

# DMForum and the BIG DATA AND ENTERPRISE ARCHITECTURE CONFERENCE 2013

## Theme: Award-Winning BIG DATA Programs – Best Practices in Technologies and Techniques

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### Conference Background

Each year, DMForum (<http://www.dmforum.org>) hosts a Data Warehouse conference in Washington, DC, where experts in enterprise data management and data warehousing gather to present their approaches to challenges faced in all industries concerning the use of data and information. This event is co-sponsored annually by the National Capital Region of DAMA International (<http://www.dama-ncr.org>). The 2013 conference is scheduled for Friday, November 22 at the Crystal City Hilton Hotel, and the focus will be on the exciting developments in BIG DATA.

DMForum was founded as a non-profit organization to serve as a vehicle for the dissemination of knowledge on all matters relating to the challenges and opportunities facing individuals and organizations in managing data as an important asset. As such, DMForum offers seminars, symposia, discussion groups and other information exchange methods to the data management community. DMForum works with numerous educational institutions including local chapters of DAMA, AFFIRM, The Data Warehouse Institute, and other relevant organizations. Topics for DMForum members' attention include: enterprise data management, BIG DATA, metadata management, data modeling and data architecture, reference and master data management, data quality management, data warehousing and business intelligence, analytics, and data security, among others. DMForum also hosts an annual enterprise information management conference in New York, NY that attracts some of the leaders in the data management community and serves as a much-anticipated event for data management professionals.

DAMA International is the premier, world-wide professional organization for those in the information and data management realm. With over 40 chapters across the globe and a strong virtual presence via the DAMA website (<http://www.dama.org>) DAMA connects the people who are involved in enterprise information management with one another, with concepts and practices that advance the mission of managing information as a corporate asset. The DAMA-NCR (National Capital Region) is the chapter for the Washington, DC and Baltimore, MD areas and draws both government and private sector members to its many educational and informative events.

### Conference Program

The 2013 BIG DATA and Enterprise Architecture conference speaker list and topics show that DMForum is able to attract both practitioners and thought leaders in data management arena. William H. Inmon, the "Father of Data Warehousing" will present the keynote address: "Role of Unstructured Data in Big Data and Analytics". Bill is one of the most well-known figures in the data warehousing industry, and his presentations are always a source of valuable insight into the evolution of the data warehouse for the 21<sup>st</sup> century. He is a recognized expert in the realm of "BIG DATA and Unstructured Data".

Bill will provide an overview of what he envisions to be the "Next Generation of Data Warehousing" and show how this technology is redefining itself. Bill will illustrate how

break-throughs in big data, data warehousing methods, tools and approaches are shaping enterprise architecture within the major corporations, governments and businesses on a world-wide basis, while citing from practical applications developed in various industries. Bill has been developing a blueprint for future data warehousing design and development. Within this framework, Bill plans to describe how some important new architectural features are intertwined – the lifecycle of data, the need to connect unstructured data with structured data, the need to tightly intertwine metadata with the warehouse itself, the need for an enterprise metadata repository, showing how all these features are vitally important for the next generation of data warehousing.

Suzi Iacono, Co-Chair, Big Data Senior Steering Group at National Science Foundation, will speak about “The Presidential Initiative on Big Data Research and Development”.

Suzi will discuss some of the most successful programs that promise to greatly improve the tools and techniques needed to access, organize, and glean discoveries from huge volumes of digital data. Suzi will provide an overview of the background and purpose, identify the major agencies and projects underway throughout the federal government, and describe the challenges and accomplishments. She will discuss efforts in Educational Research, BioMedical Research, Defense Intelligence, and Scientific Discovery that enables the US government to explore vast amounts of data from diverse sources for research and educational benefits. Suzi will show how the current Presidential Initiative holds out great promise for solving some of the nation's greatest challenges in this great undertaking being led by the National Science Foundation (NSF) and the National Institutes of Health (NIH), under the direction of the White House Office of Science and Technology Policy (OSTP).

Adrian Gardner, CIO, and Director of Information, Technology and Communications at the Goddard Space Flight Center, “NASA Space Flight Center And Big Data: The Enterprise Architecture and Data Warehousing Story”.

Adrian will discuss the challenges and opportunities of dealing with an array of Data Management issues focusing on large volume databases and data warehousing, the integration and data sharing of structured and unstructured data, the telemetry of data communications over long distances, and the success stories so critical to the nation's unmanned space flight program. Data mining and business intelligence have become key instruments for managing information at Goddard and across the organization at NASA. Working closely with Dr. Scott Bernard as part of the Federal Enterprise Architecture (FEA) and through the Data Architecture Sub-Committee (DAS) at the CIO Council, Adrian will discuss the future plans and strategies that have made NASA one of the world's most respected organizations for technical accomplishment. Big data has played a more prominent role in activities at Goddard than ever before, and Adrian will discuss key projects that have included data management and enterprise architecture as key components.

Michael Simcock, Chief Data Architect, Department of Homeland Security (DHS) will present “The Role of Big Data at Department of Homeland Security: Big Data Analytics Needs Big Data Governance”.

Michael will discuss why data sharing and big data is so critical to the anti-terror and intelligence efforts across the federal community, particularly given the recent efforts to strike at the U.S. homeland, and the various needs and requirements of the CIA, FBI, and at least 20 other intelligence agencies that must cooperate to achieve mission success. He will also discuss leading projects that serve as major use cases for the

utilization of big data applications at DHS. He will review award-winning programs he has implemented to manage data across the federal sector including the National Information Exchange Model (NIEM). Michael will describe the various types of business analytics used, and the architecture required to accomplish these goals as a result of having worked closely with the Director of the Federal Enterprise Architecture, and the CIO Council of the US Office of the CIO.

DMForum is proud to host Dr. James Kobielus as its featured Technology Keynote speaker for the 2013 Symposium. Mr. Kobielus, Data Evangelist and one of the world's leading experts on big data who will speak on: "Big Data Analytics: An Exploding Universe of Application Data". James will examine the components of the science of big data. Big data is all about delivering value from advanced analytics deployed at extreme scales. It enables business outcomes beyond what can normally be achieved at lower volumes, velocities and/or varieties of data. Fundamental to big data is the central focus of "3 Vs" of extreme scale: petabyte data volumes, real-time data velocities, and unstructured data varieties. There are many applications of big data in all sectors of the economy, including government, healthcare, financial services, retailing, etc. James will describe many of the technologies associated with BIG DATA including its principal platforms of massively parallel enterprise datawarehouses (e.g., IBM PureData System for Analytics), Hadoop (e.g., IBM InfoSphere BigInsights), stream computing (e.g., IBM InfoSphere Streams), in-memory (e.g., IBM DB2 10.5 with BLU Acceleration), and NoSQL (e.g., MongoDB). Big data is evolving into a hybridized paradigm under which Hadoop, MPP EDW, in-memory columnar, stream computing, NoSQL, document databases, and other approaches support extreme analytics in the cloud. James will also discuss break-throughs in "machine learning" using the "Watson Super Computer" as an example, having been viewed by millions of viewers on the network TV show "Jeopardy".

### Seminar Program

Again this year, DMForum is offering pre-symposia and full-day tutorials for those interested in expanding their education in enterprise data management and data warehousing.

On November 20, The tutorial "Architecture, Modeling and Database Design for Data Warehousing, will be given by Michael Hermida, President, K3MP Technologies, an information management consulting organization. Michael's presentation is designed to demonstrate the concepts of implementing a data warehouse as part of an enterprise architecture strategy. In this workshop, attendees will be able to see how data warehousing can fit into their enterprise architecture strategy within their individual circumstances. As a frequent lecturer in information management and instructor, Michael's workshops are always engaging and full of useful information and exercises.

Additionally, on November 21, a full-day pre-conference workshop with Bill Inmon will be offered. "Architecting For Business Intelligence and Data Warehousing - Integrating the Structured and Unstructured Data World". Bill provides an enlightening view into the latest technologies and methodologies for capturing and processing in the world of unstructured data. In this workshop Bill shows how tapping into this realm of unstructured data assets can support a truly comprehensive enterprise information strategy and how it can link to the data warehousing architecture. By leveraging the s in technologies and techniques for managing and bridging the world of unstructured, semi-structured and structured databases, organizations can make serious gains in understanding and using their data more effectively. Attendees will be able to learn from

Bill's experiences and success stories from his efforts from across the globe with leading companies and governments, helping them gain an edge in the marketplace.

All members of the data management community can benefit from attending DMForum's seminars, including their annual Data Warehouse conference. For more information on DMForum, their conferences/seminars and other events, visit <http://www.dmforum.org>.

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*Anne Marie has consulted in areas such as: enterprise information management assessment and program development, data governance, data warehousing, business requirements gathering and analysis, metadata management, information systems planning and EIM project management. She has taught numerous workshops and courses in her areas of expertise.*

*Anne Marie holds the degrees Bachelor of Arts and a Master's of Business Administration in Management Information Systems and Risk Management from La Salle University; she earned a Ph.D. in MIS at Northcentral University. She serves on the faculty of Northcentral University as an adjunct assistant professor of MIS. She is also an advisor to the DMForum (<http://www.dmforum.org>).*

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