

# Cracking the Code

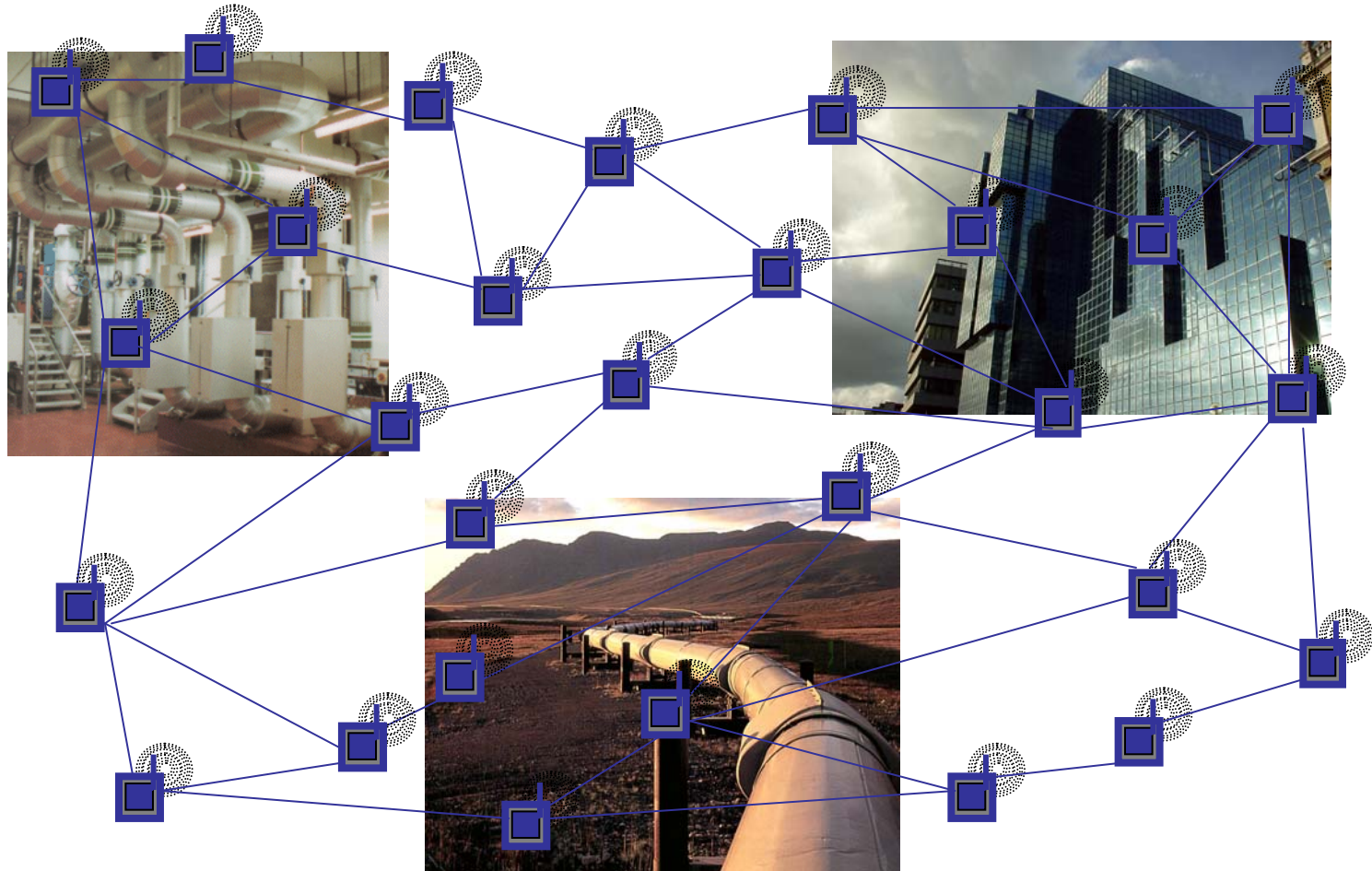
Sandra Wear  
Founder & CEO  
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- An explosive market with huge opportunity for manufacturers & corporations.
- Reduce energy & labor costs, increase efficiency & knowledge.
- ZigBee decreases cost of manufacturing & deployment.

- Breaking it Down
- Market Solutions
- Build & Plan for the Future

- Wireless
- Mesh
- Networks

# Wireless Mesh Networks



- Decrease cost
  - No costs of cable laying (parts & labor)
- Increase Opportunity
  - New solutions previously not possible
- Increase Flexibility
  - Devices can be moved, added and removed.

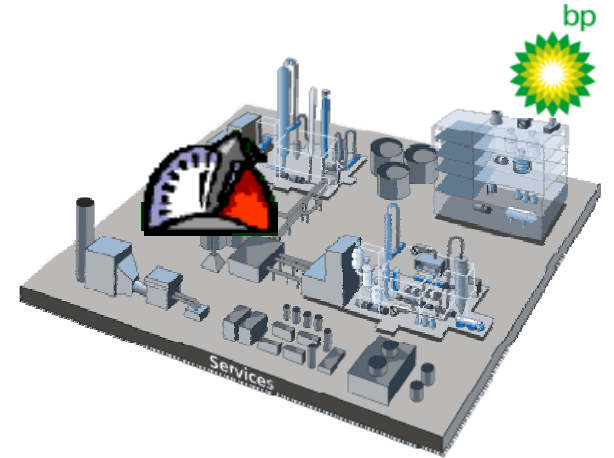
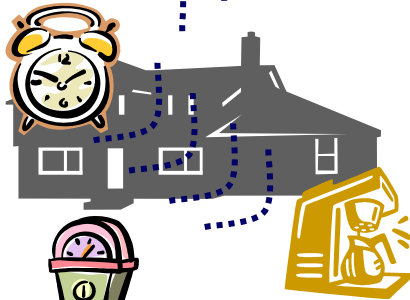
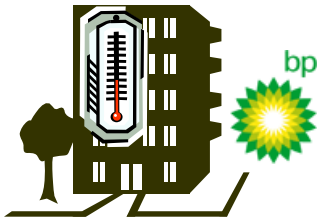
- Decrease maintenance costs
  - Self-healing
  - No single point of failure
  - Scalable
- Decrease deployment & maintenance costs
  - Self-configuring

- Builds an infrastructure but not in isolation
- Jump-point from/to other networks
- Monitor places couldn't before
  - Decrease energy costs
  - Decrease labor costs
  - Increase efficiency

- Multiple applications
  - HVAC & Air Quality
  - Security & Safety.
  - Condition Monitoring
- Requirements
  - Security access.
  - Patterns of behavior.
  - Proactive notification & response.

Leverage the capabilities of WSNs with a central access point capable of monitoring & controlling a number of applications and handling a variety of user types & levels.

Choose tools that can grow with your install base and function in deployment, support and ongoing network management requirements.



- Automatically:
  - get environmental data;
  - launch a series of events WHEN required.
- Allocate resources efficiently
  - energy, water, gas, etc.
- Garner more precise information.

- Ease of deployment (skill & number).
- Ability to maintain & manage.
  - Mitigate the cost of the technology over its lifecycle.
- Ability to integrate with systems & applications
  - Existing networks, legacy systems, billing, etc.
- Manage multi-applications:
  - Analytics
  - “Self-learning”.

- Installation
  - “Lay N’ Leave” Possibilities (negligible deployment).
  - Piece-meal installs
  - Multi-vendor, multi-application
  - Access privileges, security concerns.

- Handle network diagnostics & application analysis.
- Facilitate integration.
- Decrease learning time for operating staff.
- Provide automated support & maintenance
  - Decrease number of support calls
  - Tracking, status of support issues
  - Automate resolution

- Analysis:
  - Quantify & qualify data obtained.
  - Learn (network & environment).
  - Means to automate processes (E.g. energy procurement; maintenance, etc.)

- ZigBee networks enable a cost-effective, scalable networks with tremendous opportunity.
- The right tools to manage & control these networks provides the means to leverage the ZigBee infrastructure.

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