**Document: NBD-WG M0001**

**August 21, 2013**

**CHARTER for**

**NIST Big Data Working Group (NBD-WG)**

**Background**

NIST is leading the development of a **Big Data Technology Roadmap.** This roadmap will define and prioritize requirements for *interoperability*, *portability*, *reusability*, and *extensibility* for big data usage, analytic techniques and technology infrastructure in order to support secure and effective adoption of Big Data. To help develop the ideas in the **Big Data Technology Roadmap**, NIST is creating the Public Working Group for Big Data.

**Scope**

The focus of the NIST Big Data Public Working Group (NBD-PWG) is to form a community of interest from industry, academia, and government, with the goal of developing a consensus definitions, taxonomies, reference architectures, and technology roadmaps. The aim is to create vendor-neutral, technology and infrastructure agnostic deliverables to enable Big Data stakeholders to pick-and-choose best analytics tools for their processing and visualization requirements on the most suitable computing platforms and clusters while allowing value-added from Big Data service providers and flow of data between the stakeholders in a cohesive and secure manner.

**Deliverables**

1. Produce a working draft for Big Data Definitions
2. Produce a working draft for Big Data Taxonomies
3. Produce a working draft for Big Data Requirements
4. Produce a working draft for Big Data Secure and Privacy Requirements
5. Produce a working draft for Big Data Reference Architectures
6. Produce a working draft for Big Data Secure and Privacy Reference Architectures
7. Produce a working draft for Big Data Technology Roadmap

**Target Date**

The goal for completion of INITIAL DRAFTs is Friday, September 27, 2013. Further milestones will be developed once the WG has initiated its regular meetings.

**Co-Conveners**

Wo Chang, NIST

Robert Marcus, ET-Strategies

Chaitanya Baru, UC San Diego

**Subgroups and Descriptions**

* Definitions and Taxonomies – Survey and study current and future best practices of Big Data; develop concise definitions using factual information, characteristic description, and/or potential usage scenario; develop taxonomies by identifying clear boundaries between actors, roles, activities, components and subcomponents in their respective environments.
* Requirements – Collect and organize use cases, general and specified focus from different application domains; identify and document needed requirements with sample scenarios.
* Security and Privacy – Gather and analyze security and privacy related requirements from all Big Data stakeholders; develop security and privacy requirements that supplement the general Requirements of Big Data.
* Reference Architecture – Gather and study available Big Data architectures from all stakeholders that meet the Big Data taxonomies model; develop Big Data reference architecture that can satisfy various use cases from diversified application domains.
* Technology Roadmap – Gather input from NBD subgroups and study the taxonomies for the actors’ roles and responsibility, use cases and requirements, and secure reference architecture; perform gap analysis and produce vision and recommendations.

Subgroups Co-Chairs

* Definitions and Taxonomies: \*Nancy Grady (SAIC), Natasha Balac (SDSC), Eugene Luster (R2AD)
* Requirements: \*Geoffrey Fox (U. of Indiana), Joe Paiva (VA), Tsegereda Beyene (Cisco)
* Security and Privacy: \*Arnab Roy (CSA, Fujitsu), Nancy Landreville (U. of MD), Akhil Manchanda (GE)
* Reference Architecture: \*Orit Levin (Microsoft), James Ketner (AT&T), Don Krapohl (Augmented Intelligence)
* Technology Roadmap: \*Carl Buffington (USDA), Dan McClary (Oracle), David Boyd (Data Tactic)

Formation of the Subgroup: There will be one Lead Co-Chair, two Co-Chairs:

* Lead Co-Chair - sends meeting agenda with consensus from other Co-Chairs, calls for meeting, conducts meeting, and acts as the main point of contact for the subgroup
* 2 Co-Chairs - help create approach to meet NBD-WG needs and carryout subgroup tasks.

**Meeting Frequency**

It is anticipated that subgroups will meet by telecon weekly 2-hour Mondays to Fridays from 11:00AM – 1:00PM EDT while NBD-WG will meet every other three week Wednesdays from 1300 -1500ET. The order for subgroup meeting is:

* Mondays: Definitions and Taxonomies
* Tuesday: Requirements
* Wednesdays: Security and Privacy
* Thursdays: Reference Architecture
* Fridays: Technology Roadmap

**Membership**

Participation in the WG and Subgroups are open to all interested parties. There are no membership fees.

**Coordination/Interaction**

The NIST Big Data Working Group will function in close coordination with other big data related standards and best practices from industry, academia, and government.

**Standing Rules**

All information exchanged within the WG will be non-proprietary.

All information exchanged within the WG will contain non-PII materials.

WG members should assume that all materials exchanged will be made public.

Documents will be publicly accessible on the NIST Big Data Portal.

**Outreach**

WG results will be available to all stakeholders in the commercial, academic, and government sectors.