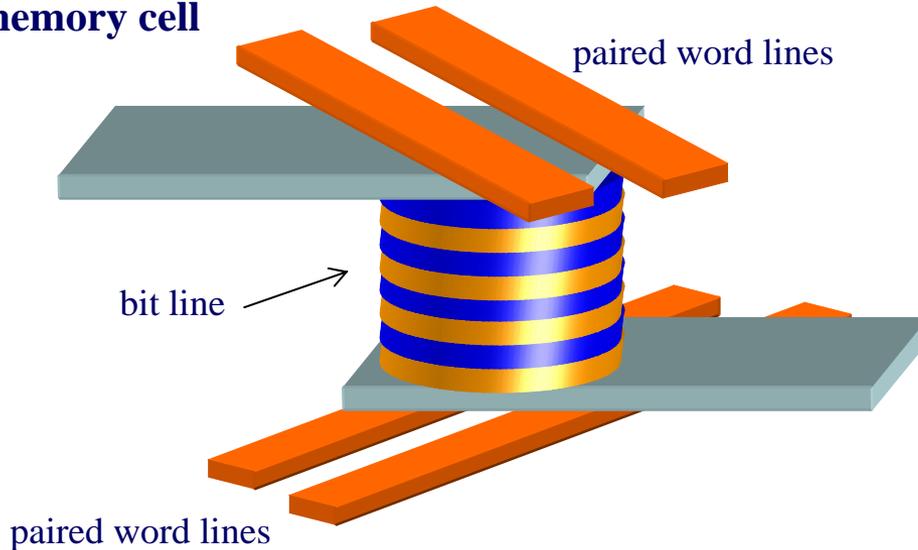


# 6.2 Magnetic Random Access Memory

## A memory cell



## OBJECTIVE

- Remove fragile hard drives from tactical computers
- Develop chip manufacturing methods to produce prototype memory device.
- Demonstrate performance of prototype memory device
- Continue downsizing to practical limit

## PAYOFF

- No moving parts--higher reliability & maintainability
- Lower weight, lower volume, lower power
- Instant booting

## TECHNICAL APPROACH

- Take advantage of Giant Magnetoresistance effect to develop a very high density solid state non-volatile memory device.
- Work with chip manufacturing processes to develop devices
- Based on ongoing ONR 312 basic and applied research programs

PERFORMERS: NRL & (FY03) Non-Volatile Engineering

Tasks	FY02	FY03	FY04	FY05
Manufacture chips	△			△
Test Chips		△		△
Build memory device			△	△
Transfer				△

Transition: Industry => MCHS