUCATION _____

   B. PREVIOUS KNOWLEDGE/EXP. _____

   C. INTEREST LEVEL _____

3. HOW IS THE PROGRAM TO BE VIEWED?

   ☐ LUNCHTIME/BREAKS

   ☐ CLASSROOM

   ☐ SELF DIRECTED

   A. NUMBER OF VIEWERS IN AVERAGE AUDIENCE _____

   B. NUMBER OF VIEWERS TOTAL _____

   C. HOW OFTEN WILL PROGRAM BE VIEWED? _____

   D. HOW LONG WILL PROGRAM BE USED? _____

   E. HOW MANY COPIES ARE REQUIRED? _____

4. WHY IS THE PROJECT NEEDED? _____

_____

_____

_____

5. LIST THE PROJECT GOALS SHORT TERM/LONG RANGE

_____

_____

_____

6. THE SINGLE MOST IMPORTANT IDEA TO BE CONVEYED _____

_____

_____

7. WHO IS THE CONTENT EXPERT? _____ PHONE _____

OTHER RESOURCE INDIVIDUALS _____ PHONE _____

_____ PHONE _____

8. CONTENT OUTLINE (ATTACH)

9. IS PROGRAM PART OF LARGER PROJECT THAT INCLUDES OTHER MEDIA? _____

10. WOULD PROGRAM REQUIRE NEW SUPPORT MATERIAL? ☐ TESTS ☐ BROCHURES

11. IS THERE ANY CONTROVERSIAL ASPECTS IN THE CONTENT OR USE? _____

_____

_____

12. DIVISION MANAGER'S APPROVAL _____ _____
(Signature) (Date)

COMMENTS

_____

_____

_____

_____

_____

_____

_____

_____

FORM II

PRODUCTION TRACKING FORM

STEP COMPLETED	ITEM	PROJECTED COMPLETION DATE	DATE
1	ORIGINATION		
2	CONSULTATION & DEVELOPMENT		
3	PROJECT COORDINATION		
4	PROJECT DEVELOPMENT		
	A. Project Team Meeting		
	B. Meeting Summary		
	C. Research		
	D. Script Outline & Treatment		
5	SCRIPT DEVELOPMENT		
	A. First Draft		
	B. Final Draft		
	C. Project Team Meeting		
	D. Final Script/Storyboard Development		
	E. Script/Storyboard Final Approval		
6	PRODUCTION		
	A. Pre-Production		
	B. Production		
	C. Post Production		
7	VIEWING & EVALUATION		
	A. First Edit		
	B. Final Edit		
8	PROGRAM VIEWING AND EVALUATION		
9	PROJECT COMPLETION ACTIVITY		
	A. Final Completion Coordination		
	B. Show(s)		
10	EVALUATION		

FORM III

PRODUCTION RECORD FORM

Week of _____ **FORMAT** _____

Project # _____ **Director or Engineer** _____

Project Name _____

Activity	**Mon.**	**Tues.**	**Wed.**	**Thu.**	**Fri.**	**Sat.**	**Sun.**	**Total**
Writer/Director Hours								
Research/Planning								
Writing								
Directing								
Editing								
Other								
Engineering Hours								
Research/Planning								
Equipment Operation								
Editing								
Duplication								
Other								
Production Hours								
Video Editing Hours								
On-Line Edit								
Off-Line Edit								
Location Hours								
Audio Room Hours								
Video Duplication Hours								
Audio Duplication Hours								

PRODUCTION ESTIMATE FOR:
DATE OF ESTIMATE:

	–Estimate–		
	RATE	HOURS	ESTIMATE TOTAL
MANPOWER CATEGORY			
PROJECT MANAGER			
PRODUCER			
INST. DESIGNER/TECH.			
CONTENT RESEARCHER			
WRITER—INST. MAT'LS			
WRITER—MEDIA SCRIPTS			
EDITOR—PRINT			
DIRECTOR—MEDIA			
PRODUCTION CREW			
TV ENGINEER			
ARTIST/ILLUSTRATOR			
ACTOR(S)			
NARRATOR			
OTHER			
TOTAL MANPOWER COSTS			
ACTIVITY CATEGORY			
VIDEO—STUDIO ORIGINATION			
VIDEO—FIELD ORIGINATION			
VIDEO—TIME CODING & WINDOW			
VIDEO EDITING—CUTS ONLY			
VIDEO EDITING—ON-LINE			
AUDIO—ORIGINATION & EDIT			
TOTAL ACTIVITY COSTS			
OTHER COSTS CATEGORY			
OFFICE SUPPLIES			
PRODUCTION SUPPLIES			
TELEPHONE & POSTAGE			
TRAVEL—LOCAL			
TRAVEL—OTHER			
TOTAL OTHER COSTS			
OVERHEAD			
FIXED FEE			
TOTAL ESTIMATED COSTS			

A signature of the client or person responsible for the project is needed at all approval steps. If the client is involved with all the phases of production, there will be fewer surprises and a smoother production. And it is important to identify the **KEY** person for the project, often referred to as the **YES MAN**. Often that "Yes Man" is not the same person you are working with or even the same person assigned to the project, as our earlier examples point out.

Production is a **PROCESS** that we take our clients through. It is truly a team effort, and the more involved everyone is, the more likely it will succeed. Often it turns out that the process of production is as important as the end product. We need to manage this process properly, plan for the approvals, work as a team and get it all in writing.

NEED FOR ORGANIZATION

The key to good production planning is being organized. If you are a well organized person, you will do well in production. If not, hire someone who is. Good organization means a lot of things when it comes to video production.

- Keep a *production notebook* that contains the phone numbers of everybody involved with the project, ideas that come to you at 3 a.m., script changes, storyboard, site survey notes, equipment requirements, rental notes, special crew requirements, all schedules and notes on recommended shots, names of talent, crew and key location contacts, notes on props that you will need and receipts. The production notebook should hold all notes about the shoot that will help you get through the project smoothly. I find the notebook an invaluable tool for reviewing script changes, referencing important dates and conversations about content changes and billing information.
- Develop a well thought out *schedule* of events from the first meeting through the editing process, schedule the day of the shoot hour by hour, and communicate this schedule to everyone involved—crew, talent and client.
- Develop a thorough *equipment checklist* of all needed equipment and production gear from tape to camera to tripod to extension cords. A checklist will assure you of not forgetting anything on the day of the shoot.
- *Pre-produce* the program in your head and then on paper. All facets of the program should be thought through on paper, from the shots you need to the equipment requirements to transitions between scenes to how you are going to edit the program. A good producer/director will have thought through all the aspects of the program before it goes on tape.
- Develop a well organized *script* that is broken down for the shots you need by time and location, and plan in advance for all the transitions between scenes.

Good organization means attention to *details*, *details*, *details* . . . lamps, tape, cables, location, lights, sound, background, props, talent, client relations, script, script changes, schedules, crew, engineering, coffee, food, sets, make-up. I can't stress enough how important it is to think

through all the details of a production. Attention to details will avert possible production problems.

Attention to details will also affect production **quality**. In major feature film production there is always someone responsible for continuity (part of the details) to assure the director that the actor looks the same in each scene, that the props in each scene are placed properly, and that the details within a scene that the director may not notice are taken care of. This adds to production quality and smooth shooting with fewer problems to contend with in post-production.