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TITLE: Regional Deployment of Computer-Integrated Prototype Database

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INVESTIGATORS: Anderson, L.J., Centrallo, C., Jenkins, A.B., Walker, B., Barry, M.E.

STUDENTS: Dana Peacock, Karla Peavy

GOAL: Under the National Textile Center project, Computer Integrated Prototype to Enhance Demand-Activated Manufacturing for the Domestic Apparel Industry, a database was developed to aid retailers and manufacturers sourcing domestic production in identifying and locating appropriate production resources. The goal of this Tech Transfer project is to expand the Alabama Textile and Apparel Prototype Database for Match Marketing to include data on textile and apparel production firms from the states of Alabama, Georgia, North and South Carolina.

ABSTRACT:

Global competitiveness in the U.S. integrated textile complex is critical to the economic health of the nation. Currently several associations support member-driven databases. However, apparel product developers find it time consuming and difficult to piece together contacts through all of these associations. Increasingly, retailers are sourcing smaller lots and private label production. However, many smaller producers who might fill these orders are not included in the existing member driven databases. Apparel product developers at leading retailers may find it easier to source through foreign agents. A centralized electronic database that includes on-line access to information to allow retailers to quickly locate available production capacity could provide an effective competitive strategy for domestic producers. This report discusses the transfer of a database prototype developed under the NTC project A92-5, Computer Integrated Prototype to Enhance Demand-Activated Manufacturing for the Domestic Apparel Industry. The regional concentration of textile and apparel producers makes is this Technology Transfer project a significant one. Successful transfer of the project to extend the existing prototype to expand and update data from Alabama, and collect data from Georgia, North and South Carolina will make the Textile and Apparel Regional Electronic Sourcing System (TARESS) the largest and most complete database existing within the domestic industry.

BODY:

Significance of the Problem

Apparel product developers are critically important in the formula of delivering the right product to the consumer, at the right price. The rising tide of imports over the last decade has indicated that apparel product developers are sourcing more foreign than domestic products. One reason for this may be that apparel product developers find it more difficult locate production resources in this country due to the lack of an organized infrastructure to support domestic sourcing. This is a vast country with 26,000 apparel producers scattered over 50 states.

As a part of the competitive retail mix, more apparel product developers want to source apparel products closer to the actual time that they would be on the selling floor. The competitive advantage often tauted for the domestic the textile and apparel industry is Quick Response. Yet, apparel product developers find it difficult to locate textile and apparel resources without investing hours in tracking down compatible resources for specific production needs.

To address the need for a more organized sourcing system that responds in a real-time environment, the Computer Integrated Prototype to Enhance Demand-Activated Manufacturing for the Domestic Industry was funded in the initial funding round of the NTC. Utilizing data collected from Alabama produces, a prototype database to facilitate sourcing of retailers, manufacturers, military procurement agents and suppliers was developed. This model was field tested with apparel product developers in leading retail product development centers across the country. Though apparel product developers expressed interest in the concept of an electronic sourcing system, they cautioned that to be optimally effective any sourcing database had to be national in scope.

With direction from the original project, the technology transfer model, Regional Deployment of Computer-Integrated Prototype Database, was designed. A statistical overview developed by North Carolina State University (NCSU) of apparel employees indicated that a vast majority of apparel producers were located in the four Southeastern states of Alabama, Georgia, North and South Carolina. See Fig. 1.

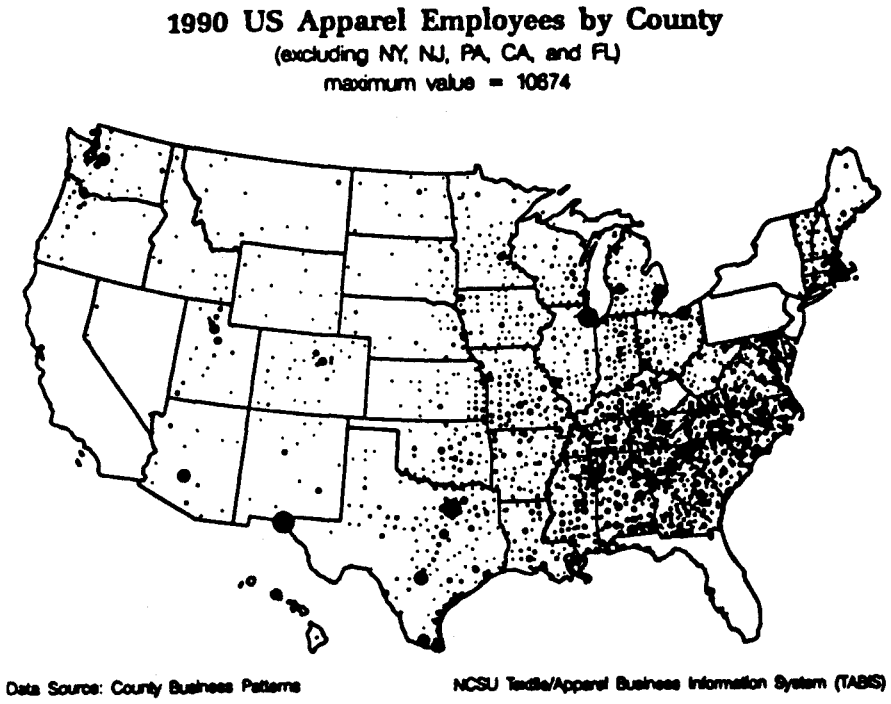

Figure 1

The focus of the project report which follows is to discuss the work begun under the NTC project, Computer Integrated Prototype to Enhance Demand-Activated Manufacturing for the Domestic Apparel Industry. This technology transfer project is an extension of and is significantly linked to the development of the basic research project. For details on the actual design and development of the prototype database see Project A92-5. This project was funded on an 18 month schedule. This report concentrates on the first year of the project and projects tasks for the remaining six month period.

Technology Transfer

Brown (1994) defines technology transfer as information flow across the institutional boundaries of human activity. Traditionally, the technology transfer paradigm where universities or external labs are partners, has required moving the research development to an internal lab for further research and development. With the fast pace of technological innovation successful technology transfer must be linked

to the research paradigm. Today effective technology transfer is critically linked to time-to-market.

Significant barriers exist to the transfer of technology in a timely manner. Included in these are time expended in redesigning the technology, excessive cost in refining technology, conflicting signals from the market, and identification of the target market. Brown (1994) calls for a new approach--one that is concurrent, continuous, immediate and market sensitive. He notes several important principles that must be considered in accelerating the commercialization of technology. Strategic partnering, rapid prototyping, market sensitivity, infrastructure development and design for manufacturability are important in a discussion of this project.

Technology Transfer Project Organization

Strategic partnering is vital in technology transfer. The design of the National Textile Center as a research consortium supplied the foundation for partnering in this project. The primary goal for the first year of this project has been the organization of the Tech Transfer team for data collection purposes. NTC partners in this technology transfer project have included the researchers from Alabama, Georgia, North and South Carolina. $[TC]^2$ has served as an external research partner. Researchers from the Argonne and Pacific Northwest National Labs funded under the AMTEX-DAMA initiative have contributed expertise in refining and show casing the technology.

Two team meetings of the five NTC partners (Alabama, Georgia Tech, NCSU, Clemson, and $[TC]^2$ were held. The primary purpose was to organize the data collection process. Since accuracy and integrity of the data are critical to the success of this project, initial data collection is structured to proceed on a one-to-one basis. Individuals in the teams will actually be visiting textile and apparel producers to make personal contacts for data collection. This will insure consistency of the data collected.

The primary purpose for this personal contact is data collection. But it also serves a second purpose. Many small and medium sized textile and apparel firms are not technologically advanced. Most have FAX machines, but many do not have computers or computers with modems. This personal contact will a serve the purpose of educating the producers regarding new technology.

Partnerships within each state have been formed to extend the resources of the NTC and aid in data collection. State Cooperative Extension Services, Chambers of Commerce, state industrial development divisions, and post-secondary schools and colleges have been organized to contribute to the data collection process within individual states. They may also serve a continuing role in the project. Many of these like the state development agencies and the Cooperative Extension Services could become local partners where smaller firms may not have the equipment to up-date their database entry on-line.

Training will be accomplished by using video based training session in each state. Site directors will coordinate the training with support from Auburn. Data

collection is scheduled to begin in all four states in late October and continue through December, 1994. Data will be verified at Auburn and entered into the database network through January, 1995.

Technical work with the Clemson Apparel Research Center is underway to allow the database to reside on the existing Apparel Manufacturing Information System (AMIS) network. Access to the AMIS system is achieved by modem using a 1-800 phone number. To quickly move the project to broad usage the Textile and Apparel Regional Electronic Sourcing System (TABIS) will Initially reside within the AMIS engine. However, AMIS has the potential to interface with the Internet. Under the AMTEX-DAMA initiative a network version of the database is being developed at Argonne Labs. The potential for database access through the Internet is being explored at Clemson.

Educational Component

The final stage of this Tech Transfer project will involve an educational effort. According the TABIS (1990), the greatest concentration of textile and apparel producers can be found in the region constituting the four states contributing to the database. Other databases offered by trade associations do exist. However, because other databases focus on specific textile and apparel producers and require member fees or access fees, this should be the most extensive database of producers available to apparel product developers to facilitate domestic sourcing. Retailers need to become aware of TARESS and textile and apparel producers need to keep the data updated.

To update data, TARESS will have an on-line update capability. Internally, the educational effort must encourage and train producers to update production information on a timely basis. In addition to updating, new textile and apparel producers from other states must be brought into the system for it to truly reflect a national database.

Externally, the technology transfer team must educate the user community to insure profitable and continued success of the system. Retail apparel product developers must be made aware of the TARESS, assisted with system access, and consulted for future updates of the system. The team will accomplish this in various ways.

To assure the success of TARESS, it will be promoted through industry conferences and visibility at trade shows like Bobbin and The Private Label Trade Show. A public awareness campaign through articles in trade publications and site visits to retailers by the team members is planned. Primary retailers who contributed to the development of the database will be revisited to establish connectivity and promote usage. In addition to apparel product developers, other groups may find the system useful. TARESS includes important information for state development agencies. Vendors who supply the industry will find it an important resource. These groups must understand TARESS.

SUMMARY::

A Textile and Apparel Regional Electronic Sourcing System (TARESS) has been developed and is currently in the process of being transferred from a developmental to an operational stage. A Technology Transfer Team of researchers from Alabama, Georgia, North and South Carolina are developing and infrastructure to collect the initial data. The project also includes an educational component to supply the intended user, the retail apparel product developer, with information on function and use of the technology.

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