

Department of Commerce IOT Workshop

Fostering the Advancement of the Internet of Things

September 1, 2016

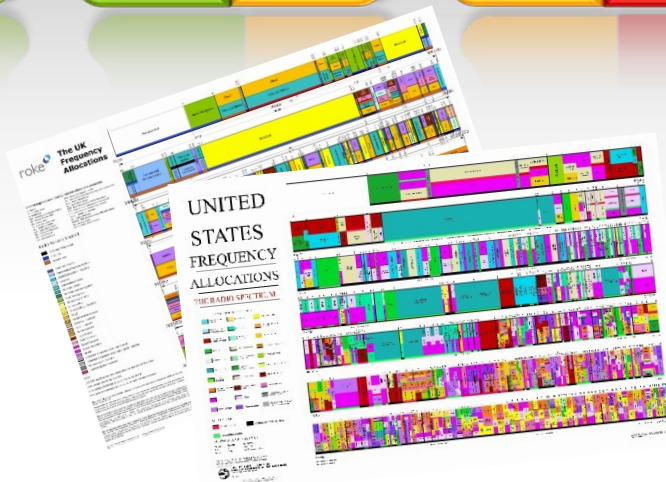
Dr. Sterling Rooke, President, X8

SSR@X8LLC.com

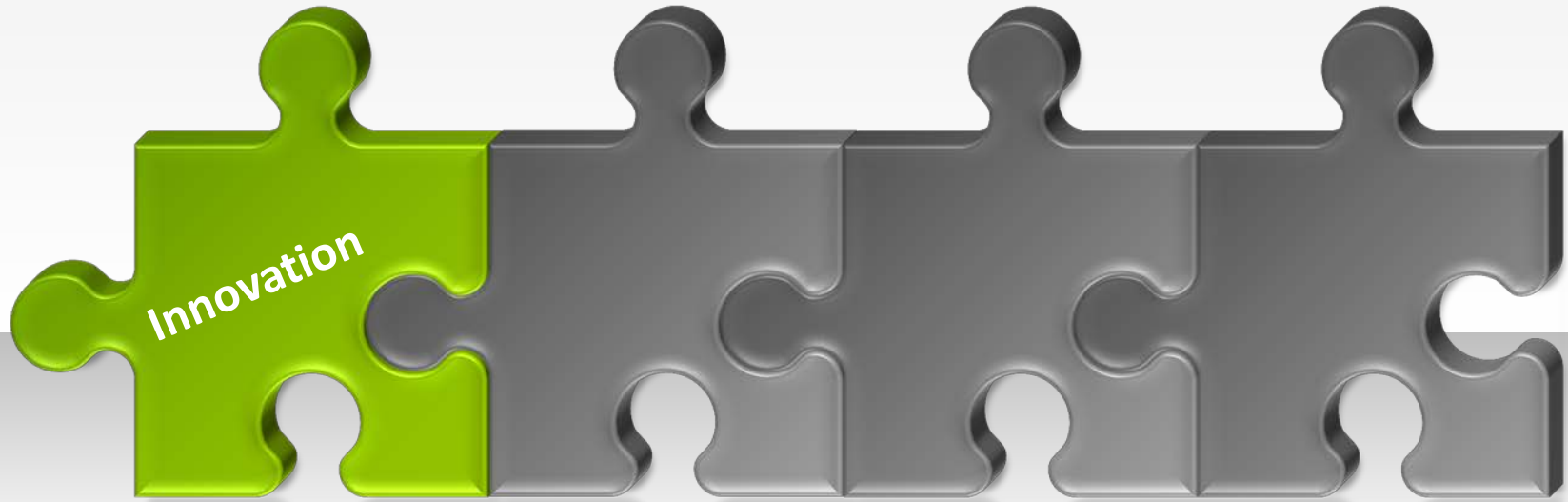


X8 LLC, 5520 Research Park Drive, Suite 100, Baltimore, MD 21228
(Main) 888-836-44**X8** (Fax)443-333-4764 www.X8LLC.com

IoT Defense and Industry Automation



Innovation drives the landscape



INNOVATION

- 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?

Active vs.
passive IoT

Preserve
spectra

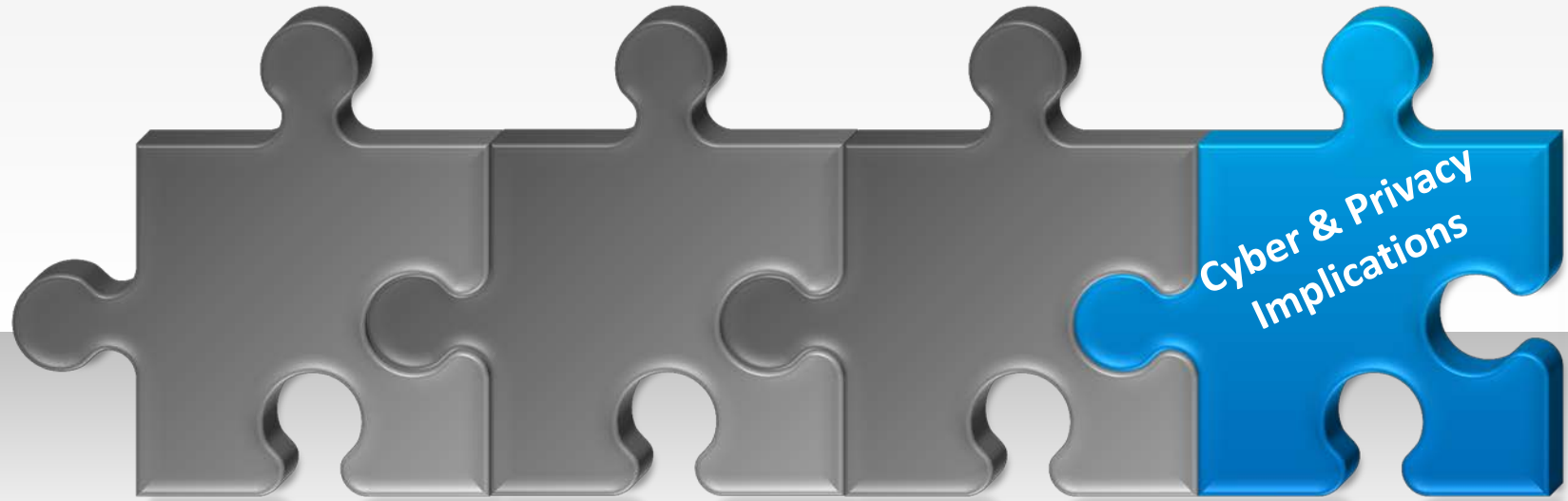
Justification and the business case



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 the hidden cost



CYBER & PRIVACY IMPLICATIONS

- 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.

