



## Conceptual MEMS Devices for a Redeployable Antenna

By Air Force Institute of Technology (U. S. ). Graduate School of Engineering and Management

BiblioScholar Sep 2012, 2012. Taschenbuch. Book Condition: Neu. 246x189x5 mm. This item is printed on demand - Print on Demand Neuware - Micro-Electro-Mechanical Systems (MEMS) are becoming an integral part of our lives through a wide range of applications, including MEMS accelerators for air bag deployment in vehicles, micromirrors in projection devices, and various sensors for chemical/biological applications. MEMS are a key aspect of everincreasing significance in a myriad of commercial and military applications. Because of this importance, this thesis utilizes MEMS devices that can deploy and retract an antenna suitably sized for placement on an insect or microrobot for communication purposes. A target monopole antenna with a length of 1 mm was used as a test metric. From this requirement, several MEMS designs using scratch drives and thermal actuators as the basis for powering the motor were developed. Some of the fabricated and tested designs included a gear with side flaps that flip up perpendicular to the substrate; gears that push an antenna beam off the edge of the substrate; and an antenna beam that is moved upwards such that it stands perpendicular to the substrate. These designs had the highest likelihood of success. Other designs included an array...

[DOWNLOAD](#)



[READ ONLINE](#)

[ 8.72 MB ]

### Reviews

*This is actually the very best pdf i have read through right up until now. This really is for those who statte there was not a well worth looking at. Your lifestyle period is going to be convert as soon as you total reading this article publication.*  
-- **Margarett Wolf**

*It in a of my personal favorite book. It really is filled with wisdom and knowledge Your daily life period will likely be enhance the instant you total looking at this pdf.*

-- **Mr. Rocio Schroeder Sr.**