

SCADA & TELEMETRY SYSTEMS

WATER & WASTEWATER INDUSTRY

Scott
Fausneacht

Pro Tech
Systems
Group



“IoT”

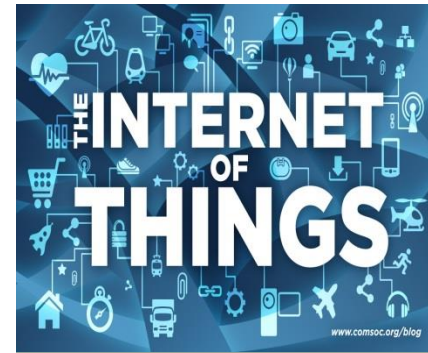


“IoT”

**What is
it?**



“IoT” Internet Of Things

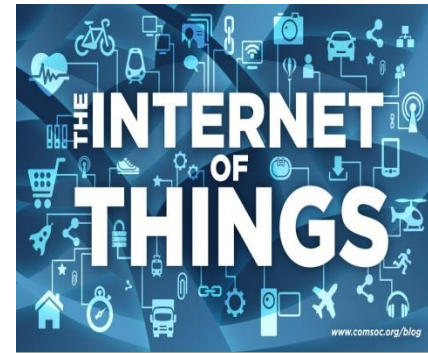
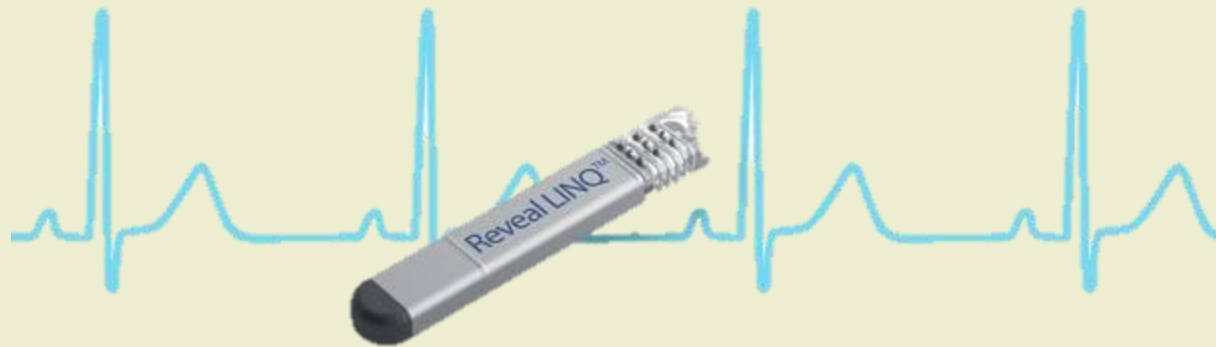


The Internet of Things (**IoT**) is a scenario in which objects, animals or people are provided with unique identifiers and the ability to transfer data over a network without requiring human-to-human or human-to-computer interaction. **IoT** has evolved from the convergence of wireless technologies, micro-electromechanical systems (MEMS) and the Internet.

IoT Definition



A thing, in the Internet of Things, can be a person with a **Heart Monitor Implant**, an animal with a biochip transponder, an automobile that has built-in sensors to alert the driver when tire pressure is low -- or any other natural or man-made object that can be assigned an **IP Address** and provided with the ability to transfer data over a network.



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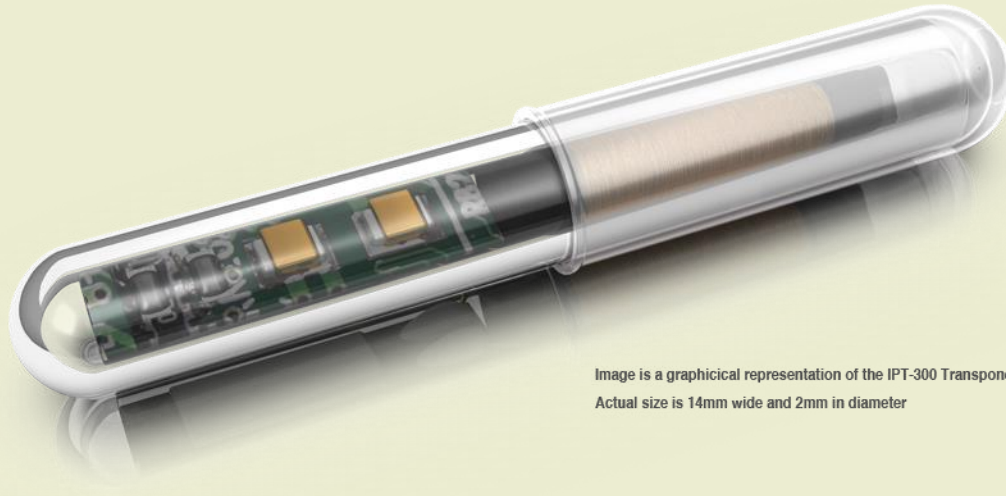
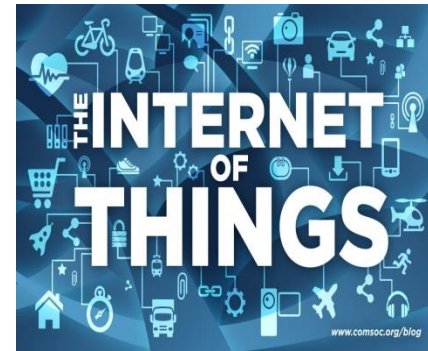
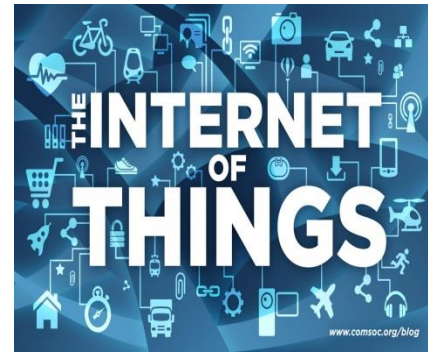
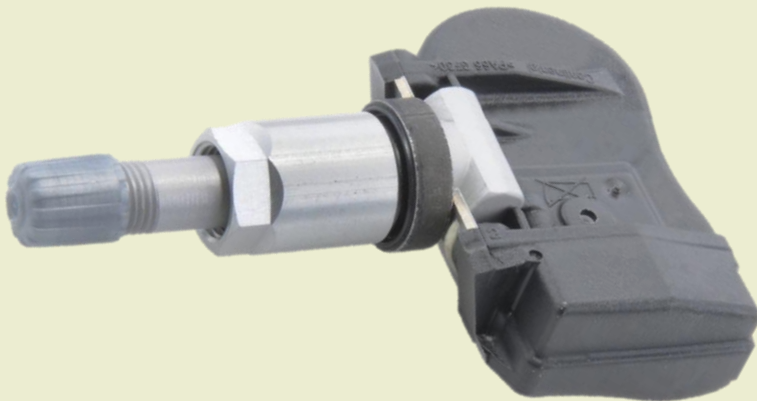


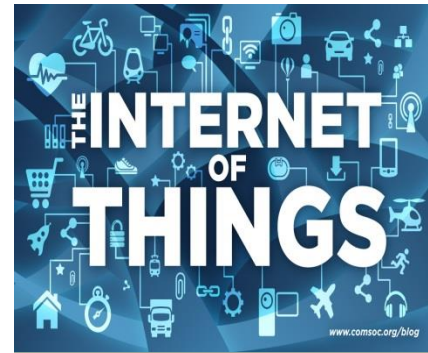
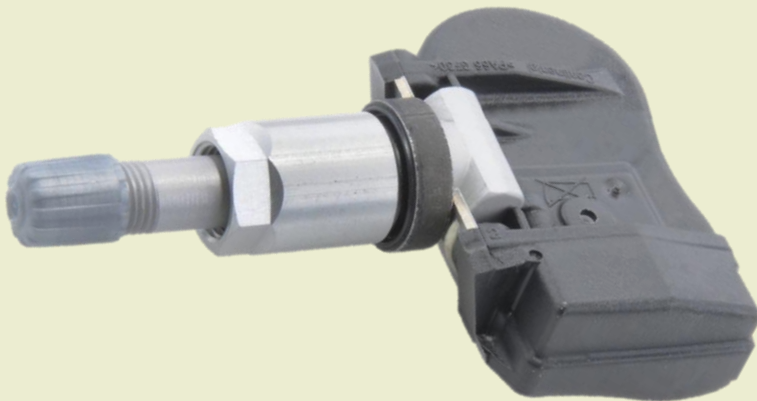
Image is a graphical representation of the IPT-300 Transponder
Actual size is 14mm wide and 2mm in diameter



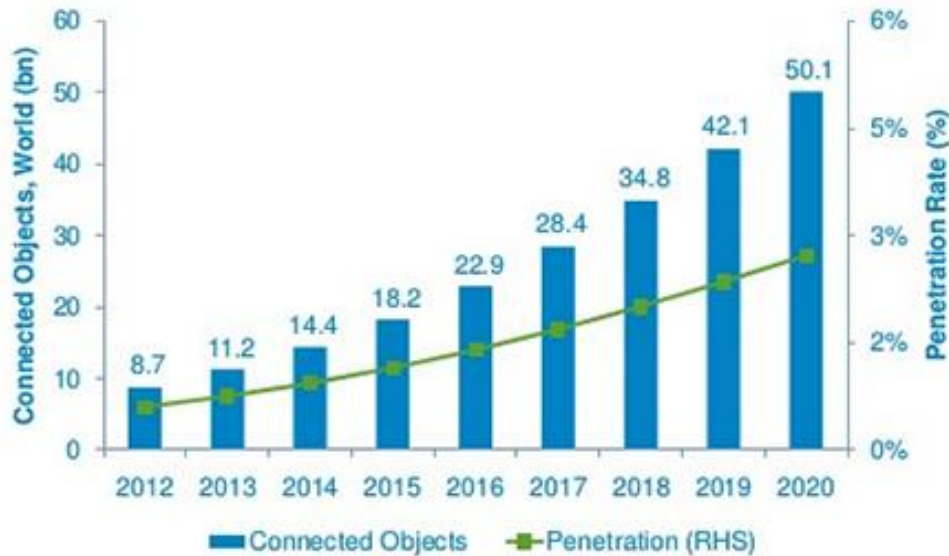
A thing, in the Internet of Things, can be a person with a Heart Monitor Implant, an Animal with a Biochip Transponder, an **Automobile** that has built-in **Sensors** to alert the driver when **Tire Pressure** is low -- or any other natural or man-made object that can be assigned an **IP Address** and provided with the ability to transfer data over a network.



A thing, in the **Internet of Things**, can be a person with a Heart Monitor Implant, an Animal with a Biochip Transponder, an **Automobile** that has built-in **Sensors** to alert the driver when **Tire Pressure** is low -- or any other natural or man-made object that can be assigned an **IP Address** and provided with the ability to **Transfer Data** over a **Network**.



Number of Connected Objects Expected to Reach 50bn by 2020

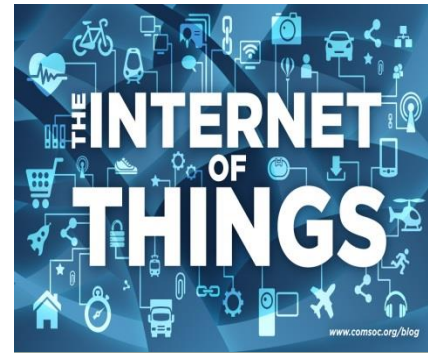


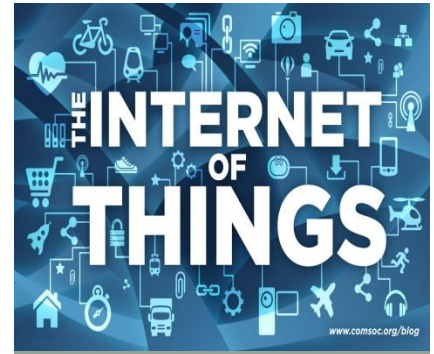
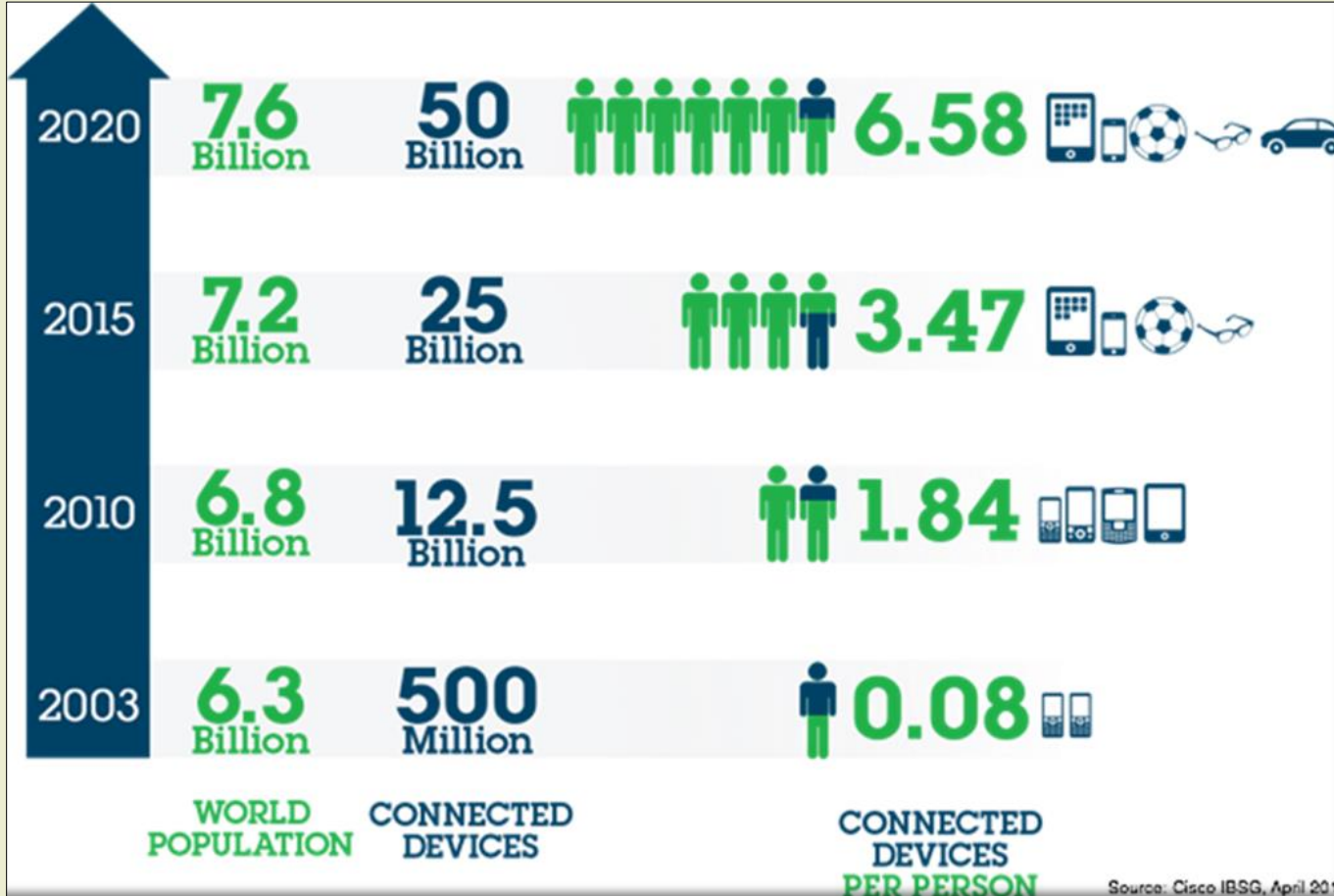
Penetration of connected objects in total 'things' expected to reach 2.7% in 2020 from 0.6% in 2012

Source: CCS, 2013

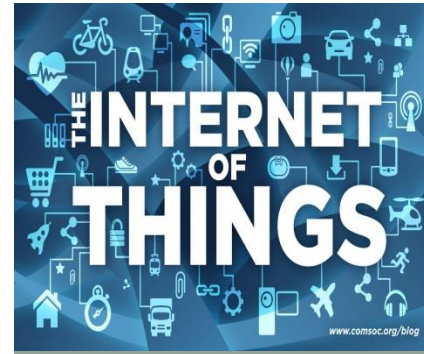
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Cisco Confidential





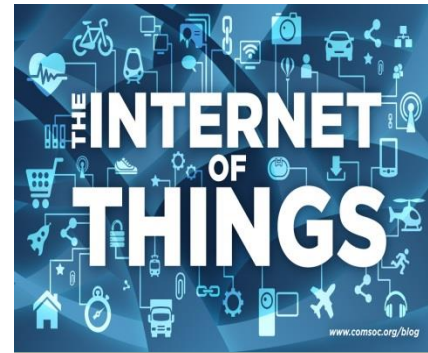
1970



Smart TV



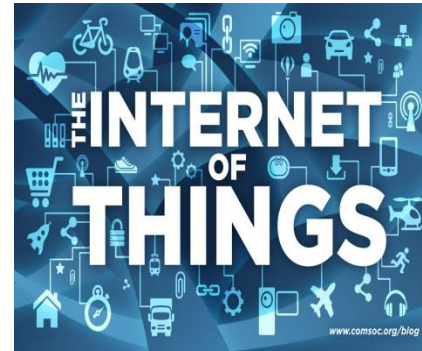
1970



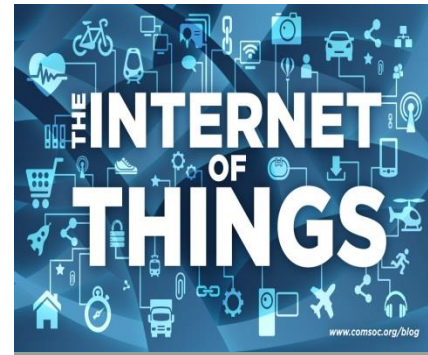
Smart TV



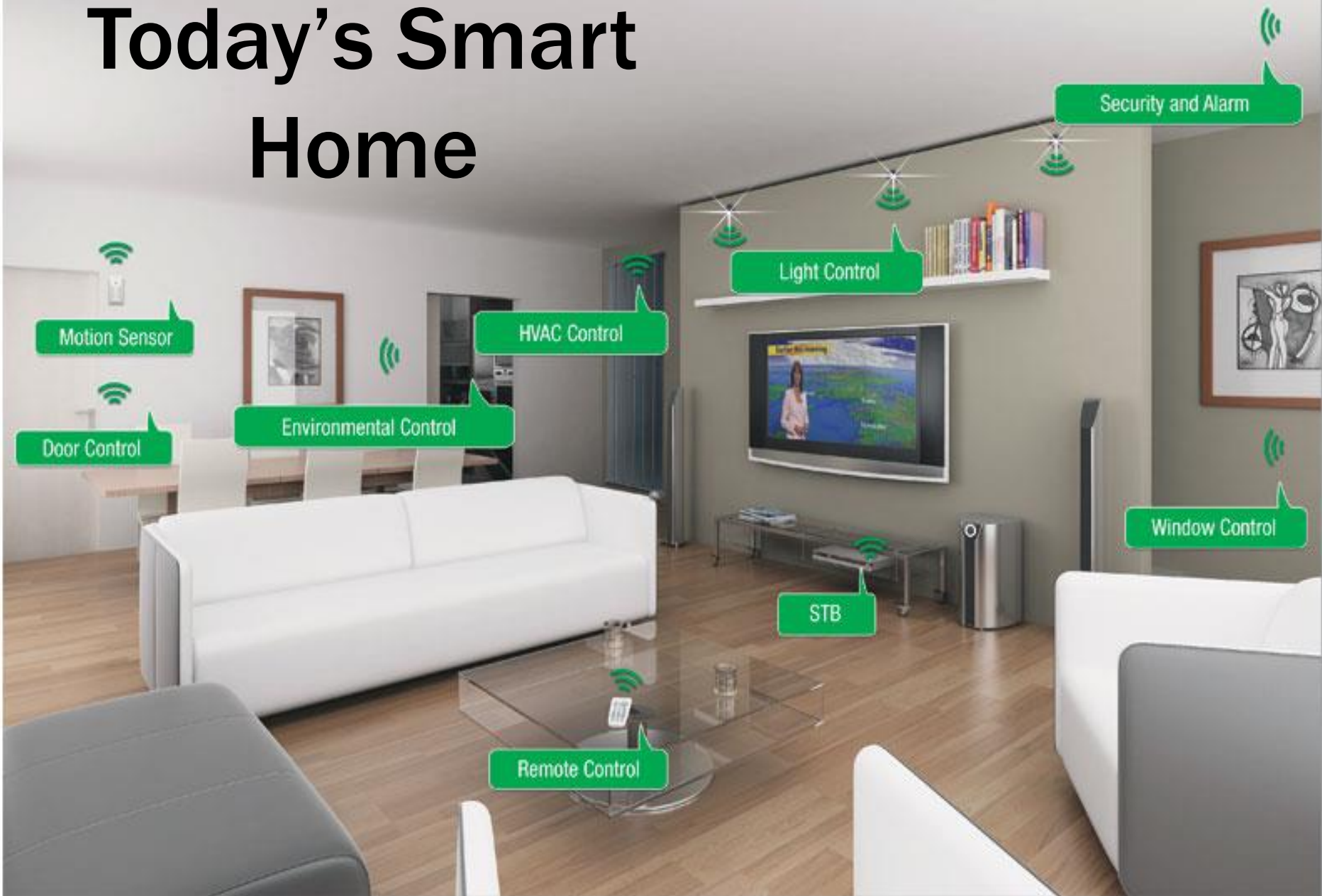
2015



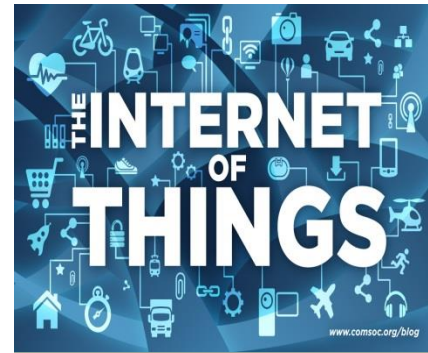
2015



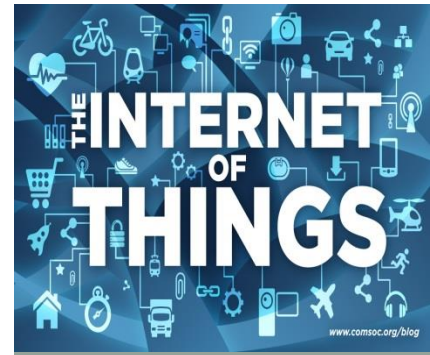
Today's Smart Home



Accessibility



Mobility



Accessibility



HOW DOES
THIS RELATE
TO THE
WATER AND
WASTE
WATER
INDUSTRY?



Even SCADA on a Mobile Device is basically “Accessibility”



HOW DOES
THIS RELATE
TO THE
WATER AND
WASTE
WATER
INDUSTRY?



Data on an App is “Mobility”



HOW DOES THIS RELATE TO THE WATER AND WASTE WATER INDUSTRY?

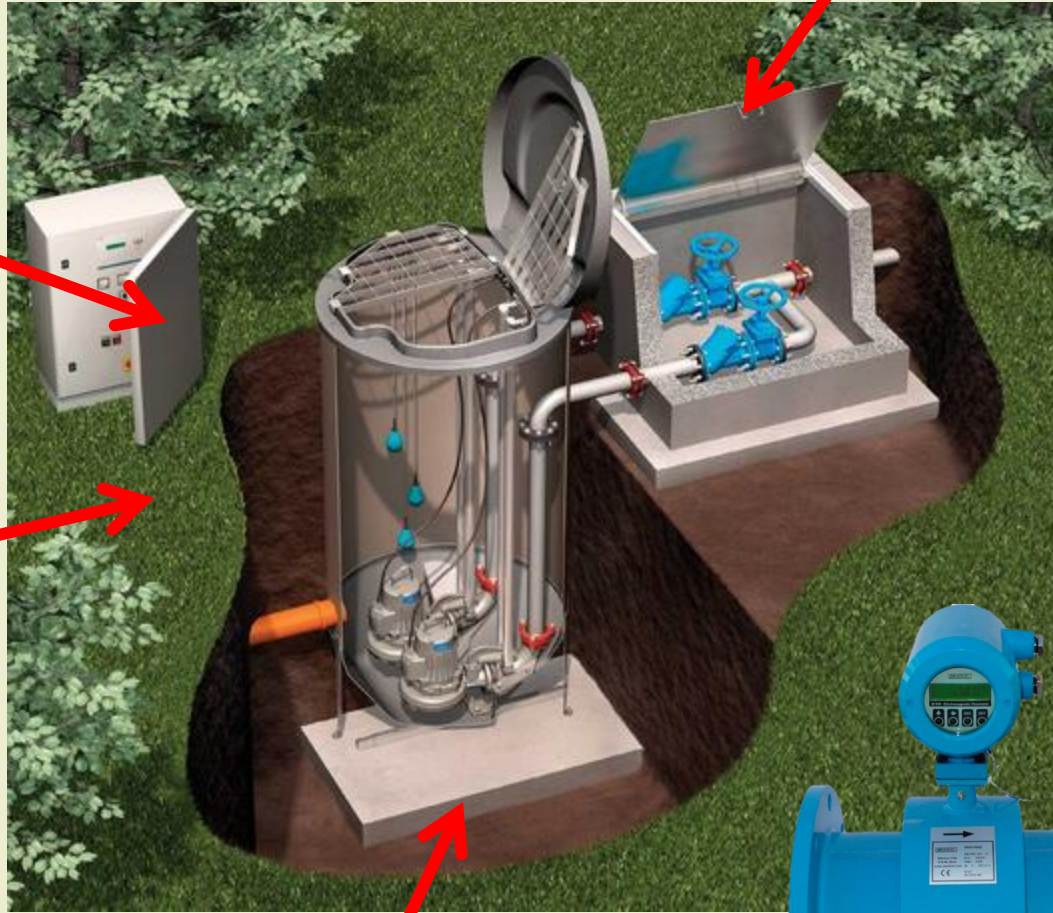




Pump cycles times longer and more frequent during times of rain?

Actual alarms

Power Failure



Measure pump runtime against flow



KPI

Key
Performance
Indicators

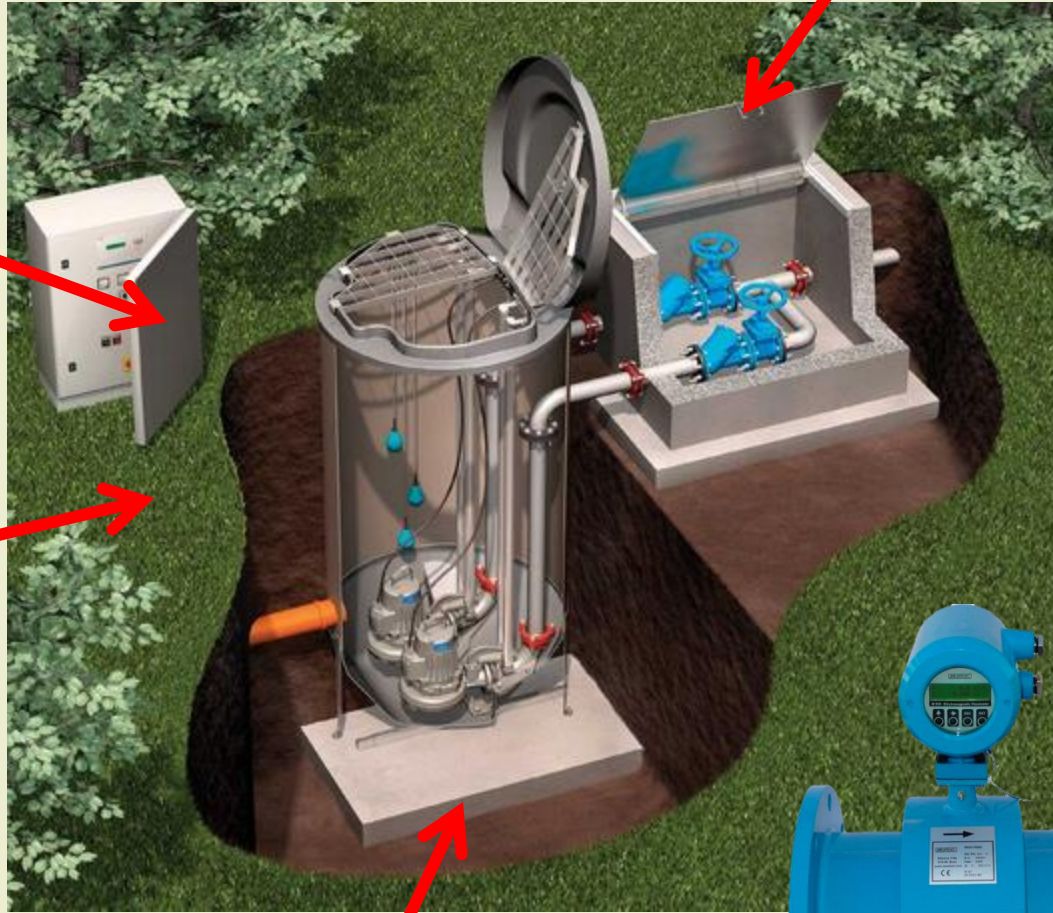




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Power Failure



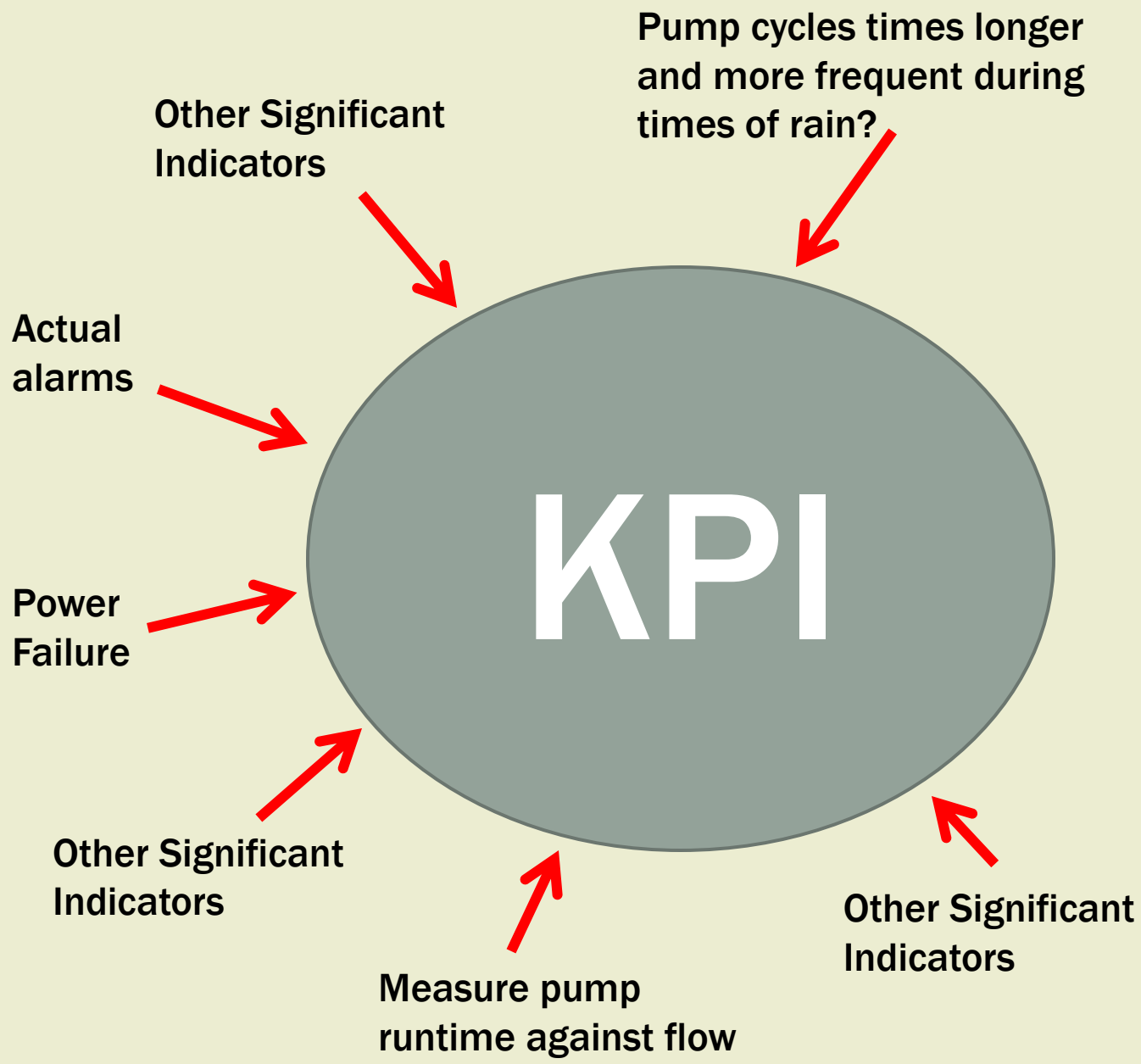
Measure pump runtime against flow



KPI

Key
Performance
Indicators



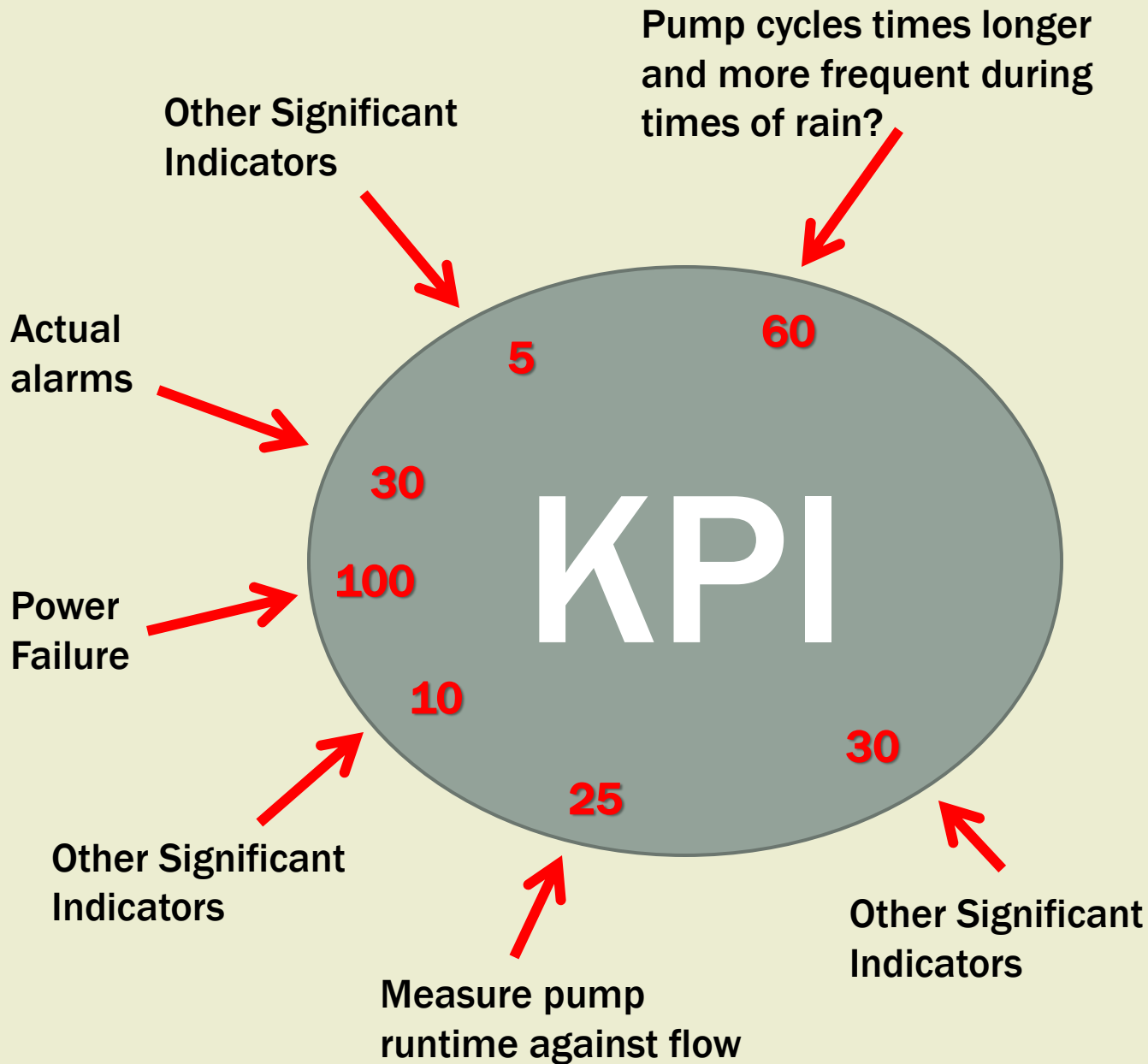


KPI

**Key
Performance
Indicators**

Perhaps adding other indicators



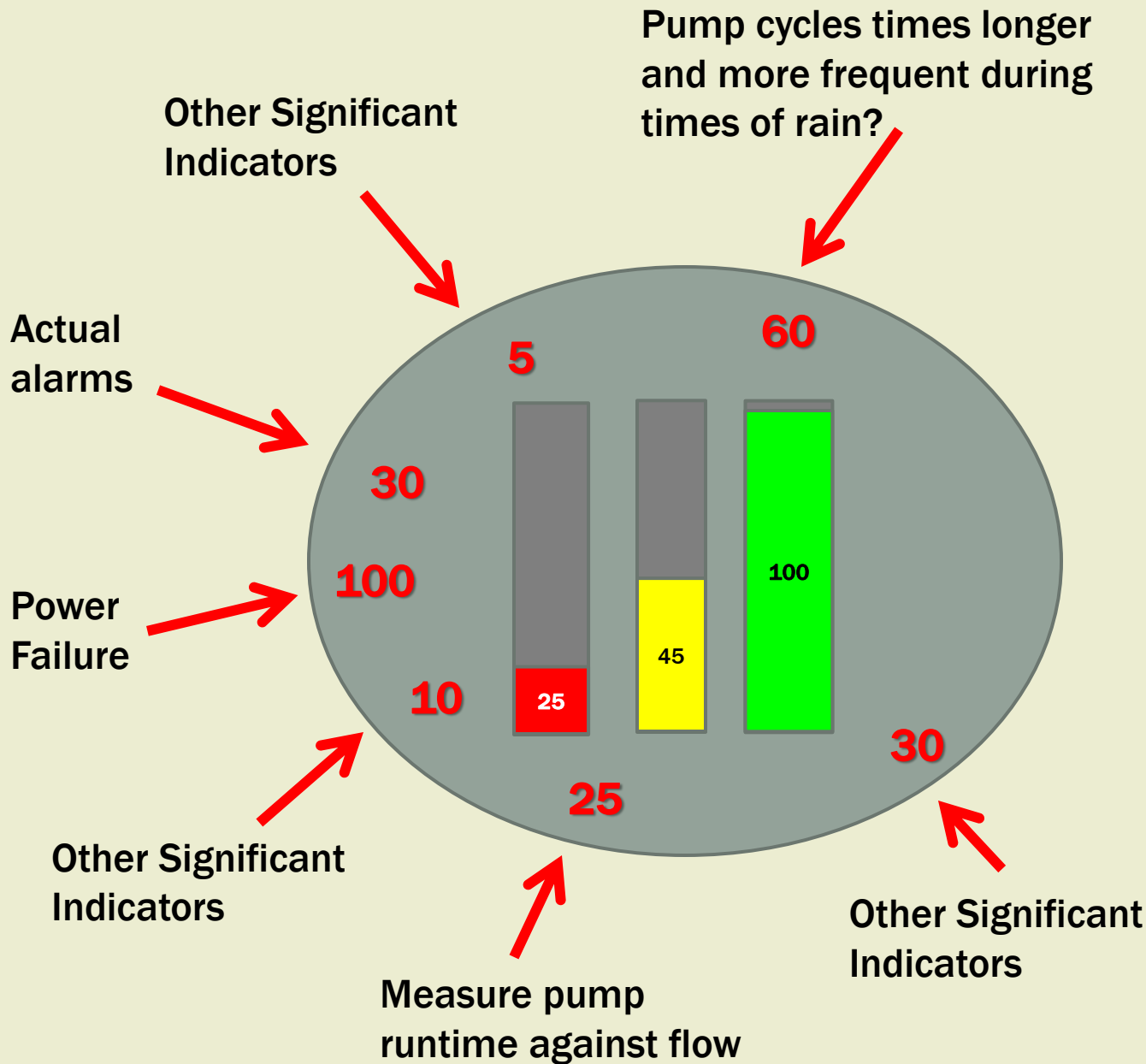


KPI

Key
Performance
Indicators

Assign a weighted value to each indicator based on relevancy





HEALTH GAUGE

KPI

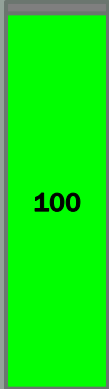
Key Performance Indicators

Assign a weighted value to each indicator based on relevancy





A SIMPLE PUMP STATION



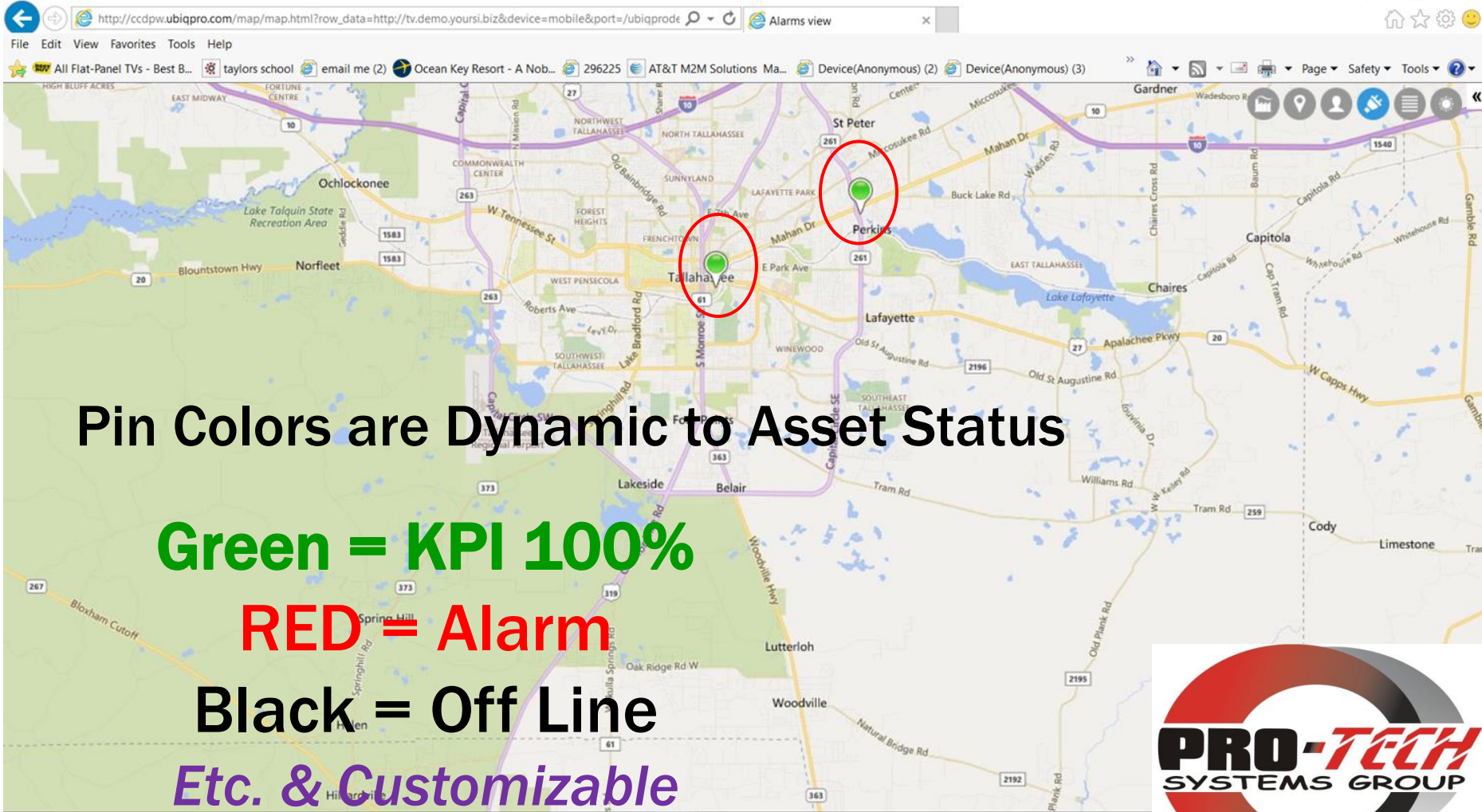


A SIMPLE PUMP STATION

25



Dynamic Map With Asset Indicators



Pin Colors are Dynamic to Asset Status

Green = KPI 100%

RED = Alarm

Black = Off Line

Etc. & Customizable



Dynamic Map With Asset Indicators

The screenshot shows a web browser displaying a dynamic map with several callout boxes and data panels. The browser address bar shows the URL: http://ccdpcw.ubiqpro.com/map/map.html?row_data=http://tv.demo.yoursi.biz&device=mobile&port=/ubiqprode. The page title is "Alarms view".

Equipment Status
 P1-P4 =4 Pumps
 B1-B4=4 Blowers
 V1-V3=3Valves
 Green=OFF/Red=ON

Various Analog Data Display

Last Data Update Time

ULL

No Alarms

p1	P2	p3	P4
B1	B2	B3	B4
V1	V2	V3	

Tnk 1: **0.80** Tnk 2: **0.61**

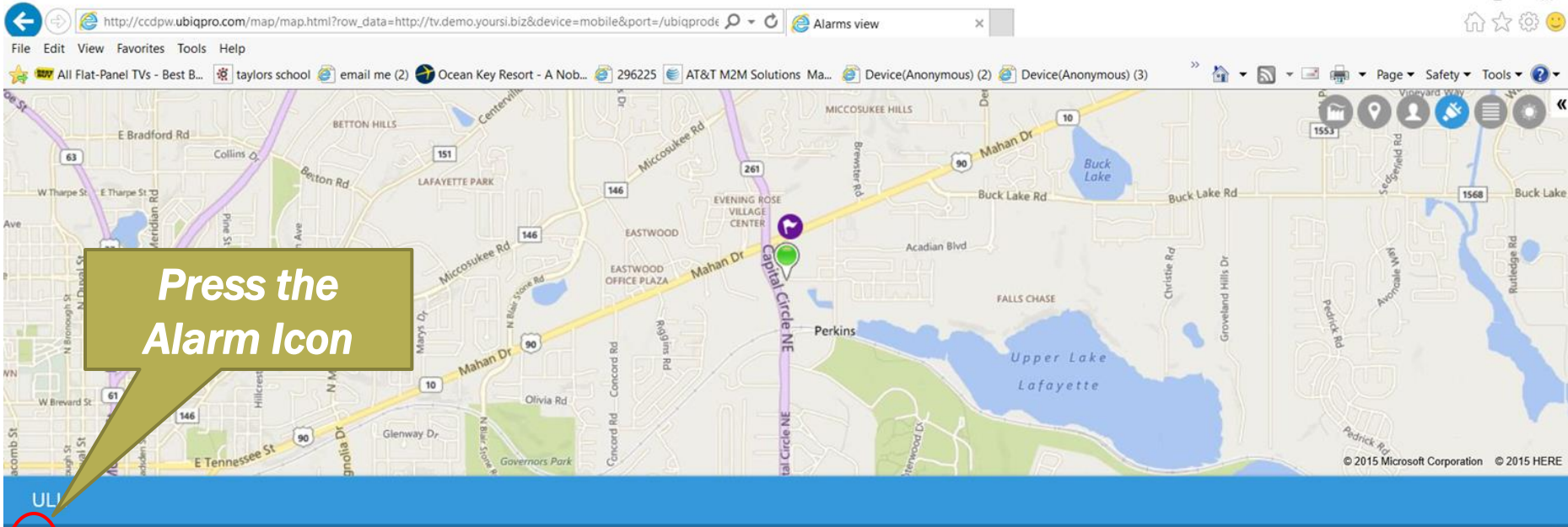
SWF: **0.00** cfs
 Alum: **0.00** gpm
6.9 ph
 ft

Loc.	pH	Cond.	DO2	Temp
1	6.88	116.00	8.74	17.32
2	6.84	115.00	8.50	17.71
3	6.93	123.00	9.64	18.48

Last Updated: Wed Dec 09 2015 20:45

PRO-TECH
SYSTEMS GROUP

Dynamic Map With Asset Indicators



ULI

No Alarms

p1	P2	p3	P4
B1	B2	B3	B4
V1	V2	V3	

Tnk 1: **0.80** Tnk 2: **0.61**

SWF: **0.00** cfs
 Alum: **0.00** gpm
6.9 ph
 ft

Loc.	pH	Cond.	DO2	Temp
1	6.88	116.00	8.74	17.32
2	6.84	115.00	8.50	17.71
3	6.93	123.00	9.64	18.48

Last Updated: Wed Dec 09 2015 20:45



Alarm Management Page

Unit Alarms

Alarms view Values view Alarm history

0 0 0
TOTAL IN ALARM UNACKD

+ Filter and sort

Refresh

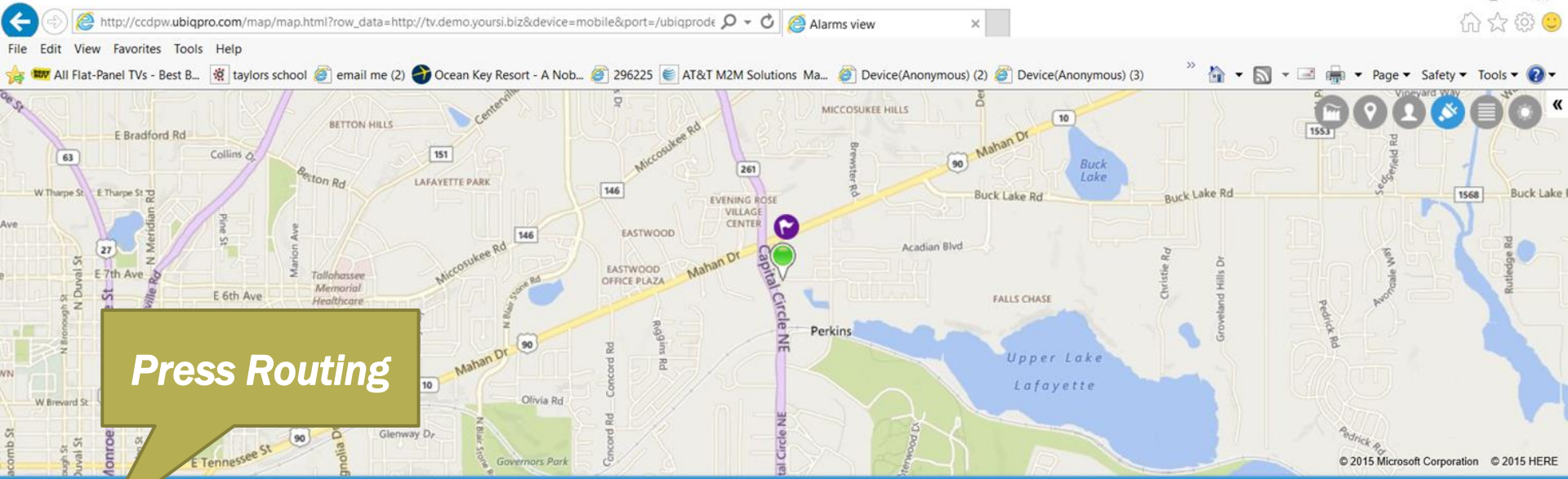
Filtering active Clear filters

There are no alarms to display.

Filtering active Clear filters



Dynamic Map With Asset Indicators



Press Routing

ULL

No Alarms



Tnk 1: **0.80** Tnk 2: **0.61**

SWF: **0.00** cfs
 Alum: **0.00** gpm
6.9 ph
 ft

Loc.	pH	Cond.	DO2	Temp	Turb
1	6.88	116.00	8.74	17.32	-0.70
2	6.84	115.00	8.50	17.71	-2.30
3	6.93	123.00	9.64	18.48	

Last Updated: Wed Dec 09 2015 21



Route to the Location

https://www.google.com/maps/dir/40.9826,-81.5298/30.457424,-84.226202/@35.6688658,-87.4502412,6z/data

242 Lake Front Dr, Akron, O... x

File Edit View Favorites Tools Help

All Flat-Panel TVs - Best B... taylor's school email me (2) Ocean Key Resort - A Nob... 296225 AT&T M2M Solutions Ma... Device(Anonymous) (2) Device(Anonymous) (3)

242 Lake Front Dr, Akron, OH 44319

3024 Eliza Rd, Tallahassee, FL 32308

Leave now OPTIONS

via I-77 S **14 h 44 min**
13 h 49 min without traffic
915 miles
This route has tolls.
DETAILS

via I-75 S **14 h 51 min**
13 h 44 min without traffic
952 miles

Akron, OH—Tallahassee, FL **3 h 45 min**
from \$623

14 h 51 min 952 miles

3 h 45 min from \$623

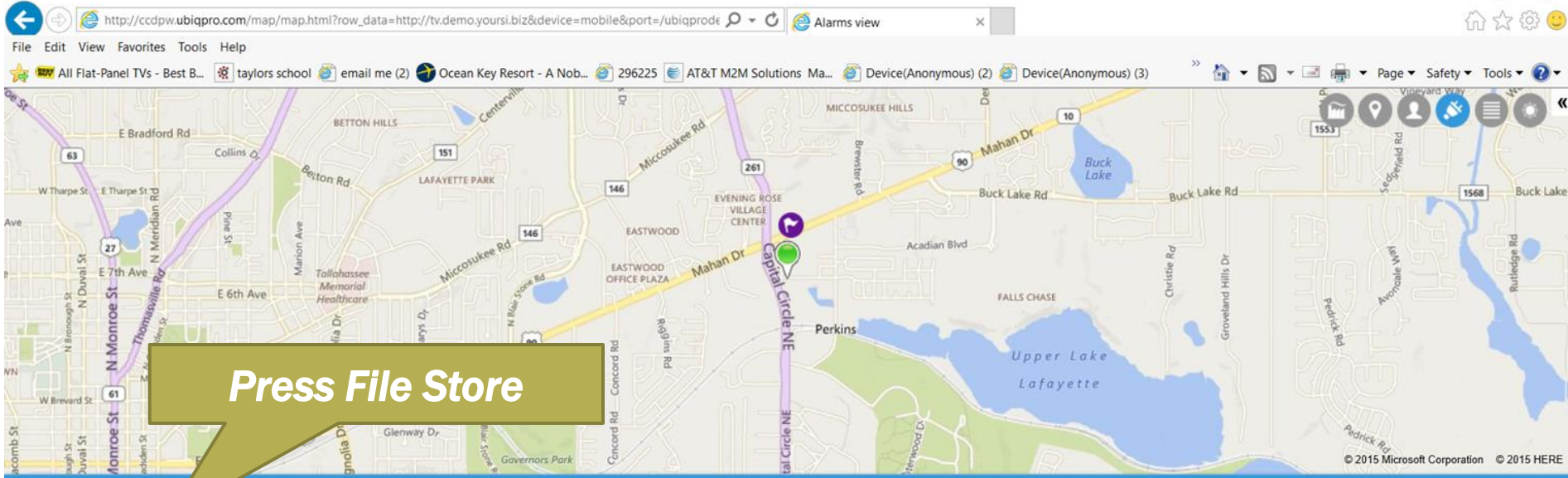
14 h 44 min 915 miles

3024 Eliza Rd

Google



Dynamic Map With Asset Indicators



Press File Store

ULL

No Alarms



Tnk 1: **0.80** Tnk 2: **0.61**

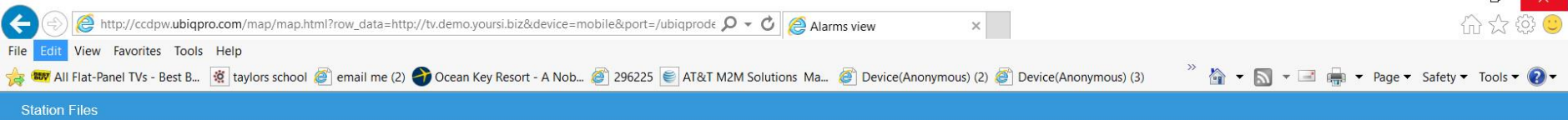
SWF: **0.00** cfs
 Alum: **0.00** gpm
6.9 ph
 ft

Loc.	pH	Cond.	DO2	Temp	Turb
1	6.88	116.00	8.74	17.32	-0.70
2	6.84	115.00	8.50	17.71	-2.30
3	6.93	123.00	9.64	18.48	---

Last Updated: Wed Dec 09 2015 20:



Dynamic Map With Asset Indicators



MODEL 2004

Features

- Dry pump cavity
- Self-priming operation
- Runs dry without damage
- Complete isolation of pumped fluid
- Heavy-duty roller bearings
- Wide range of pump configurations/flows
- No cups, packing or seals
- Low maintenance
- Reversible flow

Industries Served by Vector Series Pumps

- Waste water and water treatment
- Chemical processing
- Petrochemicals
- Pulp and paper
- Ceramics
- Mining
- Paints and coatings
- Dairy processing
- Pharmaceuticals
- Cosmetics



Materials of Construction

Non-Wetted Parts

Casing: aluminum alloy
Rotor: aluminum alloy
Rollers: plastic/alloy

Wetted Parts

Hose:

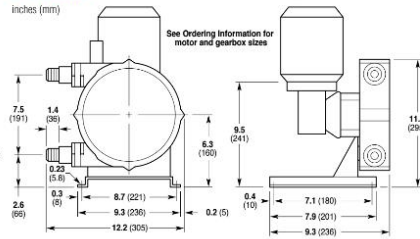
EXTRUDED – Neoprene, Hypalon, Varprene, Silicone

BRAIDED – EPDM, Natural rubber, Nitrile

Inlet/Outlet Connections: Teflon or stainless steel hose barb, stainless steel or carbon steel ANSI flange, brass or carbon steel NPT, and stainless steel sanitary tri-clamp

Dimensions

inches (mm)



Wanner Engineering, Inc.
1204 Chestnut Avenue, Minneapolis, MN 55403 USA
(612) 332-5681 FAX (612) 332-6937

Toll Free FAX [USA only] (800) 332-6812
Email: sales@wannereng.com
Website: www.vectorpump.com

Press File icon
to view



Dynamic Map With Asset Indicators

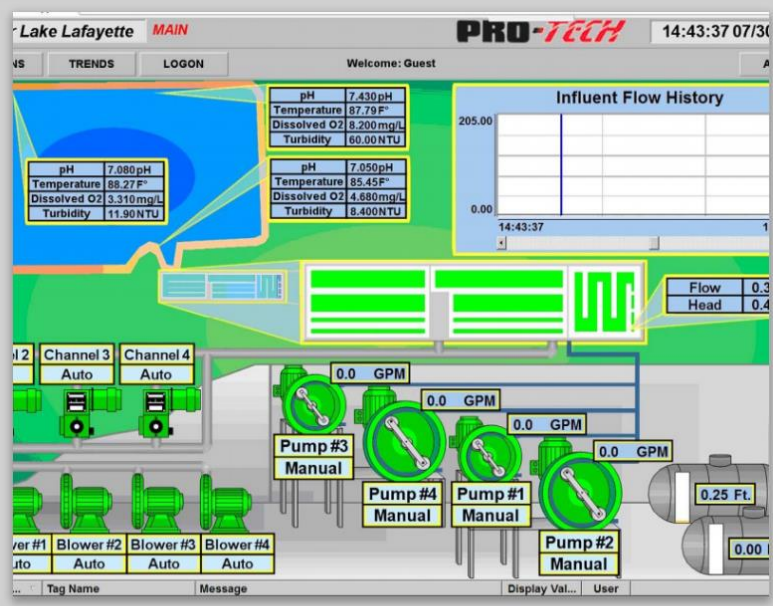


Browser address bar: http://ccdpw.ubiopro.com/map/map.html?row_data=http://tv.demo.yoursi.biz&device=mobile&port=/ubioprode Alarms view

Navigation: File Edit View Favorites Tools Help

Browser tabs: All Flat-Panel TVs - Best B... taylor school email me (2) Ocean Key Resort - A Nob... 296225 AT&T M2M Solutions Ma... Device(Anonymous) (2) Device(Anonymous) (3)

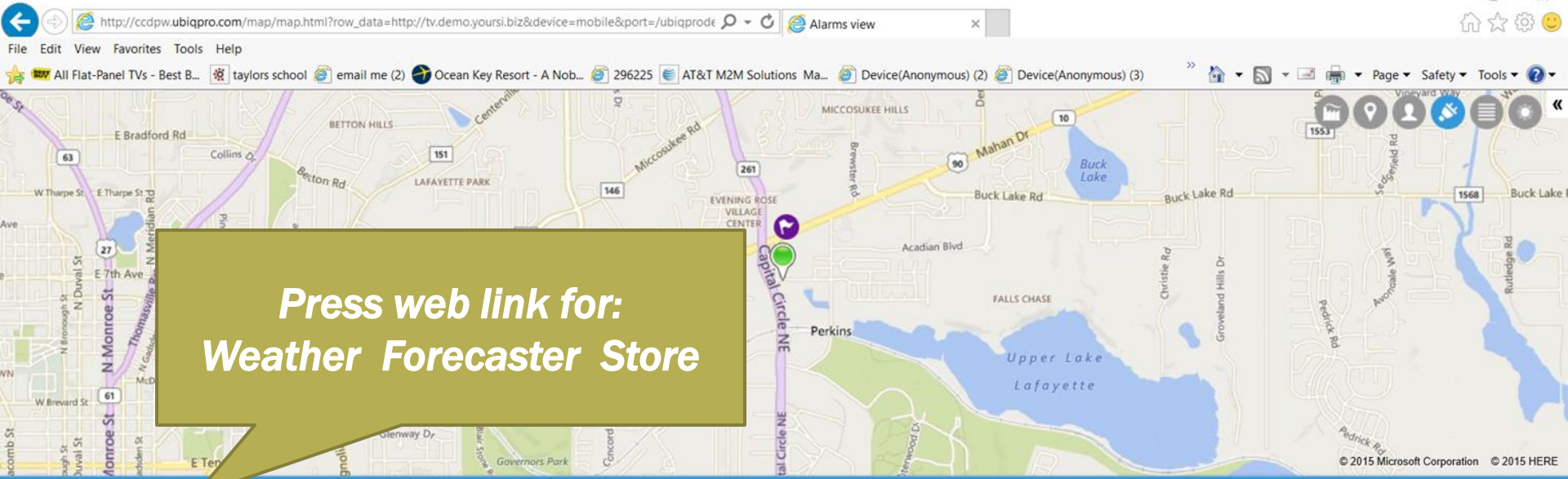
Station Files



- I/O Flow
- Display



Dynamic Map With Asset Indicators



Press web link for:
Weather Forecaster Store

ULL

No Alarms

p1	P2	p3	P4
B1	B2	B3	B4
V1	V2	V3	

Tnk 1: **0.80** Tnk 2: **0.61**

SWF:	0.00	cfs
Alum:	0.00	gpm
	6.9	ph
		ft

Loc.	pH	Cond.	DO2	Temp	Turb
1	6.88	116.00	8.74	17.32	-0.70
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Last Updated: Wed Dec 09 2015 21



Dynamic Map With Asset Indicators

The screenshot displays a web browser window with the URL http://ccslpwu.bigpro.com/map/map.html?row_data=http://tv.demib.youris.biz&device=mobile&port=/uoiqprod. The browser's address bar shows "Alarms view" and several tabs, including "All Flat-Panel TVs - Best B...", "taylors school", "email me (2)", "Ocean Key Resort - A Nob...", "296225", "AT&T M2M Solutions Ma...", "Device(Anonymous) (2)", and "Device(Anonymous) (3)".

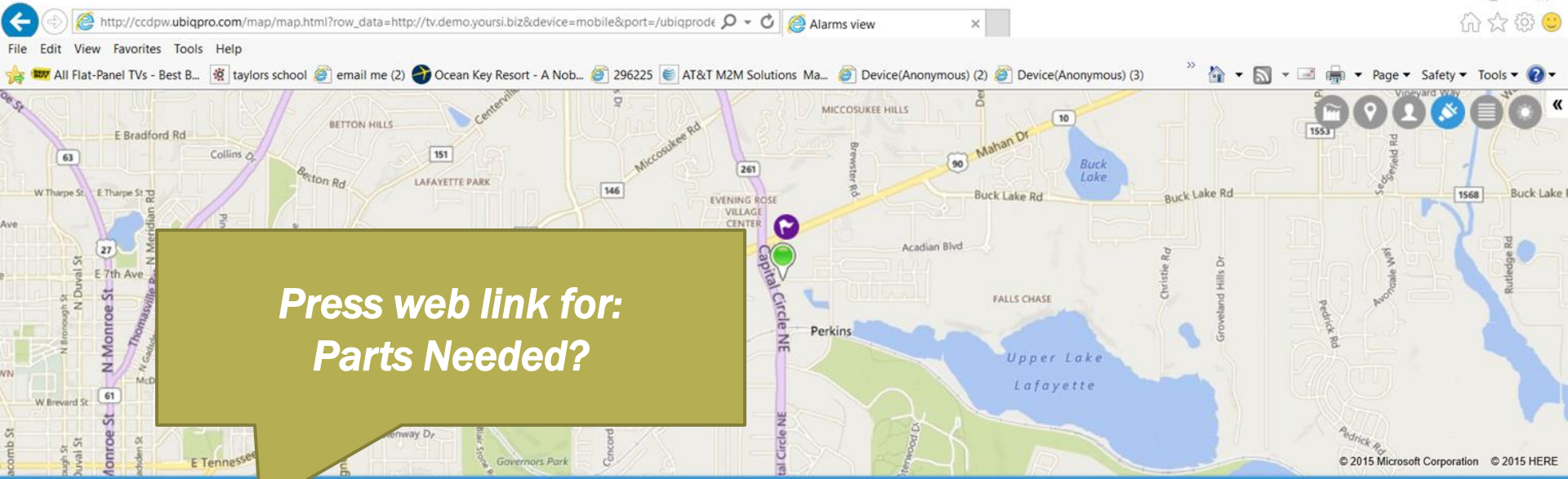
The main content area features a weather application interface. At the top, there is a search bar containing "Middle of Nowhere" and buttons for "forecast" and "time machine". Below this, the current location is listed as "925 E Magnolia Dr, Tallahassee, FL 100 3rd St, Ocean City, MD" with "ADD" and "EDIT" options. The interface includes a "PRECIP MAP" section with "Local", "Regional", and "Global" tabs, and a "78 11PM" time indicator. A 3D globe shows a precipitation map with red and yellow areas indicating rain or snow. To the right of the globe, the weather summary is displayed:

- RIGHT NOW**
64°
Clear · Feels like 64°
- NEXT HOUR**
Clear for the hour.
- NEXT 24 HOURS**
Clear throughout the day.
- NEXT 7 DAYS**
Drizzle on Monday, with temperatures peaking at 74°F on Sunday.

At the bottom of the interface, there is a "TODAY" section with a sun icon and the text "Clear throughout the day." and a temperature range of "61° - 64°".



Dynamic Map With Asset Indicators



Press web link for:
Parts Needed?

ULL

No Alarms

p1	P2	p3	P4
B1	B2	B3	B4
V1	V2	V3	

Tnk 1: **0.80** Tnk 2: **0.61**

SWF:	0.00	cfs
Alum:	0.00	gpm
	6.9	ph
		ft

Loc.	pH	Cond.	DO2	Temp	Turb
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Last Updated: Wed Dec 09 2015 21



Dynamic Map With Asset Indicators

Browser address bar: http://ccdpw.ubiqpro.com/map/map.html?row_data=http://tv.demo.yoursi.biz&device=mobile&port=ubiqprode Alarms view

Browser tabs: All Flat-Panel TVs - Best B..., taylors school, email me (2), Ocean Key Resort - A Nob..., 296225, AT&T M2M Solutions Ma..., Device(Anonymous) (2), Device(Anonymous) (3)

Browser menu: File Edit View Favorites Tools Help

Browser status bar: Action

My Account | Order History | Lists | Special Order Quotes [Sign In](#) | [Register Now](#)

GRAINGER
FOR THE ONES WHO GET IT DONE

General Catalog | Find A Branch | Services | Solutions | Worldwide

Sign Up for Email | Feedback | Help | Español

All Products [Search](#) Bulk Order Pad

- Purchased Products
- Digital Catalogs
- Replacement Parts
 - Abrasives
 - Adhesives, Sealants and Tape
 - Cleaning
 - Electrical
 - Electronics, Appliances, and Batteries
 - Fasteners
 - Fleet and Vehicle Maintenance
 - Furniture, Hospitality and Food Service
 - HVAC and Refrigeration
 - Hand Tools
 - Hardware
 - Hydraulics
 - Lab Supplies
 - Lighting
 - Lubrication
 - Machining
 - Material Handling
 - Motors
 - Office Supplies
 - Outdoor Equipment
 - Paint, Equipment and Supplies
 - Plumbing
 - Pneumatics
 - Power Tools
 - Power Transmission
 - Pumps
 - Raw Materials

When Things Cool Down...
BRING THE HEAT!





This season stay warm and productive with the right heater.

[Shop Heaters](#)

Prepare for Winter Storms | Stay Warm and Productive | [Huge Savings on Select Tools](#)

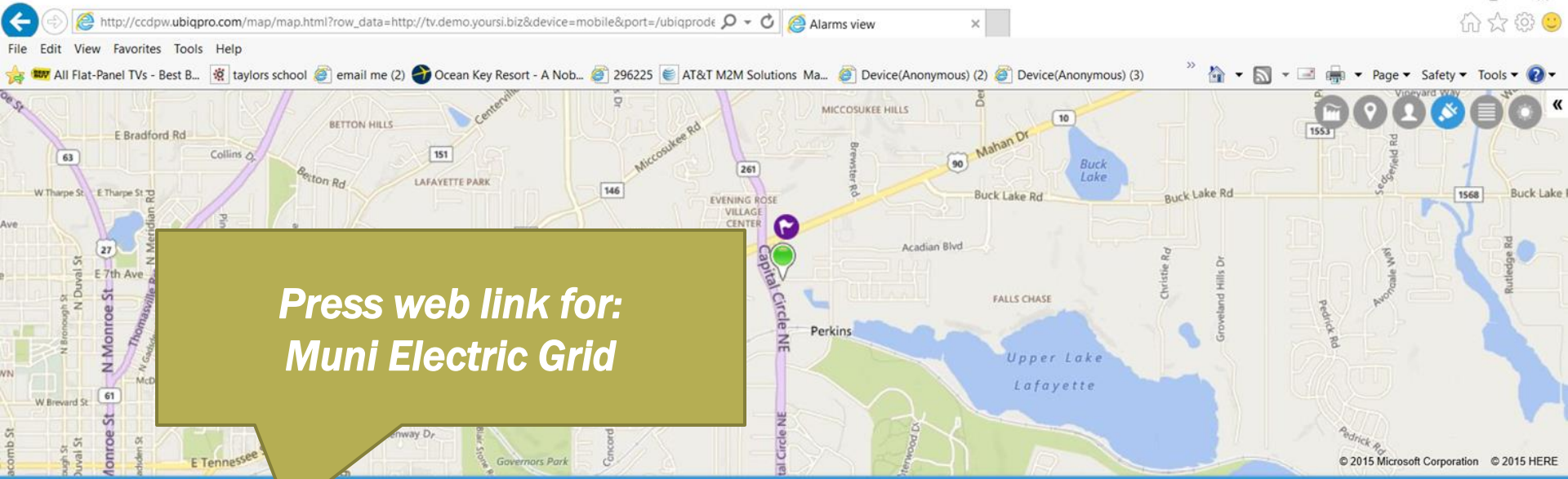
Check Out These Top Sellers

1 of 2 Prev | Next

 <p>Bleach, 1 gal. Bottle, Ready to Use, 3 PK Item # 33NT68</p> <p>TOUGH GUY</p> <p>Price: \$19.65</p> <p>1 Add to Cart</p>	 <p>2-7/16" High Carbon Steel 2-Point Heavy Duty Utility Blade, 100 PK Item # 4A805</p> <p>STANLEY</p> <p>Price: \$23.02</p> <p>1 Add to Cart</p>	 <p>Linear Fluorescent Lamp, Medium Bi-Pin (G13) Base Type, 48" Length, 36,000 hr. Item # 4PL16</p> <p>GE LIGHTING</p> <p>Price: \$4.16</p> <p>36 Add to Cart</p>	 <p>Paper Towel Roll, enMotion, Br, 800ft., Pl. Item # 4ACU1</p> <p>GEORGIA-PACIFIC</p> <p>Price: \$104.40</p> <p>1 Add to Cart</p>
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Dynamic Map With Asset Indicators



ULL

No Alarms

p1	P2	p3	P4	SWF:	0.00	cfs
B1	B2	B3	B4	Alum:	0.00	gpm
V1	V2	V3			6.9	ph
						ft

Tnk 1: 0.80 Tnk 2: 0.61

Loc.	pH	Cond.	DO2	Temp	Turb
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3	6.93	123.00	9.64	18.48	

Last Updated: Wed Dec 09 2015 21



Dynamic Map With Asset Indicators

TALQUIN ELECTRIC COOPERATIVE [Report a Power Outage](#) powered by dataVoice

Outage Status Map

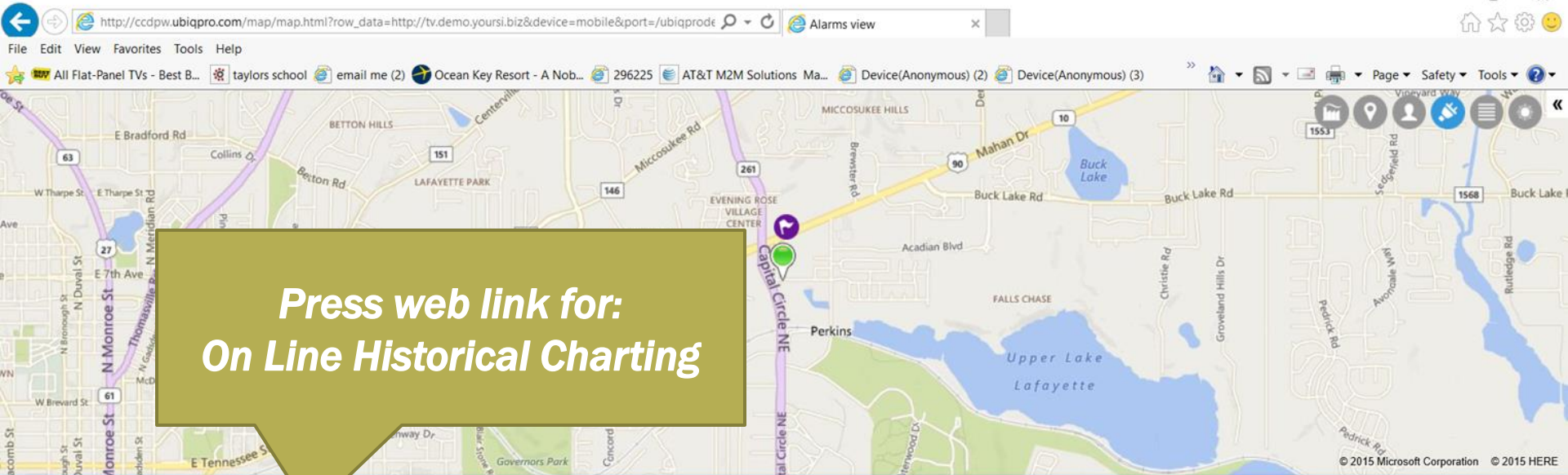
Outage Status information

View by Substation

Sub	Area	Total	Meters...	Calls	Pe...
3	Baker Sub	1457	0	0	
11	Brickyard Sub	2783	0	0	
24	Bristol Sub	1713	0	0	
9	Buck Lake Sub	2358	0	0	
2	Centerville Sub	209	0	0	
4	Chaires Sub	2697	0	0	
19	Greensboro Sub	1012	0	0	
18	Gretna Sub	3521	0	0	
10	Harbinwood Sub	2859	0	0	
14	Havana Sub	2490	0	0	
5	Hilliardville Sub	2355	0	0	
13	Hinson Sub	1431	0	0	
23	Hosford Sub	1297	0	0	
1	Killeam Sub	5708	0	0	
7	Lake Bradford...	980	0	0	
15	Lake Jackson Sub	2852	0	0	
21	Lake Talquin Sub	2011	0	0	
22	Lowry Sub	2	0	0	
10	Micoosukee Sub	1230	0	0	
12	Oak Grove Sub	877	0	0	
17	Point Milligan Sub	1962	0	0	
8	Shadeville Sub	1488	0	0	
6	Wakula Sub	3945	0	0	
20	Wetumpka Sub	1787	0	0	
25	Woodville Sub	2168	0	0	
TOTAL		50988	0	0	



Dynamic Map With Asset Indicators



Press web link for:
On Line Historical Charting

ULL

No Alarms

p1	P2	p3	P4
B1	B2	B3	B4
V1	V2	V3	

Tnk 1: **0.80** Tnk 2: **0.61**

SWF:	0.00	cfs
Alum:	0.00	gpm
	6.9	ph
		ft

Loc.	pH	Cond.	DO2	Temp	Turb
1	6.88	116.00	8.74	17.32	-0.70
2	6.84	115.00	8.50	17.71	-2.30
3	6.93	123.00	9.64	18.48	

Last Updated: Wed Dec 09 2015 21



Dynamic Map With Asset Indicators

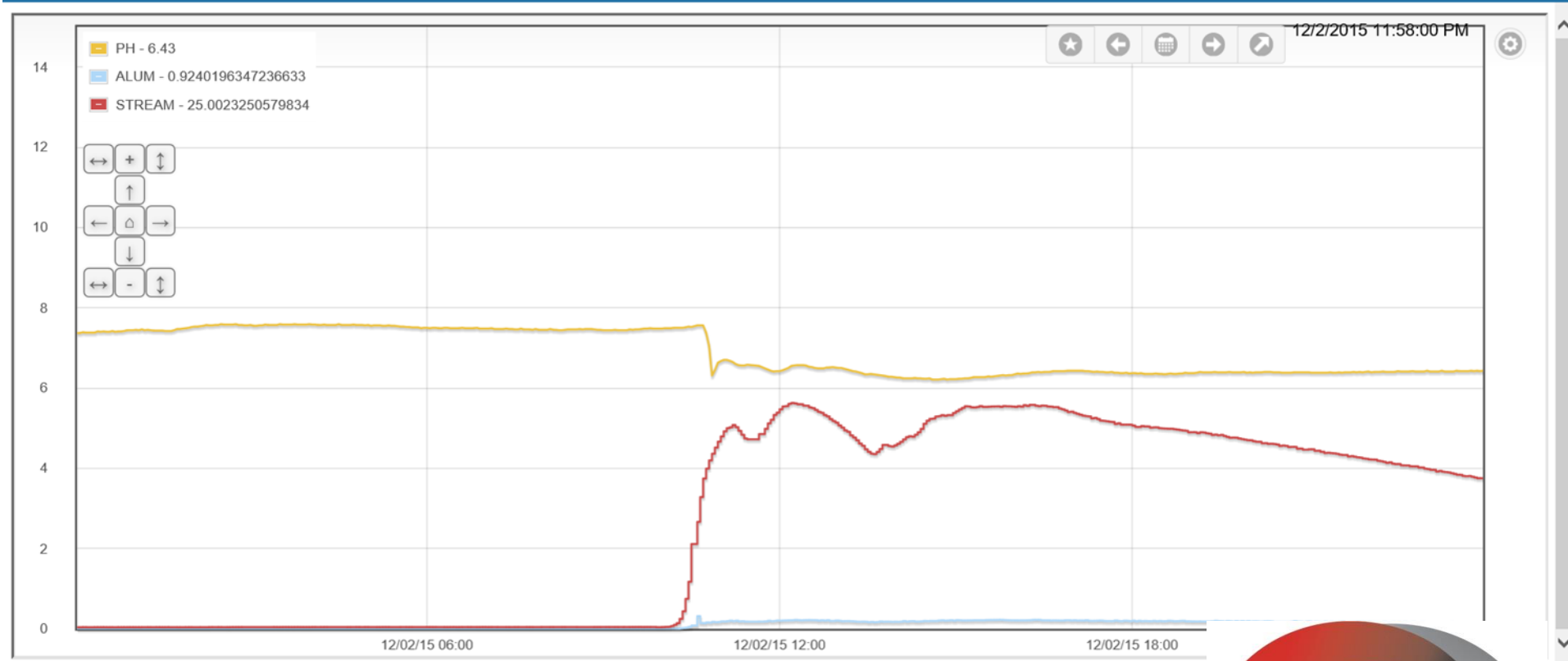
Browser address bar: http://ccdppw.ubiopro.com/map/map.html?row_data=http://tv.demo.yoursi.biz&device=mobile&port=/ubioprode Alarms view

File Edit View Favorites Tools Help

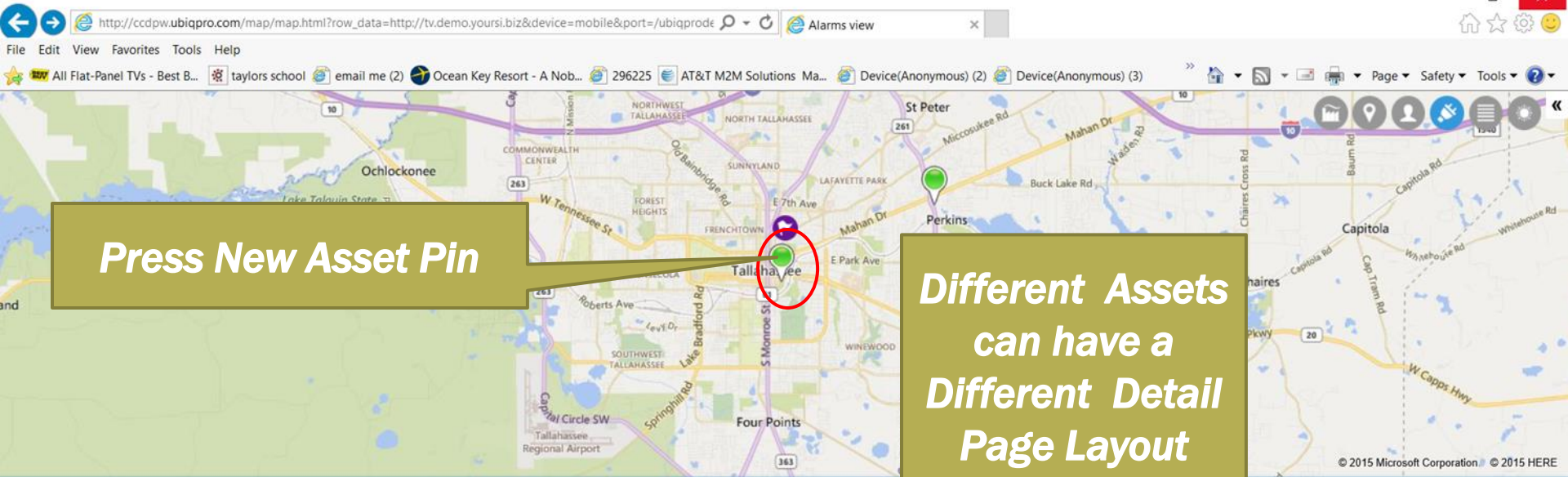
Taskbar: All Flat-Panel TVs - Best B... taylor's school email me (2) Ocean Key Resort - A Nob... 296225 AT&T M2M Solutions Ma... Device(Anonymous) (2) Device(Anonymous) (3)

Page Safety Tools

Action



Dynamic Map With Asset Indicators



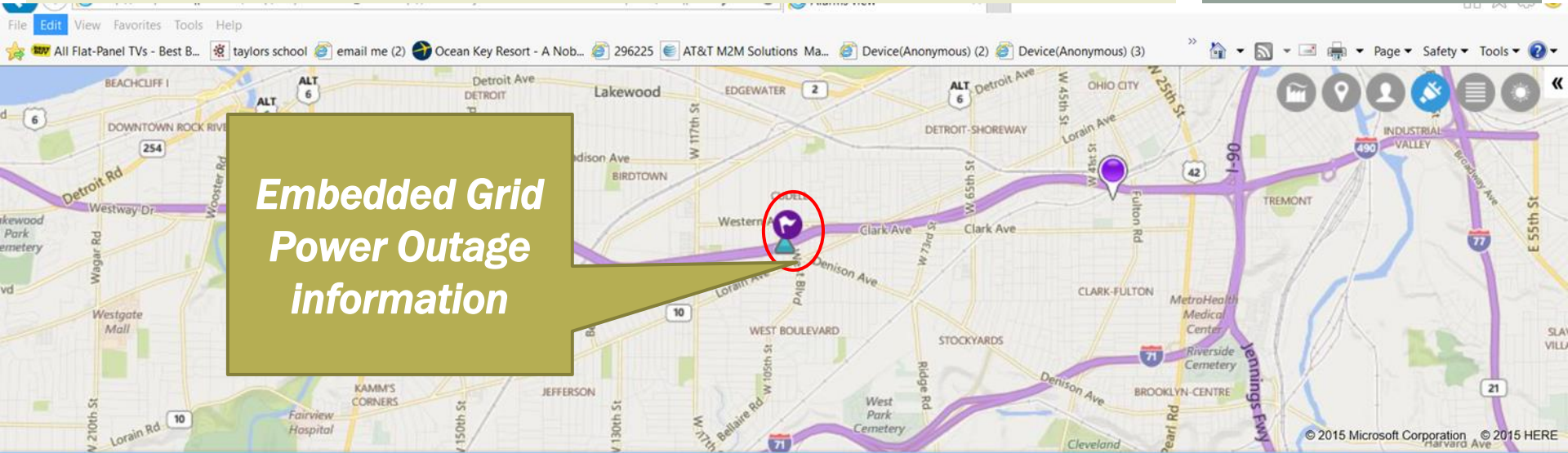
cascades

No Alarms

ALUM	PUMP	1	2	KPI
0.0 H till full	Cycles	1	1	100% - 100%
	Short	0	0	
	Long	0	0	
	Total Runtime	217.9	210.4	



Dynamic Map With Asset Indicators



Outage Information

- Cause:** Investigating
- Crew status:** Dispatched
- Customer affected:** 1
- Est. restoration:** Dec 9, 10:30 PM



Dynamic Map With Asset Indicators

http://ccdppw.ubiopro.com/map/map.html?row_data=http://tv.demo.yoursi.biz&device=mobile&port=-ubiaprode

Alarms view

File Edit View Favorites Tools Help

All Flat-Panel TVs - Best B... taylor's school email me (2) Ocean Key Resort - A Nob... 296225 AT&T M2M Solutions Ma... Device(Anonymous) (2) Device(Anonymous) (3)

Page Safety Tools

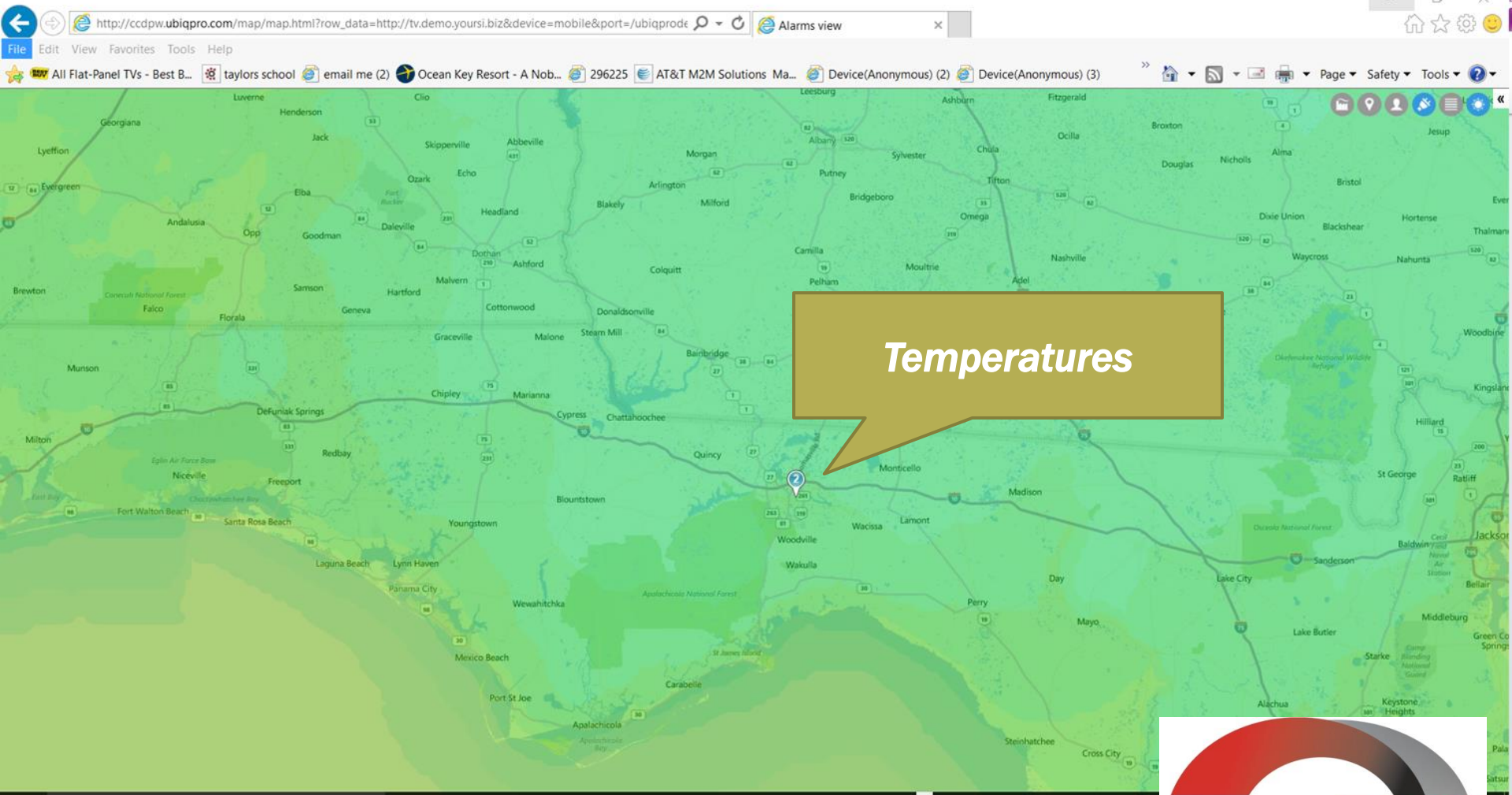
Weather Radar Embedded with Asset map

Weather

- Temperature
- Alerts
- Rada
- Wind
- Weather Conditions



Dynamic Map With Asset Indicators



Dynamic Map With Asset Indicators

http://ccdpw.ubiqpro.com/map/map.html?row_data=http://tv.demo.yoursi.biz&device=mobile&port=/ubiqprode

Alarms view

File Edit View Favorites Tools Help

All Flat-Panel TVs - Best B... taylor's school email me (2) Ocean Key Resort - A Nob... 296225 AT&T M2M Solutions Ma... Device(Anonymous) (2) Device(Anonymous) (3)

Probability of Precipitation

Weather

- Alerts
- Radar
- Wind
- Weather Conditions
- Probability of Precipitation (12Hr)



Dynamic Map With Asset Indicators

http://ccdpuwbiqpro.com/map/map.html?row_data=http://tv.demo.yoursi.biz&device=mobile&port=ubioprode

Alarms view

File Edit View Favorites Tools Help

All Fiat-Panel TVs - Best B... taylor's school email me (2) Ocean Key Resort - A Nob... 296225 AT&T M2M Solutions Ma... Device(Anonymous) (2) Device(Anonymous) (3)

Page Safety Tools

Weather

Weather Conditions

- Alerts
- Radar
- Wind
- Weather Conditions
- Probability of Precipitation (12Hr)



Dynamic Map With Asset Indicators

The screenshot displays a web-based dynamic map of Tallahassee, Florida. The map features various asset indicators, including a purple circle at the center and several green circles scattered across the city. A large, olive-green callout bubble with a white border points to a button at the bottom of the page. The callout contains the text "Get the Full Forecast". Below the map, a blue header bar displays "Tallahassee". To the left of the map, a weather information panel provides the following data:

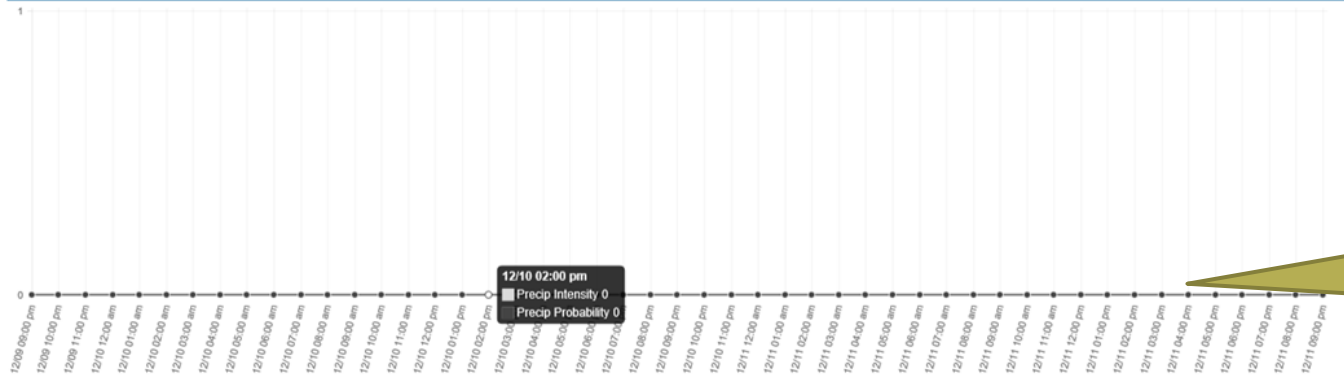
- Weather: Clouds
- Description: scattered clouds
- Temperature: 83 F
- Pressure: 1020 hpa
- Humidity: 45 %
- Min / Max: 81 F / 86 F
- Wind Speed: 5.7 m/s

At the bottom of the page, a blue bar contains a button labeled "Get Complete Forecast", which is circled in red. The browser's address bar at the top shows several tabs, including "All Flat-Panel TVs - Best B...", "taylors school", "email me (2)", "Ocean Key Resort - A Nob...", "296225", "AT&T M2M Solutions Ma...", "Device(Anonymous) (2)", and "Device(Anonymous) (3)".



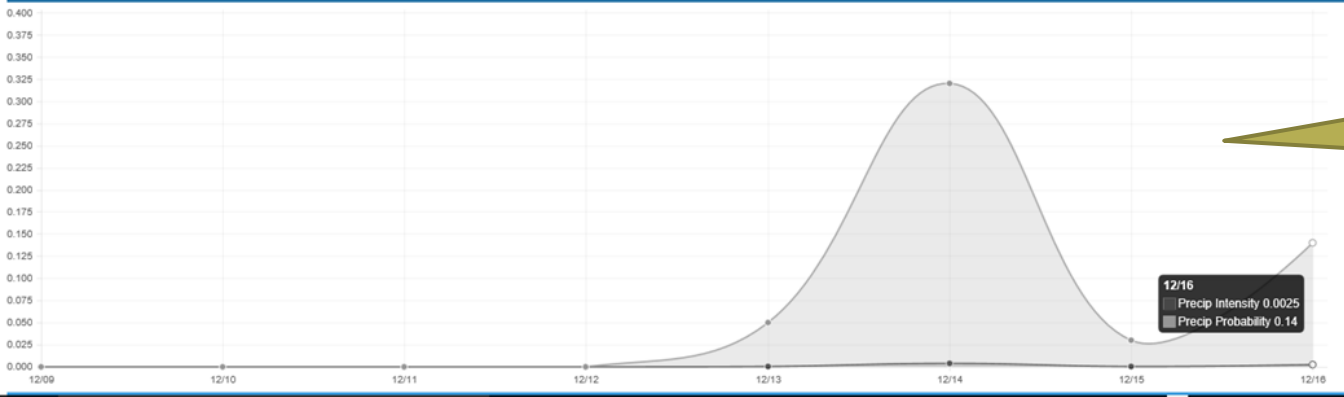
Dynamic Map With Asset Indicators

Precipitation - Next 48 Hours Forecast



**48hr
Precipitation
Forecast**

Precipitation - Next 7 Days Forecast



**Next 7 days
Precipitation
Forecast**



Alarms!!



Alarms!!





6/13/2015 7:38:14 AM
RICHMOND-
BROADWAY WETWELL
HIGH LEVEL FLOAT
call [216-390-3009](tel:216-390-3009)
[http://
tv.ccdpw.yoursi.biz:
7170/details/20](http://tv.ccdpw.yoursi.biz:7170/details/20)

[ARQ20]

<TopV
7:38 AM



((ACK)) 6/13/2015
7:56:54 AM
(ACK) RICHMOND



Enter message

Send

Alarms

***Text Alarms to
Multiple Phone
Numbers & Email
Addresses***



6/13/2015 7:38:14 AM
RICHMOND-
BROADWAY WETWELL
HIGH LEVEL FLOAT
call [216-390-3009](tel:216-390-3009)
[http://
tv.ccdpw.yoursi.biz:
7170/details/20](http://tv.ccdpw.yoursi.biz:7170/details/20)

[ARQ20]

<TopV
7:38 AM

Time & Date Stamp

((ACK)) 6/13/2015
7:56:54 AM
(ACK) RICHMOND

Alarms



Cuy Alarms
ccdpw@alarming.yoursi.biz

6/13/2015 7:38:14 AM
RICHMOND-
BROADWAY WETWELL
HIGH LEVEL FLOAT
call [216-390-3009](tel:216-390-3009)
[http://
tv.ccdpw.yoursi.biz:
7170/details/20](http://tv.ccdpw.yoursi.biz:7170/details/20)

[ARQ20]

<TopV
7:38 AM

((ACK)) 6/13/2015
7:56:54 AM
(ACK) RICHMOND

Enter message Send

Alarms

**Alarm
Description**



6/13/2015 7:38:14 AM
RICHMOND-
BROADWAY WETWELL
HIGH LEVEL FLOAT
call [216-390-3009](tel:216-390-3009)
[http://
tv.ccdpw.yoursi.biz:
7170/details/20](http://tv.ccdpw.yoursi.biz:7170/details/20)

[ARQ20]

<TopV
7:38 AM

((ACK)) 6/13/2015
7:56:54 AM
(ACK) RICHMOND

Alarms

**Detailed Directions
or
Phone Numbers**





6/13/2015 7:38:14 AM
RICHMOND-
BROADWAY WETWELL
HIGH LEVEL FLOAT
call [216-390-3009](tel:216-390-3009)
[http://
tv.ccdpw.yoursi.biz:
7170/details/20](http://tv.ccdpw.yoursi.biz:7170/details/20)

[ARQ20]

<TopV
7:38 AM



((ACK)) 6/13/2015
7:56:54 AM
(ACK) RICHMOND



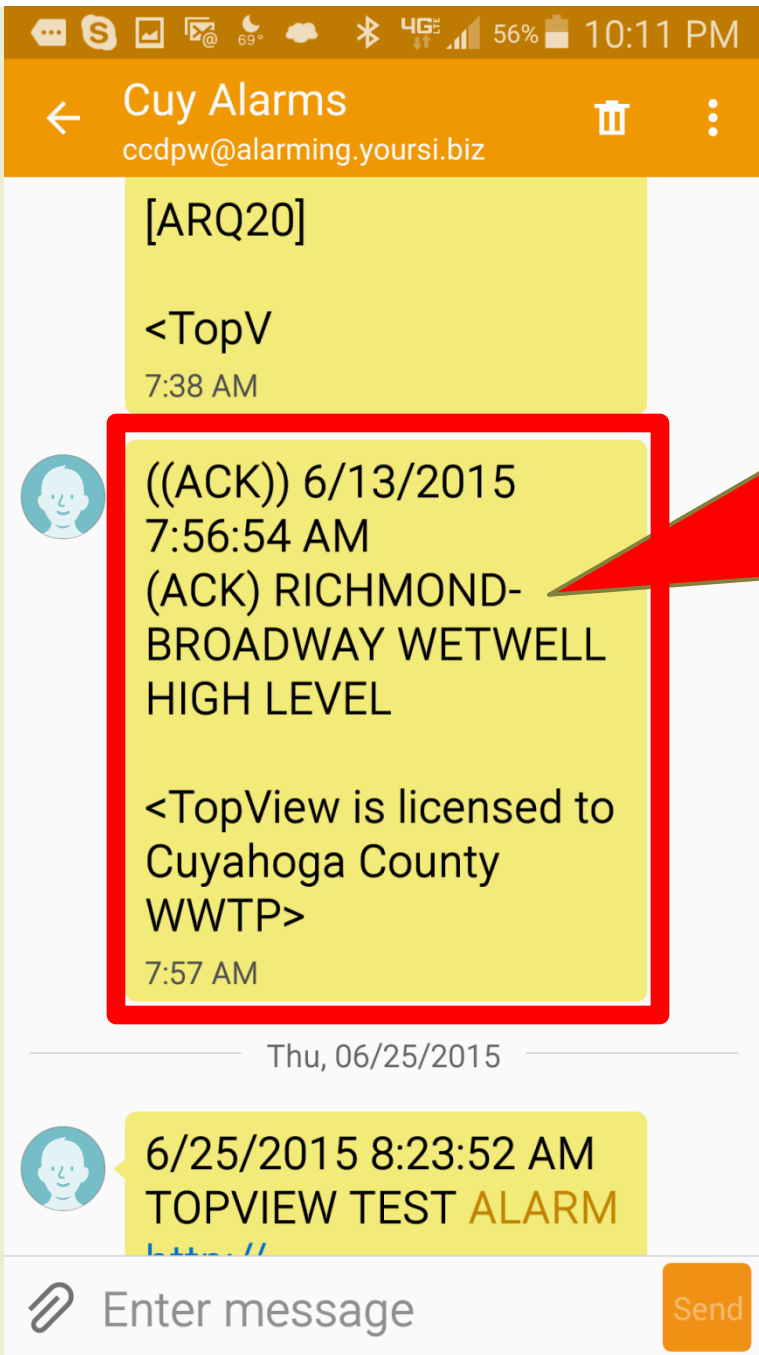
Enter message

Send

Alarms

**Acknowledgement
Code**





Alarms

**Reply With
"ARQ20"**

**Alarm Acknowledged
Message is Returned**

**The ((ACK)) Message is
Sent to All Accounts
that Received the
Alarm**





6/13/2015 7:38:14 AM
RICHMOND-
BROADWAY WETWELL
HIGH LEVEL FLOAT
call [216-390-3009](tel:216-390-3009)
[http://
tv.ccdpw.yoursi.biz:
7170/details/20](http://tv.ccdpw.yoursi.biz:7170/details/20)

[ARQ20]

<TopV
7:38 AM



((ACK)) 6/13/2015
7:56:54 AM
(ACK) RICHMOND



Enter message

Send

Alarms

**Hyperlink
for
Alarm Management**



testdemo.ubiqpro.com

Unit Alarms Close

Alarms view Values view Alarm history

0	0	0
TOTAL	IN ALARM	UNACKD

+ Filter and sort

Refresh

Filtering active Clear filters

There are no alarms to display.

Filtering active Clear filters

Alarm Management Page



Near Field Communication



NFC

Data Transfer

**Perform
Automated
Tasks**

Read Links



Near Field Communication

What is NFC?

- Short Range Wireless Technology.
- Provides unique advantages over other Wireless Technologies.
- Offers safe&intuitive communication



Fig. 1: NFC-Bluetooth Bridge System Architecture

NFC

Data Transfer

**Perform
Automated
Tasks**

Read Links



Near Field Communication

- Easy to use wireless communication interface for the last few centimeters
- Easy to use target selection, by simply holding two devices close to each other
- NFC is as easy as....



NFC

Data Transfer

**Perform
Automated
Tasks**

Read Links



Near Field Communication

NFC – Technical Basics

- **Wireless Short Range Communication Technology**
 - Based on RFID technology at 13,56 MHz
 - Operating distance typical up to 10 cm
 - Compatible with today's field proven contactless RFID technology
 - Data exchange rate today up to 424 kilobits/s



NFC

Data Transfer

**Perform
Automated
Tasks**

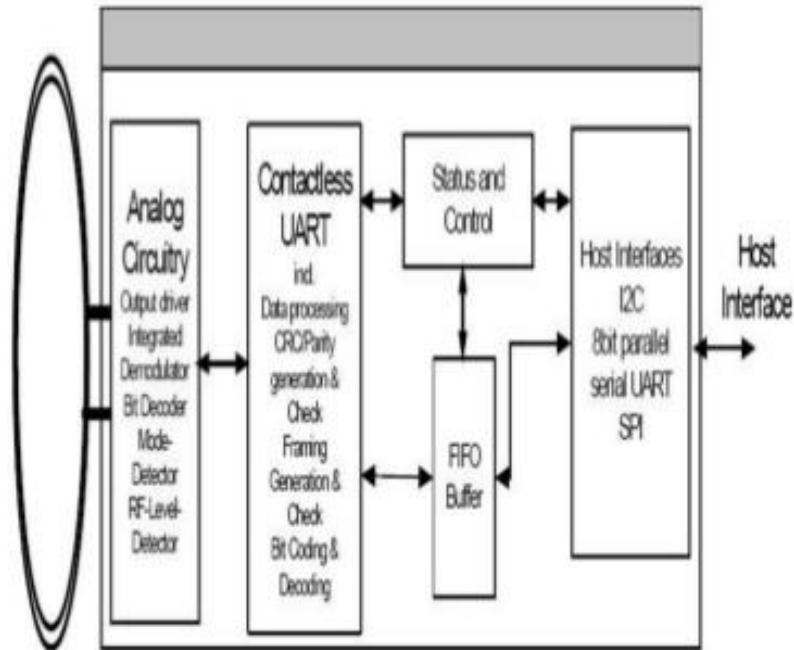
Read Links



Near Field Communication

NFC Block Diagram

- Analog circuitry-modulation
- RF detects RF field at 13.56mhz
- UART-protocol requirements
- FIFO buffer-data transfer from UART to HOST
- HOST-implemented to fulfill customer requirements



NFC

Data Transfer

Perform
Automated
Tasks

Read Links



Near Field Communication

Various Components:

- Initium Promi SD 102 Bluetooth adapter
- antenna for the NFC PN531
- NFC PN531 board
- power supply distributor PCB
- DCE-DCE serial cable

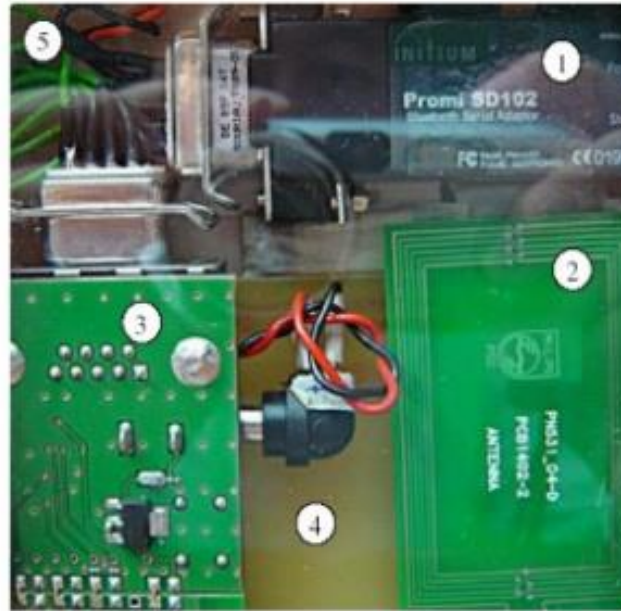


Fig. 2: Interior of a NFC-Bluetooth Bridge Prototype

NFC

Data Transfer

Perform
Automated
Tasks

Read Links



Near Field Communication

Features

- ▶ Not restricted to 1 to 1 comm.
- ▶ Multiple devices can communicate with each other using same frequency at 13.56MHz @ 106kb/s to 848kb/s
- ▶ No special software is required.
- ▶ Peer to Peer communication is possible.
- ▶ Requires log power than Bluetooth.
- ▶ Good choice for secure transactions contactless credit card payments

NFC

Data Transfer

**Perform
Automated
Tasks**

Read Links



Near Field Communication

APPLICATIONS

- Mobile Ticketing
- Mobile payment
- Bluetooth pairing
- Merchant card system
- Peer-peer system
- Application software(mobile client)




NFC

Data Transfer

Perform
Automated
Tasks

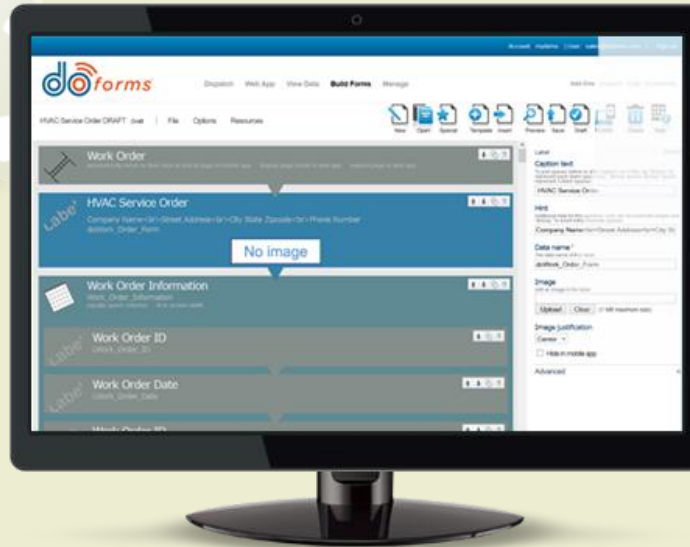
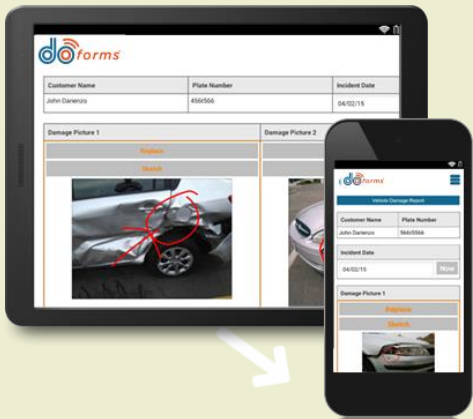
Read Links





Tame the Tidal Wave of Data!!





MOBILE FORMS





MOBILE FORMS



doForms - Windows Internet Explorer

http://udplayer1st.appspot.com/marktest/review

Account: marktest | User | Sign out

doFORMS™

View Data

Works by putting a customizable form application on a mobile device, and linking the app to a powerful website which you control.

Project: Good Dogs | 1/18/2011 | 2/18/2011 | VIEW

Project	Fields	File	Location	Latitude	Longitude	Location	Location	Location	Location	
1	2011-02-04 20:15:21 UTC	Bob	Lettie	10	Male	(P)	no-gps	no-gps	no-gps	no-gps
2	2011-02-04 20:07:33 UTC	Tes	Scoutie	20	Female		no-gps	no-gps	no-gps	no-gps
3	2011-02-04 16:00:40 UTC	Fred	Nut	9	Male	(P)	44-90210437142807	-68-05911540	0.0	



Easy to export and integrate data with your other office apps and business systems.



MOBILE FORMS



Use Your Existing Mobile Device Hardware

Android (OS version 2.1 and higher - models from Motorola, HTC, Samsung, Sony Ericsson, LG, Acer, Dell, Garmin)

Blackberry (OS version 5.0 and higher - all Bold, Curve, Tour, Storm, and Torch models)

iPhone - Available Soon

iPad - Available Soon

Windows - Available Soon



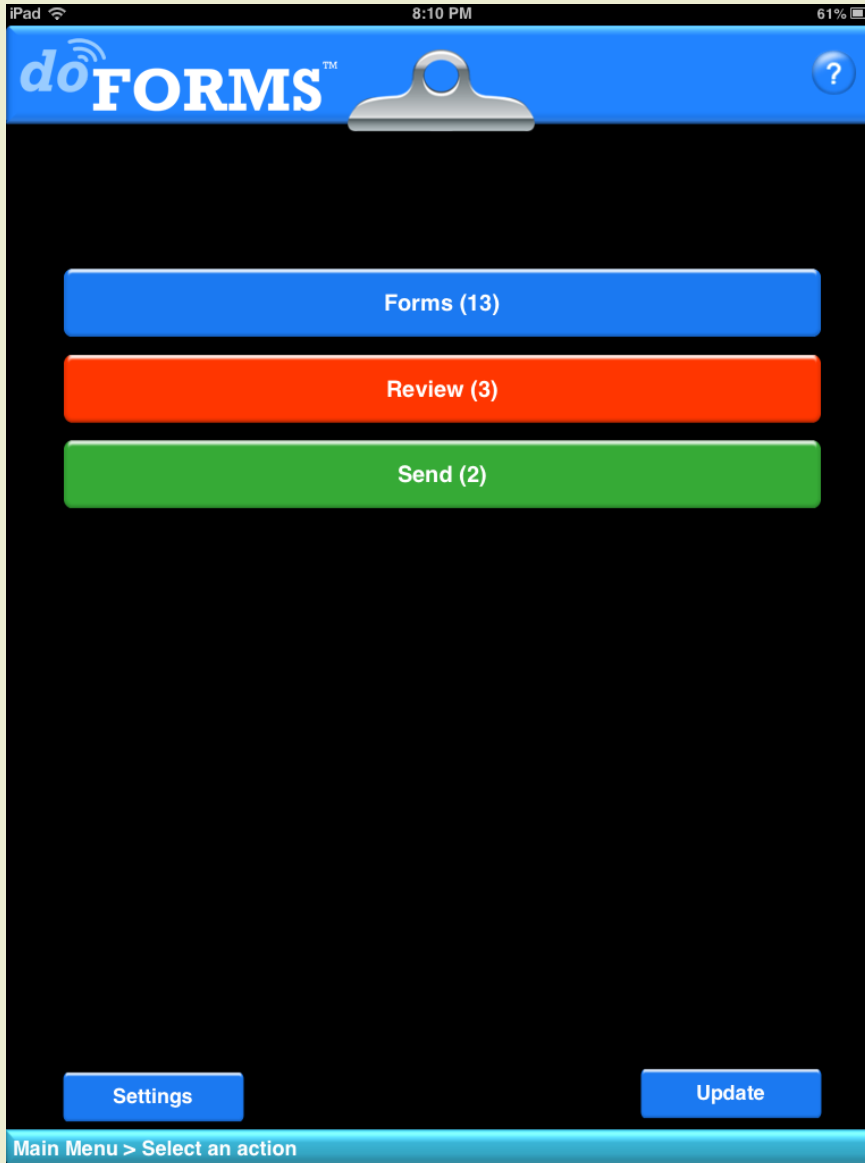
Use Mobile Forms in Both Connected or Disconnected Environments

Workers can still collect data when Internet connectivity is slow, unreliable or unavailable

Data are stored on the mobile device until Internet connection is available, then deleted after successful transmission

Use cellular, WiFi, satellite or wired Internet connections based on availability and cost





MOBILE FORMS





Elyria



Elyria Lab Analysis Report P1



Elyria Lab Analysis Report P2



Elyria Lab Analysis Report P3



Elyria Lab Analysis Report P4



Employee Initials P2



MOBILE FORMS





*Required

Furnace Street Tank

Have Cell phone and City radio on in Vehicle



Today's Date

Current Date and Time

Save as Incomplete

Save as Complete

Exit Without Saving

Furnace Street Tank Report > Swipe the screen vertically to navigate page, then tap on a question. Or swipe page horizontally to navigate between pages.



MOBILE FORMS





MOBILE FORMS



iPad 8:11 PM 60%

doFORMS™ ?

Yes
 No

Road or Drive In Need of Repair? *

Yes
 No

Before leaving *

Locked Valut Door
 Closed Tank Door
 Closed Radio Enclosure and/or Building

Any Problems to Report?
Report Problems to Supervisor when back inform them of items that need done.

Email to:
 Email Report to:

Optional Message:

Submit Report

Furnace Street Tank Report > Swipe the screen vertically to navigate page, then tap on a question. Or swipe page horizontally to navigate between pages.



MOBILE
FORMS



PRO-TECH
SYSTEMS GROUP

Dispatch Web

Project Form
Main Project ▾ ➔ Elyria Flushing

File Options Data View

Record_Name

Record Name	Options
1	<input type="checkbox"/>

1 of 1 Rows per page: 20

Elyria Flushing Program R4

Flushing Program Report Forms

To save report without sending exit form. When prompted save form for later retrieval.

Flush Program Reading Location: Lorain County Engineer
If location is not in list choose One Time Reading

Address: 247 Hadaway
Site address

Time Flushing Started: 10:11:06 AM GMT-04:00

Time Flushing Ended: 10:34:46 AM GMT-04:00

End Chlorine Free Reading: 0.28

End Chlorine Total: 0.51

Notes: I did a THM sample and a chlorine sample inside engineers building.

Today's Date: 07/24/2015

Initials: Lj
First, Middle, Last of person flushing.

Report Email:
- protechreporter@cityofelyria.org

Powered by www.doForms.com

mark@pteinc.com | Sign out

Ons Support Chat Community

Auto-refresh display

PDF Excel Map Help

Time_Flushing_Ended	ECF
10:34:46 GMT-04:00	0.28



MOBILE FORMS

Office Desktop Management



THANK YOU!!

Scott
Fausneacht

Pro Tech
Systems
Group



The Operator Training Committee of Ohio, Inc.

