

2017 BIMForum/USIBD Symposium

USIBD Reality Capture Track Schedule

Monday, November 6th

5:30 pm- 7:30 pm Joint Opening Reception: USIBD, BIMForum & SEI
7:30 PM USIBD Meet-up Location TBD

Speaker Biographies

Tuesday, November 7th

7:00 am-8:00 am Event Breakfast
8:00 am-11:30 am Joint General Session, organization introductions

10:20 AM USIBD Introduction



John M. Russo, AIA
CEO, Architectural
Resource Consultants,
Founder and President,
USIBD

Hi, my name is John, and I'm a Reality Capture Addict. My story is long and my accuracy is not validated. But I stand here before you as the leader of a renegade band of RC (reality capture) commandos, to help spread the word, the holy word of RC! Listen to our word, be one with our word and I promise our word will validate your spectrum.

John Russo has over 30 years of experience in the architectural industry. He is the founder, President and CEO of Architectural Resource Consultants (ARC), a Southern California firm specializing in providing Building Documentation and Architectural services since 1997. ARC has won two consecutive IDIQ contracts with the U.S. General Services Administration (GSA) for Nationwide Laser Scanning, BIM and SDM Services under which it was selected to develop GSA's Laser Scanning QA/QC Process. He has served as a member of the BuildingSMART Alliance board of direction and as a contributor to the BIM Forum's Level of Development (LOD) Specification. In 2011, Mr. Russo founded the U.S. Institute of Building Documentation (USIBD) - a non-profit membership organization dedicated to furthering excellence of Building Documentation for which he was awarded the SPAR Star Award in 2012 for outstanding contributions to the industry. He currently serves as President of the USIBD and has served on SPAR's Board of Advisors from 2013 thru 2016. He also currently serves as an advisor to LOD Planner – a startup software company providing automated BIM planning. On a local level Mr. Russo is a member of the Orange County Chapter of the American Institute of Architects (AIA), and is one of the founding members of the Orange County IT/CAD Manager's Technology Roundtable. Mr. Russo has spoken extensively, has been a contributing author for LiDAR News and SparView, and has been featured in articles in ENR, POB Magazine and LiDAR Magazine. Mr. Russo holds degrees in both Architecture and Business Administration. He is a Registered Architect in the State of California.

11:30 am-1:00 pm Joint Lunch

1:00 pm-5:00 pm USIBD Breakout session: "Reality Capture" Track

1:00 PM

New and Exciting Methods for Documenting & Analyzing Buildings



Philip Lorenzo,
Chief Product Officer,
Struction Site

We will be reviewing new opportunities that many building documentation service organizations/divisions have taken to derive additional value from reality capture data outside of Scan-to-BIM deliverables. One trend explores the use of streamlined building-code compliance checks for owners, such as the ADA slope/ramp limits, ASTM floor flatness, ACI concrete tolerances, and AISC installed cambers. We will also be discussing one of the most disruptive reality capture technologies to hit the AEC industry in 2017 – the introduction of mass market, affordable 360 camera and associated software. A case study involving the use of the technology as an alternative to more costly methods such as 3D laser scanning will be explored, and how owners and general contractors have been using it on projects across the US for design coordination, progress monitoring, and as-built purposes. A new initiative by the USIBD for the standardization of building documentation using photography will be announced.

Philip Lorenzo is the co-founder of StructionSite, a software company dedicated to simplifying the process of inspection, monitoring, and quality control analysis of construction projects with 360 media. He is the chair of technology for the US Institute of Building Documentation, and active within various building code organizations as an expert on reality capture and has co-written new standards that has been adopted nationwide. Prior to StructionSite, he co-founded Rithm, a software focused on 3D laser scanning workflows, and before that, Philip worked as a construction engineer for McCarthy. He obtained his bachelor's degree in Civil Engineering from the University of California, Berkeley.

1:20 PM

"Evil BIM" vs. "Smart Lean BIM"



Clive Jordan,
CEO
LOD Planner

Do all owners know exactly what BIM requirements they need, all design teams understand precisely what BIM scope they're signing up for and are all handover models created to the optimum detail and loaded with the perfect level of information?

Are we sometimes producing more BIM than required, does the owner always get the level of BIM that they need and that they are prepared to pay for?

Join us for some quick Q&A and hear about a case study where the project had the perfect opportunity to test a few BIM planning theories and compare the results against an almost identical parallel project?

Clive Jordan got his boots dirty for 6 years as a Contractor, then pioneering 4D and 5D BIM for 9 years from startup to global tech firm and spent 3 years putting it all into practice across an Owner's supply chain. Clive is now the CEO at LOD Planner and continues to focus on ridding the world of evil BIM. Clive's passion is breaking down the barriers in our traditionally silo-based construction industry. Clive collaborates using integrated BIM solutions, Virtual Construction workflows, Lean Construction practices, Knowledge Mining techniques and focuses on the integration between Owner, Architect, Consultants, Contractor, Subcontractors, and Facility Maintenance teams. Clive was part of the team that created the world's first fully integrated 4D and 5D BIM datasets, defined the first LOD model progression specifications and also helped establish the world's first BIM contract. Living in the US, UK and UAE Clive has worked with some of the world's largest construction firms on over 300 Virtual Construction projects and he also ran the strategic process integration programs as Vice President at the Irvine Company. Clive is an industry expert in integrated 2D-3D-4D-5D-6D BIM-based workflows and has taught BIM-based estimating, 4D schedule optimization and production control in the US, UK, UAE, Hungary, Kuwait, Jordan, Bahrain and South Korea. Clive is an Engineer at heart and, before devoting his life to BIM, he graduated with honors attaining a First Class Masters Degree in Civil Engineering from Loughborough University in the UK.

1:40 PM

AR/VR



Danielle Dy Buncio,
Founder & President
VIATechnik, LLC

AR and VR and what R is that? This session will describe what the difference is between AR and VR and how each is being applied in a reality capture environment.

Danielle Dy Buncio is the Co-Founder and CEO of VIATechnik, a construction and engineering services firm transforming the construction industry through virtual design and construction by blending global human capital with cutting-edge construction technologies. At VIATechnik, Danielle leads the company's strategic growth efforts and builds and manages client relationships with some of the largest AEC firms around the country.

Prior to founding VIATechnik, Danielle worked for general contractors in Silicon Valley, Sydney, and Chicago. As a Civil Engineer and a LEED Accredited Professional, she has extensive commercial building, heavy civil, and marine construction experience.

Danielle holds a BS in Civil Engineering from Stanford University and an MBA from the Kellogg School of Management at Northwestern University.

2:00 PM

Tool or Toy? Where does Reality Capture become “real” for our clients.



Cindy Baldwin,
CGC, LEED AP, CM-BIM
President
VDCO Tech, Inc.

The speed of innovation is blowing our customers minds and confidence. The BIMtopia that was sold, in reality is not what was delivered. Are we really improving quality, speeding up quantities and providing better service and products? How can we quantify these improvement for our clients? Clients don't need technical toys, they need tools they can use for process improvements, redefining how clients relate and utilize services.

Finding the balance between technology and process has always been a challenge and reality capture is shaking up the traditional supply change.

Cindy Baldwin is the founder of VDCO Tech and has 24 years of diverse project experience. She has a proven ability to lead her teams of BIM, construction professionals, subcontractors and design professionals, while maintaining strong Client relationships. Cindy's key strengths include reducing risk for her Clients and increasing efficiency in production through BIM & VDC. Cindy is recognized nationally for her expertise in VDC process and implementation strategies. A frequent speaker at conferences, Cindy is highly regarded for her practical “real-world” approach to BIM implementation and process. She is known for getting into the “BIM Trenches” and working through traditional processes to implement change. Cindy is a certified general contractor, CM-BIM, LEED AP and an Instructor for the AGC CM-BIM Classes. Cindy has created relationships with IBM and Microsoft as she looks to explore the world of VDC and Virtual Reality.

2:20 PM

"Finding and Retaining Reality Capture Talent"



Sam Billingsley,
Director, Reality Capture
Group,
Ragan-Smith Associates

Having someone that conceptually understands a project and someone that can execute a project are two very different things. Show horse versus work horse. This presentation looks at ways to find the work horses that are necessary for the successful completion of projects using reality capture hardware and software. In a field that is still too young to have university or technical certifications, how do you assess capabilities when hiring talent? How big is the talent pool? How can you determine if they will fit into your firm’s processing systems? We take a look at what you need to know, and some methods of finding the talent you need.

Sam Billingsley began working professionally on surveying and mapping projects in 1992 and moved into reality capture technologies in 2006. From then until the present he has worked in a family firm, as an owner/operator, a consultant, contract technician, and executive in the reality capture space. With “field to finish” experience in all phases of reality capture projects and project experience that includes imaging and modeling for Civil Engineering, Petrochemical Plant/Process Facilities, Heritage Site, Offshore Installations, Architectural Mapping, Mining, Security, Forensics and more, he brings a hands-on perspective to industry topics.

2:40 PM

Panel Discussion



Moderator
Ted Mort
Vice President
Eco 3D
Director, USIBD

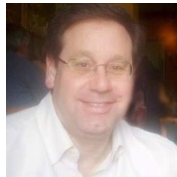
Featuring Philip Lorenzo, Clive Jordan, Danielle Dy Buncio, Cindy Baldwin and Sam Billingsley

3:00 PM

-Break-



Andy Holroyd
President
HTS Advanced Solutions
LLC



Michael Raphael
President
Direct Dimensions

Service providers have long faced the question of which scanner is the most appropriate one to use to perform their work. This session will compare data obtained from a variety of scanners by scanning material boards made up of common materials often encountered when performing Building Documentation services. The intent is to emulate as closely as possible real world conditions. Testing will not be done in a vacuum sealed, sterile, lab environment. As such we will use calibrated production instruments currently in service. Material boards will be scanned in an identical manner by qualified industry experts. Testing will be done independent of manufacturer's involvement in order to avoid conflicts of interest, undue influence, or the appearance of such. Data from each scanner will be compared side-by-side. The USIBD will not be drawing conclusions or making recommendations. Data obtained will be presented that will give interested parties the ability to draw their own conclusions on which instrument may be most suitable for an intended use. The material boards will be present at the Symposium to give attendees the opportunity to see first hand the materials that were scanned. We will also offer all interested parties the opportunity to bring their own scanner to scan the boards at the Symposium on the condition they submit a copy of their acquired data to the USIBD.

Andy Holroyd is the President of HTS Advanced Solutions, a 3D solutions provider, providing instrument and accessory rentals from offices in Houston, TX, Irvine, CA and Aberdeen, UK. HTS Advanced Solutions also provides 3D printing services and model making (architectural models, legal exhibits and industrial models). Andy has a BEng (Hons) Electrical & Electronic Engineering and spent many years in the offshore oil & gas industry as a Sonar & Navigation Technician. In 1997 he was instrumental in opening the US market for Ashtead Technology, a UK based specialist subsea equipment rental company.

Michael Rafael started in the field of 3D metrology in 1985 as an engineer responsible for solving aerospace manufacturing problems at what became Lockheed Martin Corporation. While there, Michael helped develop a revolutionary new portable three-dimensional industrial measurement technology, called the FaroArm, used today throughout the world. Following several years of in-plant development, Michael left aerospace to form Direct Dimensions, Inc. in 1995.

Michael graduated from Virginia Tech with BS degree in Engineering Science and Mechanics in 1985, followed by a Masters of Engineering Administration from George Washington University in 1992.

Intent Defines Process: use the right process for the project



Joseph P. Romano
Principle, Surveying &
Mapping
Langan,
Director, USIBD

This session will demonstrate various ways to document a space, highlighting different processes that can be used and the various results (pros and cons) associated with each. The purpose of this session is to demonstrate that there are many ways to document a space, and it is the "intent" of what is needed that will define the process to be used. Four deliverable types are needed. Four different documentation processes will be used in an attempt to deliver as many of the required deliverables as possible. We will compare the deliverable results independently and side-by-side. Accuracy checks will be taken and checked against a measured survey performed by a licensed surveyor using a total station. We will evaluate the time needed to perform each method and a hypothetical cost for each. A panel discussion will follow with audience participation.

Intent and (deliverables):

- 1) Visualization for Leasing or Sale (Virtual Tour)
- 2) Space Accounting (calculations & 2D Floor Plan Exhibits)
- 3) 2d As-built for Design Purposes (Floor Plan & RCP)
- 4) 3D As-built for Design Purposes (E-BIM)

Methods of documentation:

- 1) Structured light sensor device (Matterport)
- 2) Hand-held Laser Range Finder (SSI)
- 3) Mobile scanner (GeoSLAM)
- 4) Static Scanner (IKERD)

We will compare the deliverable results independently and side-by-side. Accuracy checks will be taken and checked against a measured survey performed by a licensed surveyor using a total station. We will evaluate the time needed to perform each method and a hypothetical cost for each. A panel discussion will follow with audience participation

Joe Romano has a broad range of experience in surveying, construction and design-related fields. Starting his career as a title searcher, he developed his expertise while working as a draftsmen, construction inspector, rodman and survey party chief, and department lead. His experience in land surveying ranges from traditional survey tasks, including highly detailed geodetic networks, to advanced mapping technologies and expert witness services. As Director of Surveying and Manager of the Langan Survey Department, Mr. Romano is very active in promoting land surveying and has been a guest speaker at numerous national and international conferences. In addition to his areas of special interest, which include boundary law and GPS/GIS/Laser Scanning technologies, his passion to give back to the surveying profession, as well as other aligned professions, has inspired him to be active at the Board level of numerous educational institutions and professional organizations. Of special note is his cofounding of the USIBD (United States Institute of Building Documentation), the only non-profit organization dedicated to the profession of building documentation.



Tomer Poran,
Business Development
Manager
Matterport

1) Structured light sensor device (Matterport)

Tomer Poran leads the business development for the construction market at Matterport (\$65M in funding) bringing a low-cost, high-speed, easy to use reality capture and VR to the construction sector. Prior to that he was an associate at DraperNexus Ventures while getting his MBA at UC Berkeley's Haas School of Business, leading investments in VR startups with applications in various industrial sectors. Tomer is originally from Israel, where before moving to the US he led a GIS services company, worked for Bain & Company in Tel-Aviv focusing on Fortune500 companies in the energy, construction and financial services sectors, founded his own venture funded e-commerce startup and served for 3.5 years as a naval officer on a missile ship. Tomer is passionate about early stage startup growth and has worked with the Alchemist Accelerator in San-Francisco, assisted Steve Blank with the Lean Launchpad Accelerator and holds various advisory roles with Israeli startups.



Peter L. Stevenson
MRICS
Stevenson Systems, Inc.

2) Hand held laser range finder

For over 40 years, **Peter Stevenson** has distinguished himself as being the creator and innovator in the business of Space Accounting, the authenticating and administration of building measurements. In 1985 Peter developed and introduced the first comprehensive system for measuring and managing building square footage, Computer Assisted Real Estate measurement (CAREM). He has furthermore developed and established many of the familiar concepts, terms, practices and process that have become ubiquitous throughout the real estate industry in accounting, measurement and documentation of square footage during all types of real estate transactions.

Through his direction he has shaped the real estate industry with measurement Standards, including the Building Owners and Managers Association (BOMA) Standards, Royal Institution of Chartered Surveyors (RICS), Real Estate Board of New York (REMNY), International Property Measurement Standard (IPMS) and others. Peter is currently involved in the revising and authoring of all six of BOMA International measurement standards.

Peter graduated from Brigham Young University (1973), with subsequent post-graduate work in the field of real estate finance and marketing at the University of California, Los Angeles (1977-78).



John Allan, GeoSLAM

3) Mobile scanner

John Allan has over 30 years’ experience in the Survey and Mapping Industry. Having graduated in Materials Science and Physics from the University of Warwick, he gained extensive international experience working in senior sales and marketing positions for companies such as DigitalGlobe, BAE Systems, Leica Geosystems, exactEarth Ltd and ERDAS Inc. In 2017 he joined GeoSLAM Ltd as VP Sales and Marketing where he is responsible for their global sales and marketing strategy and for establishing them as the world leader in the supply of “go-anywhere” 3D SLAM based mobile mapping technology. In 2009, he was the Recipient of the Founder’s Award from the UK’s Remote Sensing and Photogrammetric Society for 25 years of service and contributions to the Society.



Will Ikerd, P.E.
IKERD Consulting

4) Static Scanner

Will Ikerd PE, CM-BIM, LEED AP is principal at IKERD Consulting, an internationally recognized consulting group in buildings, civil and industrial construction markets specializing in using Building Information Modeling (BIM) enabled Virtual Design and Construction (VDC). He serves as an expert consultant in design and construction cases involving BIM and VDC processes. He currently chairs both the Designers Forum of the AGC’s national BIM Forum and the Structural Engineering Institute’s national BIM Committee. He has won the “Best Speaker” award twice from the International Structures conference, the 2010 Structural Engineering Magazine’s “Top 10 Leaders in Structural Engineering”, Glass Magazine’s 2009 “Top 30 under 40”, and Building Design & Construction’s in 2011 “Top 40 Under 40”.

5:00 pm-5:30 pm USIBD Awards, USIBD wrap-up

6:00 PM Networking Reception

Wednesday, November 8th

7:00 am-8:00 am Event Breakfast

8:00 am-8:40 am Morning General Session

8:40 am-9:20 am Joint Session/Presentations

Scanning 101: Scan School



Ken Smerz
President
Eco3D

This is a macro level review of what laser scanning is all about. It contains the features and benefits of using this technology and where it can lead to. The session will include topics such as accuracy, quality, schedule and budget and how it applies to today's built environment.



Ted Mort
Vice President
Eco 3D
Director, USIBD Board

Ken Smerz is the President and CEO of Eco3d, where he guides the company's overall direction and strategic priorities from its headquarters in Phoenix, Arizona. Upon discovering laser scanning and 3d modeling, Ken recognized such an opportunity which boils down to highly accurate 3d measurement. As 3d technology has evolved, so has Ken's vision about the future. Today, he and his team are taking 3d imaging technology to create customized 2d and 3d solutions for individual client needs within large corporations through-out the United States. Ken contributes as a writer to several publications, including the industry standard LiDAR news, on the subject of 3d measurement. He speaks nationally on laser scanning and volunteers his time discussing laser technology at local universities.

Ted Mort is the Vice President and Operations Manager of Eco3d and provides direct oversight for the full scope of laser scanning and modeling on all projects. Ted has an extensive background in construction metrology and had the privilege of being one of the original practitioners of laser scanning at Intel Ocotillo, performing and managing hundreds of thousands of successful laser scans on-site over the past five years. During the initial exploration of laser scanning at Intel, Ted sat on the committee tasked with research and the development of specifications for 3d contracts. In addition to an expertise in laser scanning, Ted leans on a deep professional history of practicing applied measurement on a variety of construction projects while operating in the fields of Land Survey, Mechanical and Electrical Engineering. The wide spectrum of projects he's worked on range from Bridges, Dams and Massive Civil Infrastructure to High-Rises, Hospitals and Commercial Complexes.

9:40 am-11:30 am

LOA V.3 Training



John M. Russo, AIA
CEO, Architectural
Resource Consultants
Founder & President,
USIBD
Chair LOA Subcommittee

Along with his credentials listed above, **John Russo** has led the charge to establish the USIBD Level of Accuracy (LOA) Specification.



Kevin Kianka, P.E.
HAAG 3D Solutions
Director, USIBD Board

Unveiling of the NEW Version 3.0 USIBD Level of Accuracy (LOA) Specification

Kevin Kianka is currently the Director of Operations, based in Haag's Sugar Land (Houston), TX office and leading Haag 3D Solution's (H3DS) 3D and modeling activities in the Southern and Western regions of the United States. He is a licensed Professional Engineer in 5 states, with experience in 3D Laser Scanning, 3D Modeling, Virtual Construction and Clash Detection, Site Planning and Engineering, Stormwater Management Design, Structural Design and Bridge Inspections. After having spent 5 years in both the structural design and site design fields of Civil Engineering, he was added to the Survey & Geomatics group, to provide Project Management support and to help evolve the 3D Laser Scanning practice to include Civil Engineering and Architectural applications. In this role, he managed projects, wrote proposals, provided QA/QC of projects, discussed project scope and deliverables with other Engineers and Architects and provided client and design team assistance in providing an accurate 3D existing conditions model into their current program. He graduated from Drexel University (Philadelphia, PA) with a Bachelors of Science in Civil Engineering in 2002.