SUPREME COURT DENIES CBCT PETITIONS; COMPTROLLER CURRENCY TO ISSUE NEW CBCT REGULATIONS

Consolidated petitions from two Chicago banks and the Comptroller of the Currency seeking review of Federal Appeals Court rulings which equate customer-bank communications terminals (CBCTs) with bank branches, and thus forbid CBCTs in nonbranching states, were denied by the Supreme Court last month "without dissent or explanation."

Banks' response. The petitioning banks, Continental National Bank and Trust Co. of Chicago and the First National Bank of Chicago, this month deactivated their combined total of seven CBCTs. The terminals' three uses permit deposits to be made, funds to be transferred, or funds to be borrowed; each of these functions, various appeals courts have held, constitute branch banking under the National Bank (McFadden) Act.

New CBCT regulations. The Currency Comptroller's Attorney Edward Jiran told AFIPS Washington Report in October that the Comptroller will issue new regulations for national bank CBCTs this month.

Rules may be written to liberalize minimum capitalization requirements for terminals shared by more than one financial institution, according to the Comptroller's Electronic Banking Systems Division Chief Claude A. Raworth. Raworth told AFIPS that the new regulations will permit banks "to use the [EFTS] technology without heavy capitalization requirements; [otherwise,] some thinly capitalized [banks] would have problems." Thus, according to the Currency Comptroller official, the regulations would encourage sharing EFTS facilities with smaller banks.

NCEFT and legislative activities. Prior to the Supreme Court action denying the CBCT petitions, National Commission on Electronic Funds Transfer (NCEFT) Executive Director John B. Benton told this writer in Washington that the branching issue should be resolved in the U.S. Congress. Benton added that "it's going to be some time before legislation is passed in Congress" on whether CBCTs are branches.

Last month, the NCEFT convened hearings on both branching and consumer issues. The Senate Subcommittee on Financial Institutions, chaired by Sen. Thomas J. McIntyre (D-N.H.), will hold hearings on the branching question in December.

CBCT court action. Federal courts in various jurisdictions have been almost unanimous in their interpretation of the McFadden Act disallowing off-premises CBCTs. Last August, the U.S. Court of Appeals for the Tenth Circuit, ruling in a Colorado case, upheld a lower district court judgment that receipt of deposits by CBCTs violates the McFadden Act.
The U. S. Court of Appeals for the Eighth Circuit, in a separate case, last July upheld a district court ruling in Missouri that the First National Bank in St. Louis must remove CBCTs at two St. Louis County locations. The district court said that any one of the three major services provided by CBCTs constituted branch banking, which is limited in Missouri.

In the cases of the two petitioning Chicago banks, decided by the Federal Court of Appeals in Illinois last May, all functions performed by CBCTs were deemed to constitute branch banking, which is forbidden in Illinois.

However, a Federal District Court in Oklahoma approved all three uses of CBCTs, finding terminals "only processors," and as such legal. An appeal of the case was mooted when the state legislature authorized legislation sanctioning the use of CBCTs.

Government Operations Committee Criticizes Noncompetitive Procurements

Following hearings last June (Washington Report, 8/76), the House Committee on Government Operations stated in October that "the low level of fully competitive ADP procurements, coupled with the apparent lack of effective utilization of ADP resources will, if allowed to continue, ultimately result in seriously jeopardizing the effectiveness of the Brooks Act [P.L. 89-306], at a cost of millions of dollars annually to the taxpayers."

Reexamination of 'true impact of computers' suggested. In a report, titled Administration of P.L. 89-306, Procurement of ADP Resources By the Federal Government (#), the Committee said: "If the full benefits of the Act are to be achieved, GSA, OMB, NBS, and the user agencies must join together in a commitment to fully support and adhere to the provisions of the Act."

The report suggested a reexamination of "the true impact of computers on government operations." It raised the question of whether "acquisition of ADP resources is necessary to carry on an essential program, or whether such acquisition will foster non-essential activity because the computer is available."

ADP must... receive attention of top management. The Committee concluded that ADP "can no longer be viewed as a mere tool, but must now be treated in the same way as other major programs and, as such, receive top attention of top management." The report attributed the basic causes of noncompetitive procurements to a lack of: (1) adequate justifications for ADP acquisition; (2) long-range planning; (3) standards; (4) high level languages; (5) utilization reviews; and (6) use of functional specifications.

OMB directs GSA to use 'functional ADP specifications.' Responding directly to the Committee report and other criticisms, OMB Director James T. Lynn, in a letter last month to GSA Administrator Jack Eckerd, wrote that "[t]o preclude the adverse effects of unduly restrictive specifications, agencies shall, to the maximum practical extent, express their ADP requirements in terms of functional performance specifications rather than equipment specifications."
Lynn added: "GSA should strive for expeditious review of agency submission to avoid delays in the procurement process. Agencies should cooperate with GSA to expedite these reviews. An undue length of time for the normal ADP procurement process may be considered a disagreement by GSA with the request of the agency, and may be appealed to the Office of Management and Budget.

"Consistent with the policy expressed herein, any such appeal will be handled expeditiously, but the burden will be upon the agency to demonstrate the need to specify the particular make or model of equipment or its functional equivalent when such specification is at issue," he said. The GSA has 60 days from October 6, the date of the letter, to comply with the directive.

HOUSE COMMUNICATIONS SUBCOMMITTEE CHAIRMAN RECOMMENDS OVERHAUL OF 1934 COMMUNICATIONS ACT

A "basement-to-attic" overhaul of the 1934 Federal Communications Act, the statute which provides the basis for regulation of the nation's telecommunication systems, was proposed to the next Congress last month by Rep. Lionel Van Deerlin (D-Calif.), chairman of the House Communications Subcommittee. The Subcommittee has just completed three days of hearings on the proposed Consumer Communications Reform Act of 1976 (Washington Report, 10/76).

Joined by Rep. Lou Frey (R-Fla.), Van Deerlin said the original Act is outdated.

According to the trade press, issues to be considered by the Subcommittee include: whether the FCC has established fair competitive ground rules; whether business telephone services really subsidize residential services; and what the implications of changing FCC policies are toward competition.

NEW TAX ACT REPEALS PART OF 1974 PRIVACY ACT ON STATE USE OF SOCIAL SECURITY NUMBER

President Ford last month signed into law the Tax Reform Act of 1976, recently passed by Congress (Washington Report, 9/76), which includes an amendment permitting state governments to demand and retain an individual's Social Security Number (SSN) to aid in searches for parents not supporting their children. The amendment repeals part of the Privacy Act of 1974.

In addition, state and local governments can now use the SSN as an identifier for tax administrative programs, for drivers' licenses, and for motor vehicle registration. However, government officials who disclose the number without authorization are subject to a fine of up to $1,000 or imprisonment of up to one year.
NEWS BRIEFS

Rep. Tim Wirth (D-Colo.) last month wrote Office of Telecommunications Policy (OTP) Director Thomas Houser (who had reportedly contacted Assistant Attorney General Donald Baker to discuss the "economic rationale" for the Government's antitrust action against AT&T) that "any further contacts between OTP and the Department of Justice, concerning the [suit]... would be most inappropriate."

The FCC last month set new dates for providing comments on the second "Computer Inquiry" and rulemaking regarding the use of computers by common carriers in providing communications or data processing services; comments are now due by January 10, 1977; replies, by February 24, 1977.

Responding to protests by AT&T, the FCC last month revised registration specifications for modems to facilitate direct interconnection of modems to the telephone network.

The House Government Operations Committee last month failed to report to the House floor a bill that would have authorized the Federal Assistance Program Retrieval System (FAPRS).

The Institute for Computer Sciences and Technology (ICST) of the National Bureau of Standards (NBS) last month issued Disk Drive Interface Characteristics ($5.50); the report was prepared by Auerbach Associates under NBS contract, and deals with characteristics of the interfaces between high performance disk drives and their controllers.

The National Communications System (NCS) last month announced proposed Federal standards for data communications interfaces; the proposed standards specify the general purpose electrical characteristics to be applied to data communications interfaces.

The National Science Foundation (NSF) last month said several of its staff members have been appointed to provide initial support for the Office of Science and Technology Policy (OSTP).

The first Federal Software Exchange Catalog, designed to promote the exchange and sharing of software among Federal ADP units, is scheduled to be released this January by the Agency Services Division of the General Services Administration (GSA).

The Bureau of the Census last month announced the availability of a 584-page report, titled Computer Programs for Demographic Analysis ($5.50), first published last June.

The National Bureau of Standards (NBS) is holding a Bicentennial Conference on Mathematical Programming November 29 through December 1 in Gaithersburg, Md.; the conference is being co-sponsored by NBS and the ACM Special Interest Group on Mathematical Programming (SIGMP).

AFIPS IN WASHINGTON

FCC/AFIPS PLANNING CONFERENCE ON COMPUTER COMMUNICATIONS CONVENED IN WASHINGTON

A Planning Conference to provide technological background for the second FCC "Computer Inquiry," organized by AFIPS in conjunction with the FCC (Washington Report, 10/76), was convened in Washington November 8-9. The conference focused on computer communications, especially as it relates to regulatory policy. Detailed coverage will appear in the December AFIPS Washington Report.
WASHINGTON OFFICE ACTIVITIES DESCRIBED AT DPMA INFO/EXPO '76 IN LAS VEGAS

AFIPS Washington Office Director Philip S. Nyborg last month chaired a panel session on major activities of the Washington Office at the DPMA INFO/EXPO '76, in Las Vegas October 26. The session covered the Office's activities in such areas as privacy, EFTS, legal protection for software, computer security, data communications, and technology transfer.

The panel opened with a discussion of the historical perspective of the office and its outlook for the future by Mr. Keith Uncapher, chairman of the AFIPS Washington Activities Committee. Nyborg followed with a description of the daily operations of the Office, outlining the manner in which comment has been organized by AFIPS on specific issues.

Mr. William Moser, DPMA International Vice President for Industry and Government Liaison, described his role as DPMA liaison to the Washington Office. Moser emphasized his interaction with DPMA members in developing comment on testimony, and he encouraged their continued participation.

Dr. A. Michael Noll, formerly the staff member for computers in the White House Office of Science and Technology (OST), described past and present Presidential science advisory mechanisms. Noll's presentation also covered the new Office of Science and Technology Policy, and its potential relationship to the field of information processing.

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FEDERAL HOME LOAN BANKS, FHLBB APPEAL RULING PROHIBITING DP SERVICE OFFERINGS
BY BANKS

Federal Home Loan Banks in Cincinnati, New York, Chicago, Pittsburgh and
Des Moines have joined Washington's Federal Home Loan Bank Board (FHLBB) to
appeal a September ruling by a Federal District Court judge in Cincinnati
that Federal Home Loan Banks can not provide computer services to savings
and loan associations. Five of the 12 regional Home Loan Banks, which are
or at one time have been suppliers of data processing services, are involved
in the Cincinnati appeal.

ADAPSO, United Data Processing obtain injunction. The original case was
brought against the FHLBB and a Cincinnati Home Loan Bank by the Association
of Data Processing Service Organizations (ADAPSO) and United Data Processing,
Inc. in October, 1973. The remaining four Home Loan Banks joined the suit as
intervenors in November, 1973. The district court ruling enjoined all five
banks from offering data processing services beginning January 1, 1977. A
modified stay of the injunction has been obtained by the FHLBB pending the
present appeal.

District court holds that Federal Home Loan Banks are not permitted to provide
DP. In the original suit, ADAPSO argued that the Federal Home Loan Banks
posed "a form of unfair competition" to private enterprise because they are
exempted from taxation. William W. Fletcher, president of Midwest Advanced
Computer Services, Inc., Warren, Michigan, and ADAPSO member, has been quoted
as saying that his firm can not compete with the Federal Home Loan Banks'
"30 per cent lower" rates. In addition, ADAPSO said that the Federal Home
Loan Bank Act of 1932 forbids banks from participating in nonbanking commercial
activities such as those provided by computer service centers.

Federal District Judge Carl B. Rubin, in his ruling last September, held that
"the providing of data processing services to member institutions is not an
express power granted to the Federal Home Loan Banks or Federal Home Loan Bank
Board" by the Federal Home Loan Bank Act. ADAPSO Executive Vice-President
Jerome L. Dreyer has criticized the FHLBB for encouraging its members to market
data processing services to the same banks which the FHLBB regulates.

Further adverse court rulings could proscribe future DP offerings by Home Loan
Banks. ADAPSO Attorney Herbert E. Marks, who is handling the FHLBB case, told
AFIPS Washington Report that the New York Federal Home Loan Bank has ceased
offering data processing services since the district court injunction was
obtained. Marks noted that further adverse rulings against the Home Loan Banks
could proscribe future data processing offerings by the seven other Federal
Home Loan Banks. He also said that if the district court is upheld by the
appeals court in Cincinnati, the Federal Home Loan Bank Board could appeal to the Supreme Court.

A spokeswoman for the FHLBB in Washington told AFIPS that the FHLBB had no comment on the case since it is in litigation. She stated that the New York Federal Home Loan Bank ceased providing data processing services prior to the district court ruling, not after the injunction, as Marks contended.

NEW CBCT REGULATIONS MAY SANCTION OPERATION OF NON-FEDERALLY REGULATED EFTS TERMINALS

Acting Comptroller of the Currency Robert Bloom last month announced new customer-bank communications terminal (CBCT) regulations for national banks. The new regulations allow national banks to apply for permission to establish CBCTs as branches in states where state-chartered banks are permitted to establish branches. Bloom's action follows the Supreme Court's refusal to consider consolidated petitions from two Chicago banks and the Comptroller of the Currency seeking review of Federal Appeals Court decisions which equate CBCTs with bank branches and forbid CBCTs in non-branching states (Washington Report, 11/76).

The Comptroller has unsuccessfully argued in the courts that CBCTs are not branches, and are not forbidden in states which limit or disallow branching. The trade press suggests that the new regulations may sanction the operation of non-federally regulated EFTS terminals by retailers, shopping mall operators, owners of apartment complexes, or operators of transportation terminals. Thus, the effect of these regulations may be to extend the present list of EFTS "providers" beyond financial institutions, i.e., to include what were formerly only EFTS users.

The Comptroller's new regulations state that capitalization required for a CBCT branch may now be shared among the participants, thus lowering the cost of operating a CBCT, and presumably making CBCTs available to smaller banks with less capital (see Washington Report, 11/76). Also, in contrast to the $500 application fee for a traditional branch, the application fee for a CBCT branch is $200.

In the section of the Acting Comptroller's statement, said to sanction operation of non-federally regulated EFTS terminals, Bloom held that "any CBCT which is not established by a national bank . . . is not a branch of a national bank, and not subject to the provisions of" the applicable section of the federal bank regulation, the McFadden Act, which the courts have held forbids CBCTs in non-branching states.

WHITE HOUSE ANNOUNCES APPOINTMENTS TO PRESIDENT'S COMMITTEE ON SCIENCE AND TECHNOLOGY

The White House has announced appointments to the President's Committee on Science and Technology (PCST), which will conduct a two-year review of science and technology as it relates to the Federal government.

The Committee was created by the same legislation (Washington Report, 5/76) which established the new White House Office of Science and Technology Policy (OSTP). As previously announced, the chairman of the committee is Dr. Simon Ramo, co-founder of TRW, Inc. Vice chairman is Dr. William O. Baker, president
of Bell Labs. Both Ramo and Baker were chairmen of committees organized last year by President Ford to plan for OSTP.

Other members of the PCST are: Otis R. Bowen, governor of Indiana; W. Glenn Campbell, director of the Hoover Institute on War, Revolution and Peace, Stanford University; Edward E. David Jr., vice president of Gould, Inc., and former science adviser to President Nixon; Elizabeth H. Leduc, professor of biology, Brown University; Fritz J. Russ, president, Systems Research Laboratories, Dayton, Ohio; Charles P. Slichter, professor of physics, University of Illinois; Charles H. Townes, professor of physics, University of California at Berkeley; and W. Bradford Wiley, chairman of John Wiley and Sons.

FEDERAL ENERGY ADMINISTRATION ASSISTS WITH COMPUTERIZED CONSTRUCTION FORECASTING SYSTEM

The Federal Energy Administration (FEA) is assisting in developing a computer-based system to permit national and regional projections of construction labor needs in relation to energy development. The system will also provide long and short-range forecasts in local areas, FEA Administrator Frank G. Zarb said last month. It will be implemented late next year, Zarb added.

NATIONAL SCIENCE FOUNDATION RELEASES GUIDE TO PROGRAMS REFLECTING APPROPRIATIONS

The National Science Foundation (NSF) last month released its Guide to Programs (#-- enclose $1.35) reflecting NSF's appropriations for FY 1977. Programs in theoretical computer science, software systems science, software engineering, intelligent systems, computer systems design, and special projects are described. Proposals for support are ordinarily assigned to the appropriate NSF division or office for review and evaluation.

The theoretical computer science program encompasses the theory of computation, numerical analysis and computational mathematics, theory of formal languages, and analysis of algorithms. The software systems science program covers "fundamental" questions of communicating with and controlling computer systems.

The software engineering program includes the methods, tools, and techniques for specifying, designing, and implementing "quality" software. The intelligent systems program covers computer-based systems which have such characteristics as pattern recognition, pattern generation and knowledge representation.

The computer systems design program includes the principles of computer systems design such as: computer system architecture, performance, graphics, man-machine interaction and logic design. The special projects program encompasses research projects, studies, workshops, and other activities which "might encourage the development of new fields of computer science research."

Should future legislation result in some modification to the FY 1977 program, changes will be announced in the monthly NSF Bulletin. Program schedules, deadlines, updates, and availability of brochures describing individual programs are also published in the Bulletin. It may be obtained free-of-charge by writing: Editor, NSF Bulletin, Public Information Branch, NSF, Washington, D.C. 20550.
NEWS BRIEFS

The FCC at press time late last month reversed the Chief of the Common Carrier Bureau's rejection of AT&T's Dataspeed 40/4 filings (Washington Report, 4/76); the Commission concluded that the 40/4 service is "not inconsistent" with its existing computer rule; detailed coverage will appear next month.

FCC Chairman Richard E. Wiley early last month said the FCC is considering whether it has authority to ask the courts to modify the 1956 AT&T antitrust consent decree; the Justice Department has held that the consent decree bars AT&T from interstate marketing of the telephone company's Dataspeed 40/4 as "incidental" to regulated communications.

The director of the White House Office of Telecommunications Policy (CTP), Thomas J. Houser, last month criticized the Federal Reserve System for expanding "its operational role in interbank EFT with pilot projects" linking automated clearing houses (ACHs) with telecommunications (Washington Report, 9/76); however, H.L. Baynes, president, National Automated Clearing House Association (NACHA), which is operating the project with the Federal Reserve, told this writer last August that the Fed has "the right to develop an ACH processing capability [and to go] interregional without involving the private sector."

The General Services Administration (GSA) last month amended its Privacy Guidelines adding privacy and security considerations for use in ADP or telecommunications systems solicitations and contracts; the amendments also require that agencies provide an inspection program in system specifications and contracts that will "ensure continuous, efficacious and efficient safeguards, and provide for the discovery and the countering of any new threats or hazards."

The National Science Foundation (NSF) last month said industrial spending for research and development reached $23.5 billion in 1975, up five per cent from the 1974 level of $22.4 billion.

A study which lists "factors important to success" in the mainframe computer industry, titled The American Computer Industry in Its International Competitive Environment (#--enclose $1.70) was released last month by the Domestic and International Business Administration of the Department of Commerce.

Information which may be needed by managers considering data base implementations is featured in Data Base Directions--The Next Steps (#--enclose $2.40), a 158-page special publication of the National Bureau of Standards (NBS), first announced last October; the document incorporates the Proceedings of a 1975 workshop co-sponsored by NBS and the ACM.

The National Civil Service League Career Service Award for 1976 was presented last month to Dr. Ruth M. Davis, Director of the Department of Commerce's National Bureau of Standards (NBS) Institute for Computer Sciences and Technology (ICST).

AFIPS IN WASHINGTON

FCC COMPUTER COMMUNICATIONS PLANNING CONFERENCE: 'NO LOGICAL TECHNICAL BOUNDARY' BETWEEN COMPUTING AND COMMUNICATIONS

Summarizing the technical presentations at the FCC Planning Conference on Computer Communications November 8-9 in Washington, organized by the AFIPS Washington Office, Dr. Vinton G. Cerf of the Information Processing Techniques Office, Defense Advanced Research Projects Agency (ARPA), noted: (1) There is no "logical technical boundary" between computing and communications; (2) Packet switching is having an "important effect" on computer communications today, and will have a "profound effect" on frequency allocation in the future; (3) High
local access costs, international link costs, and user learning costs are
"limiting" the growth of computer communications services; (4) The prime opportu-
nities for network costs and tariff improvement lie in the development of new
facilities for local access and for intercontinental links; and (5) A regulatory
climate is needed "which encourages innovation, ensures reliable interconnection
of primary services, and promotes the acquisition of capital for growth."

Wiley says FCC policy decisions must be based on understanding of technology.
Opening the conference, FCC Chairman Richard E. Wiley stated his view that a
computer is a communications device, not a data processing device, when it is used
in a traditional communications service. However, Wiley also noted that the use
of computer technology may result in an enhanced service, offering more than
traditional communications.

He predicted that similar technological forces will develop in several areas of
communications service. Wiley said: "I firmly believe that, in this great free
enterprise society of ours, government regulations must not be permitted to stand
in the way of technological development. If the new technology creates adminis-
trative difficulties for the government, it is the regulations that must be
conformed and not the technology."

According to the FCC chairman, "We will see more instances in the future where,
as here, the technology is developing in a manner that blurs traditional inter-
fases. In cases of this sort, the policymakers must have direct access to
technical experts and decisions must be based upon an understanding of the
technology."

Wiley also said, "It is our belief that AFIPS is a particularly appropriate
entity to present this conference for the Commission, in view of the Federation's
sponsorship of the National Computer Conference, and the Joint Computer Conferences
prior to that. Moreover, it is also our view that AFIPS is a basically impartial
organization in relation to our policy concerns, bringing to us the objective views
of a group of highly qualified experts."

Computer communications account for 20 per cent of all expenditures in computer
field. In the conference's first presentation on "Computer Communications: An
Introduction and Overview," Lynn Hopewell (chairman, IEEE Computer Society
Technical Committee on Computer Communications; and senior member, executive staff,
Computer Sciences Corp.) said that computer communications systems had first been
used in controlling "complex" operations of industry and government. Hopewell
added that the most common use of computer communications is in data base applica-
tions.

The speaker suggested that the computer communications industry accounts for 20
per cent of all expenditures in the computer field. Examples of industrial areas
affected by computer communications technology were listed as law enforcement, se-
curities brokerage, insurance, reservations systems and banking. Hopewell said
that 75 per cent of the top 500 industry corporations are now using computer
communications.

Distributing samples of a microcomputer-on-a-chip, he noted technological changes
that have produced a 1976 microcomputer CPU costing $20 in contrast to a 1960 IBM
CPU costing $30,000. Hopewell added that microprocessors which cost $20 today
cost $100 only a year ago. He indicated that such differentials represent only
the beginning of extremely low cost computing.

Hopewell said that the proposed definitions employed in the new "Computer Inquiry"
aid in "clarifying the permitted uses of computers by common carriers, but in no way allow the proposed abandonment of the 'hybrid' service concept." He noted that the hybrid concept should be retained "because some service offerings have mixes of both computing and communications functions," not because of unclear definitions.

Since "hybrid services will become even more common in the future," Hopewell continued, elimination of the hybrid concept will "inevitably suppress innovation because any services that have communication functions inextricably bound into them will be defined as subject to regulation." The speaker concluded that he saw no "technological or economic reason for the regulation of the resale industry."

"Technology is moving towards integrated wideband services." In his presentation on "Research Topics in Computer Communication," Vinton G. Cerf summarized technological factors influencing the development of computer communications: the availability of wideband transmission media; the use of computers to control the switching and allocation of transmission bandwidth; the trend towards all-digital telephone networks; and interconnection of computer communications networks.

Cerf said the "technology is leading away from separate, distinct narrowband services . . . towards integrated wideband services. The potential social impact is pervasive; the possibilities for new wealth-creating activity, almost incalculable; and the need for regulatory adjustment, inevitable."

With the juxtaposition of computing and communication, he suggested the FCC could: reallocate the radio spectrum using computer-controlled demand access; mandate computer communication network interconnection through the enforcement of interconnection standards; and consider proposals by regulated carriers as well as others "to provide previously impossible combinations of information processing and traditional communication services."

"Boundary between communicating and computing will become more blurred." In his presentation on the "Dimensions of the Need for Computer Communications," Alex Curran, president, BNR, Inc., suggested that domestic users must seek to reduce the cost of network access for smaller users, especially in the "smaller urban centers." FCC Interconnection Chief Louis Feldenr, in a question-and-answer period following Curran's presentation, stressed the "need for computer power" in rural areas.

In his formal presentation, Curran continued that the cost of intercontinental transmission must also be reduced. According to the speaker, these measures would help to insure that "the common carrier networks can cope with the data communications traffic of commercial users."

Curran stated that some of the office and home services associated with computer communications could require reintegration of voice and data capabilities. He provided several current examples of personal computing including: Viewdata, the embryonic electronic newspaper in the United Kingdom; Incasting, instantaneous voting and data collection in Canada; Mailgram, a precursor of electronic mail in the U. S.; and CAI, computer-assisted instruction.

Curran also said that other services will require switching machines "capable of recognizing information [interest] specifications as valid addresses." For example, switching machines could recognize selective information dissemination interest profiles as valid addresses, he noted. Curran concluded: "Thus, the boundary
between communicating and computing will become more blurred. There are economic arguments for suggesting that the boundary definitions be relaxed to encourage a new cycle of innovation."

FCC decisions may limit the growth of carriers, not necessarily the growth of unregulated suppliers in data processing. In his presentation, titled "Limitations on the Growth of Computer-Communication Services," Prof. Donald A. Dunn, Engineering Economic Systems Department, Stanford University, indicated that user learning costs will limit the rate at which new computer communication services can be introduced to markets serving non-computer professionals. Dunn suggested that, in future regulatory decisions, integrated service packages (designed to minimize user learning and operation costs) might be used in lieu of individual component services as the unit of service that is judged communications or data processing. He added that regulatory limitations on the rate of return and regulatory policies on depreciation allowances can restrict technological change as well as limit the rate of introduction of new equipment by carriers.

According to the speaker, the earlier "Computer Inquiry" rule, requiring data processing services to be provided by carriers through a separate affiliate, may limit the growth of carriers. But he added that the rule does not affect the growth of the data processing industry since unregulated suppliers can respond to this market. Dunn also noted that the resale and sharing decision, imposing regulation on resale carriers, would not necessarily inhibit the growth of the industry "since separate data processing affiliates will not be required of resale carriers that do not provide monopoly services."

He stated that the resale and sharing decision "removed some of the most serious limits to the growth of this industry by opening the market for network services to essentially any firm willing to operate as a resale carrier." Dunn concluded: "Pressures are likely to develop soon to regulate providers of information service packages that may offer computer message services to users that obtain network service from resale carriers. Such regulation would inhibit the growth of the industry, and is not needed to protect the interests of users."

"There is no natural boundary' between communications and computing. In their presentation on "The Future of Computer Communications," Vinton G. Cerf and Alex Curran said that "we cannot offer a solution to the definition of a boundary between communicating and computing--in fact, technical considerations convince us that there is no natural boundary."

Cerf and Curran urged the FCC to support the development of "competitive services"; to insure that a "sufficient set" of standards is created to facilitate interconnection of "prime services"; create a climate in which both computing and carrier interests profit from the installation of "reliable" facilities; and broaden the base for the acquisition of capital so as to eliminate a possible constraint on growth.

Conference presentations will become part of formal record of Computer Inquiry. The conference, open to the public, was attended by over two hundred people, including those who watched the proceedings via closed circuit television in an adjoining room. As previously announced, the presentations will become part of the formal record in the FCC's "Computer Inquiry." A Proceedings containing all the papers is available at $10 per set from AFIPS Headquarters, 210 Summit Avenue, Montvale, New Jersey 07645. Headquarters telephone number is (201) 391-9810.
Members of the AFIPS panel on private sector usage of the Social Security Number (SSN), organized at the request of the Privacy Protection Study Commission (Washington Report, 2/76), last October responded individually to a staff memo concerning the use of the SSN, submitted to them by Privacy Commission Executive Director Carol W. Parsons.

Daniel D. McCracken, independent consultant, said he favors legislation "to prohibit unauthorized matching of records" through use of the SSN as a universal identifier. McCracken wrote Parsons, saying that lacking such legislation, "I would argue for restrictions on the use of the SSN as a partial substitute, and as a way to keep the more basic issue alive and visible." McCracken, who is ACM vice-president, is responsible for passage of an ACM resolution opposing the use of the SSN as a universal identifier.

Herbert S. Bright, president, Computation Planning Inc., who also filed a response to the memo, said use of the SSN in licensing drivers opens SSN files to insurance companies as well as list compilers and other vendors. Bright added: "Continuing progress in cross-linking practice between insurance companies is increasing the justification for vigorous efforts by the Commission to examine such attacks on privacy and to place the facts before the public and the Congress." Bright is also a member of ACM.

Willard E. Hick, auditor, Massachusetts Mutual Life Insurance Co., Springfield, Massachusetts, responding to the memo, wrote that the Commission's statement supporting continued use of the personal identifier "should emphasize need and not concentrate on counteracting suggestions that have been made." Hick questioned why the Commission does not "address in more detail the reason universal identifiers are necessary on a positive rather than negative note." He told AFIPS Washington Report that, to the best of his knowledge, there is no "cross-linking" between insurance companies. Hick is a member of the Institute of Internal Auditors.

Also responding to the memo, with letters not available at press time, were: Jeffrey V. White, president, The Credit Bureau, Inc., Atlanta, Georgia; John J. Stiglemeier, director, Information Center on Education; Roger E. Creel, assistant vice president-Systems & Processing, Employers Insurance Co. of Wausau, Wausau, Wisconsin; Aiden R. Dalzell, director of Data Processing, Ohio University, Athens, Ohio; J. M. Moore, section head, Exxon Corp., Florham Park, New Jersey; and William E. Perry, director of EDP and Research, the Institute of Internal Auditors, Orlando, Florida.
FEDERAL DATA ENCRYPTION STANDARD APPROVED BY COMMERCE DEPARTMENT

A data encryption algorithm, designed to protect digital information, was approved in November as a Federal Information Processing Standard (FIPS) by the Department of Commerce. The new standard will be described and promulgated in FIPS PUB 46.

The algorithm was first proposed by the Institute for Computer Science and Technology (ICST) of the National Bureau of Standards (NBS) in 1973. The encryption algorithm converts information into an encoded (i.e., encrypted) form which can be transmitted or stored, but which cannot be read without the appropriate key. Thus, it can be used to protect information communicated between a terminal and a computer, as well as between computers; in addition, it can be used to protect information stored in off-line media.

Mandatory standard for Federal agencies. As a FIPS, Federal agencies will be required to use the encryption algorithm, whenever encryption of data is deemed necessary. However, data subject to the National Security Act of 1947 and the Atomic Energy Act of 1952 are exempted from the standard. The encryption algorithm may also be used on a voluntary basis by organizations and individuals outside the Federal government.

Primary initial application in EFTS. The new standard's primary application is initially expected to be in Electronic Funds Transfer Systems (EFTS). The algorithm can be employed in EFTS to discourage "skimming" of bank card information for the purpose of gaining access to automated teller machines (ATMs). It can also be employed to prevent interception of computer messages authorizing transactions at the ATM. Several non-standard encryption algorithms, including one developed by Diebold, Inc., are already in use by some banks.

Strength of algorithm estimated. NBS said technical workshops have been held to measure the strength of the algorithm in terms of time and money that must be spent in finding the key. In November, at the Dartmouth College Symposium on Man and the Computer, ICST Director Dr. Ruth M. Davis stated that, while no code is "theoretically unbreakable," 2,500 years of computer time on a general-purpose computer "significantly faster" than a CDC 7600 would be required to derive a key. With respect to future technology, Dr. Davis estimated that "working from matched sets of clear and cipher data, well over $100 million" could be spent five years from now to find a key. With technology available in 10 years, it could take $70 million to derive a key, she said.
IBM's algorithm chosen; companies to manufacture devices incorporating standard without paying royalties. ICST began soliciting encryption algorithms in 1973 and 1974. IBM's proposed algorithm was chosen in 1975. While IBM has patent rights in the standard, the company has agreed to grant royalty-free licenses to other companies which wish to manufacture devices incorporating the algorithm. The trade press notes that Motorola and Rockwell International are planning to manufacture integrated circuit chips which incorporate the encryption algorithm.

Standard to be published 3/15/77; conference scheduled. FIPS PUB 46 is expected to be published February 15, 1977, and to become effective August 15, 1977. Copies of the standard will be available after February 15 from the National Technical Information Service (NTIS), DOC, 5285 Port Royal Road, Springfield, Virginia 22161, or through the AFIPS Washington Office. NBS will hold a conference on February 15, 1977, at its Gaithersburg, Maryland, facilities to discuss FIPS PUB 46 in relation to other security measures.

TERMINAL MANUFACTURERS, INDUSTRY ASSOCIATIONS CRITICIZE FCC APPROVAL OF DATASPEED 40/4

Independent terminal manufacturers and industry associations last month criticized the Federal Communications Commission (FCC) for its approval of tariff filings on AT&T's Dataspeed 40/4 terminal device (Washington Report, 12/76). The FCC's approval, announced in November, reverses a previous proposed decision by the Commission's Common Carrier Bureau which rejected the Dataspeed 40/4 tariff (Washington Report, 4/76). Under the new FCC ruling, AT&T will be permitted to provide the Dataspeed 40/4 service.

Primary Issue. The debate centers on whether the terminal offering constitutes a data communications service or a data processing service. If it is a data communications service, as held in the present Commission ruling, AT&T can provide the service. However, if it is a data processing service, as the Chief of the Common Carrier Bureau stated last March, AT&T cannot provide the service.

The FCC had held earlier in its original "Computer Inquiry" that common carriers may provide data processing services, but only through unregulated subsidiaries. However, AT&T is even precluded from this option by its agreement in a 1956 consent decree (with the U.S. Department of Justice) not to participate in unregulated industries.

Specific industry criticism. The independent terminal manufacturers and computer industry groups charged that the development of the Dataspeed 40/4 terminal is subsidized by profits from AT&T's regulated communications service offerings. Thus, they contend that the device represents "unfair" competition by AT&T against unregulated industries.

Possible further action. The FCC has stated that its latest ruling is contingent on the outcome of the Commission's new "Computer Inquiry" (see Washington Report, 8/76). (Comments in this proceeding are now due April 11, 1977; replies are due May 25, 1977.) However, the trade press speculates that it is unlikely that the Dataspeed 40/4 offering, once tariffed, will be "detariffed."
The Computer and Communications Industry Association (CCIA) has indicated its intention to file suit against the Commission in the U.S. Court of Appeals in the District of Columbia. CCIA seeks to enjoin implementation of the FCC's ruling, pending a full court review on the merits.

CCPA APPROVES PATENT FOR SOFTWARE PROGRAM SECOND TIME

Some software programs are eligible for patents, according to the U.S. Court of Customs and Patent Appeals (CCPA), which last November reversed the U.S. Patent Office for the second time on the issue of software patentability. The CCPA decision involves the "Regulator" program (developed by Glen F. Chatfield, president of Duquesne Systems, Inc.), which adjusts the priorities on computer programs.

In two previous cases, the Supreme Court (prior to the latest Chatfield decision) has reversed the CCPA, deciding in favor of the Patent Office on limited grounds and not addressing the question of software patentability. In Gottschalk v. Benson, the Court ruled four years ago that a program to convert binary-coded decimal was not a patentable "process" as defined in the U.S. Code. In Dann, Commissioner of Patents and Trademarks v. Johnston, the Court held last April (Washington Report, 5/76) that a computerized record-keeping system, developed for banks by Thomas R. Johnston, is "obvious to one reasonably skilled in [the applicable] art," and is therefore not patentable.

CCPA Chief Judge Harold T. Markey ruled in the Chatfield case that "no prior art was cited [by the Patent Office] against the appealed claims, and, accordingly, [the] invention must be considered to have been new and unobvious." The judge also held that Chatfield's invention meets the U.S. Code requirement for "process" claims.

TELEPROCESSING SERVICE PROGRAM INITIATED BY GSA, TO HELP REDUCE $10 BILLION FEDERAL DATA PROCESSING BUDGET

The General Services Administration (GSA) in November signed its first two teleprocessing services schedule contracts, permitting agencies to order services at government-wide volume discounts, rather than make separate procurements at greater cost. The contracts, effective December 1, provide for interactive and remote batch processing services estimated at between $50 to $80 million over the next year. Computer Network Corp. and First Data Corp. received the first two contracts.

The trade press suggests that the teleprocessing services program is the first of several steps the Government is implementing to reduce its $10 billion in yearly expenditures on data processing. For example, the Office of Management and Budget (OMB), Executive Office of the President, is encouraging greater use of outside service bureaus as well as third-party leasing firms. In addition, each Federal agency has been directed by OMB to determine five operations now being performed on its own computers that could be performed on service bureau computers.

OMB is expected to continue its moves to cut DP expenses through the transition to the Carter Administration.
CONSUMER BENEFITS IF EFT TERMINALS ARE NOT CONSIDERED BRANCHES: NCEFT TELLS SENATE

Members of the National Commission on Electronic Fund Transfers (NCEFT) last month told a Senate Subcommittee that the American consumer "may suffer unnecessary inconveniences and may pay higher prices for payment services" if EFT terminals are governed by the same laws and regulations that apply to bank branches. Such Federal laws equate EFT terminals with branches thus forbidding EFT terminals in non-branching states. (See Washington Report, 12/76.)

In testimony presented to the Subcommittee on Financial Institutions, chaired by Sen. Thomas J. McIntyre (D-N.H.), NCEFT Chairman William B. Widnall and Executive Director John B. Benton agreed that "[t]he greatest current impediment to putting into place the technology which can provide the benefits of EFT to the consumer is the uncertainty which exists about the legal environment within which EFT systems will operate in the future." The chairman and executive director, joined by three NCEFT commissioners, said that a competitive imbalance is created when federally-chartered savings institutions have greater freedom in deploying EFT terminals than national banks, which are governed by more restrictive legislation. The NCEFT representatives added that business enterprises, such as retail chains, "should not be considered . . . regulated institutions or branches thereof," when they employ electronic terminals to communicate with depository institutions.

Last month, the NCEFT convened hearings on competition and sharing. The Commission's interim report is due February 23.

R&D HAMPERED BY LACK OF COOPERATION BETWEEN GOVERNMENT, PRIVATE ENTERPRISE: RAMO

"Lack of teamwork between the Government and private enterprise is the number one bottleneck in the nation's pursuit of research and development," said Dr. Simon Ramo, vice chairman of the board and chairman of TRW, Inc. Speaking last November in Washington at the annual fall meeting of the National Academy of Engineering, Dr. Ramo added, "Even the nation's most capable researchers spend much of their time defending their selection of projects and describing potential results, rather than in carrying on research. We are persisting in this tendency even with growing indications that the U.S. is losing its leadership position as to the fraction of gross national product being devoted to basic research." The TRW Executive, who is also chairman of the President's Science and Technology Committee, expressed the hope that the new Office of Science and Technology Policy, Executive Office of the President, will contribute to the formation of "sound" national policy.

ASST. COMMERCE SECRETARY RECOMMENDS USPS COMPROMISE ON PAGE CHARGES FOR NON-PROFIT SCIENTIFIC, ENGINEERING, AND TECHNICAL JOURNALS AND PERIODICALS

The U.S. Postal Service (USPS) is "willing to modify" the USPS regulation requiring reading matter in all non-profit, second class publications to be marked "advertisement" when contributors are required to pay page charges on their submissions. Dr. Betsy Ancker-Johnson, the Department of Commerce's Assistant Secretary for Science and Technology, last month said the USPS is "willing to modify the regulation so long as contributions to publishing costs aren't mandatory but voluntary."
Convening a meeting last month of the Committee on Intellectual Property and Information, Federal Coordinating Council for Science, Engineering and Technology, Dr. Ancker-Johnson, committee chairman, indicated that this voluntary arrangement should be clarified in the publication's masthead. The regulation could affect the policy of AFIPS constituent societies which must publish a non-profit journal as one qualification for membership.

Page charges, paid by researchers, are viewed by journal publishers as one method of defraying the cost of reporting research. In many cases, page charges are paid by funds obtained through research grants. Charges may be voluntary, for example, with researchers who are not supported by grants.

Dr. Bernard Forscher, managing editor of the National Academy of Sciences' Proceedings, suggested in an interview with AFIPS Washington Report, that page charges should be considered in research budgets. Dr. Forscher compared publication of research findings with "staking a claim to a discovery," or "obtaining a deed." Forty per cent of the production costs of the Proceedings are defrayed through page charges; the remaining 60 per cent is covered by sales of subscriptions as well as reprints and back issues, he said.

The meeting of the Committee on Intellectual Property and Information was attended by representatives of IEEE, the National Science Foundation, the American Astronomical Society, as well as AFIPS and others. A representative of the Federation of American Societies in Experimental Biology said that the scientific community, will not accept the compromise solution. He indicated that unless page charges are mandatory, they "won't work." The biology society's representative recommended a special exemption from the regulation for scientific journals.

The counsel for the National Academy of Sciences agreed that page charges cannot be voluntary. He said "those who now pay must continue [to pay] or serious problems [will arise]." He stated that scientific journal articles are "as deserving of second-class [mailing privileges] as anything that goes through the mail."

There was, however, some support for the USPS compromise. One society representative suggested that attendance at the meeting, reflecting opposition to the voluntary page charges, was not representative of most professional societies views.

Ancker-Johnson stated that her committee could "monitor" cases brought to its attention and act as "brokers" in situations in which voluntary payments, once agreed to, were not made. She confirmed that the compromise is about to be put in writing (#) by USPS counsel.

Ancker-Johnson suggested that further comments concerning the regulation and the proposed compromise be directed to her in Room 3862, DOC, 14th Street between Constitution Avenue and E Street, N.W. Washington, D.C. 20230; telephone is (202) 377-3111.
$42.9 billion in total funding is predicted for U.S. R&D in calendar year 1977, according to the annual R&D forecast of Battelle's Columbus Laboratories.

Federal Judge Joseph C. Waddy last month ruled that antitrust laws apply to the Bell System; AT&T has argued, since a suit was filed in Washington two years ago by the U.S., that antitrust laws do not apply to the monopoly because it is already regulated by the states and the FCC.

Lionel Van Deerlin, chairman of the House Communications Subcommittee, last November asked the FCC to expand its new "Computer Inquiry" to include an examination of the 1956 consent decree with AT&T; the decree prevents the Bell System from offering unregulated products or services.

Sen. Abraham Ribicoff (D-Conn.), chairman of the Senate Committee on Government Operations, is expected to hold "computer abuse" hearings this spring (see Washington Report, 7/76); Donn B. Parker of the Stanford Research Institute, Menlo Park, California, will testify.

The Office of Management and Budget (OMB) last month proposed an OMB Circular establishing a uniform policy for all executive branch agencies in working with commercial (i.e., non-Federal) standards-setting bodies; the proposed Circular No. A (#) appeared in the Federal Register on December 8, 1976, p. 53724.

A proposed standard for Optical Character Recognition (OCR) Paper (#) is being recommended for Federal use by the National Bureau of Standards; the standard, which adopts American National Standard X 3.62-1976, now in the final approval process, provides the requirements and test procedures for paper to be used in OCR Systems; it appears in the Federal Register, December 9, 1976, pp. 53836-53839.

The newly established Office of Science and Technology Policy (OSTP) has reportedly negotiated contracts with the Futures Group, Inc. and Harbridge House for studies on how OSTP should fill its legislative mandate; the Office is charged with issuing an annual report and five-year forecasts on national R&D activities; in addition, two of the three assistant director positions have been filled by former National Science Foundation personnel: Phillip Smith is the assistant director for natural resources and commercial services, and Dr. Russell C. Drew is the assistant director for national security.

The FBI has reportedly asked the Department of Justice for permission to abandon a nationwide criminal records computer system; Attorney General Edward H. Levi has also asked Congress to consider the major policy implications of such a system.

The Federal Advisory Committee on False Identification has recommended against a national ID card, according to an 800-page report on criminal use of false identification (#) issued by the Department of Justice.

Copies of the October 8, 1976, Preliminary Report to Congress and the President of the National Commission on New Technological Uses of Copyrighted Works (CONTU) are now available (#); the report summarizes CONTU's first-year activities.

A report, titled Operating Structures to Support Security and Reliable Software, written by Theodore A. Linden, has been issued by the National Bureau of Standards (#—enclose $1.25).

Establishment of a Washington Office for DPMA has been approved by the association's international board of directors; the new Office is being designed to coordinate with, as well as supplement the activities of the AFIPS Washington Office; DPMA's new facility is scheduled to open mid-year.

The major annual conference of AIAA is being held here January 10-14, 1977. INFO/EXPO '77 is being scheduled by DPMA October 9-12 in Washington.
AFIPS IN WASHINGTON

WASHINGTON OFFICE GATHERING DATA TO UPDATE STATE OF THE COMPUTER INDUSTRY REPORT

The Washington Office last month began data gathering to update AFIPS' *The State of the Computer Industry*, edited in 1973 by Dr. Bruce Gilchrist and Br. Richard E. Weber. The updated research, which may later be incorporated into a report, is focusing on major trends in information processing to reflect the breadth, growth, and pervasiveness of the information processing field.

It covers: suppliers, users, and costs; usage and applications; sales; and education and employment. Representatives from several market research firms have indicated a willingness to participate in the study. A part-time research assistant, William Erickson, has been hired on a temporary basis to work on the update with Pender M. McCarter, research associate.

AFIPS PANEL MEMBERS COMMENT ON USE OF SOCIAL SECURITY NUMBER AT REQUEST OF PRIVACY COMMISSION: ADDITIONAL RESPONSES DESCRIBED

Last month, *AFIPS Washington Report* described responses of some members of an APIPS panel on private sector usage of the Social Security Number (SSN) to a position paper on this subject issued by the Privacy Protection Study Commission. We now report several additional responses which have since been received from: Jeffrey V. White, president, The Credit Bureau, Inc. (CBI), Atlanta, Georgia; John J. Stigglemeier, director, Information Center on Education, New York State Education Department; Alden R. Dalzell, director of Data Processing, Ohio University, Athens, Ohio; J.M. Moore, section head, Exxon Corp., Florham Park, New Jersey; and William E. Perry, director of EDP and Research, the Institute of Internal Auditors (IIA), Orlando, Florida.

Credit Bureau President White wrote: "Since one of CBI's primary obligations is to maintain the confidentiality of the information in its data base, we would be opposed to any general prohibitions against the use of the Social Security Number in the private sector. While CBI does not use this number as a universal identifier or as a sole factor in the identification or authentication process, it is an aid in maintaining confidentiality in a small number of cases. Therefore, eliminating the use of the Social Security Number would have an adverse impact on our ability to serve the consumer and the credit granting community."

Exxon Section Head Moore wrote: "[T]he presence of the SSN in the record constitutes unique identification and restricting its use as a formal record identifier would serve no useful purpose." Ohio University Data Processing Director Dalzell said: "I would question whether the individual's knowledge and consent should be a complete qualifier. An individual may be informed that he need not supply information if he does not wish, and he may be informed of how it will be used, but that does not completely answer the question of whether the information should be gathered and used, even with his permission."
New York State Education Department Director Stiglemeier wrote that the Commission's position paper constituted an "excellent" outline of the project boundaries and issues, but the paper's introduction omitted discussion of "goals, information needs, and interrelationships with other projects." He called these omissions "critical" to the success of the project.

IIA EDP/Research Director Perry cited examples of what he called "some preconceived findings and conclusions" of the position paper, described by the Commission as a "problem and issue statement." He mentioned such Commission "findings" as "the use of the SSN for personal authentication does not appear in itself to constitute an unfair information practice," and "the exchange of information without the knowledge or consent of an individual may constitute an unfair information practice." Perry also wrote that individuals who feel that divulging the SSN for personal authentication is dehumanizing "would probably object to the alternatives even more."