

## B. Achieving Industry Consensus

The use of an industrywide panel to develop consensus standards is consistent with the practice of the American National Standards Institute (ANSI), and its international counterpart, the International Organization for Standardization. ANSI commissions an ad hoc committee or accredits an existing organization to formulate standards in a given area. Technical subcommittees collect information and prepare drafts for the full committee. A completed proposal is then offered for public comment. The technical subcommittees respond to the comments and prepare a revised draft, repeating the process until the standards committee is satisfied. The proposed standard is then submitted to ANSI for review and approval.<sup>31/</sup>

The most successful efforts at establishing standards in the communications field have been along this model, beginning with the NTSC (National Television Systems Committee) that set the basic television transmission standard still in use today. The first NTSC, organized under the auspices of the RMA, consisted of representatives of a wide range of industry interests. Many members of the Committee and its panels had hands-on experience in technical fields and

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<sup>31/</sup> Carlton and Klamer, The Need for Coordination Among Firms, with Special Reference to Network Industries, 50 U. Chi.L.Rev. 446, 449 n.14 (1983). [cite primary source?]

were directly involved in evaluating proposals and formulating a standard.<sup>32/</sup>

A similar process was used in establishing consensus standards for stereo television.<sup>33/</sup> [cellular telephone?] and the second color TV standard. All have been successfully adopted. DBSA also recommended a standard for DBS operations from two standards approved by its standards committee, but the FCC declined to endorse one. It isn't clear what effect this has had on DBS service, which has been delayed by other factors.

By contrast, less successful standardization efforts did not employ this procedure. The first color TV standard was established by the FCC on the basis of months of formal adversary hearings with the contending systems presenting often conflicting testimony and cross-examination. This cumbersome procedure proved less effective in analyzing and comparing systems than the informal exchange among engineers and other participants in the NTSC and BTSC. The adversary process was less open to compromise and more likely to reflect proprietary interests than broader market forces.

In the AM stereo proceeding, the industry organized the National AM Stereophonic Radio Committee (NAMSRC), but is

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<sup>32/</sup> Cite Fink.

<sup>33/</sup> Use of Subcarrier Frequencies in the Aural Baseband of Television Transmitters, 55 RR 2d 1642; 47 Fed. Reg. 18100 (1984). See also Besen & Johnson, supra, 61-71.

activities were limited to testing various proposed systems and reporting the results. NAMSRC did not make any recommendations concerning the system. Its function was therefore more like the ATV Test Center than the NTSC or BTSC. Moreover, several of the system proponents declined to cooperate with the NAMSRC testing program, further limiting its impact. Despite this lack of consensus, the Commission unsuccessfully attempted to designate the Magnavox system as the standard. The FCC was forced to back down in the face of the resulting opposition from the broadcast industry.<sup>34/</sup>

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<sup>34/</sup> 47 Fed. Reg. at 13154.

V. Conclusion.

The Working Party believes that it is essential that the Commission adopt a single terrestrial broadcast standard as soon as possible after sufficient testing of proponent systems has been completed, whether or not that testing process results in industry consensus. The Commission clearly has the necessary legal authority, and it should continue to make clear its intention to act decisively at the appropriate time. Economies of scale engendered by a single standard will lower the costs and heighten the efficiency of ATV implementation, and the impetus provided by government action will help overcome industry and consumer inertia. These and other advantages of government-adopted standard are particularly compelling in this instance because prompt introduction of ATV terrestrial broadcasting is necessary to ensure technological competitiveness with nonbroadcast media which are not subject to spectrum constraints.

**Attachment 4:**

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**PROPRIETARY STANDARDS IN ADVANCED TELEVISION**

It is likely that all of the proposed Advanced Television systems incorporate some proprietary technology and intellectual property in the form of patents and/or trade secrets. At least some of the proponents may be unwilling to contribute this intellectual property to the public domain. Moreover, it seems likely that the U.S. public interest would be better served by widespread licensing of ATV technology to multiple TV camera, transmitter and receiver manufacturers, than by tightly restricted licensing. However, the Commission is without authority to require "compulsory licensing" or to otherwise regulate the licensing and royalty practices associated with patents. Consequently, at the same time the proponents are deciding on their strategies for licensing their technology, the Commission should be deciding on a strategy for dealing with ATV proprietary technology. It may be possible, for example, for the Commission to consider patent licensing offers as a decisional input when reaching a decision on an ATV system.

**Proprietary Standards Are Common In High-Tech Products, and****Licensing of Proprietary Technology Is Also Common**

In high-tech product markets, it is common for *de facto* standards to incorporate proprietary technology. Nintendo video games, Postscript printer

fonts and page description language, Ethernet local area networks and 80286/80386 microprocessors are all examples of products that have become standards, yet all are based on patents or trade secrets rather than being part of the public domain.

In a competitive marketplace, owners of proprietary technology typically decide on a licensing strategy that maximizes their benefits. They may decide to adopt a strategy of widespread licensing in order to make their product into a *de facto* standard. Or they may decide to limit licensing to only a few other manufacturers. Or they may decide to grant no licenses.

Nintendo has licensed perhaps twenty other companies to manufacture and sell video game cartridges using Nintendo's proprietary interface, but only Nintendo manufactures the base unit. Atari Games filed a \$100 million antitrust lawsuit against Nintendo in December 1988.

Adobe Systems, Inc., which controls the page description language and proprietary font family called Postscript, licenses software developers and computer printer manufacturers to incorporate Postscript technology, but the license fees are said to be very high.

Xerox, Digital Equipment Corp. and Intel Corp., which developed the technology and own the patents for Ethernet local area data networks, were willing to grant licenses to use this technology to anyone for a small fee. Some elements of Ethernet technology may now be in the public domain.

Intel licenses multiple manufacturing sources for the 80286 microprocessor, but has declined to license second sources for its next-generation 80386 microprocessor.

The Polaroid family of film and cameras is recognized as the *de facto* standard for instant photography, yet only Polaroid manufactures these products. In a patent infringement case won by Polaroid, Kodak was forced out of the instant photography market.

While companies have been able to develop non-infringing clones of the IBM XT and AT computers, there are neither clones nor second sources of the Apple Macintosh computer.

In the land mobile communications area, Motorola owns a proprietary communications protocol that controls the assignment of radio channels to users who share a "trunked" radio system. Because of Motorola's general dominance of the land mobile radio market, this protocol has become a *de facto* standard. Motorola has declined to license other manufacturers to use this protocol. This was an issue in the FCC's land mobile trunking protocol proceeding, where the Commission declined to adopt a compatibility standard. While some comments supported a mandatory compatibility standard, others opposed it.<sup>1</sup>

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<sup>1</sup>For example, APCO said: "APCO wants no part of penalizing an existing equipment developer by forcing the company to surrender its patents to benefit other companies who have made no contribution to the development process." Comments of Associated Public-Safety Communications Officers in Docket No. 88-441, October 17, 1988, at p. 31.

Consequently, these examples show that the normal working of the marketplace might result in widespread patent licensing, or it might result in restrictive licensing, or it might result in no licensing at all.

It is normally the case in any technology that no single entity holds all of the relevant patents. In such cases, rights holders generally are able to work out cross-licensing terms and other private agreements among themselves for the licensing of technology to one another. This is likely to be the case with ATV as well. It is not certain, however, whether these cross-licensing agreements give ATV proponents the rights to sub-license the patents of others. For example, if the Zenith system were to be based in part on AT&T patents, and if the Commission chose the Zenith system as the ATV standard, then it is not clear whether other TV set manufacturers could deal with Zenith to obtain all the necessary patent licenses, or would have to deal with AT&T as well.

#### FCC Authority to Regulate Proprietary Standards is Limited

FCC authority in the area of patents and patent licensing is very limited. It has acted to protect rightsholders (for example, in the area of syndicated exclusivity), but has not acted to deprive rightsholders of their rights. The former FCC Chairman stated that protection of intellectual property rights has been one of the four basic principles guiding his chairmanship of the agency.

Remarks of Dennis R. Patrick before the National Association of Broadcasters,  
May 2, 1989, at 6.

Patents are legal monopolies, and the patentee may choose whether or not to license others to use its patents (Dawson Chemical Co. v. Rohm & Haas Co., 448 U.S. 176, 202 (1980); SCM Corp. v. Xerox Corp., 645 F. 2d 1195, 1204 (2nd Cir., 1981), cert. denied, 455 US 1016 (1982)) and may charge the royalty amount that the leverage of the patent monopoly permits (Brulotte v. Thys Co., 379 US 29, 33 (1964)). Moreover, the 100th Congress enacted an amendment to the patent laws providing that no patent owner may be found to have misused its patent by refusing to license or use it.<sup>2</sup>

Under the Constitution, intellectual property rights (like other forms of property) may not be taken by the government without just compensation. With respect to patents, the only government agencies that have the authority to compel the licensing of patents are the Nuclear Regulatory Commission and the Environmental Protection Agency, and in each agency the power is narrowly limited. In the case of the NRC, the licensing power is limited to special nuclear material, and the statutory authority includes a compensation scheme.<sup>3</sup> The EPA, under the Clean Air Act,<sup>4</sup> has limited authority to effect compulsory licensing of patented technology needed to ensure compliance with pollution

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<sup>2</sup>Patent and Trademark Office Authorization Act, Pub. L. No. 100-703, Sec. 201, amending 35 U.S.C. Sec. 271(2).

<sup>3</sup>42 U.S.C. 2183.

<sup>4</sup>42 U.S.C. 7608.

standards. This would be done by EPA asking the Attorney General to seek a court order compelling the licensing of a patent; the final decision and determination of compensation is left to the court.

U.S. patent policies are based on the idea that broad and potentially lucrative protection for intellectual property will stimulate invention and innovation. The underlying public policy of promoting technological progress is enshrined not only in the Patent Clause of the Constitution and in federal patent and trade secret law, but also in Section 7(a) of the Communications Act. But there is nothing in the Communications Act that gives the FCC any power over patent rights, authority to impose a compulsory licensing scheme for patents, or the power to appropriate patented technology.

The Commission itself has recognized that it has very limited, if any, authority in the patent area.<sup>5</sup> In discussing the possibility of an RCA patent monopoly in the development of color television, the Commission refused to eliminate RCA's patented system from consideration, nor did it suggest that it could compel licensing of the system. It merely noted that remedies were available under the antitrust laws, or the Commission could seek additional authority

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<sup>5</sup>In a April 21, 1988 memorandum from FCC Deputy Chief Engineer Bruce Franca to Irwin Dorros, Chairman of the Systems Subcommittee of the Advisory Committee on Advanced Television, an FCC patent policy is cited. The policy appears to be that the Commission will take "appropriate action" in cases where patent ownership obstructs the development of telecommunications services. However, it does not appear that this "policy" has ever been implemented, nor has the Commission's authority in this area ever been affirmed in court.

from Congress to deal with the specific antitrust problems of radio communications.<sup>6</sup>

In the case of telephone jacks and plugs, the Commission noted that AT&T patents could be used as a discriminatory and anti-competitive tool, but did not suggest mandatory licensing as a solution. Instead, it adopted the AT&T jack and plug designs on the condition that AT&T abide by its promise of voluntary licensing on a non-discriminatory basis.<sup>7</sup> Even this action was based on authority under Title 2 of the Communications Act not applicable to ATV.

Only once, in the case of Comsat, has the Commission actually proposed a mandatory patent licensing system. This would have covered patents resulting from work paid for out of INTELSAT funds. The FCC proposed it as a means of minimizing Comsat's competitive advantages over other U.S. companies due to its government-granted monopoly position in INTELSAT.<sup>8</sup> Here again, however, the Commission eventually decided to merely hold the patent owner to a pledge of voluntary, non-discriminatory licensing.<sup>9</sup>

Both in the case of AT&T and Comsat, the Commission exercised extensive regulatory oversight and authority under Title 2 of the Communications Act.

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<sup>6</sup>Amendment of Section 3.606 of the Commission's Rules and Regulations, 41 FCC 1, 41 (1950) at para. 126.

<sup>7</sup>Revision of Part 68 of the Commission's Rules, 62 FCC 2d 735, 738 (1976).

<sup>8</sup>Comsat Study, 77 FCC 2d 564, 650 (1980).

<sup>9</sup>Changes in Comsat Corporate Structure, 90 FCC 2d 1159, 1195 (1982).

By contrast, an ATV system proponent would be an entirely private entity that enjoys no government-granted monopoly, whose profits are not regulated by the Commission, and whose business activities are not regulated under Title 2.

#### The Commission Could Require Disclosure of Licensing Terms Prior To Choosing a Standard

As a policy matter, the Commission might be able to treat patent licensing terms as a decisional criterion in choosing an ATV system. It could require disclosure of the patent licensing terms and conditions, and then treat this as an input into the decision process, in the same way that consumer cost, technical quality and other factors might be decisional inputs. In this way, proponents with more generous licensing terms would receive a higher score than proponents with restrictive terms. Arguably, this approach would not actually compel the licensing of patents, while still most likely accomplishing the widespread licensing of proprietary ATV technology.

However, this approach further complicates the Commission's decisionmaking job, by adding an additional tradeoff into the decisional process. Moreover, it presents a possible problem if any proponent desires to hold its patent licensing terms as confidential information, a practice which is not uncommon. In this case, while the Commission might be able to treat the licensing terms and conditions as trade secrets and could grant confidentiality, it is not clear whether the Administrative Procedures Act would permit the Commission to use such confidential information as the basis for a rulemaking decision.