

DICKSON **insights**

HEALTHCARE COMMUNICATION COUNTS

How hospitals are communicating in 2016

PAGING DR. GREEN

A DISPARITY BETWEEN CARE AND COMMUNICATION



JEFF RENOE • DICKSON INSIGHTS EDITOR-IN-CHIEF

FEATURES

02-04 Dickson Resources

Letter from the Editor
Join Our Team
Unplugging to Unwind

05-09 DicksonOne

About
Overview
The Touchscreen
Pricing

10-13 Dickson Resources

High and Dry
Mobile App

14-20 Dickson Solutions

Calibration
Replaceable Sensors
Temperature Mapping
Validation
Products

21-23 Feature Story

Healthcare
Communication

EDITOR'S NOTE

Historically speaking, it's a great time to be alive. Americans spend more on medical research than any other country in the world, and the results have spoken for themselves. We live longer today than at any other point in human history.

With the advancements in medical technology you may be surprised to know that hospitals are still relying on technology as outdated as the beeper. It's a device that was first made portable by Motorola in 1956 and is still in use by doctors across the country today.

At a point in time known as the Information Age it's hard to believe that U.S. Hospitals are estimated to lose \$12 billion dollars each year because of issues with communication. The health system has a long way to go for its communication methods to catch up with the technology they use to deliver healthcare. If doctors are able to perform surgery remotely through machines then they should be able to easily communicate with each other within their own hospital.

In the pages that follows you'll learn more about healthcare communication in 2016 as well as a variety of stories as we work to keep your assets safe and your auditors happy.

Thanks for reading, and I hope you enjoy the October issue of Dickson Insights.



"It's important to monitor the constant changes in local temperature and humidity to keep from generating air that is too dry and unsafe as surrounding conditions fluctuate."
- High and Dry, page 10



DICKSON

when every point matters

Recent graduate or experienced professional, we have a spot for you.




We're hiring for positions in:

- Sales
- Marketing
- Engineering
- Manufacturing
- Production

At Dickson 'Every Point Matters' and that starts with the hiring of the best employees. Our team is a diverse group of individuals with a multitude of skills, all of which make Dickson an exciting place to work. From our engineering to our marketing department, we welcome new faces with friendly faces, never giving bad nicknames to new hires.

Each day inside Dickson offers a new challenge, and with that new challenge a new opportunity. As Dickson grows, so will you. **Come have fun with us, even on Mondays.**

Find our listings at:

-  dicksondata.com/careers
-  linkedin.com/company/dickson_2
-  glassdoor.com



How to Survive a Weekend Without the Internet

With summer now in our rearview mirrors, millions of Americans are making plans to get outside before it get's too cold. For more than forty million of them, those plans may very well include camping.

In an age where we are becoming more and more dependent on our devices to navigate our day, 66% of adults now suffer from nomophobia -- a fear of losing their phones, Americans are showing that escaping from the rigors of technology is important. In fact, according to the outdoor foundation, people who decided to camp for the first time chose to do so to escape the grind more often than any other reason.

There's no question that technology has become an integral part in our lives. In fact, with the information that is readily available on the web, we use it to help us navigate nearly every situation that exists. But our addictions are causing us harm. Heavy technology use has been linked to fatigue, stress and depression in young adults.

It means unplugging may be more important than you thought, and getting out where there's no cell service may just be what the doctor ordered. But, oh my goodness, how would we ever survive without our cell phones? Well, here are some ideas.

Worried about...

...not being able to talk with friends while you're gone? Bring them with you! Camping creates some of the "fondest memories" you can have with family and friends.

...being bored without your phone? Take a deck of cards! There are all kinds of games you can play with a group of people of varying ages and they don't take up much room when you pack.

...getting lost without your GPS? Be a natural navigator! Learn how to find your way by the position of the sun in the sky, your shadow on the ground and the growth of moss on a tree.

...missing out on something you could have otherwise seen? Explore on your own! Personal exploration of the outdoors can help increase the bonds of family.

...listening to your significant other complain about how ridiculously hot it is? Be your own temperature monitoring system! Experts suggest that adding 37 to the number of times a cricket chirps in fifteen seconds can give you a rough estimate to the outdoor temperature in Fahrenheit. Chances are, it isn't as hot as you think.

While we rightfully lean on technology and digital innovation to better our lives we often forget it's supposed to give us more time. Whether it's be-

cause of a new cell phone or a cloud based data management system, new efficiencies should be adding time to your day. Since, more often than not, the added time goes back into our work instead of our lives, then it becomes more important than ever to unplug and unwind. Thankfully, if you're doing relaxing right, there isn't an app for that. [D](#)

Have something personal you'd like to add to the conversation? Send your thoughts to jeff@dicksondata.com for a chance to be featured in a future blog or article in our magazine.



WELCOME TO THE CLOUD

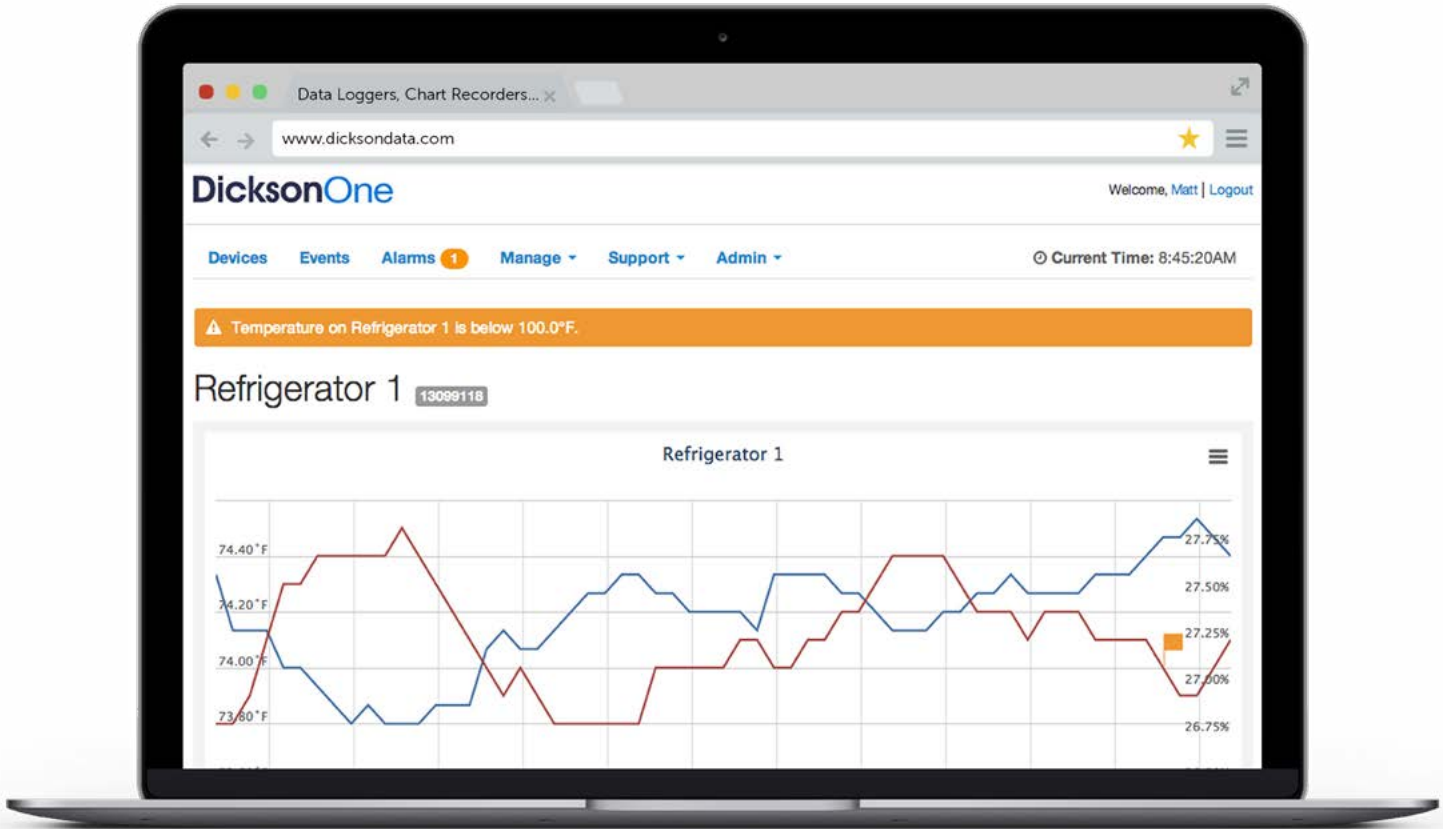
DATA AT YOUR FINGERTIPS. ANYTIME. ANYWHERE.

DicksonOne



TAKE POWER OVER YOUR ENVIRONMENT

We've re-thought temperature and humidity monitoring making it easier, scalable, and cost effective.
Your data. How you want it. When you want it.



Secure
We utilize bank-grade security and Amazon Web Services for unparalleled reliability.



Anywhere
Wherever you are, access your data anywhere, anytime, 24/7.



Infinite
Securely store all your data in the cloud, whether you're recording for days, months, or years.



Automated
Devices send all collected data to the DicksonOne servers automatically, so you don't have to.

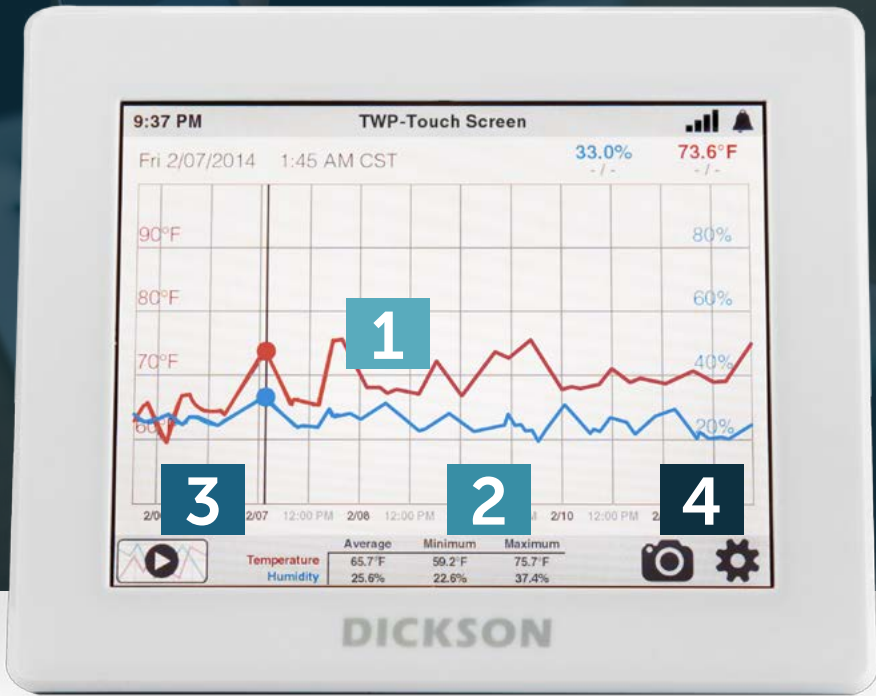


On Your Time
Create customizable reports delivered exactly when you want them.



Immediate
Receive real-time email, text, or phone call alarms when excursions occur.

Stay Connected. Wherever You Are.



01

THE GRAPH

We updated the user-interface, and made it easy to view and manage your data.

02

YOUR CHANNELS

The touchscreen automatically calculates and updates summary data for the selected time range

03

MONITORING

Pushing the play button brings you back to the most recent readings, updating the view in real-time.

04

SETTINGS

Easily adjust sample rates, set alarms, and connect to DicksonOne.

The Touchscreen

The Touchscreen gives you the option to connect directly to DicksonOne. You get all of your data at your fingertips, and now you can access it anywhere too. Just connect your device to your local WiFi network or plug it into an Ethernet port, log into DicksonOne, and boom, complete data control.



DicksonOne Enabled • Capacitive LCD Touchscreen
Replaceable Sensors • WiFi, Ethernet, and USB Connectivity

DicksonOne Touchscreen

MODEL	REMOTE PROBE	PRICE
TSB	USB Download	\$424
TWE	DicksonOne Wifi/Ethernet Connection and Download	\$524
TWP	DicksonOne Download and Power over Ethernet	\$599



DicksonOne Display Logger

MODEL	REMOTE PROBE	PRICE
DWE	DicksonOne Wifi/Ethernet Connection and Download	Starting at \$350



NEW!

Per device billing
now available!

\$3

per device, per month
Requires a credit card

DicksonOne Software

One of the most common pain points when discussing monitoring is the retrieval of data. DicksonOne loggers send data to the cloud automatically, freeing up resources to do what they do best.

Talk to a specialist now | 630-543-3747

BASIC	STARTER	REGULAR	PLUS	ENTERPRISE
\$0 per year	\$300 per year	\$725 per year	\$1,400 per year	Call for Quote
Unlimited Devices Data stored for 30 days 1 hour sample interval	1-10 Devices Data stored for life of account Multiple sample rates Email, Phone, & Text Alerts API Access	11-25 Devices Data stored for life of account Multiple sample rates Email, Phone, & Text Alerts API Access	26-50 Devices Data stored for life of account Multiple sample rates Email, Phone, & Text Alerts API Access	51+ Devices Data stored for life of account Multiple sample rates Email, Phone, & Text Alerts API Access



RELATIVE INDOOR HUMIDITY VS OUTDOOR TEMPERATURE

A great article was published by the StarTribune in Minnesota last winter that provides some guidelines of relative indoor humidity versus the outdoor temperature. Here are a number of key points as they've defined them.

10



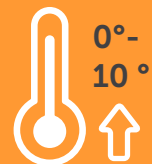
20°-40°

Humidity indoors should not be more than **40 percent**



10°-20°

Humidity indoors should not be more than **35 percent**



0°-10°

Humidity indoors should not be more than **30 percent**

How dry air can have disastrous effects on our health

The health of yourself, your colleagues and your loved ones is probably something you think about often. Should we get flu shots? Are we getting enough exercise? Is there really a benefit to a standing workstation compared to a seated one?

There is one question though I don't think we ask ourselves often enough. Is the quality of air we're breathing healthy and safe?

According to the United States Department of Labor, the quality of indoor air is as important to your personal comfort as it is to your health. Poor air quality has been tied to symptoms ranging from any of the following:

- Headaches
- Fatigue
- Trouble concentrating
- Irritation of the eyes, nose, throat and lungs

Additionally, different types of air can affect the body in different ways. Some diseases have been linked to air contaminants, such as asthma in damp environments. Viruses and infections, like colds and the flu, can also spread more rapidly when dry conditions are present.

WHAT DOES IT MEAN TO HAVE DRY AIR?

In truth, there is no simple answer to what it means to have dry air. Research shows that the ideal level of indoor humidity is between forty and sixty percent; however, the temperature outdoors will have dramatic effect on how well your structure is able to manage different air moisture levels. For example, a humidity level within a typical range can cause moisture to appear and freeze on windows and even within walls and attic spaces depending on how cold it is outside.

As you can see, humidity levels aren't a set it and forget it consideration. It's important to monitor the constant changes in local temperature and humidity to keep from generating air that is too dry and unsafe as surrounding conditions fluctuate.

Dry air varies dependent on outdoor weather temperature and humidity. This means your risk level can be dependent on your geographical location.

WHY DOES THIS ALL MATTER?

As we've already touched on, dry air can impact your health as well as the wellness of those around you. Irritation can be caused over time as low humidity dries out and inflames the mucous

membrane that lines our respiratory tract.

This membrane is what our body uses to trap disease causing organisms from penetrating into our system. When this happens we become more at risk of respiratory infections, and are left more susceptible to the cold and flu season. Because the membrane lines your nasal cavity, as it dries out you'll also find yourself more susceptible to frequent nose bleeds.

But one of the most frustrating reasons it's bad to have dry air indoors is because viruses tend to live longer in it. This allows them to linger and spread. That alone isn't a happy thought for a home or crowded workspace.

HOW CAN THIS BE COMBATED?

While the obvious answer is introducing moisture back into the environment, there are a number of ways to help keep the air in your home or workplace safe and comfortable for you to breathe.

Ensure that your office or home is properly insulated. The more cold air that is able to enter, the drier the air becomes. Make sure doors are closed and sealed and windows are well enough insulated that they aren't letting a tremendous amount of cold air into the room. If replacing windows and doors with more energy efficient ones isn't an option there are a number of low cost solutions to get you through the cold winter months.

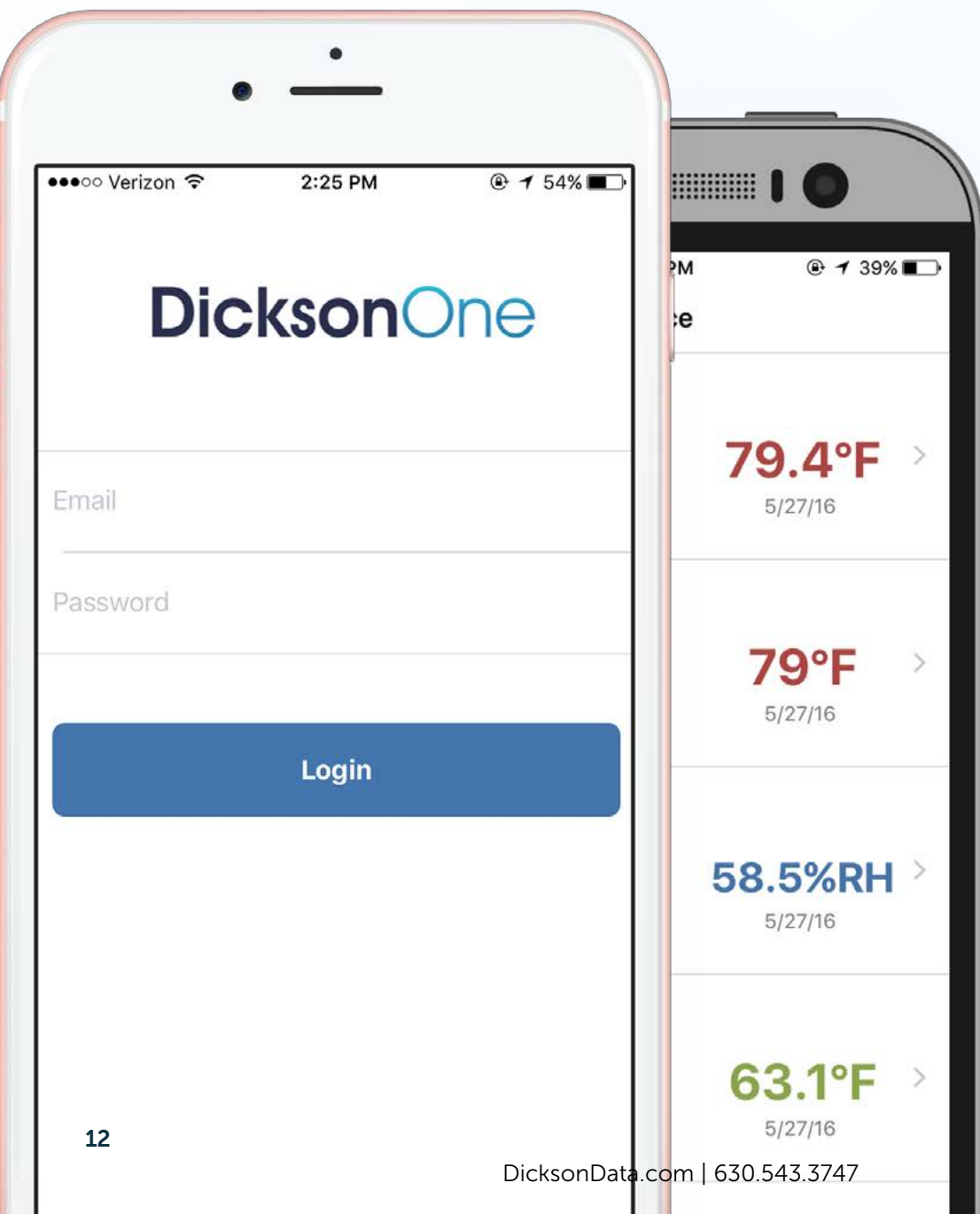
- Replace weather stripping and caulking on both the inside and outside of your windows.
- Install heavy curtains to help absorb the cold air before it can circulate into the environment.
- If you have space at the bottom of your doors, consider laying towels along the floor to keep cold air from rushing in.
- Purchase a portable humidifier or have a whole house humidifier added to your furnace. These devices use filters or screens to collect water and use fans to blow through them helping to release the moisture back into the air.

IS THAT EVERYTHING?

Unfortunately, no. In the process of moistening the air you need to make sure that your solutions don't snap the issue in the other direction because having air that's too moist can be detrimental to your home. For that reason you need to make sure that you closely monitor the ongoing humidity levels and temperature of wherever you are to help maintain the highest quality air for yourself and those around you. Even so, these tips can go a long way toward maximizing productivity in your workplace. **D**

11

THE DICKSONONE MOBILE APP



MILLIONS OF DATA POINTS
RIGHT IN YOUR POCKET

Instant access to all data logger and
location information in the cloud.

Anytime. Anywhere.

Available now via



DID YOU KNOW?

Dickson was the first manufacturer of temperature monitoring equipment to become an A2LA accredited lab for calibrations.



Assurance that you're getting the best.

Calibration Services SETTING THE STANDARD

Calibrations are essential to all devices that measure a variable. However, we often get the questions, "Why isn't it accurate already?" "Isn't it made to be accurate?" The answers are: it is, and yes. However, while our devices are accurate without calibrations, we can't be positive they are accurate to a specific measurable degree (and thus can't prove their accuracy) unless we perform a calibration.

HOW CALIBRATION WORKS

STEP ONE

We compare your sensor with a standard sensor in a stable environment across a range of temperature readings.

STEP TWO

If there are any differences between the sensor and the standard, we adjust the sensor to align with the standard.

STEP THREE

We run through the above process multiple times, adjusting the device as it is compared at multiple temperatures.

STEP FOUR

We perform a final check of one or more points, depending on your order, and create the necessary calibration certificate.

CALIBRATION OPTIONS

What works for my company?

1-POINT NIST

- One specific temperature point calibration
- Good if your temperature varies by little

- Choice to specify the temperature point to best reflect your application

Example: A calibration lab determines that a device is reading 26°F when it should be reading 24°F. So, the calibration lab adjusts the device two degrees, so that it now reads 24°F. A 1-point NIST assures accuracy at this specific point.

3-POINT NIST

- Three-point (high, middle, and low) temperature point calibration

- Grants a larger proof of accuracy

- Choice to specify the temperature point to best reflect your application

Need help? Let us be your calibration expert. | (630)-923-6565 | dicksoncsr@dicksondata.com

REPLACEABLE SENSORS



CONVENIENCE IS KEY.

Calibrate in your office. On your own time. In three simple steps.

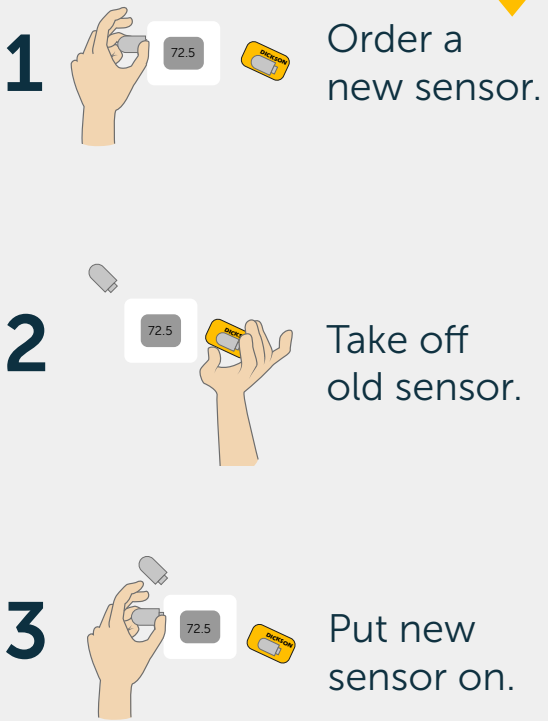
ALL YOUR CALIBRATION DATA, RIGHT ON THE SENSOR.

Now, you have the option to calibrate the sensor as opposed to the unit. Think of it like this: the Replaceable Sensor takes an environmental reading, and the data logger or chart recorder records that environmental reading. By splitting up the sensor from the data logger and chart recorder, we've created a plug and play device, that will keep you in compliance, but save you time and resources.

Replaceable sensors allow for:

- ✓ Zero down time
- ✓ Faster calibrations
- ✓ More cost effective calibrations

Need help? Let us be your calibration expert. | (630)-923-6565 | dicksoncsr@dicksondata.com



TEMPERATURE MAPPING 101

Temperature mapping your facility, warehouse, or refrigerator is a daunting task. We know, we've done it a lot. Dickson can help keep your business fully compliant in audits, streamline your business operations, and protect sensitive products with our temperature mapping services.

WAREHOUSE TIPS

Warehouses are one of the most common areas that need the service of temperature mapping. We've included a few tips to get your process started.

- Note the location of HVAC outputs, and then place a temperature monitor near units.
- Place your loggers in problem spots such as exits, ceilings, heaters, etc.
- Label all loggers with a unique ID and record the location along with a date.
- Know how much distance you should put between loggers.



Getting Started

Whether you're being audited or just want information on what's happening in your facility, then a mapping report can be an asset to your company. Once the mapping has ascertained where the points of temperature variation lie within a temperature control system, then monitoring can be installed so that owners and users can prove their adherence to the related health and safety standards.



Some industries are required to have documented evidence that environments are under state of control. Let Dickson's skilled professionals get you up to date.

Want more information?
Contact a specialist today.
(630)-923-6565



Validation Services SOLUTIONS TO SUIT YOU

If you're in the quality assurance business like us, validation is a term you hear every day. "Validation" falls under the umbrella of terms businesses use to discuss the quality of their product, facility, or service. For those not well-versed in the world of quality assurance, hearing "validation" can send you running to hide under your desk. It's a word that can scare you into a frightful Google search, an emergency call to someone in your quality department, or worse, it can scare you into ignoring it.

PQ
PERFORMANCE
QUALIFICATION

✓ **TESTS**
VERIFICATION OF CORRECT
EQUIPMENT PERFORMANCE

✓ **ENSURES**
CORRECT PERFORMANCE
OF SYSTEM PER SPECS

✓ **VERIFIES**
SYSTEM MEETS CUSTOMER'S
INTENDED PURPOSE

OQ
OPERATIONAL
QUALIFICATION

✓ **TESTS**
VERIFICATION OF CORRECT
EQUIPMENT OPERATION

✓ **ENSURES**
CORRECT OPERATION
OF SYSTEM PER SPECS

✓ **VERIFIES**
SYSTEM MEETS CLAIMS
FROM PARAMETERS

IQ
INSTALLATION
QUALIFICATION

✓ **TESTS**
VERIFICATION OF CORRECT
EQUIPMENT INSTALLATION

✓ **ENSURES**
CORRECT INSTALLATION
OF SYSTEM PER SPECS

✓ **ESTABLISHES**
BASELINE FOR EQUIPMENT

**VALIDATION
VOCAB**

If you are reading this, you may be familiar with Medical Device and Life Sciences specific acronyms for example IQ, OQ, and PQ. For those who are new to the specific world of Validation Services, we'll try to help with some of the important terminology.



Dickson offers validation services for our DicksonOne or Dicksonware software, and temperature controlled equipment like refrigerators, stability chambers, freezers, walk-in chambers, and more.

Is your company ready for
a quotation or need more
information?
Contact a specialist today.

(630)-923-6565

CHART RECORDERS

Want a physical readout right where you are monitoring? Our Chart Recorders have you covered. For ninety years we've built the best chart recorders in the business. Check out our models below.

8 and 6 Inch Models

MODEL	FEATURES	STARTING PRICE
KT6P	6 Inch Temperature	\$369
KT8P	8 Inch Temperature	\$419
TH6P	6 Inch Temperature and Humidity	\$489
TH8P	8 Inch Temperature and Humidity	\$489



KT8P shown above

4 and 3 Inch Models

MODEL	FEATURES	STARTING PRICE
SL4350	4 Inch	\$239
SL4100	4 Inch	\$239
SC3	3 Inch	\$239



SL4350 (top) and SC367 shown above

DATA LOGGERS

For data loggers, information (temperature/humidity measurement and date and time) are stored as information. That data is stored in the device for later download (via software) onto a computer, or sent to a cloud application or server for remote access.

Compact

SP125 Temperature Logger. Accuracy $\pm 1.2^{\circ}\text{F}$, $\pm 0.67^{\circ}\text{C}$. Range -10 to 176°F, -23 to 80°C.	\$119
SP175 Temperature Logger with Thermocouple Probe. Accuracy $\pm 1.8^{\circ}\text{F}$, $\pm 0.1^{\circ}\text{C}$. Range -300 to 2000°F, -30 to 50°C. A203 Probe required for +500°F	\$229
TP125 Temperature and Humidity Logger. Accuracy $\pm 0.8^{\circ}\text{F}$, $\pm 0.45^{\circ}\text{C}$. Range -10 to 176°F, -23 to 80°C.	\$199
SK550 Temperature. Pack of twelve. Accuracy $\pm 1.8^{\circ}\text{F}$, $\pm 1^{\circ}\text{C}$. Range -4 to 158°F, -20 to 70°C.	\$699
TK550 Temperature & Humidity. Pack of twelve. Accuracy $\pm 1.8^{\circ}\text{F}$, $\pm 1^{\circ}\text{C}$. Ranges -4 to +158°F, -20 to +70°C.	\$999



SP125 shown above



SP425 shown above

Display

SM300 Temperature Logger. Accuracy $\pm 1.2^{\circ}\text{F}$, $\pm 0.67^{\circ}\text{C}$. Range -10 to 176°F, -23 to 80°C.	\$249	TM320 Temperature & Humidity. Accuracy $\pm 1.8^{\circ}\text{F}$, $\pm 1^{\circ}\text{C}$. Ranges -4 to +158°F, -20 to +70°C.	\$299
SM320 Temperature Logger with Thermocouple Probe. Accuracy $\pm 1.8^{\circ}\text{F}$, $\pm 0.1^{\circ}\text{C}$. Range -300 to 2000°F, -30 to 50°C. A203 Probe required for +500°F	\$299	TM325 Temperature and Humidity Logger. Accuracy $\pm 0.8^{\circ}\text{F}$, $\pm 0.45^{\circ}\text{C}$. Range -10 to 176°F, -23 to 80°C.	\$399
SM325 Temperature and Humidity Logger. Accuracy $\pm 0.8^{\circ}\text{F}$, $\pm 0.45^{\circ}\text{C}$. Range -10 to 176°F, -23 to 80°C.	\$399	SP425 Temperature. Accuracy $\pm 1.8^{\circ}\text{F}$, $\pm 1^{\circ}\text{C}$. Range -4 to 158°F, -20 to 70°C.	\$159
SM420 Temperature. Accuracy $\pm 1.8^{\circ}\text{F}$, $\pm 1^{\circ}\text{C}$. Range -4 to 158°F, -20 to 70°C.	\$499	TP425 Temperature & Humidity. Pack of twelve. Accuracy $\pm 1.8^{\circ}\text{F}$, $\pm 1^{\circ}\text{C}$. Ranges -4 to +158°F, -20 to +70°C.	\$249

High Temp Solutions
INDICATORS

- 1

HT 300 Waterproof, High Temperature Data Logger
HACCP and FDA Compliant. USB Download. IP68 Rating.
Temperature Range -40° to 257°F (-40° to 125°C).

\$349
- 2

HT350 High Temperature Process Logger
HACCP Compliant, K-Thermocouple Probe, USB Download, and
a large temperature range. Temperature Range -40° to 257°F
(-40° to 125°C).

\$349



Instant Data Solutions
INDICATORS


- TC700/TH700 Touchscreen Handheld Indicator**
Instant temperature or temperature/humidity data.
No-slip silicone cover. Battery powered.

\$299




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**HEALTHCARE
COMMUNICATION
COUNTS**

How Paper and Pens are Taking a Backseat to Technology

HOW HOSPITALS ARE COMMUNICATING IN 2016

COMMUNICATION DEVICES USED BY DOCTORS AND NURSES

Why are hospitals still using pagers?

SIMPLICITY
A page is quick and efficient, compared to fumbling around with a smartphone.

SECURITY
There are already secured networks in place for pagers in hospitals.

RELIABILITY
Pagers are less likely to fail in the event of an emergency, compared to Wi-Fi or cellular networks.

RANGE
Radio signals range farther than Wi-Fi or cellular phones, ideal for thick hospital walls.

What are smartphones being used for that pagers can't be?

PHYSICIANS
are starting to use smartphones for searches and professional references.

NURSES
use smartphones to search information related to their work.

EMAIL
Email is widely used in the healthcare system and falls under HIPAA coverage, since systems are encrypted.

PAGERS
RM 315

SMART PHONES

TEXTING
Sending patient information by text violates HIPAA and is subject to fines up to \$50,000 per text.

The stereotype of the illegible doctor's handwriting is no joke - it can cause a pharmacist to dispense the wrong dose of a certain drug – or the wrong drug altogether – potentially killing a patient. Yet for years, that's how prescriptions were handled. A quick scrawl on a notepad and, fingers crossed, the patient would get the drug they needed.

It's why those days are quickly becoming a thing of the past. This old cliché, and many others, are being left behind for the future of modern hospitals. With the staggering amount of money involved, poor communications systems can cost a lot. In this case, a lot means \$12 billion in losses every year in the U.S. hospital system alone. That's a big number, but it's not the most important issue for the community at large.

Hospitals and the healthcare industry at large are all about saving lives, so when a staggering 70% of accidental deaths and injuries in hospitals are caused by communication issues, it's a serious problem.

So, what's the cause of these communication issues, and are there solutions?

Even though it's no longer the 90s, pagers are still favored in hospitals due to their simplicity, security, size and ability to get a signal where cell phones can't. That's an important factor if you could find yourself in a cement-walled hospital basement. (It also doesn't hurt that nurses can't play Pokémon on them.)

Smartphones are great and they're the preferred choice of communication by 80 percent of Americans and nearly a third of the world's population, but they haven't been the best choice for hospitals. Texting patient info on a cell network isn't secure and it's a violation of a patient's rights. A single violation can mean a fine of up to \$50k per text.

Telecommunications aside, there is still the matter of tackling the huge amount of paperwork involved in hospital care. When it comes to patient records, referrals, and Rx's, it's out with the folio and in with the cloud. Electronic health records, or EHR, are electronic, computerized records that are taking the place of stacks of papers, overflowing file cabinets, fossilized fax machines, and the aforementioned poorly-

HOW IT ALL WORKS

COMMUNICATION BETWEEN DEPARTMENTS

ELECTRONIC HEALTH RECORDS (EHR)
Congress incentivized EHR seven years ago as part of the 2009 American Recovery and Reinvestment Act, replacing paper files and creating benefits like better organization, fewer human errors and more efficiency in patient care.

OLD SYSTEM

Doctor gets patient record from nurse. It could be the wrong file, or suffer from illegible handwriting.

Doctor sees patient, writes a prescription. Doctor has to fax it to the pharmacy, which can take hours.

Pharmacist can't read the doctor's handwriting and potentially dispenses the wrong drug or dose.

NEW EHR SYSTEM

Clear, consistent records available at the touch of a button.

Has full patient history to make accurate care decisions.

Referrals and prescriptions are filled almost immediately, thanks to fast file transfers.

BETWEEN HOSPITALS

EHR is a huge innovation, but new technology is allowing hospitals to share other resources.

REMOTE SURGERY
The concept of remote surgeons originated from NASA in the 1970s, providing astronauts medical care as needed. Today, doctors have the ability to operate on patients from thousands of miles away thanks to sophisticated robotics and video conferencing.

TRAUMA TELEMEDICINE
This breakthrough allows doctors and nurses to assist in triage situations, remotely. If there's a natural disaster and additional doctors are unable to physically be at the hospital, on-site doctors can use videoconferencing with remote doctors to help triage.

BETWEEN HOSPITALS AND EMTs

"The average 13-year-old has more capability in their hand than we have on the ambulance."

Kevin McGinnis, 40 years in EMS, Chief/CEO, North East Mobile Health Services

TWIAGE
Twilage, a new HIPAA-compliant software which can be used on a smartphone, represents a step away from relying on walkie-talkies and pagers, and a step toward improving communication between EMTs and hospitals.

Provides live patient data, like vital signs.

Instantly relays patient information to the hospitals.

Tracks ambulances so hospitals know exactly when they will pull up.

scrawled prescription pads. Their adoption in healthcare has grown considerably since 2009 when the industry was incentivized to do so.

The evolution of hospital communication also means that doctors everywhere can communicate with one another in amazing ways. Remote surgery would allow patients to get a liver transplant from a doctor located across the country via robotics and video conferencing. If the zombie apocalypse ever does hit, doctors from around the world could put their heads together to tackle triage remotely.

That's exciting but it doesn't diminish the lack of communication technology that exists in the industry. It even stretches beyond the confines of the hospital and into the ambulances that work to keep patients alive until they can get the care they need. While static-filled walkie-talkies have been used for years, there are now better options. Smartphone software called Twilage has made the job easier. EMTs can now see a patient's info and vital signs, communicate that info to the hospital they're going to, and let both parties know exactly when they'll get there all from a single handheld device. In other words, if you're an EMT, there's now an app for that.

What does the future of hospital communication hold? Data warehouses, device and data integration, and computer-guided resource management and clinical logistics are just some of the ways hospitals are hoping to deal with some of the shocking losses that occur each year due to miscommunication. The \$12 billion that the healthcare system loses each year would be enough to rank as a mid Fortune 500 company rivaling the likes of J.C. Penney, Parker-Hannifin, and Texas Instruments. Learning to communicate in the 21st century could help the American healthcare system recoup a large portion, if not all, of those losses. That's a pretty big incentive for everyone involved.

Have something personal you'd like to add to the conversation? Send your thoughts to jeff@dicksondata.com for a chance to be featured in a future blog or article in our magazine.

WHAT'S NEXT?

HOSPITALS OF THE FUTURE

The hospitals of the future have a single digital system, which consists of components such as:

HEALTH ANALYTICS
Using data warehouses and business intelligence to predict needs and improve efficiency.

RESOURCE MANAGEMENT
Digital coordination of staff and resource schedules, optimization of processes, and better employee development.

CLINICAL LOGISTICS
Real-time location of ambulances, tracking and alerts, and bring-your-own device policies.

INTEGRATION
Medical device integration, data integration, and vendor-neutral archives.

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