The Long Island Technology Access Program
Cooperative Agreement No. DE-FC02-94ER76006

Interim Progress Report

July 1 - September 30, 1995

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LITAP PROGRESS REPORT
for the period
JULY 1 TO SEPTEMBER 30, 1995

PROGRAM OBJECTIVES

The objective of LITAP is to demonstrate the effectiveness of providing access to technologies and technological resources resident within large regional laboratories and R&D organizations as a means of assisting small defense-related companies in the region with conversion to the commercial business sector.

SUMMARY OF PROGRESS

During the reporting period work focused on moving ongoing projects ahead. We were successful in putting together an agreement between ReGain, Inc., the Maryland-based developer of the Ultra Reach wheelchair, and Dunrite Systems (formerly Dunrite Tool & Die), Inc. the Long Island defense contractor that will manufacture the wheelchairs. We were also successful in identifying a local marketing consultant who specializes in advanced technology products for the handicapped. This consultant, M. Norgaard, assisted in developing a detailed market and sales strategy.

The Coriolis mass flowmeter is still proving to be difficult to generate interest in. Target Rock, that had originally expressed interest, decided that the investment required to bring it to market was too high. Prof. Vradis, Chairman of the Department of Mechanical Engineering, Polytechnic University, has performed an initial technical assessment of the concept and has found the technology to be valid. His laboratory is currently testing off-the-shelf Coriolis meters for use in metering compressed natural gas at filling stations. He has agreed to look for potential licensees.

PROGRESS DURING THE PERIOD

Meetings were held with 11 companies and researchers during the reporting period, as summarized below. The summaries include an indication of meetings held as part of new or ongoing conversion projects or technologies.

Meetings

- Susan Afilal, United Engineering Group - business planning for radar warning receiver (ongoing).
- Daniel Stettin, Wire Graphics - development of business strategy for adaptive defrost timer for use in refrigerators (ongoing).
- Stephen Rappaport, SUNY Stony Brook, Department of Electrical Engineering - discussion of cellular communications channel-assignment concept (new).

- Michael Golumbeck, ReGain - discussion of business strategy for advanced wheelchair (ongoing).
- Paul Greco, Dunrite Systems - discussion of manufacturing strategy for wheelchair (ongoing).
- Steven Barre, Servo Corporation - start-up Phase II of gas-leak detector project (ongoing).
- George Vradis, Polytechnic University - technical discussion of Coriolis flowmeter (ongoing).
- Arthur Ezra, SUNY Farmingdale - discussion of general technical capabilities (new).
- Mette Norgaard, consultant - market strategy for advanced wheelchair (ongoing).
- Donna Tumminello, Long Island Lighting Company - review of market data for refrigerator defrost timer (ongoing).
- Robert Lemire, CAMI - review of advanced picture-hook prototype (new).

New Technologies

A list of 59 technologies was submitted by Brookhaven National Laboratory for review. We are assessing the list and requesting additional information for those that appear to have commercial potential. An initial selection includes -

- Optical Pressure/Density Measuring Means (Veligdan)
- Method for Producing High-Quality Thin-Layer Films On Substrates (Strongin)
- Flat or Curved Thin Optical Display Panel (Veligdan)
- Optical Lens Having Electronic Control of Focal Length (Veligdan)
- Interactive Optical Panel (Veligdan)
- Vacuum Canister for Pick-Up (Stoutenburgh)
- Fan-Atomized Home Oil Burner (Butcher)

- Multiple-Port Gas Distribution Valve (Lewin)
- Hypervelocity Cutting Machine and Method (Powell)
- Magnetic Injection and Detection of Underground Networks (Powell)

Two additional technologies with possible commercial potential were identified -

- Channel borrowing and assignment algorithm for cellular networks that optimize usage by making available unused channels in neighboring cells (S. Rappaport, SUNY Stony Brook).
- Picture hook that permits the picture to be move several inches vertically, after the hook is nailed to the wall, to achieve perfect alignment (R. Lemire, CAMI).

Conversion Projects

Conversion projects have two primary components - a technology with commercial potential and a defense company that has agreed to undertake the commercialization effort. The linking of company to technology occurs either through the efforts of LITAP in bringing technologies to the attention of prospective companies, or through companies approaching LITAP with technical concepts they have identified as having commercial potential. LITAP is currently engaged in seven conversion projects.

- T&T MACHINING COMPANY and ENGINE RESEARCH & DEVELOPMENT (ERD) - TITANIUM CONNECTING RODS - Little progress has been made during the quarter as other business interests have taken up the time of the principals.
- SERVO CORP. OF AMERICA and LONG ISLAND LIGHTING COMPANY (LILCO) - GAS LEAK DETECTOR - Market research is progressing.
- BEHLMAN, an ASTROSYSTEMS CO. - POWER SUPPLY TEST INSTRUMENT - Problems with the design were uncovered. The consultant is reworking specific parts of the software.
- WIRE GRAPHICS, INC. and LILCO - ADVANCED DEFROST TIMER - Research by LIRI has shown a link between defrost cycling in residential refrigerators and the quality of frozen food. LILCO's initial market survey indicates strong consumer interest in the issue of frozen food quality.
- DAVIS AIRCRAFT PRODUCTS CO., INC. - CARGO TIE-DOWN CHAIN TENSIONER - Initial reaction to the product concept has been positive in

meetings with railroad officials.

- REGAIN/DUNRITE - Agreement reached on a contract to manufacture the ReGain wheelchair, called Ultra Reach, in Dunrite's L.I. facility. LIRI is assisting in finalizing the business plan for investor review. This included work on the market strategy using input from a L.I. expert in the field of high-tech devices for the handicapped. Investor reaction to the business strategy has been favorable.
- JUSTEC - KIDNEY TRANSPORT DEVICE - A design engineer has been contracted to provide a response to FDA requests.

The Target Rock project has been put on the inactive list.

OUTSTANDING ISSUES

Our goal is to have established fifteen conversion projects during the two-year course of the program. Only seven projects are currently active. Additional technologies have been made available for licensing by Brookhaven. They are being investigated. An additional eleven technologies have been identified for transfer to suitable defense companies.

- Cellular Channel Borrowing Algorithm
- Radar Warning System
- Adjustable Picture Hook
- Nebulizer for Drug Delivery
- Electronic Sunglasses
- Plastic-Fiber Optic Splicer
- Vibrometer
- PC-Based Communications Controller
- Digital Color Matching
- Tuned Laser Diode.

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The objective of LITAP is to demonstrate the effectiveness of providing access to technologies and technological resources resident within large regional laboratories and R&D organizations as a means of assisting small defense-related companies in the region with conversion to the commercial business sector.