smallTime

MEMS @
Texas Tech
MEMS Design, Simulation and Fabrication

Ideen

AutoCAD (TTU)

ANSYS (FEM) Simulation

Illustrator

SUMMiT V Sandia National Labs

Devices

TTU Nano Tech Center
MEMS Testing and Characterization

Packaging issues
- Stiction
- Friction
- Accelerated wear
- Coatings

Testing
- Custom Drivers
- Microscope probe stations
- Interferometric Microscope
- Electron Microscope
- Atomic Force Microscopes
MEMS Control

Integrated Sensing & Control

Adaptive Optics

Non-contact digital micromirrors
MEMS Education

Three Course MEMS Curriculum

Sandia National Labs
SUMMiT V Process
University Alliance Program

The 18mm² Classroom,
T. Dallas, J. Berg, & R. Gale
Hilton Head 2006
MEMS Integration

Generation of arbitrary sequences of ultrafast pulses

LED Illuminators for DMD-based video projection systems

Nano Tech Center
MEMS Applications

- IR detector with integrated shutter
- MEMS Microphone
- Biochemical sensors
MEMS Organization

TEXMEMS IV – Texas Tech University – July 2002

T. Dallas – Co-Chair MEMS Technical Working Group, Texas State Strategy on Advanced Technology

www.TEXMEMS.org