

Project researchers were involved in networking with AM-TEX to facilitate the development of the Demand Activated Manufacturing Architecture (DAMA) project. Dr. Anderson serves on the AMTEX Technical Advisory Committee for DAMA. Dr. Jenkins provided technical expertise to the committee.

Technical Papers and Other Communications

- Anderson, L. J. (Auburn) Host National Textile Center Conference. *Bobbin*, June, 1993.
- Researchers have presented the NTC concept and research progression to contractors and manufacturers at the American Apparel Manufacturers Association meeting and the SEAMS show, a regional trade show for apparel manufacturers. An abstract on sourcing domestic apparel was accepted for presentation to the International Textile and Apparel Association at the national meeting.

Marketing Research

Computer-Integrated Forecasting for Demand-Activated Product Development, Production and Merchandising

Principal Investigators:

A92C6

E. L. Brannon, reporter, L. J. Anderson, P. Ulrich (Auburn)

Objective:

The objective of this research is to develop and test a prototype computer-integrated forecasting system that captures, stores, organizes, and retrieves visual, verbal, and numerical data in actionable form. Implementation of computer-integrated forecasting creates competitive advantage by anticipating trends and providing direction for demand-activated product development, production, and merchandising. The project treats the decision-making process as a corporate asset that can be maximized through continuous trend forecasting.

We are developing a prototype computer-integrated forecasting system that anticipates market trends.

Summary:

Workstation Design and Integration

The workstation consists of a number of storage devices, drives and peripherals and numerous software packages. The goal is to blend these parts into a workstation adapted for a particular set of forecasting and product development functions. Workstation integration is now complete. Team members have begun integrating the product developer's tasks with software features and applications--the "proof-of-the-concept" stage in computer integrated forecasting.

Team members are performing product developer's tasks using workstation resources in three modules: fashion scan, media scan, business forecasting. Results are being captured in flowcharts that detail the software features/applications required for the tasks, the storage space required, the transfer requirements between software packages (not all packages works with the same file format). and the cost/benefit for computer versus traditional processing. Tests involve using multiple input sources for data (scanning, video capture, etc.) and presentation formats (computer slide shows, slides, video, etc.).

Knowledge-Based Systems/Expert Systems

The first-pass expert system to assist product developers in specifying care instructions has been beta tested with novice product developers and is currently being evaluated by a textile scientist. The system will be revised based on these first tests and submitted to another round of beta testing by novice and professional product developers.

Forecasting Theory and Practice

Brannon and Duffield are developing a hypertext directory of forecasting theory and practice including techniques gleaned from social, economic, business, fashion, and color forecasters. Each section will contain biographies of leading forecasters with information about their companies, a summary of how they prepare their forecasts, a list their data sources, and copies of their most recent forecasts. The directory will act as an interactive summary of the knowledge domain of forecasting. With the directory, users will be able to compare forecasting techniques and forecasters as they design an individualized plan for environmental scanning and trend analysis.

Technical Papers and Other Communications

A paper on the development and testing of the expert system has been accepted for presentation at annual meeting of the International Textile and Apparel Association in November.

Projection of U. S. Apparel Demand and Consumer Profiles Based on Demographic Changes for the Period 1991 - 2010.

S92C7

Principal Investigators:

Moon W. Suh, reporter, C. H. Priestland, M. Davidian (NC State)

Objectives:

Long-Term: 1) To create a public sector apparel/textile business database, and **2)** design a demand forecasting system which will make the U. S. apparel and textile industries competitive within and outside the U. S. Specifically, this research is aimed at forecasting the apparel demands in the U. S. during the period 1991-2010 based on the anticipated changes in the demographic profiles, make-up of U. S. households and the apparel purchase patterns.