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Connecting Issue



The IT Brand—Building Connections

By Ellen Koskinen-Dodgson

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Dashboards Matter!

Dashboards deliver critical information at a glance. They show trouble while there's still time to react.

Whether it's declining revenue, increasing costs, schedule delays or increasing risk, dashboards can save huge amounts of money since they allow timely course corrections.

Regardless of your preferred style of graphic, the information behind the colours needs to be right. As dashboards are based on rolled-up numbers which are based on a variety of assumptions, how can you be sure that you are using the right numbers?

More Information

Contact Ellen to discuss how TMC can help you ask the right questions and get the right results.

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IT often works at a disadvantage. Historically, IT has had a bad brand - they were the people who said "No - you can't have what you need and if you can have it, it will take forever." My client pool includes both camps – the IT departments with a bad brand and those whose user departments think that they're wonderful, even when they're understaffed and have to say "No". Here's what I've learned about building a brand from the 'wonderful' camp.



Self Assessment

The first step is to find out if you have a bad brand or a wonderful one. You can ask trusted colleagues in other departments or you could issue a survey. You may even commission an external review.

Why So Wonderful?

So what makes the wonderful IT departments so wonderful? In my decades of working with IT departments, the answer has become obvious. The wonderful departments have a culture of connecting with users.

They don't stay in their department grinding through their endless list of tasks. They work hard on their work, sure, but they make a point to do a bit of wandering around each day.

Every member of the team says hello to everyone that they come across. They act genuinely happy to see each person, even if they know that they'll have bad news when the person asks, "How's my work request progressing?"

They deliver bad news with sympathy and honesty, saying "I'm so sorry – it's going to take another week. Finance



had a crisis so we had to drop everything to deal with that."

Walking the Walk

There are a few things that you can do once you decide that you need a brand upgrade.

First, include friendliness and sympathy on your hiring checklist.

To improve the friendliness quotient of your current staff, first think about exactly how you want them to behave. You don't want them to take your 'be friendly' advice to mean that they should spend their day socializing instead of doing their work.

A Project Like Any Other

Meet with your team and explain the objective. Have everyone raise examples of good and bad examples from their own life. It's important that everyone understand how it feels to be the customer.

Let them brainstorm solutions. Each person needs a slightly different approach to match their personality.

An extrovert may say, "Hi Bob, did you see the game last night?" where an introvert might be more comfortable saying "I looked at your work request yesterday" as a conversation opener. Or they might just smile and say hello.

Feedback

Let each person develop their own plan for a test phase and try out a few approaches. They'll soon know what works for them. Meet at least weekly at first, to discuss what's working and what isn't, then include discussions in your monthly team meetings.

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There is a robust version of Wi-Fi and manufacturers are using it to build vehicles that communicate with each other. Potential benefits are immense (including collision warning, congestion alerts and emergency service broadcasts) but there are serious interference and privacy issues; along with possible hacking risks. What features will be good for business and what pitfalls can we expect?



Beyond Tolling

Dedicated Short-Range Communication has been with us for several years, mainly in tolling systems. Vehicle manufacturers are now adding the radio equipment into vehicles to provide a robust mobile 2-way communications platform with the ability to communicate with other vehicles and with fixed infrastructure.

DSRC needs to be more tolerant of data corruption than does regular WiFi because it is in an environment that is hostile to radio signals.

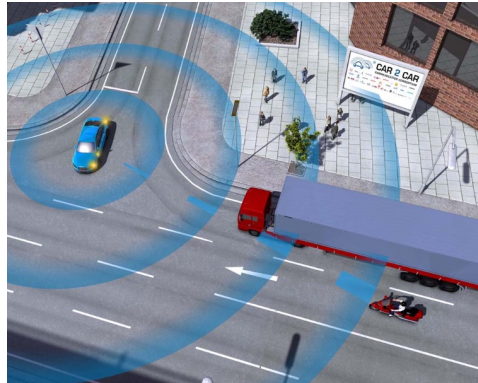
Existing Options

Cellular (and satellite) radio, like GM's OnStar, are too slow where alerts are needed in seconds.

Broadcast systems exist in many countries, usually based on public radio networks, such as SiriusXM Traffic. Some, such as TomTom Traffic, augment SatNav systems to warn of road congestion and accidents. Many of these suffer limited coverage or high cost and the lack of a universal standard makes these issues worse.

TCAS in Aviation

With increases in air traffic density the risks of mid-air collisions has risen over



Courtesy of CAR 2 CAR Communication Consortium

the last few years. As one solution to this, aircraft are now fitted with a transponder system known as TCAS (Traffic Collision Avoidance System). This allows aircraft to scan their nearby airspace for other aircraft, which respond by advising their altitude, heading and speed. The TCAS system can classify responses and advise the pilot of other planes that are in danger of flying into their airspace. The same ability in vehicles will make drivers aware of dangers even before they are visible (around corners or at intersections).

Future Developments

DSRC will do a lot more, like:

- advising of traffic congestion or accidents. Typically this

information will be generated on-site by the emergency responders

- Warning of approaching emergency vehicles—where the vehicle is coming from and where it is headed
- Warning emergency vehicle drivers about dangerous conflicts with other emergency responders
- Fleet managers could add the ability to download data on return to home base
- Refuelling could be billed directly to the vehicle
- Transit busses could download dynamic route data to advise passengers on board of delays

Risks

Privacy concerns are driving the development of new cryptography standards that will anonymously sign the data transmission. This will give the security needed but will prevent routine 'ping' requests identifying the vehicle. Users will just know what its location, speed and direction are.

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ZigBee—Opportunity or Crisis?

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There are a growing number of controllable devices sporting the 'ZigBee certified' logo. It is inevitable that end users will incorporate these devices into their life at home and at work—as happened with 'smart phones'. There are many real benefits but, as with previous technology leaps, there are dangers—the biggest being radio signals interfering with each other. Businesses need to understand the issues and proactively plan for a peaceful co-existence.



The Dangers

Modern radio systems, like WiFi, Bluetooth and ZigBee, all have to co-exist in a shared radio band. Being designed to share does not mean that the sharing will be 'fair' for all.

When skilled IT managers plan their WiFi layout few consider Bluetooth or ZigBee in that process. The addition of ZigBee nodes around the same area in low use scenarios is not likely to be an interference issue—but what about high use areas? We have already seen WiFi issues in airports and public places. WiFi is tricky to design properly and it doesn't even co-exist with itself particularly well.

The Benefits

The big 'opportunity' from ZigBee comes from the growing number of applications that will allow increased efficiencies and reduced costs.

Applications being developed include:

- Smart Energies—more adaptive control of energy use to optimise cost and efficiency
- Remote Control—allowing the separate development of systems and controls to improve flexibility
- Light Link—making light sources individually controllable to simplify wiring and reduce costs

ZigBee is the only open, global wireless standard to provide the foundation for the Internet of Things by enabling simple and smart objects to work together, improving comfort and efficiency in everyday life.

The ZigBee Alliance is an open, non-profit association of approximately 450 members.

- Building Automation—building sensors and control systems into buildings to operate everything from HVAC and power to security

ZigBee vs WiFi

WiFi 802.11 supports very high speed Ethernet standard (TCP/IP) data transmission. In contrast, the IoT needs a network topology based on very low power and hence the trade-off is low speed. IEEE 802.15.4 supports data rates up to 250kbit/s.

The ZigBee alliance is the custodian of 802.15.4 hardware certification. As with WiFi, standardisation is key to widespread acceptance.

It is important to understand that ZigBee uses the same radio spectrum as WiFi so there is the very real potential for interference. The danger will be greatest where a ZigBee hub is positioned close to a WiFi device.

Links to Other Networks

Purchase a 'smart' lighting system starter kit and you typically get a hub, some lights and a switch. You can program the switch to command the lights to set level and colour.

ZigBee does not use TCP/IP so ZigBee devices cannot communicate with a WiFi Access Point. [The HaLow initiative](#) may change that in the future—but, for now, your WiFi AP will not be of any use for communicating with ZigBee devices. However the ZigBee hubs may need to communicate upstream with control systems. Simple control systems (like switches, dimmers and thermostats) could themselves be ZigBee devices and hence the ZigBee hub would be all that is needed. More advanced control needs external servers that sit upstream of the ZigBee hub on a conventional Ethernet TCP/IP network.

ZigBee or other IoT equipment and networking could become a replacement for traditional SCADA systems (control of water and sewage valves and pumps etc.)—but that is another story.

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DR and More

Tabletop exercises (tabletopping) can serve a variety of purposes. Beyond emergency planning and training, some companies use them for team-building. Others use them as a way to introduce new employees to the organizational culture and priorities.

These exercises focus attendees' attention on the exercise topic and encourage creative expression of ideas. The results may expose weaknesses in disaster plans, demonstrate better ways of dealing with practical problems or gain 'buy in' on corporate priorities. They always increase a feeling of connectedness among participants.

Topics can include:

- post-disaster transportation problems
- emergency communications
- media management strategies
- business-resumption plans

The Process

The trainer draws up a disaster scenario and gives it to a group of employees. Often the scenario is kept secret until the exercise takes place, so



that participants are forced to deal with the element of surprise and to think on their feet. Strict time limits are essential.

Scenarios can include:

- an earthquake
- severe weather
- power outages
- bomb threats
- electronic intrusions
- handling suspicious packages
- workplace violence
- pandemic

Example Exercise

Scenario: The sprinkler system has unexpectedly activated in your work area. Example tasks for participants,

assign 10 to 15 minutes per task:

1. Make a list of the first steps that you would take to resume business
 2. Write a schedule with realistic time estimates for these steps
 3. Identify the equipment you will need in order to offer the basic services listed above
 4. Outline a communication plan
- What is the first message that should be sent to management, local employees, other locations, customers, the media...?
 - How often should messages be updated?
 - Should the messages be in-person, phone calls, emails, press releases, website postings or...?

Lessons Learned

Always close with a discussion of lessons learned and next steps.

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