Department of Commerce IOT Workshop
Fostering the Advancement of the Internet of Things
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IoT Defense and Industry Automation

Innovation

Interoperability and Spectra

Cost and Applications

Cyber & Privacy Implications
Innovation drives the landscape

- Innovation shapes the IoT society
- The quest for productivity drives innovation
- New markets drive innovation
- Demands of society drive innovation
- Must be grounded in economic reality

We face an unsettled IoT technology marketplace - Making it difficult for companies with deeply embedded plan, design, build and market systems to make a confident investment.
A pathway toward coexistence

INTEROPERABILITY and SPECTRA

- Billions of “points” to be measured and communicated
- Ubiquity alone demands innovation
- Coexistence with IoT and other devices
- To live in a world where a $10 diet scale will have worldwide connectivity!
- A society of IoT --- How should this be regulated?
Justification and the business case

COST and APPLICATIONS

• Applications will drive vision and start the cost curve
• Hardware costs will be driven to almost zero
• Cost will simply be baked into the device itself
• Do you pay extra for a mobile device with a camera? More likely you pay more for a mobile device without a camera.
• What will be the real driver of cost?
Cyber and associated system risk will be the real driver of cost.
Without the consideration of secure IoT standards, growth will just fuel cyber intrusions of all kinds.
Build off existing standards for authentication and trust --- yet if required propose new standards optimized for IoT.

NIST Special Publication 800-183 which explores the science, foundation, and security ramifications of IoT.
Things to think about

- Modern urban environments could allow for human identities to shape nearby IoT devices as the user moves geographically
  - A common public infrastructure
  - How will privacy and security be maintained?
- IoT enabled body chip implants DEFCON?

Delegation schemes are important to authorize objects to perform actions on behalf of the user.

Identity Management in the Internet of Things (IoT)

Samsung & Toyota?

How will IoT interact with mobile devices and the future automotive industry? When you get into a “public” vehicle your IoT world should follow.