RANN Symposium: NSF Puts Its Brainchild on Display

The National Science Foundation's RANN (Research Applied to National Needs) effort, now briskly carrying on in its third year of full-fledged existence, had its coming-out party in the form of a 2-day symposium held recently in Washington, D.C.

This first national symposium—RANN officials intend to hold more of them in the future—was designed to show the audience of some 1400 representatives from government, industry, and academic science that RANN really exists and that it has already chalked up some solid achievements. The RANN program, when it was created, was subjected to heavy criticism from members of the scientific community who feared that NSF would neglect its primary function, the support of basic research, and become an "applied" outfit.

Up with Applied Research

One purpose of the meeting was to show that applied research need no longer be the second-class citizen that it is in the minds of many scientists—that, on the contrary, figuring out new ways to press the findings of high science and technology into the service of society is a noble and challenging mission. As NSF head H. Guyford Stever said in his upbeat speech delivered at the symposium banquet: "So far we have tapped only a small portion of the huge reservoir of knowledge and creativity that resides in our academic and industrial communities in terms of how it can be applied to our national needs."

The desire of RANN's leadership to push technology in this direction cannot be overestimated, according to Frank Hersman, director of the office of intergovernmental science and research utilization. Hersman said the Agriculture Department's extension service represents the government's only effective effort to get the results of new research out into the field, where it counts. RANN wants to follow this example by developing an "environmental extension system," an information dissemination system for local governments, and a consortium of major cities to see how RANN and other research can be used to serve urban needs.

Those who attended the symposium were treated to 2 days of rapid-fire show-and-tell presentations of some of the more noteworthy RANN-sponsored projects in three categories: energy, the environment, and productivity. A few of the projects described involved: research on a sodium-sulfur battery for electric cars, which holds more promise than the old lead-acid battery; application of extant knowledge on heating and cooling buildings with solar energy to building technology; new magnetic metal-separating techniques that might be used to clean up large bodies of polluted water; and the contributions of enzyme research to chemotherapy.

As Joel Snow, RANN's deputy director for science and technology, describes it, the key criterion for a RANN project is that it must fill research needs that are not being met by the rest of the system. Solar energy research, for example, fell behind after it failed to meet exaggerated expectations for it in the 1950's. Now the RANN program is the country's major source of funding for research on solar energy, with $13.1 million of the total fiscal 1974 budget of $72 million going for that purpose.

One of the major contributions of the RANN program has been its apparent success in getting diverse sectors of the economy to work with each other. Many of the projects described were joint efforts among universities, private industry, and local governments. In the state of Washington, for example, Boeing Co. technologists are working with Tacoma city officials in the transfer of technology into city operations—"institutionalizing innovation," as the city manager put it, adding that the bureaucrats and technologists are finding each other to be not such bad fellows after all.

The symposium made it clear that there is more than a grain of sense in the simple-minded lament, "If they can send a man to the moon, why can't they build a decent mass transit system [clean the air, feed the poor, or stop crime]?" In the 1960's, while the United States was busy with military and space applications, places like Europe and Japan were busy applying existing technology to human problems, with the result that they are far ahead in areas such as fire-fighting (another RANN interest), mass transit, computerization of services, and laying a scientific base under manufacturing processes. (One scientist said that, on a recent trip to Europe, he "felt like a visitor from an underdeveloped country.")

Love and Peterson Speak

Those who attended the symposium, in addition to rubbing shoulders with NSF officials and each other, got a firsthand look at two Administration newcomers, John A. Love, head of the President's Energy Policy Office, and Russell Peterson, chairman of the Council on Environmental Quality. Love warned that there will be no substantial increase in the domestic supply of energy over the next 3 to 5 years and said if he had known how bad things were he would have stayed on as governor of Colorado, developed its oil shale, seceded from the nation, and become Colorado's "King Faisal." Peterson, in his first environmental address as CEQ nominee (he was confirmed later that day, 20 November), gladdened the hearts of the environmentalists present by calling for zero growth in population and pollution. He took an optimistic peek into the future, saying that the economy needs to be directed into "resource-lean" activities, such as teaching and landscape gardening, and that everyone should be guaranteed a job. ". . . [P]roviding jobs is not only the most critical social service, but it is also the most important product of the economic system. . . . The terms 'full employment' [and] 'unemployment' should be wiped from the economist's lexicon."

The symposium was an ambitious attempt to give visitors a panoramic view of RANN in a rather short space of time, and, as such, some observers felt it had little use as anything but a lengthy and at times boring public relations presentation. But it did convey a sense of the broad scope and innovation of many RANN-sponsored projects and undoubtedly gave would-be-contractors a better idea of what would be expected of them.

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