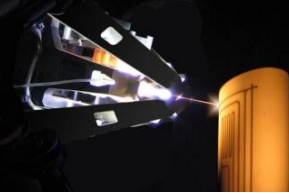


*Providing our customers with structurally integrated electronics  
for advanced sensing, communications, and signals intelligence.*



## **“Our experience with SBIR/STTR Grants & Contracts”**

Jeff Brogan, PhD  
CEO

NYS SBDC Workshop: 12 SEP 2012

Disclaimer: The content and opinions expressed in this briefing are not those of the US Government nor SBDC but solely reflect the views of J.Brogan.

# About MesoScribe Technologies

- High technology company, founded in 2002
- Spin-off from Stony Brook University, 4 exclusive patent licenses
- Provider of Direct Write products and additive printing services for aerospace, energy, and military markets



Formerly located at the Long Island High Technology Incubator (SBU)

## **Corporate Office, R&D Center**

MesoScribe Technologies, Inc.  
7 Flowerfield, Suite 28  
St. James, NY 11780  
Tel: 631.686.5710  
Fax: 631.686.5709

## **West Coast Manufacturing**

MesoScribe Technologies, Inc.  
5445 Oceanus Drive #108  
Huntington Beach, CA 92649  
Tel: 714.894.8400  
Fax: 631.686.5709

# Diagnostic Sensors

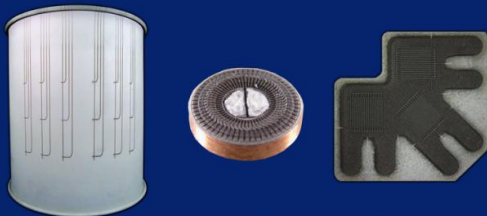
Off-the-shelf or On-the-part



Heat flux insert SmartBlade™

- Adhesive free installation
- High temperature packaging
- Integrated signal routing

## In situ measurements



Temperature Heat flux Strain

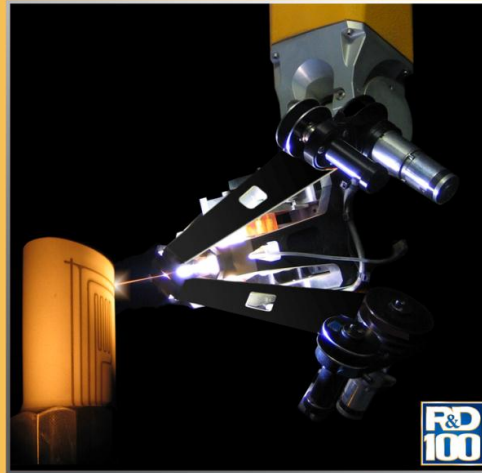
Harsh operating environments



# MESOSCRIBE

TECHNOLOGIES

## Direct Write™ Printed Electronics



- High-precision automation
- Direct fabrication onto parts
- Broad feedstock library
- Proven manufacturing process

Aerospace Energy Defense Transportation



# Conformal Antennas

Low profile & conformal

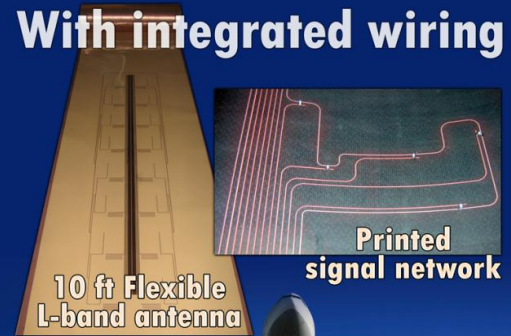
Structurally integrated

UHF/VHF + GPS  
Antenna

VHF Conformal  
Load-bearing  
Antenna

- Flexible conductors
- Robust interconnects
- Large area printing

## With integrated wiring



10 ft Flexible  
L-band antenna

Printed  
signal network

## Structures & Aerosurfaces



# MesoScribe: The Early Days....

- 2002 – 1st Phase I SBIR grant award
  - ✧ Department of Energy, \$100k, 12 month POP
  - ✧ Leased 500 sf at LIHTI (expanded to 2,000 sf by 2008)
  - ✧ Hired 1<sup>st</sup> full-time employee (other than Founders)
  - ✧ Executed a facilities-use agreement with SBU
  - ✧ Began sensor product development
  - ✧ Wrote more proposals....
  - ✧ Engaged gas turbine engine OEM (led to a NIST ATP in 2005)
  
- 2003 – Successfully converted the Phase I into a Phase II grant
  - ✧ Department of Energy, \$600k, 24 POP
  - ✧ Hired 2 more employees
  - ✧ Leveraged SPIR cost-matching opportunities (Strategic Partnership for Industrial Resurgence)
  - ✧ 3 more SBIR Phase I awards

# MesoScribe Technologies

- 10 years later, cumulative Government funding totals:
  - ✧ 56 Government grants & contracts
  - ✧ 44 SBIR/STTR awards: 27 Ph I and 17 Ph II
  - ✧ ~ \$18M in funding
  - ✧ Army, Navy, Air Force, DARPA, MDA, NASA, NIST, DOE

## Government Partners



# Our SBIR/STTR Funding

- Launched MesoScribe, enabled gradual expansion
  - ✧ 500 sf increase per year at LIHTI
  - ✧ 1-2 new employees per year
  - ✧ We needed time to develop technology, products, & applications
- Enabled the purchase of laboratory facilities, test equipment, instrumentation, robotics, etc. for 14,000 sf (Direct Costs & on OH)
- Retain patent rights (FAR 52.227-11)
- Provides 4 years of data rights per contract (Ph I, Ph II, each Ph III)
- No loss of equity
- Not a loan, nothing to pay back
- No cost share required
- Enabled us to transition technology to other markets
  - ✧ Capabilities developed from a NASA SBIR allowed us to manufacture a product for commercial aircraft, currently in production

# Starting Out: Some Lessons Learned

- Keep your overhead low, minimize your expenses, stretch your cash, utilize available resources at universities, etc.
- Carefully manage expectations and adoption of required procedures as a government contractor
  - ✧ Proper government cost accounting system is needed ASAP from Day 1
  - ✧ You need to be compliant and satisfy DCMA/DCAA regulations but large cookie-cutter plans could suffocate your fledgling business
- Commercialization strategy is critical, even as you develop your Ph I proposal
  - ✧ License or manufacture?
  - ✧ Who is going to buy your product or service and how do you sell it?
  - ✧ Understand the acquisition platform/procurement cycle
- SBIR/STTR funding is not sustainable
  - ✧ Getting an SBIR/STTR is not easy; but transition is far more difficult
  - ✧ Have a strategic plan

SBIR/STTR Grants are a great way to launch a business, and to develop and commercialize new cutting edge technologies.

**I wish you all success!**

## **Contact Information**

Jeff Brogan, Ph.D.  
(631) 686-5710 x1  
jbrogan@mesoscribe.com