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The NASA -Florida State Technology Applications Center

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The NASA-FLORIDA State Technology Application Center

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The State Technology Applications Center (STAC) program is intended to help in the application of already-developed technology to the attack on problems of Florida's business and industrial community. Designed to serve a single state's industry it is unique in the nation, although a number of somewhat similar operations are being conducted in other states. It is a part of the NASA effort to promote new technology applications throughout the country with the goal of economic gain for the United States. It is an economic gain for the United States. It is an expression by the Florida DOC of its intentions to help employers of people in our state, again working for economic gain. It is a part of larger economic development activities of the State University System, to give assistance to business and industry throughout Florida.

Engineers and businessmen in Florida find use for this program of information retrieval in locating documents related to their specific technical and business questions. Modern, rapid, computerized searching techniques are used to find published articles or papers in libraries throughout the United States or elsewhere. Copies of needed documents are obtained and delivered to an inquirer at surprisingly low cost. The ultimate overall goal of the program is the strengthening of Florida's economy by facilitating the applications of modern technology.

In operation since January, 1977, STAC is jointly sponsored by the National Aeronautics and Space Administration, the State University System of Florida, and the Florida Department of Commerce. Funding from the three sources permits a Florida business to request a library search, and to receive copies of documents at a fraction of the actual costs. For a flat fee of \$50 to \$150, a person in private practice, in government, in industry, or in construction can utilize this service to obtain technical information in relatively short periods of time.

The service is described as follows: A customer contacts a local STAC representative, of which there are eight strategically located throughout the state. He presents to the STAC person a question on which he wants documented information that may have been published and placed in a library somewhere. The STAC representative transmits the question to the STAC Library Center (LC) at Gainesville. The LC personnel then, by remote computer terminal, search NASA and other literature data bases for citations relevant to the specific question.

When a list of citations is in hand, the LC requests the STAC Area representative to select up to 15 documents to be ordered. The LC Supervisor then places the orders, and when the document copies are received, sends them to the Area STAC Office where they may be transferred either to the customer or, at customer request, to a technical analyst from a state College of Engineering who will scan them and mark useful or related portions. The marked documents then go to the customer who pays a predetermined fee for the service.

Suppose, as an example, a design engineer needs information on environmental effects on composite materials such as fiberglass laminates. He contacts his area STAC representative, who takes his question and relays it to Gainesville. By computer, the STAC Library Center obtains a list of published articles related to the question. This citation list usually will give brief abstracts, locations from which copies may be obtained, authors, and other data. In this case there might be listings on thermal cycling, outdoor weathering, natural aging and many other topics.

The citation list is transmitted to the Area Office where contact with the customer may be used to select documents to be ordered. A maximum of 15 documents may be procured under a flat fee. If only the NASA RECON data base was used in the search only \$50 is charged for the service. If that data base did not yield sufficient citations there are many others that may be searched, in which case \$150 is charged. It is noted that an average cost of \$10 for each of 15 documents is indeed a small charge.

There are literally millions of publications stored in libraries throughout the world, covering virtually every subject imaginable. Access to these is through computerized listings such as the NASA RECON system, COMPENDEX (Engineering Index), METADEX (Metals/alloy abstracts), SCISEARCH (Institute for Scientific Information), and many others. Location of documents is accomplished by use of "key words" which the Library Center Supervisor feeds into the computer to retrieve stored information on those articles, books, etc., which have been indexed by the chosen key words. Obviously, the choice of the proper key words is essential to rapid, accurate retrieval.

Throughout the State University System there are hundreds of engineers and scientists qualified in various specialties. From these, analysts may be selected to scan documents and mark portions related to the customer's question. This is not a consulting service. The analyst makes no attempt to use the documented information to solve a problem. His aim is simply to assist customers who themselves are not knowledgeable in the specific area. For example, if the inquirer in the previous case on glass-plastic composites is a civil engineer, he may want a chemical engineer to mark those passages which are relevant to his problem. If further help is needed, it will be suggested that he obtain the service of a consultant. For this service the analyst receives a maximum fee of \$50, a cost to the customer in addition to the flat fee search-and-documents cost of \$50 or \$150.

The organization of the STAC involves division of the state in five geographic areas: Area I (Northwest), Area II (North Central), Area III (Central), Area IV (South Central), and Area V (South). For each area, there is a designated Department of Commerce field representative and a College of Engineering representative. Customers in an area present their questions to one of the area representatives.

Florida is a surprisingly long and diverse state; the distance between its extreme seaports is the same as between Washington D C., and St. Louis, Missouri. The representative's knowledge of local business and industry conditions proves invaluable in dealing with each businessman's request for information.

Request for searches have come from large and small manufacturers, engineers and consulting firms, utilities, local government and Chambers of Commerce, agriculture, fisheries, investment companies, health services, etc. In 1977's 250 searches, the subject matter was unbelievably varied with seldom a hint of duplication. Some of the subjects were: environmental effects on glass fibers, solar assisted heat pumps, earth resources inventory, photovoltaic cells, raising salt water eels, carbon dioxide in the atmosphere, R & D on ducted fans, financing from the SBA, radiator cooling fan noise reduction, electrostatic painting, road maintenance, economic effect on the city due to football, market size in can conveying equipment, lubrication of gold, thermal stability of glass, uranium recovery, veterinary equipment, import of LED clock modules, methane gas to heat pools, hydrogenation of solid wastes, watermelon seed processing, schools for mentally retarded, expanding concrete, desalinization of sea water, regeneration of gold, job and task analysis, Florida imports and exports, disposal of hydrogen sulfide, linkage optimization, production control and shotgun pellet patterns. In each case it is easy to see one of Florida's employers gathering information important to a decision. Better information gives him the advantage in today's competitive world.