some special cases where a university wants to hire an emigre but does not have sufficient funds to offer a full-time position, the Program provides small supplementary grants.

But in spite of the best efforts of the dedicated staff, the story has been a grim one. Those who, at great personal sacrifice, leave the Soviet Union and come to our shores in search of freedom often find a harsh life of penury, dependency, temporary menial jobs, and disillusionment. And they cannot go back.

We in the physics profession could, and should, do something to help our fellow professionals. With a fund of money we could partially subsidize a retraining effort during which the immigrant physicist could obtain on-the-job training, improve English language skills, and learn to accommodate generally to a strange, frightening insecure new life. Along with a matching support fund, what is needed is a small roster of employers willing to hire for one year at shared, reduced salary, as an earnest of commitment, those who have chosen freedom.

The undersigned have offered to assist the Program for Soviet Emigre Scholars in soliciting and administering the fund and the employment schedule. What is most needed are contributions, but also job leads, and, of course, volunteers who would like to participate in what promises to be a small but long-term program. With $12 500 we should be able to place two or three persons for a year, in jobs that might get them started again.

Contributions are tax-deductible. Make checks payable to ACEP Emigre Scientists Work Fund and send them either to the New York address or to one of the undersigned. Please inform us if you as an employer are willing to participate or know of a firm that is willing to participate in this program.

EARL CALLEN
The American University
Washington, D.C.
GEORGE A. SNOW
N. S. WALL
University of Maryland
College Park, Md.

Split up Bell Labs?

The February issue (page 69) contains a news story reporting the concern by Bell Labs executives over the Justice Department suit against the Bell System claiming violations of the Sherman Antitrust Act. The Bell Labs executives oppose the suit and claim the interests of telephone customers would best be served by continuing the existing vertically integrated regulated monopoly.

It is surprising that PHYSICS TODAY presented only one side of this complex issue without presenting the views of either the Justice Department or those firms who oppose Bell's monopolistic grip on telecommunications in the United States.

A key concern in deciding the fate of the Bell System should be the public and its needs for telecommunications products and services. In the past, the need was to create an integrated national telecommunications network. To achieve that goal, a vertically integrated regulated monopoly run by private industry indeed appears to have been the best organizational structure. However, the national network has now been achieved, and the need for the future appears to be innovative products and novel services. To achieve this new goal, it would appear that a competitive organizational structure would be best.

All too long, telecommunications has been equated with the Bell System. Now is the time for this equality to cease and for Bell to realize that the death of the Bell System in its present form is not equivalent to the death of telecommunications in the United States.

Bell Labs President, William O. Baker, is quoted in the story as stating that "the disintegration of the Bell System will destroy Bell Laboratories." Indeed, the prime thrust of the Bell Labs executives argument against the Justice Department suit is that if the Bell System were split up, Bell Labs would suffer. Probably Baker is correct, but the destruction of Bell Labs as an institutional entity in its present form is not equivalent to the destruction of the research and development in communications that Bell Labs conducts.

If Western Electric were divested from the Bell system, then that portion of Bell Labs supported presently by Western (nearly one-half) would undoubtedly be incorporated directly within Western. Since research and development are usually most relevant when they are directly under the mission which they should support, such a move could be viewed as a good thing.

If the AT&T Long Lines department and Bell telephone companies continued to exist as entities within the Bell System, then support for the remaining half of Bell Labs would not be a problem. If the whole Bell System were fragmented, then the basic research portion of Bell Labs could be supported either by the communications industry as a whole or by the Federal government. The basic researchers at Bell Labs are so noted in their fields that most of them would be eagerly sought by many universities and industrial laboratories. The remainder of Bell Labs could be scattered around the remnants of the Bell System or perhaps held together as a systems engineering and standards laboratory under Bell support.

The options available to Bell Labs ex-

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letters

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ecutives would thus appear to be many. It is disappointing that the Bell Labs executives appear to be unable to develop constructive discussion and options for the future of Bell Labs other than dire predictions of doom and gloom.

Although I disagree with the Bell System's position regarding the Justice Department suit, I indeed sympathize with the Bell Labs executives concerning Bell Labs' uncertain future. Over its fifty years of existence, Bell Labs has become a legend in industrial research laboratories and has created a most impressive and highly significant record of scientific and technological achievements.

A dismembering of the Bell System followed by the destruction of Bell Labs might indeed be a deplorable calamity for research in communications. However, Bell Labs has perhaps become a bureaucracy suffering from unwieldy enormity, loss of mission, and other problems. Thus, a restructuring of the many entities that comprise Bell Labs, if performed with wisdom and caution for the fragile environment that constitutes research, might solve many of the Lab's problems and result in a new multi-faceted research and development structure that is responsive to both Bell's and the nation's needs in communications.

The challenge to Bell Labs executives is to show the same creativity and ingenuity in openly and objectively exploring and searching the future of Bell Labs and research and development in communications that Bell Labs scientists have shown in their scientific achievements. The views expressed by the Bell Labs executives in the PHYSICS TODAY report simply reflect the standard Bell position and show an unfortunate lack of such creativity and ingenuity.

HOWARD A. LOEHMAN
Somerville, N.J.

REPLY FROM BELL LABS: We agree with Howard Loehman that "a key concern in deciding the fate of the Bell System should be the public and their needs for telecommunications products and services." Indeed, John deButts, AT&T Chairman, and other Bell System officials have repeatedly said that the public-interest standard should be used in settling these issues. Our concern had been that some other standard would be used, for example, competition for its own sake, whether or not it provided benefits to the public.

Loehman acknowledges that Bell Laboratories "has created a most impressive and highly significant record of scientific and technological achievements" but then urges us to exercise "creativity and ingenuity" in taking it apart. The dismemberment he recommends would destroy the *raison d'être* of these achievements. Specifically, he suggests a corporate separation of those functions that support Western Electric and those that support AT&T and Long Lines, including perhaps even a fragmentation of the latter. But it is very tight coupling between the Bell Labs' research and development organizations that perform these functions which has given its research its clear sense of mission and its development strong support in new science and technology. Within Bell Laboratories there are no corporate barriers to interactions, and these organizations work closely together. Indeed, people frequently transfer from one role to another and some organizations support both functions.

Loehman appropriately suggests "wisdom and caution" in restructuring Bell Laboratories and concedes that it might be a "deplorable calamity." If he fully understood the contribution of its organizational structure to its achievements, he too would conclude that Bell Laboratories should retain its present corporate identity in a vertically integrated Bell System.

It seems ironical that the dismantling of something that is acknowledged by Loehman and others to have worked extraordinarily well is being seriously proposed when the country's attention could more profitably be turned to solving problems created by the many institutions that are failing.

N. B. HANNAY
Bell Laboratories
Murray Hill, N.J.

Amorphous contradiction

In as much as "amorphous" means "without form" I find it amusingly contradictory that it is now reported (September, page 17) that amorphous solid water exists in two forms. This must be the first example of a dimorphous amorphous substance.

JERRY DONOHUE
University of Pennsylvania
Philadelphia, Pennsylvania

Political sentence

The news has arrived from some of my friends at the University of Belgrade that Dr Ing Danilo Raskovic, professor of mechanics at the University of Belgrade, has been sentenced to jail for 16 months of hard physical labor.

He has been arrested for criticizing, as his private opinion, a film dealing with national problems in Yugoslavia.

Raskovic is known world-wide in mathematical physics and applied mechanics as a very honest man who suffered tremendously at the hands of the Germans during World War II; after World War II, because of his philosophical conception of human right and freedom, and because of his orientation as a human being toward Western democracy, he was sentenced several times by Tito's communist government in Yugoslavia. At present, he is 65 years old and is tortured in a jail built by the Turks several centuries ago in Mostar.

I am asking all physicists and mathematicians to write a letter to the Yugoslav government in Belgrade, or to the secretary of the United Nations in New York, protesting the inhuman treatment of such a distinguished intellectual and scientist as Professor Raskovic.

M. M. STANISIC
Purdue University
West Lafayette, Indiana

Auxiliary publication

I read with interest concerning the AIP Physics Auxiliary Publication Service (February, page 71). Would it not be a good idea to publish a listing of the depository items? This could be updated occasionally and would provide better bibliographic control than simply appending as a footnote. In addition, it would reach a larger audience, assuming of course that this larger audience would be interested in materials supplementing an article. As a practicing librarian, I am all too aware of the loss of vital information and like to see all documents listed in some standard reference publication, be it a list or, preferably, an indexing journal.

C. J. MCKOWN
The Pennsylvania State University
University Park, Pennsylvania

AIP COMMENTS: We welcome McKown's suggestion and agree that it is a good one. Accordingly, we are going to publish an annual listing of items deposited in PAPS in two places. One will be in the printed index that accompanies our monthly microfilm service *Current Physics Microform*, and the other will be the annual cumulative issues of *Current Physics Index*, a combined subject-and-author index to the 42 physics journals published by AIP. This 1800-page cumulative index, by the way, is specifically designed for technical librarians, although its low price ($50) makes it useful to many individuals as well.

A. W. K. METZNER
American Institute of Physics
New York, New York

Public notice of wager

On this the FIFTEENTH DAY of DECEMBER of the YEAR ONE THOUSAND NINE HUNDRED AND SIXTY FIVE, at the luncheon given at the Laboratories of the