

Approved: 2-8-95
Date

MINUTES OF THE HOUSE COMMITTEE ON ECONOMIC DEVELOPMENT

The meeting was called to order by Chairperson Bob Miller at 3:30 p.m. on February 7, 1995 in Room 423-S of the Capitol.

All members were present except: Rep. Greg Packer - excused
Rep. Jo Ann Pottorff - excused

Committee staff present: Lynne Holt, Legislative Research Department
Bob Nugent, Revisor of Statutes
Bonnie Fritts, Committee Secretary

Conferees appearing before the committee: Richard Bendis, President, Kansas Technology Enterprise Corporation
Clyde Engert, Kansas Technology Enterprise Corporation
Jim Terry, Terry Engineering
Dr. Paul Sutor, Director, Surfaces Research and Applications

Others attending: See attached list

The meeting was called to order at 3:30 p.m. by the Chairperson Bob Miller. The minutes of February 6, 1995 were distributed and approved.

Chairperson Miller scheduled **SB 12** for discussion and possible final action for February 13.

SB 12: An act concerning economic development; relating to small businesses

Richard Bendis gave presentation on SBIR/STTR Program grants, processes, and benefits (Attachment 1).

Clyde Engert gave update on workshops regarding Federal and State funds available for small businesses developing new technologies.

Jim Terry, spoke in favor of **SB 12** as a recipient of KTEC funding for design and test of an improved crashworthiness on small composite airframe (Attachment 2).

Dr. Paul Sutor, also a proponent of **SB 12** and recipient of KTEC funding, addressed the committee regarding stimulation to business in Kansas (Attachment 3).

Meeting was adjourned at 4:20 p.m.

The next meeting is scheduled for February 8, 1995.

HOUSE ECONOMIC DEVELOPMENT COMMITTEE
GUEST LIST

DATE: 2-7-95

NAME	REPRESENTING
Mike Montero	Alan Cobb
Betty D. Terry	Aust
Steve T. Silver	KTBC
Roger Frouder	Ks Gov. Const. Office
Terry Danker	Ks. Dept. of Ag.
Kimberly Likens	KSEC
DANN J. Jones	CITIZEN
Chyll Gmyrt	KTEC
Rich Berdas	KTEC
Jim Terry	TERRY ENGINEERING
Jim Glass	CAS, Inc.
Paul Sutor	Surfaces Research



Presentation to

**House
Economic Development Committee
February 7, 1995**

by

Richard A. Bendis, President

Kansas Technology Enterprise Corporation

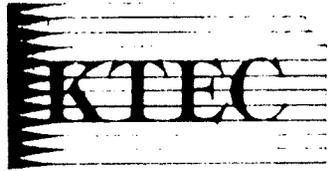
112 SW 6th, Suite 400, Topeka, KS 66603

913/296-2120

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*HOUSE Eco. Dev.
2-7-95
ATTACHMENT 1*

*HOUSE Eco. Dev.
2-7-95
ATTACHMENT 1*



SBIR/STTR Program

- **Federal Research and Development Programs Utilized to Fund High Risk Innovative Efforts that have Excellent Commercial Potential**

KILC 1995



Science--

**the fuel for technology's
engine.**

KTEC 1995

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Technology

The Engine of Economic Growth--

- creates jobs,
- builds new industries,
- Improves our standard of living.

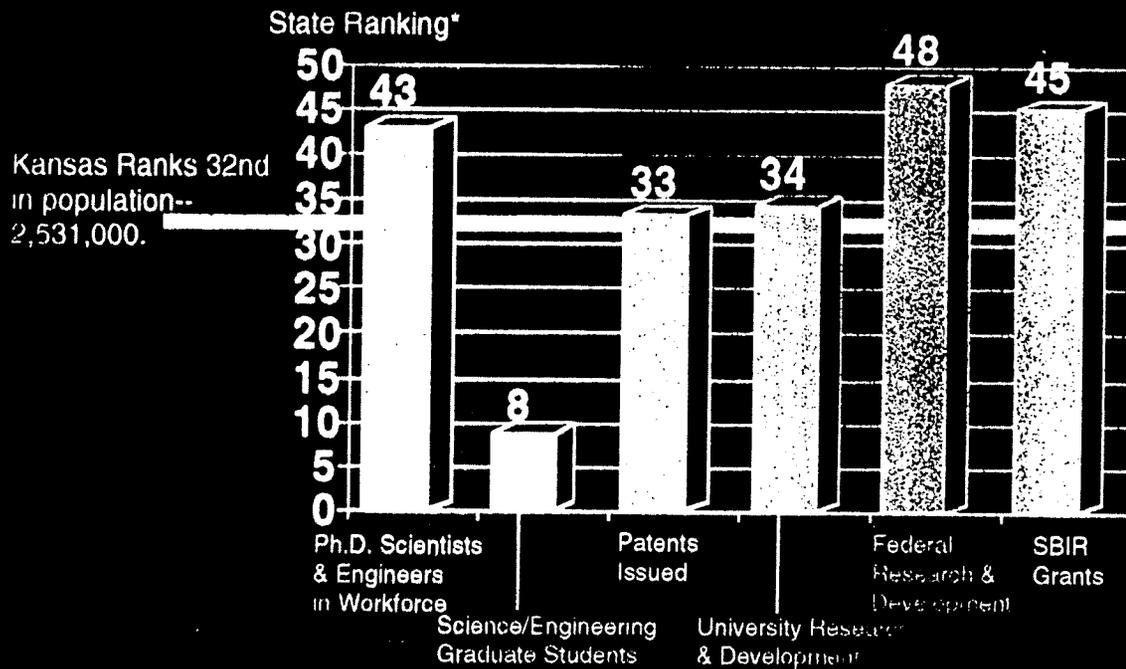
KTEC 1995

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Development Capacity Index Measures 1994 Report Card of the States How Kansas Ranks



*A low number ranking is best.

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SBIR/STTR Bridge Loan Concept

- I. Overview of federal SBIR and STTR programs
- II. Kansas performance
- III. State programs
- IV. KTEC role
- V. IPPBR study recommendations
- VI. Gap in the funding process
- VII. Proposed solution to funding gap

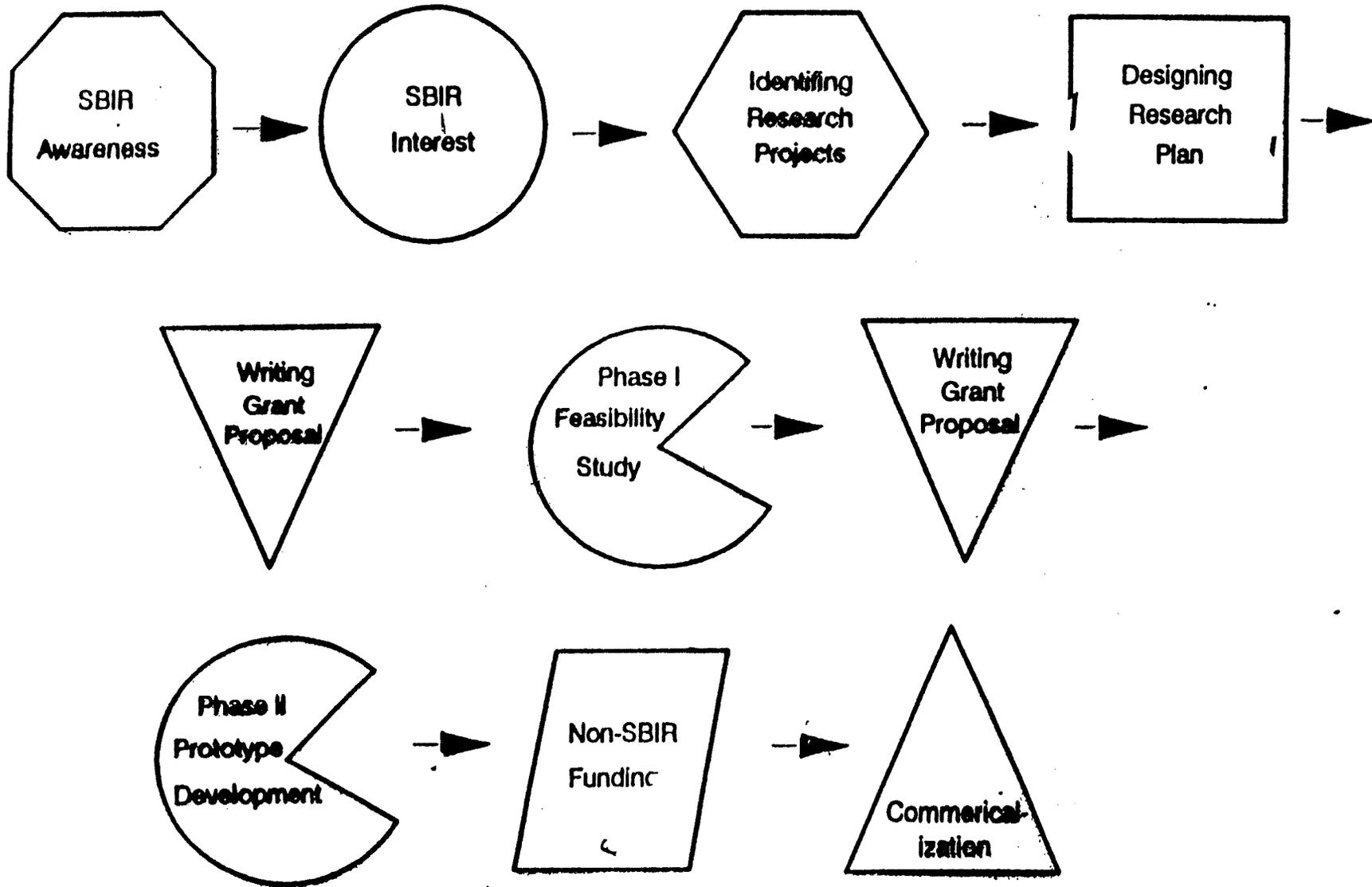
SBIR/STTR--continued

I. Federal SBIR / STTR Program

- * purpose -- improve U.S. industrial competitiveness, market share
- * technology focus
- * federal funding approximately \$700 million
- * administration -- agencies administering SBIR:
Agriculture, Defense, Energy, Transportation, NASA, NRC,
Commerce, Education, HHS, EPA, NSF
- * eligible applicants -- U.S. companies with under 500 employees
- * Phase I funding -- grants up to \$100,000
- * Phase II funding -- grants up to \$750,000
- * solicitation topics

Chart 1

SBIR Process



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SBIR/STTR--continued

II. Kansas historic performance

- * 8th lowest performance (per capita) among the 50 states
- * total grants to Kansas companies average \$1 million annually

	United States	Kansas	Kansas as a Percentage of United States
Population 1990	248,709,873	2,477,574	1.00%
Median Household Income 1989	\$30,056	\$27,291	90.80%
Bachelor's Degree 1990	20,832,567	221,016	1.06%
Graduate or Professional Degree 1990	11,477,686	109,361	0.95%
Total Degrees	32,310,253	330,377	1.02%
Total R&D Expenditure FY1989 (\$1,000)	\$135,059,734	\$522,856	0.39%
Federal Laboratories	606	2	
SBIR Awards FY1983-FY1990	17,830	28	0.16%
SBIR Awards FY1990	3,179	2	0.06%
Amount Awarded FY1990 (\$1,000)	\$445,859	\$249	0.06%
Phase I Awards FY1992	2,554	5	0.20%
Phase II Awards FY1992	1,485	2	0.13%
Total FY1992	4,039	7	0.17%

Sources: Median household income, bachelor's, graduate and professional degrees came from 1990 Census Tape, STF 3, U.S. Bureau of the Census, Department of Commerce. The number of federal laboratories comes from the master list of the Federal Laboratory Consortium for Technology Transfer. The rest of the data has the same sources as Table 1.

SBIR/STTR--continued

III. State programs

- * most states offer technical assistance; some include proposal preparation grants
- * 16 states have "bridge financing" programs

IV. KTEC role

- * historically high success rate on preparation grants, small budget
- * increased emphasis: staffing and budget
- * workshops and dissemination of SBIR information
- * proposal preparation grants up to \$5,000
- * screening, networking, improving quality of proposals

V. IPPBR study recommendations

- * Make SBIR someone's full-time job
- * Enhance the preparation grants program
- * Help firms fill the gap between Phases I and II
- * Help firms obtain follow-on commercialization capital

VI. Gap in the funding process

- * 12-24 month gap between Phase I and Phase II
- * critical cash shortage, some projects abandoned, many weakened
- * competitive disadvantage in getting product commercialized
- * inability to hold key personnel during down time

VII. The remaining solution: bridge funding

- * close gap between Phase I and Phase II
- * loans up to \$50,000
- * expenditures toward Phase II goals
- * value added by commercialization corporations
- * repaid with interest, based on commercialization
- * some projects may warrant an equity position
- * movement toward long term self-sufficiency
- * patterned after North Carolina program



SBIR Program

■ Phase I

- Evaluate scientific/technical data
- Award period up to 6 months
- Amount up to \$100,000

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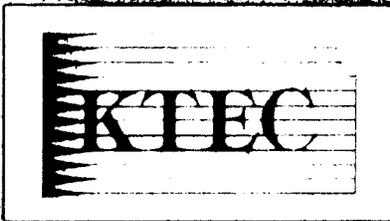


SBIR Program

■ Phase II

- Only Phase I awardees are eligible for consideration
- Expand on results of Phase I--develop working manufacturable prototype
- Award period up to 2 years
- Amount up to \$750,000

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SBIR Bridge Financing Benefits

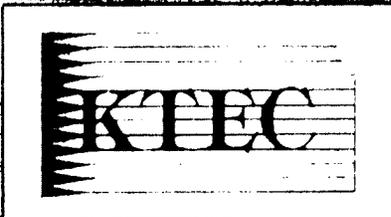
Most companies have spent more money on completing a Phase I than they anticipated and are in greater need of financial support when they have no income. They must keep their capability intact while awaiting Phase II funding to begin.

For all Kansas Small Businesses

- Encourages technology development by making the job easier.**
- Allows Kansas an opportunity to profit economically.**

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SBIR Bridge Financing Benefits

**For companies that have not won Phase II,
Bridge Financing will:**

- **Provide an opportunity to commercialize technologies that otherwise may be lost**
- **Allows a company to form partnerships to aid in commercialization**



SBIR Bridge Financing Benefits

**For companies that have won Phase II,
Bridge Financing will:**

- **Allow starting Phase II work early;**
- **Provides “holding time” and keeping their team together;**
- **Allows sub-contract work to be let prior to Phase II funds available.**

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KANSAS
TECHNOLOGY
ENTERPRISE
CORPORATION

*KTEC's mission is to create and maintain
employment by fostering innovation, stimulating
commercialization, and promoting the
growth and expansion of Kansas businesses.*

SBIR/STTR SUBMISSION GRANTS FISCAL YEAR 1995 APPLICATION PROCEDURE

KTEC provides matching grants to Kansas companies for preparation of competitive proposals under the federal Small Business Innovation Research (SBIR) and Business Technology Transfer (STTR) programs. KTEC matching grants are intended to help the applicant prepare the best possible proposal to the given federal agency, and are awarded only in advance of proposal preparation.

Kansas companies meeting the requirements set forth in this document are eligible for up to 50% of the cost of preparing Phase I or Phase II proposals, up to a maximum of \$5,000 per proposal. An eligible company may receive up to three grants annually. Grants are subject to availability of funds in KTEC's SBIR/STTR Matching Grant account. \$75,000 is available for the fiscal year beginning July 1, 1994.

KTEC offers a support network for SBIR/STTR concept evaluation and proposal writing. Costs involved in utilizing this network generally qualify for matching monies.

A. Applicant Eligibility

1. Kansas companies meeting the code of Federal Regulation 121 as set forth for defining a small business.
2. Application to KTEC must be made in advance of preparation of the federal proposal.
3. KTEC grants are contingent upon proper submission of a Phase I or Phase II proposal that meets all federal submission requirements (verified by a "proposal receipt" that the federal agency gives the applicant at the time of submission).

B. Allowable Costs

1. Salaries, consulting and other expenses related to evaluation and preparation.
2. Technical database search costs.
3. Writing, editing, word processing and reproduction of the proposal.
4. Registration cost to attend SBIR/STTR conferences.
5. Pre-approved travel to soliciting agency in preparation of the proposal.

C. Review Process

1. Application must be approved and evaluated by KTEC for adherence to published guidelines and suitability for federal requirements prior to submission to the soliciting agency. Applications should be submitted to KTEC as soon as possible, preferably two weeks prior to due date, to allow KTEC time to review the application.
2. Grants are made on a first come, first serve basis with consideration given to assisting the maximum number of applicants.

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D. Restrictions of KTEC Grants

1. If the federal grant is received, the project must be conducted in Kansas (some allowances are made for subcontracts, etc.).
2. Primary manufacture or production of resulting technology must be done in Kansas. If the company eventually elects to produce the resulting technology outside of Kansas or sell rights to produce it to an out-of-state entity, it shall pay KTEC three (3) times the original KTEC grant amount within thirty (30) days of such transfer.

E. Repayment Obligation

1. Recipient will repay KTEC for the actual amount paid by KTEC plus 3% simple interest from any manner of commercialization of the product(s).
2. When condition #1 is met the repayment may be by lump sum payment or through a repayment schedule set at the rate of at least 3% of the gross sales on a quarterly schedule.
3. In the event the project is not commercialized and no longer has commercial value, the actual amount paid by KTEC will be considered a non payback grant and the obligation for payback will be forgiven.

F. Reporting Responsibility

1. Following acceptance of the KTEC grant, the company will provide KTEC with a copy of its federal proposal and subsequent notification of award or denial, and a copy of the final report submitted to the federal agency. These documents are to be submitted to KTEC within two weeks of receipt or submission, whichever is applicable.
2. To assess the overall impact of the project KTEC will request economic impact data (jobs, sales, investment) quarterly until the date of last payment and then annually for a period of at least 5 years.

HOW TO APPLY

Application to KTEC must be made on Form #316 prior to writing the federal proposal. The application consists of the following:

1. Complete Application Form #316.
2. Abstract of the concept for the proposal (2-3 pages).
3. Name, address and brief resume of proposal writer, if known.
4. Evidence of valid existence of the company, e.g., certified copy of articles of incorporation, partnership agreement, charter of association, notarized affidavit of proprietorship; including name and address of the business.
5. Statement that the project and resulting production will be conducted in Kansas (relative to D-1 and D-2 above).
6. Summary of the research qualifications and capabilities of the company and any consultants to the project.
7. A brief statement forecasting the impact of the resulting technology in terms of Kansas jobs, revenues and exports.
8. An estimated budget for the cost of proposal preparation. (Attachment A)

Please address Applications and inquiries to:
Kansas Technology Enterprise Corporation
112 W. Sixth Street, Suite 400
Topeka, KS 66603-3869

**KANSAS TECHNOLOGY ENTERPRISE CORPORATION
SBIR/STTR MATCHING FUND**

FY 1995 APPLICATION FORM #316

Name of Firm _____ Federal Tax ID. # _____

Contact Person _____

Mailing Address _____

Telephone _____ Fax _____

No. Full-time Employees _____ Annual Sales \$ _____

Solicitation Number _____ Agency _____

Project Title _____

Federal Due Date _____ KTEC Funds Requested \$ _____

ASSISTANCE REQUESTED: (CHECK APPROPRIATE ITEMS)

- Research Assistance
- Proposal Writing
- Seminar Attendance
- Travel to Agency
- Commercialization Planning
- Data Searching Assistance
- Pre-evaluation prior to submission

AWARDS RECEIVED IN THE PAST 12 MONTHS:

Year _____	Agency _____	Phase _____	Amount _____
Year _____	Agency _____	Phase _____	Amount _____
Year _____	Agency _____	Phase _____	Amount _____

PRINCIPAL INVESTIGATOR

Name _____

Title _____

Address _____

Telephone _____

Signature _____

Date _____

AUTHORIZED CORPORATE OFFICIAL

Name _____

Title _____

Address _____

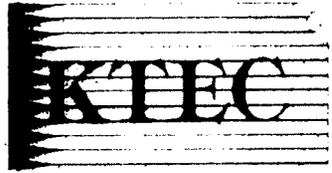
Telephone _____

Social Security # _____

Signature _____

Date _____

• Please attach additional information as instructed in the "Applications Procedure."



SBIR Recommendations

- **Expand current SBIR proposal preparation grant program to include other significant Federal grant opportunities**
- **Expand the scope of SBIR program to include additional funds for SBIR Bridge financing**
The purpose is to bridge SBIR I winners so they are able to continue their research while awaiting award of SBIR II grants

APR 1998

Design and Test of an Improved Crashworthiness Small Composite Airframe

Team Members:

- Terry Engineering
- National Institute for Aviation Research
The Wichita State University
- Oregon Aero
- Task Research
- Cirrus Design

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2-7-95
ATTACHMENT 2

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2-7-95
ATTACHMENT 2

Terry Engineering
Design and Test of an Improved Crashworthiness Small Composite Airframe
NASA SBIR Contract NAS1-20178

Phase I

- Evaluate feasibility of improving crashworthiness
- Seat tests showed potential cost & weight reductions for energy absorbing seats
- Analyzed airplane impact response
- Representative structural elements fabricated, tested, and analysis developed
- Feasibility of improving crashworthiness for low cost, weight, and performance penalties shown
- Phase II plan and proposal developed

Phase II Statement of Work (Proposed)

- Apply lessons of Phase I to design
- Validate methods through subscale (1/2) testing
 - Scale models of forward cabin & engine compartment
 - Quasi-static tests in WSU structural test laboratory
- Fabricate two full size airframes and test at NASA Impact Dynamics Facility
- Update design based on test results from first two airframes
- Fabricate two more full size airframes and repeat NASA tests
- Develop design methodology for application to other projects
- Final report

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Terry Engineering SBIR Program Timeline

Actions		Funding	
Start Proposal	May, 1993		
Submit Proposal	July 21, 1993		
Acceptance Notification	December 6, 1993		
Contract date	January 11, 1994		
		1st Payment	February 8, 1994
		2nd Payment	April 25, 1994
Phase I Final Report	July 9, 1994		
Phase II Proposal Submitted	July 25, 1994		
		Final Payment	September 12, 1994
Phase II Acceptance Notification	November 17, 1994		
Phase II Contract Date	?????????		

SURFACES RESEARCH AND APPLICATIONS

8330 Melrose Drive • Lenexa, Kansas 66214 • (913) 541-1221

Date: February 7, 1995

To: Kansas State Legislature

Reference: KTEC Bridge Funding for SBIR Contract Recipients:
Stimulation to Business in Kansas

Kansas Technology Enterprise Corporation (KTEC) has petitioned the Legislature to permit it to add to its support of high tech business in Kansas the ability to provide low-interest loans of up to \$50,000 for companies between Phase I and Phase II SBIR awards.

Surfaces Research strongly endorses this activity as a further strengthening of the economic climate for high tech business activities in Kansas.

Surfaces Research is the recipient of five SBIR awards since 1992, including two Phase II awards, and the sixth (a Phase II) is pending, all from the Department of Defense. The total dollar value of these awards is \$1.8M. The time from completion of Phase I work and beginning Phase II has been nine months. Six months seems a minimum.

High technology businesses such as ours often have considerable operating expense due to the specialized facilities and personnel that were attractive to the SBIR funding organizations in the first place. In our own case, operating expenses would deplete \$50,000 in less than two months.

Further, during the bridge period, the contract negotiation itself may require considerable expenditures of administrative time and services such as accounting. For most agencies, Phase II awards are full contracts, not grants, and scrutiny is much more rigorous than Phase I. The company must comply with all Federal Government contractor requirements for accounting systems, procurement systems and staffing, and demonstrate knowledge of many requirements such as workplace regulations and subcontracting procedures. The company must develop rate structures and have them and their accounting system audited, as well as demonstrate (by site reviews and audits) the capacity to carry out the larger contract activity with staff, facilities, and so forth.

Investments made in personnel and resources in Phase I need to be continued in order to meet these requirements for Phase II, as well as for the health of the company.

Knowing that funds are available and cash flow will not be the overriding concern will allow:

- **Development of new business** in the intervening period; There is typically a two-year lead time between initial identification of a topic/funding source match and Phase I award funding.
- **Commercialization of products within Kansas.** Commercialization ties can be strengthened; Commercialization is now the highest-rated component of SBIR Phase II activities. We developed strong ties with two existing Kansas firms during the Phase I to II bridge. These Kansas companies are now working with us in Phase II, and we have plans to continue work with them for commercialization of products within Kansas.
- **Protection of the tax and revenue base,** keeping workers employed and off employment security. Any continuation of the tax base is good for the state.

This is why a bridge loan program is an excellent opportunity for Kansas to support its high-tech activities as well as support itself. Loans to SBIR recipients have the highest probability of being repaid, as well as bringing all the other benefits of commercial high-tech business to the State of Kansas.

We strongly support this KTEC activity and look forward to its passage, as well as your continued strong support of KTEC. We will continue to work together to bring more high technology and its benefits of jobs, revenues and state recognition to Kansas.

Very truly yours,



Barbara J. Kinzig, Ph.D.
President



Paul Sutor, Sr., Ph.D.
Director of Research