



# The Facilitator

*Campus FM Technology Association's Member Journal*

Volume I, Summer 2009



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**NCFMTC 2009 heads to  
Oklahoma City**  
August 11-14, 2009



## CFTA President's Message

by Lynn E. Hazelbaker, Sr.

Wow! We've been through a busy year. In a flurry of activity the corporate officers, board of directors, and steering committee members worked their way through many issues and months of hard work to reorganize our not-for-profit corporation into a professional association. Now, with all that legal work behind us we have the task of building on that foundation.

A lot of people have questions about the reorganization. I thought it would be appropriate to take some space in this first edition of CFTA's journal, *The Facilitator* to answer some questions that people are asking.

**Q.** Why did you reorganize the corporation in the first place?

**A.** We reorganized to enable us to grow and increase the services we provide to you and others.

**Q.** How does the current organization compare to that prior to reorganizing?

**A.** Previously the only way a person could become a voting member of the corporation or serve in any kind of corporate leadership was for that person to be a conference director representing a school hosting a yearly conference. The new organization offers membership to a much broader constituency.

**Q.** Historically, the focus of activities and services has been on serving people on higher education campuses. How has that changed?

**A.** We will retain a strong focus on higher education. After all, those of us who reorganized and opened up the organization to wider participation still serve on higher education campuses. That said, though, membership is now open to others with campus interests, including those of primary and secondary education and other not-for-profit companies, institutions, and organizations.

**Q.** Must a person now become a member of CFTA in order to attend a conference?

**A.** No, conference attendance and association membership are not synonymous. Conference attendance is still open to all who register regardless of membership.

**Q.** What does a person need to do to become a member of CFTA?

**A.** To become a member of CFTA a person or institution must qualify for one of the levels of membership, complete a membership application form, and pay annual membership dues.

**Q.** How will membership dues be used?

**A.** Membership dues provide funding for sustaining and expanding the work and services of Campus FM Technology Association.

**Q.** What are the advantages of membership?

**A.** CFTA established a new, more interactive web site as part of its reorganization efforts. At CFTA.org we now maintain a searchable, on-line member database as a member-only service. This assists members in maintaining their professional networks. Although initially the *The Facilitator* is being sent to non-members as a part of our membership drive, in the future it will be sent only to members as another member benefit. And beginning in 2009 a conference registration discount is available to all CFTA members. Membership dues will fund additional member services as the membership roster expands.

I hope these questions and answers are helpful. Many in our family of past conference attendees and sponsors have already joined the Association. If you are not a member of Campus FM Technology Association, please consider joining CFTA today. As an organization, we have provided much of our value to you once a year through our annual conference. The speed and success of our efforts to continue to expand beyond that to provide more year-round services to you depends on the success of our membership drive.

Thank you for your support.

LEH

*The CFTA president also serves as Manager of the Office of Facilities Information at Oklahoma State University.*



**CFTA Institutional Members and Business Partners as of June 15, 2009**

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**Leveraging BIM for Building Life Cycle Management**

*University of Southern California, Facilities Management Services  
 NCFMTC 2008 General Session Recap*

Hosted by the University of Southern California (USC), NCFMTC 2008 was held in Los Angeles in August. BIM was the main topic at the Thursday morning general session. Presented by Tom Brady of the Lucasfilm Foundation, Ray Kahl and Clifford Bourland of Urban Design Group, and Mark Mosley representing USC Facilities Management Services (USC FMS), the presentation focused on how BIM is being used on a USC building project from its design stage to ongoing use for facilities management.

The presenters described how the Lucasfilm Foundation chose to undertake the design and construction process using BIM after providing the project's primary financial contribution with a commitment to hands-on involvement in the design of a new School of Cinematic Arts at USC. The process of accurately designing this building digitally in collaboration with the project architect, Urban Design Group, USC Capital Construction Development, and USC FMS resulted in saved time and money by identifying potential problems and correcting them prior to the start of construction.

The promise of BIM's use after construction has been all the buzz in the built industry for some time, but this project seeks the fulfillment of that goal. *(Continued on page 2).*

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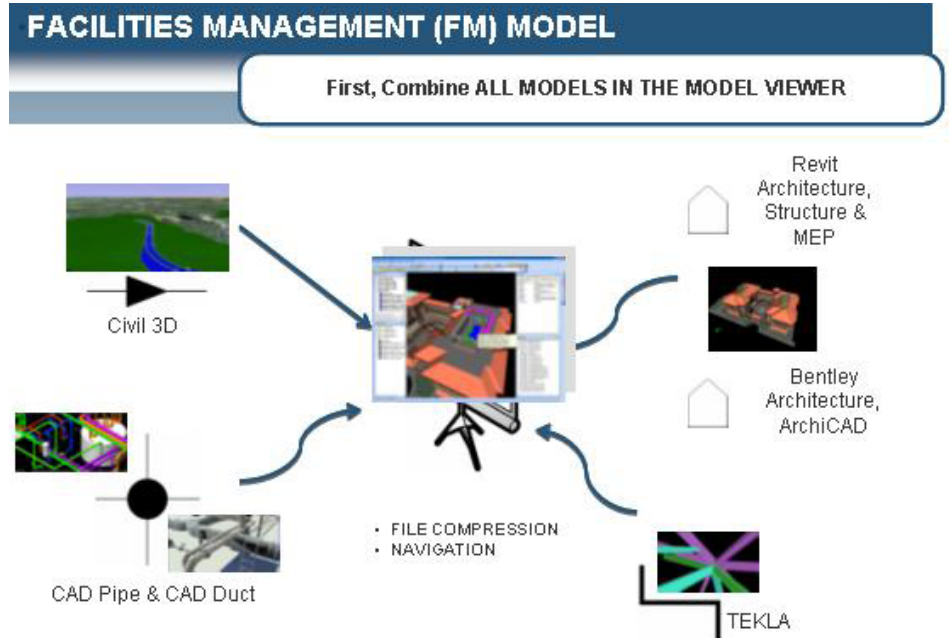
**Leveraging BIM for Building Life Cycle Management** (continued from page 1)

The BIM for Building Life Cycle Management project is unlike any other of which we are aware, as it uses a virtual model to not only look ahead through design and construction but also farther into the life cycle of the facility—all the way, perhaps, even to its demise. USC FMS and the School of Cinematic Arts were able to collaborate in such a way that the building will be managed using a model view of the building's as-built model as a portal to existing databases.

As Tom Brady, the representative for the donor—USC alum and filmmaker George Lucas—stated, USC Facilities “tied the model into their facilities management system, which to my knowledge has never been done before.” USC Facilities Management Services is currently integrating the BIM developed for Phase I of the School with its FAMIS, Honeywell, Meridian and other software to monitor the building's heating and air conditioning, electrical, and plumbing systems. Phase I of this project consists of a 130,000 S.F. building—four floors plus basement—with over 5,000 live sensor data points. Ultimately, BIM is envisioned to be the primary conveyer of that monitoring capability.

The model will either alert USC FMS of mechanical problems, or it will be the first place for an engineer to look when a problem in the building is reported. This promises to greatly improve response and repair time. By applying this technology, BIM will help ensure that the building lasts for its projected 100 year life expectancy. Confident of BIM's advantages, USC FMS plans to bring other key USC buildings (teaching, research, data centers, etc.) into the BIM framework over the course of the next several years.

The project team was asked to create an as-built BIM model of the new building and to populate it with data that will allow facility managers to understand what is happening within the completed building. To create a functional, data-rich BIM model, USC's current facility management software was audited in order to clearly understand USC's needs and better analyze potential solutions. The audit results indicated that software should be adapted to create a communication bridge between the various programs. Rather than directly embedding all information in the BIM model itself (that could result in the model containing an unmanageable amount of



data), the software allows information to be linked from a data environment to a graphic one. Plans for future implementations also involve bi-directional data links and data transfers between the model and external databases. The result is a system that communicates in a robust environment while at the same time maintaining a manageable file size.

The BIM model for the School of Cinematic Arts will serve as an interface between the university, suppliers, and maintenance personnel. The BIM model for the School of Cinematic Arts will serve as an interface between the university, suppliers, and maintenance personnel. USC will be able to take a unique look at how this model can be used to identify lifecycle issues including energy conservation, maintenance, and long range facility planning for remodeling and future additions. The use of BIM technology for the School of Cinematic Arts led to integrated planning and delivery, faster turnaround, cohesive teamwork, and, perhaps more importantly, fiscal control. In addition to gaining a dynamic new facility, USC has the additional benefit of receiving a data-rich, as-built model that contains a wealth of information about the existing facility. This will help USC reduce the carbon footprint of the building and provide opportunities for better utilization of resources. ☺

*Contributed by Jose Delgado and John Welsh*

*Jose Delgado is CAD Manager at the University of Southern California, Facilities Management Services. Jose served as conference director of NCFMTC 2008 at USC.*

*John Welsh is Associate Vice President of Facilities Management Services at the University of Southern California.*

## Business Partner Spotlight

### **BIM: Is it "Interoperability," or "Collaboration," or Both; and What's in it for The Owner?**

by Fred Mechini

Today the focus is on both interoperability and collaboration. So, what is their value? Why should Owners advocate and spend hard-to-find resources seeking either one?

In 1985, in the glorious and heroic days of Mylar and Pentel 0.5 mechanical pencils loaded with P1 soft plastic lead, I discovered the pin-bar overlay system.

For the "younger than 30 crowd", the pin bar system was a 1/2" thin, 24" long, flat metal bar that was outfitted with round pins. The pin-bar would hold pre-punched Mylar sheets. While there was a physical limit on how many sheets you could stack, there was no limit on how many drawings you could organize. The pin-bar system was an extremely efficient "layering" system that sped up production time; but the real value of the pin-bar system was in its ability to organize the work of different professionals (collaboration) and its ability to share information among the team members (interoperability). For the Owner, though, except for a well-coordinated set of blueprints, it provided no real added value.

Jump forward 15 years to about the year 2000, when the pin-bar finally evolved into CAD. After a few years of debate and uncertainty, thanks to increased functionality, efficiency, and widespread availability of accepted standards, CAD became the production tool for the AEC industry. Along with the Internet (aka the World Wide Web), CAD allowed for an unprecedented level of collaboration during the course of a project, but as a consequence we saw the creation of software's vertical markets, within which interoperability was offered as a software centric option.

For the Owner this meant alignment and/or creation of project-specific demands for the delivery of project-based information. In this case, the value added was incremental and directly related to the Owner's investment in technology and ability to grab projects' essential data. Yet, even after all these efforts, for each project, thousands of CAD files could not interface with all the boxes and boxes of projects' cutout books and specifications unless the Owner was willing to invest even more in application-specific software.

In the end, it took a full 25 years to finally see on the market (affordable) commercial applications capable of carrying information from design to construction. Today BIM offers capabilities that were

once considered proprietary, and were designed for high-end billion dollar engineering productions like Boeing, McDonnell Douglas and Dessault Systemes.

Learning from the past, strong standards are being developed and put in place for BIM, and more importantly, software companies have been paying attention and (trying) to stay away from vertical silos, or at least offering their products as "industry solutions."

Today, a BIM model can be imported into a CAFM application, the data can be parsed without having to destroy the original BIM information model, and the resulting CAFM information can be brought into a GIS application, geo-referenced, and offered for use on a handheld device. In one word, this is (true) interoperability. But still, what is the real value in all this, and how can Owners maximize ROI (return on investment) by using BIM?

While for the past five years construction companies have been telling Owners that, with BIM, they can build better and cheaper, I truly believe the value of BIM is in the ability to provide Owners with an "interoperable and collaborative" platform for the management of their existing facilities. After all, it really doesn't matter if the information about a boiler refers to an old or new boiler, does it?

So, if a construction company offers you the ability to have a new building, the documentation, and the specs in BIM, why not do that for the older buildings?

For the Owner, the value is the result of implementing a technology that will be applicable across all properties and that will be carried through new construction. Also, bringing additional value to the Owner, the cost of a new BIM system could be absorbed by the new construction since, in many cases, the construction company will outfit construction trailers with hardware and software and provide training for the sub-contractors.



In the end, for the Owner, this will result in significant financial savings as new BIM information models will provide data structures and parameters for the cataloguing of existing data. ☺

*Fred Mechini is the owner of Global Facilities Management Services. [www.gfms.biz](http://www.gfms.biz)*



Campus FM Technology Association presents  
THE 20<sup>TH</sup> ANNUAL NATIONAL CAMPUS FM TECHNOLOGY CONFERENCE

NCFMTC 2009  
**LEVERAGING INVESTMENTS  
IN FM TECHNOLOGY**

AUGUST 11-14, 2009 | COX CONVENTION CENTER | OKLAHOMA CITY  
CFTA Facilitating Your Success

The banner features a central logo with a blue and white stylized 'C' and 'F' forming a tower. It is surrounded by a collage of images: a blue wireframe building, a city skyline, a person holding a large umbrella, and a group of people in a meeting.

## Register Now for NCFMTC 2009!

In these financially difficult times, we must do everything we can to leverage our technology investments. NCFMTC 2009's aim is to bring together campus employees from all levels and responsibilities to not only explore the challenges we face but also to set the course for finding solutions to them.

Attend these power-packed presentations and others at NCFMTC 2009:

- It's a 3D World—How will Your GIS Catch Up?
- The Use of Technology in Planning, Designing, Building, and Managing the Vertical Campus
- Building a World Class Organization
- The Value of "Where-Enabling" FM Enterprise Systems
- Free Chocolate and Straight Talk on Facilities Data Integration
- BIM Initiatives of the National Institute of Building Sciences
- Competition for Funding in the Great Recession
- High Definition Scanning (3-D Laser Scanning) and Building Information Modeling

Early Registration (Deadline July 12, 2009)  
\$595 CFTA Members     \$645 Non-members

Special 40% discount for new group members: \$357 One-time Discounted Registration for the first CFTA member from an organization with a group membership in Campus FM Technology Association. Register additional members at the normal member rate.

For More Information: **NCFMTC 2009 Conference Site: Link at <http://cfta.org>**

### Pre-Conference Hands-On Training

Revit Architecture Fundamentals  
Monday, August 10, 2009  
8:00 AM – 5:00 PM  
Cost: \$300 members and \$350 for non-members  
(includes lunch and 2 refreshment breaks)

Revit Architecture Component Families and Schedules  
Tuesday, August 11, 2009  
8:00 AM – 5:00 PM  
Cost: \$300 members and \$350 for non-members  
(includes lunch and 2 refreshment breaks)



## CFTA Membership Information

Campus FM Technology Association accepts both institutional and individual membership enrollments. Membership is open to both non-commercial (not-for-profit) and commercial institutions and businesses. Memberships held by employees of non-commercial institutions are voting memberships. Voting members may vote in member meetings and serve as Association officers. All votes are cast by members, not by the institutions they represent. **Affiliate Memberships:** Memberships held by employees or owners of commercial institutions, for-profit businesses, and companies that provide services to CFTA members for a fee are affiliate memberships. Affiliate members enjoy full membership privileges except that affiliate members may not vote in member meetings and may not serve as Association officers.

### Membership Types and Levels:

#### Institutional Group Memberships—Non-commercial Campus

- Institutional A — Annual Dues: \$350.00(US) Includes Member privileges for 2 people.
  - Institutional B — Annual Dues: \$675.00(US) Includes Member privileges for 4 people.
  - Institutional C — Annual Dues: \$1,000.00(US) Includes Member privileges for 6 people.
  - Additional add-on members for any institutional group membership above - Annual Dues: \$175.00 ea.\*
- \*Must hold an Institutional Group Membership to apply for add-on members at this rate.

#### Institutional Affiliate Group Memberships—Commercial Campus

- Institutional Affiliate A — Annual Dues: \$350.00(US) Includes Member privileges for 2 people.
  - Institutional Affiliate B — Annual Dues: \$675.00(US) Includes Member privileges for 4 people.
  - Institutional Affiliate C — Annual Dues: \$1,000.00(US) Includes Member privileges for 6 people.
  - Additional add-on members for any institutional affiliate group membership above - Annual Dues: \$175.00 ea.\*
- \*Must hold an Institutional Affiliate Group Membership to apply for add-on members at this rate.

Note: In the instance that a large for-profit company that actually maintains a campus desires to hold a membership as an Institutional Affiliate A, B, or C, and at the same time maintain a relationship with CFTA as a Supporting Affiliate (as defined below), the company must maintain both types of membership.

#### Supporting Affiliate Group Memberships—Business Partners and Others

- Non-campus Affiliate A — Annual Dues: \$500.00(US) Includes Member privileges for 2 people.
  - Non-campus Affiliate B — Annual Dues: \$950.00(US) Includes Member privileges for 4 people.
  - Non-campus Affiliate C — Annual Dues \$1,350.00(US) Includes Member privileges for 6 people.
  - Additional add-on members for any supporting affiliate group membership above - Annual Dues: \$250.00 ea.\*
- \*Must hold a Supporting Affiliate Group Membership to apply for add-on members at this rate.

#### Individual Memberships (Note: There are no individual memberships for non-campus affiliates.)

- Individual A — Non-profit (member's employing institution would qualify for "Institutional Group Membership—Noncommercial Campus," but membership is requested for only one person) — Annual Dues: \$190.00(US).
  - Individual B — Commercial (member's employing institution would qualify for "Institutional Affiliate Group Membership—Commercial Campus," but membership is requested for only one person) — Annual Dues: \$190.00(US) Includes member privileges for one person.
  - Individual C\* - Retired — Annual Dues: \$50.00(US) Member privileges for 1 non-commercial retiree.
  - Individual D\* - Student — Annual Dues: \$40.00(US) Membership for 1 graduate student or 1 full-time undergraduate.
- \* "Individual C" and "Individual D" members do not receive discounts on registration fees.

### Membership Category and Member Councils associated with Membership:

#### Category:

- Education  State Government \*  Healthcare - Non-profit
- County Government \*  Federal Agency  Museum
- City Government \*  Military  Church
- Commercial  Supporting  Non-profit Foundation

\* These Categories apply to the work of developing, maintaining, and managing city, county, and state campuses (land, buildings, and infrastructure relative to supporting government operations).

#### Membership Council:

- Higher Education  Primary and Secondary Education
- State and Local Government  Historical Preservation and Museums
- Hospitals and Health Care Organizations  Federal Agencies and Military Installations
- Churches and Charitable Organizations  Airport Foundations and

**Please download a Membership Application at <http://cfta.org>**

## Hands on with Tools: Masks

This section is intended to provide information directly to end users about tools or techniques used in Facilities Management technologies. Our members are invited to participate in future issues of **The Facilitator** by submitting a topic or write-up to [facilitator@cfta.org](mailto:facilitator@cfta.org). If you have additional info to share on this topic, please reference this article and journal volume and it send to CFTA's e-mail discussion list.

Since there has been recent discussion on the list about creating presentation maps, it seems appropriate to discuss "masks" or "white boxes" that are useful when creating them.

Use a mask when you need to hide existing basemap data in order to include a sketch of a future building or a new landscape plan. Your basemap stays beneath the mask and your new plan sits on top. Use masks subtly, as the backdrop to a "call out." For example, you might highlight details within a vault in a larger "blow up", while hiding neighboring linework at true scale, similar to how newspaper editors create insets that also indicate the original location.

Masks can be used behind text when labeling features on a map when outline features are not available. Masks can also be used as part of a symbol, so it isn't transparent.

In illustration programs, a thick white line (smooth miters) over a shaded background can depict roads. If you are creating a layer of road areas for pavement management purposes in your GIS, you can use solid white fills and outlines over a field of color for publishing. You can also create donut-shapes, by making associations between two shapes the innermost shape displays your map. This is done through special joins, or by creating topologies in GIS applications. One might experiment with arrays in a CAD program.

No matter what program you use, you'll want to be able to control layering so you can turn off masks and access features beneath them, so create masks on their own layers. The "wipeout" command is the tool used in AutoCAD to create masks. When working with it, play around with the "draworder" command to help specific features appear before others. Since AutoCAD usually draws in the order that something was placed into a drawing, you may need to rebuild your drawing with a series of wblock \* exports, or use a 3rd-party tool to help manage print production and PDF creation based upon layers, so test these out when you first get started. Once you have spent the time to set up a mask, it may be easiest to copy, paste and modify, than to start from scratch, so save a file with one ready-made. ☺

Contributed by Kristina Seyer Smith. Kristina has managed the department of Maps and Records at Stanford University and is a CFTA Board Member.

Visit <http://cfta.org>

**Welcome to CFTA!**

Welcome to CFTA's virtual, international office. On behalf of the leadership team of Campus FM Technology Association (CFTA) I want to express to you how excited we are to unveil this new web site and announce our initial membership drive. If you are new to our organization we invite you to follow the links under the **About Us** navigation tab to read about who we are, where we've been, and where we plan to go.

[Read More](#)

**CFTA Starts Membership Drive**

Campus FM Technology Association (CFTA) began its initial membership drive at its annual conference in Los Angeles on August 21, 2008. The beginning of the membership drive comes at the end of a yearlong process of reorganizing our not-for-profit corporation into a professional association whose membership is made up of institutions and their staff members who plan, develop, maintain, and manage campus infrastructures.

The primary focus of our constituents always has been the development and application of tools of technology used for carrying out their work. The initial application of modern computer technology that brought CFTA constituents together in their first series of annual conferences was that of Computer Assisted Drafting and Design (CADD) systems used for designing, modeling, and maintaining campus facilities in the late twentieth century.

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### CFTA appreciates sponsors of the 2008 NCFMTC conference, held at USC:

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Partner Sponsor: **Archibus and CFI**

Gold Sponsors: **ESRI, Autodesk, Microdesk, Honeywell, Network Digitality, Greenheck**

Silver sponsors: **Faithful+Gould, Aramark, InfoQuest Technologies, KST Data Inc.**

Bronze Sponsors: **Phoenix FSG, KPFF Consulting Engineers**

## A Tribute to Charles Bowler

The CFTA family recently faced the loss of one of its long-time friends. Charles Bowler, of the University of Maryland passed away on November 16, 2008 at his home in Silver Spring, MD. He was 73.

Charlie, as he was known to all, was born in Indian Head, MD, and was raised in University Park. He earned an engineering degree from the University of Maryland in 1958 and received his masters degree from Catholic University in 1965. Charlie played football and wrestled in High School and was a member of the University of Maryland wrestling team, wrestling in the 177 lb. weight class. He did this as a childhood polio survivor.

Charlie served for two years on the south pacific island of Guam while in the Air Force, where he supervised the construction of military facilities that still are in use today. Following his military service he worked as a transportation engineer for the Washington DC Department of Highways, the Federal Highway Administration, and then for half-a-dozen Civil Engineering firms in the DC area over a 30 year period from 1966 to 1996.

Among work on many other projects, Charlie designed the Shirley highway Bus Lane system (now the 395 HOV lanes); worked on the Washington Reagan National Airport and Baltimore-Washington International Airport master plans and parking designs; and conducted a national study of "park-and-ride" programs to establish a guide for determining the feasibility and planning of the support facilities for that program.

At one time Charlie held a private pilot's license, and in the mid-1980's he completed the operational models and business plans for the startup of a regional jet airline, Cavalier Airlines, based at Dulles Airport.

Upon leaving the commercial engineering sector he worked in the Facilities Planning department at the University of Maryland, College Park, and worked there until the time of his death. During his tenure at the University he found out about the National Collegiate CADD Conference (NCCC) and began attending the annual conferences. The 1998 NCCC at Stanford University was the first conference he attended.

Following that conference, he attended each succeeding year's conference and became one of its most vocal and faithful proponents and contributors. Charlie was known for throwing himself into the activities and programs he believed in, and with the approval of his administration he offered



to host a conference in Maryland. He served as the conference director of NCCC 2003 at the University of Maryland. Charlie also served at several conferences as a session speaker. Beginning with the 2003 conference, Charles served as a Steering Committee member of the NCCC, Inc.—now Campus FM Technology Association.

Members of the CFTA family who had the privilege of spending time with Charles Bowler over the years came to know him as a true friend and use words such as "kind," "friendly," "knowledgeable," and "gracious" to describe him. The regular attendees at our conferences will miss him at future events. Many CFTA constituents have expressed their fondness for Charlie and their sadness over losing him.

A comment by someone who worked closest with Charles for the last ten years does well in reinforcing our feelings. Terry Brenner, Charlie's boss, the Assistant Director of Facilities Planning at the University of Maryland, recently wrote the CFTA president and expressed the following: "There was no one more dedicated to his work or his staff—he was a teacher, a mentor, a motivator, a dear friend—he will be dearly missed by our FM family." ☺ - LEH

### Recent Discussion List Topics

- Google Earth for Universities
- Mapping Grade GPS Units
- Who has performed an Archibus Upgrade - 16.x to 17
- BIM workflow questions on updating a master building model with project changes
- Large Format All In One
- Help for the little guy
- Pre-conference Training
- Information Security - Floor Plans
- COBIE: From BIM to Facility Management
- BIM - GSA Furthers it's Investment
- GIS Survey and Benchmarking

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**CFTA** Facilitating Your Success

A collage of images related to technology and business. It includes a person's face, a globe, a building, and a network diagram.

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