



**Volume 5 - Summer 2013**

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## **This Issue of Windwords**

Welcome to the Summer 2013 issue of 'Windwords'. In this issue you will find the following topics...

**The Photo Contest Winner Is...** Take a look at our photo contest winner!

**For The Record** - Here is a little of the History of Applied Technologies, Inc.

**Just The Facts** - More information about our Ultrasonic Anemometer.

**Some Articles From Agricultural and Forest Meteorology** - We found a couple of articles which may be of interest.

**New Section** - "For the Fun of it" - Fun, funny stories, and notable quotes...

For those of you who have just received your first copy of Windwords - we invite you to take a look at some previous issues. The Windwords Archive can be found on our website: [www.apptech.com/windword](http://www.apptech.com/windword)

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**The Photo Contest Winner Is...**



*The Golden Eagle 1*

A Clarkson University research team, led by Mechanical & Aeronautical Engineering Professors Pier Marzocca submitted this photo of its unmanned aerial vehicle, the Clarkson Golden Eagle 1 to acquire wind turbulence data.

They mounted an Applied Technologies, Inc. - "A" style probe on the nose of the Golden Eagle 1.

More details, including a video report of their project and another photo can be found on our website: [www.apptech.com/photo-contest.html](http://www.apptech.com/photo-contest.html)

***Get out there and start taking pictures... we have another photo contest starting soon!!!***

## **For The Record**

Are you aware that Applied Technologies, Inc. has been designing and building Sonic Anemometers since the mid 1970's?!! ATI is the first U.S. company to actively build and sell Ultrasonic Anemometers, and the second oldest internationally.



*(The original ATI Logo)*

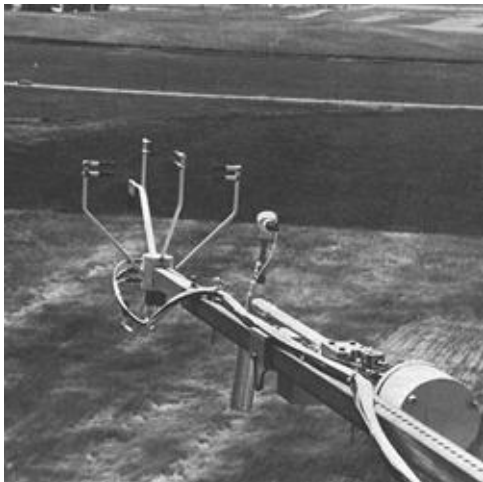
The original engineers, with years of design and development expertise, are still designing and building instruments for this field. ATI was one of the first companies to actually build and sell the Sonic Anemometer commercially. Much of our original time was

## **Just The Facts**

- Did you know that the ATI Sonic Anemometer is currently the only TRUE orthogonal 3D ultrasonic anemometer?
- Did you know that the ATI Ultrasonic Anemometer can be synchronized for ANY measurement time period?
- Did you know that you can connect multiple ATI Sonic Anemometers together, and have them all take data over the same time period?
- Did you know the NEW ATI Sonic Anemometer does it all on a reduced power now of something less than 0.50 Watts, depending on the options..
- Did you know the accuracy on the new Sonic Anemometer is 0.01 m/sec for velocity?
- Did you know that the ATI Sonic Anemometer can output data from once per hour up to 200 Hz?

spent trying to convince others that you really could measure wind speeds by this means.

The first Ultrasonic Anemometers were built before the micro-processor, so they required a lot more parts, (and of course cost a lot more than now). The probe had a path length of 25 cm, it had 4 transducers in each axis, (see picture below) and the electronics were contained inside a very large NEMA 4 aluminum box. The electronics box had 9 triax cables going between it and the probe. The box also contained a large power supply that put out 1000+ VDC to run the transducers. Inside the box was a frame that held six or more PCB's that required an oscilloscope and a lot of tweaking and adjusting to keep it set up and running.



One of the original probes mounted on a tower

Imagine, if you can, installing these instruments on a tower, writing your own software to process the data, and then trying to relate the data to a science in it's infancy. The first scientists to use these instruments were certainly dedicated pioneers.

(To be continued...)

## New Articles of Interest



If you are a regular reader of '**Agricultural and Forest Meteorology**' there are a couple of articles that might be of interest. If you are not a subscriber, check out these:

- "**Underestimates of Sensible Heat Flux due to Vertical Velocity Measurement Errors in Non-Orthogonal Sonic Anemometers**"

This article is associated with the paper we listed in our Winter 2012 Windwords. The article can be found in 'Agriculture and Forest Meteorology', Volume 171, Article

- Did you know that the ATI Sonic Anemometer has a calibration command that gives the operator the ability to calibrate the instrument any time it might be necessary? There is no need to return the instrument to the factory for calibration.

Do you have questions about the temperature accuracy? [Check out 'Sonic Thermometry' in the Application Notes on the Applied Technology website.](#)

## For the Fun of it!



Could be the most quoted definition of a committee, which has to be credited to none other than Anonymous:

**"A committee is a group of the unwilling, chosen from the unfit, to do the unnecessary."**

## Just a little For What It's Worth:

"Heavier-than-air flying machines are impossible!"  
- Lord Kelvin, President, Royal Society, 1895

"Everything that can be invented has been invented."  
- Charles H. Duell, Commissioner, U.S. Office of Patents, 1899

"Who the heck wants to hear actors talk?"  
- H.M. Warner, Warner Brothers, 1927

"I think there is a world market for maybe five computers."  
- Thomas Watson, Chairman of IBM, 1943

"Computers in the future may weigh no more than 1.5 tons."  
- Popular Mechanics, Forecasting the Relentless March of Science, 1949

"We don't like their sound, and guitar music is on the way out!"  
- Decca Recording Co., Rejecting the Beatles, 1962

"There is no reason anyone would want a computer in their home."  
- Ken Olson, President and Founder of Digital Equipment Corp., 1977

"640K memory ought to be enough for anybody."  
- Bill Gates, 1981

## Contact Us

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[Here is a link to the article @ sciencedirect.com.](#)

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If you're looking for a Sonic Anemometer that can do something special, check this out:

**- "Turbulence Spectra Measured During Fire Front Passage"**

They have had an ATI Sonic Anemometer operating in fire plumes successfully to +250 degrees C. This article can be found in 'Agriculture and Forest Meteorology', Volume 169, Article 19.

[Here is a link to the article @ sciencedirect.com.](#)

If you have any questions for ATI, please don't hesitate to ask - Click [HERE](#)

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