ACCESS TO DIGITAL OBJECTS: A COMMUNICATIONS LAW PERSPECTIVE

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When developing systems for the management of copyright, patent, trade secret, mask work and other rights and interests in the national information infrastructure ("NII"), an important consideration is how to provide a legal environment that will maximally encourage the development of new information products and services. While the so-called "intellectual property" aspects of digital communications have been discussed in various fora, and, in particular, the copyright law implications of network access to computer formatted works, there has been little attention paid to the role and impact of communications law in this context. However, from a business perspective, it is vital that a coherent legal approach to regulation of the communications marketplace be developed and put in place. This paper suggests the need for the development of a new "communicator's right" derived from communications law concepts to authorize access to sets of sequences of bits in order to perform stated operations.

Efforts have been made to adapt existing concepts of broadcasting, cable television, cable satellite programming, libraries and publishing to the world of digital communications, but in an ad hoc and fragmentary manner.[1] Yet new possibilities may become available commercially in the future which do not easily fit into the current communications law scheme. It is necessary to begin now the dialogue required to accommodate within the framework of the communications law the dynamic new services that are under de-

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1. A recent example of this "band aid" approach was seen in the communications bills considered in the last Congress, where attempts were made to pigeonhole new communications services into stereotyped concepts such as "electronic publishing" or "video programming."

velopment. It would be especially helpful in connection with consideration of communications legislation by the Congress for the Federal Communications Commission ("Commission" or "FCC") to undertake a careful evaluation of experiments underway on new capabilities.

A. Provision of Communications Services over Global Computer Networks

When entering any new regime, the legal environment needs to be clarified. In the past, legal arrangements have been made for the introduction of entities like cable systems, satellite carriers, telephone companies and broadcast stations; however, none of these arrangements map very well into the requirements for information services over global computer networks. A basic issue is separating out the various rights which exist under copyright, patent, trade secret, trademark and other laws relating to content, from those rights which are derived from the transmission/ communication/ transporting of the "content." Without a clear legal framework which looks at all sides of the legal "coin," these rights may overlap in ways that are confusing at best and obstructive or destructive at worst. In any event, the lack of clarity in this area may seriously hinder entry of new business into the developing information infrastructure.

Rather than focus on the content of the communication, let's begin instead by looking at the communicator—the information service provider. One model of an information service provider is an entity which acts much like a bank. While a bank provides certain financial services, there is generally limited liability with respect to the underlying transactions. For example, when you pay a bill with a check, and a bank pays the amount noted on the face of the check to the account of the organization designated, the bank is not usually required to determine whether the transaction which resulted in the writing of the check met all the necessary requirements of a binding contract. A second model is one in which an information service provider operates much like a broadcaster. In that case, the provider may be required to assume certain responsibilities with respect to content, such as clearance of rights at the source.

1. Locating and Invoking Digital Objects.

A general model of an information service provider (and one which is currently being developed on an experimental basis) is that of a "repository" containing "digital objects." From a business

perspective, the digital object is equivalent to a "package" incorporating information in the form of a set of sequences of bits. This entity appears to be a most useful concept on which to begin the discussion of a legal framework based on communications. When considering a legal basis for regulation of access to repositories containing digital objects (whether such objects are also called documents, television programs, photographs, movies, records, manufacturing designs, widgets, etc.), this paper will review the conceptual underpinnings of existing communications law and explore whether any or all of these precepts may be applicable in this context.

The NII will provide capabilities in which information services of all kinds may flourish.[2] For commercial enterprise to take full advantage of the NII, it will be helpful to separate out the need for clearance of copyrights and other rights and interests that may be claimed in connection with a given digital communication from the task of delivering digital objects independent of their contents. For example, in the broadcast industry, retransmission consent is viewed as a separate, albeit connected level of authorization. There are similar provisions relating to the unauthorized reception of cable programming under section 705 of the communications law which are independent of any underlying intellectual property rights in the cable programming. Various package delivery companies like UPS or Federal Express need not obtain permission from a copyright owner or other owners of rights in the content in order to move a physical package from one place to another. This activity is distinctly not the same as communications, where there is a dual level of authorization required, one covered by the communications law applying to the program-carrying signal (this has also come up recently in the context of North American Free Trade Agreement),[3] and one applying to the public performance and/or display of any underlying works that may be subject to copyright.

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2. For an interesting discussion of emerging architectural principles for the NII, see "An Architectural Framework for the National Information Infrastructure," Cross-Industry Working Team (XIWT) (Sept. 1994) (report at ftp://cnri.reston.va.us/xiwt/papers; or at http://www.cnri.reston.va.us:3000/XIWT/public.html); see also "Putting the Information Infrastructure to Work: Report of the Information Infrastructure Task Force Committee on Applications and Technology," National Institute of Standards and Technology, U.S. Dept. of Commerce (May 3, 1994).

3. See Article 1707: Protection of Encrypted Program-Carrying Signals, Ch.17—Intellectual Property, North American Free Trade Agreement ("NAFTA"), *reprinted in* NAFTA Text (CCH), at 327 (1994).

For the NII, this dual level of authorization arises in connection with the concept of access to repositories containing digital objects. The notion of a digital object which incorporates information in the form of a set of sequences of bits is the basic entity in the system. With proper authorization, one can "unwrap" objects to obtain the information entities they contain. By analogy, one can talk about a performance of an episode of an audiovisual work like the television show MASH and the transmission program MASH as the package which contains the performance of the work. Television broadcasters, cable systems and other information service providers all have similar needs to deal with packages of information rather then the underlying works. Apart from the licensing of any rights and interests in the content under copyright or other bodies of law, digital objects, and the legal framework under communications law that governs access to such objects, should be addressed.

There has been work going forward on the development of a frame of reference for locating and/or invoking digital communications services and digital objects on a computer network. In this context, a digital object is simply a set of sequences of bits, plus a unique identifier for the object called a "handle."[4] A digital object may incorporate information or material in which copyright or other rights or interests are claimed, although this need not always be the case. There may also be rights associated with the digital object itself (and some digital objects may be considered as computer programs or computer databases).

2. Repositories That "Know" About Digital Objects.

Digital objects may be placed and retained for possible subsequent retrieval in a "repository." These may be operated in a variety of ways spanning the range from storage depot to bulletin boards to broadcast stations on the net. The digital storage system or repository may contain other related information and management systems, and provide user access to stored objects under some set of policies. The digital object has co-located with it in the repository an associated "properties record" which is a table or set of database entries that describe basic properties of the digital object. The properties record may contain entries such as the handle for that object, the originator of the object, the name of the object (if

4. See R. Kahn and R. Wilensky, "Locating Electronic Library Services and Objects: A Frame of Reference for the CS-TR Project," Draft for Discussion Purposes (Feb. 2, 1994) (paper contains definitions of key concepts and introduction to method of operation of repositories). For the current text of the Kahn/Wilensky architecture paper, see http://www.cnri.reston.va.us/home/cstr/k=w.html.

any), a description of any work or other information or material incorporated in the object, time and date of deposit, format information, and stated terms and conditions for access and usage of the object.

From a copyright perspective, it is important to stress that a handle generally identifies a fixation of a work in some digital format and not the work itself. For a given work, there may be several handles or unique identifiers assigned depending on the different versions, *e.g.*, a work may be given a separate handle for its fixation in different formats, from Postscript to its Word Perfect version, to its Group IV facsimile version. There is also a concept of a "meta-handle" or indirect handle. When a user supplies a meta-handle to a repository, the digital object it gets back may contain all of the handles for a given work (suitably annotated) or all of the handles for a given version of the work, rather than a particular fixation of the work. The repository itself has no deep knowledge of what the work is or even what a given digital object contains; it treats all digital objects alike. In the case of a meta-handle, it just happens that the object's contents can be interpreted as handles.

To take an example, if you put a computer program into a repository that knows about other digital objects, *e.g.*, the program is based on or incorporates thousands of photographs of rocks landing on the planet Jupiter, the program may contain separate handles for each of the photographs intended only for internal use. The information about each separate handle may be made available to external users; however, the program may not let a user interact with the photographs in this way. The program as a whole would be invoked in the repository as a digital object using its own handle; and, the program would then invoke the other handles internally.

In dealing with a repository, there are at least three different modes of access that may be anticipated: (1) Here the repository assumes that the user knows what digital object he/she wants and has already obtained the appropriate handle or handles. For example, the user may supply the handle for a particular Word Perfect version of Hamlet to retrieve it directly. (2) The repository has some knowledge about content and is often able to retrieve specific elements stored. Generally, the repository operates like the first example, plus some mechanism for indexing or browsing, *e.g.*, a user may want a particular version of Hamlet, but not know its handle; an index service within the repository (or external to it) could provide the handle information. Alternately, the index service could simply use the handle or any other mechanism to provide the digi-

tal object if it had access to it. (3) A more complex repository may be viewed as an "expert system," a "knowledge-based system," or, more generally, a computer program. In such a repository, the output is not measured simply with reference to the information "stored" in the system. Rules or heuristics may be used to form inferences on a particular topic and generate the equivalent of digital objects on the fly, particularly if the repository is of a distributed character.

Let us now get back to the legal underpinnings of a business strategy to facilitate management of access to a distributed set of repositories. As with many areas, the law of the evolving NII has generally been reactive and nonlinear in its development. There have been few attempts to look at the emerging environment as a whole, and, instead, the area is now governed by a smattering of case law.[5] One source of legal regulation which has often paralleled (and sometimes intersected) the copyright paradigm is the legal structure found in the Communications Act of 1934 and its regulations (promulgated by the FCC and found in Part 47 of the Code of Federal Regulations).

B. Title II vs. Title III: Radically Different Regulatory Approaches to Communicators Under the Communications Act

Although embodied in the same Act, the way in which Congress and the FCC have chosen to regulate common carriers and broadcasters is radically different. Understanding these divergent approaches is critical to understanding the paradox Congress and the FCC now face, as telephone companies (traditionally common carriers) begin to look more like broadcasters with the introduction of video dialtone, and broadcasters begin to look more like common carriers as they begin to use their allotted 6 MHz of spectrum for ancillary services such as paging and data transmission. In addition, packet network providers are increasingly able to support each possible mode of operation.

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5. *See, e.g.*, Playboy Enterprises Inc. v. Frena, 839 F. Supp. 1552 (M.D. Fla. 1993) (computer bulletin board operator found to have infringed copyright on photos that were digitized and uploaded by others); Cubby, Inc. v. Compuserve, Inc., 776 F. Supp. 135 (S.D.N.Y. 1991) (in defamation action, computer network which provided access to third party "library" of new publications a mere "distributor" and not "publisher" and could not be held liable for defamatory remarks unless plaintiff could prove actual knowledge on the part of defendant); Steve Jackson Games, Inc. v. U.S. Secret Service, No. 93-8661 (5th Cir. 1994) (seizure of a computer used to operate a bulletin board system, and containing unread private electronic mail, does not constitute an unlawful intercept under the Federal Wiretap Act, as amended by the Electronic Communications Privacy Act of 1986).

1. Common Carrier Regulation Under Title II.

Regulation of communications common carriers draws its fundamental precepts from the law of bailments. A bailment, under English common law, is a delivery of personal property by the owner to a third party, with a 'relation' resulting from this delivery. But laws surrounding the concept of hiring out oneself to carry goods for another dates back far further, at least to the Babylonian Code of Hammurabi. Roman law had separate subcategories of bailments, including "location operis mercium vehendarum," the transportation of goods for hire.

Inherent in the concept of bailments was that the bailee served only as the transportation medium, and had no ownership interest or control over the goods themselves except as necessary to transport them from point A to point B. These concepts found their way into the Interstate Commerce Act of 1887,[6] and, eventually, into the Communications Act of 1934. A communications common carrier is defined therein as "any person engaged as a common carrier for hire in interstate or foreign radio transmission of energy."[7] This rather circular definition of a communications common carrier has been modified by courts into a two-part test:

> The primary *sine qua non* of common carrier status is a quasi-public character, which arises out of the undertaking to carry for all people indifferently. This does not mean that the particular services offered must practically be available to the entire public; a specialized carrier whose service is of possible use to only a fraction of the population may nonetheless be a common carrier if he holds himself out to serve indifferently all potential users. . . .
>
> A second prerequisite to common carrier status is. . . that the system be such that customers transmit intelligence of their own design and choosing.[8]

The holding oneself out to the public at large led to the requirement that all common carriers provide service according to established, or tariffed, rates, which could be regulated.

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6. 24 Stat. 379 (1887). In fact, it was the Interstate Commerce Commission ("ICC") which first had jurisdiction over telegraphs and telephones, once the concept of information as a "good" was accepted. By default, the ICC was the only government agency which had any experience regulating commerce of this type.

7. 47 U.S.C. sec. 153(h).

8. National Ass'n of Regulatory Util. Comm'rs v. FCC, 533 F.2d 601, 608-09 (D.C. Cir. 1976) ("NARUC II") (quotations and footnotes omitted).

When one thinks of a common carrier, one tends to think of large companies such as AT&T, the Bell Operating Companies, or other long distance telephone companies such as MCI or Sprint. In fact, common carriers come in a variety of assortments, including companies that merely resell the capacity of other carriers. These "resale common carriers" essentially buy capacity from other carriers at a bulk rate, then resell it to customers. Even though they do not own the hardware over which the communications ultimately travel, such resale common carriers generally are subject to Title II regulation.[9]

If a carrier provides service to others who "transmit intelligence of their own design and choosing," but does not hold itself out to the public as a whole, instead offering service pursuant to individually-negotiated contracts, they are considered "private carriers" and not subject to full Title II regulation.[10] Many of the benefits of being a common carrier nonetheless apply to private carriers, including being excluded from regulation under Title III as a broadcaster or cable system, since they are not responsible for the creation of the content of the communication. Moreover, it is possible to be both a common carrier and a private carrier at the same time, depending on the service offering.[11]

One of the other hallmarks of common carrier regulation is split jurisdiction between federal and state regulators. The U.S. Constitution allows Congress to regulate interstate commerce. Because so much of communications (*e.g.*, local telephone service) is intrastate, state regulators have a large say in determining communications policies, especially price regulations, for common carriers.[12]

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9. See Regulatory Policies Concerning Resale and Shared Use of Common Carrier Domestic Public Switched Network Services, 62 FCC 2d 588, 600 (1977) ("Resale and Shared Use Order") ("resale carriers, whether they be brokers or 'value added' carriers . . . are equally subject to the requirements of Title II of the Communications Act"); *but see* Second Report and Order, 91 FCC 2d 59, 73 (1982) (resale carriers that own no equipment at all are not required to file tariffs or receive permission to terminate service).

10. NARUC II, 533 F.2d at 608-09.

11. Id. at 607.

12. For a prime example of the friction between federal and state regulation of communications common carriers, see Louisiana Public Service Commission v. FCC, 476 U.S. 355 (1986), wherein the Supreme Court rejected the FCC's attempt to allow the expensing (rather than capitalization) of home wiring by local exchange carriers ("LECs") in order to accelerate the write-off of such items and provide impetus to LECs to replace twisted pair copper going into the home with greater capacity coaxial cable or fiber optics.

2. *Broadcast Regulation Under Title III.*

In contrast to common carrier regulation, broadcasters are regulated pursuant to Title III of the Communications Act. More than just a different section, the approach taken to broadcast regulation does not stem from the concept of bailment, but rather from a wholly new concept of regulation of the scarce electro-magnetic frequency. Because of the limited number of channels which could be allocated, Congress and the Commission have imposed restrictions on the content of programming that goes out over the airwaves.[13] Moreover, from the inception of the Communications Act of 1934, Congress and the Commission understood that the rights of the owners of programming needed to be protected, both as such rights are defined for purposes of copyright law, and in other ways as well. Thus, a number of statutory and rule provisions have developed on the broadcast "side" which are absent on the common carrier "side" of communications regulation.

a. Section 325 and Rebroadcast Consent.

From the outset, Congress recognized that once programming is broadcast over the airwaves, the broadcaster loses control over such material. Technology existed, even in 1934, to allow someone to receive the broadcast, remodulate the signal, and rebroadcast it. Given the questionable application of the definitions of "copying" and "performance" under the 1909 Copyright Act to a radio broadcast, Congress enacted Section 325 to provide broadcasters, and thus programming owners, some degree of protection against the usurpation and redistribution of their valuable programming. Section 325(a) states in part:

> . . .[N]or shall any broadcasting station rebroadcast the program or any part thereof of another broadcasting station without the express authority of the originating station.[14]

The fact that Section 325(a) is rooted in communications policy and not copyright can be found in the FCC's decision in *Channel 7, Inc.*[15] There, the Dallas, Texas, CBS affiliate refused to grant rebroadcast consent to another television station with an overlapping

13. See Red Lion Broadcast Company v. FCC, 895 U.S. 367 (1969). Cable systems are regulated pursuant to Title VI (47 U.S.C. Sec. 521 et seq.). As discussed below, many Title III concepts have been applied to cable systems, although their First Amendment status is considered different than that of broadcasters. See, e.g., Turner Broadcasting network, Inc. v. FCC, 114 S. Ct. 2445 (1994).

14. 47 U.S.C. sec. 325(a).

15. 3 RR 2d 679 (1964).

service area. The Commission found that the second station had violated Section 325(a) in rebroadcasting the CBS signal, and rejected its claim that Section 325(a) applies only when the signal being transmitted is produced by the station originating the broadcast. It construed Section 325(a) of the Communications Act "as requiring consent of the station whose signal is rebroadcast even in those cases where property rights in the program material may rest elsewhere."[16]

b. Network Nonduplication and Syndicated Exclusivity.

One major problem with Section 325(a) is that it applies only to broadcasters. With the development of cable systems, the Commission once again was faced with broadcast stations, especially television, losing control over their signals. Specifically, the Commission was concerned that a cable system's ability to import distant television signals airing the same programming could spell financial disaster to local stations. Thus, in 1965, the Commission adopted its first network nonduplication and syndicated exclusivity ("syndex") rules, granting local stations the right to black out imported distant signals.[17]

As with Section 325(a), the basis for network nonduplication and syndex regulations is not intellectual property ownership, for local stations owned neither the copyright to their network feeds nor the syndicated programming they purchased from program producers. Instead, the rights granted to broadcasters are grounded in the FCC's jurisdictional mandate to ensure equitable and fair distribution of licenses and to promote diversity over the airwaves.[18]

c. Section 325(b) and Retransmission Consent

The latest chapter in communications policy granting rights to broadcasters is the new Section 325(b) of the 1992 Cable Act, which for the first time grants broadcast stations the right to withhold con-

16. Id. at 681; *see also* Amendment of Rebroadcast Rules, 9 RR 350 (1953) (rejected request to amend rebroadcast rules such that broadcast stations could refuse rebroadcast consent only if they were the producers of the programming at issue).

17. Rules re Microwave-Served CATV, 38 FCC 683 (1965) (although the syndex rules were repealed in 1980, they were reinstated in 1988, and upheld in United Video v. FCC, 890 F.2d 1173 (1989)).

18. See Amendment to Program Exclusivity Rules, 3 FCC Rcd. 5299, 5320-5321 (1988) (reimposition of syndex rules based not on copyright concepts but on communications policy).

sent from carriage of their signals by cable systems. This is not a copyright right, but rather a communications right which is separate from the copyrights in the underlying work:

> The legislative history of the 1992 Act suggests that Congress created a new communications right in the broadcaster's signal, completely separate from the programming contained in the signal. Congress made clear that copyright applies to the programming and is thus distinct from signal retransmission rights.[19]

3. The Line Between Title II and Title III Begins to Blur —Video Dialtone and Dark Fiber

The problem with the distinction between common carrier and broadcasting regulation is that more and more services are looking less and less like common carrier offerings and more like "private" offerings, or even broadcasting. Common carriers themselves often try to be both common carriers and "private carriers" to avoid tariffs and rate regulation for non-traditional communications services, such as data transmission. The Commission recently was forced to deal with two of these "gray areas," first with regard to so-called "dark fiber," and second in its "video dialtone" ("VDT") proceeding.

a. Dark Fiber — Telephone Company Leasing of Excess Fiber Capacity on a Contract Basis

With the advent of fiber optic technology, many phone companies found that the most expensive part of installing fiber was the labor cost, which far exceeded the cost of the fiber itself. When replacing heavy and bulky copper wire with new thinner, lighter, glass fiber, many telephone companies installed far more fiber than initial, or even forecasted, demand called for, since the marginal cost of this excess capacity approached zero. Once in place, this fiber was not hooked to the electronic equipment necessary to send the laser communications down the fiber. It thus became known as "dark fiber."

At first, the Commission allowed phone companies to market "lit fiber" (fiber to which the phone company attached communications equipment) and "dark fiber" on an individual contract or "individual case basis" ("ICB"), outside of the normal tariffing requirements of Title II of the Communications Act. In 1989, the FCC concluded that phone companies now had sufficient experi-

19. Broadcast Signal Carriage Issues, 8 FCC Rcd. 2965, para. 173 (1993).

ence with "lit fiber" that they should offer such service according to a standard tariff.[20] On reconsideration, the FCC extended this requirement to "dark fiber" as well.[21] After a number of companies filed tariffs the FCC found unreasonable, they attempted to leave the "dark fiber" market and were denied this right by the FCC.[22]

In *Southwestern Bell Telephone v. FCC*,[23] Southwestern Bell and others appealed these decisions to the D.C. Circuit claiming that the Commission had no common carrier jurisdiction over "dark fiber." These companies claimed that "dark fiber" was a private service, negotiated between the carrier and individual customers outside of Title II. The Commission argued that the mere filing of the ICB contracts with the FCC proved that the carriers intended to hold themselves out as common carriers. The Court reversed and remanded to the FCC:

> In order to regulate an activity under Title II of the Communications Act, the Commission must first determine whether the service is being offered on a common carrier basis. In this instance, the Commission short-circuited any analysis of whether petitioners held themselves out indifferently to all potential users of dark fiber, by pronouncing an insupportable *per se* rule that a filing of a piece of paper with the FCC constitutes an offer of common carriage. We certainly do not impugn the intentions of the FCC to serve the public interest by regulating dark fiber, and we do not decide today whether the Commission may draw on other authority, such as its ancillary jurisdiction, to regulate petitioners' services. But we cannot permit the Commission to augment its regulatory domain, as it has attempted to do here, by redefining the elements of common carriage to include any service arrangement that is recorded with the FCC.[24]

The net result of this case (unless the Commission finds a way around it on remand), is that for two identical pieces of fiber under the street, one may be subject to common carrier regulation by virtue of being "lit," and one not subject to common carrier regulation by virtue of being "dark." Same hardware, same types of transmissions, but different regulatory approaches.

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20. In re Local Exchange Carriers' Individual Case Basis DS3 Service Offerings, 4 FCC Rcd. 8634 (1989) ("ICB Order").

21. In re Local Exchange Carriers' Individual Case Basis DS3 Service Offerings, 5 FCC Rcd. 4842 (1990) ("ICB Reconsideration Order").

22. Section 214 Order, 8 FCC Rcd. 2589 (1993).

23. 19 F.3d 1475 (D.C. Cir. 1994).

24. *Id.* at 1484.

b. Video Dialtone — When Telephone Companies Begin Carrying Video

Video Dialtone stemmed from the Bell Operating Companies' ("BOCs") attempt to be allowed to offer video programming. Under the consent decree which broke up the AT&T telephone monopoly, known as the Modification of Final Judgment ("MFJ"), the BOCs were precluded from providing information services within their service area. In *United States v. Western Union*,[25] the D.C. Circuit ordered Judge Greene to lift the ban on the provision of information services. As a result, in 1992 the FCC adopted an order allowing the BOCs to provide the *technology* necessary to deliver video over their wires, but only on a common carrier basis.[26] Further, the FCC limited the equity interest a BOC could have in programming companies to five percent. Finally, the FCC concluded that local exchange carriers providing video dialtone were exempt from local requirements to obtain a municipal cable franchise in order to provide the service.

What is interesting in the way that the FCC chose to approach video dialtone is that the FCC did everything in its power to force the provision of video programming into a common carrier mode. As with most common carrier decisions, the FCC totally ignored the content of the VDT and instead focused primarily on the regulatory status of the carrier. The FCC assumed, almost without comment, that the VDT provider would have no ownership or control over the *content* of the signal—the VDT provider would merely transmit the signal down the wire.

Yet to the uninitiated, a telephone company providing VDT service would look very much like a cable system, or so the cable industry argued in appealing the FCC's decision. The national Cable Television Association, among others, challenged the FCC's rules, because in concluding that a VDT provider was a common carrier and not a cable system, the FCC thereby precluded local authorities from requiring the VDT provider to obtain a local franchise to operate, thereby eliminating the customary five percent "franchise fee" most cities reap from cable operations.

In *National Cable Television Association, Inc. v. FCC*,[27] the D.C. Circuit upheld the FCC's rules, agreeing that a VDT provider was a

25. 900 F.2d 283 (1991).

26. In the Matter of Telephone Company-Cable Television Cross-Ownership Rules, 7 FCC Rcd. 5781 (1992). The telephone-cable cross-ownership provision stems from long-standing FCC regulations codified in the 1984 Cable Act which precluded telephone companies from offering cable-type services within their service areas.

27. D.C. Cir. No. 91-1649 (August 26, 1994).

common carrier subject to Title II regulation, and not a cable system, even though to the home user, the two might eventually become indistinguishable. The key for the court was the FCC's regulations that require a VDT provider to hold itself out indiscriminately, the hallmark of common carriage. Further (and of critical importance in this context), the court found that the act of carrying video over a VDT was not cable service because:

> [I]t would not be engaged in the 'transmission . . . of video programming.' In the Commission's lexicon 'the term transmission . . . requires active participation in the selection and distribution of video programming.'[28]

The upshot of this discussion is that so long as a video provider has no control over the content of the transmission, it is a common carrier and not subject to the content based regulation which permeates Title III.

4. Section 705 — Restrictions on Interception of Communications

Probably the most important section which cuts across all delivery media (*except* broadcasting) is Section 705. Section 705 precludes the interception and divulgence of radio and wire communications not generally available to the public.[29] Section 705 began as the anti-wiretapping provision of the Communications Act.[30] It was intended to prevent eavesdropping—the unauthorized interception and use of private conversations and other point-to-point communications.[31] Indeed, a number of courts and the FCC have applied general privacy law principles in determining the

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28. Id. at 9-10 (citations omitted).

29. Because broadcast signals are intended to be received by the public at large, Section 705 does not apply to the interception and divulgence of a radio or television signal. Indeed, it was precisely because of this "not generally available to the public" language that Section 325 has been necessary to protect the content of broadcast signals.

30. See Omnibus Crime Control and Safe Streets Act of 1968, Pub.L.No. 90-351, 1968 U.S. Code Cong. & Admin. News (82 Stat.) 2112, 2113, 2154; *see also* Nardone v. United States, 302 U.S. 379 (1937) (evidence obtained in violation of then-section 605 held inadmissible in criminal trial).

31. As originally adopted in 1934, then Section 605 embodied a broad public policy against eavesdropping on point-to-point communications such as telephone conversations. Section 605 was amended in 1968 to update and clarify the basic applicability of the prohibition against interception and disclosure. Section 605 was renumbered and further amended in 1984. See Cable Communications Policy Act of 1984, Pub.L.No. 98-549, Section 5-6, 1984 U.S. Code Cong. & Admin. News (98 Stat.) 2779, 2802-04 (1984). All references herein will be to Section 705, regardless of whether at the time of the citation, the section was enumerated as Section 705 or Section 605.

applicability of Section 705 to differing technologies. In *Goodall's Charter Bus Service, Inc. v. San Diego Unified School Dist.*,[32] the court found that there was no "reasonable expectation of privacy" in the use of a shared dispatch radio frequency, and hence the interception and publication of conversations did not constitute a violation of Section 705. Similarly, the Commission has held that Section 705 does not apply to either the citizen band ("CB") or amateur bands, since such transmissions can be received by the general public.[33] More recently, Section 705 has been found inapplicable to cordless telephones and cellular telephones on the basis that use of such devices does not provide the user with any reasonable expectation of privacy.[34]

Section 705 has been applied to a number of non-interstate telephone type transmissions, including strictly intrastate telephone conversations,[35] telegrams,[36] Federal Aviation Administration communications,[37] taxicab radio service,[38] Subscription Television,[39] Multipoint Distribution Service,[40] cable television,[41] and certain sat-

32. 125 Cal. App. 3d 194 (1981).

33. In re Amendment of Parts 73 and 97 of the Commission's Rules Concerning Rebroadcasts of Transmissions of Non-broadcast Radio Stations, Report and Order, 101 F.C.C.2d 32 (1985).

34. Tyler v. Berodt, 877 F.2d 705 (8th Cir. 1989), *reh'g denied*, Aug. 8, 1989.

35. Huff v. Michigan Bell Telephone Co., 278 F.Supp. 76 (E.D. Mich. 1967); Diamond v. United States, 108 F.2d 859 (6th Cir.1938).

36. In re Howard Steve Strouth V. Western Union Telegraph Co., Decision, 70 F.C.C.2d 506 (1978).

37. Unauthorized Broadcast of FAA Communications by Broadcast and Other FCC Licensees, Public Notice, 74 F.C.C.2d 615 (1972).

38. In re Herbert E. Dickson on Request for Inspection of Records, Memorandum Opinion and Order, 3 FCC Rcd. (1988).

39. Subscription Television Service ("STV") is a broadcast service in which customers pay for programming by renting a reception box which will unscramble the STV signal. United States v. Westbrook, 502 F.Supp. 588 (E.D.Mich. 1980). Interception of an STV signal has been held to be a violation of Section 705. Id. at 590. *See also* Chartwell Communications Group v. Westbrook, 637 F.2d 459 (6th Cir. 1980).

40. Multipoint Distribution Service ("MTV") is similar to STV, except it operates on frequencies outside the television channels. Again, decoder devices are required in order for a subscriber to view the MDS programming. Movie Systems v. Heller, 710 F.2d 492 (8th Cir. 1983), *reh'g denied*, Aug. 5, 1983. Section 705 protects this service. Id. at 495. See also Premier Communications Network, Inc. v. Fuentes, 880 F.2d 1096 (9th Cir. 1989).

41. Cimineli v. Cablevision, Inc., 583 F.Supp. 158, 161 (E.D.N.Y.1984); Cox Cable Cleveland Area, Inc. v. King, 582 F.Supp. 376, 380 (N.D. Ohio 1983).

ellite programming.[42] In 1984, Section 705 was amended to exempt from its provisions the reception and private viewing of cable program materials when transmitted by communications satellites under certain specified conditions.[43]

Section 705 also was called into play in the on-line computer world in *Telerate Systems, Inc. v. Caro.*[44] Telerate, a provider of financial market data available through a dial-up service, sought a preliminary injunction against a company which had developed a computer hardware/software interface which allowed authorized Telerate subscribers to manipulate the Telerate data in an enhanced fashion. The court granted Telerate's preliminary injunction request on a variety of grounds, including breach of contract, copyright infringement, and theft of trade secrets. In addition, the court, again in the context of a preliminary injunction motion, found that Telerate had demonstrated a high degree of likelihood of prevailing on the merits of its Section 705 claim. The court found that there had been an interception of a transmission not intended for the public, and that there had been a "publication" of such transmission. In so finding, however, the court acknowledged that it had to create several legal fictions to reach its conclusion.

> The Excel-A-Rate user does not necessarily divulge or publish the transmission received to any third party. Nevertheless, courts applying Section 705 have employed a legal fiction to bring sellers and manufacturers of interception devices within the scope of this section of the statute. Courts have held that the act of viewing a transmission that the viewer was not authorized to receive constitutes a publication.[45]

The problem with the *Telerate* case, however, is that the subscribers had paid for the *transmission* of the data, but Telerate, through contract, was attempting to limit their manipulation of such data by limiting the hardware/software which could be utilized to massage the data. Thus, the "legal fiction" employed by courts to bring manufacturers of devices such as cable descramblers

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42. United States v. Harrell, 983 F.2d 36 (5th Cir. 1993); *see also* FCC Issues Warning Against Theft of Satellite Programming, Public Notice, 65 Radio Reg.2d (P&F) 36 (1988).

43. Cable Communications Policy Act of 1984, Pub.L.No. 98-549, 98 Stat. 2779, 2902-03 (codified at 47 U.S.C. Sec.705(b)-(e) (Supp. III 1985)). Owners of home satellite dishes may receive cable programming transmitted via satellite as long as such programming is not encrypted or the program distributor has not established a local marketing system. 47 U.S.C. Section 705(b) (Supp. III 1985).

44. 689 F.Supp. 221 (S.D.N.Y. 1988).

45. Id. at 230-31 (citations omitted).

under Section 705 had to be stretched to the breaking point in order to cover the case not of unauthorized *interception* of data, but rather, the unauthorized *manipulation* of data upon reception (*e.g.*, *after* its transmission). To bootstrap backwards to make manipulation of data actionable under Section 705 appears to turn that Section inside out, and extend it far beyond its initial concept as an anti-wiretap statute.

Similar stumbling blocks exist in applying Section 705 to the NII. While it is likely that Section 705 would be applicable in the case of a "hacker" breaking into an on-line database and downloading materials for which he or she has not paid, it may ultimately prove very difficult to extend Section 705, which deals only with the *interception* of data, to *misuse* cases in the future.

C. Privacy of "Electronic Communications"

Under the Electronic Communications Privacy Act of 1986 ("ECPA"), the focus of protection is not on specific rights in specific works, or communicators rights, but rather on the integrity of the electronic transfer and storage process. Generally, under the ECPA, it is unlawful for any person to "intentionally" intercept, use, or disclose any electronic communication, where the unauthorized interception is made through an electronic communication system that is configured so that the communication is not "readily accessible to the general public," that is, where the communication is scrambled or encrypted, transmitted using modulation techniques whose essential parameters have been withheld from the public with the intention of preserving the privacy of the communication, and specific other situations.[46] The ECPA also provides for the case in which an electronic service provider offers a mixture of services, some readily accessible to the public, and others intended to be private or confidential.[47]

Like the communications law, an advantage in relying on the ECPA for protection of electronic communications is that liability under the statute is not based on a determination of the legal status of the specific contents of an electronic communication. Where steps are taken to ensure that an electronic communication is not readily accessible to the public, the ECPA generally would provide protection against the intentional and unauthorized interception, use or disclosure of the communication, apart from the myriad pos-

46. 18 U.S.C.A. Secs. 2510-2511 (West Supp. 1989).

47. *See generally* Electronic Communications Privacy Act of 1986, H.R. Rep. No. 99-647, 99th Cong., 2d Sess., at 63 (1986).

sible rights in the contents, or lack thereof. However, an important drawback in relying on the ECPA for developing business applications in the NII is its general basis in criminal, not civil law.

There is an area of overlap, however, between the Communications Act of 1934 and the ECPA. With respect to this overlap, the Senate Committee on the Judiciary observed:

> As a general rule, a communication is an electronic communication protected by the federal wiretap law if it is not carried by sound waves and cannot fairly be characterized as containing the human voice. Communications consisting solely of data, for example, and all communications transmitted only by radio are electronic communications. This term also includes electronic mail, digitized transmission, and video teleconferences. Although radio communications are within the scope of the Act, the provisions of the Electronic Communications Privacy Act directed specifically to radio do not affect the applicability of section 705 of the Communications Act of 1934, as amended, to actions by members of the public.[48]

The House Committee on the Judiciary also offered some guidance on the interplay between Section 705 of the Communications Act and the ECPA. In the legislative history of the ECPA, the Committee pointed out that, "where this bill provides that 'it shall be unlawful' for the public to engage in specific conduct with respect to radio transmissions, the Committee intends that such a provision does not 'authorize' the conduct for purposes of the first sentence of Section 705(a) of the Communications Act."[49] With respect to activities that were "implicitly authorized" for purposes of Section 705 by judicial interpretations, the House Committee stated its intention that these interpretations were to remain in effect after enactment of the ECPA.

The relationship between the ECPA and the Communications Act is also clarified to some extent in the language of the ECPA. Section 2511(2)(g)(iii) of the ECPA provides that it is not unlawful under the ECPA for a person to engage in any conduct which: "(I) is prohibited by Section 633 of the Communications Act of 1934 [relating to unauthorized interception or reception of any communications service offered over a cable system]; or (II) is excepted from the application of Section 705(a) of that Act" [dealing with

48. Electronic Communications Privacy Act of 1986, S.Rep. No. 99-541, 99th Cong., 2d Sess. 14 (1986); *see also* House Report, *id.* at 22 (Communications Act might have some limited application to electronic communications).

49. House Report, *id.* at 41.

the interception or receipt by an individual of satellite cable programming for home viewing].[50] In other words, you would have to look to the 1934 Act, and not the ECPA, to determine whether certain activities were permissible. This situation introduces an element of uncertainty in the law.

D. Authorization to Access Digital Objects: A New "Communicator's Right" for the Evolving NII

The discussion above demonstrates that non-copyright rights can be conceived of and applied both to provide better control of communications by communicators (*e.g.*, Sections 325(a) and 325(b)), and to limit "downstream" use by receivers (Section 705), if desired. However, the acts of rebroadcast, or interception and divulgence, that are currently regulated for the broadcast and cable industries under the communications law, fit uneasily as a basis for developing new businesses which depend on interactive access to information in various digital formats. There are also difficulties encountered in applying the ECPA as a basis for developing a marketplace in the evolving NII.

Distinct from copyright rights, one can conceive of a new "communicator's right" to authorize access to digital objects. The notion of "access to perform stated operations on sets of sequences of bits" is a potentially important new addition to the provision of communications services which appears to fit comfortably in the context of communications law; and, it appears useful for the rules governing authorization for such access to be articulated within the framework of that body of law. Where computer programs are used not just at the point of reception to interpret bits and manifest whatever information or material may be incorporated therein, but also at the point of origination as well as at various points along the "communications pathway," there may be multiple actions that require authorization, apart from any restrictions on the underlying content. In fact, such authorization may often be required in situations where there is no knowledge of the underlying content.

Access to repositories of computer programs or computer databases, or some combination thereof, for storage, processing, retrieval and other stated operations will be a fundamental objective of business in the future. There is a need to develop a communications law basis for authorizing access to digital objects in network based repositories, whether the repositories are maintained by what are now labelled as publishers, libraries, broadcasters, cable sys-

50. 18 U.S.C.A. sec. 2511(2)(g)(iii) (West Supp. 1989).

tems, telephone companies, or others. Repositories may also be made available by corporations in the manufacturing sector; and the implications for flexible production practices hold great promise because of the need to share designs and other manufacturing information. It should even be possible for an individual to allow access to a personal repository of information under agreed terms and conditions, including free access, if desired.

We are at an early stage of a convergence between computers and communications that portends a fundamental change in the way industry approaches the regulation of communications. Where computers and computer programs play an active role in the provision of communications services, these elements should be viewed as an integral part of the communications service as such for purposes of regulation under the communications law. For example, the service may consist in the provision of access on an interactive basis to repositories of digital objects that, when invoked or unwrapped, may be computer programs in themselves such as video games. The service may also include the transport of performances of such video game programs in the form of sets of sequences of bits.[51] Programs used in the context of a communications service as such should fall within the ambit of the communications law, while any performance of a computer program or computer database embodied in a given communication may be subject to licensing under copyright and other bodies of law.

The communications law is likely to play a major role in the orderly development of information services on the evolving NII. To date, there has been only limited consideration of how to integrate the growing body of communications services that rely on digital capabilities. In this context, a communicator's right to control access to digital objects is an important new development that should be accommodated within the framework of communications law.

51. For discussion of performance rights and computer programs, *see* P.A. Lyons, "Where Electronic Publications and Television Programs Are Really Computer Programs: Some Copyright Implications," *Scholarly Publishing: The Electronic Frontier*, Ch. 18 (MIT Press) (scheduled for publication in 1995).