IEEE Future Big Data Analytics and Systems Direction
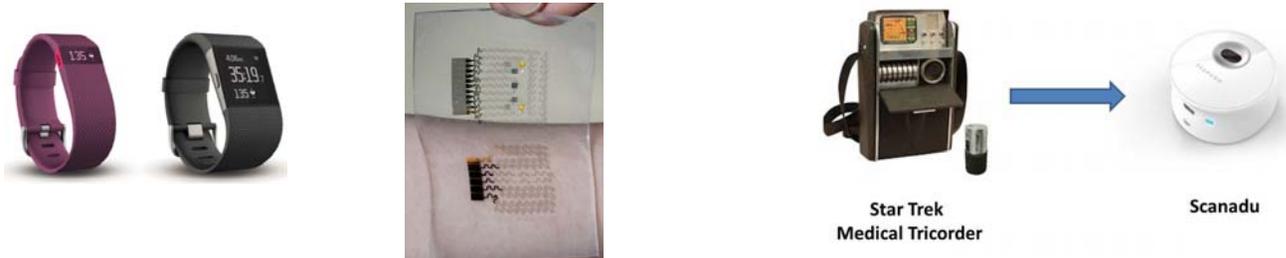
Kathy Grise, Senior Program Director, IEEE Future Directions
NIST BD Workshop
1-2 June 2017

"Smart" Data Explosion
and Interconnected Healthcare

More Sensors and Lower Cost Sensors ➔ Lots of DATA

Within 15 Years or less, Health Data Goes Up to 1 Yottabyte!
1,000,000,000,000,000,000,000,000 bytes

Star Trek
Medical Tricorder

Scanadu

And, we cannot forget about non technology issues…

➔ Social and privacy implications

What is IEEE doing?

✓ Leading the focus with current, new, and emerging technology initiatives

bigdata.ieee.org   brain.ieee.org

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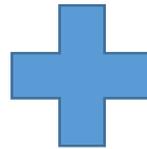bigdata.ieee.org

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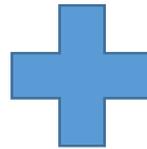
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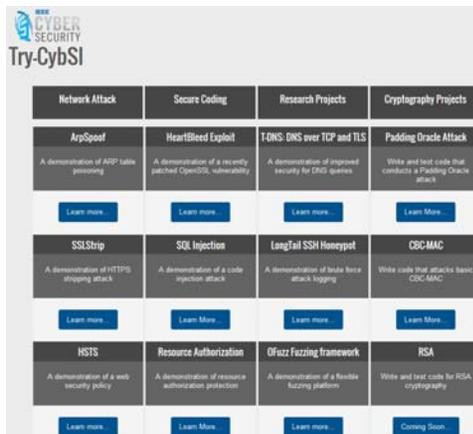cybersecurity.ieee.org

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Initiative Driven Products and Services

Try-Cybsi

- Web based application
- Where practitioners can experiment
- Learn hackers' methods
- Devise defense strategies
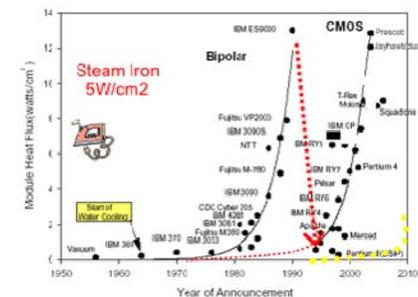

http://try.cybersecurity.ieee.org

DataPort

- Deposit datasets and make them available to a broad set of researchers, engineers and members of industry
- Gain access to datasets to support your research/interests
- Efficiently host and manage Data Competitions
- Analyze datasets either by accessing datasets in AWS or by downloading the dataset
- Facilitate validation of research (reproducibility)

ieee-dataport.org

IRDS - International Roadmap for Devices and Systems

- Developing overall roadmap
- Identifying key trends related to devices, systems, and all related technologies by generating a roadmap with a 15 year horizon
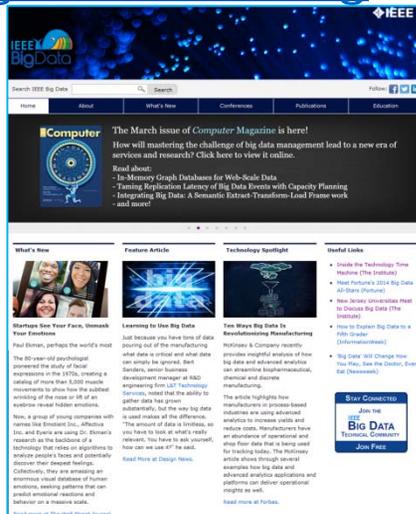- Determining generic devices and systems needs

W Tonti, "MOS Technology Drivers", IEEE T-DMR, V8, PP. 406-415, 2008

irds.ieee.org

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bigdata.ieee.org web portal

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