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A Preliminary Inquiry

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**THE REGULATORY STATUS OF  
INTEGRATED BROADBAND NETWORKS:**

**A PRELIMINARY INQUIRY**

Michael Botein

Introduction

The implementation of integrated broadband networks (IBN) is still far in the future. Nevertheless, it is necessary to analyze IBN's potential development in order to undertake effective policy planning. A major task in this process is defining IBN's fit with the legal and regulatory regime. IBN's treatment under regulatory and legal norms will influence not only its development but also its fit with traditional policies.

This paper will focus primarily upon the potential applications of federal law and policy, drawn from the Communications Act of 1934<sup>1</sup> and the antitrust laws.<sup>2</sup> The major concern will be with the Federal Communications Commission (FCC) and the District Court for the District of Columbia (D.C. District Court). This is not to downplay the importance of other legal and regulatory issues. For example, an IBN operator's liability for defamation may ultimately have a significant impact upon the relationships among components of the IBN industry. Nevertheless, consideration of such issues must await development of clearer ideas as to IBN's regulatory treatment. In the above example, the extent of an IBN operator's control over a defamatory statement would be important in fixing liability. Similarly, state regulatory authorities have become increasingly active in telecommunications regulation and may play an important

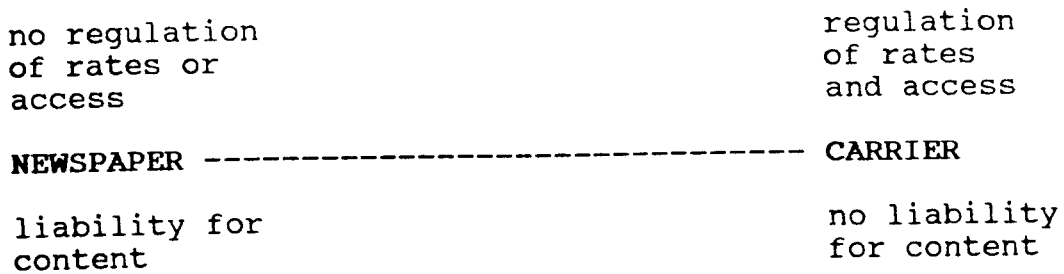
role in IBN's development; analyzing fifty discrete and tentative regulatory trends would, however, require a treatise.

I

REGULATORY STATUS OF IBN

Different media call for different regulatory treatment. As the Supreme Court has stated so often, "differences in the characteristics of new media justify differences in the First Amendment standards applied to them. . . ." U.S. jurisprudence has created a variety of possible constitutional and regulatory statuses for the media. As set forth somewhat simplistically in Figure 1, this continuum runs from no regulation to close regulation. A newspaper is subject to virtually no economic regulation and has complete editorial responsibility -- as well as liability -- for its contents; a common carrier is subject to relatively strict scrutiny even in a deregulatory environment and has no control over, or liability for, the contents of its transmissions.

Figure 1



Precisely where the electronic media fit into this scheme has become increasingly unclear. Traditionally, most observers would have placed broadcasting to the right of print, and cable to the

right of broadcasting. In several recent lower court decisions, however, cable operators have established themselves as "electronic publishers,"<sup>4</sup> immune from traditional economic regulation. If this classification becomes law, it might lead to redefining our Figure 1 continuum.

This discussion will focus primarily upon the two polar opposites -- no regulation and carrier regulation. It will first inquire whether either IBN in general, or specific IBN activity in particular, should be subject to regulation. If it should be, a second inquiry will concern the type and intensity of regulation; for example, conventional rate-base rate-of-return regulation as opposed to price monitoring.<sup>5</sup>

This is not to ignore possible permutations and combinations; new media often are subject to "hybrid" regulation, which combine aspects of traditional print, broadcast, and carrier approaches.<sup>6</sup> For purposes of this preliminary analysis, however, the print/carrier dichotomy is most significant.

Treatment of IBN as a carrier answers a variety of other questions. On the one hand, regulating an entity as a common carrier largely defines its service obligations. Although the extent of regulation may vary, common carrier status implies offering adequate service to all paying customers at reasonable rates.<sup>7</sup> The question is, "What traditional types of common carrier regulation make the most sense for IBN?"

On the other hand, classification of IBN as a novel regulatory animal requires creating a new legal regime -- a

similar endeavor is only now beginning to bring stability to cable television regulation after two decades.<sup>8</sup> This is not to suggest that IBN should be a carrier in order to avoid difficult legal decisions, but only that the initial regulatory classification is highly important.

Although important, this task is difficult at this tentative stage in IBN's development. Despite commercial and academic interest, IBN may not exist as a viable economic entity for a number of years. Nevertheless, some preliminary observations are in order as to IBN's regulatory treatment.

The traditional reason for classifying a firm as a common carrier is that it is a natural monopoly with a declining marginal cost curve. Under these conditions, traditional notions of marketplace competition do not apply. The declining marginal cost curve allows a dominant firm to both exclude other entrants, and serve consumers at the lowest possible price.<sup>9</sup> The establishment of a legal monopoly requires consumer protection, that is, common carrier status, because of the firm's ability to exploit its monopoly status either through charging supracompetitive prices or through providing inferior service.

Translating this simple proposition into legal terms is difficult. The FCC and the courts have been unable to define common carriage in more than fifty years of regulation. Going back to traditional legal theories about common carriers -- railroads and other forms of transportation -- the basic concept is simple.<sup>10</sup> A common carrier either holds itself out by its

business practices or is required by law to provide service to any financially qualified customer. The Communications Act of 1934 added little meat to these bones by providing circularly that a "common carrier" is "a common carrier for hire in interstate or foreign communication by wire or radio or in interstate or foreign radio transmission of energy."<sup>11</sup> The FCC did not help by defining a "communications common carrier" as "any person engaged in rendering communication service for hire to the public;"<sup>12</sup> and the courts have not cleared up the confusion. As the District of Columbia Circuit remarked in a seminal case:

One may be a common carrier though the nature of the service rendered is sufficiently specialized as to be of possible use to only a fraction of the total population. . . . But a carrier will not be a common carrier when its practice is to make individualized decisions, in particular cases, whether and on what terms to deal.<sup>13</sup>

Common carriage might include any offering of communications service to any class of consumers, which leaves a lot of discretion to the Commission and the courts. Although common carrier regulation presumably should apply only to a natural monopoly, the FCC has imposed at least limited common carrier obligations upon firms without natural monopolies.<sup>14</sup>

Nevertheless, the underlying policy seems to require that a firm have at least some natural monopoly characteristics before treating it as a common carrier. Recently, the Commission seems to have narrowed its definition of common carriage to exclude firms from rate-of-return legislation.<sup>15</sup>

Whether state regulatory bodies have and will assert jurisdiction over IBN is less than clear. The courts traditionally have given the FCC broad preemption powers.<sup>16</sup> The Supreme Court recently indicated that the Commission could not preempt states' basic rate regulatory powers, even if they affected interstate as well as intrastate communication.<sup>17</sup> The range and diversity of state regulatory initiatives is difficult to predict.

IBN might require common carrier status for two radically different reasons. First, it might be a natural monopoly. Second, IBN might be part of a natural monopoly. If the latter were the case, common carrier regulation might be necessary to prevent a parent company from subsidizing IBN out of monopoly revenues, or, conversely, from buying services from it at supracompetitive prices. The former situation would resemble AT&T's pre-divestiture subsidy of the Bell Operating Companies (BOCs) from long-distance revenues; the latter would be analogous to the BOCs' acquisition of equipment at supracompetitive prices from AT&T's unregulated manufacturing arm, Western Electric (now AT&T-Technologies).<sup>18</sup> The second scenario may end up requiring common carrier regulation of IBN, if only for political reasons; the public may not support the financing of IBN from basic telephone revenues.

Although its technology has yet to be defined, IBN may not have natural monopoly characteristics. To the extent that it resembles telephone carriers or integrated services digital



networks (ISDN) it would need central office switches and network control equipment. The high cost of these items would presumably create a declining marginal cost curve and hence natural monopoly characteristics.

But IBN systems may not be configured along these lines. In general, the U.S. telecommunications industry has moved away from centralized facilities, leading to Peter Huber's christening of "the geodesic network."<sup>19</sup> IBN's massive channel capacity may require substantially less centralized switching and control operations; many of these functions might be performed by the users's software, given the large amount of bandwidth available for network "overhead".<sup>20</sup> Whether and to what extent this is the case is sheer speculation but even the possibility might mitigate against strict common carrier regulation at an early phase in IBN's development.

Once again, this consideration may turn out to be of largely theoretical interest if present common carriers own IBN systems. Both long distance and local exchange carriers are likely candidates for IBN operations; moreover, there may be little reason to exclude them.<sup>21</sup> Common carrier regulation of IBN may be necessary if only to prevent past problems of cross-subsidization and goldplating.

IBN systems seem likely to be regulated as common carriers on the federal level, either because they have natural monopoly characteristics or because their parent companies do. If this is the case, the next question is the extent to which traditional

common carrier policies must be tailored to fit IBN's characteristics. As the following discussion suggests, a substantial amount of regulatory accommodation may be necessary.

## II

### STRUCTURAL REGULATION

Shaping an industry's structure generally is preferable to regulating its day-to-day business activities. Structural regulation is less confining for a firm, particularly in a rapidly developing field. It also involves less governmental intrusion, a significant consideration with a communications medium where first amendment issues are of concern.

Structural regulation depends largely upon the characteristics of an industry. The number of firms and the amount of competition in an industry are important since the more atomistic an industry the less likely is monopoly or cartel behavior. This consideration again highlights the significance of IBN's natural monopoly characteristics. If only one firm can operate in a field there is more concern about possible abuse.

For example, allowing cable operators to operate IBNs might create substantial incentives for self-dealing.<sup>22</sup> If IBN were a natural monopoly there would be real concerns about allowing cable operators to control it. But if a dozen IBNs operated side-by-side, there would be little reason to prevent cable operators from controlling one IBN. This approach would be similar to the FCC's regulation of cellular radio, which allocated one-half of the available spectrum in each location to local exchange carriers and the second half to other firms.<sup>23</sup>

At this point it is impossible to draw any conclusions as to

potential industry structure; nevertheless, it is important to consider a range of possibilities when weighing policy alternatives.

A. Provision of Services and Programming by IBN Operators

Traditional common carrier policy provides that carriers may not provide or control the intelligence which they transmit. This time-honored principle has recently been sorely tried but not abrogated in the case of "976 numbers" used by various LECs to transmit sexually provocative recordings (so-called "dial-a-porn" services).<sup>24</sup> As discussed above, IBNs seem likely to be treated as common carriers.<sup>25</sup>

If IBNs are treated as quasi-carriers, as with past cable television regulation, a prohibition on providing services may be unnecessary.<sup>26</sup> Indeed, as suggested in the access context,<sup>27</sup> there might be pressure to adopt cable-style "hybrid" regulation, by allowing IBNs to provide their own services subject to watered-down rights.<sup>28</sup> Abandoning carrier regulation at the onset of IBN development might not be advisable; one of the turning points in cable regulation may have been the 1974 rejection of a White House proposal to regulate cable as a common carrier.<sup>29</sup>

Unless IBNs lack natural monopoly characteristics they should not be able to offer their own services or to control third parties' program content.<sup>30</sup> If an IBN operation provided material it would have a strong incentive to exclude third party services. Its position would be analogous to the BOCs'

discrimination against the OCCs before the AT&T divestiture. Until they were barred from operating cable television systems, the BOCs used their control over conduits and poles to delay construction of cable systems.<sup>31</sup>

#### B. Ownership of IBNs

Ownership concerns would be less vital if IBNs did not offer their own services and control third party content. In theory, strict separation of conduit and content should remove the incentive to interfere with a third party service provider.

Common carrier regulation may not be a panacea. Even if a firm may not benefit directly from hurting a non-competitive company, it may act coercively to help a parent or affiliated company. Some of the BOCs' most abusive tactics towards OCCs and cable operators took place during the tightly regulated era of the 1970s; although the BOCs had little or nothing to gain, AT&T did. Indeed, Judge Greene has noted that the BOCs' anti-competitive stance may not have altered as a result of divestiture.<sup>32</sup> Imposition of common carrier status may not rule out abuse if an IBN's parent company has incentive to injure a competitor.

It would be useful then, to identify those industries which might have an incentive to exclude third parties from full-use IBN, even under a common carrier regime. Firms often attempt to prevent competitors from entering a market even when they cannot provide a competitive service in anticipation of being able to

enter the market at some later date. The BOC's continuing antipathy towards cable operators, even after the FCC had prohibited BOCs from owning cable systems, indicates that long-term exclusion of competition may be an incentive for IBN operators.

Assessing the potential dangers of cross-ownership requires an understanding of IBN's product market which is rudimentary at this time. IBN might provide video programming, such as high-definition television, pay-per-view, videoconferencing, and video telephony. The only operational IBN-style facility is in Biarritz, France; it focuses largely on random access programming and videoconferencing.<sup>33</sup> Voice and data services are handled by existing networks. The only opening for IBNs in these areas might be for new installations, a factor which would slow their entry into these markets. If it does transpire that IBNs offer primarily voice and data communication services, the discussion below will be inapposite.

With the above assumptions in mind, it is possible to analyze ownership issues. The RHCs and BOCs would seem to have few incentives to interfere with third party services. A LEC by definition is a common carrier and subject to common carrier regulation which may help to prevent anti-competitive practices. More important, LECs have little or no experience in marketing video programming or other services and thus have no existing services to protect, although the BOCs have recently attempted to move in to the videotex and data base markets, only to be

rebuffed by Judge Greene.<sup>34</sup>

The scenario would be quite different if the LECs operated IBNs in partnership with non-carrier firms such as cable television operators.<sup>35</sup> Even if the LEC provided only channel capacity and the cable operator handled all marketing, the LEC might have an incentive to maximize its partner's revenues (and thereby the partnership's) unless the LEC had to serve all program providers on the same terms and conditions. If free to become partners with program providers, LECs could form alliances with the highest bidders, providing a strong incentive to discriminate.

Whether IBN will develop into a major provider of data services remains to be seen. If IBN supplies video programming, an area in which the LECs have no experience, they may be content to provide carriage. (Again, this assumes that they do not enter into partnerships with non-carrier entities such as cable operators.) Entering the video programming market would put LECs into direct competition with broadcasters, cable operators, and motion picture studios, all of whom have substantially more expertise in the "nuts and bolts" aspects of making an IBN work - installation, maintenance, billing, etc. A LEC might find that the real economies of scale and scope derive from hardware, not programming. LEC concentration on this part of the IBN industry might parallel the BOCs' recently unsuccessful request to Judge Greene to offer database services to videotex providers.<sup>36</sup>

Much the same reasoning would apply to AT&T and the OCCs;

they too lack any experience with video programming and thus any immediate incentive to suppress third-party IBN users. As for the BOCs, history could repeat itself, particularly the history of the suppression of cable development in the late 1960s and early 1970s.<sup>37</sup> AT&T's exclusionary practices at that time seem to have been directed at coercing cable operators into leasing facilities from the BOCs, rather than building their own plants.<sup>38</sup> They were not primarily interested in entering the cable television business.

Neither the BOCs nor the long-distance carriers would have the incentive to suppress third-party IBN users. An IBN operator would appear to have no reason for forcing programmers to use its network; assuming that local monopoly was the rule, its operation would be the only one available. (As we shall see later,<sup>39</sup> there might be a transitional period during which IBN gains and cable television loses market share. During this time, an IBN operator might have an incentive to "poach" subscribers from slowly declining cable systems -- another factor which argues strongly for telco/cable partnerships.) Moreover, AT&T and the OCCs have substantial experience with operating switched networks and in the use of fiber optics; like the LECs, they can realize economies of scale and scope. Operation of IBNs by either the LECs or long-distance providers seems to pose little danger that competitors will be excluded and every possibility that economies of scale can be obtained.

The situation is exactly the opposite with video media and



particularly with cable television. Cable operators already provide video programming and presumably would compete head-on with IBN, despite being saddled with lower capacity coaxial cable systems. Moreover, cable operators are increasingly vertically integrated with program suppliers as shown by the cable industry's ability to prevent third parties from offering "pay" and other satellite channels to earth station owners.<sup>40</sup> The cable industry might view IBN as potentially destructive competition and try either to control or kill it.

If the cable industry dominated IBN it would have an incentive to exclude third-party program suppliers. Cable operators have waged a largely successful battle to keep third parties off their systems<sup>41</sup> and the rather vague "leased access" provisions of the 1984 Cable Act provide little relief.<sup>42</sup> Moreover, the cable industry has no experience with either switched networks or fiber optics. U.S. cable systems use "tree and branch" architectures, unlike telephone central offices. Cable operators use fiber to a very limited extent, generally for carrying signals from receiving antennas to a head-end. Although a few U.S. cable operators have experimented with quasi-switched systems, none seem ready to adopt them.

Cable operators have every reason to exclude third parties from IBNs and very little relevant operational experience. This situation is not without irony. It is the mirror image of the telephone industry's attempts to kill or control cable television two decades ago. Since then, cable has grown strong enough to

use the same strategy on IBN, just as it has done with satellite receivers.

Exclusion from IBN ownership might not sound the death knell for the cable industry. IBN will develop slowly and at great cost. Cable and IBN may operate side by side, particularly since cable's fixed costs would be much lower than IBN's, at least in the early going. Moreover, increasing vertical integration within the cable industry suggests that its ultimate role may be as a program provider rather than a network operator.

Similar considerations apply to television networks and broadcasters. Like cable operators, their sale of video programming (indirectly through the sale of advertising) gives them an incentive to exclude third parties. Though not as vertically integrated as some cable operators, the networks also have strong ties to program producers. Neither networks nor broadcasters have any experience in operating telecommunications facilities or in working with fiber optics and would seem to have potentially dangerous cross interests and no economies of scale.

In the long run, the television networks might be irrelevant, since they may have folded by the time that IBN arrives. Cable's recent expansion has led many, including one FCC member, to predict that all communications will move from over-the-air transmission to cable or fiber optics by the end of the century.<sup>43</sup> If this occurs, the networks might change from distributors to program packagers. But even as such, they would still have an incentive to exclude competing programmers from

IBN. (One consequence of such a development, beyond the scope of this paper, is the affect on people who cannot afford IBN service, another side of the "universal service" issue.)

In terms of cross-ownership policies, LECs and long-distance carriers seem to be the most appropriate entities to operate IBNs. They have comparatively few conflicts of interest with IBN users as well as having economies of scale. They are better positioned than other media -- with the possible exception of cable -- to generate the necessary capital.

The discussion of cross-ownership has not considered three other types of ownership restrictions: alien ownership; vertical integration; and common ownership.

The Communications Act prohibits aliens from owning more than twenty percent directly (or twenty-five percent through a holding company) of any "broadcast or common carrier ... license...." The reasons behind the statute are less than clear. They seem to stem from early fears that hostile countries would use U.S. radio stations to transmit either propaganda or defense information. Because cable television is particularly unsuited for either of these purposes, the Commission did not impose alien ownership restrictions upon it.<sup>45</sup> The same logic would apply to IBN, since an IBN operator is likely to have even less control than a cable operator over its system. Moreover, foreign investment may help implement a capital-intensive enterprise such as IBN. Canadian firms have made significant investments in the U.S. cable industry. Given the intense

interest of some foreign countries (particularly Japan and France) in entering the fiber optic market, investment in a U.S. IBN system might be an attractive means of forging commercial alliances and encouraging reciprocal dealing.

A second question is whether one entity should be allowed to own both local and long-distance IBN facilities. The reasoning behind the Modification of Final Judgment (MFJ) was to prevent the BOCs from discriminating in favor of AT&T and against the OCCs; but these policy considerations may not apply to IBN. Natural monopoly characteristics traditionally have been stronger for local than for long-distance telephone networks because of the high sunk costs of central office facilities. This may not be the case with IBN given the huge bandwidth, as well as the cost, of long-distance fiber optic networks. Ownership of local and long-distance transmission facilities presumably would create no danger of exclusionary tactics; there would be no potential competition to exclude. Nevertheless, it might be advisable for different firms to provide local and long-distance service, solely to increase the number of players in the IBN game. This might lead to better R & D and the like."

Finally, it might be advisable to limit the number of local IBNs which a single entity could own. One analogy here would be the FCC's multiple ownership rules, which restricts a firm to twelve AM, FM, and TV stations or twenty-five percent of the audience." Whether a common carrier or not, IBN is likely to be more passive in terms of program content control than

broadcasting. The Commission has refused to impose multiple ownership limitation on cable which is probably less passive than IBN will be.<sup>48</sup> This rationale would militate against imposing multiple ownership rules on IBN. But if IBN becomes the sole means for receiving video programming and is not designated a common carrier, traditional first amendment diversity principles would argue in favor of common ownership limitations; in effect IBN would be treated as an "essential facility" or "bottleneck."<sup>49</sup> Once again, diversification of ownership might have benefits in terms of R&D, innovation, etc.

### III

#### REGULATION OF RATES AND PRACTICES

If IBN is treated as a common carrier regulation of its rates and practices would be appropriate if not inevitable. Regulators are concerned about rates not only to insure that the public benefits from a natural monopoly's declining marginal cost curve, but also to prevent a monopolist from manipulating its rate structure to exclude competitors.<sup>50</sup> Similar concerns underlie scrutiny of a firm's dealings with users. Despite these traditional concerns, IBN may not be subject to close regulation of either rates or practices.

##### A. Rates

In the past, rate regulation generally meant rate-base, rate-of-return regulation. Under the traditional approach, a regulatory agency would first determine a firm's expenses, then establish the value of its plant (the rate base), and finally set a rate of return sufficient to attract future investments.<sup>51</sup> This approach is less than popular with many regulators, particularly on the federal level.<sup>52</sup> All stages of the ratemaking process involve ineluctable decisions -- for example, What charitable contributions are reasonable expenses? How much R&D is necessary?, etc. Although many state agencies still embrace rate-of-return regulation, some regulators just make rough guesses. Some agencies routinely give firms half of their

requested increases.

Because of disenchantment with this process and because of deregulatory trends the FCC has moved away from traditional rate regulation. The FCC has required only "dominant" interexchange carriers -- essentially just AT&T -- to justify their rates. And most recently the FCC proposed scrapping rate-of-return regulation for long-distance carriers, except for basic services. Instead, it would substitute a "price cap" under which a carrier could set more than a maximum rate for basic service.<sup>53</sup>

Classification of an entity as a common carrier does not necessarily subject it to rate-of-return regulation. A relatively wide range of alternative regulatory schemes exists ranging from rate-of-return regulation to price caps.

At this stage in IBN's development it is difficult to prescribe an appropriate form of rate regulation. IBN is likely to be subject to some form of rate regulation for both political and economic reasons. Public opinion probably would not tolerate marketplace pricing by a powerful communications medium. If IBN is owned by a common carrier it would be difficult to regulate the parent and not the subsidiary; a cross-subsidy from a regulated firm to an unregulated new venture is possible. Similarly, regulation would be necessary to prevent an IBN from discriminating against competitors.

IBN might be subject to a relatively relaxed form of rate regulation. As a new industry, it might need pricing flexibility to respond to unknown and changing market conditions; it might

need to generate substantial profits at the beginning in order to attract capital. IBN's newcomer status also suggests that rate-of-return regulation might be extraordinarily difficult; since no real benchmarks exist, it would be difficult for a regulatory agency to pass upon the reasonableness of expenses, investments, and rates of return. An IBN might have higher promotional costs and require greater returns than an LEC. If IBN resembles today's essentially unregulated cable industry, its initial rate of return might need to be about twenty-five percent, as opposed to about half that amount in the telephone industry.

At least initially, the primary role of IBN rate regulation may be to prevent discrimination among users rather than to scrutinize costs and profits. Most regulatory agencies' enabling statutes give jurisdiction over "unjust or unreasonable" charges.<sup>54</sup> With IBN, an agency might be concerned with the first rather than the second goal. This would protect IBN's competitors while preserving IBN's flexibility. Rate-of-return regulation may be sufficiently declassè that extending it to a new industry would be difficult.

#### B. Practices

Probably the single most important regulatory consideration is insuring access by third-party programmers to IBN in order to guarantee full utilization of bandwidth. IBN can handle the equivalent of dozens or perhaps hundreds of cable television systems. A host of new program producers and packagers may



spring up in response to IBN.

The basic concept of access is somewhat different with IBN than with telephony. In traditional telephone terms, access has involved a long-distance or enhanced service provider's ability to interconnect with an LEC's central office in order to transmit messages over the local network. (This concept does not include current implementation of Open Network Architecture for enhanced service providers.<sup>55</sup>) IBN is different in two respects. First, switching may be far less important with IBN than with telephony because of IBN's bandwidth.<sup>56</sup> Second, IBN users may need particular chunks of spectrum at specific times of the day. Access concerns with IBN resemble those in the cable rather than in the telephone industry. The best analogy to telephony would be resellers of telephone services. On the one hand, they need access to switches in order to deliver a message; on the other, they need designated amounts of bandwidth at set times.

Access concerns with IBN may represent a hybrid of the issues in cable and telephony. This status suggests that an appropriate access scheme for IBN might be less stringent than telephone tariff requirements and more restrictive than cable "leased access" requirements.

An IBN access scheme might require that an operator provide a user with as much bandwidth as requested, at whatever time demanded, at non-discriminatory prices. If IBN develops virtually unlimited capacity, little more would be necessary in an access scheme. Third-party users would receive as much

capacity as they needed. Unlike cable operators, IBN operators could provide as much capacity as required without restricting their own programming. Non-discriminatory pricing would insure that an IBN operator did not exclude competitors. If an IBN operator's charges were too high, a regulatory agency could invoke its power to police "unreasonable" rates; but the industry would need to develop considerably before "reasonableness" judgments were possible.

It may be questionable whether IBN operators should be able to charge different rates for different times of the day. If IBN resembled the mass media, some times of the day would be more valuable than others; or, off-peak pricing might be desirable to attract marginal users. If an IBN operator could fulfill all requests, price differentials would be unnecessary to ration scarce resources.

Positing virtually unlimited demand is optimistic. Cable television once was hailed by the FCC as "an economy of abundance."<sup>57</sup> But the reality of cable has been a fierce battle by cable operators to keep third parties off their channels.<sup>58</sup> If demand outstrips supply with IBN -- as it has with every other video medium in existence -- a more formal access scheme would be necessary. Experience with cable television access schemes teaches two lessons. First, most observers have failed miserably in proposing workable access schemes.<sup>59</sup> Second, a surprisingly large number of cable operators are willing to deal with non-commercial access requests; commercial access users receive short

shrift, however, even if not competitive with a cable operator's own programming.<sup>60</sup> In short, the prospects for creating a workable IBN access scheme are not particularly bright unless IBN develops far more than an "economy of abundance."

## CONCLUSION

With IBN or any other new technology all regulatory bets are off. Media hardly ever evolve the way they should let alone the way commentators predict, as cable television has proven. Nevertheless, a few general observations may be in order.

On a very optimistic level, common carrier status for IBN solves most policy problems.<sup>61</sup> It would exclude IBN operators from the programming business and thus remove incentives to restrict or censor competitors. But the common carrier cure may be too attractive and may ignore two questions. First, IBN may not have natural monopoly characteristics; and even if owned by a common carrier, might not be regulated as such. Second, common carrier treatment of IBN may not remove all incentives to exclude competitors, particularly if an IBN's parent company has present or future interests in marketing video programming.

Whether IBN is a carrier or not, it probably will have sufficient market power (even if not natural monopoly power) to require some type of governmental oversight. If IBN develops virtually unlimited bandwidth the degree of governmental intrusion might be rather low. IBN might become the electronic equivalent of the pre-Revolutionary War press in the United States which supported dozens of competing newspapers. If IBN fails to fulfill its technological promise, however, it might face the same regulatory problems as the other electronic media, thus requiring creation of yet another new regulatory scheme.

## ENDNOTES

1. 47 U.S.C. S 151 et seq. (1982).
2. 15 U.S.C. S 1 et seq. (1982). The most significant exegesis on antitrust policy in the context of the telecommunications industry has come from the divestiture of the American Telephone & Telegraph Company (AT&T) under the aegis of Judge Harold H. Greene in the Modification of Final Judgement (MFJ). United States v. American Tel. & Tel. Co., F. Supp. 131 (D.D.C. 1982), aff'd sub nom. Maryland v. United States, 460 U.S. 1001 (1983) [hereinafter "AT&T, 522 F. Supp. 131."]
3. Red Lion Broadcasting Co., Inc. v. FCC, 395 U.S. 367, 386-387 (1969), quoting Joseph Burstyn, Inc. v. Wilson, 343 U.S. 495, 503 (1948).
4. E.g., Century Federal, Inc. v. City of Palo Alto, No. C-85-2168 (N.D. Cal. September 1, 1987).
5. See discussion in text at n.53, infra.
6. For example, the multichannel, multipoint, distribution service (MMDS) generally is responsible for content control but may not provide more than fifty percent of its own programming. This status currently is under reconsideration by the FCC.

7. See discussion in text at n.55, infra.
8. See, e.g., Daniel L. Brenner & Monroe Price, Cable Television and Other Nonbroadcast Video Media Law and Policy (1986).
9. E.g., Charles F. Phillips, Jr., The Regulation of Public Utilities 34-64 (1984).
10. E.g., United States v. California, 297 U.S. 175 (1936).
11. 47 U.S.C. S 153(h) (1982).
12. 47 C.F.R. S 21.2 (1987).
13. National Association of Regulatory Utility Commissioners v. FCC, 525 F.2d 630, 641 (D.C. Cir.), cert. denied, 425 U.S. 992 (1976) [footnotes omitted]. C.f. National Association of Regulatory Utility Commissioners v. FCC, 533 F.2d 601 (D.C. Cir. 1976).
14. In the case of cable television access channel requirements, the Commission was soundly rebuked by the Supreme Court for doing so. FCC v. Midwest Video Corp; 440 U.S. 689 (1979).
15. Note, 50 Duke L.J. 501 (1987).
16. National Association of Regulatory Utility Commissions v. FCC, 533 F.2d 601 (D.C. Cir. 1976).
17. Louisiana Public Service Comm'n v. FCC, 476 U.S. 355 (1986).
18. Phillips, supra n.9, at 621-644.

19. Peter W. Huber, *The Geodesic Network: 1987 Report on Competition in the Telephone Industry* 1.31-1.36 (1987).
20. E.g., *International Networks*, September 15, 1987 at 1 et seq.
21. See discussion in text at n.3r, et. seq., infra.
22. See discussion in text at n.34, infra.
23. Cellular Communications Systems, 86 FCC 2d 469 (1981), recon. 89 FCC 2d 58, recon. 90 FCC 2d 571 (1982). The wisdom of this approach is open to question. By giving the existing local exchange company the right to apply for a cellular license with virtually no prospect of a competing application, the FCC has given wireline carriers a headstart in getting on the air and offering service -- as indicated by the haste with which non-wireline carriers rushed to form consortia to file uncontested applications. Nevertheless, the basic concept may have some validity.
24. When faced with a congressional mandate to clean up dial-a-porn, the Commission first limited it to late-night hours; then under judicial pressure, required users have special access codes; and ultimately found itself unable to apply the access code requirement to NYNEX because of technological problems. *Carlin Communications, Inc. v. FCC*, 787 F.2d 846 (2d Cir. 1986)
25. See discussion in text at n.7, supra.

26. E.g., Second Further Notice of Proposed Rulemaking, 24 FCC 2d 580, 587 (1970).
27. See discussion in text at n.55, infra.
28. 47 U.S.C. S 613 (Supp. 1986).
29. Cabinet Committee on Cable Communications, Report (1974).
30. Official Airline Guides, Inc. v. FTC, 630 F.2d 920 (2d Cir. 1980), certiorari denied 450 U.S. 917 (1981) held that the then-acknowledged "Bible" of airline schedules was justified in refusing to list commuter airline flights since a natural monopolist was entitled to make discretionary decisions on a non-economic basis. To a real extent, the court may have been concerned with first amendment notions of "journalistic discretion" and the like. E.g., Miami Herald Publ. Co. v. Tornillo, 418 U.S. 241 (1974).
31. General Telephone of the Southwest v. United States, 449 F.2d 846 (5th Cir. 1971).
32. United States v. Western Electric Company, Inc., Civ. No. 82-0192 (D.D.C. Sept. 10, 1987) 26 et. seq. [hereinafter "Western Electric" 1987].
33. Francois Gerin, "The Biarritz Fiberoptic System," Cable TV Law & Finance, May, 1986, at 1.
34. Western Electric 1987 at 173 et seq.
35. Walter S. Baer, "Telephone and Cable Companies: Rivals or



Partners in Video Distribution?", Telecommunications Policy,  
December 1984.

36. Id. at 188 et seq.

37. See discussion in text at n.30, supra.

38. E.g., California Water & Telephone Co., 13 FCC 2d 440  
(1967).

39. See discussion in text at n.36, infra.

40. E.g. Broadcasting, November 30, 1987, at 116-117.

41. In New York Citizens Committee on Cable TV v. Manhattan  
Cable TV, Inc., 651 F. Supp. 802 (S.D.N.Y. 1987), the court  
adopted the novel holding that Time's refusal to offer pay  
services other than its own might violate the antitrust laws.

42. See discussion in text at n.60, infra.

43. Broadcasting, November 30, 1987, at 62.

44. 47 U.S.C. & 310(b) (1982).

45. Report and Order, 59 FCC 2d 723 (1976). The FCC had  
discretion not to impose the limitations since the statute  
refers only to "broadcasters" or "common carriers," and cable  
is neither.

46. For example, total combined funding of R & D by AT&T and the  
BOCs increased after divestiture. Michael Noll, "Bell  
System R & D Activities: The Impact of Divestiture,"  
Telecommunications Policy, June, 1987, at 161.

47. 47 C.F.R. S 73.636 (1987).

48. Report and Order, 52 P&F Rad. Reg. 2d 257 (1982). In general the FCC has shied away from multiple ownership restrictions for new video media, on the grounds that they still developmental.
49. *Associated Press v. United States*, 326 U.S. 1 (1945).
50. Phillips, supra n.9 at 51 et seq.
51. Phillips, supra n.9 at 229-377.
52. See, "The Crisis of the Regulatory Commissions: An Introduction to a current Issue of Public Policy," 30-56 (P.W. MacAvoy ed. 1970).
53. Notice of Inquiry, 2 FCC Rcd 5208 (1987).
54. E.g., 47 U.S.C. S 201(b) (1982).
55. See Memorandum Opinion and Order, 2 FCC Rcd 3072 (1987).
56. See discussion in text at n.20, supra.
57. Notice of Proposed Rulemaking, 25 FCC 2d 38, 39 (1970).
58. See n.41, supra.
59. For a typically disastrous attempt, see the author's, "Access to Cable Television," 57 Cornell L. Rev. 419 (1972).
60. See n.41, supra. The 1984 Cable Act virtually institutionalizes a cable operator's ability to exclude its competitors by providing that a cable operator may set terms for third-party "leased access" channels which "assure that such use will not adversely affect the operation, financial

condition, or market development of the cable system." 47  
U.S.C. S 612(c)(1) (Supp. 1986). This seems intended to  
allow a cable operator to insure that a competitive pay-  
programming channel will cost a subscriber at least as much  
as channels provided by the operator.

61. Once again, common carrier status was also touted as the  
panacea for cable television. See n.29, supra. Whether it  
would have fulfilled its promise in what has become a  
vertically integrated industry is less than clear.