



CIRF

**Converging Industries Research
Foundation**

Practical Solutions for Communications Policy

**Revving up the Communications
Economic Engine:
Household Services, Monthly Bills, and
Barriers to Competition**

July 20, 1997; Revised July 22, 1997

*Presentation at the July 1997 NARUC Meeting,
San Francisco, CA*

Revving up the Communications Economic Engine: Household Services, Monthly Bills, and Barriers to Competition

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Telecommunications Industries Analysis Project:

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Carol Weinhaus, Pat McLarney, John Gomoll, et al.
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The Telecommunications Industries Analysis Project is associated with the Public Utility Research Center at the University of Florida College of Business Administration.

Graphics were produced by Mark Carroll.

For information on this research, contact Carol Weinhaus at:
www.ConvergingIndustries.org

ERRATA: This revised version corrects the following errors to Figure 1: the numbers “0.5” and “2.2” were transposed in the original, and “vary company” has been changed to “vary by company.” The revised paper is otherwise the same as the original.

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Project Information

List of Participants in the Telecommunications Industries Analysis Project

July 1997

State Regulators

NARUC Representatives from:
California Public Utilities Commission
Florida Public Service Commission
Illinois Commerce Commission
Iowa Utilities Board
Massachusetts Department of Public Utilities

Companies and Governments

AT&T
Bell Atlantic
BellSouth
Corning
France
France Telecom
GTE
Kalona Cooperative Telephone
Nortel
NTT America
NYNEX
Pacific Bell
SBC Communications
Sprint
360° Communications
U S WEST

Sponsors:

Corporation for Public Broadcasting

Assisting with *public* data:

Bellcore
Federal Communications Commission
National Exchange Carrier Association
National Telecommunications and Information Administration

Project Information, cont.

Background on the Telecommunications Industries Analysis Project

The Telecommunications Industries Analysis Project (TIAP), a six-year-old research consortium, conducts and reports impartial research in the areas where network planning, business financials, and public policy (regulation and legislation) intersect. The participants actively work together to develop new options for telecommunications policies to meet the needs of consumers, governments, and companies in a changing, competitive environment. Participants include regulators, domestic and foreign telecommunications companies, materials and equipment manufacturers, and other communications-based organizations.

The purpose of the Project is to produce research and analysis that will assist policy makers in making informed decisions.

TIAP incorporates the following features:

- **Neutral setting**
The Project provides a neutral setting, free of partiality, thereby ensuring objective and independent research.
- **Multiple viewpoints**
Participants play an active role in the research and analysis, represent their own interests, and understand and assist in developing others' perspectives.
- **Analysis and results of alternatives**
The Project provides research data, tools, and models for critical decision making.
- **Public distribution of research**
Data used by this Project are publicly available. Research products become public domain information.

Reving up the Communications Economic Engine: Household Services, Monthly Bills, and Barriers to Competition

Economic Potential Exists in Communications Industries, but So Do Barriers

This paper is a view of the future. Increasingly, a varied assortment of companies are offering communications services. These companies include telecommunications (local and long distance, wireline and wireless), television and radio (which includes broadcast, cable, and direct broadcast satellite, or DBS), computer (including the Internet), and others (electric utilities, publishing houses, etc.). Taken as a whole, in the long term, these companies form an economic engine with enormous potential.

However, while more "non-traditional" companies provide communications services, the potential of growth for all communications companies is limited by barriers in the form of regulatory policies and historical precedents created for "traditional" companies. Narrowly focused policies for traditional communications industries limit the overall interplay of technological innovation, market demand, costs, and competition. Other barriers may arise from the companies' existing organizational structures, some of which may parallel markets.

How Can the Barriers be Removed?

One approach to removing these barriers is to let the market sort out how services are provided, packaged, and priced. This paper presents an overview of two policy areas in which, in the long term, barriers might be removed: (1) packaging and pricing of services, and (2) subsidies based on type of service or income. Revising policy barriers in these areas may set forces into play that remove other barriers as well. For example, packaging of new services may create markets for billing systems that can accommodate payments to the multiple companies providing the service components. Another result of revising these policy barriers would be that market forces would determine the viability of new and existing companies. How can the barriers be removed?

1. *By allowing companies to freely package and price services across "traditional" industry lines to create new services.*

Policies based on traditional industry lines create barriers.

The policies governing each service, such as telephone, cable TV, Internet, and electric, currently are examined within the confines of each of the traditional industries. **Figures 1 and 2** show the overall picture. **Figure 1** shows the nationwide penetration of these services in U.S. households, the average monthly household bill, and the hours spent using these services — viewing/session-time per week or length of connection time. **Figure 2** compares prices for individual services and combinations of services based on the average monthly household bills in **Figure 1**.

Opening the markets creates opportunities for innovation.

Companies are able to try out new technologies and products. Open markets determine appropriate price levels. If a price is too high, the market does not develop and/or the company needs to adjust its prices.

Some policy barriers need to be removed.

Today, regulation at varying levels (including no regulation) is applied to each service listed in **Figure 1**. Services that might otherwise be substituted for one another (like cellular for traditional telephone service) or packaged together (like voice and video) are not substituted due to differences in regulatory treatment. Removing regulatory policy barriers would let markets sort out the efficiencies of combinations of existing and new services. Companies

Reving up the Communications Economic Engine: Household Services, Monthly Bills, and Barriers to Competition, cont.

should be able to package current and new services from any industry to create new services.

2. ***By thinking of the average monthly household bill for all communications services in total (rather than on an individual service or industry basis), "traditional" subsidies may no longer be needed.***

In the long term, after the service packaging has shaped the market, it may be appropriate to revise subsidies (who pays and who receives them). Furthermore, customers paying market prices for other communications services may not need subsidized telephone service.

Figure 3 shows that a large percentage of U.S. households pay for a variety of communications services, some of which already are at market prices. For example, even in the low-income levels, a number of households subscribe to more than just telephone service.

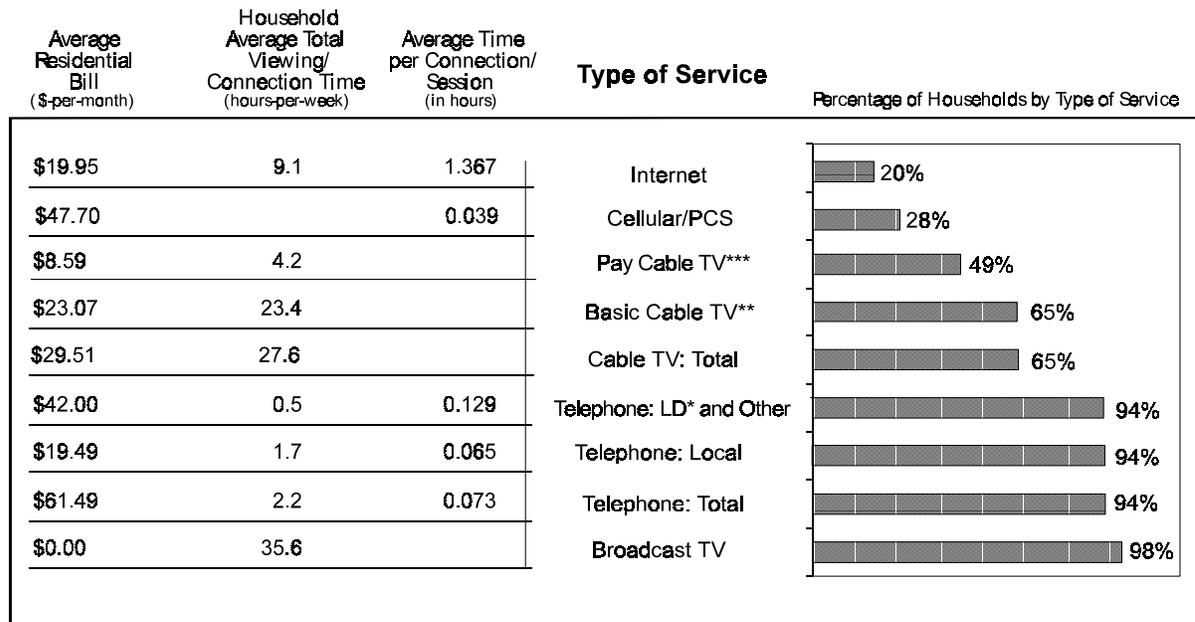
Viewing a service in isolation leads to debates over subsidies that may disappear for many consumers when taken in the context of the total communications bill, especially if service packages increase efficiencies in network use and in operating expenses. For example, across-the-board subsidies for a particular service may no longer be needed. In the broadcast industry, from the customer's view, the service is "free"; advertisers pay for the transmission of programs to customers. Most customers also have the option to purchase programs without advertising through a pay cable TV service. This example also indicates that more than one pricing approach can exist at the same time.

Caveats

- This paper does not attempt to show the transitions needed to remove the barriers between competing industries in an equitable manner.
- This paper does not look at subsidies for services other than for traditional local telephone service. It may be that the definition of what is subsidized will change in the future; however, this also means that the composition of who pays the subsidies will change accordingly.
- This paper only provides background for subsidies based on income. There are other subsidies, such as assistance to high-cost areas.
- This paper does not attempt to quantify the economies of offering more than one product or service. However, when more than one service is carried by a single facility, the common costs (such as overhead, maintenance, etc.) may be spread out over more services. This paper does not argue for or against a single facility. It assumes that markets and economics set the incentives.
- This paper uses available data to calculate the percentage of households with various products. Therefore, this paper shows patterns and ballpark numbers.
- There are other communications services such as radio and DBS that are not included in the figures.

Revvng up the Communications Economic Engine: Household Services, Monthly Bills, and Barriers to Competition, cont.

Figure 1: Average Monthly Household Bills and Usage for Selected Communications Services



* LD is Long Distance.

** Packages include broadcast TV and vary by company.

*** Packages include basic cable TV and premium channels (sometimes called "movie channels").

Figure 1 provides an overview of the average household monthly bills for various services: telephone (local and long distance), cable TV (basic and pay), wireless (cellular and PCS), and Internet services. If a household were to subscribe to all of these services, the average monthly total would be \$158.65. **Figure 1** also provides the percentage of total U.S. households with these services and usage statistics.

Notes:

Average bills are for households that subscribe to the particular service. The average prices and hours are by service; the percentages are for total U.S. households.

Broadcast TV: This category is included because a TV set is a prerequisite for cable TV. While 68.1% of the households subscribed to cable TV (Sept. 1995 through October 1996), 93.5% have a cable system passing nearby.

Data for weekly totals are unavailable for some categories.

*Telephone: Long Distance and Other: Calculated as total monthly bill minus charges for basic local service, this category is primarily toll, but also includes charges for equipment, additional access lines, connection, touch-tone, call waiting, 900 service, directory listings, etc.

All data: The data have been calculated, with as much consistency as possible, to show patterns; exact precision does not apply. For example, the calculated percent of households with TVs for 1996 is 96.4%, while the U.S. Department of the Census data for 1994 show 98.3%. In showing overall patterns, this difference of 1.9% is not significant. Whenever possible, figures use the latest data (1996 or 1997); other calculations incorporate 1994 and 1995 data when later data were not available. For the sources and methodology used to calculate penetration rates associated with services and household income levels, see *Calculations and Sources for Revving up the Communications Economic Engine: Household Services, Monthly Bills, and Barriers to Competition* (hereinafter referred to as *Calculations and Sources*), Carol Weinhaus, Pat McLarney, John Gomoll, et al., Telecommunications Industries Analysis Project, Boston, MA, July 20, 1997.

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Figure 2: Comparisons of Average Monthly Bills for Selected Individual and Combined Household Communications Services

Type of Service:	Average Monthly Household Bill (in Dollars)
Local Telephone Only	\$19.49
Cable TV Only	\$29.51
Cable TV and Internet	\$49.46
Total Telephone (Local and Toll) Only	\$61.49
Telephone and Internet	\$81.44
Cellular/PCS and Long Distance Telephone (Toll)	\$89.70
Telephone and Cable TV	\$91.00
Telephone, Cable TV, and Internet	\$110.95
Cellular/PCS and Telephone	\$109.19
All (Telephone, Cable TV, Cellular/PCS, and Internet)	\$158.65

Figure 2 compares prices for individual services and various combinations of services based on the average monthly household bills in **Figure 1**. For example, the average monthly bill for a household with telephone and cable TV service is \$91.00, for cable TV and the Internet is \$49.46, and for wireless and long distance telephone is \$89.70. Some services may have components that are substitutable with other components. For example, combining wireless services (Cellular/PCS) with long distance telephone services, may be a substitute for local and toll telephone services.

For details on the calculations, see *Calculations and Sources*.

Revving up the Communications Economic Engine: Household Services, Monthly Bills, and Barriers to Competition, cont.

Figure 3: Selected Individual and Combined Communications Services by Household

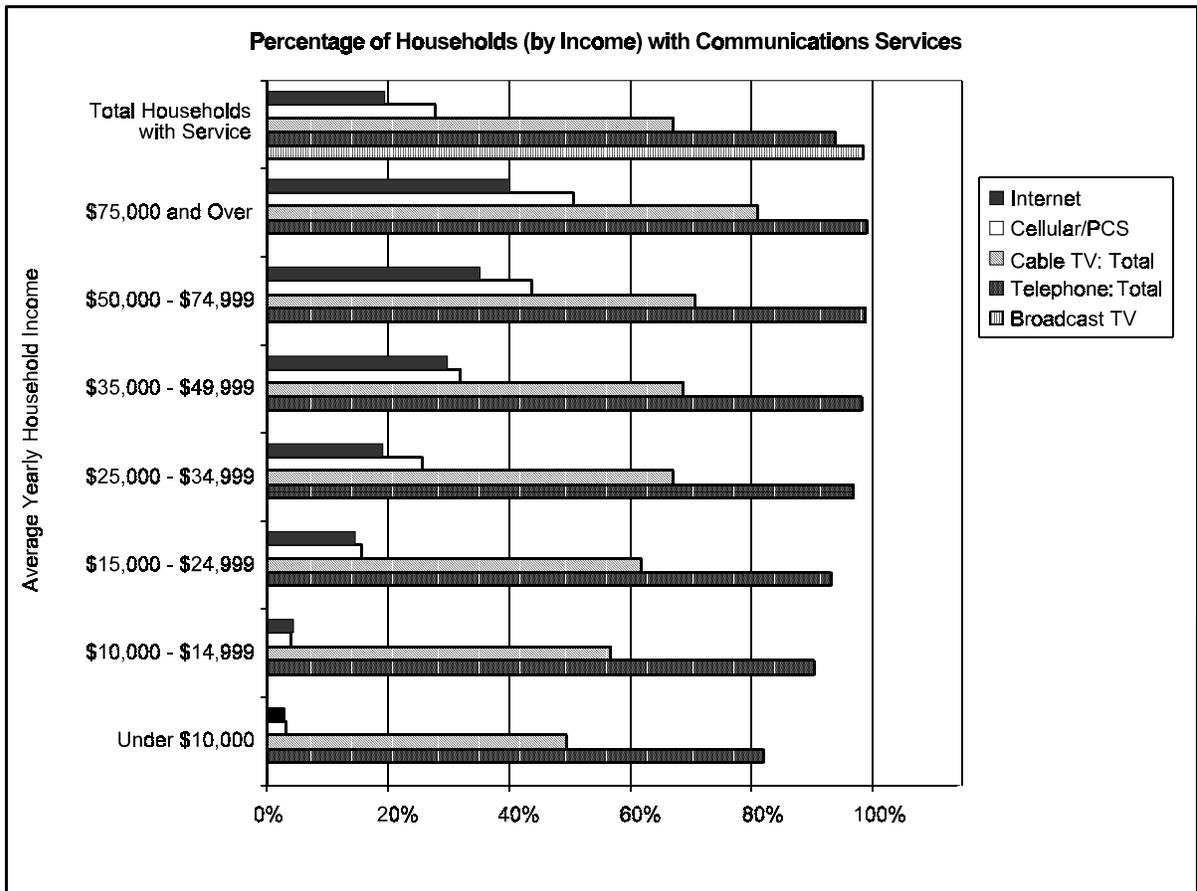


Figure 3 shows the percentage of households with various communications services by average yearly household income. Even in the low-income levels, a number of households subscribe to more than just telephone service.

For details on the calculations, see *Calculations and Sources*.

Reving up the Communications Economic Engine: Household Services, Monthly Bills, and Barriers to Competition, cont.

Figure 3: Selected Individual and Combined Communications Services by Household, cont.

Percentage of Total Households (by Average Yearly Household Income) with Service							
Service by Type	Broadcast TV	Telephone	Cable TV	Cellular/PCS	Internet	Percentage of Total Households	Total Number of Households (in millions)
Under \$10,000		82.0%	47.8%	3.5%	3.6%	12.3%	12.3
\$10,000 - \$14,999		90.3%	55.5%	4.0%	4.8%	8.7%	8.7
\$15,000 - \$24,999		93.8%	60.2%	16.1%	14.9%	15.9%	15.8
\$25,000 - \$34,999		96.9%	64.0%	23.9%	19.7%	14.2%	14.1
\$35,000 - \$49,999		98.2%	68.0%	32.9%	28.6%	16.9%	16.8
\$50,000 - \$74,999		98.8%	72.1%	43.3%	34.1%	17.1%	17.0
\$75,000 and Over		98.9%	82.2%	54.3%	39.3%	14.8%	14.7
Total Households with Service	98.3%	93.9%	65.1%	27.7%	19.5%	100.0%	99.6