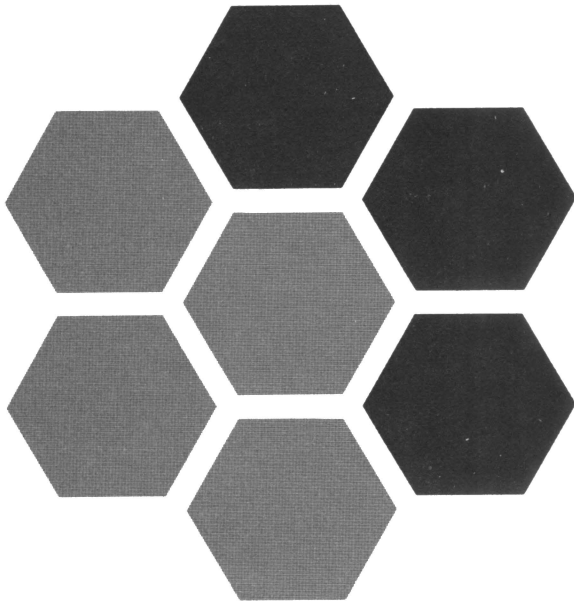


SECTION III:

Image and System Graphics and Physical Systems Design

by Redmond A. Simonsen



INTRODUCTION

One of the least discussed and least understood aspects of conflict simulation design is, ironically, that which is most obvious: the graphics and physical systems that make a game a reality in the hands and eyes of the gamer. In fact, the better the graphic design, the more likely it will *not* be noticed. Since, in game design, the overriding mission of the graphic designer is to *communicate* the substance of the game to the user, heavy-handed or flashy images that call attention to themselves (rather than their message) are actually detrimental. The type in which this book is set is a simple example of this: each letter is well designed and crafted—and yet, when strung into organized arrangements (i.e., words) the individual letters become invisible. If the typeface was eccentric or exotic in design it would be hard to read and would detract from the message rather than convey it.

I intend to deal with the *terra incognita* of graphics with regard to the following areas:

1. The role of graphic design in simulation games.
2. How the professional works and how a game is produced.
3. How the amateur game designer can produce a more professional looking product without the resources available to the professional.

Aside from the practical matters of production and technique, much of what I'll be presenting is naturally my own personal "doctrine" developed over the past twelve years (seven of which I've spent working on conflict simulation design). Since there is no "one-true-way" in matters of art, my graphic philosophy would doubtless be challenged by other artists and/or gamers. I would like to point out (at the risk of sounding elitist) that that which is superficially eye-catching may in the final analysis, not be the best solution for a game/graphics problem—and many non-artists have difficulty in separating that which looks good from that

which works well. The two are not mutually exclusive—but neither are they necessarily mutually *inclusive*. Readers familiar with my work are aware that I am an advocate of form-following-function and will accept my statement that the graphic "philosophy" expounded here is not a mere rationalization of an artist's quirk of style, but rather a sincere explanation of a point of view developed and put into practice over a number of years.

THE ROLE OF GRAPHICS IN THE DESIGN OF SIMULATION GAMES

More than almost any other type of game, simulations are enormous information processing and learning problems. Even the simplest game requires the player to manipulate dozens of discrete pieces (units) in hundreds of possible cell locations (typically hexagonal); sort out thousands of relevant and irrelevant relationships; and arrive at a coherent plan of action (a move) several times in the course of the play of that game. It is a testament to the power of the human mind that anyone can begin to play such complex systems let alone do it well. The average gamer may have several dozen game titles in his library, each of which differs from the other—yet miraculously he can sit down on any given night and (with perhaps a glance or two at the rules) play a creditable game.

Given this large burden on the player, the challenge to the graphic designer is clear: make the information the player uses clear, organized, accessible, and pleasing to look at for long periods of time. To use a military metaphor, the player is an unspecialized demolitions man defusing a complex bomb and receiving instructions on how to do so via a radio. The game is the bomb, the game designer is on the other end of the radio and the artwork *is* the radio. If the radio is faulty, the unclear signal may break the concentration of the demolitions man (with unpleasant results). Now the qualities of a good radio are fairly obvious: good signal-to-noise ratio; adequate range; reliability; and good de-

sign of human factors (ease of handling, etc.). Metaphorically, these qualities translate fairly well into the qualities of good graphic design in games—what is not so clear, however, is exactly what constitutes a good signal-to-noise ratio in graphics or just what value to place on “reliability” (which translates as consistency of format). And although the gamer is not vaporized when faulty graphics causes him to “detonate” the game he’s playing, the fact that it has indeed turned out to be a “bomb” is certainly unpleasant. Virtually every gamer has had the experience of struggling through what might be an otherwise good game, hampered by the fact that the organization and design of the components prevents him from easily understanding what he is about—and thereby losing concentration and interest in the game.

Many of the factors which degrade the performance of the graphic system in a game are not obvious to the average gamer. Some of these considerations are technical in nature: e.g., the size and style of type used on the counters; the intensity, surface quality, and range of colors used on the maps as they affect vision; the weights of the lines used to separate sections of charts or forms, etc. Others are organizational: the tables and charts should be well-integrated and logically formatted; the terrain symbology should be a development of a consistent approach; the rules should be presented in a systematic, accessible format, etc. Although they may not be consciously perceived, these factors all add up and impact upon the user as he plays the game. Wrong design choices can conspire in such a subtle manner that the gamer may not be able to pinpoint *why* the game is troublesome but he’ll be aware that *something* is wrong and is preventing him from getting the most out of the game.

It is sometimes difficult to separate poor (or good) *graphic* design factors from poor (or good) *game* design factors. There is a great deal of feedback between the two. Of course, no matter how good the graphics and physical system, they cannot turn a weak game design into a

strong one (although they can sometimes cosmetically hide an inadequate game design, at least for a while). But the reverse is possible: bad graphics and poor physical systems *can* ruin a good game.

Before going further, I should perhaps explain what I mean by the term “physical system”. The term is really my personal jargon for the graphic engineering of game elements. The more graphic engineering the artist can build into the game equipment and rules, the easier and more enjoyable becomes the play of the game. Examples of this are: the Production Spiral used in SPI’s *War in Europe* game system; Turn-Record Tracks with built in information on special events; Phase Records that are themselves diagrams of a complex sequence of play (such as in SPI’s *Fast Carriers*); game maps with the set-up printed directly on them; integrated combat results tables (with terrain effects built in). A good physical system is characterized by its organization of game information to such an extent that the presentation actually accomplishes some of the “work” of using the raw information. It is possible (and often is the case) that a game is well-designed graphically, but no serious attempt at physical system design is evident.

Decoration Versus Design

One of the major questions a graphic designer must answer when approaching a new game project is: how much decoration is necessary, desirable, and allowable within the context of the information problem the game presents? The term “decoration” is used to indicate those graphic elements which have no practical bearing on the utility of the components. Well, if decorative elements are non-essential, what’s the point of putting them in at all? In most games, some decoration is psychologically necessary in order to create the proper mood for the player who is going to spend several hours engaged in a game. Properly used, decoration helps the player to relate his activity in the game to the historical activity being simulated.

Unfortunately, many artists concentrate most of their efforts on these decorative elements and virtually ignore the practical requirements of the game. Decoration is information—*unnecessary* information—which if present in overabundance distracts the player from the truly important, game-play information he must have. Most people are, unfortunately, easily impressed by highly decorated games. Only when one plays such a game several times does the realization come that all that cute stuff is actually hampering play. Of course, the best possible combination is a well-designed physical system which has an overlay of just the right amount of mood-enhancing decoration.

Usually, the more complex the game-system, the *less* decorated it should be. When counters carry several different values and symbols; when the terrain is highly varied, when the mechanics of play are very involved, it is then that decorative effects should be kept to the bare minimum. It could almost be stated as a quasi-mathematical theorem: decoration varies inversely with complexity. As you might expect, it could also be said that the amount of graphic engineering required varies *directly* with the complexity of the game-system. Any such statements must always be qualified with the comment that there are no hard and fast rules in art. There will always be exceptional cases and mitigating circumstances. Even the borderline between practical and decorative graphic elements can sometimes become fuzzy. For example, tank silhouettes on tactical game counters may not be strictly necessary, but they do help the players to quickly distinguish AFV's from other types of units. Regardless of how simple the game might be, however, there are some elements of decoration that I am dogmatically opposed to. First on my list of such elements is the placement on maps of extensive terrain that has no effect on play whatsoever. There's nothing sillier than (for example) a large swath of desert glaring at the player when that desert is no different from ordinary clear terrain. If the designer wishes to impart the fact that there's a desert on the map,

he could much more reasonably place a simple line of type indicating the name of the desert.

Second on the list are orders of battle that go strictly by historical designation without giving the player the option to ignore the designation and set up the game and the reinforcements purely by unit type and value. Particularly in large games, the set-up is one of the most tedious and time consuming exercises that a player must endure, every effort should be made to make this process as painless as possible.

Another such mistake occurs in counter designs which use large flag symbols (for example) to display nationality (when a simple color change is all that's necessary) and the important numerical data is squeezed into the small remaining space. In this case, as in many others, it's really a matter of proper emphasis being ignored or subordinated to some eccentric concept of "historical flavor". There's nothing *wrong* with such flavoring—it's simply a matter of knowing how much salt to put in the soup.

THE GRAPHIC DESIGN AND PRODUCTION OF SIMULATION GAMES

What follows is, in game jargon, the sequence of play of designing and printing simulation games.

I. THE PRELIMINARY GRAPHICS PHASE

- A. Game Designer does sketch map using standards and procedures established by Graphic Designer.
- B. Game Designer writes rules outline and develops order of battle.
- C. Game enters developing and testing. Game Developer consults with Graphic Designer concerning particular problems in game that can be solved via graphics.

II. GRAPHIC DESIGN AND FORMATTING PHASE

Finished sketch map, counter manifest, and rules are turned into Art Department Copy Editor.

1. Rules are searched for bugs and inconsistencies.
2. Graphic designer designs terrain symbology to be used on map.
3. Graphic Designer designs counters, choosing type-styles symbology, and layout of various types of units.

III. GRAPHICS EXECUTION PHASE

- A. Typesetting Machine Operator sets counter values and map labels.
- B. Copy Editor and Graphic Designer format tables and charts; TMO sets material.
- C. Boardman pastes-up counters.
- D. Boardman does artwork for map/color separation.
- E. Boardman lays-out and pastes up rules.

IV. FIRST CHECK PHASE

- A. Game Developer proofs counter sheet and map.
- B. Copy Editor and Game Developer proof rules.
- C. Corrections performed by TMO and Boardman.

V. INSPECTION AND MARK-UP PHASE

- A. Graphic Designer inspects finished, corrected art and mechanicals.
- B. Graphic Designer marks-up work, giving printing and color specifications.

VI. FIRST EXTERIOR PRODUCTION PHASE

- A. Artwork sent to camera-house (to be photographed and rendered as large film negatives).
- B. Negatives sent to printer to be stripped up as a series of film negatives in preparation for plate-making.
- C. Printer makes paper checking copy of film negatives and sends these to Graphic Designer.

VII. SECOND CHECK PHASE

- A. Graphic Designer, Copy Editor, and Game Developer proof checking copies.
- B. TMO and Boardman perform necessary corrections and correction film patch is sent to printer.

VIII. SECOND EXTERIOR PRODUCTION PHASE

- A. Printer corrects negatives, and makes plates.
- B. Components are printed and sample press sheets sent to Graphic Designer.
- C. Graphic Designer and Printer give Binder and Die-Cutter, instructions on final finishing.
- D. Countersheets are mounted and cut by Die-cutter. Rules, maps, and charts are folded, bound and cut by Binder.
- E. Finished parts are partially or wholly collated by Binder and returned to Publisher. Game ready for sale.

Of course, the foregoing sequence is that which is followed at SPI—other publishers will have their own variations of the same basic