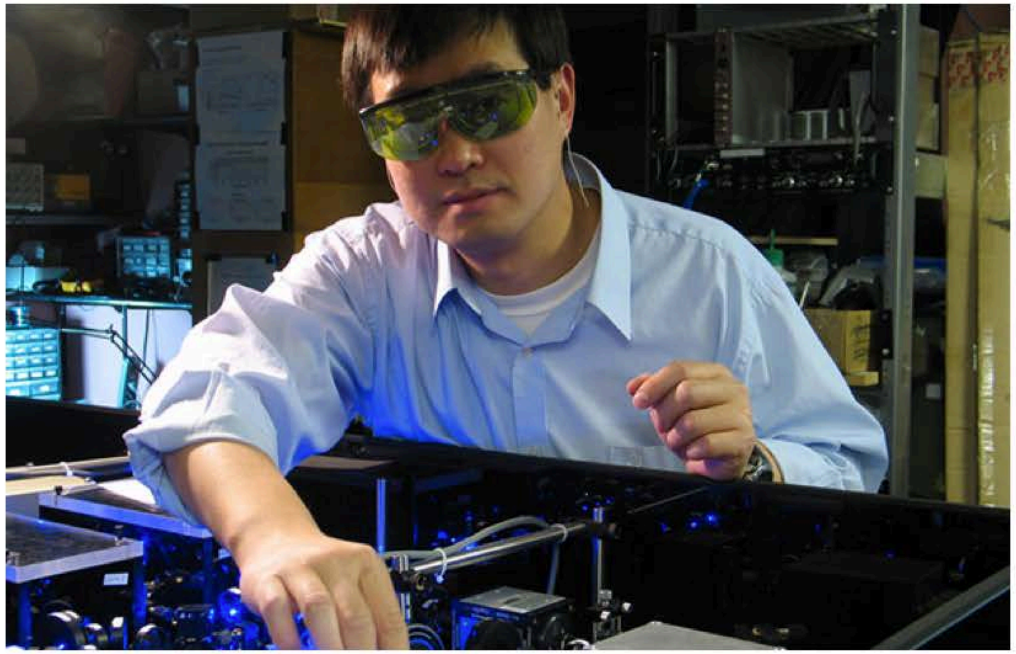
NIST Cybersecurity Activities
December 4, 2019

National Institute of Standards and Technology
U.S. Department of Commerce

Cultivating Trust in IT and Metrology

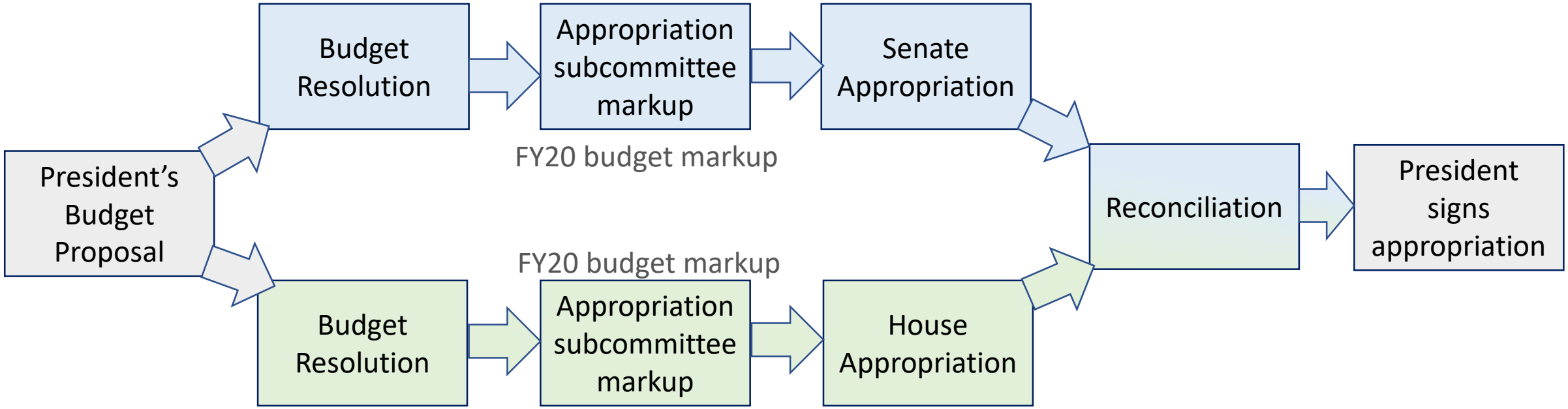


From innovation to application

Image Credit: wsj.com

Budget process

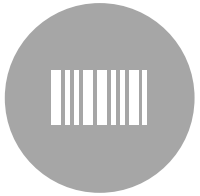
Continuing Resolution till Dec 20, 2019.



President's FY 2020 Budget Request. https://www.whitehouse.gov/omb/budget/
House Appropriation markup https://appropriations.house.gov/sites/democrats.appropriations.house.gov/files/FY2020%20CJS%20Filed%20Bill%20-%20HR3055.pdf
Senate Committee on Appropriations www.appropriations.senate.gov/news/fy2020-commerce-justice-science-appropriations-bill-approved-for-senate-consideration

Voluntary Voting System Guidelines (VVSG 2.0)

COMMON DATA FORMATS



BARCODE AND ENCODING SCHEMES

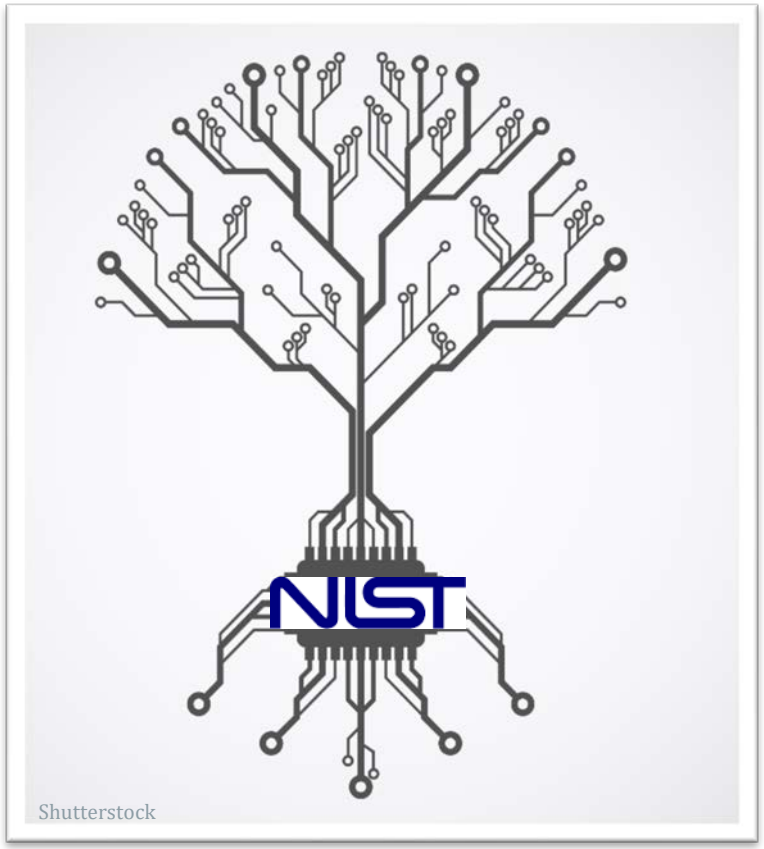
HUMAN FACTOR REQUIREMENTS

NEW SECURITY REQUIREMENTS

DEDICATED SECTION ON BALLOT SECRECY

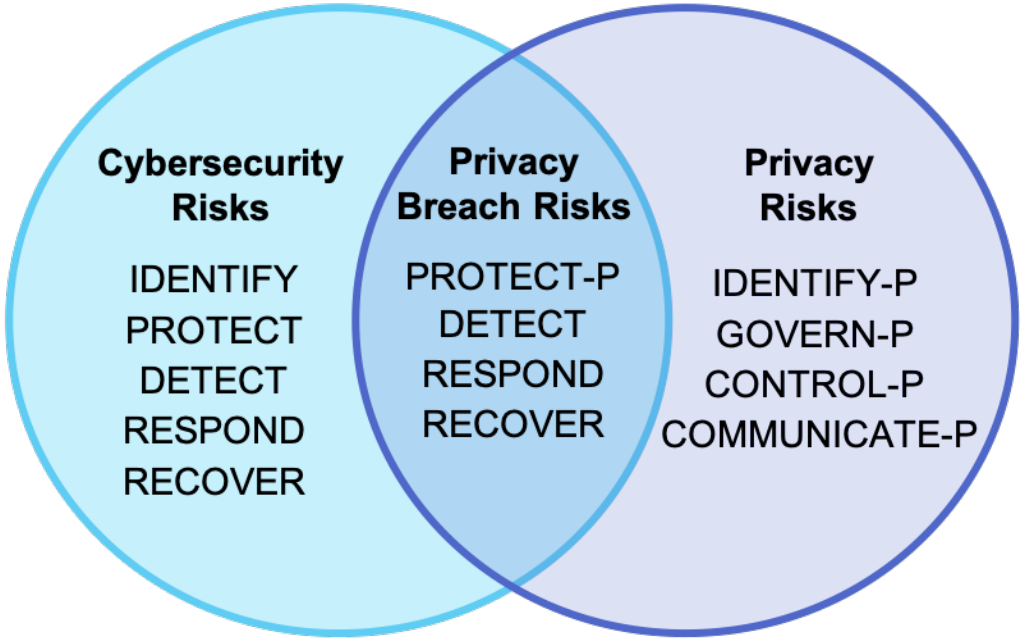
CRYPTOGRAPHIC PROTECTION

Enhancing Cybersecurity and Privacy Risk Management



- Privacy Framework
- Cybersecurity Framework and Risk Management Framework
- Supply Chain Risk Management

Privacy Framework



Preliminary Draft on September 9, 2019.

Public comment period ended on October 24, 2019.

Version 1.0 of the NIST Privacy Framework. Soon.

https://www.nist.gov/privacy-framework

Cryptography

The existing foundations of both fundamental cryptography and cryptographic standards that established trust in our global information technology infrastructure were largely developed in the United States, primarily by NIST in partnership with the private sector.

Post-quantum Cryptography

Lightweight Cryptography

Automated Cryptographic Validation Protocol

8

Secure AI

Terminology and Taxonomy of attacks and defenses for Adversarial Machine Learning.

Collaboration with MITRE.

Extensive literature survey.

Draft for public comment ends on December 16, 2019.

Trustworthy Networks

Cultivating trust in network technologies by establishing the technical basis that improves the robustness and performance of the communication infrastructures.

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Draft NIST SP 800-207: Zero Trust Architecture. Public comment period ended Nov 22.

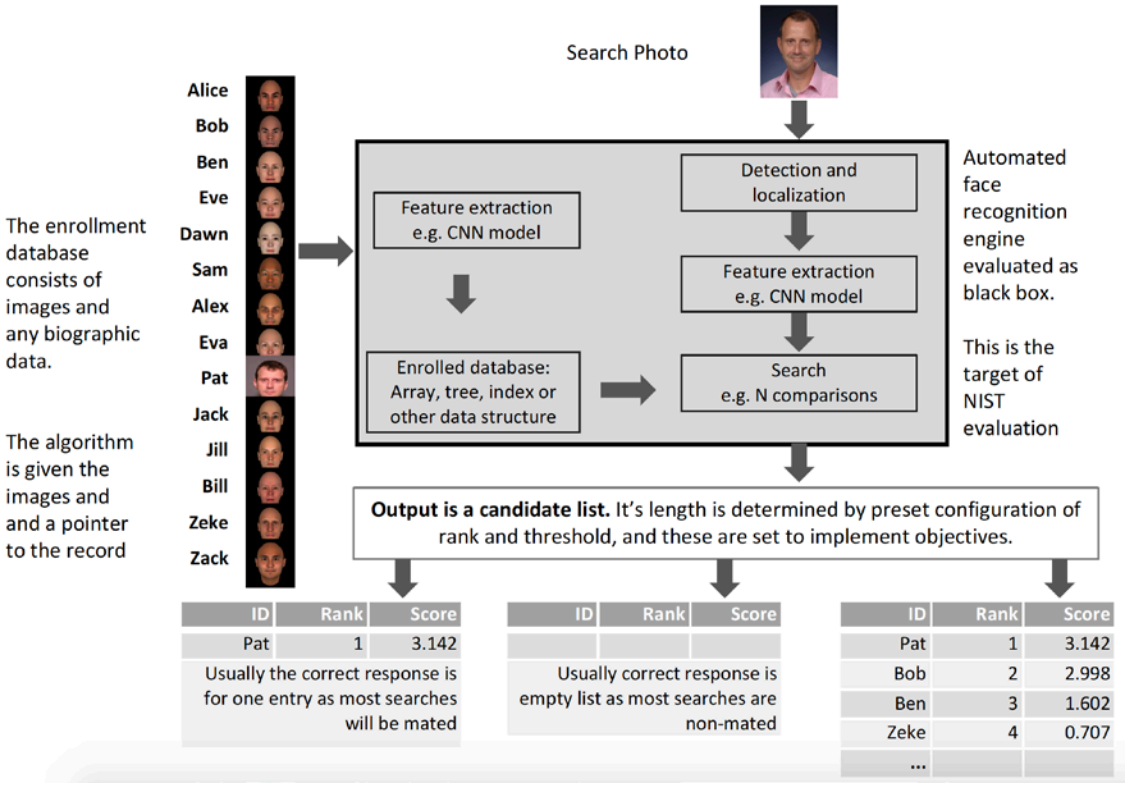
DRAFT3 of USGv6 Revision 1 Specifications. Public comment period ended Nov 19.

5G

5G Cybersecurity.
Workshop on October 10, 2019.

Work with IETF on robustness issues in the Internet's core infrastructure.

Face recognition evaluation



1. Broad participation by industry

2. Coverage by media including The Economist

3. Report on demographics

4. Hearings: House Comm. on Oversight and Gov. Reform and Comm. on Homeland Security

National Cybersecurity Center of Excellence

COLLABORATING

41 Number of NCCoE NCEP Partners

22 Number of University affiliates across the country

220 Total number of CRADA collaborators since NCCoE began

Interagency agreements 7 total, 3 currently active:

Kinds of technologies deployed at NCCoE (not just IT)

CREATING

85 PUBLICATIONS DEVELOPED

- **51** PROJECT DESCRIPTIONS
- **26** PRACTICE GUIDES
- **6** NISTIRs
- **1** MOBILE THREAT CATALOGUE
- **1** CONCEPT PAPER

184+ commercially available products were used to develop solutions

Number of open comment periods for community feedback: **65**

Number of comments received on publications from the community: **644+**

SHARING, DISSEMINATING, AND LISTENING...

Number of NCCoE publication downloads: **312,145**

Number of articles about our work in the news media since tracking began in July 2013: **424**

Quotes from the community

"The NCCoE is a powerful example of what can be accomplished through government-industry partnership... public and private sector don't always share the same mission, but when it comes to cybersecurity, both face the same challenge of protecting their organizations from emerging threats. Modern cybersecurity is an issue of national importance that needs to be addressed collectively."

— Haiyan Song, Senior Vice President for Security Markets, Splunk

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**Data reflected above is as of April 30, 2019.*

NIST National Institute of Standards and Technology U.S. Department of Commerce

2022
Celebrating 50 years
of Cybersecurity research at NIST

See you at RSA 2020!