and disappear. The motions of images are limited by the landscape and by algorithms defining their permissible movements and the effects of such movements. Images are also created or eliminated in accordance with algorithms. There are two principal modes of the video game—attract mode and play mode—which are described in detail in my article in the February 1982 issue of IEEE Micro.

Marketers of video games have sought two kinds of copyrights: (1) of the game’s computer program, as a literary work, and (2) of the collection of sounds and images in the game, as an audiovisual work. They secure registration of the program by depositing in the Copyright Office a printout of a dump of the object code, and preferably also a printout of the source code, together with a filled-out Copyright Office Form TX. They secure registration of the audiovisual work usually by depositing a videotape and brief description of one play-mode performance of the game (preceded by the attract-mode performance), together with a filled-out Copyright Office Form PA. The Copyright Office retains the deposit and returns to the applicant a certificate of registration, which is essentially a photocopy of the application.

The two kinds of copyrights raise very different legal issues. First, the computer program copyright involves questions—such as those mentioned earlier—as to whether object codes are copyrightable, and whether it is copyright infringement to make or sell a duplicate of the physical form of an object code (such as a ROM). The audiovisual work copyright involves such questions as whether the images in the alleged work are too trivial to be copyrightable, whether registration of one performance of the game’s play mode (one permutation of the image sequences) confers copyright protection on all performances of that game’s play mode (all possible permutations of the images in various sequences), and how one can separate the copyrightable elements of the videotaped performance from the uncopyrightable elements (which may be old expressions, mere ideas, or trivial elements).

Several independent programs can be written to produce the same audiovisual work, and slight changes in the object code for a game may cause a very different looking graphic display or audiovisual work. That means that it does not follow that one type of copyright is necessarily infringed when the other one is. For example, some video games have very similar graphics but very different code, because they run on different hardware.

There are no satisfactory rules of thumb for determining video-game infringement questions. Thus, the fact that 90 percent of the object code in program A is different from that in program B does not necessarily mean that program A does not infringe program B. The duplicated 10 percent of the code might be the most important and creative part. Alternatively, the duplicated part could be merely trivial, public-domain material. In the case of an audiovisual work, the legal test seems to be subjective overall similarity, a very hard kind of test to explain sensibly. In one recent case, a trial court held that a certain video game, K. C. Munchkin, was not so subjectively similar to Pac-Man that it infringed, but a court of appeals then came to the opposite conclusion and reversed the trial court’s judgment. Clearly, predicting the courts’ overall subjective reactions is not something about which great self-confidence is justified. This area of the law is in considerable flux; discerning a consistent legal pattern is still quite difficult. An article reviewing further developments is planned for a future issue.

Another subject that deserves dialogue in IEEE Micro is software license restrictions. At least one of the editors, among others, has frequently groaned and complained about software licenses with highly restrictive clauses. Questions have been raised about the legality and enforceability of some such provisions. Interested readers are invited to send in software license clauses about which they are concerned, indignant, or gratified.

Notes
3 Data General Corp. Antitrust Litigation, 490 F.Supp. 1089, 1113 (N.D. Cal., 1980).