THE CANCER NEWSLETTER

11800 Sunrise Valley Drive, Reston, Virginia 22091 Phone 703—471-9695

Vol. 1 No. 26

Aug. 2, 1974

Subscription $100 per year

NIH BALKS AT FORMING NEW REVIEW GROUPS FOR NCI'S PROGRAM GRANTS; GUIDELINES DRAFT READY FOR NCAB

NCI has completed work on the draft of guidelines proposed for its new program grant funding mechanism and will present it to the National Cancer Advisory Board at either its October or November meeting. Some problems still remain to be worked out with NIH, however.

– NIH is pushing for use of existing study sections in the Div. of Research Grants as reviewing bodies for program grants despite NCI's insistence that new multidisciplinary review groups are absolutely necessary for at least some of the project areas that will be funded by the mechanism.

– Although a consensus of NCI's five division heads has been achieved on most points, no clear picture has yet emerged on what areas the program will encompass.

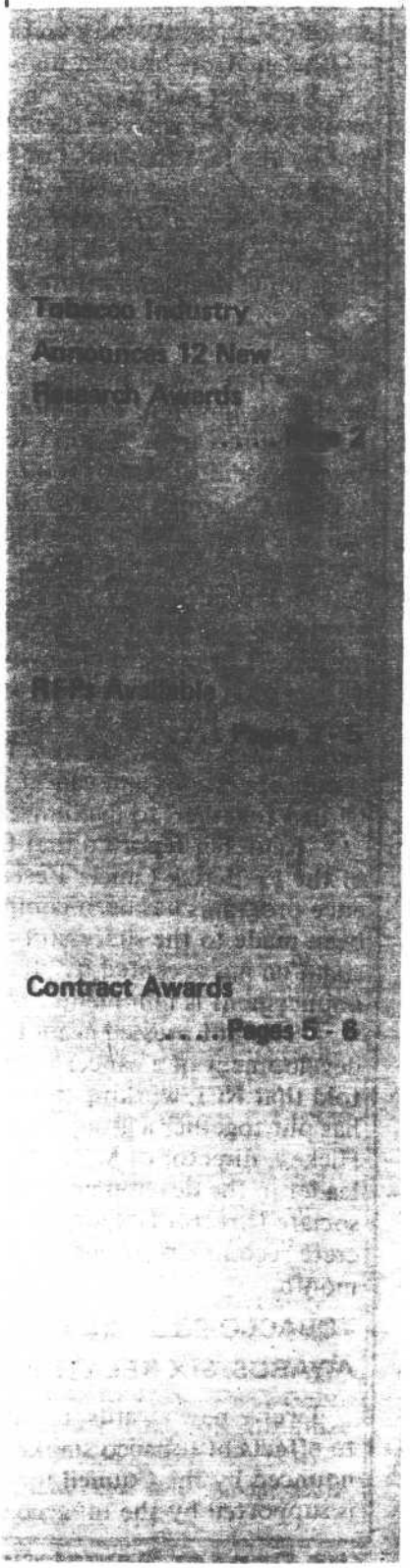
NCI Div. of Research Resources & Centers Director Thomas King told the President's Cancer Panel this week that NIH executives do not feel program grants, as envisioned by NCI, differs much if any from the existing grants mechanism. That's why they argue that no new

(Continued to page 2)

In Brief

CANCER BILL NEARLY BECAME LAW WITHOUT NIXON'S SIGNATURE AS IMPEACHMENT OBSESSES WHITE HOUSE

IMPEACHMENT concern and the obsession with related aspects were obvious at both the Washington and Western White Houses when the cancer program extension bill was awaiting President Nixon's action. The President has 10 days during which to act on a measure passed by Congress. If he neither signs nor vetoes it during that time, it becomes law without his signature. The deadline expired with no word from DC or San Clemente on whether or not Nixon had signed the bill. "They're not talking about anything except the Supreme Court's decision," a press aide told *The Cancer Newsletter* on the day the tapes decision was announced. Finally, two days later, it was learned that the President had signed the cancer bill and two other health measures (expanding diabetes and health services research) only hours before the deadline .... **HERE WE** go again, was the reaction of NIH executives when the President announced he was asking Congress to cut $5 billion from his proposed $305 billion budget for the current fiscal year as an inflation-fighting step. When the same policy was adopted two years ago, HEW bore the brunt of the reductions, and the cutbacks were felt particularly hard at NIH in other than cancer and heart programs. Although Nixon had previously promised Benno Schmidt he would go along with congressional additions to the NIH budget, he said in his economic policy speech last week that he would veto appropriations bills that exceed the budget. The new budget control act will prohibit him from arbitrarily impounding funds, as he had done in the past, without Congress' okay.



NIH BALKS AT NEW REVIEW GROUPS; NCI NEARING DECISION ON TREATMENT SHAKEUP

(Continued from page 1)

study sections are needed.

"We feel that we have to have the multidisciplinary review that is not available with existing study sections," King said. NCI Director Frank Rauscher pointed out that there is no study section now broad enough for competent review in etiology, although he did concede that in some areas, such as tumor immunology, present study sections may be capable.

Other matters brought up at the Panel Meeting:

– Rauscher said he was "beginning to see some major options" on what to do about the problems created by the fact that most of NCI's treatment programs are managed outside the Div. of Cancer Treatment. He's had a stream of recommendations from NCI and NIH executives, and he said he hoped to reach some decisions within a month.

"One of our options is to do nothing," Rauscher said. This was in response to a comment by Panel Member Ray Owen that he hoped any reorganization would not interfere with interaction between treatment and research. "I don't feel we should bring all the treatment programs too tightly together."

Panel Chairman Benno Schmidt, citing what he said has been in "applying the things we know to the treatment of cancer patients," said he was worried that "a businessman's format, of getting all treatment into one division," would result from a reorganization. "I have grave misgivings that it would work as well as what we have now," Schmidt said. "On the other hand, I do feel we ought to have a real good look at least at how the task forces operations and center operations and cancer control operations can be tied together, to maximize the efforts of all."

– Rauscher reported that the search for a director of the Frederick Cancer Research Center's basic science programs has been completed, and an offer has been made to the successful candidate. "I understand he has accepted it," Rauscher said. An announcement is imminent.

– Schmidt pressed again for tangible progress on development of a cancer research data bank. He was told that NCI, working through the cancer centers, has put together a group headed by Robert C. Hickey, director of M. D. Anderson and a long-time leader in the development of such a system. NCI Associate Director Gregory O'Conor promised that concrete recommendations would be ready within a month.

TOBACCO COUNCIL ANNOUNCES 12 NEW AWARDS, SIX RELATING TO SMOKING

Twelve new awards, including six directly related to effects of tobacco smoke on health, have been announced by the Council for Tobacco Research, which is supported by the tobacco industry.

The industry has been criticized for, first, not putting enough money into health research and, second, for not supporting enough research directly aimed at reducing the harmful effects of cigarette smoking.

"Most of the tobacco industry's research money, what little of it there has been, goes into esoteric basic research that has almost no relationship to the health problems the industry has created," one NCI executive told *The Cancer Newsletter*. "It's only a token effort, designed to hold up as an answer to the industry's critics."

A member of the National Cancer Advisory Board who heads a cancer research institution, when asked what significant findings have been reported through industry-supported research, answered "Not a God damned thing!"

A spokesman for the Council disputed the criticism. He admitted that in the first years of the Council's program, started in 1954, most of the investigations were in basic research. "Now that we have built up a base of knowledge, and not just through our investigations but all the rest, we can proceed onto targeted research," the spokesman said.

The Council claims that its project have resulted in more than 1,200 scientific publications since 1954. The Council has allocated more than $28 million to about 500 grantees and contractors in the 20 years – a little less than $1.5 million a year, the present level of funding.

The Council insists that there are "absolutely no strings" on the money it awards. Applications are reviewed by a scientific advisory board headed by Sheldon Sommers, Columbia. Robert Huebner, chief of NCI's viral carcinogenesis program, is a member of the board along with Howard Advervont, former scientific editor of the Journal of NCI; Richard Bing, Univ. of Southern California; William Gardner, Yale; Leon Jacobson, Univ. of Chicago; Averill Liebow, Univ. of California at San Diego; Henry Lynch, Creighton Univ.; Hans Meier, Jackson Laboratory; and John Wyatt, Univ. of Manitoba.

Lynch and Meier are among the 12 new grantees.

Recipients of the new grants, their institutions, and the titles of their research projects:

– Joseph Arcos, Tulane Univ., "Synergistic effects of polycyclic hydrocarbons and nitrosamines in pulmonary carcinogenesis. Potential repressors of metabolic activation of nitrosamines."

– Albert Castro, Papanicolaou Cancer Research Institute, Miami, "Nicotine and blood: detection by radio-immunoassay."

– Allen Cohen, Univ. of California at San Francisco, "The genetic defect in alpha-1-antitrypsin deficient patients."

– William Fishman, Tufts Univ., "Cancer phenotype profile which may presage bronchogenic cancer."

– Henry Lynch, Creighton Univ., "Part I: Smoking history in families with low and high cancer inci-

dence. Part II: Aryl hydrocarbon hydroxylase: cancer genetics."

– R. G. Mason, Univ. of North Carolina, "Effects of nicotine on interactions of platelets and endothelial cells."

– Hans Meier, The Jackson Laboratory, "Transplacental effects of nitrosocompounds in inbred strains of mice and rabbits."

– Dov Michaeli, Univ. of California at San Francisco, "Effects of cigarette smoke on pulmonary fibroplasts and collagen and its relation to emphysema."

– B. V. Rama Sastry, Vanderbilt Univ., "Influence of nicotine on the release of acetylcholine in the human placenta and its implications on the fetal growth."

– Ronald Rasmussen, Univ. of California at San Francisco, "Effect of cocarcinogens and tumor promoters on DNA repair in mammalian cells susceptible to chemical transformation."

– Nathan Sloane, Univ. of Tennessee, "Effect of benzo(a)pyrene and derivatives on mammalian lung cells."

– George Weinbaum, Albert Einstein Medical Center, "Lung proteinase: antiproteinase balance and the effect of cigarette smoke on this interaction."

RFPs AVAILABLE

Requests for proposal described here pertain to contracts planned for award by the National Cancer Institute, unless otherwise noted. Write to the Contracting Officer or Contract Specialist for copies of the RFP. Some listings will show the phone number of the Contract Specialist, who will respond to questions about the RFP. Contract Sections for the Cause & Prevention and Biology and Diagnosis Divisions are located at: NCI, Landow Bldg. NIH, Bethesda, Md. 20014; for the Treatment and Control Divisions at NCI, Blair Bldg., 8300 Colesville Rd., Silver Spring, Md. 20910. All requests for copies of RFPs should cite the RFP number.

RFP NCI-CO-45420-92

Title: The development and implementation of a National Cancer Program management information system

Deadline: Sept. 13, 1974

NCI has completed Phase I of a two-phased effort in support of the development of a management information system designed to provide rapid research and administrative/operational information to the director and senior staff of NCI.

The information and specifications, already developed under Phase I, will serve as a base for the detailed design and implementation of selected subsystems under this RFP.

Task 1 of Phase II will require the contractor to utilize analytical skills in the documentation of two reports (an NCP/MIS Concept of Operations and Functional Description). The contractor will also be responsible for the support of selected subsystems during this one year task.

Task 2 of Phase II will primarily involve subsystem design, implementation and operations.

A pre-proposal conference will be held 13 Aug. 1974, at NCI, Building 31, C-Wing, Conference Room 9. Further details regarding the pre-proposal conference are contained in the RFP.

Contracting Officer: H. E. Mahanes
Bldg. 31, Room 10A18
NCI, Bethesda, Md. 20014

RFP NCI-CB-53866-33

Title: Administrative support services for the Div. of Cancer Biology and Diagnosis

Deadline: Aug. 21, 1974

NCI is interested in awarding a contract to provide administrative support services in the conduct of scientific conferences, meetings, and workshops on cancer research and related activities. The contractor shall furnish all necessary personnel, labor, facilities and equipment, materials and supplies except as may otherwise be provided by the Government.

Offeror must have working experience in the specific type of services involved. Offeror must also be capable of "quick-reaction" response to the tasks designated and conference scheduled, and must have qualified personnel to perform such tasks.

Contracting Officer: Harold P. Simpson
Biology & Diagnosis
301-496-5565

RFP NCI-CB-53860-33

Title: Algorithms for computerized transaxial x-ray reconstruction

Deadline: Sept. 16, 1974

The project objective is to improve methods of detection and localizing of early cancer by advanced radiologic techniques so as to lower the mortality from cancer.

Computerized transaxial x-ray reconstruction has recently become commercially available for studies of brain lesions, and it is believed that there may be institutions or companies that are developing this technique further and are building equipment that is capable of performing the same function for the torso and parts thereof.

The government is seeking offerors who have the capability and interest to develop analog, digital or hybrid algorithms for computerized transaxial x-ray reconstruction, with the objectives of enhancing the detection and/or localization of lesions, particularly early or small lesions and developing criteria for evaluating the efficacy of such algorithms. These research efforts should include three dimensional reconstruction of absorption densities in any direction, minimize the deleterious effects of distortion and artifacts in regions of medical interest, and tend to decrease scan time and radiation risk to patient.

The contractor shall have established expertise in mathematical analysis, statistics and the radiophysical response of normal and abnormal human tissue to irradiation by x-rays. In addition:

a. It is expected that the contractor will have access to competence and display devices necessary for the research development of algorithms.

b. It is desirable but not necessary that the offeror already have access to unprocessed clinical data produced by a transaxial x-ray project machine.

The government anticipates that the proposal contract will last one or two years, with option of extension. However, offerors should furnish their own estimates of the time required to achieve the objectives of this project.

RFP NCI-CB-53865-33

Title: Development and testing of a system to improve x-ray imaging, contrast and sharpness by elimination of scatter, while retaining the resolution of film.

Deadline: Sept 16, 1974

The project objective is to improve the ability to recognize radiologically earlier (smaller) cancerous lesions so as to lower the mortality from cancer.

Since present methods of radiographic determination of the presence and size of tumors are subject to the complications of scattering of the radiation resulting in loss of sharpness and contrast, it is proposed to investigate methods of reducing such scatter.

The contractor shall have the capability of constructing a system that will function in a clinically useful range of exposure times and delivered dose. Specifically:

a. The contractor shall be able to attain the stated primary goals by mechanical and/or electronic means.

b. The system developed should eliminate the need for grids and air gaps.

c. The contractor should determine patient dosages in this new system and compare them to those occurring in standard films.

d. There should be included measurements, under clinically realistic conditions, of the improvement in scatter to primary detected radiation as a function of exposure and subject parameters.

e. There also should be included an evaluation of reoslution and contrast as well as dose reduction vis-a-vis grid and/or air-gap exposure.

f. The quality of the films should be determined objectively; the contractor will be expected to submit film obtained to an evaluation panel designated by the National Cancer Institute in matched pairs to make this determination possible.

The government anticipates that the proposed contract will last two years, allowing one year for the development of feasibility and one year for clinical application and testing.

RFP NCI-CB-53867-33

Title: Evaluation of cytoscreener

Deadline: August 26, 1974

The Cytoscreener, manufactured and patented by Nuclear Research Associates, New Hyde Park, N.Y., has been proposed as an instrument suitable for automation of clinical cytologic screening. Clinical tests of the instrument have been equivocal. Basic engineering and biologic data needed to proceed with further clinical testing are not available.

The contractor will evaluate the engineering and biological operation of the Cytoscreener as follows:

1. Evaluation of performance specifications supplied by the Cytoscreener's manufacturer of flow, optical and electronics components as provided on test objects used by the manufacturer.

2. Evaluation of the electronic, fluid and optical systems for stability, resolution and noise levels with such tests as electronic pulses, dye solutions and light flashes. This would include evaluation of signal to noise ratios in the sensing, amplification, and video conditioner outputs prior to any threshold logic.

3. Evaluation of the response of the sensors to a number of simple, relatively well understood biological and non-biological particles such as latex spheres, ragweed and paper mulberry pollen, CHO (Chinese hamster ovary) cells, matched diploid and heteroploid species lines such as WI-38 and He La or liver, thymocytes, leukocytes, chicken erythrocytes, reticulocytes and platelets, human squamous epithelial cells, and other particles and cells chosen to test the dynamic range of the sensed parameters. Evaluation will include, where appropriate, basic data such as histogram distributions of nuclear and cell diameters, centering of nucleus within cell and integrated nuclear optical density. Other areas of importance to investigate and evaluate are the ability of the instrument to distinguish mitotic from GI cells and reticulocytes from mature red blood cells.

4. Evaluation of imaging capability including resolution (e.g., using diatoms) and the ability to detect cell orientation, distortion, folding, clumping or overlapping and their effect on machine response. Suitable test systems suggested, but not necessarily limited to, are human buccal cells, sperm cells and vaginal-cervical material.

5. Evaluation of the measuring efficiency (percent of total cells inputted that are actually measured) and whether there is a bias in the cells actually measured (mostly the small or large cells, etc.)

6. Evaluation of the decision logic for reproducibility, accuracy and statistical validity.

7. Statistical evaluation of data developed in items 1-6 above as appropriate such as coefficients of variation of histograms.

8. The manufacturer of the Cytoscreener will supply the Government

a. A cytoscreener installed and operational at the contractor's site.

b. A full-time resident technician to work at the

contractor's site to ensure that the machine performs throughout the period of the contract as specified by the manufacturer.

c. Access to the interior of the Cytoscreener as necessary with cooperation of the manufacturer's resident technician for the contractor to fulfill the requirements of the contract.

d. Optical train, circuit and mechanical diagrams with test points and waveforms and specifications on optical, electrical and fluid performance. This information will be treated as proprietary and its confidentiality ensured by the Government, who in turn will require the contractor to assure the same confidentiality. This confidential information will be returned in its entirety to the manufacturer at the completion of the contract.

e. Specifications on performance of output parameters for comparison with the contractor's own tests as described above.

9. The Government shall have the right to publish and authorize publishing of the data developed under this contract.

10. The contractor selected will be licensed as necessary under the patent to perform the work described.

Offerors should make their independent assessments of the level of effort required and develop their proposals accordingly.

Quarterly reports will be supplied to the Project Officer, documenting tests done and their results. Significant technical problems or failure of the Cytoscreener to perform to an acceptable level will be reported to the Project Officer immediately.

The government anticipates that the proposed contract will span a period of 6 to 12 months.

RFP NCI-CB-53859-33

Title: Algorithm for computerized transaxial nuclide reconstruction

Deadline: Sept. 16, 1974

The project objective is to make some of the newer approaches to nuclide diagnoses of cancer more readily available so that the disease can be recognized at its earliest (smallest) stage, thus improving mortality from cancer.

Hardware and software for computerized transaxial nuclide reconstruction based on transverse section emission data from living patients is currently being developed in many institutions. This is a particularly promising imaging modality for structure-specific labeling by an enormous number of natural and artificial radioactive compounds. Emission imaging potentially permits not only static reconstruction, but quantitative estimates of time-course of labeled compounds through structures deep within the body. Transaxial reconstruction permits isolation of radioactivity in very small body parts that would be obscured by overlying and underlying radioactivity in conventional views.

The contractor shall have the capability and interest to develop and/or improve analog, digital or hybrid algorithms for computerized transaxial nuclide reconstruction, with the objectives of enhancing the detectability and/or location and/or diagnosis of lesions, particularly early or small cancers, and developing criteria for evaluating the efficacy of such algorithms.

a. These research efforts should include three dimensional reconstructions of emission counts in any direction, minimize the deleterious effects of distortion and artifacts in regions of medical interest.

b. These efforts should tend to decrease scan time and radiation hazard to the patient.

c. Offerors must establish expertise in mathematical analysis, statistics, and the nuclear physics and nuclear biochemistry of emission and absorption of radio-particles in normal and abnormal human tissues.

d. The contractor will be expected to have access to unprocessed clinical data produced by a transaxial nuclide projection machine.

e. The contractor must have access to computers and display devices necessary for research and development of algorithms.

The government anticipates that the proposed contract will last one year with the possibility of extension for another one or two years.

Contract Specialist for above RFPs:

J. H. Reynolds
Biology & Diagnosis
301-496-5565

CONTRACT AWARDS

Title: Studies on the prevention of metastasis in mammary cancer
Contractor: Health Research Inc., Buffalo, N.Y., $93,200.

Title: Expansion of the state of Kentucky's cervical cancer screening program.
Contractor: Kentucky Dept. of Human Resources, $504,379.

Title: Investigations on therapy of patients with stage II and stage III carcinoma of the breast
Contractor: University of California, Davis, $212,000.

Title: Study role of the stroma in the growth of neoplastic and preneoplastic lesions of the mammary gland.
Contractor: Baylor College of Medicine, $76,500

Title: Study of preneoplastic lesions of the human mammary gland
Contractor: Univ. of California, Davis, $152,300.

Title: Studies and investigations on therapy of patients with stage II and stage III carcinoma of the breast
Contractor: Case Western Reserve Univ., $173,500

Title: Biochemical and physiological investigations based on familial genetic patterns
Contractor: Creighton Univ., $97,900.

Title: Investigations on hormone therapy plus chemotherapy in patients with breast cancer
Contractor: Emory Univ., $78,000.

Title: Compilation of anti-uterotropic assay data & progestational & anti-progestational assays
Contractor: Mason Research Institute Inc., $34,600.

Title: Biochemical and physiological investigations based on familial genetic patterns
Contractor: Montefiore Hospital and Medical Center, Bronx, N.Y., $177,000.

Title: Family and genetic studies in human breast cancer
Contractor: Netherlands Cancer Institute, Amsterdam, $75,100.

Title: Comparative study of xerommography
Contractor: M. D. Anderson, $114,000.

Title: Aryl hydrocarbon and 16D hydroxylose studies in high and low risk breast cancer families
Contractor: M. D. Anderson, $73,800

Title: Investigations on hormone therapy plus chemotherapy in patients with breast cancer
Contractor: Rush-Presbyterian-St. Lukes, $123,000.

Title: Study of mammary gland responsiveness to multiple hormones
Contractor: Scripps Clinic and Research Foundation, $85,200.

Title: Study of the effects of nucleic acid preparations on the biological properties of mammary carcinomas
Contractor: Sloan-Kettering, $79,000.

Title: Study of growth alteration of mammary neoplastic cells obtained by manipulation of cellular environment
Contractor: Univ. of Texas, Galveston, $89,600.

Title: Immunological characterization studies
Contractor: Mason Research Institute, $130,000

Title: Serologic testing of mycobacterial fractions
Contractor: Case Western Reserve, $28,585.

Title: Production of anti-human reference reagents
Contractor: Harbor General Hospital, Torrance, CA., $40,530.

Title: Nuclear magnetic resonance to be studied in neoplastic and non-neoplastic tissues
Contractor: Baylor College of Medicine, $156,994.

Title: Studies on the transport of interferon across the mucous membrane
Contractor: Baylor College of Medicine, $96,459.

Title: Development and evaluation of cardiac prostheses
Contractor: Cleveland Clinic Foundation, $221,975.

Title: Biochemical markers or enzyme that may presage the presence of cancer
Contractor: Research Foundation of SUNY, Albany, N.Y., $22,491

Title: Develop and evaluate new approaches to the problem of markers applicable to gynecologic cytopathology specimens.
Contractor: Institute for Medical Cell Research, Stockholm, $98,000.

Title: Breast cancer detection demonstration project
Contractor: Vanderbilt Univ., $185,000.

Title: Continuation of support of the U.S. National Committee on the International Union Against Cancer
Contractor: National Academy of Sciences, $21,900.

Title: Develop methods for detecting pancreatic cancer at an early or small stage and prior to the presence of metastases
Contractor: Memorial Hospital, New York, $153,293.

Title: Develop and evaluate new methods for obtaining monodisperse cell preparations of gynecologic cytopathologic specimens in suspension and on slides
Contractor: Research Foundation of SUNY, $209,029

Title: Develop methods for detecting pancreatic cancer at an early or small stage and prior to the presence of metastases
Contractor: Mayo Foundation, $508,718

Title: Development of methods of bowel preparation preparatory to barium enema or colonscopy
Contractor: American College of Radiology, $173,155.

Title: Biochemical and molectular biological characterization of antitumor drugs
Contractors: Southern Research Institute, $1,121,139 (Total for 3 years); UCLA, $271,512 (Total for 3 years); New York State Dept. of Health and Health Research Inc., $164,252 (Total for 3 years); Brigham Young Univ., $225,569 (Total for 3 years); Yeshiva Univ., $82,797 (Total for 1 year); Univ. of Texas, $247,362 (Total for 3 years); Univ. of Minnesota, $203,154 (Total for 3 years); Michigan Cancer Foundation, $167,764 (Total for 3 years); and Univ. of Madrid, $90,178 (Total for 3 years).

The Cancer Newsletter—*Editor* JERRY D. BOYD

Published weekly by National Information Service Inc., 11800 Sunrise Valley Drive, Reston, Va. 22091.