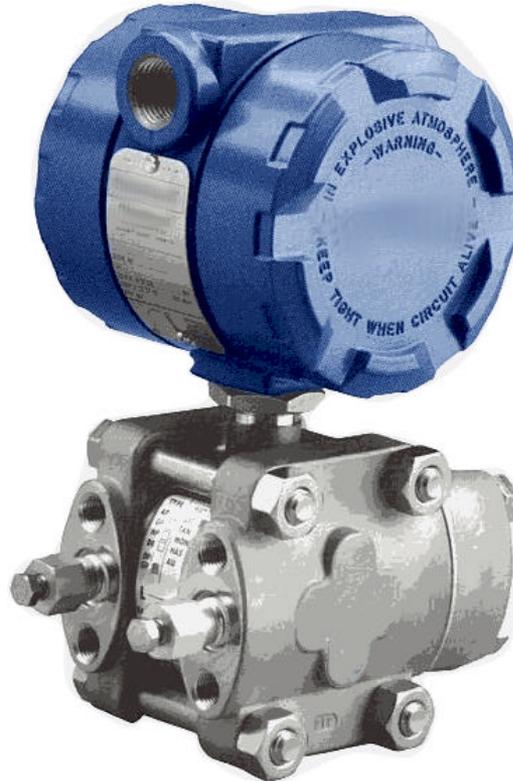


A Sensor Manufacturer's Perspective

True confessions of a 1451.2 Pioneer

Jim Moore
Telemonitor, Inc

A Generic Differential Pressure Transmitter



The Pressure Transmitter market

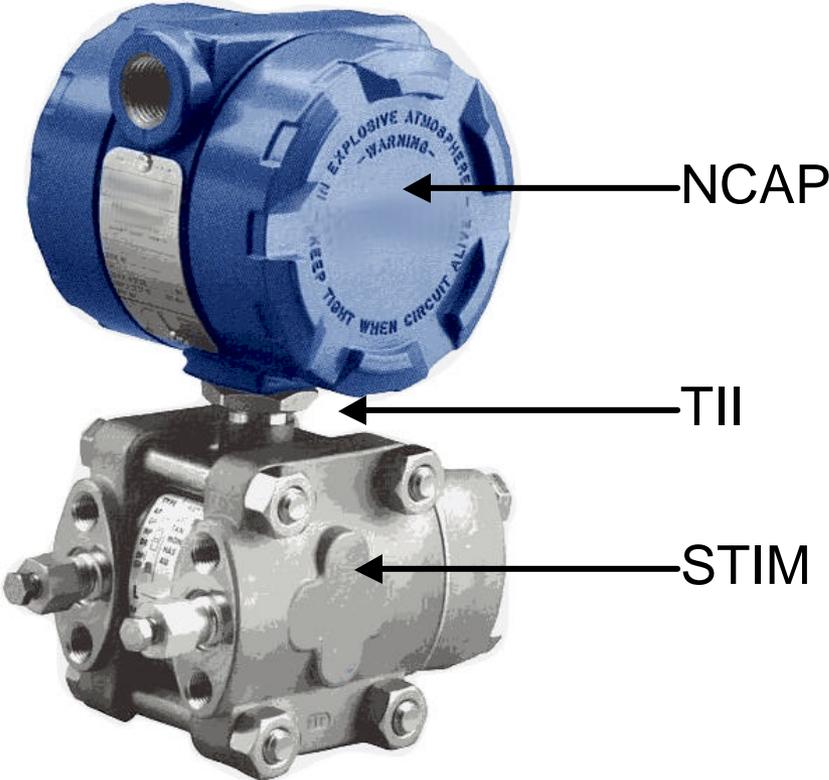
- **1.4 Million units/year with 4.3% CAGR**
 - ARC Advisory Group, Inc data
- **Manufacturers are vertically integrated**
- **Need > 50K/year to be profitable**
- **Moore Products developed the MycroSensor to compete in this market**
 - 1985 started MycroSensor development
 - 1993 introduced the XTC Pressure transmitter
- **However.....**

But If.....

We could rewrite the transmitter business model:

- **Multiple vendors of pressure sensing STIMS**
 - **Capacitive such as MycroSensor**
 - **Piezoresistive**
- **NCAPS (transmitters) manufactured for targeted markets**
 - **4-20mA/HART (~90% of market)**
 - **Profibus, FF, etc**
 - **Ethernet – future?**

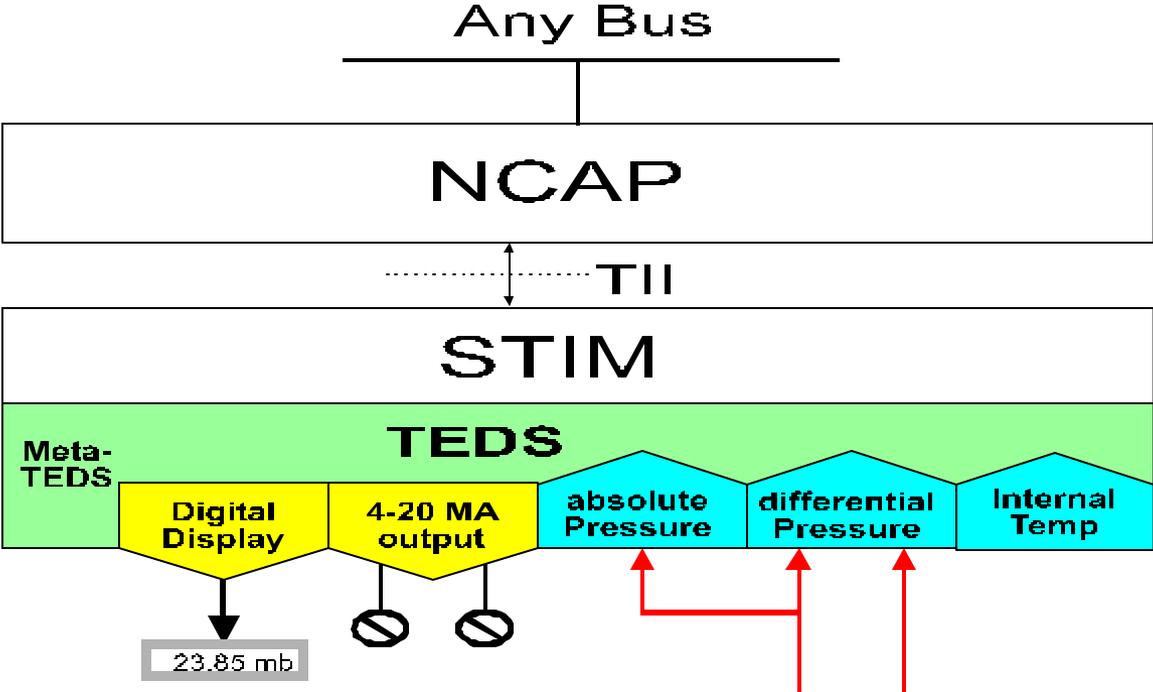
A 1451 Differential Pressure Transmitter



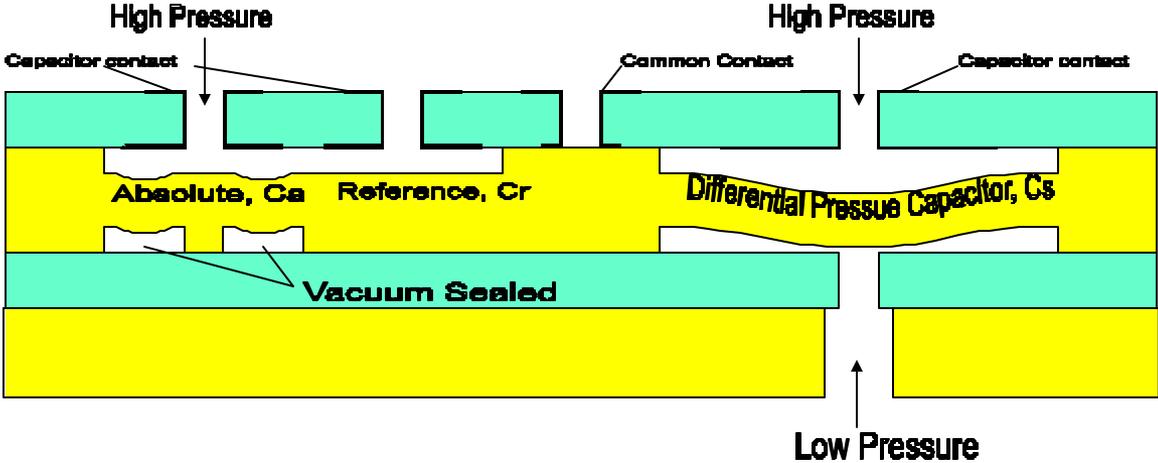
New Applications

- **Remote monitoring**
 - **Maintenance**
 - **Environmental**
 - **Security, both defensive and offensive**
- **Gas flow measurement in the “Oil Patch” (an example)**
 - **Approximately 50K units per year**
 - **Requires accurate measurement of 2 pressures and temperature.**
 - **Low power requirements**
 - **Replace old circular chart recorders**

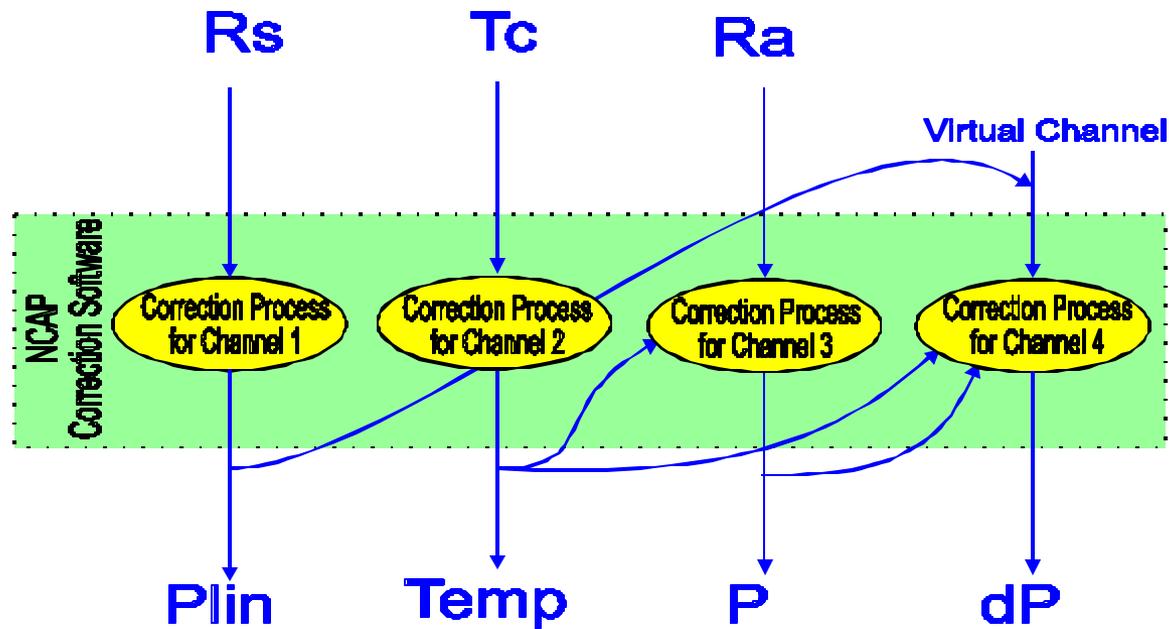
Ethernet MV Pressure transmitter



The MycroSensor



Correction Model for a MV transmitter



Lessons Learned and Path forward

- **Not going to remake an established, commodity market**
- **IEEE 1451.2 is *not* a product!**
- **TII importance?**
 - **Sensor mfg → OEM –No**
 - **Sensor mfg → End user - Yes**
- **1451 standards can provide the means to unleash existing sensor technology into *new* markets and applications.**
- **Rapid growth of TCP/IP will create many new application that are hungry for sensor data. Many sensor technologies available to feed this need**
- **The goal of the 1451 standards is to bring these together**

“We have the trains, we have the places to go; the 1451 standards can provide the rails to make it happen!”

Thank You