Incidental Paper

ACTORS AND STAKES

A Map of the Compunications Arena
(Computers-and-Communications)

Kurt Borchardt

PROGRAM ON INFORMATION RESOURCES POLICY

HARVARD UNIVERSITY
CENTER FOR INFORMATION POLICY RESEARCH

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Introduction

and

Request for Critical Comments

Capsule descriptions of the actors in the compunications (computers-and-communications) arena are presented on the following pages. This synoptic presentation is meant to help individual actors be more aware of their impacts on each other and to provide observers, including legislators, regulators and other concerned members of the public, with an overview of the complexity of policy issues in this arena.

As pieces of a map of a big and varied territory, these capsules have to be selective in order to depict significant relations among essential elements both accurately enough to be reliable and also clearly enough to be useful. To help guard against biased selectivity, each capsule presents self perceptions and others' perceptions so that its accuracy may be verified by the subjects themselves. The "selves" are the named actors. The "others" are the actors' customers, competitors, suppliers, regulators, etc.

Like all Program working papers, this document is intended primarily for communication among Program participants about work in progress. While partly based on interviews, the capsules have not yet undergone the reviewing process for formal products of the Program.

Critiques of any kind are warmly welcome, but comments of the following types would be especially helpful:

1. *Corrections and amplifications of both the self and the others' perceptions as presented.*
2. *Suggestions of additional actors to be included.*
3. *Assessments of the usefulness of the whole approach, to guide our decisions about continuing on it for the compunications arena and about extending it into the postal, media or other arenas within the scope of the Program.*

The loose-leaf format is to permit updates if critical reactions are favorable enough to warrant making them.

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PRIVATE SECTOR

Communication Companies

AT&T/WESTERN ELECTRIC/BELL LABS

Self Perception

Has been seeing itself as a public service company dedicated, as required by Federal and State law, to rendering indispensable, universal, social services to the public as an entirety. Has maintained that the general public interest is served best if such universal services (rather than special services tailored to meet the diverse needs of different classes of customers) are planned and executed by a single entity on an end-to-end basis with appropriate control of hardware (in order to protect the integrity of the network) and without the competition of cream-skimming operations of specialized common carriers (which jeopardize AT&T's universal services by offering intercity services that are cross-elastic with AT&T's message telephone services (MTS)). Seeks public airing of consequences of competition mandated by FCC and courts, and re-affirmation by Congress of AT&T's universal service philosophy. At the same time, is preparing for eventuality that its position may not be upheld by Congress in toto or in time, thus requiring AT&T's entry into open market competition with regard to hardware and services. Finds itself compelled to fight FCC's efforts to protect AT&T's competitors by circumscribing AT&T's right to compete effectively. Sees itself as being engaged in a growing conflict with IBM in the compunications (computers-and-communications) arena.

Others' Perceptions

See it as failing to meet adequately the needs of large consumers and as using its huge financial resources to thwart competition which offers more suitable hardware and services to such consumers. View AT&T's stance as self-serving effort to perpetuate status quo through large-scale lobbying effort. View AT&T's huge investment in older facilities as its Achilles' heel which keeps it from introducing new technologies expeditiously and thus compete effectively.

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PRIVATE SECTOR

Communication Companies

LARGER INDEPENDENT TELEPHONE COMPANIES

Self Perception

See themselves as partners of AT&T in providing universal services subject to Federal and State regulation but play increasingly influential roles in developing alternatives to AT&T's responses to FCC's pro-competitive policies. Objectives: introducing measure of competition without changing basic structure; removing all constraints on service offerings of which independents are capable (such as CATV, broadband, etc.); and cooperative planning with AT&T of introduction of new technologies and rate of speed with which such introduction should occur.

Others' Perceptions

Increased reliance possible on industry-government dialogue participated in by larger Independents to explore policy alternatives to extremes of (a) single system planned and executed by single entity and (b) open market competition without central industry or government-industry planning.

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PRIVATE SECTOR

Communication Companies

SMALLER INDEPENDENT TELEPHONE COMPANIES

Self Perception

See themselves threatened economically even more than Larger Independents by erosion of hardware revenues from foreign attachments; erosion of long-distance toll revenues through special common carrier competition; need for increased borrowing to update facilities and services technologically.

Others' Perceptions

Unlike Larger Independents, Smaller Independents, with rare exceptions, are incapable of participating effectively in dialogue concerning policy alternatives. Legislators stress the importance of the Smaller Independents since they largely serve rural areas.

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PRIVATE SECTOR

Communication Companies

CATV COMPANIES

Self Perception

Most CATV companies see themselves exclusively as transmitters by cable of over-the-air television programs and to a lesser degree as originators of TV programs. They see themselves as over-regulated by FCC and state and local authorities. Some ambitious CATV companies see themselves as potential broad-band, local communication companies which might be in competition with television stations and local telephone companies and which might even take the place of such stations and companies. The ambitious companies seek to use their facilities for any services which they are technologically capable of performing subject to whatever federal, state, or local regulations may be imposed upon them which will limit their competition in the open market.

Others' Perceptions

See them as competitors of television stations, particularly in smaller communities. Insofar as future plans to render broad-band services (using fiber optics technology) are concerned, some telephone companies perceive the potential competitive threats posed by the more aggressive CATV companies and are prepared to fight or meet that threat before federal, state, and local bodies, and if necessary, in the open market.

PRIVATE SECTOR

Communication Companies

"SPECIALIZED" OR "OTHER" COMMON CARRIERS

Self Perception

See themselves as called upon to meet rapidly growing demand for specialized intercity communications by large business and governmental consumers. Services include voice, data, video and facsimile. Feel that they must fight a two-front war before FCC: (1) attempts by FCC to narrow authorized boundaries of their markets; and (2) attempts by FCC to abandon protective regulation to prevent unfair competition between AT&T and Independent Telephone Companies on the one hand and Specialized Carriers on the other.

Others' Perceptions

AT&T and Independent Telephone Companies see them (1) as cream-skimming operators who serve rich markets without being required to serve other less financially rewarding markets, thus ultimately requiring AT&T and Independents to de-average (and, therefore, often raise) rates for residential and small business services; (2) as unfair competitors under the umbrella of FCC's rules of regulated competition which keep AT&T and Independents from competing effectively by meeting Specialized Carriers' lower rates while at the same time requiring AT&T and Independents to let Specialized Carriers use AT&T's and Independents' local networks, and (3) ultimately invading the telephone companies' switched message market serving large businesses and government.

PRIVATE SECTOR

Communication Companies

MOBILE PHONE COMPANIES (RADIO COMMON CARRIERS - RCCs)

Self Perception

See themselves as rendering a much needed, highly personalized service with large growth potential if sufficient radio frequencies are allocated for land mobile services. See themselves beset by numerous competitive problems: competition among themselves; competition with wireline carriers (AT&T and Independents) on whom RCCs have to depend for interconnections with public telephone network; competition with oneway paging services offered by AT&T and Independents; future competition with Specialized Mobile Radio (SMR) services offering dispatch services on a non-common carrier basis which FCC considers preferable both financially and in relation to spectrum space to private dispatch systems operated by a single company for expediting its non-communication activities.

Others' Perceptions

AT&T and Independents see future mobile operations using high capacity cellular system as good example of communication services which could more economically (both financially and in relation to spectrum space) be offered by single, nationwide system. Present operations with existing technologies do not provide an adequate service at sufficiently low rates to make possible mass marketing. New technologies may lead to a restructuring of industry consisting of small businesses.

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PRIVATE SECTOR

Communication Companies

WESTERN UNION

Self Perception

Sees itself as a rejuvenated company taking advantage of new technologies (particularly satellites) to render new services (including data and facsimile) superimposed on old technologies, facilities, and services, some of which are used in conjunction with postal service ("Mailgrams").

Others' Perceptions

Are skeptical that market for traditional services will survive, but they are watching WU's transformation with more or less attention, depending on the significance of Western Union's potential in offering competitive services.

PRIVATE SECTOR

Communication Companies

HARDWARE SUPPLIERS

Self Perception

See themselves as the principal beneficiaries of market opportunities brought about by a combination of advances in technologies and changes in public policies. See themselves also as the principal protagonists of competition in the compunications arena before Congress, FCC, Executive, and courts with regard to "foreign attachment" policies, federal rather than state control of such policies, and antitrust suits against AT&T and the Larger Independents.

Others' Perceptions

See them as threatening the traditional, exclusive control exercised by AT&T and the Larger Independents over hardware in the hands of users and hardware used in telephone companies' own facilities. This threat is seen partly in economic terms and partly in service terms (potential harm to integrity of network). In particular, AT&T fears that government regulatory standards governing hardware will not be adequate regarding installation and maintenance to assure that customers will be reached when called and that hardware manufacturers will challenge AT&T's right to introduce technological changes in the telephone network if such changes affect the market for hardware in the hands of telephone subscribers.

PRIVATE SECTOR

International Carriers

RECORD CARRIERS

Self Perception

See themselves as being engaged in a struggle for survival with AT&T on the one hand (the FCC having decided to let AT&T offer international data as well as voice services over its international switched telephone network) and with providers of satellite circuits on the other hand (which cut into full use of cables in which record carriers have heavy investments). One of the competitive tools is the provision of innovative communication services, such as "Telenet" (international packet switching) and "Graphnet" (international facsimile reproduction).

Others' Perceptions

See them as presenting a continuing problem in restructuring the compunications industry.

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PRIVATE SECTOR

International Carriers

COMSAT

Self Perception

Until recently, saw itself as the Congressionally franchised, exclusive provider of satellite services domestically as well as internationally. When it failed to gain acceptance for its claim of exclusiveness, it began to enter the domestic market for satellite facilities and services in competition or in partnership with other companies, while attempting to hold on to its international manager role for Intelsat.

Others' Perceptions

Creation by Congress of Comsat was seen as an anomaly: a compromise designed to achieve U.S. foreign policy objectives through a quasi-private corporate instrumentality instead of a government agency, and a compromise between AT&T's position that satellites were equivalent from a regulatory point of view to undersea cables and therefore not requiring the creation of a new entity, and the position of satellite hardware manufactureres which sought better access to markets for their products through the creation of a new entity separate and apart from (and competitive with) AT&T's Western Electric.

PRIVATE SECTOR

Computer Companies--Hardware Suppliers

IBM

Self Perception

Sees itself as the ongoing leader of the computer industry relying on research and marketing strategies. Because of its preference for large, centralized compunication systems, sees entry into communications, though indirectly, as unavoidable due to evolving compunications technologies, demands of big business users, and failure of communication companies to provide technologically up-to-date services at sufficiently low costs. Realizing that involvement with communications will present special problems, IBM decided to create (together with Comsat and Aetna) a separate entity (SBS). Seeks to win antitrust suits brought by government and competitors by appropriate legal tactics and by creating public opinion favorable to IBM as exponent of principle that to the industry leader belong the just rewards coming with such leadership.

Others' Perceptions

See IBM as striving not only for preeminence with regard to large centralized compunications systems but for exclusivity by driving out competitors. SBS's entry into communications reinforces such apprehension. Therefore, competitors resort to antitrust laws along with opposition to SBS before FCC as one way of fighting IBM's aspirations.

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PRIVATE SECTOR

Computer Companies--Hardware Suppliers

OTHERS

Self Perception

See themselves as being engaged in an ongoing life and death struggle with IBM with regard to large computers--several large companies having already withdrawn in recent years from competing with IBM. Competitors offering a specialized, high technology hardware, particularly in conjunction with specialized software, are in a preferred position while competitors offering mass production product lines similar to IBM's are in an inferior position. While Independent Telephone Companies with their geographical monopolies co-exist comfortably with AT&T, IBM's competitors in the worldwide computer hardware market are fearful for their survival and resort to antitrust suits as one way of combating some of IBM's marketing strategies and tactics which they consider illegal (The reduction in the number of competitors, in turn, increases IBM's risk of being found in violation of the antitrust laws). See themselves at a disadvantage competitively, particularly with customers' top managements, because of IBM's high prestige, especially in promptly servicing hardware sold or leased by them. (Purchasing personnel buying or leasing non-IBM products have to carry the burden of proving themselves right and many prefer not to carry that burden). See themselves necessarily allied with IBM in fighting AT&T and Independent Telephone Companies with regard to restrictive foreign attachment conditions and are concerned over equal access with IBM to SBS' communications system in order to avoid suffering further competitive disadvantages in the worldwide marketplace.

Others' Perceptions

Depending on the degree of their sophistication regarding hardware and software, customers will take advantage of competition between IBM and others or will enter into standard purchase of lease package deals.

PRIVATE SECTOR

Computer Companies

SOFTWARE SUPPLIERS

Self Perception

See themselves as intellectual elite of the computer industry and often as having expertise superior to that of hardware suppliers who supply software as part of a package deal which includes both hard and software. If such package deals could be found to be in violation of antitrust laws, software suppliers would stand to gain substantially. Therefore, they pursue efforts to require hardware suppliers to "unbundle" hardware and software by pricing them separately and without cross-subsidization.

Others' Perceptions

Users see hardware and software as parts of single system. Hardware suppliers who supply combinations of hard and software through package deals see software suppliers ambivalently as competitive and complementary. Suppliers are frequently engaged in disputes over degrees of separability of software and hardware. Users of computers often resort to software suppliers only when software supplied by hardware suppliers turns out to be inadequate for particular purposes.

PRIVATE SECTOR

Computer Companies

COMPUNICATION SERVICE COMPANIES

Self Perception

Compunication service companies see other companies as competitive or complementary in whole or in part, depending on the purity or mix of several services which they offer: data base services, data processing services, and data transmission services.

"Pure" Data Base Service Companies, for example, see other "pure" Data Base Service Companies as well as publishers and libraries as competitors. They see data base services as providing a rapid means by which non-computer oriented consumers are enabled to gain access to extensive data (stored in computers) needed in connection with their professional or business activities. They see companies offering only data processing or only data transmission services as complementary. Companies offering a mix of all three services are seen as partly competitive and partly complementary. Publishers and libraries are seen as offering less rapid and less extensive information services which are receiving government benefits in the form of tax advantages and subsidized postal services. "Pure" Data Processing Service Companies see themselves in competition with computer hardware companies which sell or lease computer hardware.

"Pure" Data Transmission Service Companies see themselves in competition with Data Processing Service Companies to the extent that the latter companies use their computer processing service networks incidentally for the transmission of data.

Others' Perceptions

Puslishers, librarians, and other data suppliers as well as various classes of middle and low level professionals who have been retrieving and processing information in connection with top level business and professional activities see data base and data processing services as threatening their livelihood. Therefore, specialized data suppliers, both in private and public sectors, either withhold their data or make substantial charges for their data.

Data Transmission Service Companies nervously watch their turf being invaded by Data Processing and Data Base Networks which transmit data incidentally to supplying and processing data.

PRIVATE SECTOR

Users

BIG BUSINESS

Self Perception

See themselves as special category among users and as deserving adequate consideration of their special needs. They insist upon their needs being met at wholesale prices which they deem reasonable, either by AT&T and Independent Telephone Companies or by "Specialized" or "Other" Common Carriers. They further insist upon liberal foreign attachment policies. Thus, they favor competition among compunication companies.

Since their methods of conducting their businesses often depend on the use of private networks furnishing internal and external compunication services at very low rates, they oppose any limitations on the use of such networks in conjunction with switched services offered by AT&T and Independent Telephone Companies. Compunication services often are used not only for profit maximization but are highlighted in advertising, stressing advantages which such compunication services offer to customers.

Others' Perceptions

Telephone companies fear that the de-averaging of rates (resulting in lower rates to big business and government users) will lead to the eventual drying up of the pool of revenues from which local services are presently subsidized. Small business users fear that such de-averaging will affect them adversely in competing with big business.

PRIVATE SECTOR

Users

SMALL BUSINESS AND PROFESSIONAL

Self Perception

If aware at all of their compunication problems, see themselves as positioned in the middle between Big Business Users on the one hand and Urban and Rural Household Users on the other hand: not being sufficiently large to take advantage of private networks, yet not getting the kinds of switched services needed by them, they are charged higher rates than household users. Thus, they see themselves at a disadvantage vis-a-vis big business competitors. They look to compunications hardware which will provide needed services at reasonable costs.

Others' Perceptions

At present, AT&T and Independent Telephone Companies see them as one of two main sources of revenues (the other being Household Users) which depend on switched services rendered by them and not sufficiently large to take advantage of offerings by "Specialized" and "Other" Common Carriers. There is some apprehension that in the future "Specialized" and "Other" Common Carriers may offer competition regarding Small Business and Professional as well as Big Business.

PRIVATE SECTOR

Users

URBAN HOUSEHOLDS

Self Perception

Usually taking uninterrupted functioning of their household phones for granted, they do not perceive how dependent they are on their phones until service is interrupted. Then they realize that they are as dependent on phones for urban living as they are on electricity, using phones for socializing as much if not more than for other household activities. Suburban and exurban calls are perceived as excessively expensive when area-wide rates are not available.

Others' Perceptions

AT&T and Independent Telephone Companies see urban household users along with business and professional users as two main sources of revenues and are fearful that purchase of phones from hardware suppliers instead of rental from phone companies will drive up rates for household services and will lead to customer dissatisfaction in case purchased equipment malfunctions. Householders are looked to by phone companies as allies in phone companies' fight to maintain status quo, since phone companies claim that changes in policies are likely to lead to increased rates for overwhelming majority of householders.

PRIVATE SECTOR

Users

RURAL HOUSEHOLDERS

Self Perception

Perceive themselves as being absolutely dependent on uninterrupted telephone service, especially in emergencies and to a considerable extent for socializing. Take for granted low rates and do not mind that the rates are not based on cost but being subsidized from other telephone services and government loans to rural telephone companies.

Others' Perceptions

AT&T and Independent Telephone Companies see rural householders as most potent political allies in their fight to maintain status quo. Therefore, want to continue averaging of rates (which results in low rates to rural householders). Congress and regulatory commissions (FCC and states) similarly support low rates to rural householders as a desirable social public policy objective.