# Remarks to IEEE International Conference on SmartGridComm

October 4th, 2010

Aneesh Chopra

**U.S. Chief Technology Officer & Associate Director for Technology**
**White House Office of Science & Technology Policy**

# A Presidential Commitment to Openness
## Healthcare.gov a Model for Simplifying Access to Information



"My Administration is committed to creating an unprecedented level of openness in Government...and establish a system of transparency, public participation, and collaboration." —President Barack Obama, Jan 21st, 2009

# Tech Team* Formula to Close Technology Gap
## Platforms + Participation Equals Ecosystems Focused on Results

### Public Sector Platforms

*Five Technology Pillars*
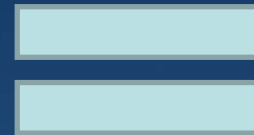
- Consensus-Driven Standards
- Accountable Government
- Open Data
- Cloud Computing
- Connectivity

**+**

**Public Participation**

**=**

**Results-Driven Ecosystems**

# Unleashing a Mobile Broadband Revolution

## Presidential Commitment to (Nearly) Double Available Spectrum

### Spectrum Initiative in Brief

*#1:* Identify and plan for the release of 500 MHz of spectrum

*#2:* Provide new tools and new incentives to free up spectrum

*#3:* Redeploy the spectrum to high-value uses

*#4:* Use the auction proceeds to promote public safety and job-creating infrastructure investment

**Commerce Dept report due by 10/10 on timetable for freeing up spectrum for exclusive or shared use; CTO focus on advanced sharing technologies**

**She's one smart mom**
She's got **text4baby**

**Text BABY to 511411**
Get **FREE** messages on your cell phone to help you through your pregnancy and your baby's first year

4baby
aby.org

*Innovations*: Text4baby partnership serves 75,000+ moms since 02/10 launch

# Ultra-High Speed Broadband to the Home

## Neighborhood 1 Gb/s Incubator

- June 2010 - Case Western Reserve University brings Gb/s service to 104 low-income homes to incubate future uses

- Collaborative R&D, with 40+ partners, private sector stakeholder support

- Focus on community needs



Energy Sustainability

Graduation Rates

Chronic Disease

Safety

## City-Wide 1 Gb/s Market

- Sept. 2010 - Chattanooga's power company begins offering Gb/s service to up to 170,000 customers by end of 2010

- Dept of Energy Smart Grid grant contributes $118 million to business model

- Platform for entrepreneurs with services that require Gb/s to the home

# In Pursuit of "Game Changers" in Cybersecurity
## Public Input Key to Moving "Leap-Ahead" Technologies Forward

Office of Science and Technology Policy

About OSTP | OSTP Blog | Pressroom | Divisions | R&D Budgets | Resource Library | NS

### Help Change the Game in Cybersecurity!

Posted by Aneesh Chopra and Howard A. Schmidt on May 19, 2010 at 02:48 PM EDT

Today marks the launch of a new web forum to discuss your research and development ide
game" in cybersecurity. To inaugurate this forum, public session will be webcast live today
PDT, from the IEEE Security and Privacy Conference in Oakland, California.

Comprising the broadband and wireless networks that connect us, the smart devices that e
digital information that informs and inspires us, cyberspace touches every part of our daily l
enabling entrepreneurship through e-commerce, enhancing health care and education thro
information technologies, achieving efficient energy use through smart grids, and many oth

The ability to use cyberspace securely and with confidence is key to society realizing its full benefit         resident
                    st May: "America's economic prosperity in the 21st century will depend on cybersec

                who would abuse the system often hold the advantages of time (systems change only slowly),
                attacker needs to succeed only once while defenders must succeed always), and targets (a
                ility may be found in many locations).

                o the research and development community, the President's Cyberspace Policy Review (near-
                #9) called for a strategy for new, game-changing technologies that give the advantage to
                This challenge complements and extends the call in the Comprehensive National Cybersecurity
                goal #9) for "leap-ahead" technologies, strategies, and programs.

Th         ional Cyber Leap Year responded to this challenge, gathering input from the community through concept
pape     and a national summit. The first three game-changing concepts to emerge from this process are:

- **Moving Target** – Systems that move in multiple dimensions to disadvantage the attacker and increase resiliency.
- **Tailored Trustworthy Spaces** – Security tailored to the needs of a particular transaction rather than the other way around.
- **Cyber Economic Incentives** – A landscape of incentives that reward good cybersecurity and ensure crime doesn't pay.

> **Dept of Energy announced $30M investment (10 projects) to address cybersecurity issues facing the electric grid**

> **National Cyber Leap Year Summit helped define game-changing concepts**

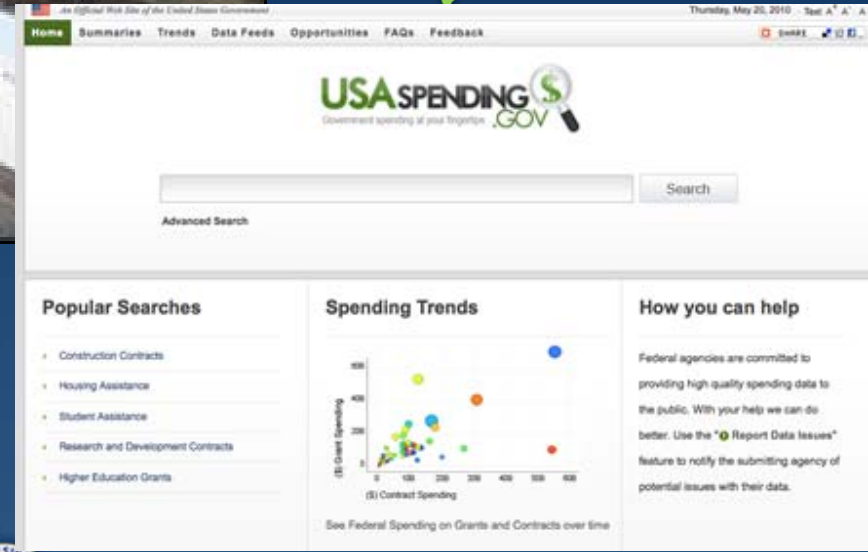# From R&D to Public Sector Innovation
## NSF-Funded Research Commercialized, Supporting Cloud Initiative



**NASA Open Gov flagship initiative – Nebula – supports USAspending.gov (5/10) as part of CIO's Cloud Computing Initiative**

**USCB Prof. Wolski joins NSF-funded grid computing "VGrADS" project; proposes novel concept (Fall 2007) to link "private" and "public" clouds; commercialized in 2009 and deployed as part of NASA Nebula**

# Helping Our Children Make Healthier Choices

## Prizes Policy Spurs USDA to Reward Apps Developers



**95 qualified apps built on data that feeds USDA site – judges include Zynga's CEO, "Woz", GE's *Healthymagination* lead**



*Sample App:* **Smash Your Food™ lets children see foods explode - while learning how much sugar, salt and oil are in them**

"The Apps for Healthy Kids competition challenges... the most creative, talented, and kid-savvy innovators across the country to build games that inspire and empower kids to get active and eat healthy." –First Lady Michelle Obama, March 11th, 2010

# Standards to "Unlock" Value of Health Exchange
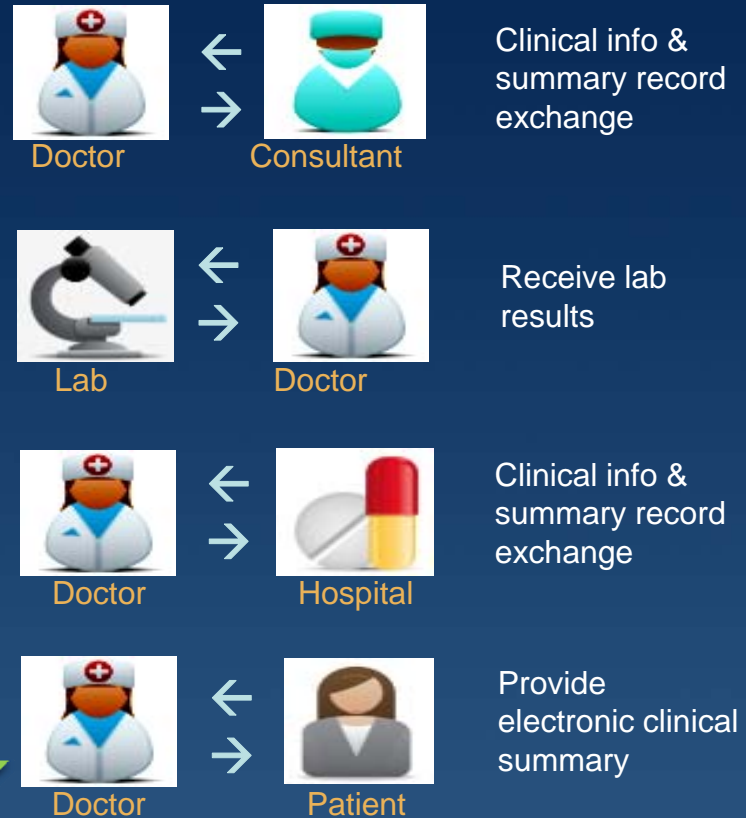## Open Industry Collaboration Delivers Technical Specs in 90 Days

## NHIN Direct Project in Brief



- Services
- Standards
- Policies
- Trust Fabric

**"A set of policies, standards and services that enable the Internet to be used for secure and meaningful exchange of health information to improve health and health care" – launched 3/10, specs posted 6/10**

**SMTP-based specs for all providers; reference implementation underway with 25,000+ lines of code and counting...**

## Secure, Direct Communication

Doctor ← → Consultant — Clinical info & summary record exchange

Lab ← → Doctor — Receive lab results

Doctor ← → Hospital — Clinical info & summary record exchange

Doctor ← → Patient — Provide electronic clinical summary

# The Smart Grid Opportunity
## Recovery Act Leveraged to Support 100 Projects Valued at $10+BN



Your Use Comparison: Jan. 1 - Feb. 4, 2010 vs. Jan. 1 - Feb. 4, 2009

BILLING PERIOD TOTAL 650kWh $80.15

Peak Time: Weekdays, 7 AM To 7 PM — USE — USE LAST YEAR

WEEK 1  WEEK 2  WEEK 3  WEEK 4

TUESDAY, JANUARY 26, 2010
40° Cloudy

DAY'S TOTAL
40kWh ↑ $6 COMPARED TO A SIMILAR DAY LAST JANUARY

20% OF THIS INCREASE DUE TO PEAK USE

*Example:* **NSTAR and Tendril to deploy real-time energy apps for 3,000+ homes in MA this summer – expecting 5% peak reduction**

**National Science & Technology Council is developing a policy framework that articulates a vision for the Smart Grid**

# Building Results-Driven eGov Ecosystems
## Emerging Technologies Enable Large, Small Communities to Engage



New York City fields 70,000+ 311 calls a month; FY '10 budget exceeds of $45M

Manor, TX – population 6,500 – deploys free "SeeClickFix" platform including voice, web, mobile options; cost ~$38/month

# Putting it Altogether: Entrepreneurs are Welcome
## Bob, Dave, Andrew Embody Spirit of (Near) Frictionless Participation



**APPS FOR INNOVATION DEVELOPER CONTEST**

The contest asked developers to build apps that demonstrate one of two categories: how innovation and entrepreneurship are impacting the U.S. economy or apps that help consumers advance policy goals that support innovation. The contest was open to apps for any type of device or any Web platform.

Jump to
Select an App ▼

**Team (in spare time) wins competition (Jan, '10) by building more accessible Federal Register after posted on data.gov**

**GOVPULSE**
WINNER

**INNOVATION MOVEMENT NETWORK**

**ONLINE TOWNHALLS**
3rd PLACE

**FEDERAL REGISTER**
THE DAILY JOURNAL OF THE UNITED STATES GOVERNMENT

Monday, June 28th

**Inspires AOTUS (March, '10) to designate team as lead designers for modernized "daily newspaper of the federal government"**