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Announcements
- Graham Nasby, assumes role of VP for Industry and Sciences Technical Divisions
- Leo SaLemi appointed as Director of the Building Automation Systems Division
- Phil Zito from BuildingAutomationMonthly.com joins BASDIV as Resident BAS Mentor
- Rathan Bala appointed as BASDIV Secretary

Message from the BASDIV Director
Lea SaLemi

BASDIV, the Building Automation System Division, was conceived back in 2011 around the same time that the Internet of Things (IoT) was making its debut. Jacob Jackson was appointed as the first Director of this newly formed Division with the mission to make the Building Automation Systems (BAS) professionals aware of the existing ISA standards and practices that could be utilized within the BAS sector. This group included people who design, build, install, troubleshoot, operate and manage building automation systems, and those who seek to adhere to best practices to ensure optimum system operation and performance.

However unlike IoT, the BAS sector was slow coming out of the gate mainly because the building architects, designers and owners had no urgency to introduce new untested technologies that only a handful of people understood.

But it didn’t take long for the stakeholders and real estate portfolio managers to realize that the ROI from using smart technologies in their buildings was not only good for the bottom line but a must if you wanted to stay ahead of the game in a very competitive market.

So where are we today? Most of the major Instrumentation and Controls manufacturers have a full complement of automation products and services that BAS designers and integrators can utilize in their building designs; and most new building projects will contain some form of building automation system that can be used to integrate all the sub-systems in it and make the building intelligent.

However if the BIoT (BUILDING Internet of Things) market projections are on track then expect to see a lot smart technologies going into new builds and a shortage of skilled people that can manage and make these buildings intelligent. In other words we are going to end up with a lot of stupid buildings filled with smart technologies.

As an ISA Technical Division our goal is to create an awareness of where the BAS industry is going, the skills a BAS Specialist or Engineer needs to know, and by helping Process/Industrial automation practitioners identify new career paths or leverage existing skills so they can learn how to manage or commission a BAS project. Stay Connected.

https://www.isa.org/basdiv/
isabuildingautomation@isadivisions.com
**Introductions**

**BASDIV Secretary**

**RATHAN BALA, Principal Consultant**
**RS BIZ Consultant ,LLC**
rathan@rsbizconsultant.com

Presently founder and Principal Consultant of RS BIZ Consultant, LLC in CT, USA
Mr. Rathan Bala has acquired 40 years plus experience in the top management of small business units, large corporate companies and managing complex multidisciplinary projects. His track record includes building new ventures and organizations in manufacturing related industries, team building for optimum productivity and management systems encompassing MIS, work flow, production process, quality systems, vendor management, customer management and automation consultancy for Industries 4.0.

Mr. Bala has held several high level positions throughout his career including:

- Director - Controls of BMS Company in Bangalore, India, leading the Building Automation team.
- Director-Consultant of BNI (Structured Business Networking Organization, with Head Quarters in USA)
- Senior Engineer in ISRO Satellite Centre, Bangalore, as coordinator and senior member of Program Planning Evaluation Group
- Member-Secretary of Telecommand Review Board of Remote Sensing Satellite Program.

Academically he graduated in B. SC (Physics) from Madras University in 1969, India and B.Tech in Electronics Engineering from Anna University, Chennai, India in 1972 both in high first class. Did many short term courses in Electronics and Management. Widely travelled to many countries and also presented papers in international conferences. Was member of Board of Council for Mechatronics Engineering in KSR College of Engineering, an autonomous College in Tamil Nadu, India for two year term.

**BASDIV Building Automation Mentor**

**Phil Zito , Principal Owner**
**www. Building Automation Monthly**
phil@philzito.com

Phil’s role at Building Automation Monthly, is to help fellow professionals with diverse automation backgrounds better understand the world of Building Automation so they can leverage existing experience and merge it with new opportunities and pathways in this vertical market.

Prior to starting BAM, Phil was responsible for the Technical Integration Program at Johnson Controls. With more than a decade of front line experience in the Building Automation industry Mr. Zito has put together a comprehensive collection of on-line training material and courses such as Building Automation Fundamentals, IT for BAS Professionals and BAS Design Fundamentals. Phil’s website also features regular blog posts, podcasts and interviews with leading industry experts.

Visit Phils website at www.BuildingAutomationMonthly.com and tap into the vast ocean of BAS resources or set up a 1 on 1 consultation with him so he can point you in the right direction.

We are honored to have Phil as our resident BASDIV Building Automation Mentor and would highly recommend him to those who are seeking for a new or extended career opportunity in the BAS industry.

Email: philzito@bam.com

**BASDIV Committee Members**

Director—Leo SaLemi
Director Elect—Adrian Rosales
Secretary —Rathan Bala
Education Chair—Muddassir Siddiqi
Fernando Katayama
Cristian Villanueva
Ricardo Medina
Phil Zito
Nayak Sheshagiri
Dzhamshid Safin

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**What is an ISA Technical Division?**

Graham Nasby, Vice President
I&S - Industries and Sciences Department

The general function of an ISA technical division is to program timely technical papers, short courses, workshops and like activities, representing the division’s scope at the annual conferences or events; to plan timely technical meetings comprised of technical papers, short courses, workshops and like activities on specific areas or themes within the Division’s scope; to cooperate with other Divisions for programming in areas of mutual interest; to provide discerning review of papers offered for presentation, discussion, and/or publica-
Current Developments and Challenges in Building Automation
By S.M. Nayak
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The Building Automation System (BAS) sector has evolved to a point where disruptive technologies such as IoT and industrial data communications have changed the landscape as we know it. Long gone are the days when an automated building system consisted of a DDC (Direct Digital Control) unit designed to only monitor and control the buildings temperature, humidity and air quality.

Today the use of modern and flexible communication standards borrowed from the IT world has opened the field even further making the seamless integration of other buildings systems like lighting, life safety & security, card access and occupancy control possible. And if you include other disruptive technologies like smart sensors, artificial intelligence, cloud computing and open standards then the creation of intelligent buildings becomes a reality.

Like any emerging industry there are challenges that come at a cost and not necessarily the dollar value of the equipment as this has come down, but the soft costs that include things like:

- Maintaining an educated workforce that can keep pace with rapidly changing technologies and know how to manage and maintain an intelligent building
- Standards that define the BAS industry as a whole and the type of buildings where it is being used (commercial, industrial, institutional, retail outlets, multi dwelling)
- Keeping current with rapidly changing technologies and how it improves the energy efficiency of the building or make it smarter. For example do we switch to LED lighting? Do we include renewable energy solutions in our design?
- And of course dealing with Cyber Security and Privacy Issues when your customers want remote access

I will address some of these challenges in future newsletters and posts and offer my commitment to help the BASDIV community keep pace with current developments at the core fields of BAS by reporting on things that affect the building construction services, emerging control technologies and communication systems. A special focus in BAS will be in energy efficiency which is becoming a major topic throughout the world.

Sheshagiri Nayak is the Assistant Vice President Engineering at Godrej & Boyce Mfg. Co. Ltd. Mumbai Area, India. His field of study is in Mechanical Engineering with a degree from Karnataka State Open University.

New Breed of Professionals Required for Today's BAS Projects
By Dzhamshid Safin
dzh.safin@gmail.com

Most Instrumentation and Controls Engineers/Specialists have a solid foundation when it comes to understanding the measurement and control technologies used on a factory floor. However many of them may not be aware that the same technology is being installed in new buildings and there’s a shortage of qualified people that can properly commission a building let alone make it smart.

In general, building construction projects utilize different control technologies like Direct Digital Controllers and Programmable Automation Controllers with SCADA functionality for remote and local operation of HVAC, Lighting, Security, Video, Door Access and much more. But when it comes to integrating these disparate systems so they can communicate over one network using a common protocol then things become problematic and beyond the scope of most engineers who do not have a strong IT networking background.

But the real challenge is for those who need to manage the project over its entire life cycle. In order to complete all these activities on time it is crucial for project managers to have a proper qualification and experience. For example, it is beneficial to be familiar with IT (especially considering modern trends towards IoT and clouds), specific protocols (BACNet, LON, etc.), lighting, HVAC and related engineering technologies.

Very often in BAS projects there is no such phase as a start-up, since there is no main process or production. Instead, there is usually a kind of "doors open" milestone. Taking this into account, engineer shall plan his activity accordingly. It is necessary to define what needs to be done before, and what could be done later. It should be noted, that when building is already in operation it is much harder to do some types of activity and it will have much more sophisticated schedule.

Similarly to industrial automation, BAS projects require careful scope definition. Given the fact that clients’ expectation of BAS could vary significantly, it is vital to manage them carefully. Engineers should provide a clear picture of what the functions of BAS will be, and, what is more important, what BAS will not do.

Dzhamshid Safin is a Control Systems and Automation Engineer with a Ph.D. in Information-Measuring and Control Systems from the Ministry of Education and Sciences of the Russian Federation. He also is a certified PMP and Siemens Certified S7 Programmer.
The ISA Toronto Section and BASDIV will be hosting a one day tabletop show for the Building Automation Sector and invite you to participate as:

- Exhibiting Company
- Technical Speaker/Panelist
- Sponsor
- Attendee interested in BAS

Ideal for companies that supply products and services related to DDC, PAC, PLC, SCADA, Sensors, Actuators & Controls, Building IoT & Software and Facilities Management Tools. Exhibitor spots are limited.

The theme for the technical talks will focus on emerging trends and technologies related to the Digital Transformation, Data Analytics & AI, BioT, Connected Cities and Intelligent Buildings.

Attendees from all the Automation Technologies sectors will be invited to attend this all day event and take in the exhibits and talks as well as network with other professionals and experts in the field.

Now accepting speaker bio’s and abstracts. Email us at isatoronto@gmail.com
www.isatoronto.org

Got a question? Ask Phil Zito on Tec Tips

Q. What is IT/OT and where is it headed?

I’m sure you’ve heard of the term IT or Information Technology before, but some of you may not know that OT stands for Operations Technology or the things that the engineering folks want to monitor and control over the IT network. And as many of you in the Industrial or BAS space know, this is easier said than done.

Essentially the OT engineering team is responsible for managing the plant or facilities side of the corporate enterprise while the IT group manages all data networks servers, routers and switches throughout the physical and virtual enterprise. The co-existence between the IT/OT groups is not only paramount but essential in order to maintain an efficient and sustainable enterprise.

But the IoT revolution has disrupted this harmony as one group wants to connect everything and anything to the network while the other group is trying to block it because of cyber security concerns, network management challenges and privacy issues. So the question now becomes - Is it time that OT manage their own networks or should they find a way to converge and share resources with IT. You be the Judge! Email your thoughts to philzito@bam.com

Some thought leaders believe that OT will benefit the owner and BAS provider.

- A private network controlled by the BAS provider and operator saves time and money
- The ability to quickly isolate and segment building system traffic and subsystems
- Independence from the maintenance and patch cycles and restrictive IT policies

Others think that the OT approach will create more issues than benefits.

- A “perceived” lack in IT knowledge within the BAS industry
- No governance process to oversee best standards in implementation and operation of the network
- The potential creation of vulnerabilities by introducing an “unmanaged” IT structure inside the building envelope

If would like to learn more about the topic of IT and OT you can listen to Phil Zito’s podcast on the topic at http://www.buildingautomationmonthly.com/91.